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ERNEST HART.

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 Finzean, Aboyne, Aberdeenshire
 78, Portsdown Road, Maida Hill, W.
 53, Wimpole Street, W.
 Old Charlton, Kent
 Kennure Lodge, Elgin Road, St. Peter's
 Park, W.
 16, Upper Berkeley Street, W.
 31, Lower Seymour Street, W.
 30, Westbourne Park Terrace, W.
 13, Belgrave Road, S.W.
 21, Montagu Street, W.
 89, Sutherland Gardens, W.
 204, Hoxton Road, N.
 St. John's Road, Jersey
 Eltham
 47, Stoke Newington Road, N.
 12, Park Place, Greenwich
 Hitchin
 3, Finsbury Square, E.C.
 110, Park Street, Grosvenor Square, W.
 44, Pembroke Villas, Bayswater, W.
 225, Camden Road, N.W.
 145, Bishopsgate Street Without, E.C.
 Epping
 21, St. George's Square, S.W.
 10, Cunningham Place, N.W.
 77, Wimpole Street, W.
 111, Piccadilly, W.
 Stockleigh Road, St. Leonard's-on-Sea
 16, Connaught Square, W.
 33, Great James Street, W.C.
 143, Bow Road, E.
 Kent House, Bow Road, E.
 Royal College of Surgeons, W.C.
 27, South Street, Thurlow Square, S.W.
 23, Westbourne Park Terrace, W.
 4, Fellows Road, Haverstock Hill, N.W.
 40, Harley Street, W.
 93, Richmond Road, Dalston, E.
 18, Stratford Place, W.
 39, Oxford Terrace, W.
 32, Cadogan Place, S.W.
 10, Russell Square, W.C.
 32, Fitzroy Square, W.
 St. John's, Horsleydown, S.F.
 105, Fulham Road, S.W.
 27, Pentonville Road, N.
 81, Wimpole Street, W.
 1, Astwood Road, Cromwell Road, W.
 9, Grosvenor Street, W.
 Little Waltham, Chelmsford
 Ealing, W.
 Ealing, W.
 27, Weymouth Street, W.
 25, Westbourne Square, W.
 16, Queen Anne Street, W.
 2, Marlborough Road, St. John's Wood, N.W.
 12, Hereford Gardens, W.
 50, Queen Anne Street, W.
 34, Finsbury Square, E.C.
 370, Commercial Road, E.
 523, Commercial Road, E.
 Ongar
 14, Chichester Road, W.
 Bolingbroke House, Wandsworth Com., S.W.
 Eastbourne, Sussex
 74, Wimpole Street, W.
 9, Grosvenor Street, W.
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 63, Harley Street, W.
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 6, Curzon Street, Mayfair, W.
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 Priory Road, West Hampstead, N.W.
 121, Ladbroke Grove, W.
 74, Brook Street, W.
 103, Park Street, Grosvenor Square, W.
 10, Hampstead Hill Gardens, N.W.
 70, Brook Street, W.
 21, Welbeck Street, W.
 Brighton
 1, Jermyn Street, S.W.
 Sherborne Lane, King William St., E.C.
 34, Gloucester Terrace, Hyde Park, W.
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 25, Harley Street, W.
 39, Brook Street, W.
 196, Tufnell Park Road, N.
 11, Kilburn Priory, N.W.
 11, Darnley Road, Hackney, E.
 39, Wimpole Street, W.
 Braintree
 38, Wimpole Street, W.
 Great Baddow, Chelmsford
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 9, Harley Street, W.
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 Lewisham, S.E.
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 71, Oakley Square, N.W.
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 341, Brixton Road, S.W.
 20, Notting Hill Terrace, W.
 132, Highbury Hill, N.
 308, Camden Road, N.W.
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 14, City Road, E.C.
 36, Berkeley Square, W.
 Lordship Lane, Dulwich, S.E.
 1, Dorset Square, N.W.
 24, George Street, Hanover Square, W.
 Amburst Road, Hackney, E.
 38, Brook Street, W.
 135, Tulse Hill, S.W.
 55, Wimpole Street, W.
 49, Richmond Road, Barnsbury, N.
 70, Abbey Road, N.W.
 22, Mecklenburgh Square, W.C.
 4, Stanhope Terrace, Bayswater Road, W.
 69, Camberwell Road, S.E.
 Aylesbury, Bucks
 Carlton House, Bridge Road, S.W.
 Halsted
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 3, Addison Place, Croydon
 Watton, Hertford
 Montpelier Road, Brighton
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 1, Bedford Square, W.C.
 107, Victoria Street, S.W.
 68, Adelaide Road, South Hampstead, N.W.
 18, Great Cumberland Place, W.
 14, Savile Row, W.
 Sudbury Park, Richmond
 43, Green Street, W.
 59, Curzon Street, Mayfair, W.
 150, Shoreditch, E.
 106, Amhurst Road, E.
 Warriar Square, St. Leonards-on-Sea
 Five Houses, Clapton, E.
 3, Mansfield Street, Queen Anne Street, W.
 11, Boundary Road, St. John's Wood, N.W.
 10, St. Thomas's Street, S.E.
 26, Elgin Road, Notting Hill, W.
 Sussex House, Hammersmith, W.
 10, Old Burlington Street, W.
 83, Hamilton Terr., St. John's Wood, N.W.
 53, Devonshire Street, Islington, N.
 42, Addison Road, Kensington, W.
 19, Trinity Square, E.C.
 101, Queen's Road, Dalston, E.
 15, Cavendish Square, W.
 44, Brook Street, W.
 Stapleton House, Stapleton Hall Road, N.
 10A, Hanover Square, W.
 11, Stoke Newington Road, N.
 Marlborough House, 17, Poland Street, W.
 3, Manchester Square, W.
 8, Altenburg Grdns., Clapham Common, S.W.
 3, Russell Road, Kensington, W.
 205, Brixton Road, S.W.
 20, Weymouth Street, W.
 11, Thurlow Square, S.W.
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 11, Marles Road, Kensington, W.
 Eltham, Kent
 63, Brook Street, W.
 20, Warwick Gardens, Kensington, W.
 Asylum, Stone, Dartford
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 Wells
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 Epsom
 24, Montagu Square, W.
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 Roberts, J. Coryton, Esq. .. Avenue House, Peckham Rye, S.E.
 Roberts, Henry W., Esq. .. Wickham Terrace, Lewisham High Rd., S.E.
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 Rygate, John J., M.B. .. 126, Cannon Street Road, E.
 Salter, J. H., Esq. .. Tolleshunt D'Arcy, Essex
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 Sandwell, Edward, Esq. .. 70, Charles Street, Soho Square, W.
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 Saunders, Edwin, Esq. .. 28, Colville Terrace, Bayswater, W.
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 Savory, W. Scovell, M.B., F.R.S. .. 150, Bethnal Green Road, E.
 Schmidt, Alfred E., Esq. .. Camberwell House, Camberwell, S.E.
 Schofield, F., M.D. .. 13, South Hill Park Gardens, N.W.
 Scofield, William J. J., Esq. .. 10, Tavistock Square, W.C.
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 Sedgwick, William, Esq. .. 59, Welbeck Street, W.
 Semon, Felix, M.D. .. 8, Torrington Square, W.C.
 Semple, Robert H., M.D. .. 34, Jewry Street, Aldgate E.C.
 Sequeira, H. L., Esq. .. Cassland Crescent, Cassland Road, E.
 Sequeira, James S., Esq. .. 12, Thurloe Place, S.W.
 Seton, David E., M.D. .. 21, Cavendish Square, W.
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 Shepherd, W. G., M.D. .. 2, Frederick Place, Old Jewry, E.C.
 Shillitoe, Buxton, Esq. .. Hitchin
 Shillitoe, Richard, jun., Esq. .. 7, Harley Street, W.
 Sibley, S. W., Esq. .. 17, Manchester Square, W.
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 Simms, Frederick, M.B. .. 739, Old Kent Rd., S.E.
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 Simpson, Thomas, Esq. .. 25, Brewer Street, W.
 Slight, George, M.D. .. 4, York Place, Bow Road, E.
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 Sloggett, W. H., Esq. .. 26, Camersham Road, N.W.
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 Smale, M. A., Esq. .. 70, Victoria Park Road, E.
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 Smith, E. Noble, Esq. .. 5, George Street, Hanover Square, W.
 Smith, Eustace, M.D. .. 68, Harley Street, W.
 Smith, T. Gilbert, M.D. .. 18, Harley Street, W.
 Smith, Heywood, M.D. .. 42, Park Street, Grosvenor Square, W.
 Smith, Protheroe, M.D. .. 53, Haverstock Hill, N.W.
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 Smith, Walter, Esq. .. Seamen's Hospital, Greenwich
 Smith, W. Johnson, Esq. .. Tyson Road, Forest Hill, S.E.
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 Snell, Edward, Esq. .. 40, Norfolk Terrace, W.
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 Stowers, Nowell, Esq. .. 125, Kennington Park Road, S.E.
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 Taylor, John, M.D. .. Brighton (resigns)
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 Tenison, E. T. Ryan, M.D., R.N. .. 215, Uxbridge Road, W.
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 Travers, William, M.D. .. 2, Phillimore Gardens, W.
 Treves, F., Esq. .. 18, Gordon Square, W.C.
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 Tucker, Anthony C., Esq. .. 16, Richmond Road, Barnsbury, N.
 Tukey, D. Hack, M.D. .. 4, Charlotte Street, Bedford Square, W.C.
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 Waggett, John, M.D. .. 2, New Square, Lincoln's Inn, W.C.
 Waite, Charles D., M.B. .. 3, Old Burlington Street, W.
 Wakefield, Thomas, M.B. .. 37, Nottingham Place, W.
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 Webber, W. Littleton, Esq. .. 36, Addison Road, W.
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 Weber, Hermann, M.D. .. 10, Grosvenor Street, W.
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 Welch, Charles H., Esq. .. 120, Stoke Newington Road, N.
 Welch, Samuel, Esq. .. Lauriston Villa, Victoria Park Road, E.
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 Whaley, John C., Esq. .. 1, Brondesbury Road, Kilburn, N.W.
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 Whitmarsh, John L., Esq. .. 9, Western Villas, Southgate, N.
 Whitmore, W. T., Esq. .. 7, Arlington Street, S.W.
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 Willcocks, Frederick, M.B. .. 14, Mandeville Place, W.
 Willett, Edmund, M.D. .. 6, Anson Road, Tufnell Park, N.
 Willett, Edmund S., M.D. .. Wyke House, Isleworth, W.

Guildford House, Henden
 53, Junction Road, Holloway, N.
 276, Lambeth Road, S.E.
 4, St. Thomas's Street, S.E.
 45, Great Cumberland Place, W.
 58, Welbeck Street, W.
 249, Hackney Road, E.
 25, Tavistock Street, W.C.
 13, Carlton Hill, N.W.
 Leavesden Asylum, Watford
 St. Bartholomew's Hospital, E.C.
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 Bushey
 Epping
 Kensington Dispensary, Church Street, W.
 Lower Tooting, S.W.
 11, St. George's Ter., South Kensington, S.W.
 Queen's Road, Peckham, S.E.
 Buntingford, Herts.
 Metropolitan Free Hosp., Commercial St., E.
 University College Hospital, Gower Street, W.
 Dalberr Road, Brixton, S.W.
 7, Church Street, N.
 7, Railway Terrace, W.
 1, North End Road, S.W.

42, Clarendon Street, Strand, W.C.
 52, St. John's Terrace, N.W.
 54, Marlborough Place, Plaistow
 55, Humber Street, W.
 56, Humber Garden, E.C.
 57, Waverley Street, W.
 1, Humber Street, W.
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 1, Humber Street, Lower Edmonton
 12, St. John's Street, S.W.
 13, Waverley Street, W.
 14, Clarendon Street, W.
 15, Lambeth Road, Hackney, E.
 16, Victoria Highgate, N.
 17, Lambeth Road, S.E.
 18, Humber Street, W.
 19, Clarendon Park, Gunnersbury, W.
 20, Clarendon Berkeley Street, W.
 Pinner
 21, Pembroke Square, W.
 22, Grove End Road, St. John's Road, N.W.
 23, Lynnmoor, Devon
 24, Clarendon Street, W.
 25, Wimpole Street, W.
 217, Bethnal Green Road, E.
 218, Lambeth Palace Road, S.E.
 219, Shanghai
 220, Fulham Road, S.W.
 221, Clarendon Road, S.W.
 222, Clarendon Road, E.C.
 223, Waverley Avenue, Harrow Road, W.
 224, Furnival's Inn, W.C.
 225, Hampstead, N.W.
 226, Wimpole Street, W.
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 450

- Graham, A., Esq. 205, King's Road, Chelsea, S.W.
 Graham, J., M.D. 29, Gloucester Road, N.W.
 Grayson, Francis D., M.D., Rayleigh
 Greet, W. A., Esq. 2, Vernon Square, W.C.
 Greenish, R. W., Esq. 20, New Street, Dorset Square, N.W.
 Griffin, T., Esq. 26, Drury Lane, W.C.
 Grimsen, G. de Corquer, Esq. 34, St. George's Square, S.W.
 Griffith, W. S. A., Esq. 66, Guildford Street, W.C.
 " F. W., Esq. 10, Notting Hill Terrace, W.
 Haden, F. Seymour, Esq. 38, Hertford Street, Mayfair, W.
 Haden-Haden, W. H., M.D. 66, Harley Street, W. (resigns)
 Hall, Ed. T., Esq. Blacklands House, Chelsea, S.W.
 Hall, John, M.D. Monkridge, Crouch End Hill, N.
 Hamlin, W. T., Esq. 121, Tredegar Road, Bow, E.
 Hare, Lancelot, Esq. 23, Prince's Street, Cavendish Square, W.
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 Hazel, W. F., Esq. 71, Oakley Square, N.W.
 Heath, W. L., Esq. 85, Gloucester Road, South Kensington
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 Hensley, P. J., M.D. 4, Henrietta Street, W.
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 Herron, J. W., Esq. 101, Gower Street
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 Hickman, W., M.D. 1, Dorset Square, N.W.
 Hicks, F. J., M.B. Brompton Hospital, S.W.
 Hilder, R., Esq. Treviot House, Upper Tooting
 Hill, J. R., Esq. 105, Earl's Court Road, S.W.
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 Holbertson, H. M., Esq. Hampton, Middlesex
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 Holland, J. F. R., M.D. 56, Maida Vale, W.
 Hollings, E., Esq. 4, Gordon Square, W.C.
 Holt, William, Esq. 4, Norton Folgate, E.
 Horrocks, F., M.D. 29, Merrick Square, S.E.
 Horsman, G. C., Esq. 22, King Street, Portman Square, W.
 Houchin, E. King, Esq. 151, Steppin Green, E.
 Howard, R. J. B., Esq. London Hospital, E.
 Howse, A., Esq. 4, Windsor Terrace, Barking Road, E.
 Humphry, L., M. B. City of London Hospital for Diseases of the
 Chest, Victoria Park, E.
 Bridge Road, Hammersmith, W.
 Hunt, Alfred, Esq. 29, Woburn Place, W.C.
 Hutchinson, Francis, Esq. 40, Elgin Crescent, W.
 Hutchinson, T. Cayley, Esq. West Green Road, Tottenham
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 Johnson, W. B., Esq. 113, Kingsland Road, N.
 Jones, Derry, Esq. 60, King Street, W.
 Jones, E. A., Esq. 34, Maryland Road, Harrow Road, W. (dead)
 Jones, John, Esq. Albert Square, Clapham Road, S.E.
 Jones, Lewis H., Esq. 6, Westbourne Street, W.
 Jones, T. M.D. 45, Finsbury Square, E.C.
 Jones, T. W. C., Esq. Sycamore House, Edmonton
 Jones, Walter, M.D. 156, York Road, S.E.
 Jones, W., Esq. 44, New Broad Street, E.C.
 Jordan, G. R., Esq. 209, King's Road, Chelsea, S.W.
 Keen, E., Esq. Halstead
 Keen, W., Esq. 9, Tavistock Square, W.C.
 Kellett, R. G., Esq. 19, St. Stephen's Road, Bayswater, W.
 Kendrick, Phineas J., Esq. 51, Pembroke Villas, W.
 Kent, Thomas J., Esq. Welwyn
 Kiernan, L., Esq. 94, Philbeach Gardens, Earls Court, S.W.
 King, David A., Esq. 112, St. John's Road, Hoxton
 Kite, J. A., Esq. 56, Guildford Street, Russell Square, W.C.
 Klein, E. L., M.D. 49, Norfolk Square, W.
 Ladell, W. J. S., Esq. Park Lodge, East Finchley
 Lake, Charles, Esq. 23, St. Mary's Abbotts Terrace, Kensington
 Lane, J. E., Esq. Iver Heath, Uxbridge
 Langford, P. P., M.D. St. Alban's Terrace, Hammersmith, W.
 Lattey, J., Esq. Highbury Grove, N.
 Lavin, M. Drury, Esq. 27, Longridge Road, South Kensington, S.W.
 Lawrence, F., Esq. 73, Albert Street, Regent's Park, N.W.
 Layton, H. A., Esq. 6, Brunswick Place, N.W.
 Leeson, Oliver J., Esq. 2, Palace Road, Albert Embankment, S.E.
 Lewis, C. B., M.D. 12, Park Crescent, Portland Place, W.
 Lewis, Louis, M.D. Shenley, Barnet
 Lidbetter, T. G., Esq. Merton Road, Wimbledon
 Lilburn, J., M.D. 8, Sergeant's Inn, E.C.
 Lingard, A., Esq. Burham, Ludlow
 Lister, Joseph, M.D., LL.D., F.R.S. St. Ann's Villas, Notting Hill, W.
 Little, C. E., Esq. 389, City Road, E.C.
 Little, Ed., Esq. De Crespigny Park, S.E.
 Lockwood, C. B., Esq. 19, Westbourne Square, W.
 Long, Mark, M.D. 17, Queen Anne Street, W.
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 Lyons, Isidor I., Esq.
 Macfarlane, W., M.D.
 McHardy, M. M., Esq. 5, Savile Row, W.
 Macnamara, F. W., M.B. 28, Palace Gardens Terrace, W.
 Macready, J., Esq. 125, Harley Street, W.
 MacSwiney, G. H., M.D. Brook Green, W.
 MacRae, Alexander C., M.D. 119, Westbourne Terrace, W.
 Mackintosh, Hugh, M.D. 84, Brompton Road, S.W.
 Maine, W., Esq. Clacton-on-Sea, Essex
 Makuna, M. D., Esq.
 Mancor, A. F., M.B. 338, Walworth Road, S.E.
 Manthorpe, M. L., Esq. Thorpe, Colchester
 Maples, Reginald, Esq. Kingsclere, Newbury
 Marcet, William, M.D. 39, Grosvenor Street, W.
 Markwick, A., Esq. 1, Leinster Square, W.
 Marsh, T. C., Esq. 56, Fitzroy Street, W.
 Marshall, J. B., Esq. Nightingale Road, Clapton, E.
 May, Harry, M.D. Ware
 Maybury, H. M., M.D. 303, Upper Street, Islington, N.
 Meagher, J. S., Esq. 10, Manchester Street, W.
 Medlicott, C. W. C. M., M.D. Carlisle Road, Eastbourne
 Meeham, W., Esq. 6, Taunton Place, N.W.
 Meredith, W. A., M.B. 6, Queen Anne Street, W.
 Merryweather, J. W. C., Esq. 11, North Crescent, W.C.
 Middleton, R. W., M.D. Fulham Road S.W.
 Mills, Joseph, Esq. 15, Henrietta Street, W.
 Money, A., M.D. 7, Pemberton Road, N.
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 Morgan, J., Esq. 3, Sussex Place, Hyde Park Gardens, W.
 Morrison, John R., Esq. 57, Cannon Street Road, E.
 Mott, F. W., Esq. Vienna
 Mould, J. T., Esq. 1, Onslow Crescent, S.W.
 Moxon, Walter, M.D. 6, Finsbury Circus, E.C.
 Mumby, B. N., M.D. Iver, near Uxbridge
 Murphy, T. C., Esq. 28, Brunswick Square, W.C.
 Murray, John, M.D. 17, Westbourne Square, W.
 Murray, H. M., Esq. North Road, Highgate, N.
 Nash, J. P., M.D. 41, Portsdown Road, W.
 Neale, W. H., M.B. 59, Queen's Gardens, Hyde Park, W.
 Neville, T., M.D. 85, Pimlico Road, S.W.
 Newmarsh, B. J., Esq. Hampton Wick
 Nicholls, James, M.D. Chelmsford
 Nix, E. J., M.D. 143, Great Portland Street, W.
 Noble, H. B., Esq. Tasman Road, North Stockwell, S.W.
 Noble, J. B., Esq. 23, Trinity Square, S.E.
 Nodt, W. M., Esq. 8, Kensington Park Road, W.
 Norton, Algernon C. W., M.D. 112, Westbourne Grove, W.
 Norton, G. Everitt, Esq. 63, Upper Gloucester Place, W.
 Nunn, T. W., Esq. 8, Stratford Place, W.
 O'Connor, Bernard, M.D. 40, Brook Street, W.
 Ormsby, G. H., M.B. 2, High Street, Wood Green, N.
 Orwin, A. W., Esq. 2, Ospringe Road, Tufnell Park, N.W.
 Osborn, Samuel, Esq. Datchet, Bucks.
 Osborne, Hy., M.D. 10, Churchfield Road, Ealing
 Otley, W., M.B. 93, Ladbroke Grove, W.
 Owen, Ed. B. M.D. 49, Seymour Street, W.
 Owen, Rayley, Esq. 61, Cleveland Square, Hyde Park, W.
 Palmer, H. Drake, Esq. Nayland, Colchester
 Palmer, James F., Esq. 8, Royal Avenue, Chelsea College, S.W.
 Parker, Wm. K., Esq. 36, Claverton Street, S.W.
 Parsons, H. F., M.D. Whitehall, S.W.
 Paterson, Rev. H. S., M.D. 59, Cathcart Road, S.W.
 Pearce, Walter, Esq. St. Mary's Hospital, Paddington, W.
 Pearson, David R., M.D. 23, Upper Phillimore Place, W.
 Peck, E. G., Esq. Cambridge
 Pett, Alfred, M.D. 57, Avenue Road, N.W.
 Pettifer, Edmund Henry, Esq. 50, Southgate Road, N.
 Phibbs, R. F., Esq. 30, Sutherland Gardens, W.
 Philpot, H. J., Esq. Warwick Road, N.W.
 Philpot, J. H., Esq. 26, South Eaton Place, S.W.
 Pickett, Jacob, M.D. Colville Square, W.
 Pink, Thomas, Esq. King's Cliff, Wansford
 Pitt, E. G., Esq. 17, Prince's Square, St. George's Road, E.
 Plaister, W. H., Esq. Pembury House, Tottenham
 Pollock, G. D., Esq. 36, Grosvenor Street, W.
 Potts, Wm., Esq. 2, Albert Terrace, N.W.
 Poulain, Victor, M.D. 124, Fulham Road, S.W.
 Powell, H. A., Esq. Beckenham, Kent
 Powell, Josiah T., M.D. 347, City Road, E.C.
 Pranker, O. R., Esq. 21, Church Crescent, South Hackney, N.
 Preston, W. J., M.D. 4, Abercorn Place, N.W.
 Prince, J., Esq. Staines
 Pritchard, S. E., Esq. 88, White Horse Street, Stepney, E.
 Pye-Smith, Philip H., M.D. 56, Harley Street, W.
 Radcliffe, C. B., M.D. 25, Cavendish Square, W.
 Ramskill, Jabez S., M.D. 5, St. Helen's Place, E.C.
 Raper, W. A., M.D. Great Wakering
 Rawlins, H. A., Esq. 6, Sutherland Gardens, W.
 Ray, C., M.D. 72, Bishop's Road, W.
 Rayner, W., Esq. 4, Dorset Square, W. [Street, W.C.
 Read, M., Esq. Hospital for Sick Children, Great Ormond
 Reed, H. A., Esq. 33, Trinity Square, S.E.
 Rees, W., Esq. 129, Queen's Crescent, Haverstock Hill, N.W.
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 Reid, A., M.D. 29, Canonbury Park North, N.
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 Renner, Charles, M.D. 80, Portsdown Road, W.
 Renner, William, Esq. 46, Woburn Place, W.C.
 Renny, F. H., Esq. London Hospital, E.
 Richards, S. A., Esq. 153, Upper Kennington Lane, S.E.
 Richardson, A. J., Esq. Leyton, Essex
 Richardson, Ralph, M.D. 10, Roland Gardens, South Kensington, S.W.

Curgenven, W. G., M.D.	.. Friargate, Derby	Marshall, L. W., M.D.	.. 2, East Circus Street, Nottingham
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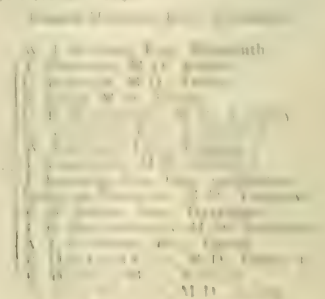
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ABSTRACT OF REPORT

OF

THE ROYAL COMMISSION ON THE MEDICAL ACTS.

SUBJOINED is an abstract of the Report of the Royal Commission on the Medical Acts. The report is signed by the Commissioners—Lord Camperdown, the Bishop of Peterborough, Mr. W. H. F. Cogan, Sir George Jessel (Master of the Rolls), Mr. Sclater-Booth, Sir William Jenner, Mr. John Simon, Professor Huxley, Dr. R. McDonnell, Professor Turner, and Mr. James Bryce. Appended to it are expressions of dissent from various portions by Mr. Simon, Professor Turner, Mr. Sclater-Booth, Professor Huxley, the Bishop of Peterborough, and Mr. Bryce.

The Commissioners report that they have held forty meetings, and have examined such persons as they thought necessary, and have also received written statements from various persons and from the various medical bodies. They have also had before them the evidence given before the Select Committee appointed in 1879 and 1880 to consider the Bills for the Amendment of the Medical Acts.

The report is arranged under the following heads:

- I. Grant of Medical Licences.
- II. The General Medical Council: Constitution, Functions, Powers and Procedure, Relations to the Universities, Colleges, and Medical Bodies, and to the Medical Profession.
- III. Courses of Education.
- IV. Courses of Examination.
- V. Grant of Medical Degrees, Memberships, Fellowship, Licences, and other Diplomas of Universities, Medical Colleges, and other Bodies.
- VI. Privileges conferred upon Registered Practitioners; Restrictions, Disabilities, and Penalties imposed upon Practitioners not so registered.
- VII. Practice in the Queen's Possessions, out of the United Kingdom, of Registered Medical Practitioners; and Practice in the United Kingdom of Medical Practitioners educated in the Possessions out of the United Kingdom or in a Foreign State.
- VIII. The Conditions or Manner under or in which Medical Practitioners are entered in or struck off the Register of Medical Practitioners.
- IX. The Medical Act, 1858, and the Acts amending the same.

1. *Grant of Medical Licences.*—After a brief sketch of the present system of medical licensing, the Commissioners remark that the Act of 1858 would appear to have been passed rather in the interests of the general public than with a view to protecting the separate interests of the medical profession. Parliament was not prepared to enact that registered persons alone should practise medicine or surgery, but it seems to have been assumed that, if a statutory distinction were drawn between registered and unregistered practitioners, the public would know how to protect itself against unqualified persons. At the same time, the importance of obtaining the concurrence of the universities and medical corporations made it impossible then to do more than to require that their examinations should be subject to the supervision of a central authority, appointed to the extent of more than two-thirds by themselves, and having only a power of representing their shortcomings to the Privy Council.

The licensing bodies being nineteen in number, dissimilar in con-

stitution, and conferring different titles, it was not to be expected, and not to be desired, that their examinations should be uniform or even approximately equal in standard.

The large majority of the licensing authorities have shown a praiseworthy readiness to introduce improvements into their examinations, whether originated by themselves or suggested by the General Medical Council. Since 1858, all the authorities have agreed to insist on a preliminary examination of each intending medical student; and the examinations in science, and in most cases the practical examinations, have been improved.

On the other hand, it has been stated that not only do the diplomas and degrees of these medical authorities imply very different standards of skill and knowledge, but that in some cases the possession of a diploma affords no guarantee that the practitioner holding it possesses a competent knowledge of medicine, surgery, and midwifery.

Another prominent defect of the present licensing system lies in the fact that nearly all the medical corporations grant diplomas in medicine alone or in surgery alone. Further, even the diploma of the Royal Colleges of Surgeons of England and Ireland does not imply a knowledge of midwifery. There is no point of medical reform on which there is so general an agreement as that the holding of a medical licence ought to imply the attainment of a sufficient standard of proficiency in all the three essential branches of medical practice—medicine, surgery, and midwifery.

Again, new universities will doubtless from time to time be created in the United Kingdom, each of which will, of course, lay claim to the privilege of giving a medical degree and of thereby becoming a licensing authority. Already the Victoria University has claimed this; and it is not easy to see on what reasonable ground such claims can be resisted. Yet the fact of the licensing bodies being even so numerous as they already are makes the adequate visitation of their examinations a matter of great difficulty and expense. Moreover, were the present system continued, new universities would also claim to send representatives to the Medical Council—a body generally allowed to be already too large.

A proposal has been made that no limit should be fixed as to the number of licensing universities and corporations, provided that in every case coadjutor examiners, sent by a central authority, be admitted by the corporation or university to its examining board. Having considered this proposal, the Commissioners are unable to recommend its adoption.

Another plan that has been suggested is, that an examination, conducted on behalf of the State, should be the necessary preliminary to enrolment on the *Medical Register*; and that such examination should be open only to those who had previously obtained a complete qualification by licence or degree from some chartered medical authority or authorities. To the arguments in favour of such a plan, the Commissioners answer, that the general voice of the profession is opposed to any plan which will add a new examination; and this objection is based not only on the additional expense, but on the distraction of the students by two different examinations.

It is the opinion of the Commissioners that the holding of a licence ought to be conclusive evidence of sufficient proficiency in medicine, surgery, and midwifery; and they have arrived at the conclusion that such a standard of proficiency can only be ensured by reducing the number of licensing authorities.

They propose, in general terms, that there shall be one Medical Council, and that, in each of the three divisions of the United Kingdom, there shall be a divisional board, representing all the medical authorities of the division; that the right of admitting to the *Medical Register*, and a general control over the proceedings of the divisional boards, shall vest in the Medical Council; and that, subject to such control, each divisional board shall, in its own division, conduct the examinations for licence.

The detailed proposals with regard to divisional boards are as follows. 1. In each division of the United Kingdom a divisional board shall be appointed, whose certificate shall be necessary for admission to the *Medical Register*. 2. Each divisional board shall contain one

or more delegates of each chartered university and medical corporation, whether now existing or hereafter to be created. 3. The number and proportion of such delegates should, in the first instance, be fixed by Parliament, due regard being had to the special claims of particular universities and corporations, as, for instance, in Scotland, the Universities of Edinburgh, Glasgow, and Aberdeen; and, in England, the Colleges of Physicians and Surgeons; and provision being made for a decennial revision of the allotment of members, with a view to altering the proportion, if changes in the relative importance of the bodies hereafter render such alteration desirable; such revision to be made by the Medical Council subject to appeal to the Privy Council. 4. The members of the divisional board should be elected from time to time for a term not exceeding five years, and should be capable of re-election.

The duties and functions of each divisional board should be: 1. To appoint a certain number of persons to be members of the Medical Council; 2. To prepare regulations for a course of professional study and rules for examination, so far as may be necessary to secure the requirements and the standard prescribed by the Medical Council; 3. To nominate from time to time the medical educational bodies, whose certificates shall be accepted as to sufficiency of education, and from time to time to expunge, when desirable, any so nominated; 4. To take all necessary steps, by inquiry or otherwise, to ascertain the sufficiency of the education given in each medical school in the division; 5. To appoint the examiners for the divisional board examinations, and to supervise those examinations; 6. To visit from time to time any separate professional examinations conducted in the division, which are accepted by the Medical Council; 7. To take such cognisance as may be necessary of the preliminary examinations, and to keep a register of the medical students in the division; 8. To receive and act upon the reports of the examiners, and to report, after each examination, the result thereof to the Medical Council; 9. To make an annual report of their proceedings to the Medical Council.

Power should be given to a divisional board to delegate any of its functions or powers to any committee of its number, of which the quorum ought not to be less than three. Every decision, however, of a committee should be subject to revision by the divisional board at a subsequent meeting. Any corporation or individual aggrieved by the action of a divisional board ought to be entitled to an appeal to the Medical Council. All proposals for regulations should proceed, in the first instance, from the divisional boards, as directly representing the professional and teaching bodies, but always subject to the subsequent approval of the Medical Council.

11. *The General Medical Council.*—In proceeding to speak of this body, the Commissioners express their opinion that it is clearly proved that the General Medical Council has rendered valuable services to the profession and to the public. To it, the universal adoption of a preliminary examination for intending medical students is mainly due. The Council has also elaborated and published full and detailed recommendations, which have had a very beneficial influence upon the education and examinations of medical students. Further, it has instituted visitations, which, so far as they have gone, have had an excellent effect in improving particular examinations, and generally raising the standard of examination.

Whether the Council has in these respects done all that might have been done, appears open to question. It is not, however, difficult to discern causes which may probably have influenced the Council; the expense of conducting frequent and systematic inquiries; the great power of the individual medical authorities, of which most send a representative to the Council itself; the desire to persuade rather than to compel; and, also, the constant expectation of further legislation.

The Commissioners propose that the Medical Council shall consist of eighteen members, chosen for a term of five years, and eligible for re-election; of whom six shall be nominated by the Crown; two elected by the registered members of the medical profession resident in England; one by the registered members resident in Scotland and in Ireland respectively; four by the English Divisional Board, and two by the Scotch and Irish Divisional Boards respectively. They suggest that one or two distinguished persons, not members of the medical profession, might with advantage be appointed by the Crown.

The Branch Councils will cease to be necessary, as the divisional boards will take their place. The invested funds belonging to each Branch Council should be transferred to the divisional board.

Regarding the direct representation of the profession upon the Medical Council, the Commissioners remark that it seems highly important that the profession should have full and complete confidence in the Council; and seeing that the governing bodies of the medical corporations can hardly be said to represent the great majority of

practitioners, they think it advisable to give the general practitioner an effective voice in the body which will be the principal authority of the medical profession. They see no reason to suppose that the members elected by direct representation will be less eminent than those nominated either by the Crown or by the divisional boards.

The Medical Council should annually elect from among their own number a president; who should be eligible for re-election. It should be the sole licensing authority, and should receive from the divisional boards annual reports of their proceedings. It ought also to be in general communication with the boards. The Council should also have power to visit any examinations, to make any inquiries, and to call for any information from the medical schools, the medical authorities, or the divisional boards. The Council should also have power to take such evidence and to make such inquiries as they think fit, with a view to arriving at a decision on any matter. The Council should also have power to vary or annul any resolution of a divisional board; and in any such case the decision of the Council should take effect and should hold good until reversed on appeal by the Privy Council. In the event of a divisional board failing to perform its duties, the Medical Council should be empowered to act in its stead. The Medical Council ought also to take proper steps to ensure, as far as possible, equality in curriculum and examination between the three divisional boards.

It is not, however, intended that the Council shall be the executive, or even the initiating, body in questions relating to medical education and examination. But the regulations will originate with the divisional boards, which also will be the executive bodies for administration; and the proposals of the boards will be submitted to the Council for approval or variation.

The Council should be allowed to delegate any of their powers to any committee of their number, of which the quorum should not be less than three. Every decision of a committee should, however, be subject to revision by the Council.

Any corporation or individual aggrieved by the action of the Medical Council ought to be entitled to an appeal to the Privy Council.

With the administrative functions in connection with the *Medical Register* and *Pharmacopæia* hitherto discharged by the Medical Council, the Commissioners do not propose to interfere.

III. *Courses of Education.*—The Commissioners state that, although they have recommended that the divisional boards should prepare, and submit for the approval of the Medical Council, regulations for courses of study, these should be only a general outline of what is necessary. It would be a mistake to introduce absolute uniformity into medical education. In certain matters of general importance, such as the duration of study and the age at which a student should be permitted to practise, common regulations ought to be laid down; but nothing should be done to weaken the individuality of the universities and corporations, or to check emulation between the teaching institutions.

IV. *Courses of Examination.*—The Commissioners agree in the opinion that every intending medical student ought to pass an examination in general education before entering on medical study. As the purpose of this examination is only to test the possession of a reasonable amount of general culture, its subjects should not be of a technical or professional nature, and that care should be taken to prevent its standard from being unduly raised or lowered; and, further, a sufficient diversity of subjects should be included in it to allow of candidates making a sufficient selection according to their previous education and mental qualifications. The general scope of the examination should be defined by the Divisional Boards, subject to the approval of the Medical Council; but the conduct of the examination should be left to the Universities or such other educational or examining bodies as may be approved by the Medical Council.

The system under which every student of medicine is now required to be registered, on passing his preliminary examination, should be continued. The full period of medical study should be passed after the date of registration. The registration of medical students ought to be placed under the charge of the divisional boards, and an officer of each board should keep a list of the names. A person ought to be able to register himself as a medical student on producing, or forwarding, to the divisional board of that part of the United Kingdom in which he is residing a certificate of his having passed a preliminary examination as required. Each divisional board should transmit to the registrar of the Medical Council a list of all medical students registered during the preceding six months in the division.

During the course of medical study, professional examinations, other than the final examination, ought to be held by examiners of the divisional boards. But power should be given to the Medical Council to accept the results of similar professional examinations conducted by the

separate medical authorities, on being satisfied that such examinations are of a sufficient standard.

The final examination in systematic and clinical medicine and surgery, and in midwifery, ought to be conducted by the examiners of the divisional boards in every case.

With regard to the Scottish Universities, it has been proposed that they should retain their licensing power, on condition of admitting a certain number of examiners *ab extra*. To this request the Commissioners are unable to accede. They readily acknowledge all that the Scottish Universities have done for medical teaching and examination; and they do not propose to interfere with their teaching, nor do they believe that students will cease to recognise the cheapness and excellence of their education. The Commissioners propose that all their examinations, save the final one, should, if satisfactory to the Medical Council, be accepted by the divisional board; and they require from them no concession which is not required from every other University and corporation in the kingdom. It must not, however, be imagined that the licensing power is proposed to be transferred to a central authority in which the Scottish Universities will have no share. On the Scottish divisional board, the Scottish Universities will possess a preponderating influence which will be felt in many ways. They will send to the board a majority of its members. The examinations will doubtless in many cases be held in their halls, and it is only natural to suppose that any requests which they may make will have great weight with the Scottish divisional board and with the Medical Council.

There should be power to hold the examinations of the divisional board at more than one place in each division of the kingdom, if this should be found desirable. The examiners, while placing in one class all candidates who pass, should have power to state that any individuals have passed the examination with distinction.

The Medical Council should take steps to insure that equality of value should be assigned to the same subjects in the examinations of all the divisional boards, and that the standard for passing in each subject and in the whole examination should be the same.

Subject to the discretion of the Medical Council, examiners ought not to fill the office of examiner for a continuous period of more than from four to six years.

With a view to promoting approximate equality in the examinations, some of the examiners in each division may with advantage be selected from another division of the United Kingdom.

The fees for admission to the examinations of the divisional boards should be sufficient to cover the cost of the expenses of the divisional board, and also to provide the sum required to compensate the medical authorities, or such of them as may be entitled to compensation, for any pecuniary losses they may sustain by reason of the abolition of their privilege of conferring a licence to practice; provided that the fee to be paid by medical graduates, or persons holding University certificates of having passed the professional examinations qualifying for admission to the final examination of the divisional boards, shall not exceed their proportion of the sum sufficient to cover the cost of the examination and other expenses aforesaid; but this reduction of fee is not to be allowed to a member of any University which obtains such compensation as aforesaid. The divisional boards should prepare schemes for the division of the surplus fees arising from the examinations applicable to compensation, which schemes should be submitted to the Medical Council for approval.

V. *Grant of Medical Degrees, Memberships, Fellowships, Licences, and other Diplomas by Universities, Medical Colleges, and other Bodies.*

—The Commissioners do not propose to interfere with the present powers of Universities or corporations to confer their titles, with or without examination. But in the case of persons entitled to be registered, a discretion should be given to the Medical Council to permit these titles to be registered or not.

Each medical corporation ought to receive a statutory power to accept the certificate of a divisional board, in lieu of any examination, for admission to its lowest qualification; and each University should receive a statutory power to accept the same certificate in lieu of its final examination in systematic and clinical medicine and surgery and in midwifery for primary graduation.

The Commissioners deprecate any interference with the examinations of the medical authorities for their higher titles. To higher titles they attach the greatest value, as a means of encouraging the acquisition of knowledge and skill in the medical profession.

They recommend that the Victoria University be placed without delay on the same footing as the older universities with regard to the granting of medical degrees.

They do not propose to interfere with the discretion of the universities or medical corporations in the matter of fees.

VI. *Privileges conferred upon Registered Practitioners; Restrictions, Disabilities, and Penalties imposed upon Practitioners not so Registered.*—The Commissioners consider it undesirable to attempt to prevent unregistered persons from practising, but, at the same time, they should be prevented from representing themselves as being registered, or from assuming titles which would lead the public to believe that they are regular medical men. Prosecutions for offences under the Medical Acts should be undertaken in England by the Public Prosecutor, or by anybody with the assent of the Attorney-General; in Scotland by the Procurator Fiscal, or by anybody with the assent of the Lord Advocate, and in Ireland by the Crown Prosecutor, or by anybody with the assent of the Attorney-General. The sums of money arising from conviction and recovery of penalties should be paid to the Medical Council.

With regard to the admission of women to the practice of medicine, the Commissioners remark that, if divisional boards be appointed, it appears only fair and reasonable that women should be admitted to the examinations on the same terms as men, and should, if successful, be entitled to registration. The commissioners acknowledge the moderation with which the views of women have been laid before them, and the unwillingness of their advocate to retard medical reform by bringing forward extreme demands.

VII. *Position in Her Majesty's Possessions out of the United Kingdom of Registered Medical Practitioners; Position in the United Kingdom of Medical Practitioners educated in Her Majesty's Possessions out of the United Kingdom, or in a Foreign State.*—After reviewing the present condition of these matters, the Commissioners say that, in the public interest it is not desirable to hinder competent foreign or colonial doctors from practising in the United Kingdom; and medical men in England seem to be generally agreed that, if a satisfactory guarantee of competency can be obtained, doctors holding foreign and colonial diplomas ought to be registered in the United Kingdom without further examination.

It is evident that there must be considerable difficulty in discriminating between the diplomas given by different universities abroad and in the colonies. The Commissioners cannot, however, suggest a better solution of the difficulty than that proposed in the Government Bill of 1880.* The duty of discriminating between the different foreign and colonial diplomas is thereby entrusted to the Medical Council; and safeguards are provided against the possibility of a British subject obtaining a foreign or colonial diploma merely for the purpose of avoiding the medical examinations in England, Scotland, or Ireland.

VIII. *The Conditions and Manner under or in which the Medical Practitioners are entered in or struck off the Register of Medical Practitioners.*—If the recommendations as to divisional boards be adopted,

* The provisions of the Bill in regard to foreign and colonial diplomas are as follows.

7. Where a person shows that he holds some recognised medical diploma or diplomas (as hereinafter defined) granted to him in a British possession, and that he is of good character, and either that the grant of such diploma or diplomas occurred when he was not domiciled in the United Kingdom, or in the course of a period of not less than five years, during which he resided out of the United Kingdom (or if he was practising in the United Kingdom at the passing of this Act, that he has practised medicine or surgery, or a branch of medicine or surgery, for not less than ten years, either in the United Kingdom or elsewhere), such person shall, upon payment of the registration fee, be entitled, without examination in the United Kingdom, to be registered as a colonial practitioner in the *Medical Register*.

8. Where a person shows that he obtained some recognised medical diploma or diplomas (as hereinafter defined) granted in a foreign country, and that he is of good character, and either that he is not a British subject, or that, if a British subject, he has practised medicine or surgery, or a branch of medicine or surgery, for more than ten years elsewhere than in the United Kingdom (or, if he was practising in the United Kingdom at the time of the passing of this Act, for not less than ten years, either in the United Kingdom or elsewhere), and either continues to hold such diploma or diplomas, or has not been deprived thereof for any cause which disqualifies him for being registered under this Act, such person shall, upon payment of the registration fee, be entitled, without examination in the United Kingdom, to be registered as a foreign practitioner in the *Medical Register*.

9. The medical diploma or diplomas granted in a British possession or in a foreign country, which are to be deemed such recognised medical diploma or diplomas as are required for the purposes of this Act, shall be such medical diploma or diplomas as may be recognised for the time being by the General Medical Council as furnishing a sufficient guarantee of the possession of the requisite knowledge and skill for the efficient practice of both medicine and surgery, including therein midwifery, and as entitling the holder thereof to practise medicine or surgery, including therein, midwifery, in such British possession or foreign country.

If a person is refused registration as a colonial practitioner or as a foreign practitioner, the medical registrar shall, if required by him, state in writing the reason for such refusal; and, if such reason be that the medical diploma or diplomas held or obtained by such person are or are not such recognised medical diploma or diplomas as above defined, such person may appeal to the Privy Council: and the Privy Council, after communication with the General Medical Council, may dismiss the appeal, or may order the General Medical Council to recognise such medical diploma or diplomas, or any of them, and such order shall be duly obeyed.

MR. DARWIN'S WILL.—The will of the late Mr. Charles Robert Darwin, of Down, near Beckenham, dated September 27th, 1881, was proved on the 6th instant, by William Erasmus Darwin and George Howard Darwin, the sons, the executors, the value of the personal estate amounting to upwards of £146,000. The following is a list of the bequests: The testator leaves to his son William Erasmus Darwin the family portraits and papers, all medals, the silver candlesticks presented to him by the Royal Society, his manuscript of the voyage of the *Beagle*, and his manuscript zoology; to his son Francis, his scientific library; to his wife, Mrs. Emma Darwin, £500, all his furniture, plate, books, effects, horses and carriages, and his residence at Down for life; and to his friends Sir Joseph Hooker and Thomas Henry Huxley, £1,000 each, free of income tax. The residue of the real and personal estate is to be paid over, trust for his wife for life, and, after her death, to his two eldest sons, to be divided between them, and, in the event of either of them dying without issue, to be divided between the other two, and the residue of the estate is to be divided equally among his children, and the income to be made to his children are to be brought into account at the division.

ABSTRACT

OF

THE HARVEIAN ORATION.

Delivered on Saturday, June 24th.

By GEORGE JOHNSON, M.D., F.R.S.,

Professor of Clinical Medicine, King's College, and Senior Physician to King's College Hospital.

THE oration was directed to a refutation of the attempt made in Italy to claim for Cesalpino the merit of having anticipated Harvey in the discovery of the circulation of the blood. Dr. Johnson was indebted to Dr. Pantaleoni, of Rome, for a copy of the two orations delivered by Professors Scalzi and Maggiorani at the unveiling of the monument to Cesalpino at Rome in 1877. They both mentioned with praise a work on the subject by Dr. Ceradini, professor of physiology, in the University of Genoa,* and this book chiefly served Dr. Johnson as the text for his oration. We can only give his remarks in a somewhat curtailed form.

Dr. Ceradini's statement with regard to Harvey is to this effect—that during the four years from 1598 to 1602, which Harvey spent as a student at Padua, he must have become acquainted with Cesalpino's writings, some of which had been published about thirty years before; that in these writings Harvey must have seen that the true doctrine of the circulation of the blood was clearly set forth and completely demonstrated; that Harvey designedly delayed the publication of his work, *De Motu Cordis et Sanguinis*, until 1628, twenty-five years after the death of Cesalpino, and nine years after the death of Fabricius, when his adversaries could adduce no proof that his affected ignorance of the discovery of Cesalpino was a mere pretence. Ceradini quotes the well-known passage in which Harvey expresses his fear lest, through the novelty of his discovery, he should have all mankind for his enemies, and on this he makes the following comment: "No one can doubt that by these subterfuges the Englishman designed to usurp for himself the glory of a discoverer."

Harvey's adverse critic asserts that his doctrine of the general circulation was based almost exclusively on the presence of valves in the veins, which had been first discovered, or at any rate more fully demonstrated and described, by Fabricius; and Ceradini affirms that this evidence in support of the doctrine of the circulation is all that Harvey could add to Cesalpino's prior and complete demonstration.

Dr. Ceradini admits with regret that some eminent physiologists had pronounced in favour of the claims of Harvey to be the real discoverer of the circulation of the blood; but this perversity of judgment he attributes either to ignorance or to bad faith. In particular he declares his belief that the illustrious Haller and two of Cesalpino's own countrymen, Malpighi and Baglivi, had their judgments perverted by the lamentable fact that they had been elected Fellows of the Royal Society of London.

If Cesalpino's discovery and demonstration of the course of the blood were so complete and unmistakable as his recent advocates maintain, it is remarkable that his contemporaries and immediate successors, to whom his writings must have been well known, should have remained in ignorance of the true doctrine of the circulation. Professor Scalzi, indeed, suggests that Harvey may have learnt the new doctrine of Cesalpino from his famous anatomical teacher Fabricius; but, unfortunately for this suggestion, the work of Fabricius *De Venarum Ostiis*, which was published in 1603, a year after Harvey's departure from Padua, and rather more than thirty years after the publication of Cesalpino's chief treatise (*Questionum Peripateticorum libri quinque*, Florent. 1571), affords conclusive evidence of its author's entire ignorance of the circulation of the blood through the systemic vessels.

Professor Ceradini admits that Fabricius had not the most remote

idea of a circulation of the blood. If Cesalpino had given an intelligible account of the circulation through the systemic vessels, his fellow-countryman Fabricius, of all men, would have been the least likely to be ignorant of it; and his ignorance may be taken as a fair index of the knowledge of his contemporaries.

With regard to the structure of the heart and its valves, Cesalpino says that it is so arranged as to allow continuous motion from the veins to the heart, and from the heart to the arteries. In the chapter "De Pulmonis Constitutione," he says "the hot blood is carried from the right ventricle by the artery which Galen calls the vena arterialis into the lung, and is again conveyed to the heart by the vein proceeding from the left ventricle, which Galen calls the arteria venalis. Meanwhile, in its passage, the blood is tempered by the cold air inspired into the branches of the windpipe which lie near the veins and arteries, so that by a kind of circulation the blood is converted into the nature of spirit, first in the right ventricle, then in the left; therefore, the vessel leading from the right side of the heart is a true artery, having a double tunic, in order that the spirits should not escape from it. The vessel entering the left side of the heart is a vein consisting of a single tunic, because it contains blood which has been already refrigerated in the lung."

It appears that Cesalpino's account of the pulmonary circulation is identical with that given by Servetus and Columbus, except that in one sentence (being apparently still under the influence of Aristotle and Galen) he speaks of the passage of blood from the right to the left side of the heart as taking place partly through the septum.

The word circulation is here for the first time used to describe the movement of the blood from the right to the left side of the heart. Cesalpino's fellow-countrymen make much of this word, and argue as if it implied a knowledge, not only of the pulmonary, but also of the systemic circulation; but this term is employed by Cesalpino only with reference to the passage of the blood through the lungs. This restriction of the word is *pro tanto* evidence that he was ignorant of there being a continuous passage of blood from the systemic arteries to the veins, identical with that which had been found to occur through the pulmonary vessels, and to which the term circulation is equally applicable. Yet to any one who reads Dr. Ceradini's account of Cesalpino's doctrine of the general circulation without reference to the original publications, it would seem obvious that the Italian physiologist had completely demonstrated the perpetual passage of the blood from the aorta through the capillaries to the veins, and from the veins to the right side of the heart, and thence again through the lungs to the left side of the heart.

The word *capillamenta* is occasionally used by Cesalpino, and this his modern interpreters invariably translate by the term "capillaries". Dr. Ceradini maintains that so complete were Cesalpino's proofs of the systemic circulation, that Malpighi's microscopical demonstration of the capillary vessels could add nothing to the certainty of his doctrine. Professor Scalzi also credits Cesalpino with a complete knowledge of the capillary circulation, and laments that Harvey, having misunderstood his Italian predecessor's teaching, wandered from the track which had been marked out by Cesalpino, and substituted for the Italian's demonstrated capillaries his own theory of "porosities in the tissues", through which the blood was supposed to pass from the arteries to the veins. To credit Cesalpino with having acquired a knowledge of the capillary vessels without the aid of the microscope, is to suppose him to have been endowed with superhuman sagacity.

Dr. Johnson next gave some extracts have reference to Cesalpino's use of the word "capillamenta". He says: "The vena cava and the aorta, after entering all the viscera except the heart, pass beyond them, or, if any come to an end, they are resolved into capillamenta (hairlike filaments), and do not pour their blood into a cavity, for nowhere except in the heart is the blood contained in a cavity out of a vein." He goes on to say that "the heart is the origin, not only of all the blood-vessels, but also of the nerves, the heart being the centre of the emotions which pass thence to the external parts, whilst sensations pass from the external parts to the heart."

Cesalpino confirms Aristotle's doctrine that the main function of the brain is to cool the blood contained within it; and, in the course of his remarks on this, he says:

"It is necessary that the venules should be continued and pass out from the brain to the organs of sense; but nothing is seen to pass out of the brain but the nerves; the nerves, therefore, must be these numerous venules, collected, not into one common canal, but into a body composed of many and most minute canals. Therefore, a nerve is divisible lengthways, for the venules terminate in straight fibres constituting the nerves." This, Cesalpino says, is Aristotle's doctrine. "It is the opinion of Aristotle that, from the branches of the aorta going to the head the nerves of the brain arise. Those passages which

* *La Scoperta della Circolazione del Sangue*. Del Dott. G. Ceradini, Professor di Fisiologia all' università di Genova. Milano: 1876.

Aristotle describes going from the veins about the brain to the eyes, what are they but the nerves of vision? But it is unwise to doubt that there are passages within them, because a large canal is not visible. For as we know that a hair is perforated, although its canal is not visible on account of its minuteness, so by other signs we may perceive the nerves to be tubular, although their canals are not visible."

It is evident from these passages, and others, that Cesalpino's "capillamenta", which Professors Ceradini and Scalzi convert into capillary blood-vessels, were the supposed filamentous terminations of arteries and veins in nerves; and that through the tubular nerves the spirituous part of the blood was supposed to pass, and thus to confer a sentient power upon the nerves. But in no single passage of Cesalpino's works is there to be found any mention of the "capillamenta" as channels by which the blood passes from the arteries to the veins; and it is particularly stated in one passage, that the nerves which are supposed to intervene between the capillamentous terminations of the arteries and veins do not convey blood.

Evidence of Cesalpino's entire ignorance of a system of capillary blood-vessels is afforded by the fact that, when he refers to the communication between the arteries and the veins, he always speaks of this as occurring by inosculation, "which the Greeks call anastomosis".

Again, a reference to Cesalpino's description of the supposed cooling influence of the air upon the blood affords collateral evidence, if such were needed, that he had no conception of thin-walled capillary blood-vessels, through which the air and the blood exert a mutual influence upon each other. Thus, in describing the relation of the blood-vessels to the air-tubes in the lungs, he remarks that, "with good reason, the branches of the windpipe are placed by the side of the pulmonary vein, not by the pulmonary artery;" because "the vein, having a more simple texture, and consisting of only one thin tunic, can be more readily refrigerated (i.e., by contact with the air), and, besides, the dilatation and contraction of the air-tubes would have interfered with the pulsation of the artery if they had been placed near together."

Dr. Ceradini repeatedly asserts that Cesalpino proved and demonstrated the systemic circulation by his observation of the effect of obstructing the flow of blood through the veins. In the treatise *Questiones Medice*, Cesalpino says: "It is worthy of inquiry why, when a ligature is applied, the veins swell beyond and not on this side of the obstruction, which those who practise venesection know by experience; but the opposite ought to occur if the motion of the blood and spirit is from the viscera over the entire body; for the passage outward being blocked, a swelling of the veins should occur on this side of the ligature." In explanation of this, it is to be observed that the orifices of the heart are so arranged by nature that there is an entrance from the vena cava into the right ventricle, whence there is an open passage into the lungs, and from the lungs there is an entrance into the left ventricle, and thence into the aorta, valves being placed at the orifice of the vessels to prevent reflux. There is thus a perpetual movement from the vena cava through the heart and lungs to the aorta." Up to this point, Cesalpino's description is clear and correct; but it goes not beyond the knowledge of his contemporaries. After this, confusion begins to be apparent. He makes statements and arguments regarding the circulation during the waking condition and during sleep, which may be summed up thus. During wakefulness, the blood passes from the aorta to the nerves; while, during sleep, it passes from the arteries by the anastomoses, not by capillaries, through the veins to the heart. According to this view, the swelling of the veins on the distal side of the ligature should occur only during sleep, and the only explanation of its occurrence at other times suggested is, that perhaps when a vein is obstructed "the blood returns to its source, lest being cut off it should be extinguished". Surely, if Cesalpino had known that there is a continual flow of blood from the branches of the aorta to the nerves, and thence to the heart, he would in a sentence have explained the fact, and his explanation of the fact constantly offered by those who practise venesection; but for want of this knowledge, he is obliged to resort to the explanation of the phenomenon which is given by the ancients, and which he himself had adopted.

Dr. Ceradini, in his explanation of the expression "outward flow to the heart", and return to the inferior parts, like Euripus", is a complete failure. He quotes from Aristotle, "But he quotes a sentence from Harvey with a view to show that it is identical with Cesalpino's statement. The sentence in Harvey's letter to Dr. H. Johnson, which he quotes, is "I have observed that the blood in the veins moves out from the heart, and returns to the heart by the veins, and returns from this to the heart by the veins, and with vessels that are reflex, in such mass and manner, that it is not possible to see any way in a circuit." Dr. Ceradini then says, "The essential difference between the two passages. If Cesalpino had written the sentence quoted from Harvey, he might indeed have been credited with a knowledge of the

systemic circulation; but neither that nor anything like it is to be found in any part of his writings.

The passages in Cesalpino's works which show most conclusively that he could have had no idea of a continuous flow of blood from the systemic arteries to the veins, on its way back to the heart, are those which describe, or evidently imply, a passage of the blood from the trunk to the branches of the veins. Thus, in the *Ars Medica* the following statement occurs: "But the vena cava distributes branches throughout the whole body, in order that, together with the arteries, they may nourish every part. From the same vena cava some large branches, called emulgent veins, go to the kidney, by which (veins) the superfluous water of the blood is excreted and carried by the ureters to the bladder." There is a parallel passage in the *Ars Medica*: "The fountain of blood in the heart being distributed into four vessels, viz., the vena cava, the aorta, the pulmonary vein, and artery, irrigates the whole body like the four rivers proceeding from Paradise." Curiously enough, Dr. Ceradini quotes this passage in illustration of Cesalpino's clear view of the circulation.

Cesalpino says no one denies the fact mentioned by Galen, that division or ligation of the spinal cord, or of a nerve, paralyses the parts below. But he goes on to argue that the same result follows the obstruction of all the vessels of the neck, because then the influence of the heart can no longer pass to the nerves. "But it is not sufficient that the arteries of the neck alone be closed, which Galen sometimes found might be done without harm, for then a power is transmitted from the heart by the veins to the same parts, since there are inosculations between the veins and the arteries, not only in the heart, but along their whole course."

The most curious illustration of the manner in which Cesalpino's compatriots endeavour to obtain for him the credit of originality and completeness with regard to the circulation, is afforded by a lecture by Dr. Del-Vita, which is made up of extracts from all Cesalpino's writings, the original Latin and the Italian translation being placed in parallel columns; and the quotations from various treatises are so pieced together as to read like a clear and continuous description of the circulation as we now understand it. The following brief paragraph is an illustration of the method adopted. "The blood, therefore, is carried from the right ventricle of the heart by the pulmonary artery, and again returned to the heart by the pulmonary vein, which proceeds from the left ventricle; from the heart it passes into the arteries, from the arteries to the veins, from the veins to the heart; so there is a perpetual movement from the vena cava through the heart and lungs to the aorta, and by the arteries into the whole body." This description of the circulation, which occupies ten short lines, is not taken from any one part of Cesalpino's writings, but is extracted, as the letters of reference show, from six different parts of three separate treatises, namely: *Questiones Peripateticæ*, *Questiones Medice*, and the work *De Plantis*. If Cesalpino had anywhere described the course of the blood, as it was first revealed by Harvey, there would have been no need to resort to such a patchwork proceeding as this.

Great and various as were the acquisitions of Cesalpino in different departments of natural science, more especially in botany, in which science he had the merit of great originality, as regards the physiology of the circulation his information was not in advance of that possessed by his immediate predecessors and contemporaries. Professor Ceradini relies mainly upon three distinct pieces of evidence to establish his fellow countryman's claim to be regarded as the discoverer of the circulation: (1) his use of the word "circulation;" (2) his employment of the word "capillamenta;" and (3) his observation of the effect of obstructing the current of blood in the veins. But a critical examination of each of the points has afforded evidence of Cesalpino's ignorance rather than of his knowledge of the circulation.

After giving an extract from Harvey's treatise *On the Motion of the Heart and Blood*, which affords a good example of his style, and which contains in a few sentences an illustration of the process of observation and reasoning which led up to his great discovery of the systemic circulation, Dr. Johnson concludes as follows.

Harvey, as we have seen, obtained his anatomical knowledge at Padua under the famous Fabricius, of whom he speaks with gratitude and reverence as "the celebrated Hieronymus Fabricius of Aquapendente, a most skilful anatomist and vascularist." While, therefore, we cannot concede to Cesalpino the honour of having discovered the circulation of the blood, a distinction which he himself would not probably have thought of claiming, we will not estimate his contributions to physiology as being less than the great and important ones which he made in the great and important branches of anatomy, which he could not have made but for the discovery which, through him, all ages and by all civilised nations, will be founded upon as the foundation of modern physiology, and therefore of scientific medicine.

CLINICAL LECTURE

ON

THE ANTISEPTIC TREATMENT OF
PULMONARY CONSUMPTION.*Delivered at King's College Hospital.*By I. BURNEY YEO, M.D., F.R.C.P.,
Physician to the Hospital.

GENTLEMEN,—It is but a short step from the consideration of the "contagiousness of consumption," and the infective quality of tuberculosis, concerning which I last addressed you, to the question of the antiseptic treatment of that disease.

If the expectoration, if the matters discharged from the air-passages of a phthisical patient, swarm with infective micro-organisms, as we are assured on the highest authority is the case; if the active invading area of the diseased portion of the lung be also crowded with these same infective bacilli, what treatment can be more rational and more appropriate than that which aims at destroying the life and activity of these organisms? indeed, I might ask, what treatment can be rational or appropriate which neglects to follow this indication? The only questions that admit of argument in connection with this subject are these two: 1. Are we satisfied that the presence of these infective organisms in phthisical lungs, and their causal relationship with phthisis, have been demonstrated? And, 2. Have we the means of treating this disease antiseptically—that is to say, do we possess, in an applicable form, the agents which will destroy these micro-organisms, and so arrest the progress of the disease?

With regard to the first question, I have lately had careful search made by very competent workers with the microscope, in the expectation of patients with advanced phthisis, as well as in sections of typical tuberculous mesenteric glands; but they have not yet succeeded in finding the organisms described by Koch. But it does not follow that they were not there; the method of investigation needed for their discovery and demonstration is no doubt a difficult and delicate one, and we must not be surprised or discouraged if, notwithstanding our best efforts, we fail in our earlier attempts to demonstrate that which has cost Koch and others so much time and labour to discover. And already Koch's method of demonstrating these organisms in the sputa of phthisical patients has been improved upon by Dr. Ehrlich.

But just as a belief in the contagiousness of phthisis has long existed in some minds, so also a tendency to apply to it an antiseptic mode of treatment has long prevailed with some physicians. For my own part, I may say that, during the last ten years, I have repeatedly prescribed the inhalation of antiseptic vapours in cases of phthisis, as well as other treatment which I have believed to be also antiseptic; and you must often have noticed, in the wards of this hospital, that all my phthisical patients have been in the habit of wearing a form of respirator-inhaler for the purpose of inhaling antiseptic vapours, which I shall immediately describe to you.

In a paper on "Recent Researches in the Treatment of Phthisis," which I contributed to the annual meeting of the British Medical Association in 1876, I called attention to the progress that had been made in the direction of the antiseptic treatment of this malady, and I described several methods of applying this form of treatment; and, since then, several physicians, who have had large opportunities of testing its usefulness, have published some very successful results as following this plan of treatment.

Moreover, it would not be difficult to trace an antiseptic action (assuming phthisis to be dependent on the presence of an infective organism in the lungs) in some of the remedial measures of greatest repute in the treatment of this disease. The beneficial effects which are reported from the employment of the sulphurous waters of Eaux Bonnes (Dr. Leudet, *Les Eaux Bonnes dans le Traitement de la Phthisie Pulmonaire*), and of Caunterets, and of the so-called "arsenical" waters of Mont Dore, may they not be due to an antiseptic action? for the explanations of their mode of action hitherto put forth are eminently unsatisfactory. For example, when it is suggested that the sulphurous springs of Eaux Bonnes cure phthisis by "the formation or arousing of constitutional maladies of a slighter kind, which act as antagonists to the graver disease," we must feel that we are not very far off from such dogmata as the *similia similibus* of the homœo-

paths. But, even supposing we are on the right track in applying an antiseptic method of treatment to phthisis, and in assuming an unity and identity of origin in the great majority of cases which are recognised as pulmonary consumption, we must not ask more of this method or expect better results from it than it can possibly give.

Nothing can be more certain than that tuberculous disease, whatever may be its intimate nature, tends invariably to be complicated with the products of inflammation. Wherever there is tubercular disease present in the lung, there you will find the results of present or past inflammatory action. The course and aspects of pulmonary tuberculosis are so uniformly overclouded with the phenomena of inflammatory action, that some of this "cloud" seems to have settled down over the minds of many pathologists; and, in regarding phthisis, they seem to be unable to see through this mist of inflammation; and it must be admitted, if these micro-organisms cause destruction of lung-tissue, they do so by exciting a peculiarly destructive form of inflammation; so that, in the treatment of phthisis, you must never lose sight of this inflammatory process, which always accompanies it, and plays a predominating part in its manifestations.

If in phthisis, as seems most probable, we have to do primarily with a specific virus or infective organism, and secondarily with an inflammatory process excited by it, our treatment must have a twofold object—the destruction of the virulent agent, and the reduction of the accompanying inflammation; and, in actual practice, my own experience certainly shows that the best results follow the combination in treatment of these two ends.

If we look through the whole of the literature dealing with the treatment of phthisis, it seems to me that two facts start out in remarkable prominence: one is the value of treatment which may be regarded as antiseptic—sea-voyages, mountain air, dry pure air in any locality, sulphur waters, terebinthinate vapours, iodised vapours, etc.; and the other is the value of counterirritation, systematic and continued counterirritation; treatment, you see, directed against a virus or an infective property—treatment directed against the results of present and past inflammatory action. But we must not expect more from antiseptic treatment than it can possibly yield. I have seen it remarked that cases of phthisis, though they might be benefited, are not cured, by antiseptic treatment. To this, I would reply, that aseptic and antiseptic treatment, if it do not cure, is, at any rate, an essential condition of cure, where cure is possible. Nature often herself erects an antiseptic barrier against the invasion of septic agents. And one of the most universally admitted remedies for staying the progress of phthisis is the removal of the patient to some place where he shall breathe an aseptic, if not an antiseptic, atmosphere. It is foolish to expect that antiseptic agents can act, so to speak, retrospectively. Water may extinguish fire, and stay its ravages, but it cannot rebuild what the fire has destroyed. So antiseptic agents may arrest the activity of septic influences, but they cannot undo the mischief that is already done.

When I read of hospital physicians vigorously plying, with so-called antiseptic sprays, patients in the very last stage of phthisis, with lungs riddled with cavities, and then reporting that they have arrived at "decisive negative results," I am amazed to think that they ever imagined it possible that they could arrive at any other.

When I read that such a plan of treatment was attempted in nine patients during the last three weeks of their lives, and then read that after death "nothing was found in the pathological condition of the lungs which in any way indicated the commencement of a healing process; there was an extensive phthisical decay, with cavities filled with fluid pus; in one case of left-sided pneumothorax there was a perforated cavern." I feel constrained to say, that if ignorant charlatans wrote in this way, we should find no language too severe to condemn their imbecility. Gentlemen, this kind of thing is foolish trifling. When you are called to a case, as it is often my lot to be, and find a patient in the last stage of phthisis, with physical evidence of extensive phthisical infiltration, and breaking-down of large tracts of lung-tissue and signs of excavation in various parts of both lungs, you should honestly confess that you are absolutely powerless before such a state of things, and never bring discredit on any method of treatment by attempting with it what, from your experience and pathological knowledge, you must be aware is absolutely impossible.

Nor should we fall into the error, as some writers seem to have done, of regarding the antiseptic treatment of pulmonary phthisis as closely analogous, or a strict parallel, to the antiseptic method as adopted in surgical procedures.

The surgeon's object is to prevent the access of infective organisms from without: our object is to destroy or arrest the activity of a specific organism which is at work within—a very different end to keep in view; and I fail to see any practical or logical *à priori* argument against

the conclusion, that it may be possible to impose conditions on an organism which is spreading through the pulmonary tissues which shall prove inimical to its growth and reproduction, and that is what is meant by the antiseptic treatment of phthisis.

But a complete antiseptic treatment, though it may be possible, no doubt requires minute care in carrying it out in detail.

It is not a little instructive in connection with the history of this subject to find Dr. Copland, many years ago, recording the fact that a young man, who had repeatedly come under his observation in an advanced stage of phthisis, completely recovered his health after he had been for a considerable period employed in the manufacture of creasote; and at the end of his *Historical Sketch of the Treatment of Pulmonary Consumption* he observes:—

"The inhalation of the fumes of tar or of creasote, or of the terebinthines, very weakly diffused in the atmosphere breathed by the patient, is in some cases beneficial in impeding the advance of tubercles or the formation of cavities, and in healing the surfaces of cavities which have been formed."

Valuable testimony has been given by Dr. Lemaire and Dr. Sansonias to the efficiency of the inhalation of "carbolic air" in phthisis. Dr. Lemaire gave carbolic acid also internally in aqueous solution. He found very remarkable effects follow its use. There was diminution of cough after twenty-four hours, and in some cases almost a complete disappearance after a few days. The expectoration was diminished or almost suppressed, and if the sputa were offensive, their fœtor disappeared. In many, the physical condition of the respiratory organs was ameliorated. Some were cured, in others there was a subsidence or disappearance of râles, and parts became pervious to air which had previously been impervious. In other cases he had noticed increase of strength, return of appetite and sleep, increased freedom of breathing, and general exhilaration.

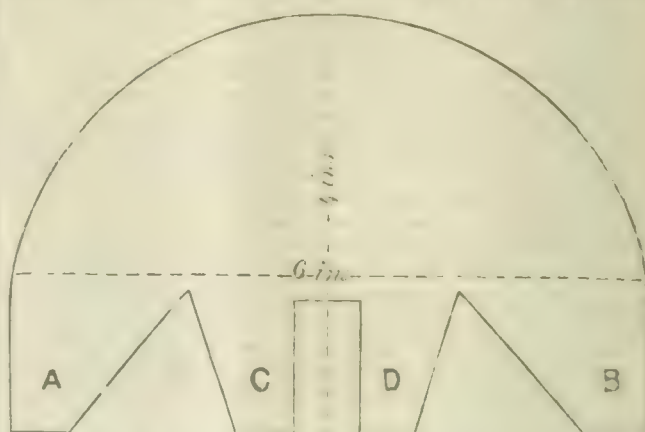
Dr. Jaccoud, the eminent Professor of Medicine in the Faculty of Paris, in a treatise which he published last year on the *Curability and Treatment of Pulmonary Phthisis*, thus testifies to the good effect of creasote given internally. The "pure creasote of the beech-tree" is the preparation used by preference in Paris. "This remedy," he says, "more rapidly and more surely than any other diminishes the expectoration and limits the extent of the catarrhal lesions, and thus reduces considerably the area of the pulmonary changes. But that is not all; and I am induced to believe that creasote may act on the *fundamental lesions themselves, the tuberculous lesions*, and promote indurative changes, which, as you know, is the method of cure." He mentions the case of a young girl twenty-two years of age, who was in the hospital three months with infiltration and softening at the left apex; and, after the creasote treatment, she became greatly benefited, and was discharged fifteen pounds heavier. The signs of "peritubercular catarrh" had disappeared; the dulness had greatly diminished; and breath-sounds had to some extent reappeared. She remained in good health for two years, when she was readmitted with an attack of broncho-pneumonia from exposure to severe cold. She was very ill, but recovered to some extent; and, when convalescent, she was obliged to leave the hospital, and was lost sight of.

In another case quoted by Jaccoud, of a young Russian thirty years of age, he observed the area of infiltration and softening at the apex of one lung diminish one-half under the creasote treatment. "This amelioration has lasted two years, and is still maintained; and the state of the patient's general health is particularly good." He considers creasote a "precious medicine", and it now forms a "fundamental part" of his treatment. His method of giving it is to begin with a very small dose, to increase it very slowly, and to maintain its administration for a very long period. He never gives at the commencement more than three minims in the day, often less, increasing by one minim every ten days, rarely exceeding five minims, and never exceeding six. He wisely objects to its being taken pure in capsules, on account of its irritating effect, in this concentrated form, on the gastric mucous membrane. He prefers that it should be added to the cod-liver oil, if the patient take this; if not, that it should be given in glycerine. He has found that the addition of creasote to cod-liver oil has often had the effect of inducing patients to take the latter, who were unable to do so previously; adding to the dose one drop of essence of peppermint. His formula for creasote in glycerine is as follows: Glycerine, to drachms; brandy or rum, 2 drachms; creasote, 3 to 5 minims; a third of this to be taken three times in the day.

Besides the internal use of creasote, Dr. Jaccoud is in the habit of recommending the inhalation of a spray of carbolic acid in cases where the disease has advanced to the formation of sinuses, chiefly with the object of preventing the entrance of air into the sinuses, and thus preventing the formation of new tubercles. He also recommends the use of antiseptic agents without the necessity of using a spray, which entails a certain amount

of trouble, and can only be applied occasionally; whereas, with the plan I am going to advocate, you have the decided gain of being able to apply the antiseptic inhalation almost continuously, and of almost any degree of strength. Several instruments have been devised for the purpose of diffusing an antiseptic vapour through the atmosphere the patient breathes. I have found none answer better than the simple contrivance I am now going to describe to you. It has the great advantage that it practically costs nothing. A dozen such inhalation-respirators as those you see on the table before you cost less than a shilling; and, with a little instruction, a nurse can make one in a few minutes. My patients in this hospital have long used them.

You take a piece of paper about six inches long and four wide; you fold it along the middle, and cut it with a pair of scissors into this form. This is your pattern. You place this, as I now do, on a piece



of perforated zinc, which costs about sixpence a square foot, and then, with a pair of stout scissors, you cut out a piece of zinc of the same size and form as the paper. You see I have cut out a piece of perforated zinc of the size and shape of the piece of paper I showed you. Now you see by a little manipulation, for this zinc is very pliable, I can bring the two outer ends (A and B) together, so as to slightly overlap; and then, fixing them together with a twist of fine wire passed through the holes of the zinc, I get a suitable mouthpiece, or rather nose and mouth-piece, for it is important, I consider, to cover both nose and mouth. This can be bent to fit comfortably any face.

The two middle pieces (C, D), now stick out behind, and, by gradually bending first one of these down, and then the other over it, you construct a little cage behind the mouth-piece which will hold a small bit of sponge, or a bit of tow or cotton-wool, or any suitable material for retaining the antiseptic vaporisable fluid.

It is desirable to cover the rough edge of the mouth and nosepiece with some protecting material, it matters not what; I have, as you see, used tinfoil; a loop of elastic on each side serves to attach it behind the ears. It can be covered with black silk or any other material, according to taste, but no covering is really necessary. You see nothing can be easier than the construction of an inhalation-respirator of this kind; and it costs so little, that it can be given, without hesitation, to hospital and dispensary patients. It is light and comfortable to wear, much more so than some other more expensive contrivances, and patients find no difficulty in sleeping with it on.

Now there are many antiseptic substances, the vapour of which may thus be continuously, or almost continuously, diffused into the air that is breathed. Your choice may depend somewhat on the taste of the patient; or you may change the applications, from time to time, until you find out, in each case, which is most useful, and best supported by the patient.

Some simply keep the sponge (or tow) moistened with carbolic acid; others prefer creasote, and others use spirits of turpentine. I have used all these alone, as well as in combination. I have also used eucalyptol, thymol, terebene, camphor, fir-wood oil (oleum pini sylvestris), solution of tar in rectified spirit, tincture of benzoin, tincture of iodine, etc. Specimens of these substances are on the table before you, and I hand round to you labels charged with several of them. Of all these, I prefer creasote; but I also frequently use carbolic acid and eucalyptol, with which I sometimes mix a little camphor. Turpentine is a useful addition as an astringent, where there is profuse secretion or a tendency to hæmorrhage. Camphor has been said to be a very powerful antiseptic, but it has the objection of diffusing 'sauf

very rapidly, and is unpleasantly pungent and penetrating. I have also found it a very convenient plan to mix these substances, such as creasote, carbolic acid, eucalyptol, or turpentine, with equal parts of spirits of chloroform. It helps to diffuse and vaporise these substances, and it is itself somewhat of an antiseptic; and it has also a soothing effect on the often irritable bronchial mucous membrane. I have often seen a patient tormented with cough at night, so much so as to be unable to get any sound sleep, obtain perfect relief from this distressing symptom by using at bedtime one of these inhalations in an instrument of this kind. The quantity required for this purpose is often quite inconsiderable; it is rarely necessary to use more than twenty minims of a mixture of equal parts of creasote and spirits of chloroform dropped on the sponge at a time, and renewed occasionally as it becomes exhausted; and it is often desirable to begin with very small quantities, until the patient gets used to the vapour. Five drops of the mixture may be dropped on the sponge at a time, and gradually increased to fifteen or twenty. One of the advantages of the little inhaler I have described to you is that, being perforated all over, the access of air is unimpeded, while the vapour diffuses itself freely into the immediately surrounding atmosphere. With more solid inhalers, patients will often say they feel "stified", and refuse to use them.

The substances I have named are, I believe, the best for continuous, or almost continuous, inhalation; for occasional inhalation, you will find a weak iodised vapour often very useful; and even a very dilute chlorine vapour is well borne by some patients. But in these matters, as I have already said, you must consult in some measure the tastes of your patients.

Iodine vapour may be diffused through a room or small chamber by throwing fragments of iodine on a heated plate, as I now do; or it may be inhaled from the surface of hot water, by pouring a few drops of tincture of iodine on the top of hot water contained in a suitable vessel, and holding the mouth and nose over the vapour, with some light covering over the mouth and nose and vessel. The vapour of tar may be inhaled in the same manner. A sleeping apartment may be impregnated with tar vapour by putting some tar on a heated metal plate, or stirring a vessel containing tar with a piece of heated metal of any kind. Other antiseptic substances which are not volatile or are vapourised with difficulty may be inhaled in solution in the form of spray. A Siegle's spray-producer is the instrument usually employed for this purpose.

A substance which has been given in Germany, and recommended as an antiseptic in cases of tuberculosis by Dr. Max Schüller of Greifswald and Dr. Rokitsansky of Innsbruck, is the benzoate of soda. This they give in the form of spray, *i.e.*, the two to five per cent. solution in distilled water. But the great objection to this mode of treatment was the amount of fluid it was necessary to inhale (twenty ounces of a five per cent. solution daily) in order to take in the minimum dose. The patient would have, as indeed Dr. Max Schüller says, to devote his life to his cure; for you cannot inhale a spray and do anything else at the same time, whereas the inhalation of an antiseptic vapour by the method I adopt can be continued at the same time with almost any other occupation.

I have adopted this plan of treatment in a great number of cases, and in nearly all of them it has been attended with conspicuous benefit. Even in somewhat advanced cases, it allays the cough, lessens the amount of expectoration, and diminishes the fever.

There is a young girl twelve years of age in the hospital now, an orphan with no obtainable family history, who was admitted three months ago in a wretched general condition, and apparently sinking from rapid phthisis. There was dulness all over the left side, with co-extensive moist crepitation and coarse *râles*; there was diminished resonance over the upper half on the right side, with diffused bronchial *râles*. The temperature was high and fluctuating; constant cough; much dyspnoea; loss of appetite, and great emaciation. She has been kept inhaling a mixture of equal parts of eucalyptol and spirits of chloroform; and considering the miserable state in which she was on her admission, she has mended wonderfully. She coughs now very little; her appetite is good; she has gained flesh, and become quite cheerful. The moist sounds have completely disappeared from the right side, where the resonance is now good; and on the left side the catarrhal sounds have, to a great extent, disappeared, and the dulness is now limited to the upper lobe. She continues, however, to manifest a sub-febrile fluctuating temperature.

I could enumerate a great many cases which have come under my care during the past five or six years in which remarkable results have followed this method of treatment when it has been honestly and faithfully carried out; but I must not weary you with these details. I cannot, however, forbear to call your attention to the particulars of a case I have quite recently had under my care, and in which, I must say, I

have never seen better immediate results from this or from any other kind of treatment. I first saw the case on the 6th of May. The patient was a married lady twenty-eight years of age, living in a low damp locality, who had lost two brothers from consumption, one at nineteen the other at twenty-three years of age. She had had a cough for two years, and had been losing flesh. She was confined last Christmas, since which time she had been worse. Night-sweats were constant; the cough was troublesome, and expectoration abundant. Her voice began to be hoarse a fortnight ago, and was now nearly lost. Her appetite was bad. Pulse 112; respirations 20; temperature 101° Fahr. She was considerably emaciated. There was some dulness over the left apex in front and behind, with moist clicks at the end of inspiration, and some diffused largish crepitations on coughing. On the right side, subcrepitant *râles* were heard over a spot just below the angle of the scapula, where there was also a patch of dulness. She was ordered to wear as constantly as possible one of my inhalation-respirators, charged with from five to twenty drops at a time of a mixture of equal parts of creasote and spirits of chloroform, so as to breathe an atmosphere only as strongly impregnated with the antiseptic as was quite comfortable to her. She was also to rub into the chest a mixture of turpentine and iodine liniment, and to take three times a day a mixture, each dose of which contained three grains of hypophosphite of lime, two grains of quinine, twenty drops of the syrup of phosphate of iron, and half a drachm of glycerine, and to continue the cod-liver oil she had been taking. She was also ordered to leave the place in which she was living, and go to some dry, bracing locality. It was agreed that she should go to an isolated farm-house built on a hill three hundred feet above the sea, between thirty and forty miles from London, on the borders of Hampshire and Surrey, where there were pine woods and open heather country. She came to see me again after about three weeks, and she had improved immensely. The temperature had become normal, the night-sweats entirely disappeared after a week of the treatment; her voice had returned after ten days; the cough and expectoration were greatly lessened. The dulness over the left apex was much less evident, but respiration there was feeble, and there was a distinct pleuritic creak in the left supraspinous fossa, a notable sign of past mischief in that region; all the moist sounds had disappeared. Her general condition had completely altered.

I have never seen a more striking improvement in so short a time, under any plan of treatment or in any locality. But this patient had been unusually obedient to the instructions that had been given her. She had devoted herself at once and unhesitatingly to all the details of the treatment. She had removed immediately to an aseptic if not an antiseptic atmosphere; she had passed a great part of her time in a hammock, suspended between fir trees, in the situation I have mentioned, and she had perseveringly worn her inhaler as I had directed.

But there is another antiseptic method of treatment which has come into general reputation within the last ten or twelve years, and of the advantage of which in certain cases there can be no kind of doubt. I allude to the removal of consumptive patients to the dry, pure, cold air of elevated regions. The low temperature of these regions may have much to do with limiting the vitality and propagation of the tubercle organisms. But I have gone into this question fully elsewhere, and I need not go over that ground again here. I will, however, refer to a remarkable passage in a letter from a well known resident in one of the chief of these resorts, Davos Platz, which seems to me to have great significance with regard to the question of the contagiousness of consumption. Speaking of the overcrowding that has taken place in that locality, he says: "The tendency at Davos has been.....to pack the patients together in as small a space as possible, and to build new inns at the doors of the old ones. All this is done in a climate where winter renders double windows and stove-heated buildings indispensable. All this is done for a society where the dying pass their days and nights in closest contiguity with those who have some chance of living. Within the last few weeks, two cases have come under my notice; one, that of a native of Davos attached to the service of the visitors; another that of an English girl, who have both contracted lung-disease in the place itself, owing, as I believe, to the conditions of life as they have recently been developed here" (Mr. J. A. Symonds, in the *Pall Mall Gazette*).

Now, if the infective character of tuberculosis were generally recognised, and the tuberculous nature of pulmonary consumption generally admitted, mistakes of this kind would hardly be committed. So, again, the antiseptic influence of sea-voyages is greatly interfered with by the unavoidable occurrence of bad weather necessitating the confinement of the invalids in close overcrowded cabins, in which the atmosphere they may have to breathe, for days and days together, is anything but antiseptic.

In conclusion, let me again remind you that you will fall into a serious error, if you carry away with you the idea that the treatment of

phthisis is to be altogether comprehended in the inhalation of an antiseptic vapour. It is a part, and only a part, of the rational treatment of phthisis.

I know of no disease in which so many and various indications for treatment arise during its progress. But, if pulmonary phthisis be pulmonary tuberculosis, and if tuberculosis depend on the presence of an infective organism in the tissues, a rational treatment of phthisis must include the administration of antiseptic agents, or the surrounding our patients with antiseptic conditions.

THE LOCAL TREATMENT OF PHTHISIS BY CARBOLIC ACID.

By ROBERT HAMILTON, F.R.C.S.,

Senior Surgeon, Royal Southern Hospital, Liverpool.

FROM the interest the subject excites, I am glad of an opportunity to supplement at somewhat greater length the remarks under the above heading in the JOURNAL of July 2nd, 1881.

The primary dependence of the lungs on the external atmosphere, for their healthy nutrition, distinguishes them from all other internal organs, and makes apparent a certain resemblance between them and the skin: a resemblance not merely imaginary, for they are structurally identical in many points. And where they are so, it is evidently for the same physiological reasons; namely, to carry out an interchange which must increasingly continue, so long as vitality lasts, between the atmospheric constituents, and the particles which the lungs and the cutis alike bring to their respective surfaces, in the process of nutrition. By the lung-surface, is here meant the inner walls of the air-cells and of the terminal bronchial twigs.

The relationship of the skin to the surrounding atmosphere is one of great importance. In the many varieties of skin-disease which occur, there are several which, undoubtedly, arise entirely from external agencies directly impinging upon the part affected, and producing the abnormal appearance it presents; and we may go further, and say of the large majority of skin-affections which are set down to internal causes, that very many of them evidence, by their amenability to local treatment alone, that external agencies have a power over them sufficient for their removal, even though their origin is supposed to be in altered or in some depraved condition of the blood; and the deeper thought that underlies even this latter truism is, that there are local skin-conditions originating in external influences which have prepared those parts for more readily than others undergoing the structural changes which the altered or defective blood will set up; in fact, without which, the blood could not manifest its deficiencies. It is a thought within a thought to attempt to explain why, for instance, the patches of psoriasis or eczema appear at any particular spot; but it is helpful to call to mind that in all diseases there are two distinct factors which have to be brought together, whose combined action is necessary for the production of the functional and structural changes which ensue. It is apparent in skin-degradation—it is probably true in all internal *malaises*—and it is undoubtedly true in that special form of lung-disease we call phthisis, and it may be in all the other forms. In consumption, we have a predisposing condition of the lungs, which may be more properly regarded as a state of lung-development, that is, of cell-growth, at one or more points, either inherited or the result of insufficient surrounding sanitary conditions, and thus not fully commensurate to do the work they are called to maintain, or to contend against the many influences which at times are brought to bear upon them. Now what are these influences? They come to the lungs directly from the atmosphere, which carries them almost without delay to the very heart of the tissue, not filtering them or subjecting them to any other media, as when they pass along with food into the stomach and are subjected there and further on to so many processes, that their individuality or power of working any changes in the lungs is a remote possibility. Given these malign influences another factor must be present, and we may do so with the knowledge that we are brought at once to reason by analogy, when they lay siege upon a soil prepared for them, whether in the lungs or in the skin, and we are brought at once to reason by analogy. How do another set of influences reach a surface freely exposed to them, and how do they reach a surface which is being elaborated as on the skin, or the raw surface of a burn? The answer is, that they reach the vital processes of repair, not in its entirety, but in its essence, where cell-growth is proceeding; and the blood-corpuscle which was about to be—or had recently

been—laid down as an atom in the building up of cellular tissue, or connective tissue, is turned aside into the pus-corpuscle, which is in other words but a blood-corpuscle deprived of its own vitality, and breaking up after it had undergone certain transformations through the action of the sporule of a fungus upon it.

Before applying this reasoning to what takes place in the lungs in phthisis, we must allow the truth of another of the theories which is now pretty well established as a fact, with regard to germs; that is, the specific qualities which many of them possess. It would take up too much space to give all the reasons in favour of this view; but if it be granted (and how we can account for diphtheria, typhoid or cholera on any other supposition it is difficult to see), then the resemblance of the action of germs in the lungs to the action of germs on the fauces, in diphtheria for instance, may be thus traced. The air-cells of the lungs and the finer twigs of the bronchial tubes, weakened by long exposure to a vitiated atmosphere, or not originally in all parts well developed from hereditary causes, receive at some time an air charged with specific germs; and these latter alight on the cell-walls, and put a stop to the progressive changes taking place in those blood-corpuscles with which they there come into contact, and thus arrest to a large extent is put to the perfecting of new material, whilst yet the old effete continues to disintegrate and pass away. Healthy formative material becomes for a time the nidus, out of which the sporules of a vegetable organism multiply.*

But it is not the ordinary non-specific germ such as we meet with in every suppurating surface, but the particulate one, which has characteristic properties of its own, which is the producer of phthisis. When it finds an entrance and a feeding ground prepared for it, and above all certain atmospheric conditions of temperature and moisture,† it rapidly converts to its own growth and material development the formative material which the blood has brought to the walls of the air-cells. The development of the tubercular germ proceeds in this way to the stage of reproduction, and there stops. The parent germ then loses its vitality and disintegrates, and it is this disintegrated germinal matter that constitutes the purulent expectoration of phthisical patients. It has, however, left its seed behind it, to go through the like stages at the expense of normal tissue.

Looking at the origin and course of phthisis from the above point of view, how should we plan our treatment? Firstly, we want a weapon which shall be quickly fatal to our enemy; and, secondly, we must bring it into direct contact with the foe. These are the two problems we have to solve, and they are surrounded with great difficulties. May we say at least that we are in the right track at last? We are experimenting on the best method of reaching the lungs directly through the trachea, and we are casting about to find the best germicides. These are the specific weapons of our warfare. The auxiliary ones remain the same as they have been for some time—abundance of fresh air, purity, and dryness of the same, and a carefully selected diet.

The attempt to reach the air-cells by direct inhalation of the medicine we want to apply, need not be considered an insuperable one. To continue to do so only through the medium of vapour or steam is a mistake, for the reasons stated in my former paper, the medium itself has proved injurious, and therefore has acted as a hindrance in the way of successful prosecution of this form of treatment. Most medicines can be triturated or in some way reduced into particles lighter than air, and thus become capable of inhalation if brought into close proximity with the entrances to the air-passages.

That which at present awaits discovery is, what particular agent is capable of destroying the germ which sets up phthisis. At present, we are trying carbolic acid. We do this; reasoning from analogy, we have found that it exercises a deterrent action on the development of pus in other parts of the body, that a healing process will go on under an atmosphere of carbolic acid more rapidly than without it; and therefore we conclude, if its presence is a check to all other than normal action where an outward lesion is being repaired, it will have the like effect on lung-tissue when in a diseased state.

I admit at once that the two conditions can be shown in many respects to be dissimilar; but there is sufficient parallelism for us to advance a step further in the same line of argument, and urge that, though carbolic acid may not prove successful in checking tubercular

* The germ of the tubercular fungus, which is the cause of phthisis, is a very minute organism, and is not visible to the naked eye. It is, however, visible to the microscope, and is found in the sputum of phthisical patients. It is a very hardy organism, and is capable of surviving for a long time in a dried state.

† The conditions of temperature and moisture which are favourable to the growth of the tubercular germ are those which are found in the lungs of phthisical patients. It is, therefore, not surprising that the inhalation of carbolic acid, which is a germicide, should be found to be beneficial in the treatment of phthisis.

deposit with its attendant results, and so permit healthy action to prevail, yet it is only a question of the substance used, not of the principle involved. Why have the pine-forests of Brittany proved so beneficial to many consumptive patients? or why has sulphur-inhalation arrested the disease in many others? Are we to disbelieve these things, and assert that the beneficial results were due to other causes? I am not inclined to do so, but firmly believe that the continuous inhalation of an air moderately impregnated with some perhaps yet unknown vegetable or mineral product will ultimately prove the cure of phthisis.

But where are we to find the specific mineral or vegetable which is to do this? We can but grope on, testing and trying various ones. We may not be far from the needed substance, if we follow on the lines indicated by the good results which every now and then follow the inhaling of creasote and other preparations from resinous exudations and of sulphur.

These few thoughts on a subject of pressing importance—for there can be little doubt that phthisis is on the increase—are written for the sake of directing attention to the endeavours that are being made, both here and on the Continent, to bring this formidable disease under a certain line of treatment—one, in fact, which has for its starting-point the assumption that phthisis pulmonalis is the product of the action of a specific vegetable sporule, and that it can only be successfully encountered by bringing it into direct antagonism with its own germicide.

In conclusion, I may say, as several inquiries have been made of me, that the paper by Dr. Williams which has given rise to the above remarks is published by Marples and Co., Lord Street, Liverpool; and the respirator he uses is made by Wood, instrument-maker, Church Street, Liverpool.

OBSERVATIONS ON THE USE OF HYPOPHOSPHITES IN THE TREATMENT OF PHTHISIS PULMONALIS.*

By JOHN C. THOROWGOOD, M.D., F.R.C.P.,

Physician to Victoria Park Hospital for Diseases of the Chest, Lecturer on Materia Medica at the Middlesex Hospital.

I WOULD preface the few remarks which I am about to make on the use of the above named remedies in the treatment of pulmonary consumption, by stating that I have no intention of putting them forward as specifics for the cure of phthisis. I find that an experience of seventeen years among the patients of a hospital specially devoted to the treatment of diseases of the chest gives very little encouragement to a belief in a specific cure for consumption, though I willingly admit that one does learn something of the special sphere and power of action of certain drugs as agents of more or less value in the treatment of pulmonary disease in its various forms and stages. What I claim for certain of the hypophosphite salts is, that they are worthy of a place high in the list of our medicines for consumption. My own experience, dating from 1863, would lead me now to say that I know of no remedies so generally applicable and beneficial in the treatment of phthisis as are the hypophosphites.

I had in my mind the idea that true tuberculosis, in the form of grey miliary tubercle, was a disease in which the nervous system was much concerned. My reason for this opinion was that the disease is apt to come on in an acute form in cases where there has been great nervous strain or exhaustion.

Two of the most hopeless and rapidly fatal cases of this acute tuberculosis that I have met with came on in the cases of two young ladies, not relatives, each of whom had been working very hard for a competitive examination, and so had undergone much exhaustion of nerve-force.

The affinity, too, of miliary tubercle for affecting the nervous system is much; for, in many cases, miliary tuberculosis manifests itself only in the form of a basilar meningitis. Considering these points, I thought phosphorus and hypophosphites might be valuable in restoring the exhausted nerve-force.

Against these ideas of mine as to the nervous origin of miliary tubercle, we have to place the observations of Buhl and others, who regard miliary tuberculosis as an infective disease, produced by auto-inoculation from caseous matter in the body. I do not, however, give my implicit adhesion to this statement, if it be held to mean that we never get miliary tuberculosis unless some caseous deposit, or other infecting centre, be present somewhere in the body. In proof of this statement, I would take the case of one of the young ladies just referred to. She fell ill May 14th, and died on June 1st; and a careful *post mortem* examination by Dr. Peacock showed both lungs airless and filled with small

miliary tubercles, none of which had undergone any softening process. We do not hear of any caseation or softening, while the history tells of much nervous strain and exhaustion as the cause of the disease. To go further into the nervous origin of miliary tuberculosis will lead me away from the more practical object of my paper; I will therefore now endeavour to show in what form of phthisis I have found hypophosphites useful medicines.

I will give, first, examples of the effect of hypophosphite salts in cases of strumous or scrofulous pneumonia. It is well known how, in a scrofulous subject, a pneumonia is very protracted. The infiltration of lung subsides very slowly, or it may remain stationary, and undergo regressive metamorphosis of a cheesy character. A scrofulous catarrh persists, with abundant cell-formation, and a cellular infiltration penetrates deeply into the submucous tissue of the lung; thus the wall of the air-cell is destroyed, and a true phthisis pulmonalis, or lung-consumption, is established. Secondary to this, we may have miliary tubercle, the seat of which formation is the subepithelial connective tissue, and also the lymphatics of the lung.

Illustrations of this kind of lung-disease are very common among badly fed children who come to the hospitals, and also the same kind of disorder is by no means unknown among the better classes. A child passes through an attack of measles, and gets a cough and pulmonary congestion that do not pass away. Cod-liver oil, iron, and sea-air may, after a while, effect a cure; but I have never seen such good results from the two first named remedies as I have seen follow the administration of hypophosphite of soda and hypophosphite of lime.

This is the sort of case to illustrate what I have just said. Miss Eva H. was seen by me April 1st, 1874. She was then convalescent from an attack of measles, but an obstinate cough remained, with some feverishness. There was dulness with tubular breathing at the upper part of the left lung, and the note in my book says, "pneumonic deposit at left apex." Nitric acid was taken for ten days, and then, as the physical condition of the lung was in no way changed, two grains of hypophosphite of lime with glycerine and water were given, and the child went to Eastbourne.

June 5th. I found her better, and the pulmonary condition on the left side improved, but she was still feverish and still had a cough, while I found some impaired resonance at the base of the right lung, with a slight crepitant *râle*. Hypophosphite of soda was given in two-grain doses, and in a couple of months the signs at the right base were gone, and the dulness at the upper left chest had diminished notably. This little girl went on well till she got scarlatina in February 1880, and on the 21st of that month I was asked to see her with Mr. Kingston Barton. When I saw her, the rash of the fever was subsiding, but she had a temperature of 104°, pulse 14, respirations 48. Much crepitation was now heard over the apex of the left lung, as if old mischief had been set going again by the fever. She had slight albuminuria, and casts of blood-corpuscles were seen in the urinary sediment. The only remedy that the stomach would retain was three or four drops of nepenthe at bed-time. Quinine, digitalis, and belladonna, were tried and failed. On July 28th we began two grains of hypophosphite of lime in glycerine and water, and it kept down well. On Tuesday, March 2nd, after being at the point of death, with a temperature of 104°, for about four days, a crisis took place. Temperature fell to 101°, pulse 115; there was still much crepitation in the upper left lung; respiration on the right side was loud and puerile. Hypophosphite of lime was continued till the end of March and then the cough had ceased. The left upper chest was somewhat fallen in, the breath-sound was tubular, almost free from crepitant sounds, and the patient has done well ever since. A marked pulsation of the left auricle could be seen in the chest, due to some contraction of upper left lung.

A favourable result, therefore, in this case was associated with the continuous administration of two grains of hypophosphite of lime, after the unmistakable failure of other approved remedies.

The case of Timothy S., in Victoria Park Hospital, is another one to illustrate the good effect of hypophosphite of lime. The patient was ten years old, and his illness began with a troublesome cough. On April 23rd, 1874, he had dulness at the left base, with crepitant *râles*. He took daily three grains of hypophosphite of lime, and by July 30th had gained flesh and lost all his morbid pulmonary sounds.

The case of William P., one of the first I treated with hypophosphite of lime, impressed me much. William P. came to Victoria Park Hospital December 14th, 1863, with severe cough, much expectoration, much loss of flesh, and bad diarrhoea. He had been ill three years and had taken much cod-liver oil. I ordered him five grains of hypophosphite of lime, one fluid ounce of decoction of cinchona, and two drachms of cod-liver oil three times daily.

* Read before the North London District of the Metropolitan Counties Branch.

January 11th, 1864. He felt much better. Pulse 96. Expectoration was very much less. Diarrhœa had ceased. Cavertous sounds and large crepitation were heard at the upper part of the left lung. He was ordered fifteen minims of tincture of iron three times daily. In a week he returned worse in every respect; the diarrhœa was as bad as ever. The hypophosphite of lime was resumed, and on it he again improved very markedly.

The case of Minnie S., who has just left the hospital, deserves a word of notice. This girl comes of a consumptive family, and has always had some cough. After an attack of measles, she was laid up with severe cough and congestion of left lung. Fourteen days afterwards, on November 13th, 1880, she came into Victoria Park Hospital with much cough and expectoration, and a temperature of 102°. The left lung was dull, and full of crepitant râles in its upper part. She took regularly three grains of the hypophosphite of lime for six weeks, and lately she has been taking some of Burrough's iron and beef wine. She has gained about ten pounds in weight, and, though the dulness at the upper left lung is not gone, yet the crepitant râles are scanty, her cough causes her hardly any trouble, her pulse is quiet, and she can run about like a child in perfect health.

I should have liked to be able to give you a few more cases to show how well the hypophosphites answer in curing caseous and scrofulous pneumonia of the apex of the left lung. Croupous ordinary pneumonia of the base I believe very rarely to lead to phthisis, but catarrhal pneumonia of the apex is very apt indeed, especially in young scrofulous persons, to lead to destruction of lung-substance; and it is in these cases, where cell-products accumulate in the alveoli and bronchioles that both phosphorus and hypophosphites are unsurpassed in curative action by any remedy with which I am, as yet, acquainted. Nor am I singular in this belief; my friend and colleague at Victoria Park Hospital, Dr. Eustace Smith, has said to me, and has said also in his *Clinical Studies on the Diseases of Children*, pp. 178, 289, that, when softening in a deposit has begun, the effect of hypophosphite of lime is often very remarkable; and again, page 289, speaking of pneumonic phthisis, Dr. Smith says "The effect of the hypophosphites seems at times almost magical; but in true grey tuberculosis they, in common with quinine, digitalis, and other remedies, are of small avail."

Thus I have briefly endeavoured to show the indications for the employment of the hypophosphites in phthisis pulmonalis. Most useful medicines I have found them; never have I seen any injurious effect follow their administration, and all I would say in conclusion to anyone who is disposed to try these salts is—Examine well the patient and see if he have any hepatic or renal disease complicating his lung-affection, and then test your hypophosphite to see if it ignites readily when heated. Lastly, give the salt in as simple a form as possible. A little bicarbonate of soda may be added to the soda salt, and some liquor calcei saccharatus to the lime salt; and then let simple water, or syrup and water, form the vehicle for administration.

PHTHISIS: ON THE THEORY OF INFECTION, AND ITS INFLUENCE UPON TREATMENT.

By W. R. THOMAS, M.D., M.R.C.P.,

Physician to the Sheffield Public Hospital, Lecturer on Medicine, Sheffield Medical School.

I so frequently meet with patients suffering from phthisis in whom no hereditary tendency whatever can be traced, but who have lived with another or others who have suffered from the same complaint, that I cannot help thinking that the disease must be infective; more especially as, in many, what we consider to be the predisposing and exciting causes have not been present to any great extent.

Now, if phthisis be infectious, and if we can satisfy ourselves by careful observation that it is, that knowledge alone will enable us, by recommending certain precautions to be taken, to save the lives of thousands who might in the future, being ignorant of the fact, expose themselves to the infection, and ultimately die of the complaint.

The following are examples of cases to which I have before referred.

A. A married woman, aged 30, has extensive deposit in the upper part of her left lung. Her husband died, eight months ago, of phthisis, and she has never been well since.

B. A phthisical young man, aged 24, slept with another young man for two years, who afterwards died of phthisis. He has never felt well since; he gave up living with his friend two years ago.

C. A young man, about 20, was very consumptive; his wife died about eight months ago of the same complaint.

D. A widow, aged 26, has a cavity in her right lung. Her husband died of phthisis twelve months ago, and her child of tabes mesenterica fifteen months ago.

In all these cases, the family history was favourable. Of course, such patients are often exposed to the ordinary causes of phthisis. Watching, worry, and want, tend to produce it; but cases of death from phthisis occur so often among those who have attended upon phthisical patients, that I cannot help thinking that there must be some cause for the frequency which we do not now appreciate, and that probably many of the cases now deemed to be hereditary, are owing to infection.

For years, we have been in the habit of reading, and now read, of dogs who, after licking the phlegm expectorated by a phthisical master or mistress, have died of the same complaint; proving that the act of swallowing, or inhaling, or both, reproduced the disease in the animal.

Dr. Tappeiner mixed half a gramme of pus from a tubercular lung with one hundred grammes of water, and made dogs inhale the atomised mixture for a quarter of an hour daily for ten days; this produced cough, loss of weight, etc. The animals were then killed. Those killed before the nineteenth day presented no tubercles whatever. Those killed after the twenty-third day presented tubercular nodules, proved to be such by microscopical examination of the lungs and spleen. Other dogs were treated in the same way with pus from scrofulous abscesses and bronchitis, but no tubercular mischief whatever was produced by such pus.

Some maintain that, in phthisis, the morbid process begins with proliferation of the connective tissue elements of the outer walls of blood-vessels; and that this action gradually involves the surrounding cellular tissues. Dr. Burdon Sanderson maintains that the disease begins with proliferation of cells of adenoid tissue, which is abundant everywhere, and often connected with the walls of blood-vessels. Dr. Klein says that the first changes take place in the alveoli and interalveolar septæ; that the epithelial cells become enlarged and detached; that they then proliferate; and that, either by their coalescence, or by the enlargement of one, a multinuclear cell is formed; and that degenerative changes take place afterwards.

Probably all these theories are correct; and it may be that certain irritating particles, when they come into contact with the delicate lining membrane of the tubes and alveoli, produce proliferation of cellular tissue corpuscles, of cells of lymphatics, and of epithelial cells as well.

Now, if it be true that phthisis is infectious, not only may we be able to adopt certain precautions to prevent infection, but our treatment also may be influenced by our belief. We know full well that there are certain medicines which are known to be poisonous to some of the lowest forms of life; and such remedies, when inhaled, may act beneficially. Indeed, phthisical patients are regularly recommended by our best authorities to take long sea-voyages, and they often return much improved; and we naturally believe that the mode of living and the pure sea-air has cured the complaint. Is it not possible that the constant inhalation of an atmosphere impregnated with tar has had much to do with the cure?

Lately, I have been in the habit of recommending phthisical patients to use a medicated respirator; and the majority have certainly confessed that such use has lessened the cough and amount of expectoration to a remarkable extent. I have seen patients who have had most decided symptoms of phthisis, in the first and second stages, almost entirely recover. All the symptoms have disappeared, and nearly all the physical signs, to such an extent that they have been able to return to their former occupations. Certainly I have, in these cases, tried to improve the general health by other treatment as well; and I have seen cases of phthisis recover under such other treatment before; but, the difference in the number of successful cases has been so great, that one must come to the conclusion that the inhalation has had much to do with the recovery.

Dr. Mackenzie of Edinburgh has described an admirable naso-oral respirator, which acts well. It has two lateral expiratory valves, and two anterior; in front of the latter is a small covered chamber, in which the piece of medicated sponge can be placed.

We are apt to discard all new theories and all new methods of treatment, and we are not alone. Those who have gone before us have done likewise. We see theories, propounded by some, years ago, and then not received, brought forward in our day with additional explanations, and at once accepted by the profession. We know of remedies, recommended most earnestly by some before we were born, and then rejected, now-a-days brought before the notice of the profession, and becoming generally used. Owing to our advanced knowledge, we can now see what could not be appreciated before; and, in the interim, thousands have died whose lives might have been saved.

There may or may not be truth in the theory of infection. Let us not, without careful examination, take it for granted that there is not : for, if there be, and we become satisfied there is, we may, by prevention and by alteration of present treatment, be able to save the lives of thousands.

A NOTE ON RESPIRATORS, OUTDOOR AND ANTISEPTIC.

By EDWARD MACKEY, M.D., Brighton.

I BELIEVE that more advantage may be gained from the judicious use of outdoor respirators than is commonly recognised; and, according to my experience, the objection of the public to wearing them has become less, whilst the profession prescribes them less often than formerly. Messrs. Maw and others have recently favoured me with a selection of specimens for the Sanitary Exhibition at Brighton; and I think it may be useful to name these, with a few brief notes as to some of them.

A. Metal Respirators.

1. The principal forms made by Jeffries (named "original") are three: one for the mouth only (the men's size larger than the women's); a second (Himalene), for the mouth, with a scarf; and a third, for mouth and nose (ori-nasal). Most of them are made in two "strengths"—i.e., with more or fewer separate wire plates; and some so that plates can be added or removed according to the weather. Their specialty lies not only in excellence of workmanship, but also in the fact that all the wires are vertical, so that there is less tendency for moisture to accumulate than there is on crossed wires or netting. Mr. Jeffries claims also that the objection commonly made to all respirators—viz., their retaining, for re-inspiration, injurious elements of air already breathed—does not apply to the vertical arrangement; and that it retains enough moisture and enough warmth for comfort, whilst carbonic acid and other gases pass through. Certainly, when this form is used only for outdoor exercise, it has seemed to me to answer its purpose well. Of two ladies under observation, wearing the single-mouth form, one, with tubercular disease (at present quiescent, but rendering her very sensitive) has gone out here almost daily throughout the winter without catching cold or complaining of inconvenience; the other, the subject of chronic pleurisy and bronchial catarrh, with much dyspnoea, has been able to go out in the evening without any of her former inconvenience.

2. A wire respirator by Rooff (named "Eclipse"), light, and well shaped to the mouth; worn with marked advantage by a man suffering from strumous deposit in one apex, liable to hæmoptysis; also by a girl with an old cavity in one apex, and liable to bronchial attacks. Both these patients have been constantly in the open air throughout this winter. But respirators are apt to be kept in use too long without cleaning, and patients seem to expect them to last for ever; and these slighter-made wire ones are not calculated for continuous effective use more than one winter.

3. The same remark applies to the wire-respirators of Maw, Son, and Thompson. These are made in many sizes and qualities—some only of perforated metal, others of wire. There must be a fair demand for these, for all chemists show them; their price is moderate. My own experience of them is not very large; but they have seemed of service in a few cases with tendency to relaxation and irritable throat.

B. Charcoal, Wool, and Cork Respirators.

4. The charcoal respirator of Dr. Stenhouse is still met with, and contains about one-fourth in-layer of charcoal, protected by wire gauze.

5. Messrs. Bourne and Taylor have constructed a cotton-wool ori-nasal respirator, inspired by the sanguine lecture of Professor Tyndall on wool filters. A movable metal plate, perforated, protects the wool. It is presumed useful in infected atmospheres.

6. The "cloud respirator" of Captain Mackenzie Douglas really deserves a favourable mention. It is named, I presume, from a ladies' "cloud" shawl, and is of wool, woven or knitted, smooth inside, and shaped to the lips, rough and woolly outside, and fastening by elastic. The cost is about a shilling. A girl with softening tubercle at one apex has been able to go out most days (at mid-day), with the air-passages protected only by this, and has not suffered. Another girl, liable to much congestive dyspnoea and catarrh, and accustomed to sleep with a "cloud" shawl round her mouth and nose (which relieved her, but often excoriated her neck from retained moisture), has found the greatest comfort from this simple substitute.

7. A cork respirator, of equal cheapness, is on sale, and might answer; but I have not used it.

With "antiseptic" respirators, we pass from the idea of prevention to that of cure; and their use marks unquestionably a great step in advance.

8. Dr. William Roberts's form is of blackened metal, perforated with large holes at the front, shaped to the lips, and about three-fourths of an inch in depth, with a hinged lid opening outwards, allowing the introduction of a saturated sponge or wool. With this, and the following form, it is necessary to carefully regulate inspiration through the mouth, and expiration through the nostrils.

9. Dr. Sinclair Coghill's early form is a hollowed oval of plated metal, perforated with small holes, enclosing a movable and shaped plate, also perforated; between these wool is placed. His later form is of somewhat similar shape externally, but has a hinged plate opening outwards, with wool between the two. This is a decided improvement; and, in this form, his respirator is identical with one (10) sent me by Messrs. Aitken of York, on a request for Dr. J. Carrick Murray's.

A patient with chronic cavity, and profuse foetid expectoration, which has not been checked by ordinary remedies or vaporous inhalations, has worn one of the last-mentioned pattern for about an hour night and morning (making use of the compound antiseptic fluid, dispensed according to Dr. Coghill's formula), with marked improvement in the character, and lessened amount of expectoration.

11. Dr. McDowell Cosgrave's "skeleton" (John Whyte, Dublin) is a very light and ingenious form of wire cage, shaped to the mouth, and enclosing between a spring-hinged plate a piece of lint, about one inch from the lips, and just under the nostrils. Of course, the vapour is not so completely charged with the remedy used; but, on the other hand, the apparatus is well borne by children and others, who could scarcely tolerate a heavier one. One phthisical girl, who inhales terebene on the lint, for about an hour morning and evening, has certainly improved, and I believe partly on account of this practice; her temperature is now normal (or subnormal), instead of 101° Fahr., and there is no septicæmia.

12. But, certainly, the most complete and effectual instrument for its purpose, is that of Dr. Hunter Mackenzie (Edinburgh), named though it has been by some of my patients the "portable coal box." It is in metal, and shaped like a chloroform-inhaling mouth and nose piece; it has four rubber valves, two on the sides opening outwards, and two inwards from the antiseptic chamber; this is in front on the truncated nose piece, and an oval perforated rimmed plate fits on it, and can be taken off for the purpose of saturating a contained sponge. The valves enable the patient to breathe without trouble in the ordinary way, and secure the immediate exit of expired air.

Since this was written, Messrs. Meyer and Meltzer have introduced a much lighter and more elegant form of this respirator, in pink vulcanite; this leaves nothing to be desired.

Dr. Saundby has recently figured a form which recalls that adopted by Dr. Roberts, but is much more freely perforated; it is made also with a nose piece. His patients have found it "light, comfortable, well ventilated, and not fatiguing." (BRITISH MEDICAL JOURNAL, December 24th, 1881.)

ABSTRACT OF LECTURES

ON THE

ANATOMY, PHYSIOLOGY, AND ZOOLOGY OF THE EDENTATA.

Delivered at the Royal College of Surgeons of England.

By W. H. FLOWER, LL.D., F.R.S.,

Hunterian Professor of Comparative Anatomy.

LECTURE VII.

THE existing *Dasypodide* or Armadillos are generally divided into six genera. Of these, the one called *Tatusia*, which contains the common Peba or nine-banded Armadillo (*T. novicincta*), and a closely allied species, the Mulito (*T. hybrida*) is the most aberrant. The other genera are *Dasypus* proper, containing the equally common six-banded Armadillo (*D. sexcinctus*) and the Hairy and Little Armadillos (*D. villosus* and *D. minutus*), also a rare small species called *D. vellerosus*. *Xenurus*, containing *X. uncinatus*, a large species remarkable for the absence of bony scutes covering the tail. *Priodon*, with one species, *P. maximus*, the largest of all the group. *Tolypeutes*, with three species, all small, with only three movable bands in the carapace, and capable of rolling itself up into a ball; and lastly, *Chlamyphorus*, very remarkable for the peculiar character and arrangement of its dermal covering, having a strongly ossified, solid, bony shield, cover-

ing the hinder truncated end of the body, which is united by buttresses of bone with the pelvis. The remaining portion of the carapace is horny, with very little development of bone. In the skull, the zygomatic arch differs from that of the preceding families in being complete. In *Dasypus* and *Chlamydophorus*, there is a completely ossified tympanic bulla, ankylosed with the rest of the skull, perforated on the inner side by the carotid canal, and continued externally into an elongated bony meatus auditorius, with its aperture directed upwards and backwards. In all the other genera, the tympanic is a mere half-ring, connected with the surrounding bones. The hyoid arch is rudimentary. The anterior cornua consists of the usual three bones; the thyro-hyals ankylose with the basi-hyals. The cervical vertebrae are always seven in number, and have peculiar characters common to all the species. Their bodies are extremely short, broad, and depressed, and several are commonly ankylosed together; the corresponding neural arches being also united, the neural and vertebral arterial canals form continuous tubes. The orifices for the spinal nerves perforate the united pedicles. The atlas is always free. The vertebrae that are united are the second and third, or the second, third, and fourth, and in some species the fifth also. The spinous process of the axis is very large, but the neural arches of the hinder five vertebrae are extremely narrow, and the spinous processes rudimentary. The lumbar vertebrae have the same accessory articulating processes as in the Anteaters, and the metapophyses are very long and project upwards, outwards, and forwards, supporting the bony carapace, while the broad transverse processes are exceedingly reduced in length. The sacrum is very long, in some species including as many as ten vertebrae, which are firmly fixed together, and with both ilium and ischium. The tail is generally of moderate length. The presternum is broad, and, in *Priodon*, strongly keeled. The mesosternal segments, four to six in number, are broad above, but very narrow below; and, according to Parker, each ossifies from eleven centres. They are connected by synovial joints to each other, and to the strongly ossified sternal ribs, which have broad, sub-bifid heads. The xiphisternum expands posteriorly into a wide cartilaginous plate. Compared with the preceding families, the ribs are few (from ten to twelve pairs), and are broad and flattened, the first extremely so. The first sternal rib is very short, and incorporated with the vertebral rib, but the others are very strongly ossified and articulated by synovial joints, both with the sternum and with the vertebral ribs.

The scapula is rather varied in form. The coracoid does not unite with the anterior scapular border above the notch, as in the Sloths and Anteaters. The acromion is always very long and curved; in many cases, it has a distinct articular facet on its inner surface for the upper end of the humerus. There is a second spine on the postscapular fossa. A well developed clavicle is always present. The humerus is broad, and remarkable for the great development of the points of muscular attachment, as the tuberosities, deltoid and supinator tuberosities, and internal condyle. Great use is made of the fore limb in digging and burrowing. The supracondylar foramen is present in all the genera.

The radius and ulna are also well developed and distinct, but no great amount of motion is permitted between them. The olecranon is long and strong. The manus is stout and broad, with strongly developed ungual phalanges supporting long, curved claws. The first metacarpal articulates with the cuneiform as well as the trapezoid.

There is always a very large palmar sesamoid bone. There are three types of digits, in which the bones of the digits are developed. In the first type, the second and third toes are subequal (the third being the longest), with moderate, conical, and slightly compressed ungual phalanges; and the first and fourth are also nearly equal, and with the normal number of phalanges. The fifth is absent, as in *T. hybrida* by three rudimentary nodular bones. In the second type, which is the most common, the first digit is rather short and especially slender; the second is the longest, and has a long, curved, compressed ungual phalanx, of nearly equal length to the second metacarpal, then two short broad phalanges, the first being the longest, short, and a long, curved, compressed, ungual phalanx. The third and fifth are shorter, but present the same general form, and their metacarpals are also reduced in length. All the digits are from the normal type of manus observed in the common Anteater, and the first digit, which is the most rudimentary, and the second and third, which are the most developed, and retain the normal number of phalanges. In the other three, the metacarpal is short and broad. The first phalanx is either compressed or incorporated with the second, and the second phalanx is very short, but the third phalanx is extremely developed, and larger in the third than in the two outer digits. A still further modification of the

same type is seen in *Priodon*, the largest existing member of the group. The metacarpals of the three outer toes are still further reduced in length, the ungual phalanx of the third is increased in size, while that of the fourth, and especially the fifth, are greatly diminished. Modification in the same direction reaches its greatest extent in *Tolypentes*; in one species at least of which, the two outer toes are entirely suppressed, and the third immensely enlarged, with a long slender claw, a condition almost parallel to that seen in *Cyclothorus* among the Anteaters. This animal moves about upon the tips of its great claws. The femur is short and broad, and has a distinct third trochanter. The fibula and tibia are ankylosed together at each extremity, but curve away from each other at the middle, leaving a wide interosseous space. The pes presents none of the singular modifications seen in the manus, but is normal in type, and adapted for plantigrade progression, with five stout broad nails, subequal in length.

All the different species of Dasypodidae have teeth nearly equal in number in both upper and lower jaw, and confined to the sides of the mouth. In all except *Priodon*, they range in number between seven and nine on each side above and below. In *Priodon*, there are from twenty to twenty-four, making altogether from eighty to a hundred teeth, the largest number known in any mammal, except among some of the Cetacea. In this genus, the teeth are close together, and extremely compressed from side to side, and wear flat at the top. In all the other genera, they are more or less cylindrical; and, those of the upper and lower jaws being alternately placed, they usually wear into a ridge across the middle line, with sloping edges. In structure, they are chiefly composed of dentine, without the large central axis of vaso-dentine found in the Sloths, but with an external layer of cement. No succession has ever been observed, except in the aberrant genus *Tatusia*, in which, in all the three species, there is a complete set of milk-teeth preceding all the usual teeth except the last, and which, according to Burmeister, have distinct double roots, and, according to C. Tomes, an enamel-organ, if not fully developed enamel. These teeth are shed about the time the animal attains its full size. Their existence is a matter of extreme importance in considerations relating to the affinities and origin of the Armadillos.

The tongue, though extensible, is considerably less elongated than in the Anteaters, being triangular and pointed, and is provided with conical, fungiform, and circumvallate papillae. The parotid gland is very small, and the submaxillary of great size. The duct of the latter, not far from the gland, dilates into an oval reservoir. The stomach is comparatively simple and subglobular, lined with a soft vascular membrane, the thick oesophageal epithelium terminating at the cardiac orifice. The muscular coat is thin at the fundus, but thicker towards the pylorus, at which spot, in *Tatusia*, is an oblong valvular pad projecting from the upper border. The intestinal canal is not very long, the colon especially being short and simple. In *Tatusia*, there is no caecum, the intestine only undergoing a rapid dilation at the commencement of the colon. In *Tolypentes* and *Neomys*, the caecum is also absent; but in the genus *Dasypus*, and also in *Chlamydophorus*, the ileum enters the large intestine by a slit-like valvular aperture situated between a pair of short, broad, rounded cecal projections of the colon. The liver is formed on the ordinary mammalian type, having the usual six lobes all distinctly marked, and a gall-bladder. The arteries, especially those of the hinder extremities and the tail, show a tendency to give off retiform branches, but to a much less degree than in the Anteaters and Sloths.

CLINICAL MEMORANDA.

CASE OF MILD SCARLATINA, COMPLICATED WITH RHEUMATISM.

THE following case presents some features of interest. The patient was a young medical man, with a family history of rheumatism, and subject to vague rheumatic pains, without having had any previous acute arthritis. He had never had scarlatina. He consulted me, after suffering for some days with general malaise; and for forty-eight hours there had been almost complete loss of appetite, with sore-throat, headache, and slight chills, as well as slight stiffness and pain in both wrist-joints, which were slightly swollen. His face was flushed, and eyes suffused. Temperature 102.6°. The tongue was red and furred; the fauces and tonsils intensely congested and swollen. There was no skin-eruption. A hot bath was administered, and the patient kept in bed, on a liquid diet; the throat painted frequently with a solution of perchloride of iron in glycerine, and quinine administered internally. The same evening there was great stiffness and tenderness of all the small and middle-sized joints of both extremities; and next morning the knees, ankles, and smaller joints of the hands were most acutely inflamed, and con-

tained a small amount of effusion. The pressure of the bedclothes was found intolerable. The skin over the implicated joints was covered with a scarlatiniform eruption, consisting of very numerous punctiform red points, not coalescing, and localised to the skin in the immediate vicinity of the joints; it was not manifest over the anterior surface of ankle-, wrist-, and knee-joints. No eruption could be detected on the trunk, face, or neck. There was a copious and smelling perspiration from the skin. The urine was albuminous, and the condition of the throat but little altered. Temperature 102° . Salicylate of soda combined with alkalis was now administered, and was speedily (in about twelve hours) followed by relief of the joint-pain and reduction of the temperature to normal. The skin-eruption entirely disappeared in about two days, remaining localised to the extremities. The swelling of the joints, which was never excessive, now speedily subsided, and the throat became less congested and less painful; so that, by the seventh day of the illness, the patient, contrary to advice, got up for a few hours; and on the fifteenth day, he undertook a long railway journey into the country. No cardiac *bruit* could be detected. Five weeks later, the joints still felt very stiff, and I was informed that, whilst in the country, there had been a general desquamation, most marked in the hands, where the epidermis had peeled off in great flakes. No albumen had appeared in the urine.

REMARKS.—The symptoms in the early stage of this case indicated scarlet fever, but the appearance of all the symptoms of rheumatism relieved rapidly by salicylate of soda caused the skin-eruption to be considered as of purely rheumatic origin. The subsequent history of marked desquamation once more modified my diagnosis. The primary affection was evidently an attack of mild scarlatina; the localisation of the eruption to the extremities being probably influenced by the arthritis, which appeared almost contemporaneously as a complication. I am not aware that any specific action is claimed for the salicylates upon the simple arthritis which not unfrequently complicates scarlatina; hence I believe that the arthritic symptoms were truly rheumatic, as further corroborated by the patient's family history.

J. ALEX. WILLIAMS, M.B., C.M., late House-Physician to the London Hospital.

PATHOLOGICAL MEMORANDA.

THE TYPHOID BACILLUS.

WITH regard to the so-called "typhoid bacillus", the discovery of which by Eberth was brought to the notice of the readers of the JOURNAL in November last, it is indeed satisfactory to find a confirmation of its presence by so high an authority as Dr. Coats of Glasgow, in a case published by him in the JOURNAL of March 26th. Accordingly, it was with some encouragement that I proceeded to search for the bacillus in the following case, for the use of which I am indebted to the kindness of Dr. Jacob, the visiting physician to the hospital.

A young adult suffering from typhoid fever was admitted about the eighth and died on the fifteenth day of the disease. The case from the first was unfavourable. Epistaxis, vomiting, and prostration, with great cardiac weakness, were prominent symptoms; and death occurred suddenly, apparently from syncope. At the necropsy, the lower six feet of the ileum showed a more or less uniform swelling of the solitary follicles, which stood out like large boiled sago-grains; while it is seldom one sees such splendid examples of the "plaques dures" and the "plaques reticulées" as were presented by Peyer's patches. Only those solitary and agminated follicles contiguous to the ileo-cæcal valve showed the ulcerative process going on. The spleen was enlarged, weighing fourteen ounces. The heart was very flabby, and the muscle generally soft and pale. Many of the fibres, in preparations made by dissociation in a 0.1 per cent. solution of osmic acid, showed loss of striation and granulo-fatty degeneration. Immediately after the necropsy, a scraping from one of the enlarged and hyperæmic mesenteric glands was spread out on a cover-glass, allowed to dry in the sunlight protected by a watch-glass, and then stained with a watery solution of gentian violet (1 in 200); a drop or two being allowed to remain on about twenty or thirty minutes. The superfluous fluid having been washed off, the stained scraping was allowed to dry, and finally mounted in balsam. I should here mention that the film, thus stained and dried on one cover-glass, was first cleared by a drop of oil of cloves, and then mounted in balsam; and this, in my opinion, showed the bacilli by far the best of the two. On examination with a good one-sixteenth water-immersion objective (a No. 10 of Hartnack), magnifying about 850 diameters, the bacilli were easily made out as short violet-stained rods amongst the deeply stained lymph-corporuscles and nuclei. Indeed, for all practical purposes, a good one-ninth (No. 8 objective) of the same maker showed them quite distinctly. They were very numerous, and,

as regards size and appearance, corresponded exactly with the excellent descriptions given of them by Drs. Coats and Eberth. Indeed, to have sent a drawing of them as they appeared under the immersion-objective, through a camera eye-piece of Hartnack's (about 1,000 diameters), would simply have amounted to a reduction in the size of the drawings given of them by the above named observers. Their length corresponded mostly to the diameter of the lymph-cells, while their breadth would about equal a one-sixth of that. Here and there, a few longer ones could be seen; but they were mostly jointed.

Some portions of the mesenteric gland, intestine, and spleen have been placed in alcohol; other portions are being hardened by other methods. Bacilli have been made out in a trial section, as it were, of a mesenteric gland; but a careful and systematic examination of these structures may, I hope, form the subject of a future communication.

GEORGE F. CROOKE, M.B.,

Resident Medical Officer, Fever Hospital, Leeds.

OBSTETRIC MEMORANDA.

ALBUMINURIA: INDUCTION OF PREMATURE LABOUR: NO ECLAMPSIA.

THE following case, of which I give a brief outline, occurred in the practice of Mr. T. Fox Morrish, of Dingle Hill, Liverpool.

Mrs. L., a primipara, engaged Mr. Morrish, on April 5th last, for her confinement, which was expected in the middle of July. Her lower extremities were œdematous. Next day the urine was examined, and contained a trace of albumen. These symptoms increased until, in the beginning of May, the patient was confined to bed—being, from the œdema of the legs and labia, and debility, unable to walk. There was no puffiness of the face, and no history of Bright's disease. On May 10th, the urine had a specific gravity of 1041; quantity, sixteen ounces in twenty-four hours. It was so albuminous as not to be capable of being poured from the test-tube after boiling. There was headache, and a pulse of 120. Induction of premature labour was now resolved on—the œdema of the labia being already reduced, as a preparatory measure, by Southey's tubes and puncture. On the 11th, at 12.30, a gum-elastic bougie was introduced into the uterine cavity, and pains set in about ten o'clock on the evening of the 12th. She had fifty grains of chloral, in two doses, during the night. At eight next morning, a Barnes's bag was introduced; and, shortly after ten, a living child was born, with about seven months' character. The presentation was normal, in the first position. There was no eclampsia. On the 15th (forty-eight hours after delivery), the œdema was gone. The urine was of specific gravity 1031, neutral in reaction; albumen, a half of column; quantity, three pints in twenty-four hours. On May 24th, the patient had come down stairs; and, on June 9th, the urine had a specific gravity of 1031, acid reaction, and the albumen had become reduced to one-sixth. Both mother and child were doing well.

REMARKS.—This case seems to me to corroborate remarkably the pressure views mentioned by Dickenson, in his work on *Albuminuria*. There was a progress of symptoms, *pari passu* with the rise of the uterus in the abdominal cavity, as the inferior vena cava and renal veins became more and more pressed upon. The general aspect of the case, indeed, with the headache and diminished urine, gave the impression that uræmia would supervene before either natural labour or abortion gave relief. It was a fortunate, rather than remarkable circumstance, that there was no complication of labour. Some renal congestion remains, but the result is encouraging so far; and, in a similar case, where a viable fœtus is not an important object, earlier interference even appears to me to be indicated as a prophylactic.

A. DRUMMOND MACDONALD, M.B. & C.M. Edin.,

3, Peel Street, Dingle Hill, Liverpool.

ON THE TREATMENT OF A DISEASED OVARY BY LIGATURE.

ON January 16th last, I performed ovariectomy, with strict antiseptic precautions, on a woman, aged 42. A large multilocular tumour was removed, in the usual manner, from the right side, and the pedicle secured with a silk ligature. The left ovary was found to consist of several cysts, and was double its normal size; it had not become pediculated, and the ligament was so very tense that, were the tumour removed by the knife, a ligature could not be trusted to control the hæmorrhage. Not having sufficient confidence in the cautery, I passed a double ligature through the ligament underneath the ovary, and tied each half as tightly as I could at opposite sides of it; the cysts were then punctured and emptied of their fluid. The toilet of the peritoneum was completed, and the wound closed, the operation having lasted twenty minutes. The patient made a rapid and perfect recovery,

and was up on the twelfth day, never having had a symptom of peritonitis or other complication; and I trust the strangulation to which it has been subjected will destroy an organ so complex in its structure as an ovary, though, as is well known, it has but little effect on the harder tissue of the pedicle.

JAMES MURPHY, M.D.,

Surgeon to the Sunderland Hospital for Women and Children.

REPORTS

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

CUMBERLAND INFIRMARY.

ULCER OF THE LEG TREATED BY DIRECT UNION OF ITS EDGES: CURE.

(Under the care of Dr. MACLAREN.)

[Reported by Mr. WILFRID WILSON, House-Surgeon.]

WILLIAM R., aged 15, a shoemaker, was admitted August 3rd, 1881, suffering from an ulcer of the left leg. In the beginning of April an abscess formed in the left calf and burst. It showed no signs of healing, and the boy came to the infirmary. At that time there was an ulcer at the inner side of the lower third of the left leg, with the opening of a sinus leading upwards at the upper part of the ulcer, and with undermined edges. The sinus was freely laid open and stuffed from the bottom. The boy was kept in bed, and various local applications were used; but the ulcer did not heal, and the patient was sent to the Silloth Convalescent Institution for a month. When readmitted, October 28th, the ulcer was three inches long by two inches broad, covered with pale flabby granulations, and with edges undermined half an inch all round. On November 2nd, Dr. MacLaren made a vertical incision through the undermined skin, passing half an inch beyond the margin of the ulcer at each end. He then thoroughly scraped away with a sharp spoon all the granulations, laying bare the deep fascia, and pared the edges of the ulcer. The wound was purified with 1 to 20 carbolic lotion. A decalcified bone drainage-tube was used, emerging at both extremities, and the edges were brought together by means of four silver sutures, under the spray. The sutures caused very considerable tension of the skin, and indeed in the middle of the wound the edges could not be brought quite into apposition. It was dressed antiseptically in the usual way. The dressing was repeated on November 6th and 12th. On the latter day the two lower and the uppermost sutures were found to be causing irritation. They were accordingly cut but not removed. There being considerable eczema round the wound, a large piece of oiled silk protective was used to cover the eczematous part.

November 15th. The wound was dressed, and the previously cut stitches were removed. There was less eczema. Salicylic acid cream was used with the deep dressing.

November 19th. The last stitch was removed. The wound had given way in the middle to the extent of a quarter of an inch, exposing the bone drainage-tube, which was much softened.

After this the wound was dressed three times at intervals of nine or ten days, and was found to be completely healed on December 15th. No trace of the drainage-tube could be discovered. He was discharged January 4th, wearing an elastic stocking.

CORK MATERNITY HOSPITAL.

PUERPERAL CONVULSIONS: OESOPHAGEAL CATHETERISATION: RAPID DELIVERY: RECOVERY.

(Under the care of Dr. HENRY CORBY.)

[From the notes of Mr. M. J. SEXTON.]

MRS. W., aged 18 years, had been ten months married; the week before her confinement she received a severe shock owing to a street row, and some time earlier she had had a fall. At midnight on June 6th, having arrived at her full period, labour set in: vomiting ensued, and she became insensible. The following morning, June 7th, at 11 a.m., she was still unconscious, and convulsions occurred with the bearing-down pains. Dr. Corby saw her about 12.45 a.m.; she was then actually in a convulsion, and previously had had two. There was frothing at the mouth; the countenance was livid, breathing stertorous, and pupils somewhat dilated; the pulse was 150; the child's head was almost on the perineum. Water was dashed on the patient's face; and when the fit had terminated a No. 12 gum elastic catheter was passed

through one of the nostrils into the oesophagus, and through it, by means of a syringe, a draught containing a drachm of bromide of potassium was injected. About a fourth of the draught escaped, principally between the nozzle of the syringe and the catheter. The window and door were now opened to admit an abundance of fresh air. Two other fits occurred in spite of this treatment; about a quarter of an hour after injecting the first draught a second was administered, which contained only half a drachm of the bromide. The nurse also endeavoured to give a turpentine and assafoetida enema, but hardly any of it was retained. After administration of the draughts, breathing became less stertorous, and the pulse somewhat slower. Two other fits occurred, making a total of seven: the final one, lasting one minute and a half, occurred at four minutes to two o'clock. In the intervals, she uttered a cry rather like the bark of a dog, and manifested great fear during the fifth fit. After the seventh, the labour-pains came on more rapidly, and, about half an hour after the cessation of the fits, the patient was sufficiently roused to show her objection to the dashing of the water on her face. Dr. Corby had sent for his colleague, Dr. Atkins, with a view to discussing the question of speedy delivery, and with his approval the forceps were adjusted, and a still-born female child delivered at 3.15 a.m. Repeated attempts at resuscitation proved unavailing. Some time after the placenta was removed there was smart hæmorrhage, the result of uterine relaxation, owing to the patient having pulled up the binder. Pressure on the uterus was not completely successful till the hand was got well behind it, as in expressing a placenta. At 4.10 a.m. the pulse was 100. At 7 a.m. the pulse was 93, and there had been normal sleep since 4 p.m.; no hæmorrhage had occurred. The report next morning was "slept well, is perfectly conscious, and had a good breakfast". She recollected none of the events of the previous day. The urine drawn off previous to putting on the forceps was smoky, and found to be loaded with albamens. On June 24th Mr. Sexton kindly called to make inquiries, and learned from the patient that there had been no recurrence of the convulsions.

REMARKS BY DR. CORBY.—The oesophageal tube, if I had happened to have had one by me, would have been a more suitable instrument for the introduction of the medicine into the stomach; but the large catheter proved very useful—due care, of course, being taken not to inject any of the fluid into the larynx. I remember using a catheter similarly, in a case of puerperal mania, when the patient persisted in refusing anything by the mouth. And I cannot help thinking, that what I will call the naso-oesophageal tract is not utilised as often as it might be. However, in diseases such as tetanus, when the pharyngeal muscles are morbidly excitable, I would hesitate a good deal before thinking of using the oesophageal tube in the manner indicated, as I have seen very unpleasant and serious spasms result. The quantity of the bromide, about twenty-five grains, within half an hour, may be considered large: however, when we have a formidable disease to contend with, requiring prompt measures, I think very small doses of the drug would be worse than useless. But, doubtless, a most important consideration is, whether or not the child ought to be delivered as soon as possible. In discussing this matter, we must remember that we are dealing with two lives, and are responsible for both. With regard to the mother, in this instance, it was pretty evident that the expulsive pains were the proximate cause of the convulsions; and speedy delivery, with the head almost resting on the perineum, would probably at least diminish the severity of the attack. But, on the other hand, we run the risk of hæmorrhage, by emptying the uterus suddenly of its contents. With reference to the safety of the child, I think the sooner the forceps were put on, the better; for I was particularly struck with the livid appearance of the child's face, and the extraordinary heat of the mother's vagina, showing that the poisoned blood of the mother was a good deal delayed in the system of the child—owing, I dare say, to the uterus partaking of the general convulsions, and pressure being thereby exercised on its contents, including the umbilical cord. Remembering, then, that the longer the child is left undelivered, the worse its chance; and bearing in mind that the mother is liable to die of asphyxia, owing to closure of the glottis during a convulsion, I would feel strongly disposed, in an exactly similar case, to put on the forceps early, without even waiting for consultation.

SANITARY INSTITUTE OF GREAT BRITAIN.—The following gentlemen have accepted the Presidentship of the Sections at the Congress to be held at Newcastle-upon-Tyne, September 26th, 1882:—Section I. Sanitary Science and Preventive Medicine, Dennis Embleton, M.D.; Section II. Engineering and Sanitary Construction, Henry Law, Esq.; Section III. Meteorology and Geology, Arthur Mitchell, M.D., F.R.S.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JUNE 7TH.

J. MATTHEWS DUNCAN, M.D., President, in the Chair.

Twisting of Pedicle in an Incipient Dermoid Ovarian Cyst.—Mr. ALBAN DORAN showed a specimen of this condition. The patient, aged 32, was operated upon for a cystic tumour of the left ovary, which reached two inches above the umbilicus, and proved to be dermoid. After its removal, a tumour of the right ovary was discovered, also dermoid. Its pedicle was long and twisted, and entirely reduced to white fibrous tissue. The patient experienced an amount of pain and discomfort altogether out of proportion to the size of the tumour; and Mr. Doran thought that the condition of the pedicle of the smaller tumour was the true cause of these symptoms.

Accidental Removal of Uterus: Recovery.—Mr. HOPKINS WALTERS (Reading) exhibited an uterus, with one ovary and Fallopian tube, and a piece of omentum, that had been torn away by a midwife in the attempt to remove an adherent placenta. The patient made an excellent recovery. He hoped at a future meeting to communicate a full account of the case.

Oophorectomy for Uterine Fibroids.—Mr. KNOWSLEY THORNTON showed the ovaries and Fallopian tubes removed from a woman aged 44, to check hæmorrhage from uterine fibroids. The ovaries were enlarged and cystic; and the tubes were closed at their extremities, and full of semipurulent fluid. They were buried in adhesions, so that the operation was difficult. The patient recovered. He had removed the ovaries five times for fibroids, once for fibro-cystic disease of the uterus. One of the former cases was only a partial success; in the others, the hæmorrhage ceased, and the uteri in a few months became atrophic.—Dr. HEYWOOD SMITH had had a case in which, during the first week after the operation, the uterus shrank from one and a half to two inches.

Uterus of Patient about to Menstruate.—Mr. WALTER GRIFFITH showed an uterus, with microscopic sections, taken from a woman aged 29, delivered five months previously, who died from hepatic abscess, having, at the time of her death, believed herself about to menstruate. The mucous membrane was thickened, red, infiltrated with blood, but not detached nor degenerated. The subepithelial layer of the internal coat of the arteries of the muscular tissue was enormously thickened.—Dr. JOHN WILLIAMS remarked that this thickening was constantly seen after parturition.

Missed Abortion.—Dr. CAMPBELL POPE showed an ovum and placenta removed after dilatation of the cervix in what there was reason to think was the eighth month after conception. The ovum presented the appearance of about six weeks' intra-uterine age.

Fibroid Tumour of Ovary.—Dr. CARTER exhibited a tumour of the right ovary weighing three pounds, which he had removed from a patient aged 29. It was homogeneous in structure, consisting of fibrous tissue, with a varying amount of non-striated muscle. The tumour was wedged into the pelvis, reaching to within an inch and a half of the perinæum; and there were ascites and oedema of the legs, which Dr. Carter ascribed to the pressure of the tumour. Drainage was used after the operation. The patient did well, and the dropsy rapidly passed away.—Mr. DORAN referred to a case formerly reported, which was at first supposed to be fibroma, but subsequently ascertained to be sarcoma. The presence of ascites was in favour of the view that Dr. Carter's case was one of sarcoma. Pathologists were slow to distinguish between the spindle-shaped cell of sarcoma and the similarly shaped one of fibro-myoma. It was reasonable to believe in the possibility of fibro-myoma of the ovary; but clinical phenomena, pointing to innocence or malignancy, must be taken into account.

The Natural History of Dysmenorrhœa.—The adjourned debate on Dr. JOHN WILLIAMS's paper on this subject was resumed by Dr. GERVIS, who said that he thought dysmenorrhœa in single women was very commonly acquired. He agreed with Dr. Williams as to the beneficial effect of child-bearing, but thought that sterility was the rule. The statement with regard to imperfect development of the uterus he thought was too absolute. Stricture of the uterine canal, either actual, from stenosis, or virtual, as from antelexion or endocervicitis, he had found extremely common. The most usual changes in the uterus in primary dysmenorrhœa were corporeal hyperplasia, endometritis, and endocervicitis; but many showed no evidence of secondary inflammatory disease. Ovaritis he thought a very frequent consequence. The statement that menstrual pain was the result of spasm, he thought applicable only to cases in which there was obstruction. There were other varieties of menstrual pain, dependent on uterine congestion and ovarian complications.—Dr. ROUTH thought that dysmenorrhœa was

often acquired, and that it was most frequent in sterile women. In every woman the mucous membrane of the uterus was swollen at the beginning of menstruation, and obstruction might thus be caused which would not be detected by an examination made at any other time. Obstruction and pain often resulted from the presence in the flow of clots and membranes. Sometimes the uterus was morbidly sensitive in consequence of chronic inflammation, as in the condition he had called fundal endometritis. One case of dysmenorrhœa was what he would call retrogressive suction, secretions of the cervix or vagina being drawn up into the uterine cavity, and there exciting irritation and inflammation. This probably was the explanation of intermediate dysmenorrhœa. His principal objection to Dr. Williams's paper lay in his neglect of uterine flexions and versions as causes of dysmenorrhœa. Sometimes the uterine cavity was twisted and bent in several different ways; such he had ventured to call a corkscrew uterus. There were other cases of "ball and socket" flexion, and these conditions were very powerful causes of dysmenorrhœa. He had seen cases which convinced him that the unimpregnated uterus could and did contract, and he thought that such contraction to overcome some kind of obstruction gave rise to the phenomena of dysmenorrhœa.—Dr. HEYWOOD SMITH regarded dysmenorrhœa as a symptom only. He thought that most women suffering from primary dysmenorrhœa were sterile. The changes in the menstrual flow were different, according to whether the dysmenorrhœa were ovarian or uterine. In the majority of cases, the uterus was of normal size. Erosion, eversion, catarrh, areolar hyperplasia, ovaritis, and perimetritis, he thought to be causes, rather than consequences, of dysmenorrhœa. The accompanying hypertrophy he thought more often due to subinvolution. The kind of pain was different in uterine dysmenorrhœa from that in ovarian. Fatty degeneration of the decidua was the natural means whereby it was broken up and loosened from its attachments.—Dr. GALABIN agreed with Dr. Williams as to the frequency with which shreds of membrane were found in the flow. He had repeatedly found entire uterine glands in these shreds. He thought the author went too far in ascribing menstrual pain universally to spasm, for he thus excluded congestive dysmenorrhœa. He (Dr. Galabin) believed that there was an active flux of blood to the uterus during menstruation, and that secondary dysmenorrhœa was commoner in single women than Dr. Williams had found it. There were many cases in which the primary pain was very slight, and it depended very much on the question whether the case were classed as primary or secondary. Intermittent pain was not necessarily due to muscular action. He thought the frequency of imperfect development of the uterus had been rather overestimated.—Dr. CHAMPNEYS could not agree that dysmenorrhœa was only a symptom. He remarked the conspicuous absence of any solidarity between dysmenorrhœa and flexions.—Dr. R. T. SMITH thought that the lithæmic diathesis was one of the most common causes of dysmenorrhœa.—Mr. HOPKINS WALTERS (Reading) thought that acquired dysmenorrhœa in single women was very frequent, and was often due to sedentary occupations, and constipation, which led to congestion, and subsequent secondary changes.—Dr. W. R. ROGERS thought that acquired dysmenorrhœa in single women was frequent. He could not agree with the author as to the frequency of clots or shreds, nor as to the rarity of stricture; and he believed that flexions and displacements played an important part in the production of dysmenorrhœa.—Dr. HAYES had found dysmenorrhœa chiefly associated with a conical cervix and a small external os. He believed this form of cervix was a continuation of the foetal condition.—Dr. GODSON considered that everything depended on the character and severity of the dysmenorrhœa. In slight cases, fertility was common; in severe ones, rare.—Dr. JOHN WILLIAMS said his paper referred to primary dysmenorrhœa alone. Glands were found in the membranes expelled, although often their epithelium had fallen out. Dr. Savage's remarks as to the length of the broad ligaments did not explain cases in which the uterus lay close to the pelvic wall. He thought that pregnancy did take place in imperfectly developed uteri; and that such a condition was the cause of some abortions and premature labours. In the great majority of cases of dysmenorrhœa, the os externum was well formed; and in some a No. 10 bougie readily passed into the uterus. He did not think that dysmenorrhœa was due to retention. The pain he believed due to spasm caused by a peripheral irritant; and he did not think that in the great majority of cases stenosis had anything to do with it. Ovarian dysmenorrhœa was not included in the paper. There was no evidence that the menstrual flow was regulated by the ovaries. The changes referred to by Dr. Heywood Smith as causal could not have been present at puberty. He thought congestion had its place in some kinds of dysmenorrhœa, but not in that occurring at puberty. When ovaritis came on in consequence of dysmenorrhœa, he thought the patients were generally sterile.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 1ST, 1882.

THE ROYAL COMMISSION AND MEDICAL REFORM.

IN another column, we present a full abstract of the Report of the Medical Acts Commission. This important Royal Commission consisted of Lord Camperdown (Chairman), the Bishop of Peterborough, the Right Hon. W. H. Cogan, the Master of the Rolls (Sir G. Jessel), the Right Hon. George Selater-Booth, M.P., Sir William Jenner, Bart., K.C.B., Mr. John Simon, C.B., Professor Huxley, Dr. Robert McDonnell, Professor Turner, and Professor Bryce, M.P.; Mr. John White acting as Secretary to the Commission. It will be seen that the Commission was intellectually strong, and professionally as well as politically powerful. We have thought it right, seeing the importance of the subject, and the intense interest which the British Medical Association takes in the investigation of a subject to which the Association and its Medical Reform Committee have devoted much time and thought, and in which it has been powerfully and ably represented, to communicate to the members of the Association, so soon as the report was signed and sealed, such well authenticated information as reached us, as to the purport of the chief report, and the principal conclusions arrived at. In this, we have followed the tradition to which we think it a duty faithfully to adhere, of communicating to the members of the Association at large any well authenticated information which reaches us concerning matters affecting the general interests of the Association at large, and of disregarding the narrow views which would confine early information to privileged circles.

It will be seen that the report, of which the text is now published to the world at large, confirms the short statement which we made a fortnight since, by anticipation, to the members of the Association. The Report-in-chief of the Commission, signed by all its members, confirms and concedes the views of the Association and the contentions of its Medical Reform Committee, which have been urged with much persistent fidelity and earnestness by its members, and especially by its indefatigable, undaunted, and devoted chairman, Dr. Edward Waters. To Dr. Waters individually, and, of course, to the various members of the Committee in due proportion, and to the Association at large, belong the honour, the satisfaction, and the triumph of this substantial victory. The Association will know how to apportion the credit, and how to do justice to the man who, through years of labour and in the face of many defeats and discouragements, has known how to persist in upholding the principles which have achieved this great professional and political victory. We need only here record the facts, and state them in such a way as to make their meaning clear to those who may not have the time and patience to wade through the twenty-six large pages of print in which the investigations, the conclusions, and the dissents, of the Royal Commissioners are set forth.

Perhaps the essential features of the report may best be read—apart from the full impartial summary which we publish, or the text of the report itself—from the wording of the following resolution which was passed at a special meeting of the Medical Reform Committee held

on Tuesday, at Chester, and which was read to and received with acclamation at the annual meeting of the Lancashire and Cheshire Branch held later on the same day. This resolution is worded as follows.

"The Committee finds with satisfaction that the report of the Medical Acts Commission includes recommendations for the formation of Divisional Boards for the conduct of compulsory uniform minimum examination in each division of the kingdom, which should confer the sole qualification for registration and licence to practice, and such examination to include medicine, surgery, and obstetrics. 2. For the direct representation of the profession on the General Medical Council, and for the diminution of the influence of the licensing corporations thereon. 3. For strengthening the powers of the General Medical Council thus amended in composition. 4. For making more effective the penal clauses of the Medical Acts against the false assumption of medical titles; and, 5. For the conduct of prosecutions for offending against the Act by the public prosecutor in each division of the kingdom.

"These are the essential points of reform for which the British Medical Association and the committee acting on its behalf have long contended. The Medical Reform Committee desire to recognise the ability, labour, and skill with which the Royal Commission have conducted their exhaustive inquiry, and while reserving the question of proposed amendments of details, they express their great satisfaction at the result of the inquiry, and they congratulate the Association on the important confirmation of its views on Medical Reform by this high authority."

On referring to our abstract, it will be seen that the Commission advocates the establishment of conjoint boards of examination—one for each division of the kingdom. The conjoint boards are to be termed divisional boards, and a general control over their proceedings will vest in the Medical Council, together with the right of admitting to the *Medical Register*. It recommends that each divisional board shall be composed of representatives of all the medical authorities, in proportion to their importance; such proportion to be fixed in the first instance by Parliament, afterwards by the Medical Council, and subject to decennial revision.

The imperfection and low standard of some of the existing examinations were considered proved, though never laid stress on by the General Medical Council. The Commission recommends acceptance of examination of universities in first subjects, with proportional diminution of the fee to the divisional board for the practical examination. The conjoint board must, it considers, be made compulsory. Direct representatives of the profession are to be added in the proportion of one-half of the representatives of the universities and corporations. This gives eight representatives in a council of eighteen to the universities and corporations: four being allotted for England, two for Scotland, and two for Ireland; four direct representatives: two for England, one for Scotland, and one for Ireland; and six Crown nominees, of whom one or two might, it is suggested, with advantage be distinguished non-medical men. The Association has always looked with favour on the Crown nominees, whose number is unchanged, but whose influence in the smaller Council will therefore be increased. The university and corporation representatives on the divisional boards are to appoint the members of the Medical Council, making them, as far as possible, free from individual influences and prejudices. This arrangement appears to recognise the force of the long-urged charge against the present Medical Council, that its corporation representatives are *pro tanto* biased delegates. The powers of the Council, when reconstituted, are to be increased. The Commission propose to consider it "one supreme controlling authority." They propose that the Medical Council shall be the sole licensing authority.

An appeal to the Privy Council in certain cases by divisional boards is granted. In the event of a divisional board failing to perform its duties, the Medical Council should be empowered to act in its stead. The Medical Council should also take proper steps to ensure, as far as possible, equality in curriculum and examination between the three divisional boards. The powers of the Medical Council and of the divisional boards may be delegated to committees, of which the

quorum must not be less than three. During the course of medical study, professional examinations, other than the final one, ought to be held by examiners of the divisional boards. The penal clauses, it is urged, should be strengthened, and persons should be prevented assuming titles which would lead the public to believe they are regular medical men. Prosecutions are to be undertaken by the Public Prosecutor. Provision is made for the formation of conjoint boards.

Among the points in which the conclusions of the report differ from the Bill of the Association, is the omission to impose a compulsion to join a corporation or university.

In the Commission, Professor Turner alone objects to the proposal to deprive the existing medical authorities of their power to confer a licence to practice. All the authorities are preserved by the Commission, but the apothecaries have no pecuniary advantage from licensing.

Mr. Simon has eight pages of objections to a report of twelve pages; Professor Turner more than nine pages. Both object to direct representation. Mr. Simon adduces his evidence before the Select Committee, and the extracts from the deceased *Medical Mirror* as proof that the demand was created by a hope of increased fees, increased salaries etc.; though it has been distinctly proved to be coeval with the Association, and entirely connected with a desire to improve the education and attainments of medical men, and so raising the profession in the social scale. We have stated the substance of the dissents on another page.

We are far from undervaluing their importance, or the extent to which they may subsequently impede ultimate legislation on the lines laid down by the Royal Commission as a whole. We may, however, point with the utmost satisfaction to the fact that the whole of the Commissioners sign the report as a whole, and that the report endorses every one of the claims put forward by the Association, and urged on behalf of the Medical Reform Committee by Dr. Waters, its chairman, before the Select Committee, and repeated in his evidence before the Royal Commission.

We have confidence that the conclusions of a Royal Commission, so powerfully constituted, including so many elements of intellectual strength, and enlightened by the evidence of every interested party to the question to be solved, will have great weight with this or with any other Government. The Royal Commission has gone far to lift the question out of the region of party politics, and out of the atmosphere of corporation strife. Its report endorses the claims which the great body of the profession have urged in the face of powerful opposition from great corporations and from talented and influential individuals. We cannot doubt that this decision will have preponderating weight with the Privy Council and with the political chiefs of the Government. It should surely forecast the necessary form of inevitable legislation; and it is with this conviction that the Association and the profession at large will, we believe, accept this report with hope and with satisfaction.

THE CONVICT MEDICAL SERVICE.

We felt it our duty on a recent occasion to comment on the unenviable position of surgeons of gaols and prisons, and to suggest that, until the treatment of the medical staff is amended, men had better think twice before entering a service with so little to recommend it. An order from the Home Secretary to coroners, issued last Saturday, has, however, heaped on the last straw; and we should be wanting in our duty to the profession if we refrained from expressing our opinion on it in no doubtful terms.

On every prisoner dying in prison, a coroner's inquiry, as is well known, is held, even though the case be perfectly free from suspicion. Hitherto, it has been the custom and duty of the medical man in charge of such cases to make a *post mortem* examination, and testify to the cause of death; now, however, the Home Secretary apparently questions either the skill or integrity of these gentlemen, and has issued an order to the coroners to obtain independent medical evidence on the

cases of convicts dying in prison. A more direct insult could not well be conceived—an insult calculated to injure the service, as well as the medical men attached to it. What can the public think of a body of men so openly distrusted by their own chief? How degrading in the eyes of the prisoners, who are already being taught to look on the doctors as their enemies instead of their best friends, and those to whom they should look to interpose between them and undue punishment. But there is a more serious aspect still. The refusal to accept the evidence of a medical man who has had charge of a case undergoing inquiry, is tantamount to placing him in the position of a suspect; so that, for the future, prison doctors are to assume that they are on their defence at every coroner's inquisition. This becomes a most serious position, for the proceedings taken on every death in prison become an imputation on the character of the doctor. We trust, however, the Home Secretary may take this view of it, and rescind so obnoxious an order.

We have asked ourselves: How did it originate? Where was the necessity? Have there been any proved charges of neglect? Has there been an excessive mortality due to want of medical care? No; on the other hand, the death-rate in prisons is the lowest in England, possibly in the world; and the establishments are, on the Home Secretary's own showing, admirably conducted; and that they are so is chiefly due to the medical staff, which seems to control and be held responsible for everyone's duties as well as its own. We cannot suppose that there can exist any prejudice against medical men; and yet that seems the only solution of the problem.

In the meantime, we can only advise those surgeons whom circumstances oblige to retain their appointments, to be most careful, especially with reference to punishments. They should bear in mind that they are only responsible for the health of the prisoners, but not for the discipline; and that they must be particularly careful that they do not, with the idea of supporting the authority of the governor, run any risk themselves. Young men recently appointed will frequently find a sort of moral pressure put on them to back the executive; let them, however, bear in mind that they will be held responsible for any results; that their veto is sufficient; and, no matter how discipline may be affected, the public will support them. As for young men about to enter the service in the present position of affairs, we can only repeat what we before have said—let them reflect before they do so.

RECENT RESEARCHES ON BACTERIA.

III.—THE ETIOLOGY OF ANTHRAX.

TILL a few years ago, our knowledge of the etiology of anthrax was founded on the observations of Pollender, Brauell, and Davaine, who had found that small rod-shaped bodies were present in the blood of animals suffering from anthrax, and that inoculation with blood which contained these rods was followed by development of the disease; while the inoculation of blood which was free from these bodies—as, for example, the blood of the foetus of an animal which had died of anthrax—did not produce any effect. These rods were motionless, and were generally held to be crystals, though some observers classed them among the bacteria. Such was the state of knowledge when Koch's first paper appeared, in Cohn's *Beiträge zur Biologie der Pflanzen*. In this work, Koch showed that these rods were really vegetable bodies; and that, when placed in a suitable medium, they gradually lengthened and subdivided, giving rise to new rods, which grew in like manner. He further observed, that in these rods bright oval bodies appeared; that then the rods broke down, the oval bodies were liberated, shoots gradually sprang out from them, which grew to rods similar to the original ones. In other words, the life-history of these bacilli was, that the rods grew by elongation and fission; that spores formed in them; and that, under favourable conditions, these spores again gave rise to fresh bacilli. These rods and spores, growing apart altogether from the animal body, always gave rise to anthrax when introduced into a living animal—thus proving that they were the cause

of the disease. Further researches showed that these spores were the resting form of the organism: for, while the rods alone very quickly lost their vitality on drying, or after the action of various antiseptic substances, the spores retained their vitality in the dry state for an indefinite time, and were wonderfully resistant to destructive agencies. By these researches, the origin of anthrax, by infection through insects which have previously been in contact with blood containing these bacilli, and also the infection of man at *post mortem* examinations of anthracic animals, was easily explained. The spontaneous origin of anthrax, its outbreaks at certain periods of the year, and the strange connection between particular soils and the occurrence of the disease, were still, however, a mystery; and the mode of development of the disease, where no wound existed, was also unknown.

A research, which at first sight seemed to be a considerable advance, was that published two years ago by Buchner, in which he stated that, by methods of cultivation, he was able to transform the deadly bacillus anthracis into the innocuous hay bacillus, and *vice versa*. Dr. Koch, in a paper in the *Mittheilungen des Kaiserlichen Gesundheitsamtes*, criticises Buchner's investigations, and shows that the conclusions are quite erroneous. As our readers may remember, Buchner cultivated bacillus anthracis in a large number of successive quantities of an infusion of meat; and he found that by-and-by, at variable periods, in different sets of experiments, the bacteria in these infusions ceased to be infective. A complicated apparatus, and various precautions, were employed, with the view of preventing contamination of the cultivating fluid. Now, in the first place, Buchner looks upon these two forms of bacilli as morphologically similar; but in this he is quite wrong: since, for instance, the rods composing the bacilli of anthrax have a very characteristic mode of junction, while the individual pieces are very different in form from those of the hay bacillus. Further, the hay bacilli have flagella, while the others do not. If the bacilli of anthrax be transformed into the hay bacilli, the process ought to be a gradual one, and intermediate forms ought to be found. In the same way, the change from noxious to harmless organisms ought also to be gradual; and forms which produce a modified disease ought to occur. But, according to Buchner, the change is a sudden one; the bacilli in one flask are very infective, in the next they are not; and Buchner does not refer to any change in form—indeed, he does not recognise the difference between them. Further, the change does not always occur at or even near the same time in different series of cultivations. These facts imply the entrance of some other form of bacillus, which has displaced the bacillus anthracis, and do not show the transformation of the one into the other. Now, extract of meat often contains impurities in the shape of spores of bacilli, and the form most frequently found is one closely resembling bacillus anthracis in appearance and mode of growth; and, from Buchner's description, it is evident that the solutions were not properly sterilised, while the apparatus employed was by no means perfect. It would really have been a proof of some change, if Buchner had got a rare form of bacillus, such as that of blue milk; but the replacement of bacillus anthracis by hay bacilli, is only what may be expected from contamination of the cultivating fluid. Koch and others, by using better precautions, have been able to cultivate bacillus anthracis for an indefinite time without alteration.

In the second part of his paper, Buchner performed a reverse experiment: viz.: he transformed, or rather thought he transformed, the hay bacillus into bacillus anthracis. He did this by growing the hay bacillus in blood which had not been sterilised; and, after a time, he got an infective bacillus, which he took for the bacillus anthracis. The experiment is, however, of no value; for it is stated that various forms of bacteria grew, and it is well known that the injection of putrefying blood will often give rise to an infective disease resembling anthrax. On this subject, we shall have to say something in a future article; but, in the meantime, we may state that Koch has made out the existence of a disease, at first sight closely resembling anthrax, and with very similar bacilli. These bacilli, however, have very marked points of distinction from those of anthrax, and they are found in the cellular

tissue rather than in the vessels. To this affection, Koch has given the name of "malignant oedema"; and it is most probably this disease which Buchner got when he tried to transform hay bacilli into the bacilli of anthrax.

Researches which have a more direct bearing on the spontaneous origin of anthrax, and its occurrence in certain localities, are those made by Pasteur, some time ago. Pasteur apparently only recognises formation of spore outside the living body in the carcasses of anthracic animals which have been buried, and also in the earth in their immediate vicinity. It was, therefore, necessary for Pasteur to find some explanation of their presence on the surface of the ground. This he did by supposing that the earth-worms brought up the spores from the deeper parts of the ground, and left them on the surface. The experiment on which Pasteur based this theory was the following. A sheep having died of anthrax, a *post mortem* examination was made, and the animal buried at the same spot where it died. Ten to fourteen months later, earth was taken from the surface of this spot; guinea-pigs were inoculated with the earth, and died with what was diagnosed as anthrax. Pasteur, therefore, concluded that the spores had been brought to the surface in the castings of earth-worms. Now, there are various objections to this view. In the first place, it is not necessary to suppose that the spores were brought from the buried body; for, before the death of the animal, blood containing bacilli flows from the nose and mouth, and also the excretions, more especially the urine, are full of these organisms. Spores will form readily in this blood and urine after its exit from the body, and thus there will be plenty of spores on the surface of the earth. Secondly, it is very seldom that spores will form in a body which has been buried; and, as the bacilli themselves will soon die, the body soon loses its infective properties. For the production of spores, a certain temperature is necessary. The best temperature is from 25° to 30° Cent. (77° to 86° Fahr.). The formation of spores does not occur below 15° Cent. (59° Fahr.), and, only with great difficulty and very slowly, below 18° Cent. (64.5° Fahr.). Now, Koch has ascertained the temperatures of a great number of soils, at all seasons of the year, at the depth at which carcasses are buried; and he finds that, in only one or two instances, and for a very few days, is the temperature sufficient for the production of spores. Hence, not only is the earth-worm theory unnecessary, but it is also erroneous; for it is very seldom any spores are present that could be brought up. Koch further made experiments to see whether these spores were really present in the castings of earth-worms. He mixed the spores of bacillus anthracis in large quantities with garden earth in a pot, and introduced into it twelve healthy earth-worms. At various periods of time he removed an earth-worm, washed it very thoroughly, then made an incision into it, collected the earth in its interior, and introduced it under the skin of mice. At the same time, he inoculated other mice with portions of the earth. This experiment he repeated seven times. Six of the mice inoculated with earth died of anthrax, and one of a mixture of anthrax and malignant oedema. Of the seven mice inoculated with the contents of the earth-worms, only one died, and that of anthrax, which was long in developing, implying probably the presence of only one or two spores. When the large number of spores on the outside of the worm, and the difficulty of cleansing it thoroughly, are taken into account, it is by no means improbable that this spore or spores were not in the interior of the worm, but came from outside. This experiment is not, of course, a weighty one; but, taken along with the other evidence, it tells against the earth-worm theory. Koch also calls special attention to another point. The spores of the bacillus of malignant oedema are plentifully present in earth, and a very careful examination is requisite to distinguish between that disease and anthrax; he, therefore, thinks it not improbable that Pasteur got malignant oedema in his experiments, and not anthrax.

Pasteur further propounded the view that, apart from infection by the stings of insects, animals became infected from their food; and that this occurred from the presence of siliceous material in the grass, and mixed with the fodder, which wounded the mucous membrane of the

mouth, and thus allowed the entrance of bacillus spores. In fact, he found experimentally that the admixture of siliceous grasses with fodder containing bacillus spores led to the infection with anthrax of a large number of the animals which fed on it. He therefore concluded that this was one of the most frequent explanations of auto-infection. What also gave support to this view was the fact, that, in a number of sheep which Pasteur examined, and which had died of anthrax, the lymphatic glands of the neck were in most cases enlarged. Now, it is evident that an animal, feeding on fodder containing anthrax spores and siliceous material, must run a great risk of infection in the manner described by Pasteur; but it by no means follows that this is the most frequent cause of infection in nature. For, according to Koch, the intestine is most frequently the primary seat of infection, with the exception of infection arising from the stings of insects; and also, in many of the meadows where anthrax is frequent, there are no siliceous grasses. Further, the face of the sheep is almost the only exposed part; and therefore, swelling of the cervical lymphatic glands does not imply infection from the mouth, as distinguished from infection by the stings of insects; while it is by no means a constant rule that the lymphatic glands nearest the seat of infection are the most enlarged.

The investigations of Buchner and Pasteur have, therefore, done little or nothing towards explaining the etiology of anthrax, and its prevalence in certain districts. Some facts, however, which are brought forward by Dr. Koch, in the paper to which we have referred, throw great light on the subject. Anthrax very frequently infests localities where carcasses of anthracic animals have not been buried, and more especially in meadows which are frequently flooded. Now, here it might be supposed that the water had passed over the carcasses of animals which have died of anthrax, and carried along and deposited some of the spores as it went. But, then, why should one meadow be affected and not neighbouring ones? That the bacilli of anthrax can live, and form spores, apart from the body, is now well known: for instance, they grow luxuriantly on potatoes. Koch tested infusions of hay, straw, etc.; but found that, as ordinarily prepared, they were very unsuitable media for the development of these bacilli; but, if neutralised or made slightly alkaline, the bacilli grow with great rapidity and vigour; or, if in the hay there be present very fine narrow-leaved grasses, the resulting infusion is an excellent medium for the growth of these bacilli, without the addition of an alkali; or, if to the infusion made with the coarser grasses carbonate of potash or lime-salts be added, then they can grow luxuriantly. Thus, there are certain vegetable materials, particular grasses, plants containing starch, etc., which, when dead and kept moist, furnish an excellent medium for the development of bacillus anthracis; while, as in all anthracic districts the subsoil contains lime, even when these plants are not present, the lime renders the dead moist grasses a suitable soil for the growth of these organisms.

The life-history of bacillus anthracis may, therefore, according to Koch, be summed up as follows. In marshy districts, at the borders of rivers, etc., there is in the warm months a plentiful development of the spores of bacillus anthracis in parts where the suitable plants or subsoil are present—these spores being able to retain their vitality till the following season, when they again spring into life. When floods occur, these spores are carried away with the mud and deposited on the flooded meadows, where they become mixed with the food of the animals; and, if suitable conditions be present, develop in warm weather, and lead to the infection of the cattle or sheep grazing on the pasture. They generally enter the body through the intestine; develop there; kill the animal; are scattered over the ground in the blood and urine which flow from the animal; form spores; and are then ready to develop further, if the favourable conditions which have just been mentioned come into play; or they will cause anthrax, if taken into the living body.

MR. MALCOLM MORRIS has been appointed surgeon to the skin department at St. Mary's Hospital.

A REUTER'S telegram states that cholera has broken out in Japan, and in the islands belonging to the Sooloo Archipelago.

HIS ROYAL HIGHNESS the Duke of Cambridge has kindly consented to distribute the prizes to the students of the London Hospital Medical College, on Tuesday, July 18th, at four o'clock.

THE distribution of prizes to the students at the Dental Hospital of London Medical School is announced to take place on Thursday, July 6th, at six o'clock, at Willis's Rooms, when Mr. Edwin Saunders, F.R.C.S., will preside.

THE honorary degree of D.C.L. was conferred by the University of Durham, at the Convocation held on June 27th, the occasion of the Jubilee of the University, on Dr. G. Y. Heath, President of the Newcastle College of Medicine; and Dr. G. H. Philipson, the Professor of Medicine in the University.

PROFESSOR BIGELOW, the eminent American surgeon, has resigned the Chair of Surgery in Harvard University. He succeeded Dr. George Hayward in 1849, and has thus held office thirty-three years. The corporation of the university have appointed him *emeritus professor*.

THE United States Cabinet, on Friday evening, June 23rd, considered various appeals for the grant of a respite to Guiteau, on the ground of insanity, and upon other considerations. They unanimously declined to interfere with the course of the law in the execution of the convict on Friday, June 30th. The decision has been announced, with an elaborate opinion by the Attorney-General, giving the reasons upon which the decision is based.

A ROYAL Commission has been issued appointing Lord Bramwell, Sir John Coope, Professor Williamson, Surgeon-Major de Chaumont, Dr. T. Stevenson, and Mr. J. Abernethy, F.R.S., as Commissioners, to inquire into and report upon the system under which sewage is discharged into the Thames by the Metropolitan Board of Works, whether any evil effects result therefrom, and in that case what measures can be applied for remedying or preventing the same. The usual powers are granted under the Commission, and Mr. W. Pole, F.R.S., is appointed Secretary to the Commissioners.

THE annual meeting of the American Medical Association was held at St. Paul, Minnesota, from June 6th to 9th. It was the largest, with one exception, in the history of the Association, being attended by 883 members. In the absence in Europe of the President, Dr. J. J. Woodward, Dr. P. O. Hooper presided. A report favourable to the establishment of a weekly Journal, in place of the Transactions, was presented and adopted. Dr. John L. Atlee, of Lancaster, Pennsylvania, was appointed President-elect; and Cleveland was selected as the next place of meeting.

THE third annual meeting of the American Surgical Association was held in Philadelphia from May 31st to June 2nd inclusive, in the Hall of the College of Physicians, Philadelphia. The chair was occupied by Professor Gross, President of the Association. Papers were read on Sanitary Conditions in regard to the Treatment of Surgical Operations and Injuries; Fractures of the Skull; Transverse Fractures of the Patella; Foreign Bodies in the Air-Passages; Antiseptic Treatment of Wounds; Diseases of the Hip-joint; and the Ligature of Arteries for the Relief of Mortification. Dr. Gross was re-elected President; and it was decided to hold the next meeting in Cincinnati.

DEATHS IN PRISON.

THE Home Secretary issued an order on Saturday to all coroners in whose bailiwicks a prison or prisons are situate, directing that in future, in all cases where an inquest is to be held on a prisoner in any of Her Majesty's gaols, a medical man entirely unconnected with the prison is to be employed to make the *post mortem* examination and give evidence at the inquest. The selection of the independent medical man to perform the duty is left absolutely in the hands of the coroner.

FRENCH HOSPITAL.

DR. VINTRAS, physician in chief of the French Hospital in Leicester Place, has just received through General Menabrea, the Italian Ambassador, the insignia of the order of the *Corona d'Italia* conferred upon him by the Italian Government, as a graceful acknowledgment of the care bestowed at that hospital on Italian subjects, who, next to the French, are the most numerous among the people of various nationalities admitted as in- or out-patients.

THE ATTACK ON DR. ORANGE.

WE are pleased to be able to announce that Dr. Orange is going on quite favourably, although not at present able to leave his room. The wound of the scalp has healed, but there still remains a considerable feeling of soreness and bruising, both externally and internally, and Dr. Orange still finds it prudent to remain as long as possible in the horizontal position. No fresh symptoms have, however, arisen; and those which have existed throughout are steadily subsiding.

VACCINATION OF PASSENGERS TO AMERICA.

WITH a view of preventing the importation of small-pox into the United States by vessels from England, examination has been made of all persons arriving at Philadelphia. Between March 18th and April 3rd the arrivals at that port by steamers from Liverpool amounted to 1,945. Of this number but 460 were found to be protected from small-pox. The remainder, numbering 1,485, were vaccinated before leaving the vessels, in pursuance of the regulations of the National Board of Health. Cases of varioloid were found on board a steamer which arrived on April 3rd. These were carefully isolated in the ship's hospital, and were, on the arrival of the vessel in port, promptly removed to the municipal hospital.

INGLEBY LECTURES, QUEEN'S COLLEGE, BIRMINGHAM.

THE Annual Ingleby Lectures were delivered in the theatre of the College, on June 15th, and on June 22nd, by Dr. Robert Jordan, senior physician to the Birmingham Children's Hospital. There was a good attendance of members of the profession and medical students. Scarlet fever formed the subject of the lectures. In addition to a full definition of the phases of the disease, its treatment in individual cases, and the management of epidemics, Dr. Jordan brought forward a very comprehensive collection of statistical details, which he dealt with in a masterly manner. He asserted that there could be no doubt that there were "scarlatina years." In these years the progress of the disease might differ slightly in different parts of the kingdom, but everywhere the epidemic had its definite periods of recurrence and decline. It is best to state boldly that no satisfactory reason could be given for these risings and fallings.

DR. HJALTILIN.

WE regret to hear of the sudden death, on June 5th, of Dr. John Hjaltelin of Reykjavik. Dr. Hjaltelin held for many years the appointment of chief sanitary officer in Iceland, and resigned it last year. He was a highly enlightened practitioner, keeping himself well acquainted with what was being done abroad, and also observing diligently for himself. He had an excellent knowledge of the English language; and, from his remote residence, several times sent contributions to British medical periodicals; among them being the *BRITISH*

MEDICAL JOURNAL, which contains a paper by him on Hydatid Disease in Iceland (August 14th, 1869); and one on the history of an epidemic of Small-pox imported by a French vessel, and stamped out by the adoption of rigorous sanitary measures. Dr. Hjaltelin was well known for the ready and hearty assistance which he gave to all scientific visitors to the island.

RESECTION OF THE PYLORUS IN ITALY.

THIS operation has just been performed for the first time in Italy by Professor Caselli, of the University of Genoa. The patient was a female, who had been admitted to the hospital with symptoms which pointed to closure of the pyloric orifice of the stomach by a neoplasm presumably of a carcinomatous nature. In the operation itself there was no feature of particular interest, except the severe shock from which the patient suffered almost from the first incision. The time occupied was two hours and a half. To secure the stomach to the duodenum, and to sew up the organ itself, about fifty sutures were employed. The portion excised was elliptical in form, and measured four inches and a half in length by three and three-quarters in breadth. The operation itself, in all its details, was successfully completed; but the patient unfortunately sank from shock a few hours after her removal to the wards. The necropsy confirmed in every respect the correctness of the diagnosis, and showed, moreover, that all the other viscera were perfectly free from cancerous infiltrations. The operation, therefore, was a thoroughly legitimate one. Moreover, from the excellent position in which the stomach and duodenum were found after death, there is little doubt that, had the patient's vital powers held out, the result would have been a most brilliant one.

MILK-SICKNESS IN AMERICA.

A RECENT publication of the Washington Board of Health contains a short but interesting paper on this subject, from the pen of Dr. James Law, who thinks that the great importance of the disease has failed to be recognised, mainly because its source is to be found in certain back-wood districts, rarely penetrated by those who preside over our medical literature; and because it generally recedes before the advance of improved agriculture. It closely resembles malignant anthrax in its source in unimproved marshy localities, and also in its communicability to all animals; but differs essentially from anthrax in failing to show the specific local lesions, in place of which it expends its energy on the nerve-centres, producing great hebetude and loss of muscular power. According to Dr. Phillips, it is characterised by the presence in the blood of a species of spirillum, resembling that seen in relapsing fever. The germ is probably derived from drinking water, or from the surface of vegetables, as certain wells are found to infect with certainty, and the disease has been repeatedly produced by feeding upon particular plants (*Rhus toxicodendron*, etc.) That these plants in themselves are not the pathogenic elements, is shown by their innocuous properties when grown in places out of the region of the milk-sickness infection. Dr. Law thinks it altogether probable that here, as in malignant outbreak, we are dealing with a micro-organism which has developed pathogenic properties, and which can be reproduced indefinitely in the bodies of living animals. The great danger of this affliction consists in the conveyance of the germ with unimpaired potency through the flesh and milk, and through the manufactured products of the latter—butter and cheese.

ANOTHER DEATH FROM CHLOROPFORM.

WE have again to record a death during the administration of chloroform, this time at St. Bartholomew's Hospital. The patient was a sober man, in robust general health, but suffering from a cancerous growth of the lip. Previously to the proposed operation for its removal, the anæsthetic was administered by the junior resident chloroformist, in the usual way; about a drachm was poured on a piece of lint, and the patient began to inhale readily and quietly; the administration was not conducted very rapidly, but the patient passed

into a stage of very violent excitement, and struggled fiercely; without further warning, the pulse became imperceptible, and the breathing, after four or five respirations, seemed about to stop; artificial respiration and other means of resuscitation were resorted to, but without avail. At the necropsy, the only organ which notably departed from the healthy state was the heart; it was rather large and flabby, and weighed thirteen ounces and a half; there was extensive atheroma of the coronary arteries, but no evidence of fatty degeneration of the muscular substance, nor of valvular disease. According to the evidence given at the inquest, which was held on June 22nd, no examination of the heart was made before chloroform was administered, and the administrator was, no doubt, fully justified in stating that no examination could have revealed any dangerous condition of the organ. The case, however, suggests the wisdom of adhering to the rule, invariably followed by many chloroformists, of making a thorough examination of the cardiac region in every case; often something may be felt or heard which may put the administrator on his guard; in this case, however, as in many others, such a proceeding would be no safeguard. The jury returned a verdict of death while under the influence of chloroform.

THE ELECTION AT THE COLLEGE OF SURGEONS.

THE election of three Fellows into the Council of the Royal College of Surgeons on Thursday next will be conducted according to the method which is enjoined by the charter of March 1852, and which would seem to have been framed with the object of taking from the procedure that element of exactitude which should characterise all elections. Firstly, it would appear that a properly organised meeting cannot commence until fifteen Fellows at the least be present; and, when the ballot has begun, it "shall be kept open for three hours, unless, for the space of ten minutes after notice from the Chairman of his intention to close such ballot, no Fellow shall actually ballot, in which case the chairman shall declare such ballot to be closed, although the three hours may not have expired." The election begins at two o'clock in the day, and consequently may, or may not, last until five o'clock. This uncertainty respecting the hour of closure naturally acts as a deterrent to Fellows who cannot leave their work sufficiently early—especially country Fellows—to arrive at Lincoln's Inn Fields before the latter part of the afternoon, inasmuch as they are then liable to find the ballot closed, and the election ended. The exchange of the present system of uncertainty for one of precision would be a great gain; but its accomplishment would probably necessitate an amendment of the charter; and this question should be well considered when any thoughts of a revision of the charter come to be entertained. It is probably much more convenient to the Fellows that the ballot should be open for as long a time as three hours, than that it should be of less duration; and it does not appear probable that any more suitable time than that from two to five o'clock, especially as the Fellows' dinner takes place later on the same evening, could be selected. But it is matter for regret that the duration of the meeting is not precisely fixed by the charter, or that the chairman does not make it fixed by announcing beforehand his determination not to close the ballot until five o'clock, in conformity with the option to close it or not after the ten minutes' interval which is now accorded him by the charter.

THE ORDER OF ST. JOHN OF JERUSALEM.

ON Saturday, June 24th, St. John Baptist's day, the sixth or English League of the Order of St. John of Jerusalem held its annual Commemoration Service, by permission of the Queen, at the Chapel Royal, Savoy, where the anniversary sermon was preached by the Rev. W. K. R. Bedford, Vicar of Sutton Coldfield, one of the chaplains; and the General Assembly held at St. John's Gate, Clerkenwell, when the proceedings included a paper by Mr. John Furley on the Use of Ambulance Litters and Horse Carriages for the Removal of Sick and Injured Persons, and the reading of various reports by the Secretary, Sir Edmund

Lechmere, Bart., M.P., on the general progress of the work of the Order, an interesting feature in which was the award of silver and bronze medals for deeds of gallantry in saving life on land; by the Almoner, General Lord Templetown, K.C.B., referring chiefly to the diets of nourishing food provided for out-patients of London hospitals and elsewhere; by the Director of the Ambulance Department, Lieutenant-Colonel F. Duncan, R.A., reporting the continued remarkable extension of the St. John Ambulance Association, which has now 130 centres in existence, besides many hundreds of detached classes. The Association has granted over 8,000 certificates of proficiency in "first aid to the injured" during the past year, making a total of nearly 40,000 awarded since its institution by the Order four years since; and has now extended its operations not only throughout Great Britain and Ireland, but also to Malta, India, Australia, and other remote colonies; whilst its system of instruction has been established on the same lines, from information supplied from St. John's Gate, though under different names, in Germany, St. Petersburg, and New York. A report was also read from the committee appointed by the chapter for the formation of a "British Hospice and Ophthalmic Dispensary" at Jerusalem, containing the gratifying intelligence that a firman had just been received from the Sultan authorising the free grant of a site of land for the purpose.

PROFESSOR BILLROTH.

PROFESSOR BILLROTH, who is a native of Rügen, has lately received an invitation to take the place of his teacher, Professor Langenbeck, in Berlin, but preferred to remain in connection with the University of Vienna, in which he has held a distinguished position for the last fifteen years. The students thereupon resolved to thank the great surgeon for determining to stay with them. In the morning of June 22nd, an address was presented to him in the hall of the Academy of Sciences, where most of the professors of the University and many men of science had assembled, while the body of the hall was filled with students in their academic costume. The address was signed by a large number of Billroth's pupils, the name of Duke Karl Theodor of Bavaria heading the list. Dr. Billroth, who was received with great applause, said he considered himself as belonging to Austria and the University of Vienna. In the evening, a great torchlight serenade was held in his honour. Some thousands of students, with torches and coloured lamps, marched with the old University flag and a band of music to the street where the professor lives. The German students' song, "Gaudeamus igitur", was sung by thousands before the professor's house; and afterwards a hymn, specially composed for the occasion. Dr. Billroth thanked the gathering in a few warm words; and, after some more singing and cheering, the students dispersed.

CASE OF POISONING BY LOBELIA.

A FATAL case of poisoning by lobelia inflata occurred recently at Carlisle. From the evidence, it appears that the deceased, John Richardson, a joiner, had been for some months suffering from heart-disease, and had frequently complained of a severe burning pain in the stomach. He was a man of intemperate habits, and an enormous eater. On the day of his death, he was not so well as he had been, and said he had taken an emetic, which had not acted. He was asked of what kind, when he replied, "One of Dr. Coffin's prescriptions, and there is lobelia in it." There was a book on the table; and, pointing to it, he said he had been recommended to try that system when in Lancashire. The *post mortem* examination was made by Dr. Hair and Dr. Carlyle twelve hours after death. The pupils were slightly dilated. The lower jaw was firmly fixed. The abdomen was greatly distended. A quantity of fluid, probably about two pints, having a milky appearance, was found in the peritoneal cavity. The intestines were in places much congested. The stomach was next examined, and an aperture about the size of a goose-quill was found in the lesser curvature; and it was probably through this aperture that the fluid

found in the peritoneal cavity had escaped. In the stomach itself, there was about half a pint of yeasty-looking fluid, in which, on careful examination, lobelia-seeds and pieces of cayenne could be detected. The lungs were healthy, but the heart was fatty. The head was not examined, as sufficient evidence to account for death was afforded by the perforation of the stomach. The jury returned a verdict that the deceased died of perforation of the stomach, induced by the action of an emetic containing lobelia which he had judiciously taken. Deaths from lobelia inflata administered by Coffinets are of frequent occurrence. Their dictum is that "Heat is life, and the want of heat disease and death". In accordance with their principles, their drugs are lobelia and cayenne. It is asserted by them that lobelia cannot kill, but it has been shown over and over again that, when not rejected, it acts as a powerful toxic agent, and kills with the greatest certainty. The treatment of poisoning by lobelia is simple. The stomach-pump should be used if necessary, stimulants should be freely administered, and a dose of 1-25th of a grain of nitrate of strychnia, or its equivalent in nux vomica, should be injected hypodermically.

DARWIN MEMORIAL.

WE have received a circular, addressed from the Royal Society, Burlington House, stating that, though the works of Charles Darwin form his best and most enduring memorial, his many friends and admirers feel that these should not be his only monument. They are desirous of handing down to posterity the likeness of a man who has done so much for the advancement of natural knowledge, possibly in the form of a statue to be erected in some public place. They wish further, if possible, to establish a fund associated with his name, the proceeds of which will be devoted, in some way hereafter to be determined, to the furtherance of biological science. A committee has accordingly been formed with a view of raising funds for the above purposes. The Honorary Secretaries are T. G. Bonney and P. Edward Dove; and these gentlemen will receive the names of all who desire to co-operate by subscription in this endeavour. The General Committee, of which W. Spottiswoode, Pres. R.S., is Chairman, includes many distinguished names—such as His Royal Highness the Duke of Albany, the Archbishop of Canterbury, and several foreign ambassadors. The Executive Committee consists of His Excellency the American Minister; Lord Aberdare, F.R.S., Pres. R.G.S.; Right Hon. Lyon Playfair, M.P., F.R.S.; Sir John Lubbock, Bart., M.P., F.R.S., Pres. Linn. Soc.; Very Rev. the Dean of Westminster; Sir W. F. Pollock, Bart.; Sir F. Leighton, Pres. R.A.; T. H. Farrer; W. E. H. Lecky; W. Bowman, F.R.S.; Dr. W. B. Carpenter, F.R.S.; Professor W. H. Flower, F.R.S., Pres. Zool. Soc.; Dr. M. Foster, F.R.S.; F. Galton, F.R.S.; Sir J. D. Hooker, F.R.S.; J. W. Hulke, F.R.S., Pres. Geol. Soc.; Professor T. H. Huxley, F.R.S.; Professor H. N. Moseley, F.R.S.; Major-General A. H. Pitt-Rivers, F.R.S., Pres. Anthropol. Inst.; C. W. Siemens, F.R.S.; W. Spottiswoode, Pres. R.S.; and Professor J. Tyndall, F.R.S. The Executive Committee also including the Treasurer, J. Evans, Treas. R.S.; and the Honorary Secretaries. A large number of subscriptions have already been received or promised: His Royal Highness the Prince of Wales contributing £21; and the Duke of Devonshire, F.R.S.; the Earl of Derby, F.R.S.; Sir John Lubbock, Bart., F.R.S.; W. Bowman, F.R.S.; Francis Galton, F.R.S.; and W. Spottiswoode, Pres. R.S.—each give £100.

MEDICAL DEGREES AT THE MADRAS UNIVERSITY.

THE Principal of the Medical College of Madras is much exercised in mind as to the exodus to medical schools of Great Britain of students of the College, whose general education has not been liberal, but who possess a certificate from the College. He proposes to check this exodus by refusing the men certificates of their proficiency; a proposal that has provoked much comment and difference of opinion. He regards the object of the University in instituting the degree of L.M.S. as the supplying of the Presidency with sufficiently well qualified practitioners. He considers the concession has been abused, in that the majority of

the students, after obtaining the necessary certificates from the College, instead of passing the degree in the Madras University, proceed to England to complete their medical education, mainly with the view of competing for commissions in the army. The Principal objects to this course because he holds that the matriculation examination does not guarantee a proper standard of general education and culture, and he also doubts whether the degree of general education is "a sufficiently firm or wide foundation for the professional superstructure" which is now built on it. To remedy what he holds to be an evil, he suggests that the course be assimilated to the university course; and, secondly, that the college certificates should only be issued to the Registrar of the Madras University. The Director of Public Instruction does not, however, at all agree in regarding this exodus of medical students to Europe as an evil, and still less in the remedy which it is proposed to adopt to cure it. The main point which the State has in view is to secure medical men duly qualified, and he thinks no one will question that a tour of study in the hospitals of Great Britain, in addition to the medical education already received at Madras, must be in itself an immense gain to the country. To endeavour to check this desire on the part of students to proceed to England seems to him most impolitic, and clearly opposed to the good of the country. The vast majority of the students will return to make a living in the country far better qualified, he thinks, to be useful in their profession than if they had never left it. Again, it must not be forgotten that from a student's point of view, a British degree is of more value than a Madras degree, for it enables him to practice in any part of the British Empire, and therefore it is only natural that they who possess the means, should seek to obtain it in preference to a Madras degree. The proposal to check the exodus of students by refusing to them, except for a special purpose, the certificates which they have earned, savours, to his mind, too much of protection and illiberality, and conflicts with the student's right to what he has earned by hard work. If these certificates are taken at more than their intrinsic worth in European medical schools, the governing bodies of such schools can surely be moved by their members to remedy the evil. The remedy lies in Europe, and not in India.

THE REMOVAL OF SMALL-POX PATIENTS.

A CASE of small-pox which attended the out-patient room of Guy's Hospital on May 17th, and which was received the same evening into the small-pox hospital at Stockwell, has been the subject of much censorious comment in the public press, in consequence of a report to the district board from the resident medical officer of the asylum, complaining of "the gross neglect of those who saw the patient at Guy's, and not detaining him there until an ambulance had been obtained, but sending him away to spread the disease through the streets." A question, referring to the matter, was addressed in Parliament to the President of the Local Government Board last Monday; but as Mr. Dodson was in communication with the authorities of the hospital on the subject, and had not received a reply, notice was given that the question would be repeated on a future occasion. It appears that the man, who was not aware what was the matter with him, came into the out-patient room, with many others, as soon as the doors were opened, and was afterwards diagnosed by the medical officer on duty to be suffering from small-pox. For the safety of those in the room, the patient, being quite able to undertake the journey, was advised to return home and acquaint his family of the occurrence, with special instructions to avoid public conveyances, and to make application to the parish authorities, who alone could secure his admission to a small-pox hospital. We learn, on good authority, that this method of dealing with out-patients who may be suffering from contagious disease has been occasionally rendered necessary at Guy's and other hospitals in consequence of the delay and difficulty experienced in obtaining the necessary parish authority, along with the ambulance, to remove the patient to a small-pox or fever hospital. It is probably not generally known that, before a patient can be transferred from a general hospital to one belonging to the District Asylum Board, a warrant must be obtained from the

relieving officer of the district in which the hospital is situated, who must visit the patient in the company of the medical officer of the parish, as the latter is the only medical man authorised to certify as to the nature of the complaint from which the patient is suffering. These officers are, for the most part, engaged on parish business away from their respective headquarters, and the solitary vehicle which the union possesses as a means of transport is in such cases employed on a separate errand. Thus much precious time is lost, during which, in default of there being no suitable means of isolation, which is usually the case in the out-patient department, so much danger is incurred by the other patients that, of the two evils, it has on several occasions been found the lesser to send the patient away, with proper instructions how to proceed if he desire to become an inmate of a small-pox or fever hospital. Amongst a certain class, and especially mothers in charge of children, much repugnance is expressed at being separated from their children, while not a few are averse to becoming enrolled as paupers, which must inevitably be done before they can be admitted to the asylum. No doubt, if the patients can be persuaded to accept the proffered hospitality of the District Asylum Board, one step—and a most important one—is taken to mitigate the propagation of contagion; but, to expedite this action, it is absolutely necessary that every facility should be given to the managers and medical officers of those hospitals which are beset with crowds of out-patients, to secure the speedy removal of the contagiously affected either to their own homes or to the asylums devoted to their special reception. This can be more effectually accomplished by investing the resident medical officer of the hospital with the same authority which now rests with the parish officials; and, until the Local Government Board can be induced to allow this, there must inevitably be a repetition of the sensational paragraphs in newspapers as to the manner in which small-pox or fever is spread.

CHOLERA IN THE RANGOON LUNATIC ASYLUM.

A SERIOUS outbreak of cholera occurred in the Rangoon Lunatic Asylum in the month of November last. Throughout the previous ten months of 1881 the general health of the patients in the asylum, who number on an average 182, had been satisfactory. Diarrhoea had prevailed somewhat beyond the average amount at the commencement of the rains, and cases of dysentery had been frequent in July and August, as many as 10 cases having been treated, but this was attributed to the influx of an unusual number of worn out and debilitated cases. The first alarm of cholera was given on November 18th. A man was attacked with vomiting and diarrhoea, and although this case was not distinctly marked, the symptoms were regarded as suspicious; he was kept in bed isolated from the other patients and his case carefully watched. All the wards were thoroughly cleansed, washed and fumigated, and for five days it was hoped that there would be no other cases. A reappearance of the disease, however, took place on the 22nd, when another man was attacked, and on the 23rd and 24th four men were admitted to the hospital, all from different cottages on the asylum estate. On the 26th the pestilence had spread to each department of the establishment, and after that each day added to its victims materially. Not a single ward escaped. The patients carried off were, with scarcely an exception, the subjects of incurable mental derangement, and in a majority of instances so demented as to be unable to describe their symptoms, while many perversely refused alike food and medicine. A few of the fatal cases appeared suddenly death-struck, without premonitory symptoms of any kind, and sunk in from 8 to 12 hours; in others, the attack was more prolonged, and lasted from 2 to 3 days. In 26 out of 31 cases there were no premonitory symptoms; either the patient was observed to be in a state of collapse before purging and vomiting began, or he sank rapidly into this condition after the sudden appearance of vomiting and diarrhoea. Some patients affected by cholera were not discovered until the doors of their rooms were opened in the morning, no sound of illness or distress having been heard by the night-watchmen. They were found in livid collapse, having been recently sick and purged. In a considerable number of cases there was no

diarrhoea sufficient to drain away any considerable amount of the serum of the blood before collapse was established. The total number of cases treated was 31, and there were 12 deaths. The disease remained in the asylum from November 18th to December 1st, and then suddenly disappeared. Patients recently admitted and chronic cases were attacked in equal degree, but the mortality was greater amongst the former class. Patients in bad health seemed to resist the disease better than those who were in good physical condition. Dr. Griffith, the Medical Superintendent, regrets that no line of treatment seemed especially efficacious. When collapse came on, all treatment was unavailing. Careful preventive measures were taken by the prompt treatment of anything approaching diarrhoea in any patient by the fumigation of all the wards with chlorine, and the liberal use of carbolic acid in cleansing. Dr. Griffith is inclined to attribute the outbreak chiefly to the unusual weather that occurred in November in Rangoon. The barometer had been high in November, reading a daily mean of 29.965 from the 15th of the month, and remaining about 30.033 during the rest of the month without any remarkable fluctuations. The thermometer was 80° from the 15th, falling to 75.5 on the 27th, the date on which the largest number of cases occurred. The wet and dry bulbs showed a great amount of moisture in the air. The early part of the month was very hot and oppressive; about the 16th it became unusually muggy and close, the prevailing wind from N.N.E., and a good deal of rain falling almost every day. The 27th was particularly oppressive, the air being damp and sultry, just such a day as might be supposed to favour the propagation of pestilential miasmata. The water in the wells, Dr. Griffith says, was lower, during the past hot season than during any year since the asylum was built. The inference from this fact is, that the water in the wells is, after all, principally surface drainage, more or less filtered; it is possible that most of the soil-water drains down between the steining of the well and the surrounding soil without much filtration. The only other source of pollution Dr. Griffith can think of is the fact that the lunatics, when drawing water, stand on the well covers, the effect of this arrangement being, that droppings and washings of the feet and loongyes fall into the wells, and thus, when the water is low, it may become somewhat impregnated with impurities. Another defect in the sanitary arrangements of the asylum is the state of the ground beneath the cottages, and especially the cottages occupied by the filthy lunatics. Much difficulty is experienced when washing these cottages, as must be done daily, to prevent the water passing between the boards, and lodging under the floor. To remedy this evil, Dr. Griffith recommends the adoption of corrugated iron sheet floorings, covered with asphalt and concrete, making an impervious surface.

SCOTLAND.

HEALTH OF GREENOCK.

THE monthly report by Dr. Wallace, Medical Officer of Health for Greenock, shows that, for the five weeks ending June 3rd, the total mortality was 161, which was equivalent to an annual rate of 24.1 per 1,000. For the corresponding period of last year the rate was 22.9. Diseases of the zymotic group caused 10 deaths, or 6.2 per cent. of the whole. The number of cases of infectious disease ascertained was 57. On June 3rd, there were 11 cases of infectious disease in the hospital, and 24 under treatment at their own homes.

FATAL OCCURRENCE IN GLASGOW.

A BOY died last week in the Glasgow Royal Infirmary under very distressing circumstances. He was at play in a court, and happened to sit down on a flagstone above a printer's premises. In this flagstone there was an aperture, and, while the lad was sitting there, someone thrust upwards a red-hot iron, which penetrated some distance into the rectum of the boy, inflicting such injuries that he died in the course of two days. Some apprehensions have been made in connection with the occurrence.

DEATHS FROM EATING POISONOUS HERBS.

THE deaths of two girls, aged five and three years respectively, are reported to have occurred at Airdrie from eating some leaves which they had gathered in the fields. At first the matter excited no attention, as the leaves were thought to be those of the "sourrocks," a kind of cress; but the day following, the younger child became suddenly ill and died, while the other succumbed two days afterwards. The medical man in attendance considered death was caused by eating some poisonous vegetable. The word "sourrocks" is Scotch for a kind of cress much eaten by the country people, and it seems probable that the children had partaken of one of the umbelliferae, such as the *Sium nodiflorum*, which bears a good deal of resemblance to the cruciferous *nasturtium*, or watercress, and, unless when in flower, is not very easily distinguished from it by the inexperienced.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending June 17th, it appears that the death-rate in the eight principal towns during the week was 20.8 per 1,000 of estimated population. This rate is 0.8 below that for the corresponding week of last year, and 2.4 below that for the previous week of the present year. The lowest mortality was recorded in Leith, viz., 16.4 per 1,000; and the highest in Greenock, viz., 24.5 per 1,000. The mortality from the seven most familiar zymotic diseases was at the rate of 4.0 per 1,000, or 0.5 above the rate for the previous week. The most fatal miasmatic diseases were whooping-cough and measles—the incidence of the latter being felt in most of the principal towns. Acute diseases of the chest caused 105 deaths, or two less than the number registered during the previous week. The mean temperature was 49.5°, being 5.8° below that of the week immediately preceding, and 3.2° below that of the corresponding week of last year.

IRELAND.

THE DUBLIN PORT HOSPITAL SHIP.

THE Corporation of Dublin have adopted a recommendation of their Public Health Committee to abolish this ship. It was stated that no case had been sent to the ship since its establishment; and that it cost the citizens £2,500 a year.

LIGATURE OF THE INNOMINATE ARTERY.

MR. THOMSON'S case continues to progress favourably. A small portion of the ox-aorta ligature has come away through the sinus, which still remains open. On the twentieth day after ligature, the tumour was reduced in size by an inch in its long, and half an inch in its short, diameter, and is still firmer.

DEATH FROM PHOSPHORUS.

A DEATH under very singular circumstances was the occasion for an inquest this week at Thurles Workhouse. It appears that a dwarf named Dillon, having complained of a pain in the stomach, was told by some mischievous boys that, if he eat some rat-poison, he would be cured. The unfortunate creature, having purchased a pot of phosphorus paste, swallowed the entire contents, death resulting in a few hours afterwards.

THE KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

THE fee for the licence of this College, fifteen guineas, has, by a recent resolution of the College, been reduced to five guineas for graduates in arts and medicine of any of the universities of Great Britain and Ireland. This will be a great boon to a large number of graduates in medicine, especially of the University of Dublin, living in Ireland, who may desire to avail themselves of the advantages of becoming members of the College, but have hitherto been debarred by the amount of the fee, in addition to that paid for their degree.

ADDRESS AND PRESENTATION TO JOHN POPHAM, M.B.,
LATE OF CORK.

THE members of the County and City of Cork Medical and Surgical Association, having learned that Dr. Popham was about to leave the city which had been the field of his professional labours for nearly fifty years, could not allow their intercourse to terminate without giving expression to the feeling of respect they ever entertained for the high and honourable principles which guided his conduct in public and private life. They accordingly have presented him with an address on the occasion of his retiring from professional life and removing to London, which was accompanied by a valuable solid silver inkstand, of early English design. Dr. Popham graduated with honours in 1835, and obtained the senior moderators'hip and gold medal. He commenced practice in Cork, and was elected lecturer on the practice of medicine in the then Cork School; and, in 1846, was appointed physician to the Cork Workhouse. He was afterwards connected with the North Charitable Infirmary for many years, and, on his retiring some months since, was elected consulting physician to the hospital.

THE DUBLIN LADIES' SANITARY ASSOCIATION.

THE first annual meeting of this Association was held on Monday last, Mr. Justice Lawson being in the chair. Her Excellency the Countess Spencer, and several other influential and representative ladies and gentlemen, attended the meeting. The chairman stated that the object of the association was to promote sanitary regulations, and to induce the working classes to keep their houses in a state that would promote their own health and comfort, and, at the same time, contribute to reduce the death-rate in Dublin, which exceeded that of other cities in a remarkable degree. In the short time that had elapsed since the establishment of the Association in April 1881, it had been very active, and done good work. The report detailing what had been accomplished, and the means employed, having been read, its adoption was moved by Mr. Barton, President of the Royal College of Surgeons in Ireland. He said that the members of the profession could not but join heartily in welcoming an association that would in a great measure aid in removing the germs of disease and death in the case of many of their fellow-citizens. It was a serious duty to see that, in the homes of the poor, cleanliness was observed; and especially, in view of the recent researches of Pasteur, Lister, and others, was it necessary that the places where the sick were to be attended should be kept clean, and that proper sanitary arrangements should be carried out. He was glad to see that the ladies took a practical view of the work to be done. He noted with great pleasure that a cookery class had been established in connection with the association. The Rev. Dr. Molloy, vice-Rector of the Catholic University, in seconding the adoption of the report, said that, if they analysed the sources of human happiness, they would find that attention to domestic comfort and to sanitary matters had more to do with it than the principles of political economy, which occupied so much of the attention of the world:

"Of all the ills that human hearts endure,
How small the part that kings can cause or cure."

Dr. Lyons, M.P., in moving the appointment of the executive committee for the year, expressed his approval of the effort of the association; and Dr. W. H. Newell, C.B., of the National Board of Education, said that, as the result of a proposal made by Miss Hamilton Stubber, through whose exertions mainly this association had been started, the Commissioners of Education had under their consideration how far physiology and practical sanitary science could be taught in the national schools. They had made arrangements to carry out a scheme, of which some of the details might yet be altered, but it was likely to take the form of an obligatory course with result fees, so as to bring home this subject to the poor. The subject of cooking had not escaped the attention of the commissioners, for, twice a week, one hundred girls were receiving instruction in plain cooking in the Model Schools, Marlborough Street. They had also a school in Waterford and another in Cashel.

GENERAL COUNCIL

MEDICAL EDUCATION AND REGISTRATION.

SESSION, 1882.

Tuesday, June 27th, 1882.

DR. ACLAND, President, took the Chair at 2 P.M.

New Members.—Official notices of the appointment of the following new members were read: Mr. John Marshall, by the Royal College of Surgeons of England, in the room of Sir James Paget, Bart., resigned; Dr. Thomas King Chambers, by the University of Oxford, in the place of the late Dr. G. Rolleston; Dr. Patrick Heron Watson, by the Royal College of Surgeons of Edinburgh, in the room of the late Mr. Spence; Mr. Thomas Collins, by the Apothecaries' Hall of Ireland, in the place of Dr. C. H. Leet, resigned; and Dr. R. D. Lyons, M.P., as Crown member for Ireland, in the place of the late Dr. A. H. McOlintock.

President's Address.—The PRESIDENT delivered the following address. At the close of the last session of the Council, two questions of detail in administration were raised, which fully deserved the attention they then received; first, whether there should not be a fixed time for an annual meeting of the Council, and second, whether it would not be expedient, at all events in the present year, to meet at Easter. These questions are now alluded to because I desire at once to draw the attention of the Council to certain subjects of importance connected with them. They weighed with me in not promoting in either direction the expressed wishes of several members of the Council.

Firstly, at a time when a Royal Commission was sitting to inquire into the working of the Medical Acts, with, as was well known, the certainty of strong pressure being put on the Commission to recommend the reconstitution of the Council, it seemed improper, and possibly also futile, to attempt to fix a date for the future meetings of a body which might perhaps no longer exist.

Secondly, it seemed to me that it would be to trespass needlessly on the time of members of the Council to summon them before they had received the report of the visitors appointed, in July 1880, to visit the several medical and surgical corporations in England, Scotland, and Ireland, during the year 1881.

Thirdly, it was clearly desirable that the meeting of the Council during this year should be fixed for such a time as would probably enable it to be cognisant of the report of the Royal Commission on the Medical Acts. By a general agreement among the members, the present has seemed to be the most suitable time for our reassembling in the thirty-third session.

The first business, then, of the Council relates to the Visitors' Report, which will to-day be formally submitted to you, together with remarks thereon by the various bodies visited.

It would not become me to express any detailed opinion as to the manner in which Mr. Teale, Professor Gairdner, and Mr. Stokes have fulfilled the task which they undertook. The report and the remarks thereupon were forwarded to the members of the Council individually, as soon as they were printed, in order that when they were laid before the Council, they might, if it were so desired, be at once discussed with full previous knowledge. On one point it is my duty to speak, and I do so with confidence. It is of my knowledge that the pains which have been taken by your visitors were such as could hardly have been required at the hands of any professional men; the sacrifices to which they have voluntarily submitted having been such as nothing but a keen appreciation of the importance of their new and special task would have induced them to undergo. They acted on public grounds for the following public objects:

First, that an official record of the condition of the examinations as conducted by the corporations, after over twenty years of the existence of the Medical Council, might be thereby obtained. This record has been made by the same reporters, with the experience of the former reports, which, be it observed, were made by visitors who had not been enabled to survey the examinations as a whole, or to compare them with one another, since each had visited only a certain portion of the bodies.

Secondly, that when the visitors had made their observations on the several bodies, and had then, with considerable labour, compared them

one with the other, they might be enabled to frame a common report, so that the impressions they had themselves received might be subjected to the criticism equally of the individual bodies, of the General Council assembled, of the medical teachers, and of the profession generally.

There were special reasons at the time why this task was one from which less sincere men might even without blame have shrunk. One was, that the appointment of the Royal Commission would at first sight make the work seem of little value, and, another, that the bodies themselves, for that reason might not view the new inquiry with favour. But both of these plausible reasons had no weight with the visitors. You had, by a resolution of July 16th, 1880, specially directed them to inquire into the causes of the rejections. Time was, and that not long since, when the chief allegation against the licensing bodies was that many men passed, who passed only in order to fill the coffers of the body they joined. A new question had now arisen, which, in the opinion of persons so eminent as Professor Humphry and the late Professor Rolleston, demanded your attention, "why so many were rejected." To many minds this charge and countercharge indicated difficulties in education and examination, into the nature of which it was a public duty to search without delay. It was felt that, whether the present executive continued to exist, or whether it was to be changed by Parliament, the interests of students, teachers, examiners, and the public, showed that delay in this inquiry was much to be deplored. The visitors have laboured for you in this important matter without stint. Their conclusions are now laid before you for consideration.

I do not presume to discuss the remarks made by the several corporations on the report. They will all, according to the standing orders, be laid, with the report itself, on the table of the Council. The remarks are interesting for their variety, and for the different views which they take of the position of the education and examination question as described by the visitors.

Upon the whole, it cannot be reasonably doubted that these several documents will materially aid thoughtful persons in coming to conclusions as to whether it is, or is not, desirable to continue to press for a diminution of the number of the licensing bodies; as to whether there should be a combined board or boards to represent the existing authorities; as to whether there should be one or more central State examinations; as to whether the present freedom of the existing local bodies should continue, combined or not combined with a system of coadjutor examiners, or of visitation, and of a power to report on them by a central authority, however constituted; as to whether the central authority should control in any sense the methods of teaching in the schools; and as to whether there should be any central regulations regarding the conferring honours for attainments above the minimum standard of medical knowledge required by the State. These and other questions have yet to be answered. None of the corporations enter upon these topics in their remarks.

It is not therefore to be supposed that this report can be final. From its very nature it touches only part of the subject. It has already, indeed, given rise to many valuable remarks (such as those of the Royal College of Surgeons of England) on what is, according to the experience of that and other bodies, the best method for carrying out the object of examinations, namely, the guiding of the studies, and ascertaining, with reasonable certainty, the practical fruit which they have borne. The report hardly gives any new clue to the solution of the difficulty how so to combine local freedom of teaching with central control of examinations, or how to reduce the amount of "cram," and evoke the powers of observation and reflection in our youth.

In relation to the report of the Royal Commission, which has just been made public, and for copies of which we have to thank the Royal Commissioners, I venture a very few observations. For now eleven years the Council has laboured under an abiding difficulty which it was powerless to remove. Parliament had in 1858 enabled all the licensing authorities of our profession to send to a common Council a representative. The authorities in England, Scotland, and Ireland at that time had in many respects conflicting interests. These had to be fought out in the Council, in continuation of contests which had resulted in the passing of the Act of 1858. Notwithstanding these difficulties, the Council, in a very few years, produced a complete register of the profession; exercised discipline which had never before existed; put an end to animosities between institutions; digested a national *Pharmacopœia*; created the efficient conduct of a central office, which was gradually collecting and diffusing information of educational value to the whole medical profession and to the country at large; and brought about a marked improvement in education, general and professional. This is well illustrated by the fact that the Royal College of Surgeons of England has relinquished its examina-

tion in arts for examinations to be conducted by the national educational bodies, in compliance with the strongly expressed desire of the Council, that the same tests of general education as belong to the higher education of the country should be also applied to all medical students; and, at the same time, one of the older universities agreed to establish special local examinations at the period of the year most suited to the circumstances of youths about to enter the profession of medicine.

Among other things which the Council advocated and would have carried out in some form, under the pressure, no doubt, of Lord Ripon's Bill, in 1871, was a fusion of the licensing bodies for examination purposes. But suddenly all progress was blocked by discussions on the constitution of the Council, carried on within the profession so persistently, that I acknowledge with deep regret that, justly or unjustly, a doubt has been thrown on the wisdom of Parliament in having intrusted the education of our profession to the representatives of our old institutions, though it is by them that medical education and medical science have been raised to their present condition in Great Britain. Had Lord Ripon's Bill passed, we should for the last ten years have been working a combined examination-system of some description. No one would have been placed on the *Medical Register* who had not had a complete medical, surgical, and obstetrical education. Our whole force would have been harmoniously expended on perfecting that education and on solving the various problems which, in consequence of the vast progress of knowledge, year by year present themselves. As it is, we have necessarily been distracted by collateral discussions on Parliamentary Bills which have failed to pass; and we have been, without ceasing, impeded by the doubts and uncertainty attending deferred legislation.

Yet, even as it is, no one who attends dispassionately to the state of medicine in this country can but be aware of the progress in the knowledge and character of our medical students; or can fail to know the patience, energy, and skill, of our younger teachers, the improvement in our institutions, and the increasingly philosophic, as well as benevolent, tone which generally pervades the hard-working masses of our profession. We want now in its education chiefly united effort, with reasonable freedom. For my own part, I cannot convince myself, after many years' observation and experience, that the principle on which the Legislature constructed the Council in 1858 was erroneous. Yet I would devote my utmost energies to bring about at the earliest moment the formation of any Council which could be left undisturbed to use the powers which the Legislature might accord to it, and to work for the common purpose of promoting the steady growth of medical knowledge, as distinguished from medical politics, which belong to voluntary organisations, and not to a responsible Council of Education.

Whether the Council which the Royal Commission recommends is the best that can be devised, and whether Parliament will adopt the recommendations of the Commission, which are not unanimous, are propositions into which, together with other topics arising from the Report of that Commission, I feel precluded from entering on this occasion. The Council is much indebted to the Earl of Camperdown and the other Royal Commissioners, with Mr. White, their Secretary, for the manner in which they have forwarded their Report at the first possible moment to the Council, so that it might be in your hands this day. Of the care, ability, and courtesy with which the Commission has carried on that which it designates an intricate and laborious inquiry, the Council will, I am sure, entertain but one opinion. It will rest with the Council to say whether it will take now any step with regard to the Commissioners' Report, or whether it will wait until a Bill founded upon it is brought into Parliament, and is submitted to it.

It remains for me only to name certain topics of a more restricted kind.

The Lord President has forwarded, for the consideration of the Council, a draft Bill for the Regulation and Registration of Midwives. This important Bill will be laid before you.

Since the last meeting, a case involving certain legal questions has occurred, which may be thought worthy of consideration by a Special Committee.

A registered practitioner assumed a title which he did not possess. The body whose title he assumed felt itself unable or unwilling to restrain him or remove his name from its roll. What course should the Council take in such a case? There has been always an impression on the part of the Council to act as public prosecutor. But, manifestly, the duty to keep the *Register* free from improper persons must also the duty to take steps to bring professional irregularities under the cognisance of the law; if not so brought by other agencies. When once a legal conviction has been obtained, the course of the Council is clear under Section 20 of the Medical Act. In other cases that come under the same section, the Council has to decide as to what implies infamous conduct in a professional respect. It has

been decided that the whole Council, and the whole Council alone, can remove a name from the *Register*, and that the power to do so cannot be delegated. But the machinery of a large Council meeting annually is for this purpose both cumbrous and slow. The subject has been considered before, and may have to be brought before you again. The case of Mr. Murdoch in relation to certificates may serve to raise this question also in a practical form.

The legal points arising out of the vexed questions of who are *bona fide* dentists, and what names ought to have been, or ought to be removed from the *Dentists' Register*, cannot be left unnoticed.

The costliness of the visitation of the corporations has attracted observation. It is well to observe that the visitors were assured by your president that whatever clerical or other help they needed to lighten their personal labour, and whatever assistance could be given by the Council's printers, were to be at their disposal. In this instruction I feel sure of your concurrence. You will be glad to know that notwithstanding this unusual expenditure, the treasurers of the English Branch Council have been able to invest this year £4,000, making a total capital now invested by the English Branch Council of £29,000.

The work of the office, under the assiduous care of the Registrar, will, I doubt not, meet with your approval. It was my privilege on your behalf to explain in this office, together with some other members of the Council and your registrar, to several foreigners of distinction, at the time of the meeting of the International Medical Congress in August last, the working of the British Medical Acts, the system of Registration, and the nature of the Council's recommendations and powers in relation to education. It is not too much to say that they were greatly interested by the inspection of the various books, registration forms, reports, and minutes of the Council.

The several matters of formal business, and the notices of motion which have been submitted to you need not, of course, be named.

I conclude this brief address—should a new bill pass, the last I may be called upon to give you—with only one further remark. There remain now only three members of the Council who first undertook the duties which Parliament assigned to it. They have shared their work, from 1858 till now, with some of the most honourable and most patriotic of men, among whom I may name, for instance, Brodie, Christison, Syme, Green, Sharpey, Parkes, Begbie, Stokes, Rolleston—I name but some of the dead. Would I might also speak of the living who, from various causes, have ceased to be with us. I will dare to speak for the whole Council when I say, in the spirit of all these men, that should Parliament by any changes relieve us from the work which Parliament laid upon us, we shall surely rejoice. If, by so relieving us, the care of conducting medical education for the public good be lightened, none will hail a new Council, which shall fulfil that condition, with more hearty good-will than the old. Till the day when that relief come, we shall continue to discharge our duties to the best of our ability, and to the utmost extent of our knowledge, and to the full extent of our powers.

At the conclusion of the address, it was moved by Mr. TURNER, seconded by Mr. MARSHALL, and resolved: "That the President's address be entered on the minutes."

Committees.—The following committees were appointed. *Business Committee:* Dr. Pitman (Chairman), Dr. Aquilla Smith, Dr. Haldane. *Finance Committee:* Dr. Quain (Chairman), Dr. Pitman, Dr. Aquilla Smith, Dr. Scott Orr. *Pharmacopæia Committee:* Dr. Quain (Chairman), Dr. Aquilla Smith, Sir William Gull, Dr. Pitman, Mr. Macnamara, Mr. Collins, Dr. Haldane, Mr. Bradford. *Executive Committee:* Dr. Pitman, Mr. Simon, Dr. Humphry, Dr. Quain, Dr. Haldane, Dr. Aquilla Smith.

Results of Examinations.—A table showing the results of professional examinations for qualifications granted in 1881 by the bodies named in Schedule A of the Medical Act, was presented, and was advised to be entered on the minutes. The following is a summary of the table: [I = First Examination; II = Second Examination; III = Third Examination; P = passed; R = rejected.] The figures after the designation of the degree or diploma denote the number of examinations to be passed before obtaining it.

Royal College of Physicians of London.—Licence (3): I, R 109, P 258; II, R 26, P 20; III, R 26, P 90. Membership: (3), III, R 5, P 22.

Royal College of Surgeons of England.—Membership (2): I, R 258, P 624; II, R 270, P 451. Fellowship (2): I, R 76, P 53; II, R 25, P 27.

Apothecaries' Society of London.—Licence (2): I, R 61, P 105; II, R 54, P 200.

University of Oxford.—M.B. (2): I, R 5, P 8; II, R 2, P 4.

University of Cambridge.—M.B. (4): I, R 32, P 60; II, R 20, P

26; III, Part 1, R 7, P 21; Part 2, R 1, P 19. M.D. (1): R 1, P 4.

University of Durham.—M.B. (2): I, R 23, P 44; II, R 3, P 17; M.D. (Essay): P 6. M.C. (1): R 4, P 4. M.D. for Practitioners of fifteen years' standing (1): R 3, P 8.

University of London.—M.B. (3): I, R 93; P 116; II, R 39, P 67; III, R 5, P 49. M.D. (1): R 7, P 19. B.S. (1): R 3, P 10.

Royal College of Physicians of Edinburgh.—Licence (2): I, R 7, P 12; II, R 40, P 135.

Royal College of Surgeons of Edinburgh.—Licence (2): I, R 7, P 6; II, R 14, P 28.

Faculty of Physicians and Surgeons of Glasgow.—Licence (2): I, R 45, P 40; II, R 30, P 40.

Royal Colleges of Physicians and Surgeons of Edinburgh.—Licence in Medicine and Surgery (2): I, R 101, P 142; II, R 148, P 149.

Royal College of Physicians of Edinburgh and Faculty of Physicians and Surgeons of Glasgow.—Licence in Medicine and Surgery (2): I, R 9, P 12; II, R 25, P 27.

University of Edinburgh.—M.B.; also M.B. and M.C. (3): I, R 159, P 246; II, R 136, P 240; III, R 42, P 140. M.D. (Thesis): R 2, P 36.

University of Aberdeen.—M.B.: P 1. M.D. (by promotion): P 34. M.B. and M.C. (3): I, R 33, P 51; II, R 27, P 52; III, R 20, P 51.

University of Glasgow.—M.B. and M.C. (Old) (3): I, R 19, P 6; II, R 20, P 13; III, R 15, P 23. M.B. and M.C. (New) (4): I, R 85, P 87; II, R 29, P 100; III, R 39, P 74; IV, R 5, P 29. M.D. (2): P 2.

University of St. Andrews.—M.B. and M.C. (3): I, R 1, P 4; II, P 3; M.D. (1): P 9.

King and Queen's College of Physicians in Ireland.—Licence in Medicine (2): I, R 5, P 8; 2, R 27, P 104.* Licence in Midwifery (1): P 99.

Royal College of Surgeons in Ireland.—Licence (3): I, R 95, P 125; II, R 42, P 106; III, R 42, P 106. Licence in Midwifery (1): P 1. Fellowship (3): I, R 1; III, P 3.

Apothecaries' Hall of Ireland.—Licence (2): I, R 29, P 31; II, R 10, P 17.

University of Dublin.—M.B. (2): Half M.B. Examination, Anatomy (Descriptive) and Physiology, R 60, P 24; Botany and Materia Medica, R 71, P 6; Physics and Chemistry, R 65, P 9; II, R 11, P 45. M.C. (4): P 2. M.D. (Thesis), P 11. B.C. (3): R 1, P 33.

Queen's University in Ireland.—M.D. (3): I, R 85, P 161; II, R 60, P 125; III, R 23, P 72. M.C. (1): R 20, P 53.

Exceptional Cases.—A letter was presented showing the number of exceptional cases which had occurred during 1881, under the clause of the Recommendations giving power to relax the Council's rules in certain cases. The Royal College of Physicians of London reported 14 cases of candidates admitted to examination after having fulfilled all the College requirements except registration (in England) in some cases as a medical student. The Royal College of Surgeons of England reported 28 exceptional cases, all of which were either Indian, colonial, or foreign cases, where registration could not take place. The Royal College of Surgeons of Edinburgh reported 22 cases. Three were exempted from preliminary examination or consequent registration for exceptional reasons by authority of the branch registrar for Scotland; and the remaining 19 took their entire curriculum in foreign or colonial schools, but having produced certificates verifying their curriculum and satisfactory evidence of general education, were, by authority of one or other of the registrars, admitted to examination. The Faculty of Physicians and Surgeons of Glasgow reported 7 cases. Three of the applications were granted, and 4 declined. The King and Queen's College of Physicians in Ireland stated that no return could be made, owing to the fact that registration of students in Dublin "has not been carried out with sufficient care" to enable a calculation of length of study to be made. Most candidates also possess already a registrable qualification. The Queen's University in Ireland made no return; and the remaining bodies reported that no exceptional cases had occurred.

The table was ordered to be received and entered on the minutes.

Returns from the Medical Departments of the Army and Navy.—A return was presented from the Director-General of the Medical Department of the Army, showing the degrees, diplomas, and licences of candidates for commissions who presented themselves for examination on February 20th, 1882; showing the number that did and did not pass. The following is a summary: Total number of candidates, 64; Found physically unfit, 0; Failed to appear at examination, 0;

Rejected, 1; Passed for number of vacancies, 15; Qualified, but unsuccessful for a place in vacancies, 48. A similar return was presented from the Director-General of the Medical Department of the Navy, respecting candidates who presented themselves on February 20th, 1882. The following is the summary: Total number of candidates, 31; Found physically unfit, 5; Failed to appear at examination, 3; Failed to obtain a place, although qualified, 13; Retired, 2; Successful, 6.

Dr. PITMAN moved, Mr. TURNER seconded, and it was resolved:

"That the returns from the medical departments of the army and navy be received and entered in the minutes, and that the thanks of the Medical Council be returned to the Directors-General for their courtesy in furnishing these returns."

Registration of Midwives.—The following letter to the Registrar from the Privy Council Office was read:

"June 24th, 1882.

"SIR,—I am directed by the Lords of the Council to transmit to you the accompanying Draft Bill (Registration of Midwives in England and Wales); and I am to request that you will lay the same before the General Medical Council, and that you will move that body to favour their lordships with any remarks they may think desirable to make thereon.—I am, Sir, your obedient servant, C. L. PEEL."

The Bill referred to was that which has been prepared under the sanction of the Parliamentary Bills Committee of the British Medical Association. Copies of the Bill, which had been sent to the President of the Council by the Chairman of the Parliamentary Bills Committee, were distributed to the members of Council.

It was moved by Dr. QUAIN, and seconded by Dr. PYLE:

"That the Draft Bill, forwarded with Mr. Peel's letter, be referred to a Committee of the Council for report during the present session of the Council, and that the Committee consist of the following members:—Mr. Marshall (Chairman), Dr. Storrar, Dr. Chambers, Dr. Humphry, Dr. Pyle, Dr. Quain, Dr. Banks, and Dr. Heron Watson." (The Rev. Dr. Haughton was afterwards added to the committee.)

Sir WILLIAM GULL thought that the subject was not yet ripe for consideration, much less for legislation. The appointment of a Committee would indicate that the Council must go on with the matter.—Dr. QUAIN said that the object of the Committee was to find out what was proposed. The Lord President of the Privy Council had asked for an opinion, and the Council must give him an answer.—Mr. SIMON agreed that, the Bill having been sent to the Council for consideration, the proper and usual course was to refer it to a Committee. But some caution was necessary, not to preclude the Council from considering whether the present was a suitable time for going on with the measure. In the present uncertain tenure of office of the Medical Council, would it be wise to accept new responsibilities? He thought that the Midwives' Bill should follow the Medical Acts Amendment Bill. The general principle of the Bill was good; but there was a tendency to excessive legislation in some parts of it.—Mr. MACNAMARA thought it would be most desirable to refer the Bill to a Committee. He regretted that it was proposed to limit it to England and Wales, as the means for educating midwives were at hand in Dublin.—Dr. LYONS thought that the proposals in the Bill demanded the serious consideration of the Council. It was apparently proposed to place on the Council the responsibility of educating and registering midwives. It might be a very desirable thing; but the Council should not be in too great haste to act, until the subject had been discussed in the press and by the medical profession.

Sir WILLIAM GULL proposed, as an amendment, and Dr. LYONS seconded:

"That, whilst the Council are impressed with the importance of the questions relating to midwives, and acknowledging the receipt of the draft Bill from the Clerk of the Council, they think it desirable to defer its formal consideration until the next meeting of the Council."

Mr. TURNER thought the amendment was a request to the Council to abrogate its functions. The Council was bound to take notice of the Bill, which had been referred to it by the Lord President. The appointment of a Committee would not necessarily imply approval of the Bill.—Dr. HERON WATSON said that there was, unfortunately, an opinion that the Council cared too little for matters obstetrical; and nothing should be done to encourage this opinion. He would support the proposal for the appointment of a committee, which could do no harm.—Dr. QUAIN said that the midwives' question was not a new one. The Duke of Richmond's Medical Act Amendment Bill contains clauses relating to midwives.—After some remarks from Sir W. GULL, the amendment was put to the vote and lost, three members only voting for it. The motion was carried.

Removal of Names from the Register.—A report was read, which had been presented to the Executive Committee by Mr. Ouvry, as to any

* Thirteen candidates showed deficiency in general education, whereof eleven were Licentiates of the Royal College of Surgeons in Ireland, one had passed the Preliminary Examination of the Royal College of Surgeons of England, and one was from Bombay Medical College.

alterations that might be necessary in the Standing Orders with regard to the removal of names from the *Medical Register*. The only alteration suggested was the removal of the words which required at least one month's notice to be given to the person implicated: as often the day of meeting of the Council was not known so long before. On the motion of Dr. PITMAN, seconded by Mr. SIMON, the report was received and adopted, and the Standing Orders were altered in accordance with Mr. OUVRY's recommendation.

Dental Business.—The Council considered the case of Mr. Thomas J. Molloy, a registered dentist, whose licence in dentistry from the Faculty of Physicians and Surgeons of Glasgow had been revoked by that body. It was resolved—"That as, by the report of the Dental Committee, it appears that Mr. Thomas John Molloy has ceased to be a licentiate in dentistry of the Faculty of Physicians and Surgeons of Glasgow, his qualification as licentiate be erased from the *Dentists' Register*, and that the registrar be ordered to erase such qualifications from the *Register* accordingly."

A report was also presented by the Dental Committee on the case of Mr. Valleck Cartwright Mallan, a registered dentist. The committee found that Mr. Mallan has been carrying on the practice of a dentist in his own name at 173, Praed Street, and at 64, High Street, Notting Hill; at 94, Praed Street, as Charles Smith, and at 106, Edgware Road, as Mr. C. Valleck. The Council proceeded to deliberate on the case in private.

Dr. QUAIN moved, and Dr. AQUILLA SMITH seconded, "That the Council, having considered the report of the Dental Committee on the facts of the case of Mr. V. C. Mallan, are of opinion that the practice brought under the notice of the Council is one which is inconsistent with the law and with professional propriety; but the Council, if it receive the assurance of Mr. Mallan that the practice shall be discontinued, will not think it necessary to take further steps in the present case."

Dr. LYONS moved as an amendment, and Sir W. GULL seconded, "That this Council direct Mr. Mallan to remove from his place of practice any name but his own or that of a registered dentist in partnership with him."

The amendment was lost; the original motion was put to the vote and agreed to.

Strangers having been readmitted, Mr. Mallan was called before the Council, and gave his assurance that the practice complained of should be discontinued. It was resolved, "That the General Medical Council, having received Mr. V. C. Mallan's assurance that the practice which has been complained of shall be discontinued, do not think it necessary to take any further action in this case; and that this resolution be communicated to Mr. Mallan by the registrar."

Results of Examination for Qualifications under the Dentists' Act.—A table, showing the results of examinations held in 1881 for qualifications granted under the Dentists' Act, was presented, and, on the motion of Dr. PITMAN, seconded by Mr. TURNER, was ordered to be received and entered on the minutes. The following is an abstract. The examinations of each body are reported to be "written, oral, and practical," except those of the Royal College of Surgeons, Edinburgh, which is "written and oral," and Harvard University, which is "written and practical." The qualifications granted are by the examining bodies in the United Kingdom, a "licence in dental surgery"; by Harvard University "D.D.M.," and by the university of Michigan "D.D.S."

Royal College of Surgeons of England.—Without curriculum R 1, P 18; without curriculum R 2, P 1.

Royal College of Surgeons of Edinburgh.—Without curriculum R 6, P 35.

Faculty of Physicians and Surgeons of Glasgow.—With curriculum R 1, P 0; without curriculum R 12, P 23.

Royal College of Surgeons in Ireland.—Without curriculum R 57, P 163.

University of Harvard.—With curriculum R 3, P 5.

University of Michigan.—With curriculum R 4, P 36.

Wednesday, June 28th.

Dr. AGLAND, President, took the chair at 2 P.M.

Preliminary Scientific Examination.—A report was presented by the Preliminary Scientific Examination Committee: and it was resolved: "That the recommendations of the Council at present in force in respect of the Natural Science subjects or the preliminary examination be not at present changed."

Examination in General Education.—Dr. STORRAR moved, the Rev. Dr. HAUGHTON seconded, and it was resolved: "That a committee be appointed to consider and report to the Council on the list of

bodies whose examinations in general education are at present recognised by the Council."

The motion was carried, and the Committee was appointed to consist of Dr. STORRAR (Chairman), Dr. FERGUS, Mr. TURNER, the Reverend Dr. HAUGHTON, Mr. MACNAMARA, Dr. HUMPHRY, Mr. TEALE, and Mr. MARSHALL.

Alleged Personation at Examinations.—Mr. MACNAMARA moved, the Rev. Dr. HAUGHTON seconded, and it was resolved: "That it is desirable that this Council should know what provisions, if any, are taken to ensure the impossibility of 'personation' at the examinations of the several bodies, the certificates of which are accepted by them as satisfactory evidence of preliminary examination; and that the Executive Committee be requested to inquire into, and report upon, this subject, previous to the next meeting of the General Medical Council."

The Midwives' Bill.—A letter from Dr. J. H. AVELING was read, asking the Committee to receive a deputation on the Midwives' Bill. It was agreed to receive a deputation at a quarter past 4 on Thursday.

Visitation of Examinations.—The Report on the Visitation of Examinations in 1881-82, made by Mr. T. P. TEALE, Dr. W. T. GAIRDNER, and Mr. W. STOKES, and the remarks of the Licensing Bodies thereon, were ordered to be appended to the volume of Minutes. It was decided:

"That the Council proceed to the consideration of the 'Report on the Examinations, 1881-82, of the Medical and Surgical Corporations of the United Kingdom', and the 'Remarks of said Corporations on the Report.'"

Mr. TEALE read a statement having reference to the Report. It was resolved:

"That Mr. Teale be requested to furnish the Council with a copy of his statement now made; and that the cordial thanks of the Council be given to the Visitors of the Examinations in 1881-2—namely, to Mr. T. PRIDGIN TEALE, Professor WILLIAM TENNANT GAIRDNER, and Professor WILLIAM STOKES—for the laborious, careful, thorough, and unbiassed performance of those duties which they undertook so liberally, and with such large sacrifice of their private interests."

On Thursday, the Council commenced the consideration of the conclusions presented by the Visitors of Examinations in their Report.

At a quarter-past four, the Council received a deputation on the proposed Midwives' Bill, consisting of Mr. ERNEST HART, Chairman of the Parliamentary Bills Committee, Dr. W. S. PLAYFAIR, Dr. J. H. AVELING, Mr. SIBLEY, and Dr. C. HOLMAN of Reigate. The Committee explained the objects and scope of the Bill.

The report of the Finance Committee was presented.

A more complete report of the day's proceedings will be given next week.

GLASGOW WESTERN INFIRMARY.—There is at present in the wards, under the care of Professor George Buchanan, an interesting case of gun-shot wound of the abdomen. About three weeks ago, the patient, a young man aged 26, was accidentally shot by a companion, while examining some revolvers. The two were standing quite close to one another at the time of the occurrence, and the bullet entered the abdomen of the wounded man. He was without delay removed to the infirmary. On admission there, he was found to be in a state of great collapse; and an examination revealed a wound just below the ensiform cartilage, and to the left side. From this wound, which evidently communicated with the abdominal cavity, some bloody serum issued. The patient complained also of pain in the left thigh and leg, which was relieved by flexing the limb. No wound of exit of the bullet could be detected; but the injury received was evidently of so serious a nature, that the patient was not expected to survive. Next day, however, he rallied, and no bad symptoms showed themselves. There was no vomiting: the bowels acted regularly; and no peritonitis supervened. Last week, however, he complained of pain in the left lumbar region, and some swelling showed itself, accompanied by a rise of temperature. On the 23rd ultimo, Professor George Buchanan cut into this swelling, with antiseptic precautions, and found a cavity filled with blood. On introducing his finger, he came upon the broken transverse process of one of the vertebrae; and further examination detected the bullet lying in the erector spinae muscle of that side. The patient has progressed very favourably since the operation. No doubt, the case will be reported at full length subsequently; but it possesses interest, when contrasted with the late President Garfield's case.

HISTORY OF THE BRANCHES OF THE BRITISH MEDICAL ASSOCIATION. (Continued.)

SOUTH-EASTERN BRANCH.

THIS Branch, which is one of the oldest in the Association, was established in the year 1844 by Mr. Thomas Martin of Reigate, who, in September, assembled a few of the leading practitioners in the counties of Kent, Surrey, and Sussex, for the purpose of forming themselves into a Branch of the Provincial Medical and Surgical Association. At this meeting, the boundaries of the Branch, the rules for its guidance, the form of nomination-paper for the admission of members, and its mode of government, were discussed and agreed on.

The first annual meeting of the members may be said to have taken place on June 26th, 1845 (the Reigate meeting in 1844 having been merely preliminary, and preparatory to this one) at the Town Hall, Tunbridge, when Mr. William James West of that town took the chair as the first president, and two vice-presidents and a committee of twelve were appointed to aid him in the government of the Branch.

The following is a list of the Presidents and Vice-Presidents, and places of meeting, up to the present time.

Place of Annual Meeting.	President.	Vice-Presidents.
1845..Tunbridge	..W. J. West, Esq.	..I. Hargraves, Esq.; J. Pickance, Esq.
1846..Ashford	..William Sibbald, M.D.	..J. Mackness, M.D.; J. Beet, Esq.
1847..Reigate	..Edward Wallace, Esq.	..W. Newnham, Esq.; J. Stedman, Esq.
1848..Tunbridge Wells	Isaac Hargraves, Esq.	..W. J. West, Esq.; J. Mackness, M.D.
1849..Brighton	..G. S. Jenks, M.D.*	..G. S. Jenks, M.D.; E. J. Furner, Esq.
1850..Guildford	..James Stedman, Esq.	..W. Newnham, Esq.; C. E. Bacon, M.D.
1851..—	—	—
1852..Folkestone	..G. Soutby, M.D.	..F. Sankey, Esq.
1853..Tunbridge Wells	Isaac Hargraves, Esq.	..C. M. Thompson, Esq.
1854..Chichester	..J. McCargher, M.D.	..N. Tyacke, M.D.; Allen Duke, Esq.
1855..Canterbury	..James Reid, Esq.	..F. H. Sankey, Esq.; F. F. Giraud, Esq.
1856..Chatham	..Adam Martin, M.D.	..F. J. Brown, Esq.; J. Dalvey, Esq.
1857..Redhill	..C. M. Thompson, Esq.	..Thomas Smith, Esq.; John Steele, Esq.
1858..Brighton	..J. Cordy Burrows, Esq.	..J. H. Branfoot, M.D.; G. Lowdell, Esq.
1859..Dover	..William Sankey, Esq.	..A. W. Baird, M.D.; S. Eastes, Esq.
1860..Maidstone	..Frederick Fry, Esq.	..William Hoar, Esq.; H. Gould, Esq.
1861..Sydenham	..G. Bottomley, Esq.	..C. Lashmar, M.D.; E. Westall, M.D.
1862..Reigate	..T. Heckstall Smith, Esq.	..Thos. Smith, Esq.; J. S. Steele, Esq.
1863..Rochester	..J. Armstrong, M.D.	..J. J. D. Burns, M.D.; J. M. Burton, Esq.
1864..Brighton	..E. L. Ormerod, M.D.	..G. F. Hodgson, Esq.; F. A. Humphry, Esq.
1865..Sydenham	..E. Westall, M.D.	..A. Napper, Esq.; A. Sisson, Esq.
1866..Tunbridge Wells	Charles Trustram, Esq.	..J. Milner Barry, M.D.; R. J. Starling, Esq.
1867..Guildford	..Albert Napper, Esq.	..J. R. Stedman, M.D.; C. Chaldecott, Esq.
1868..Hastings	..F. Ticehurst, Esq.	..Alfred Hall, M.D.; R. L. Bowles, Esq.
1869..Reigate	..G. Holman, M.D.	..J. M. Burton, Esq.; A. Carpenter, M.D.
1870..Gravesend	..John M. Burton, Esq.	..C. J. Pinching, Esq.; H. Jeaffreson, M.D.
1871..Worthing	..N. Tyacke, M.D.	..H. Collet, M.D.; J. S. Bostock, Esq.
1872..Sydenham	..A. Carpenter, M.D.	..F. Hetley, M.D.; A. Duke, M.D.
1873..Ashford	..E. Garraway, Esq.	..E. W. Thurston, Esq.; R. L. Bowles, M.D.
1874..Brighton	..G. F. Hodgson, Esq.	..A. Hall, M.D.; F. A. Humphry, Esq.
1875..Guildford	..J. R. Stedman, M.D.	..T. N. Brushfield, M.D.; T. M. Butler, Esq.
1876..Maidstone	..Stephen Monckton, M.D.	..W. Hoar, Esq.; W. Sankey, M.D.
1877..Eastbourne	..Bransby Roberts, M.D.	..J. M. Cunningham, M.D.; T. F. Sanger, Esq.
1878..Croydon	..H. Lanchester, M.D.	..A. G. Roper, Esq.; C. W. Chaldecott, Esq.
1879..Folkestone	..R. L. Bowles, M.D.	..G. Rigden, Esq.; T. S. Rowe, M.D.
1880..Brighton	..W. Withers Moore, M.D.	..W. J. Harris, Esq.; F. Paxton, M.B.
1881..Reigate	..F. E. Hallows, Esq.	..J. H. Galton, M.D.; H. Jeaffreson, M.D.
1882..Tunbridge Wells	Blackall Marsack, Esq.	..J. V. Bell, M.D.

* Dr. John Hall of Brighton had been nominated as President, but resigned in consequence of leaving the district; and Dr. Jenks, the senior Vice-President, was appointed in his room.

† The annual meeting of the Parent Association was held within the limits of the Branch.

‡ Dr. G. Soutby of Dover had been appointed President-elect; but was prevented by illness from being present, and his place as Chairman was taken by Mr. Sankey, the Vice-President.

In this Branch, the honorary secretary is also the treasurer, and discharges the duties of both offices. The first secretary was Mr. Thomas Martin of Reigate, the founder of the Branch, who, on his retirement, was presented by the members with a handsome time-piece in recognition of his valuable services. He was succeeded, in 1843, by his son,

Mr. Peter Martin of Reigate; on whose death in 1864 Dr. C. Holman, also of Reigate, became secretary, and continued in office till 1868; so that for twenty-four years the secretaryship of Thomas Martin was continued by his successors in Reigate, and contributed greatly to the prosperity and consolidation of the Branch. In 1869, Mr. G. F. Hodgson of Brighton was elected secretary; and on his retirement in 1873, Dr. Charles Parsons of Dover, who for the three preceding years had been secretary to the East Kent District, was appointed to the vacant office, which he continues to hold at the present time.

AREA AND ORGANISATION.—This Branch comprises the counties of Kent, Surrey, and Sussex, and for many years its administration did not differ from that of other Branches of the Association. Meetings were held from time to time in each county in rotation for the reading of papers and cases of interest, and for the discussion of topics more immediately concerning the interests of the profession. In 1857 the feeling found expression in West Kent, that the objects of the Association would be greatly furthered if opportunity were afforded for the more frequent assembling of the members together by means of district meetings; such meetings to be subordinate to the Branch Council, but entirely self-governed. To this the Council assented, and the West Kent District was established, with an honorary secretary of its own. In 1861 East Kent followed the lead of its neighbour, and formed a district for itself. The success which attended this experiment in Kent soon attracted the notice of the Surrey members, and in 1866 the East Surrey District was established, and was quickly followed by the West Surrey District in 1867. It soon became evident to the members in Sussex that these district meetings conferred benefits both professionally and socially which could be attained in no other way, and in 1869 the East Sussex District was formed; whilst the establishment in 1870 of the West Sussex District completed the subdivision of the Branch.

The subjoined list contains the names of the gentlemen who have filled the office of Honorary District Secretaries.

West Kent.—Mr. James Dulvey (Brompton) elected in 1857; Dr. F. J. Brown (Rochester) in 1863; Mr. A. H. B. Hallows (Maidstone) in 1878.

East Kent.—Dr. T. Boycott (Canterbury) elected in 1861; Dr. R. L. Bowles (Folkestone) in 1864; Dr. C. Parsons (Dover) in 1870; Mr. E. W. Thurston (Ashford) in 1873; Mr. W. K. Treves (Margate) in 1877; Mr. T. W. Reid (Canterbury) in 1880.

East Surrey.—Dr. H. T. Lanchester (Croydon) elected in 1866; Dr. J. H. Galton (Ankerley) in 1874; Dr. J. H. Stowers (Finsbury Circus) in 1880.

West Surrey.—Dr. Morton (Guildford) elected in 1867; Mr. A. A. Napper (Cranleigh) in 1877.

East Sussex.—Mr. F. C. Mudd (Uckfield) elected in 1869; Dr. T. Trollope (St. Leonard's) in 1871; Mr. E. J. Verrall (Brighton) in 1881.

West Sussex.—Mr. W. J. Harris (Worthing) elected in 1870; Mr. G. B. Collet (Worthing) in 1880.

The organisation of the Branch then may be briefly described thus: Its area comprises the counties of Kent, Surrey, and Sussex: each county is divided into two districts, East and West, with an honorary secretary attached to each. The districts govern themselves by laws which have been sanctioned and approved by the Branch Council, of which the following is a specimen:

Outline of the By-Laws of the Branch for Regulating the District Meetings.—1. There shall be meetings to be called the *.....District Meetings of the Members of the South-Eastern Branch of the British Medical Association, at *.....and.....or at such places in the.....portion of the County of *.....or its immediate neighbourhood as may from time to time be agreed upon, and as may not interfere with the arrangements of any adjoining district of the Branch. The primary objects of these meetings shall be the promotion of the scientific and social objects of the Association, and topics connected with the political interests of the profession shall be considered thereat only on special notice thereof having been previously given in the notices convening the meeting. 2. All members of the South-Eastern Branch of the Association may attend these meetings, and be at liberty to introduce professional friends. Visitors' names should be inserted by the honorary secretary of the district in a book to be kept by him for that purpose; and all visitors shall be invited by the Chairman to take part in the discussions, and in all other respects (except voting) to consider themselves members for the evening. It shall be generally understood that a non-member of the Branch may attend only one meeting during the same session. 3. The meetings shall be held on the.....day before or the.....day after the full moon in the months of.....or of such other months of the year as may be agreed upon. It shall be one of the first questions at each meeting to decide where the next meeting shall be held, and to nominate a member of the Branch, resident in or near

such place of meeting, to take the chair thereat, provided the President of the Branch does not attend. 4. At the last meeting of each session a District Honorary Secretary shall be chosen for the year ensuing. 5. The District Honorary Secretary shall give at least seven days' notice of each of these meetings to the member of the Branch resident within the area of the district and to the President and Honorary Secretary of the Branch, stating also the papers, etc., intended to be communicated; and he shall forward a similar notice to the Editor of the Association Journal, in time for its insertion in the two numbers of the Journal published next previously to the day of meeting. He shall likewise forward to the Editor, as soon after each meeting as he can, a brief summary of such of the papers read, and of such other proceedings of the meeting as may be deemed advisable for publication in the Journal.† 6. Annually, at the end of the month of May, each district Honorary Secretary shall forward to the Honorary Secretary of the Branch an account of the expenses incurred for these meetings during the previous year, certified by the signature of himself and of at least one other member of the district. 7. No alteration or addition shall be made in these by-laws unless notice thereof shall have been given on the circular convening the meeting of which such change or addition be made: and then two-thirds of the members must vote in favour thereof, and the approval of the Executive Council be subsequently obtained, before it can take effect.

The government of the Branch is vested in the President and Council, the District Secretary being *ex-officio* member of the latter; and the Branch Secretary is responsible for the efficient administration of the whole, as well as for the care of the finances by virtue of his office of Treasurer.

This method of organisation has been found to work so well in promoting the special objects of the Association, and in attracting members to its ranks, that it may be safely commended to the notice of other Branches for imitation.

The annual meeting of the Branch for the transaction of business, at which all the districts are represented, is held in each county in rotation, the President for the year being selected from the members residing in that county.

MEDICAL REFORM.—From its earliest days, the subject of medical reform would seem to have had a peculiar attraction for this Branch; and its members have been unwearied and persevering in their efforts to procure both reformation and improvement in whatever was capable of being reformed and improved. No Branch has been more loyal in supporting measures introduced into Parliament by the parent Association, sometimes by special meetings for the purpose, and sometimes by petitions and deputations to the Government of the day. The machinery of the Districts enables the Council of the Branch not only to gauge but also to educate professional opinion on matters of absorbing interest, in a manner which is not possible under other systems of organisation; and consequently to give to the action of the Branch the moral force which accrues from almost perfect unanimity.

It would only encumber the pages of the JOURNAL to describe in detail the various measures which this Branch has had the privilege of promoting, and sometimes of originating. Suffice it to say, that, as early as 1843, vigorous efforts were made to effect an improvement in the system of Poor-law relief, and deputations waited on the President of the Poor-law Board and on the Home Secretary. In 1854, 1855, and 1856, the Reform Bill of the Association, introduced into Parliament by Mr. Headlam, was cordially supported by petitions from all parts of the Branch.

On April 27th, 1870, a memorial was presented from the Branch to the Lord President of the Council, expressing approval of the general scope of the "Medical Acts Amendment Bill", then before Parliament, but suggesting that it should be determined to have three, instead of two, boards for the whole kingdom; the subjects of examination and table of fees should be uniform at each board; that there should be a proportionate direct representation of the general practitioners on the Medical Council, to be elected by the registered practitioners; and that, so soon as the new Council and Executive Committee should be formed, the control of the State or Privy Council should cease, the presence of the Government representatives at the Council Board being considered sufficient for all State purposes. In May 1878, the Council gave cordial approval and support to the action of the Executive Committee of the Association as regards the Medical Acts (1868) Amendment Bill, by unanimously passing a resolution to the following effect:

On March 1st, 1882, the Council gave its support to the action of the

Parliamentary Bills Committee of the Association, by sending the following resolution relative to the Medical Bill then before Parliament to the Chairman of that Committee: "That this Council cannot support any Medical Bill which does not provide for the direct representation of the profession on the General Medical Council."

OTHER SUBJECTS DISCUSSED BY THE BRANCH.—The history of the Branch as regards its action in other matters concerning the profession may be related in chronological order.

In 1864, the unsatisfactory condition of the Army Medical Department excited universal attention, and was discussed with great vigour in most of the Branches of the Association. This was followed by petitions to Parliament, this Branch being amongst the earliest to memorialise the State.

In 1866, the subject of Sanitary Reform was brought under the notice of the Metropolitan Counties Branch by Dr. Druitt, in a paper on Amendments in the Sanitary Laws. The recommendations of that Branch received the cordial support and approval of this Branch; and, at a meeting on May 31st, were forthwith adopted and embodied in a petition to Parliament.

In March 1872, a petition in support of the Infant Life Protection Bill was presented to the House of Commons.

On November 7th, 1872, a meeting of the Council was held to consider the Public Health Act and the new Adulteration of Food Act, at which it was unanimously agreed that it would be most unwise, and an impediment to the real progress of sanitary work, that the supervision of the sanitary wants of this country should be committed to men having no special knowledge of the sanitary and medical questions into which they would be called upon to inquire; and that the proposed appointment of non-medical men to be inspectors under the Act would be a retrograde step, and certain to impede the objects for which the Public Health Act was obtained. It was also resolved that it was highly desirable that the areas supervised by the medical officers of health should not be of limited extent, but should generally be arranged with reference to the drainage or watershed of the district, and independently of the parochial or Parliamentary boundaries; and that, in the appointment of analysts under the Adulteration of Food Act, preference should be given to men having special qualifications for such duties, and who should also be entirely independent of personal interest in the trade of their several districts. Copies of these resolutions were sent to the Committee of Council, and to the Honorary Secretaries of all the Branches of the Association, as well as to the Members of Parliament representing the three counties of Kent, Surrey, and Sussex. A deputation also waited on the President of the Local Government Board, and at the interview impressed upon him the importance of the foregoing matters.

In 1875 the East Kent District established for itself an Ethical Committee, on the basis that subjects having relation only to the general interests of the profession in the district should be considered by the Committee, and that all subjects in anywise having a mere personal or individual character should be excluded.

In this year it was proposed by the Council of the Branch that, considering the present financial condition of the Association, the charge made to members for insertion in the Journal of Births, Deaths, and Marriages, should be discontinued; and a recommendation to this effect was forwarded to the Journal and Finance Committee; but the Committee of Council, in reply, expressed their regret that they could not adopt the recommendation.

In June 1876, at the annual meeting, the subject of medical ethics was discussed, and the following resolution was passed:—"That it be a recommendation from this meeting to the Executive Council of the Branch that an Ethical Committee be formed, to whom all questions affecting the welfare and conduct of the profession may be referred." Early in January 1877, the Council gave effect to this recommendation by constituting itself an Ethical Committee for one year.

In 1877 also, the subject of the notification of infectious diseases came under discussion, and the opinion was unanimously expressed that the medical attendant of a family was not the proper person to be charged with the notification to the Local Health Authority; but that, when the notification was made, the Local Health Authority was not bound to accept it, and that the responsibility should rest with the medical attendant.

The Honorary Secretary of the Branch, Dr. Alfred Carpenter, was appointed to attend the meetings of the Committee in that capacity.

In May 1879 a memorial relating to the Coroner's Bill then before the House of Commons was presented to Parliament, pointing out the importance of the Bill, and the necessity of public charities to give evidence in the Bill, and such as the services rendered

were for the public benefit, and ought therefore to be adequately acknowledged from the public purse.

Early in 1880 certain resolutions of the Metropolitan Counties Branch upon Medical Education were circulated amongst the Branches of the Association. This Branch gave the subject earnest and anxious consideration, and appointed a sub-committee to draw up a report which was afterwards presented to the Committee of Council. Subsequently, a special general meeting of the Branch was held at Brighton for the discussion of the report just then issued by the Committee of Council, embodying the views of the Branches collectively upon the subject.

In 1881 the question of School Board certificates was considered; and, though as yet no action has been taken in the matter, the broad principle was laid down that these certificates should be exacted for the public benefit, and should be paid for from the public purse. Its further consideration stands adjourned.

It only remains to be stated that all members of the Association are eligible for election on the nomination of three members of the Branch, and the payment of the Branch subscription of 4s. annually. Gentlemen who wish to join both the Association and the Branch must be similarly nominated, and pay an annual subscription of 25s. (one guinea for the Parent Association and 4s. for the Branch). Members of the Branch have the privilege of attending any of the district meetings, as well as the general meetings of the Branch.

WEST SOMERSET BRANCH.

THIS Branch sprang from an association of medical practitioners residing in and around the town of Taunton, under the title of the Taunton and West Somerset Medical Association. After this association had existed a few years, there was a strong feeling and desire amongst its members that it should be affiliated to the Provincial Medical and Surgical Association. In due course this step was taken, and the old society *en masse*, consisting of thirty-seven members, was in 1844 constituted and recognised as a Branch under the title of "The Taunton and Somerset Branch" of the Provincial Medical and Surgical Association. This name was changed to the present designation of "The West Somerset Branch" in 1849.

Its first president was Dr. Stephen Macmullen, of Taunton; and its first secretary and treasurer (to whose energetic action the Branch may be said to owe its existence) was Mr. Charles Hayes Higgins, then residing in Taunton, and who remained in office until he removed from Taunton in 1848. He was succeeded by Dr. F. H. Woodforde, on whose retirement in 1860, Mr. W. E. Gillett was appointed secretary, and held office until 1862, when Dr. W. M. Kelly, who is still secretary, was appointed.

The following table contains the names of the presidents of the Branch, of the places where the annual meetings have been held, and the number of members in each year from the formation of the Branch to the present time.

Date.	Place of Meeting.	President.	Number of Members.
1844	Taunton	Stephen Macmullen, M.D.	37
1845	Taunton	W. E. Gillett, Esq.	47
1846	Taunton	F. H. Woodforde, M.D.	40
1847	Wellington	H. W. Randolph, Esq.	30
1848	Taunton	G. Brock, M.D.	30
1849	Taunton	H. Alford, Esq.	28
1850	Bridgwater	W. Trevor, Esq.	28
1851	Taunton	S. F. Bridge, Esq.	25
1852	Milverton	R. Burridge, M.D.	28
1853	Taunton	W. E. Gillett, Esq.	30
1854	Wellington	G. Kidgell, Esq.	30
1855	Taunton	C. P. Collyns, Esq.	25
1856	Bridgwater	R. R. Sewell, Esq.	22
1857	Taunton	S. F. Bridge, Esq.	22
1858	Taunton	W. C. Pyne, Esq.	23
1859	—	—	21
1860	Taunton	W. M. Kelly, M.D.	14
1861	Langport	J. Pranker, Esq.	33
1862	Taunton	H. Alford, Esq.	33
1863	Wellington	C. P. Collyns, Esq.	32
1864	Taunton	J. H. Kinglake, M.D.	33
1865	Taunton	Hugh Norris, Esq.	31
1866	Ilminster	G. R. Burt, Esq.	38
1867	Taunton	C. H. Cornish, Esq.	41
1868	Bridgwater	W. L. Winterbotham, M.B.	46
1869	Taunton	H. J. Alford, M.B.	50
1870	Weston-super-Mare	John Cornwall, Esq.	50
1871	Bridgwater	W. H. Axford, Esq.	55
1872	Taunton	E. C. Garland, Esq.	55
1873	Taunton	George Gillett, Esq.	55
1874	Milverton	H. W. Randolph, Esq.	55
1875	Taunton	G. Cordwent, M.D.	54
1876	Bridgwater	F. Farmer, Esq.	56
1877	Taunton	S. Farrant, Esq.	60
1878	Bridgwater	F. J. C. Parsons, Esq.	61
1879	Dunster	T. Clark, Esq.	60
1880	Wellington	J. Meredith, M.D.	59
1881	Taunton	G. W. Rigden, Esq.	52

OBJECTS OF THE BRANCH.—At the formation of the Branch, the following propositions were set before its members as indicating the special objects to be kept in view: "The public interests of the profession, and legislation in Parliament thereon; a higher and more uniform standard of preliminary and professional education; professional rights and privileges, and legal protection therein; the remuneration of medical practitioners by public bodies; the discussion of medical and surgical subjects at the general meetings; the cultivation of social and friendly feelings and honourable conduct towards each other, and thereby to uphold the dignity, respectability, and usefulness of the whole medical profession."

MEDICAL REFORM.—The first action taken by the Branch soon after its formation, was in relation to the Bill then just introduced into Parliament "for the better regulation of medical practice throughout the United Kingdom". A general meeting was called, not only of members of the Branch, but also of medical practitioners generally residing in and about the county of Somerset, and was held at Taunton on December 4th, 1844, at which resolutions to the following effect were passed: That it was desirable that provisions should be introduced into the Bill (1) for the direct representation of general practitioners on the Council; (2) for restraining unqualified persons from practising; (3) for stopping the sale of secret remedies; (4) for introducing the representative principle in the several Colleges of Physicians and Surgeons and other medical corporations; (5) for an uniform system of qualification and licence to practise; and (6) for registration being made compulsory—and not simply optional—with an uniform fee. Petitions embodying these resolutions were signed by over fifty medical men, and were presented to both Houses of Parliament.

Again, in 1850 and succeeding years, this Branch fully participated in the promotion of medical reform by acting in concert with the central Council and with the Reform Committee of the Association, and also by sending petitions to the Houses of Parliament, and bringing its influence to bear as far as practicable on the local town and country members. It especially advocated the adoption of the representative principle in the formation of a new Council, if the existing colleges and governing bodies could not be united into one incorporation—of which some hopes were at that time entertained.

In May 1870, a special meeting of the Branch was held to consider the Government Medical Bill which had been introduced into the House of Lords. Resolutions were passed proposing several amendments (one especially, that the intended Medical Council should contain four representatives elected by the registered members of the medical profession resident in the United Kingdom), which were embodied in a petition to the House of Lords, which was in due course presented.

Lastly, in May 1873, the Branch petitioned in favour of Mr. Headlam's Medical Act (1858) Amendment Bill; and in April 1879, they supported by petition the Medical Act, 1858 (No. 2) Bill, and those were the last efforts of the Branch in the direction of medical reform.

In 1868, the Parliamentary Committee of the British Medical Association invited this Branch to appoint one of their members to co-operate with them, and Mr. H. J. Alford was appointed as representative of the Council of this Branch for that purpose.

POOR-LAW.—At a general meeting of the Branch, in 1863, it was resolved—That the Council of the Association be requested to bring before the Annual Meeting the desirableness of urgently memorialising the Government to introduce into the Poor-law Board some medical element to assist them in deciding all matters connected with the medical department of that Board.

In 1865, a resolution was passed approving Mr. Griffin's efforts towards ameliorating the position of Poor-law medical officers, and a grant was voted towards the expenses incurred by Mr. Griffin.

NAVY AND ARMY SURGEONS.—In 1851, petitions to both Houses of Parliament in behalf of the assistant-surgeons of the Royal Navy were sent up from this Branch; and in 1864, a memorial on the subject of army medical service was signed and dispatched to the Secretary of State for War.

SUPERANNUATION ALLOWANCE TO POOR-LAW MEDICAL OFFICERS.—In 1870, a petition to Parliament in support of Dr. Brady's Bill on this subject was sent up by this Branch.

PUBLIC HEALTH AND INFECTIOUS DISEASES.—In 1872, acting in concert with the main body of the Association, this Branch sent petitions to Parliament with a view to amending the Public Health Bill; and in 1880, the question of the best mode to be adopted in order to check the spread of infectious disease was made the subject of a special discussion, when the opinion of the meeting was strongly expressed, that a notification of the occurrence of any case of infectious disease to the district sanitary authority lay at the root of the whole matter, and that this duty should be made compulsory on the head of, or the responsible person in, the house where the disease occurs.

HABITUAL DRUNKARDS.—The subject of placing habitual drunkards under some restraint has engaged the attention of the Branch on several occasions; and in 1875, and again in 1877, petitions to both Houses of Parliament having this object in view were sent up from this Branch.

VACCINATION.—A petition from this Branch was presented to Parliament against the objectionable Bill for altering the Vaccination Laws, which was introduced into Parliament in 1880.

MEDICAL EDUCATION.—The resolutions passed by the Metropolitan Counties Branch in December 1879 with regard to medical education were considered at a meeting of this Branch in March 1880, and a report thereon was agreed to and forwarded to the Committee of Council of the Association, in compliance with the request made by the Committee of Council to this Branch.

CLUBS AND PROVIDENT SOCIETIES.—The question whether club practice is conducive to the interest and welfare of the profession, was much discussed by this Branch in 1873, and a committee was appointed to draw up rules having reference to the duties, pay, etc., of the medical officers of clubs and provident societies. The report of that committee, and the rules which they drew up, were adopted by the Branch at their annual meeting in 1874, and both may be found printed in the JOURNAL of August 8th of that year, at page 186.

ASSOCIATION LAWS.—At a meeting of the Branch held in 1855 to take into consideration a proposed revision of the laws of the Association, it was resolved to recommend:—that the name of the Association should be changed from "Provincial Medical and Surgical Association" to "British Medical Association": that as regards the election of representative members of Branches on the general council, it was considered (1) that there should be one member of Council to every twenty members of a Branch; (2) that the secretaries of Branches should be *ex officio* members of Council; and (3) that elected members should bear their own expenses when attending meetings, but that the expenses of a secretary should be defrayed by the Branch when requested to attend; that, as regards Branch expenses, each Branch should defray the expenses of its management by a separate subscription, and not as heretofore deduct those expenses from the guinea subscription to the Association; and the meeting resolved that this plan should at once take effect in this Branch.

BRANCH MEETINGS.—General meetings of the Branch from its formation up to 1862 were only held once a year, in June. At these meetings officers were elected, general business transacted, papers read, etc., with a dinner to wind up the proceedings. A desire was then expressed that a second meeting annually should be held; and an evening *conversazione* for papers, etc., was accordingly held in the winter for two years. Quarterly meetings were then essayed, but they only lasted one year; and it was at the annual meeting in 1865 resolved, in addition to the annual meeting, to hold two intermediate meetings—one in the spring, and the other in the autumn; this has ever since been the established practice of the Branch and has worked well. The meetings have been mostly held in Taunton, but other towns have been visited, viz., Bridgwater, Yeovil, Wellington, Langport, Ilminster, Dalverton, Dunster, Milverton, and Weston-super-Mare.

PRESENTATION TO SECRETARY.—In 1872 the Branch paid their honorary secretary, Dr. Kelly, the handsome compliment of presenting him with a valuable time-piece.

BRANCH MEMORABILIA.—Among the events which may deserve a few words, one which created a good deal of local interest, and also attracted attention at the time outside the limits of the Branch, occurred in Taunton in 1847. It was brought to the notice of the Council of the Branch, that a person who had been carrying on for years, and until one year before that date, the business of a pastrycook and confectioner in Taunton, had set up as a medical practitioner on homoeopathic principles on the strength of a new diploma, which he displayed duly framed and glazed, and which he had just obtained from the College of Surgeons. That body was immediately communicated with, and after investigation, it was ascertained through the medium of this Branch, that the College had been imposed upon. It was thereupon declared by the College that the diploma granted to the party in question had been obtained by false statements and imposition; they therefore recalled their diploma, and removed the name of the person to whom it had been granted from their list of members. In sequel, it may be mentioned that the homoeopath took no notice whatever of the denunciation launched at him by the College; and, although the circumstances were published throughout the district, this in no way hindered but appeared rather to promote his prosperity, and he continued in practice till his death.

In 1848, by the invitation of this Branch, the anniversary meeting of the Association was arranged to be held in Taunton; but owing to the death of the president-elect (Dr. Macmullen) and the removal from

Taunton of the secretary (Mr. C. H. Higgins), the Branch was under the necessity of foregoing the honour intended to have been conferred on it, and was fortunate almost at the last moment in being able to arrange for the meeting being held at Bath instead.

Questions of medical etiquette have arisen on several occasions within the benefit of the Council, or of the Branch itself, as a court of appeal, has been much valued and appreciated. An important and a painful case occurred in 1849 when an associate, who at the time was president-elect of the Branch, persisted in meeting in consultation a practitioner not regularly qualified, who was also a homoeopath—the person referred to in a preceding paragraph. After a full investigation before the Branch, and the whole of the circumstances being laid before the Central Council at Worcester under Sir Charles Hastings as president, the gentleman would not admit he was wrong, and his name was removed from the list of members of the Association by a vote of the annual meeting of the Association. The Branch was thanked for its conduct in the matter.*

A friendly advance on the part of the Crewkerne Medical Association to join the Branch was made in 1854, and gladly entertained; but although a deputation from this Branch went to Crewkerne and attended one of the meetings of their Association with a view to arranging the union, it unfortunately was found to be impracticable.

In 1858, some unhappy occurrences threw a cloud over the fortunes of the Branch. For nearly two years no meeting was held, and at the annual meeting in 1860, it was found that there were only fourteen members on the list, fears were created that the Branch would die out. Vigorous measures were immediately taken, and in a very short time the existence of the Branch was made secure by an addition of eighteen new members. From that time to the present its vitality has been thoroughly well sustained, although in point of numbers it seems unable to get beyond three score.

THAMES VALLEY BRANCH.

THE proposal to form a Branch for members living in the Lower Thames Valley, west of the metropolitan district, was decided upon at a meeting held at Normansfield, Hampton Wick, on April 9th, 1875, under the presidency of Dr. Langdon Down. The by-laws were drawn up, and at a further meeting, held on May 14th, 1875, the officers and Council were elected; Dr. Langdon Down being appointed first President. Subjoined are the names of the Presidents and Vice-Presidents, and the number of members, in each year since the formation of the Branch.

Date.	Presidents.	Vice-Presidents.	N. of Members.
1875-76.	J. Langdon Down, M.D.	W. Price Jones, M.D.; C. F. Maunder, Esq.	43
1876-77.	J. Langdon Down, M.D.	C. F. Maunder, Esq.; W. Martyn, M.D.	49
1877-78.	W. Price Jones, M.D.	W. Martyn, M.D.; J. Langdon Down, M.D.	50
1878-79.	C. F. Maunder, Esq.	J. Langdon Down, M.D.; W. Price Jones, M.D.	49
1879-80.	E. L. Fenn, M.D.	W. Price Jones, M.D.; C. F. Maunder, Esq.	47
1880-81.	F. P. Atkinson, M.D.	E. L. Fenn, M.D.	50
1881-82.	G. Farr White, Esq.	E. L. Fenn, M.D.; F. P. Atkinson, M.D.	52

The present number of members in the Branch is 58.

The first secretary of this Branch was Dr. F. P. Atkinson of Kingston. On his retirement in 1879, Dr. F. J. Wadd of Richmond was appointed, and he was succeeded in 1880 by the present secretary, Dr. E. L. Fenn of Richmond.

The first treasurer of this Branch, Mr. George Farr White of Kingston, was appointed in 1876, and was annually re-elected up to July 1881, when Dr. E. L. Fenn was appointed joint-secretary and treasurer.

The meetings of the Branch are held ordinarily four times a year, alternately at Richmond and Kingston-on-Thames. The first hour of the meeting is devoted to the reading and discussion of papers and cases, or to the consideration of any matters of importance and interest to the profession at large.

ADVERTISING MEDICAL BOOKS IN THE NON-MEDICAL PRESS.—On February 17th, 1876, a resolution was passed condemning this practice.

LEGISLATION FOR HABITUAL DRUNKARDS.—At a meeting held on June 13th, 1878, Dr. Langdon Down was requested to act as the representative of the Branch on the committee appointed to consider this question; and the President was desired to write to the county members, asking them to give their support in the House of Commons to Dr. Cameron's Bill.

NON-PAUPER INFECTIOUS CASES.—On April 7th, 1881, a resolution was passed pointing out the urgent necessity that existed in the neighbourhood of Kingston-on-Thames for a hospital for the reception of non-pauper infectious cases; and copies of this resolution were sent to the various local sanitary authorities.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL.

NOTICE OF MEETING.

A MEETING of the Committee of Council will be held in the Council Room of Exeter Hall on Wednesday, the 12th day of July next, at two o'clock in the afternoon.

The following Sub-Committees will also meet at the Offices of the Association, viz., on Tuesday, the 11th, at five o'clock, the Scientific Grants Committee; six o'clock the Trusts Funds Sub-Committee.

On Wednesday the 12th, at eleven o'clock, the Office and Printing Sub-Committee; twelve o'clock, Journal and Finance Committee.

FRANCIS FOWKE, *General Secretary*.

161A, Strand, London, June 27th, 1882.

BRITISH MEDICAL ASSOCIATION:
FIFTIETH ANNUAL MEETING.

THE Fiftieth Annual Meeting of the British Medical Association will be held at Worcester, on Tuesday, Wednesday, Thursday, and Friday, August 8th, 9th, 10th, and 11th, 1882.

President: BENJAMIN BARROW, F.R.C.S., Consulting-Surgeon to the Royal Isle of Wight Infirmary.

President-elect: WILLIAM STRANGE, M.D., Senior Physician to the General Infirmary, Worcester.

An Address in Medicine will be delivered by W. F. WADE, F.R.C.P., Physician to the Birmingham General Hospital.

An Address in Surgery will be delivered by WILLIAM STOKES, M.D., F.R.C.S.I., Professor of Surgery in the Royal College of Surgeons, Ireland.

The business of the Association will be transacted in Eight Sections, viz.:

SECTION A. MEDICINE. (Council Room, Guildhall.)—*President*: Thos. Clifford Allbutt, M.D., F.R.S. *Vice-Presidents*: George W. Balfour, M.D.; William Henry Broadbent, M.D.; G. H. Philipson, M.D.; *Secretaries*: Edwin Rickards, M.B., 14, Newhall Street, Birmingham; H. Ashby, M.D., 13, St. John Street, Manchester.

SECTION B. SURGERY. (Recorder's Court, Guildhall.)—*President*: Augustin Prichard, F.R.C.S. *Vice-Presidents*: T. W. Walsh, F.R.C.S.; Reginald Harrison, F.R.C.S.; T. H. Bartleet, M.B., F.R.C.S. *Secretaries*: F. E. Manby, F.R.C.S., 10, King Street, Wolverhampton; Richard Clement Lucas, M.B., F.R.C.S., 18, Finsbury Square, E.C.

SECTION C. OBSTETRIC MEDICINE. (Committee Room Assembly Room, Guildhall.)—*President*: William Leishman, M.D. *Vice-Presidents*: Henry Vevers, M.R.C.S.; J. G. Sinclair Coghill, M.D.; Arthur W. Edis, M.D. *Secretaries*: C. J. Cullingworth, M.D., 25, St. John Street, Manchester; Tom Bates, L.R.C.P., Worcester.

SECTION D. PUBLIC MEDICINE. (Civil Court, Shire Hall.)—*President*: Alfred Carpenter, M.D. *Vice-Presidents*: Alfred Hill, M.D.; Horace Swete, M.D.; E. T. Wilson, M.B. *Secretaries*: Geo. Haynes Fosbroke, jun., M.R.C.S., Bidford, Redditch; Francis Edward Atkinson, L.R.C.P., Settle, Yorkshire.

SECTION E. ANATOMY AND PHYSIOLOGY. (North Wing Committee Room, Guildhall.)—*President*: George M. Humphry, M.D., F.R.S. *Vice-Presidents*: S. S. Roden, M.D.; Frank Payne, M.D.; Gerald Yeo, M.D. *Secretaries*: J. B. Haycraft, M.D., Mason's College, Birmingham; James Shuter, M.B., F.R.C.S., 58, New Broad Street, London.

SECTION F. PATHOLOGY. (South Wing Committee Room, Guildhall.)—*President*: J. Hughlings Jackson, M.D., F.R.S. *Vice-Presidents*: W. R. Gowers, M.D.; H. T. Butlin, F.R.C.S.; Wm. Smith Greenfield, M.D. *Secretaries*: Sidney Coupland, M.D., 14, Weymouth Street, London; F. Treves, F.R.C.S., 18, Gordon Square, London.

SECTION G. OPHTHALMOLOGY. (County Grand Jury Room, Shire Hall.)—*President*: James Vose Solomon, F.R.C.S. *Vice-Presidents*: David Everett, F.R.C.S.; Frederick Mason, M.R.C.S.; Edwyn Andrew, M.D. *Secretaries*: Geo. Edwin Hyde, L.R.C.P., Worcester; J. A. Nunneley, M.B., 22, Park Place, Leeds.

SECTION H. OTOTOLOGY. (City Grand Jury Room, Shire Hall.)—*President*: W. Laidlaw Purves, M.D. *Vice-Presidents*: Geo. P. Field,

M.R.C.S.; A. H. Jacob, M.D.; E. Cresswell Baber, M.B. *Secretaries*: J. J. Kirk Duncanson, M.D., 22, Drumsheugh Gardens, Edinburgh; Peter McBride, M.D., 20, Alva Street, Edinburgh.

Honorary Local Secretaries: George W. Crowe, M.D., Shaw Street, Worcester; H. C. Moore, M.R.C.S., 7, King Street, Hereford; Thelwell Pike, M.D., 2, Montpellier, Great Malvern.

Honorary Treasurer: G. A. Sheppard, M.R.C.S., Worcester.

TUESDAY, AUGUST 8TH.

2.15 P.M.—Meeting of Committee of Council. (Committee Room off Assembly Room, Guildhall.)

3 P.M.—Meeting of the Council of 1881-82. (Council Room, Guildhall.)

4.15 P.M.—Service in the Cathedral, with sermon by the Dean of Worcester.

5 P.M.—General Meeting. President's Address; Annual Report of Council, and other business. (Assembly Room, Guildhall.)

Tea and Coffee after the Meeting.

WEDNESDAY, AUGUST 9TH. (Jubilee day).

9.30 A.M.—Meeting of Council of 1882-83. (Council Room, Guildhall.)

11 A.M.—Second General Meeting. Address in Medicine.

1.30 P.M.—Luncheon given by the Worcester and Hereford Branch to Members of the Association (limited to 500), and afterwards presentation of bust of Sir Charles Hastings to the Mayor and Corporation of Worcester. (Great Hall, Shire Hall.)

1.50 P.M.—Sectional Meetings.

3 to 5.30 P.M.—Special Service in the Cathedral, at which, by permission of the Dean, Haydn's Sacred Oratorio, "The Creation", will be performed by the Philharmonic Society, assisted by members of the Worcester, Gloucester, and Hereford Choirs, and conducted by W. Done, Esq., Organist to the Cathedral.

THURSDAY, AUGUST 10TH.

9 A.M.—Meeting of the Committee of Council. (Committee Room off Assembly Room, Guildhall.)

10 A.M.—Third General Meeting. Reports of Committees. (Assembly Room, Guildhall.)

11 A.M.—Address in Surgery. (Assembly Room, Guildhall.)

2 to 5.30 P.M.—Sectional Meetings.

6.30 P.M.—Public Dinner. Tickets will not be issued later than twelve o'clock on the day of the dinner. (There will be two kinds of dinner ticket: one for those who take wine, and the other for abstainers, 21s. and 14s. each.) (Assembly Room, Guildhall.)

FRIDAY, AUGUST 11TH.

9.30 to 11.30 A.M.—Sectional Meetings.

11.30 P.M.—Concluding General Meeting. Reports of Committees. (Assembly Room, Guildhall.)

3 P.M.—Garden Party, at Madresfield Court, Great Malvern, given by the Lord-Lieutenant and the Countess Beauchamp.

9 P.M.—Soirée of the President and G. W. Hastings, Esq., M.P.

EXCURSIONS.

On Saturday, August 12th, there will be—1. An excursion to Malvern Hills, including the ancient British Camp, the chief interesting features of which will be explained to the visitors on the spot. 2. An excursion to Stratford-on-Avon to visit Shakespeare's house, the church and tomb, Shakesperian Museum, etc. The party will then proceed to Warwick and Kenilworth Castles, returning by way of Leamington. 3. An excursion to the Wye, by which the beautiful scenery on the banks of that river may be viewed either from the railway or by boats from Ross to Monmouth. Particulars of these excursions will be published in an early number. 4. There are steamers and pleasure-boats on the river Severn at Worcester, which will afford very enjoyable short trips up or down the river.

DINNER TICKETS.

Applications should be made as early as possible to the Honorary Treasurer, G. A. Sheppard, Esq., Foregate Street, Worcester; accompanied, in all cases, by a remittance of 21s. or 14s.

HOTELS AND LODGINGS.

A list of accommodation will be shortly published in the JOURNAL. Members may apply for information to Messrs. Griffiths and Millington, House Agents, 50, Foregate Street, Worcester.

ANNUAL MUSEUM.

The sixteenth annual exhibition of objects of interest in connection with medicine, surgery, and their allied sciences will take place in the Music Hall, Worcester, during the second week of August, 1882. The floor-space of this building amounts to 4,000 square feet. The Committee appointed to take charge of the arrangements for this Museum will be glad to receive—1. Pathological specimens (wet or dry); 2. Drawings or diagrams illustrating disease; 3. Casts or models; 4. Surgical instruments and appliances; 5. Microscopic preparations; 6. Microscopes, thermometers, and other instruments of investigation; 7. Preparations, diagrams, etc., relating to investigations in anatomy and physiology; 8. New drugs, chemicals, pharmaceutical preparations, and dietetics; 9. Sanitary appliances, including drawings or models illustrating the ventilation of hospitals or private dwellings;

10. New medical books. It is intended that the surgical instruments, sanitary appliances, etc., shall be *bonâ fide* novelties, or improvements on those in common use. The pathological specimens will be arranged in departments.

Exhibition of Instruments and Apparatus.—It is intended to arrange for the exhibition of complete series of instruments, electro-therapeutic apparatus, instruments for physical diagnosis, and appliances relating to sanitary science and public health. Facilities will also be afforded, when requested, for the display of instruments in action, or for special explanation by the exhibitors of apparatus, etc.

The Catalogue.—It is intended to print a catalogue, which will be as complete as circumstances may permit. The Committee earnestly request those who intend to exhibit to bear in mind that it is impossible that descriptions, etc., can be included in the catalogue unless sent in early. They should be received at least a month before the meeting, that is, not later than July 8th.

Communications, objects intended for exhibition, etc., to be addressed to the Secretary of the Museum Committee, Mr. J. RANDLE BUCK, 26, Sidbury, Worcester. During the week preceding the meeting all articles should be sent direct to the Music Hall, Worcester, and addressed to the care of the Curator of the Museum of the British Medical Association.

FRANCIS FOWKE, *General Secretary.*

London, April 13th, 1882.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH.—President, EDWIN SAUNDERS, F.R.C.S.; President-elect, THOMAS BRIDGWATER, M.B. The thirtieth annual meeting of this Branch will be held at the Crystal Palace, Sydenham, on Wednesday, July 19th, at 4 P.M. Dinner at 6 P.M.; tickets 12s. 6d. each, exclusive of wine.—ALEXANDER HENRY, M.D., W. CHAPMAN GRIGG, M.D., Honorary Secretaries.

NORTHERN COUNTIES (SCOTLAND) BRANCH.—The annual meeting of this Branch will be held at Nairn on Wednesday, July 12th. Members desirous of reading papers or other communications are requested to forward the titles to the Honorary Secretary by the 30th of June.—J. W. NORRIS MACKAY, M.D., Honorary Secretary and Treasurer, Elgin.

THAMES VALLEY BRANCH.—The annual meeting of the Branch will be held in the Board Room of the Richmond Hospital on Thursday, July 13th, at six o'clock. Members desirous of bringing forward any subject for discussion are requested to communicate with the Honorary Secretary, E. L. FENN, Richmond.—June 20th, 1882.

NORTH OF ENGLAND BRANCH.—The annual meeting will be held in the Library of the Newcastle-on-Tyne Infirmary on Thursday, July 13th, at 2.30 P.M. Dr. Eastwood, the retiring President, will resign the chair to Dr. Embleton, the President-elect. Dinner at the Douglas Hotel at 5 P.M.; tickets 6s. 6d., exclusive of wine.—I. W. BARRON, M.B., Durham; D. DRUMMOND, M.D., Newcastle, Honorary Secretaries.—June 21st, 1882.

YORKSHIRE BRANCH.—The annual meeting of this Branch will be held at Leeds on July 26th, at 3 P.M.; T. R. JESSOP, Esq., in the chair. Members intending to read papers are requested to communicate at once with ARTHUR JACKSON, Secretary, Sheffield.

BRISTOL BRANCH.—The annual meeting will be held at Carlisle on Friday, July 21st. Gentlemen who intend reading papers are requested to communicate with the Honorary Secretaries, JOHN SMITH, M.D.; J. KENDALL BURT, M.B.

SOUTH MIDLAND BRANCH: ANNUAL MEETING.

THE twenty-seventh annual meeting of this Branch was held at the General Infirmary, Northampton, on Thursday, June 1st, at half-past two o'clock. Previously to the meeting, the members were entertained at an excellent luncheon at the residence of the President, C. J. EVANS, Esq. Twenty-nine members and one visitor were present.

New Members.—The following new members were elected: H. H. Tidswell, Esq., and J. Oswald Lane, M.B., Northampton Infirmary; Harry W. Smith, Esq., Northampton; Chas. Hedley, Esq., Welford; John Waugh, M.B., Toddington.

President's Address.—The President then read a very able address, referring to the loss the profession had sustained from the death of several eminent men, as Sir Robert Christison, etc. He also referred to homœopathy in relation to the regular profession; likewise to the Collective Committee for the Investigation of Diseases.

A Case of Distress.—Mr. HENRY TERRY brought forward the case of Mr. Knott of Busworth, who, owing to his advanced age and failing eyesight, was unable to carry on the duties of his profession. He was also unfortunate in the disposal of his practice, and at the present time was in straitened circumstances. A subscription-list was sent round the room, and a considerable sum was promised.

The BRITISH MEDICAL JOURNAL.—The President read a communication, which had been received by the honorary secretary from the Staffordshire Branch, as follows: "Wolverhampton, May 29th, 1882. Dear Sir,—At the last meeting of this Branch, held at Wolverhampton, May 25th, the following resolution was unanimously passed: 'That, in the opinion of this Branch, the JOURNAL of the Association should be more fully the medium of record of the transactions of the Branches of the Association than it is, and that the papers read and the records of clinical observations should have precedence of other contributions to the JOURNAL; moreover, that they should be more fully reported, and be published at an earlier period after communication than has hitherto been done.' I am directed to ask you to lay the resolution before your Branch at the earliest opportunity.—I am, yours faithfully, VINCENT JACKSON, General Secretary."—It was proposed by Dr. FRANK BUSZARD, seconded by Dr. J. M. BRYAN, and carried unanimously, "That the resolution passed by the Staffordshire Branch meets with the approval of this meeting, and that the fact be communicated to the Staffordshire Branch, and also to the JOURNAL."

Collective Investigation.—A letter to the honorary secretary, from Dr. Mahomed, was read by the President, in reference to the appointment of a subcommittee and honorary secretary in connection with this Branch, to carry out the work of collective investigation of disease.—It was proposed by Mr. H. ROGERS (ex-President), seconded by Dr. BUSZARD, and resolved: "That this Branch approves of the formation of a Committee, and refers the selection of members to the Committee of Management of the Branch."

Papers.—The following papers were read:

1. Dr. Newman: Heart-Disease.
2. Mr. R. H. Kinsey: Sarcoma of the Femur.
3. Mr. W. H. Bull: Case of Splenic Abscess, with fatal result from Perforation of the Stomach (specimen and drawing exhibited).
4. Mr. G. F. Kirby Smith and G. H. Percival, M.B.: Cases of Excision of Knee and Elbow Joints; and two Cases of Osteotomy (exhibited).

5. Mr. G. Harday: Case of Large Tumour filling the Mouth.

6. Dr. James More: Accouchement Forcé.

7. Mr. W. Kennedy: Two Cases of Puerperal Septicæmia.

8. Dr. A. H. Jones: Skin-Eruptions with Acute Rheumatism.

Discussions followed several of the papers.

A Vote of Thanks to the President for his very able address was moved by Dr. J. M. BRYAN, and seconded by Mr. R. W. WATKINS. A similar vote was carried with respect to the authors of papers.

Thanks to Officers.—It was moved by Dr. WM. W. CLARK, seconded by Mr. W. H. MASTERS, and resolved, "That the thanks of the members of the Branch be given to the officers, particularly to the honorary secretary and treasurer."

Coffee was then served, and the members separated at 5.30, after a very agreeable and successful meeting.

Forthcoming Meetings.—The autumnal meeting is to be held at Kettering, in September next; and next year, in the early summer, a combined meeting of the Cambridgeshire and Huntingdonshire and South Midland Branches is proposed to be held at Bedford.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Friday, June 23rd.

Rivers Conservancy Bill.—The Earl of SANDWICH asked what were the intentions of the Government with regard to this Bill? The longer legislation was postponed, the more did the country suffer, and the greater became the evil calling for a remedy.—Lord CARRINGTON said he was instructed to inform the noble lord that it was the hope of the Government that the Bill might be passed into law this session.

The Public Health (Fruit-Pickers' Lodgings) Bill, and the Local Government Provisional Order (Artisans and Labourers' Dwellings) Bill, were read a third time, and passed.

HOUSE OF COMMONS.—Thursday, June 22nd.

Artificial Cheese.—Mr. DODSON, replying to Mr. MACFARLANE, said the Government could not take any steps to protect the public from the sale of "Cheddar" and other cheeses which were composed of skimmed milk and various fats, but which were wholesome and nutritious. If articles were sold to the prejudice of the purchaser without notification as to the character of the food, proceedings could be taken against the vendor under the Food and Drugs Act.

The following private Bills were read a third time: The Accrington Improvement Bill, the Blackburn Improvement Bill, the Bolton Improvement Bill, the Chadderton Improvement Bill, the Dundee Police

Bill, the Macclesfield Corporation Bill, the Manchester Corporation Bill, and the Newcastle-upon-Tyne Improvement Bill.

Monday, June 26th.

Precautions against Small-pox.—Mr. J. TALBOT asked the President of the Local Government Board whether his attention had been called to a report from the managers of the Metropolitan Asylums District, from which it appeared that a patient named John Tynn, who was admitted into the Stockwell Hospital on the 17th of May, stated "that he had attended at Guy's Hospital the same morning, and was told that he had small-pox"; whether it was true that the man came in a Clapham omnibus from London Bridge to Stockwell with the small-pox eruption fully out upon his face; and whether, if this were true, he would communicate with the authorities of Guy's Hospital with a view to prevent so reckless a neglect of ordinary precautions against the spread of infection.—Mr. DODSON said that the Local Government Board are now in communication with the authorities of Guy's Hospital on the subject. There does not seem to be any question that the man went in a Clapham omnibus to the hospital, but how he came to be so conveyed Mr. Dodson had not yet ascertained.—Mr. J. TALBOT gave notice that another day he should ask the right hon. gentleman whether he could suggest any precautions that would prevent the repetition of such an act.

Vaccination.—Mr. JOHN TALBOT asked the President of the Local Government Board whether he had received from the managers of the Metropolitan Asylum District a copy of a memorandum on vaccination by Dr. Sweeting, late Medical Superintendent of the Fulham Small-pox Hospital, addressed to them; and whether, considering the importance of informing the public mind upon the subject, he had any objection to lay a copy of this memorandum upon the table of the House.—Mr. DODSON: A copy of the memorandum addressed by Dr. Sweeting to the managers of the Metropolitan Asylum District has been received by the Local Government Board. The memorandum, however, is not even addressed to the Local Government Board, but to a local authority; and it would not be consistent with the ordinary practice of the Board to present such a document with a view to its being printed and circulated at the public expense.

Lunacy Districts (Scotland) Bill.—This Bill passed through Committee, Earl DALHOUSIE undertaking, on the part of the Government, to meet the views of Lord Balfour of Burleigh by introducing an amendment to limit the power conferred by the Bill to districts of large size, or that had already built asylums.

The LORD CHANCELLOR has laid on the table of the House of Peers a Bill for amending the Lunacy Regulation Acts, and will move its second reading this week.

Mr. JOHN TALBOT has given notice that he will on Monday, July 3, ask the president of the Local Government Board whether he has been able to ascertain the truth as to the small-pox patient, who is alleged to have gone from Guy's Hospital to the Stockwell Hospital on a public conveyance, and whether, with the view of preventing the spread of disease, he will endeavour to arrange that the authorities of the various metropolitan hospitals shall have ready access to the ambulances provided by the Metropolitan Asylums Board, or by the parochial authorities, for the purpose of conveying infectious persons to the hospitals appointed for their reception.

On the motion of Mr. BURT a copy has been ordered to be presented to the House of Commons of Mr. Redgrave's report to the Secretary of State for the Home Department on the subject of lead poisoning.

The Chairman of the Parliamentary Bills Committee is officially informed that the draft Bill for the Registration of Midwives for England and Ireland prepared for the Committee will be forwarded to the General Medical Council by the Lord President of the Privy Council.

MILITARY AND NAVAL MEDICAL SERVICES.

THE INDIAN MEDICAL SERVICE.

SIR,—May I inquire if there is any truth in the rumours now afloat that the amalgamation of the above with the British Medical Service is contemplated. These rumours certainly tend to disturb the mind, produce discontent, and make one feel disgusted with the service, and contemplate washing one's hands entirely of it. The feeling of the Indian medical officers in the main, if not *in toto*, is decidedly against any such transformation. Why cannot things be left alone? By the improved pensions, the Indian Medical Service has been vastly improved and rendered popular. It is only just regaining the lost popularity when these rumours, betokening complete annihilation, overtake it. By the proposed scheme to "amalgamate" the two services, there may or may not be actual economy, which, we understand, is the chief *raison d'être*. But that there will not be the same efficiency is beyond cavil. The members of the Indian Medical Service, if they chose, could have entered the other service, and intending candidates have also their choice.

It is confidently hoped that Lord Hartington, the Secretary of State for India, will not accord his sanction whereby the good old and time-honoured Indian Medi-

cal Service is swept away, after an existence cotemporaneous with British rule in India, and significant in Indian history.

It is entirely false logic to urge that, from the proposed amalgamated service—be it styled "Royal" or anything else—the fittest men will be found to meet the requirements of the native army, civil stations, medical colleges, etc., leaving quite out of all question the absolute necessity of permanent regimental and civil appointments for medical men in India. The real interests of the State, the Sepoy, the sick poor, the public, the profession, and science, would one and all be sacrificed. The following paragraph from Sir Richard Temple's recent work (*India in 1880*) may be cited; and only let the India Office consult him and other men best qualified to pronounce an opinion, *ex cathedra*.

"The Indian Medical Service has been in part employed with the native army, and its members have hitherto been military officers. But its largest and most important employment has been with civil officers and *employés* of the Government, and among the natives. One of its highest functions has been the education of the natives as medical men and medical practitioners. At the Presidency towns of Calcutta, Madras, and Bombay, its members have an extensive private practice, not only among their own countrymen, but also among the natives. It furnishes to Government skilled advisers on every branch of sanitation. It contributes largely to the advancement in India of those sciences which are cognate to its own work; in botany, especially, it has held a high place. It has raised the British character in the estimation of the humbler classes of the natives, by reason of philanthropy scientifically directed in performing surgical operations, and in superintending charitable dispensaries. Its influence with the middle and upper classes of natives is considerable. By recent arrangements, it will be relieved of its military work, and will be devoted to those civil duties for which it is so signally qualified."

Let the Secretary of State consult also such men as Professors Maclean, Aitken, and others at Netley, Sir Joseph Fayrer, and other luminaries who belonged to the Indian Medical Service; and let the medical press pronounce *ex parte* judgment.—I am, etc.,
VERITAS.

TITLE OF QUARTERMASTER IN THE ARMY HOSPITAL CORPS.
SIR,—I see, in a military paper, that some of the officers of the Army Hospital Corps seem to think it derogatory to hold the designation of quartermaster. They seem not to be aware that, in all the native regiments in India, the quartermaster is a combatant officer—a lieutenant, and sometimes a captain or major—and is glad to get the appointment, as it carries a staff salary with it, although that salary is only 55 rupees a month. Out of this, he has to furnish his quarter-guard with oil, straw for the sick on the march, pay for forms and stationery, and if he ever wants any leave, must keep a "baboo" on 15 to 20 rupees a month. An Indian officer writes recently on this: "For this he has a great deal of uninteresting though responsible work to do, for which, if well done, he gets little praise; and if things go wrong, especially on a march, his life is not a happy one." Yet this appointment is sought after. If gentlemen of the army take such appointments for a little extra pay, it is difficult to see what is objectionable in them.—I am, etc.,
Bengal, April 30th, 1882. COMMON SENSE.

SURGEON-MAJOR A. F. S. Clarke, Army Medical Department, who has been for some time past attached to the Home District, has been appointed staff officer to the Army Hospital Corps, *vice* Captain David Pringle.

DEPUTY Surgeon-General J. E. Clutterbuck, M.D., is ordered home from Lucknow to take up duty at Malta as principal medical officer, in succession to Surgeon-General Mackinnon, C.B., appointed to the staff in Whitehall Yard.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

DR. MARTIN O'CONNOR AND THE LOCAL GOVERNMENT BOARD.

On the 2nd of last May, Dr. M. O'Connor, Medical Officer of the Fifth District of the North Wiltford Union, was requested to visit Annie Barber, the wife of one William Barber; and also Charles Barber, their son, who, on examination, was found to have sustained a fracture of the leg. Dr. O'Connor went without an order from the relieving officer. It was, however, understood that an application for orders would be made to the guardians at their next meeting. The application was duly made on May 10th, with the result that, in the case of the mother, the order for medical attendance, which carried with it meat and milk, was given; but in that of the son, which carried with it a fee of £3 for treatment of the fractured leg, the order was refused. The boy was nine years old, and there were three children in all.

Dr. O'Connor therefore wrote to the Local Government Board a letter, in which he stated the facts, at the same time pointing out that there was a sick wife, etc.; and asked for their intervention in order that his fee might be secured. According to the usual course, Dr. O'Connor's letter was sent to the guardians, and an explanation was requested. In their reply, the guardians base their refusal on the ground "that the boy's case had been in the hands of Dr. O'Connor as a *private patient* from the 2nd to the 10th of May; and that, therefore, he required no order from them for his attendance. The case of the mother, however, appeared to require the attendance of their medical officer, and was granted accordingly. The guardians are of opinion

that they were justified in the decision come to on the 10th of May." One would have thought that, after this the Central Board would have intervened. The Local Government Board, however, replies as follows: "The Board, on a consideration of the circumstances now before them, are of opinion that the case is not one with respect to which they can properly interfere with the discretion of the Board of Guardians."

Will the department desire it to be understood that, in every case of accident or injury, carrying with it the payment of a fee (for that is the contention here—nothing else), that the medical officers should, at any and every risk to life and limb of the unfortunate pauper, fold his arms, and say: "No attendance will I give, no succour will I afford, until I am secured in the possession of my fee, by the grant of an order?" To that conclusion medical officers must come, if there were many such bodies of guardians as the North Wiltford Board. Fortunately, for the sake of the poor, and the credit of our profession, it is not so.

In the early part of last year, we drew attention to a somewhat parallel case, which had occurred in the district held by Mr. Hele of Aldeburgh, Suffolk, one of the medical officers of the Plomesgate Union. (*BRITISH MEDICAL JOURNAL*, vol. i, 1881, page 829.) Our annotation was brought to the notice of Mr. Firth, M.P. for Chelsea, who was so struck by the injustice which had been perpetrated by that board of guardians, that he forthwith put a question to Mr. Dodson, who thereupon promptly ordered the guardians to pay the fee, which they had hitherto withheld. We advise that a similar course should be adopted now; and we feel satisfied that Dr. O'Connor would then not only get his fee, but that the guardians, and the permanent official at the Central Board, would be justly censured.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

ASTON RURAL DISTRICT.—Dr. Hickinbotham presents a very favourable report for the past year, the death-rate, 12.19 per 1,000, being the lowest ever recorded. In 1880, the rate was 14.41; in 1879, 15.1; and in 1878, 17.4. The decrease appears, therefore, to have been steady and persistent, and bears testimony to the energy displayed by the sanitary authority and their officers for the improvement of the district. The health-officer looks forward to a further decrease in the rate of mortality. Much, however, remains to be done to combat the ignorance and selfishness which makes the inhabitants of infected houses too often utterly careless as to indiscriminate mixing with others. Many improvements were effected in the district during the past year, notably in the extension of a public water-supply and in the commencement of comprehensive sewerage systems. The health-officer draws opportune attention to improper drain connections, and urges upon his authority not to permit a single pipe to communicate with the new sewers, except under the most stringent regulations and the most minute inspection. Dr. Hickinbotham states that the arrangement is still in force for the isolation of cases of infectious disease in the Birmingham Fever Hospital, and that, in case of any epidemic, a wooden building, for which the plans have been approved, could be at once erected. This is a step in the right direction; but the health-officer would wish to impress upon his authority that the value of such arrangements consists in its actual readiness for the reception of the first cases of any infectious disease that may show itself in the neighbourhood.

BRISTOL.—Mr. Davies reports that, in 1881, there were registered 7,124 births and 4,050 deaths, equal to rates of 24.4 and 19.6 per 1,000 respectively; the latter rate showing a slight decline as compared with the two previous years. Scarlet fever was generally prevalent throughout the city, and killed 153 persons, against 244 for 1880. It is a matter of surprise that, of the enormous number of non-fatal cases of the disease which must have occurred, only twelve should have been admitted into the Fever Hospital. Measles were fatal to 120 children, and scarlet fever to 114. The health-officer has to commend the sanitary authorities for the measures taken to improve the condition of the atmosphere in the production of organic matter, by facilitating and expediting decomposition of organic matter. Typhoid fever was fatal in 14 cases, and out of the 1,000 cases, not fewer than 557 were those of children under five years of age, and of these 300 had not completed their first year of existence. The sanitary condition of the district is from satisfactory, but the fault is apparently not with the health-officer.

271 to heart-disease. There was a decrease in the infantile mortality, but the number of uncertified deaths shows a considerable increase: 113 such deaths, or 2.8 per cent. of the total, having come under notice, against 94 in the previous year.

CRAVEN COMBINATION DISTRICT.—Mr. F. E. Atkinson's annual report on the health of this combined district is a praiseworthy attempt to follow in the lines of the excellent model of Dr. Barry, the late health-officer of the district. The total number of births registered in the combination in 1881 was 2,078, showing a decrease of 70 from last year and 110 from 1879. The total number of deaths was 1,139, a decrease of 131 from 1880, the birth and death-rates being equal to 30.4 and 16.6 per 1,000 respectively. Oxenhope was again the healthiest district, with a death-rate of 14.4, the highest rate (20.7 per 1,000) being recorded at Silsden. The highest zymotic-rate (3.8 per 1,000) also occurred at Silsden. Infectious diseases were unusually prevalent in the combination. Small-pox, which was entirely absent during the two previous years, visited the district, three distinct outbreaks of the disease being recorded. Two happened in the Settle Rural District, and the third in the Oakworth Urban District. The disease appears to have been imported into Settle at the beginning of the year by a tramp, who brought the contagion from Bury. Unfortunately the disease was not recognised at first, and it was not until the lapse of three weeks that the health-officer was informed of the appearance of three cases in the infirmary. In all, thirteen cases occurred in the Settle Rural District, ten of which came from the workhouse and three from the outside. Prompt isolation of these last cases was effectual in preventing any further spread of the contagion. In the Oakworth district the outbreak was confined to a single case, that of a girl employed as a rag-sorter in a paper mill. There seems little doubt that the contagion was imported in the rags which it was the girl's duty to sort, though no definite information on the subject could be obtained. Scarlet fever was fatal in 36 cases during the year, 20 of which happened in the rural and 16 in the urban districts. Of these 11 (out of about 150 cases) took place at Silsden, where the epidemic was of a somewhat virulent type. The disease was also epidemic in the Skipton and rural districts, but other parts of the combination were entirely free from it. Upon the whole the fever was of a mild type, and the deaths very few in proportion to the number of cases. Fourteen deaths were registered from fever, nine of which were returned as typhoid, and the others as continued. The district was comparatively free from diarrhoea, fourteen deaths having occurred against 35 in the previous year, when the disease was very prevalent throughout the whole of the combination. The death-rate of children under five years of age was slightly in excess of the rate for 1880, which was estimated at 32.1, the rate for 1881 being 33.1, or nearly one-third of the registered births. A considerable decrease, due probably to the mild winter, is shown in the deaths due to diseases of the respiratory organs and consumption, 219 being registered against 250 for 1880, and in those due to bronchitis, pneumonia, and pleurisy, which together caused 120 deaths, or 9 below the number registered in the previous year. Mr. Atkinson reports some improvements, and amongst others the extension of a proper system of sewerage to many portions of the combination, and of the completion of public supplies of water. Great improvement has also resulted from the adoption of by-laws to control the construction of dwelling-houses, but the scavenging arrangements of the district seem to be carried out in a most desultory and inefficient manner.

DURHAM RURAL DISTRICT.—Scarlatina and measles were the prevailing and most fatal zymotic diseases in this district during the year 1880. To the first cause no less than 113 deaths are attributed, and to the latter 73 deaths. Diarrhoea was also prevalent, terminating fatally in 53 cases. Mr. Bladett attributes much of the damage to the condition of the atmosphere in the production of organic matter, by facilitating and expediting decomposition of organic matter. Typhoid fever was fatal in 14 cases, and out of the 1,000 cases, not fewer than 557 were those of children under five years of age, and of these 300 had not completed their first year of existence. The sanitary condition of the district is from satisfactory, but the fault is apparently not with the health-officer.

GREENOCK.—During the four weeks ended on the 4th of February last, the deaths in this borough amounted to 171, equal to an annual rate of 2.8 per 1,000. Forty-one of the deaths, or 24.0 per cent. were due to diseases of the respiratory organs, and 27 to diseases of the digestive organs. From whooping-cough, and two from scarlatina. This last disease again

shows signs of prevalence, no less than 89 cases having come under the notice of Dr. Wallace. A rigid inquiry into the cause of the renewed prevalence led to discovery of an infected milk supply, the particulars of which have already been dealt with in our columns.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, June 22nd, 1882.

Bernard, Alfred George Farquhar, Junction Road, Highgate.
Davies, Sidney, Training Hospital, Tottenham.
Fowler, Charles Owen, Hereford.
Oldfield, Frank, Camberwell.
Perez, George Victor, Teneriffe.
Payne, Henry, Ashton-under-Lyne.
Slater, Druce John, Putney.
Wholey, Thomas, Gainsborough.

The following gentlemen also on the same day passed their Primary Professional Examination.

Hancock, Her Ruskin, Charing Cross Hospital.
Sturges, Frank, Middlesex Hospital.
Waring, John Arkle, St. Bartholomew's Hospital.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE.—The following candidates have satisfied the Examiners for the degree of Doctor in Medicine for Practitioners of fifteen years' standing.

J. O. Adams, F.R.C.S., L.S.A.; J. Alexander, L.R.C.P., L.R.C.S.; P. Cowen, M.R.C.S., L.S.A.; H. G. Moore, L.R.C.P., M.R.C.S.; R. Sanders, M.R.C.S., L.S.A.; S. C. Smith, M.R.C.S., L.S.A.

For the degree of Doctor in Medicine.

W. H. Cheetham, M.B., M.R.C.S.; F. C. Coley, M.B., L.R.C.P., M.R.C.S.; A. W. Woodman Dowding, M.B., M.R.C.P., L.S.A.; B. F. Giles, M.B., M.R.C.S., L.S.A.; G. S. Hutton, M.B., M.R.C.S., L.S.A.; W. B. Mears, M.B., M.R.C.S., L.S.A.; W. S. Porter, M.B., L.R.C.P., M.R.C.S.; W. B. Roué, M.B., M.S.

Second examination for the degree of Bachelor of Medicine.

Honours, Second-Class.—William Elliott Pierce, M.R.C.S.
Pass-List.—W. C. Beasley, L.S.A.; C. S. Blair; F. Greenwood, M.R.C.S.; J. R. Irvine; C. H. Milburn; C. Vise, M.R.C.S.

MEDICAL VACANCIES.

The following vacancies are announced:—

BARNET UNION.—Medical Officer and Public Vaccinator for the 3rd District. Salary £60 per annum. Applications by July 4th.
BRADFORD INFIRMARY AND DISPENSARY.—House Surgeon. Salary £150 per annum. Applications by July 3rd.
BURY ST. EDMUNDS FRIENDLY SOCIETIES MEDICAL AID ASSOCIATION.—Senior Resident Medical Officer. Salary £200 per annum. Applications by July 11th.
CAMBRIDGE COUNTY LUNATIC ASYLUM.—Assistant Medical Officer. Salary, £100 per annum. Applications by July 14th.
CHILDREN'S HOSPITAL, Birmingham.—Assistant Resident Medical Officer. Salary, £40 per annum. Applications by July 18th.
COUNTY ASYLUM, Shrewsbury.—Junior Assistant Medical Officer. Salary, £100 per annum. Applications by July 14th.
DUNGARVAN UNION.—Medical Officer for Dungarvan Dispensary District. Salary, £120 per annum, with £15 per annum as Medical Officer of Health, registration, and vaccination fees. Election on the 4th instant.
GOVAN POORHOUSE AND ASYLUM, Merryflats, Govan.—Assistant Medical Officer. Salary £120 per annum. Applications by July 1st.
GUEST HOSPITAL, Dudley.—Resident Medical Officer. Salary £120 per annum. Applications to E. Poole.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Assistant Physician. Applications by July 5th.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Resident Clinical Assistant. Applications by July 1st.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Mount Vernon, Hampstead.—Physician. Applications by July 6th.
LONDON HOSPITAL, Whitechapel, E.—Junior Assistant Surgeon. Applications by July 10th.
ROYAL UNITED HOSPITAL, Bath.—Resident Medical Officer. Salary, £100 per annum. Applications by July 6th.
ST. MARY'S HOSPITAL.—Clinical Assistant. Applications by July 1st.
ST. MATTHEW, Bethnal Green.—Assistant Medical Officer. Salary £150 per annum. Applications by July 11th.
ST. PETER'S HOSPITAL FOR STONE AND URINARY DISEASES.—House Surgeon. Applications by July 5th.
ST. THOMAS UNION, Devon.—Medical Officer and Public Vaccinator. Salary, £90 per annum. Applications by July 13th.
SUSSEX COUNTY HOSPITAL, Brighton.—Assistant House-Surgeon. Salary, £40 per annum. Applications by July 26th.
UNIVERSITY COLLEGE.—Resident Medical Officer. Applications by July 1st.
UNIVERSITY COLLEGE.—Surgical Registrar. Applications by July 1st.

WEST ROCHDALE IRONSTONE COMPANY, Limited.—Medical Officer Salary, £70 per annum. Applications by 12th instant.

WATERFORD UNION.—Medical Officer for Kilmeadan Dispensary District. Salary, £120 per annum, exclusive of registration and vaccination fees. Election on the 7th instant.

WYNAAD, SOUTH INDIA.—Medical Officer, to take charge of the Staffs. Applications by July 1st.

MEDICAL APPOINTMENTS.

ALPIN, W., M.R.C.S., appointed Assistant House-Surgeon to the Metropolitan Free Hospital, *vice* Thomas Kelly, M.D., M.R.C.S., resigned.

BIRD, A., M.R.C.S., appointed Resident Medical Officer to the Kilburn, Maida Vale, and St. John's Wood General Dispensary, *vice* J. P. Lumsden, M.B., resigned.

CROWTHER, George Dobson, L.R.C.P., L.R.C.S.Ed., appointed Junior House-Surgeon to the Halifax Infirmary.

EWING, A., L.R.C.P., appointed Assistant Medical Officer to the Bristol Foresters' Dispensary, *vice* J. R. Lewis, M.B., resigned.

GERMAN, F. F., L.R.C.P., appointed House-Surgeon to the West Bromwich District Hospital, *vice* G. Latham, L.R.C.P., resigned.

GRIFFITHS, P. Rhys, M.B., B.S. (Lond.), appointed House-Surgeon to the Glamorganshire and Monmouthshire Infirmary, Cardiff, *vice* C. J. Watkins, M.R.C.S., resigned.

KEIR, W. J., F.R.C.S., appointed Medical Officer of Health Melksham Rural Sanitary Authority.

LEE, R. J., M.D., appointed Assistant Physician to the Hospital for Sick Children, 49, Great Ormond Street.

LITTLE, E. M., L.R.C.P., appointed Surgeon for the Dispensary, Well Street, London Docks, belonging to the Seaman's Hospital, Greenwich.

MARRAS, E. A., L.R.C.P., appointed Resident Medical Officer to the French Hospital and Dispensary, 10, Leicester Place, Leicester Square, W.C.

MILNES, G. H., L.R.C.P., appointed House-Physician to the Addenbrooke's Hospital, *vice* W. A. Shann, L.R.C.P., resigned.

O'DONOVAN, E., L.K.Q.C.P.I., appointed Medical Officer for Bangor Dispensary District to the Belmullet Union.

PHILLIPS, E., L.R.C.P., appointed Resident Medical Officer to the Children's Hospital, Birmingham.

PULLEN, F. B., L.R.C.P., appointed Resident Medical Officer to the Tunbridge Wells Benefit Societies Medical Association.

STAINTHORPE, W. W., M.D., appointed Medical Officer of Health to the Guisborough Union, Yorks, *vice* A. E. Keith, M.B., resigned.

TAY, W., F.R.C.S., appointed Fifth Surgeon to the London Hospital.

THORNTON, B., M.R.C.S., appointed House-Surgeon to St. Mary's Hospital.

WARNOCK, J., L.K.Q.C.P.I., appointed Medical Officer for Irvinestown No. 2 Dispensary District to the Irvinestown Union, *vice* J. Armstrong, L.K.Q.C.P.I., deceased.

WHITE, A. T. O., M.R.C.S., appointed Assistant Medical Officer to the Metropolitan Asylum for Imbeciles.

WILLIAMS, F. M., M.R.C.S.E., appointed Medical Officer of Health to the Dunmow Rural Sanitary Authority to the Tavistock Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

JOHNSTON.—On the 20th inst., at 2, Melbourne Street, Leicester, the wife of William Johnston, Esq., M.D., of a daughter (Kathleen Ada).

INTERNAL ADMINISTRATION OF CHRYSOPHANIC ACID.—The external use of chrysophanic acid is now well known. Its internal use is, however, a novelty, but one which appears to promise good results. At the meeting of the Glasgow Medico-Chirurgical Society on April 7th, Dr. Napier showed two cases of psoriasis which had been treated by the internal administration of chrysophanic acid. The initial dose was one-eighth of a grain of the acid rubbed up with sugar of milk, and was gradually increased. The result in both cases was very good, and he believed that this was the first time that this acid had been used in this way. The advantage of this method was, that the remedy might be employed internally where it was too irritating to be applied externally. In the discussion which ensued, Dr. Charteris said that Dr. Napier's cases were a further proof of the fact that chrysophanic acid acted as much by being absorbed as by any local effect which it had on the affected skin. Dr. Stevens thought that, where it could be tolerated by the skin, the acid was as likely to do good by external as by internal use, because then it would act generally by absorption, and locally by directly influencing the affected area. The cases are fully described in a paper by Dr. Napier published in the *Glasgow Medical Journal* for June. Dr. Napier thinks that he has shown for the first time that, in certain cases, psoriasis may be cured by the use of chrysophanic acid internally; that the belief that the drug has a general as well as a local action is well founded; and that the acid is capable of being absorbed when taken internally, and of exercising a special influence on the skin after absorption.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with Duplicate Copies.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CHEAP EDITIONS OF MEDICAL WORKS.

SIR,—Under the above heading, a question of vast importance to medical men has been raised, viz., how to supply professional reading to medical men. As to buying books, it is out of the question. Now-a-days, new works and new editions follow each other so rapidly as to render it hopeless for any individual to keep up in the race, even with the aid of cheap editions. Nevertheless, cheap editions of professional works might materially tend to encourage study amongst medical men, who too frequently, having completed their studies as students, forget that as practitioners they should be practical students; and so limit their reading to a cursory glance at the weekly journal.

I would suggest that the Branches of the British Medical Association might be made local centres for the dissemination of medical literature by the establishment of a medical library for each Branch. Take, for instance, the Branch of which the writer is a member. Here we have a most energetic honorary secretary, who, with infinite trouble and no little expense, has created a Literary and Scientific Society. He arranges frequent meetings of the Branch (local) and an annual Branch meeting (general). We see and hear one another, and receive much mutual benefit; but we feel the want of books. When I turn over the advertising pages of the JOURNAL, I long to be able to go out and borrow some new work; but alas! the lending library—for there is one affiliated to the Literary and Scientific Society—deals in Miss Braddon's novels and such like only. It may be said, Why not subscribe to Lewis's library? The reply is simple—it is too far away.

I trust these rambling remarks may stir up some practical men to think the matter over, more especially my friend our honoured and honorary secretary.—I am, sir, your obedient servant, A COUNTRY MEMBER.

SIR,—I have just read Mr. Keetley's remarks on the above subject, and strongly think that, if our medical authors could be prevailed upon to follow Sir Henry Thompson's commendable example and issue cheap editions of their medical works, they would be conveying a great boon, not only on the medical profession, but also on the public at large. Now, it is certain the medical men in country practice with limited means are quite debarred from making themselves so proficient in medical literature as they would wish, simply on account of the expense. I have no hesitation in stating that, if cheap editions of standard medical works were published, the sale would be immense, and the results must be obvious. Our profession would be better versed in the diagnosis and treatment of disease; and I do not think I shall be exaggerating the importance of the subject when I say that "cheap medical books" may thus be the indirect means of preventing many an acute illness from relapsing into a chronic incurable condition, and of rescuing many a life from an untimely grave.—I enclose my card, and am, your obedient servant, A COUNTRY SURGEON.

E. W.—Any competent medical man will be able to effect a cure in such a case.

HOLIDAYS AND MIDWIFERY ENGAGEMENTS.

SIR,—I shall feel obliged for information as to the extent of legal and moral responsibility that an accoucheur assumes on undertaking to attend a midwifery case. To take a case in point. A woman applies to a medical man to attend her in her confinement, which, she informs him, is expected to take place during the first week of a certain month. To this he agrees. Thus there is constituted a binding contract. Now, supposing that the labour comes off one month before, or one or even two months after the expected time, as is not unusual in first confinements, is the medical man bound to be at home to attend the case at any time during the three months? Supposing that the woman insists on holding him to his contract, and obstinately refuses the services of a substitute, would the accoucheur be liable to an action at law if he were absent at any time other than the month for which he was engaged? It is evident that, if he be bound to attend at any period, his time may be virtually monopolised for three months, perhaps, by one midwifery patient. This question did not occur to our forefathers, most of whom took no holiday; but in these days even doctors have some recreation, and it concerns them to be aware of what their midwifery obligations render them liable, and whether any condition that may modify the contract can be suggested to them, and to yours faithfully, SERVUS.

* We are not aware of any legal decision which would cover the whole case stated. We think, however, that when a medical man accepts an engagement to attend a woman in her labour calculated at term, he is morally bound to hold himself, as far as ordinary professional duties permit, at her call at any time short of the calculated term; premature labour being one of the accidents of pregnancy. He must also allow a margin of two or three weeks beyond the calculated term for error. Beyond a month, we think it would be unreasonable to wait without revising the condition of the patient, if only to determine if she be really pregnant. What the law may say upon such a question, who can tell? Lawyers would fight over every possible quibble of contract—over "protracted gestation," "missed labour," or what not. The only fair escape for the doctor is to make his contract in writing, with clauses for such exceptional events as he may deem necessary. If, for example, the labour should not come off within a fortnight of term, the doctor should be released on a substitute being found.

CORONERS AND MEDICAL WITNESSES.

SIR,—Will you allow me to correct a slight misstatement in the answer given last week to "J. W." on the above subject? To his question, whether it is not the usual custom for coroners to call in the house-surgeon, in the case of an accident brought in dead, you reply truly that it is within the discretion of the coroner to call in medical evidence, and the usual practice also to call the medical officer of a hospital or infirmary as a witness; but continue, "we do not understand the motive for not doing so, as no fee is payable." This, sir, is scarcely correct, the fee appointed under the Attendance and Remuneration of Medical Witnesses at Coroners' Inquests Act (6 and 7 Will. IV. c. 89, sch. B), would in such a case be certainly payable. The only occasion where a medical officer is required to give evidence without fee is that provided for under Section 5 of the above Act, which is to the effect that no remuneration shall be allowed to the medical officer for evidence at inquests held upon the body of a person who has died in any public hospital or infirmary, or in any building or place belonging thereto or used for the reception of the patients, or who has died in any county or other lunatic asylum, or in a public infirmary or other medical institution, no matter whether it be supported by endowments or by voluntary contributions. Doubtless the reason why the coroner in your correspondent's district so often ignores taking medical evidence in accidental deaths is to save the fee payable therefor.—I am, sir, faithfully yours, JAMES GREENWOOD.

3, King's Bench Walk, Temple, June 19th, 1882.

* Mr. Greenwood is quite correct. The writer of the editorial notice to which he refers has himself on several occasions when house-surgeon received a fee for giving evidence in cases where a body was brought in dead. He has, however, known a coroner refuse payment in such cases. The concluding sentence of the editorial note should have been—"no fee is payable, except when the body is brought in dead".

HOW OUR AMERICAN BRETHREN ARE TREATED AT THEIR ASSOCIATION MEETING.

SIR,—I send you a cutting from the *Chicago Times* of June 7th, just received. It is part of a letter from their special correspondent at St. Paul, Minnesota.

"Never before in the history of the North-west have so many representative men of the medical profession met as are now assembled in St. Paul. There are now about eight hundred delegates to the National Medical Association in the city, all of whom have been comfortably cared for at the hotels or as guests of citizens, the houses of the best people of the city having been thrown open to the distinguished delegates. The Northern Pacific and the Manitoba line have also tendered the gentlemen free transportation over all of their lines at their pleasure for the entire month, to give them ample opportunity for recreation in this climate. The association is disposing of the business in hand in seven sections, but will be engaged for four days, so great is the volume of business requiring attention at their hands." I make no comment, but sign HAIL COLUMBIA!

A MEMBER (Tiverton) takes, we think, an unnecessarily cynical view of the matter. There is no pretence that those who appear in the portrait are anything else than members of the Congress. The original picture excluded accidentally a number of persons who were unable to stay, or whose addresses were not known. There is no great honour on one side or the other; and we do not feel called upon to make any strictures on the circular sent to us.

THE TITLE OF DOCTOR.

SIR,—Your correspondent in your number of June 24th, "A Country Practitioner", rather misrepresents the case of medical men who are unable to boast of M.D. It will be granted that the title of Doctor has great influence with the public, who believe that those who are such have studied more than the ordinary qualified practitioner. Now this is totally wrong; for the London man who passes the Colleges of Physicians and Surgeons has to pass examinations equal to the university examinations in every respect, and has to spend the same length of time in studying for the same. The fact is, the higher qualifications are equal in every respect to the degrees of the higher universities, whilst the London qualifications are as difficult to obtain as the degrees at the easier universities. If this be true, both parties are equally qualified. If the one party be qualified as to merit the title of Doctor, then the other is also. I am willing to admit, as things are now, the M.D. has more right, because of his university connection; but I will never admit that he has given more time in study, or that his examinations are stiffer.—I am, sir, your obedient servant, M.R.C.P.

MEMBER.—It depends entirely upon the arrangement made when you undertook the case. As a rule, attendance on a midwifery case ends on the fourteenth day.

TREATMENT OF ACNE.

SIR,—Dr. J. H. Stowers, in the JOURNAL for June 24th, says that sebaceous acne "seldom occurs before puberty", and he recommends soap and water as a remedy. If this were of use, why has it not prevented it? Or are we to suppose that his patients have not been accustomed to wash their faces? He also advises the use of sulphur, which some one said a few weeks ago in the JOURNAL would cure it in three weeks if dusted on the parts. Unless something more than this be done, we might as well expect to cure baldness by seating our patients on a cooking-stove in full blast. Nearly all the forms of acne, probably all, are due to some derangement in the sexual apparatus. Why something wrong there should paralyse the walls of the sebaceous gland ducts, and so lead to the accumulation of casein therein, is more than I can tell; but that form of acne called pustulata, and which "seldom occurs before puberty", is not curable by his treatment when it is seen in the faces of young people and associated with debility, because all who have it are masturbators, and masturbation is, in my opinion, the sole cause of it. This fact is not at all generally known to the profession; but if my professional brethren will give it their attention, they will find it true, and a little timely advice will save sulphur.—Yours sincerely, CLIFTON WRAY, M.D., M.R.C.S.

Skegness, Lincolnshire.

TREATMENT OF STRICTURE.

INQUIRER begins with an assumption which is incorrect, namely, that "potassa fusa is capable of curing stricture or some forms of it". It is precisely because potassa fusa does not cure stricture, that its use has been abandoned. No surgeon used caustics in cases of stricture with greater perseverance than Sir Everard Home, and he describes, in his work on Stricture, a patient who had caustic applied 1,258 times in fifteen years, before an instrument was passed into the bladder, and another case in which, after 436 applications, the patient was obliged to pass a bougie daily, and to leave it in the urethra for half an hour to keep the canal in a state of tranquillity.

HISTORY OF THE BRANCHES OF THE BRITISH MEDICAL ASSOCIATION.

[Continued.]

LANCASHIRE AND CHESHIRE BRANCH.

THIS Branch originated in a meeting at the Leigh Arms Hotel, Newton (half-way between Liverpool and Manchester), on June 30th, 1837. At this meeting 41 medical men were present from Liverpool, Manchester, Warrington, Bolton, Bury, St. Helens, and other neighbouring places. The "Newton Medical and Surgical Association" was then founded, "for the purpose of promoting a free communication and friendly intercourse of the members of the medical profession residing in this part of the kingdom, and maintaining the honour and respectability, as well as extending the usefulness, of the profession generally." The society proclaimed itself strictly in alliance with the Provincial Medical and Surgical Association, but disclaimed receiving any pecuniary assistance, or requiring its own members to be enrolled as members of the general association. Six weeks later the Newton Medical and Surgical Association joined the "Provincial Association" as its Newton Branch. The first annual meeting was held at Newton in June, 1838, 47 members being present; and except on two occasions, when the meetings were held at Warrington, the meetings continued to be held at Newton for a number of years. In 1849 the name was changed to the "Lancashire and Cheshire Branch;" consisted of 90 members, mostly resident in South Lancashire. The meetings were now held at Liverpool or Manchester; and it was not till 1857 that the branch began to extend its influence northwards, and met at Preston. Two years later it met at Chester, the membership then numbering 230, from all parts of Lancashire and Cheshire.

The subjoined is a list of the places of meeting in each year, with the names of the Presidents and Vice-Presidents. No meeting of the Branch was held in 1854, in consequence of the annual meeting of the Parent Association being held in Manchester.

Year.	Place of Meeting.	President.	Vice-Presidents.
1837.	Newton	..Edward Holme, M.D.	..T. Jeffreys, M.D.; J. Kendrick, M.D.
1838.	Newton	..T. Jeffreys, M.D.	..J. Kendrick, M.D.; J. Black, M.D.
1839.	Warrington	..J. Ainsworth, Esq.	..L. Jones, M.D.; J. Moore, Esq.
1840.	Newton	..R. Bickersteth, Esq.	..J. Green, M.D.; W. Goodlad, Esq.
1841.	Warrington	..Llewellyn Jones, M.D.	..D. Baird, M.D.; R. Thorpe, Esq.
1842.	Newton	..J. Kendrick (sen.), M.D.	..D. Macrorie, M.D.; W. J. Wilson, Esq.
1843.	Newton	..W. J. Wilson, Esq.	—
1844.	Newton	..E. Lyon, M.D.	..J. Jordan, Esq.; Thos. Eden, Esq.
1845.	Newton	..J. Moore, Esq.	..J. Sharp, Esq.; J. Green, M.D.
1846.	Newton	..R. W. Scott, M.D.	..W. H. Bainbridge, Esq.; T. Turner, Esq.
1847.	Newton	..W. J. Wilson, Esq.	..J. Dickinson, M.D.; G. W. Hardy, Esq.
1848.	Newton	..Sir A. J. Knight, M.D.	..J. A. Ransome, Esq.; R. A. Gaskell, Esq.
1849.	Newton	..Robert Thorpe, Esq.	..J. Kendrick (jun.), M.D.; J. A. Pearson, Esq.
1850.	Liverpool	..W. H. Duncan, M.D.	..T. Radford, M.D.; J. Edwards, M.D.
1851.	Manchester	..Thomas Turner, Esq.	..R. Broadbent, Esq.; H. H. Broughton, M.D.
1852.	Liverpool	..R. Bickersteth, Esq.	..Jas. Black, M.D.; Richd. Flint, Esq.
1853.	Manchester	..James Black, M.D.	..R. Dundas, M.D.
1855.	Liverpool	..Joseph Dickinson, M.D.	..D. Noble, Esq.; G. Mallett, Esq.
1856.	Manchester	..David Noble, M.D.	..T. Inman, M.D.; G. Dagleish, Esq.
1857.	Preston	..Lawrence Spencer, Esq.	..A. Wood, Esq.; E. Waters, M.D.
1858.	Liverpool	..Ellis Jones, Esq.	..J. Hatton, Esq.; J. R. W. Vose, M.D.
1859.	Chester	..Edward Waters, M.D.	..G. Wolstenholme, Esq.; John Harrison, Esq.
1860.	Manchester	..M. A. E. Wilkinon, M.D.	..G. Southam, Esq.; E. Batty, Esq.
1861.	Liverpool	..Edward Batty, Esq.	..L. E. Desmond, Esq.; H. Wilson, Esq.
1862.	Manchester	..George Southam, Esq.	..T. Davies, M.D.; W. T. Callon, M.D.
1863.	Liverpool	..James R. W. Vose, M.D.	..R. Martland, M.D.; G. Turner, M.D.
1864.	Lancaster	..E. D. De Vitre, M.D.	..T. Howitt, Esq.; A. T. H. Waters, M.D.
1865.	Manchester	..Thomas Turner, Esq.	..T. Mellor, Esq.; A. Stookes, M.D.
1866.	Liverpool	..A. T. H. Waters, M.D.	..D. McNicoll, M.D.; W. H. Manifold, Esq.
1867.	Chester	..John Harrison, Esq.	..T. Brittain, Esq.; W. Roberts, M.D.
1868.	Manchester	..George Mallett, Esq.	..J. G. Morgan, M.D.; A. B. Steele, Esq.
1869.	Lancaster	..W. Hall, Esq.	..J. P. Langshaw, Esq.; W. McCheane, Esq.
1870.	Preston	..Lawrence Spencer, Esq.	..Chr. Johnson, Esq.; W. Howitt, Esq.
1871.	Liverpool	..L. E. Desmond, M.D.	..W. H. Manifold, Esq.; H. Simpson, M.D.
1872.	Manchester	..T. Mellor, Esq.	..John Cameron, M.D.; A. Ransome, M.D.
1873.	Warrington	..C. White, Esq.	..J. Smith, M.D.; R. Harrison, Esq.
1874.	Blackburn	..John Skaife, Esq.	..W. M. Coultate, Esq.; D. Noble, M.D.

Year.	Place of Meeting.	President.	Vice-Presidents.
1875.	Chester	..T. Davies-Colley, M.D.	..D. Russell, M.D.; R. C. Brown, M.B.
1876.	Stockport	..George Woods, Esq.	..J. Lang, M.D.; John Harrison, Esq.
1877.	Liverpool	..A. B. Steele, L. K. Q. C. P.	..A. Ransome, M.D.; T. L. Rogers, M.D.
1878.	Blackpool	..Leslie Jones, M.D.	..J. D. Bird, M.B.; C. E. Lyster, M.D.
1879.	Lancaster	..Chr. Johnson, Esq.	..J. Harker, M.D.; T. Platt, Esq.
1880.	Manchester	..Edward Lund, Esq.	..J. Atkinson, Esq.; D. J. Leech, M.D.
1881.	Preston	..R. C. Brown, M.B.	..C. Johnson, Esq.; W. H. FitzPatrick, M.D.
1882.	Chester	..W. McEwen, M.D.	..G. B. Barron, M.D.; L. Borchardt, M.D.

During the last fifteen years the Branch has steadily advanced in numbers, and in the extent of its influence. The annual meetings have been held not only in Liverpool and Manchester, but in Preston, Lancaster, and Chester, and once in each of the following towns: Warrington, Blackburn, Southport, and Blackpool. During the last few years frequent intermediate meetings have been held at smaller towns in the district; one of these, which took place at Bolton, being attended by over 100 members. The membership now numbers 805, constituting it the largest Branch of the British Medical Association, with the exception of the Metropolitan Counties Branch.

It is unnecessary to enter into details as to the part taken by this Branch in matters of medical politics. The record preserved in its minutes shows a constant consideration by the Council of the Branch, and by the general meetings, of the important subjects of Medical Reform and Public Health. Numerous special meetings were held, resolutions were passed, and petitions were prepared. At the first meeting of the Newton Society, steps were taken to make statistical inquiries regarding epidemic and other diseases in the district. Then came discussions on the Poor-law, the Vaccination Bill, Intramural Burials, Sale of Poisons, the Medical Service of the Army, the Registration of Diseases in Towns, the Provident Relief Fund, Direct Representation, the Coroners' Bill, Medical Education, and many other subjects. One of the most prominent steps the Branch took was the organisation of district registration associations, to assist in carrying out the provisions of the Medical Act of 1858. Though it is not possible at this time to measure the exact amount of good which resulted from all this, hardly any one can doubt that the Branch must have contributed by its influence to help on the improved medical legislation of the past twenty years.

In the minutes of the Council, there are several records of instances where differences between the members were referred to it for settlement, in all cases apparently with success; and others where the honour and private interests of individual members were upheld. This ability and readiness of the Branch to defend its members from unfair treatment on the part of their fellows or the public, is one of the strongest proofs of its usefulness.

The chief work of this Branch has consisted in communications and discussions on matters of scientific and practical medicine. During the last few years, these have increased greatly in number and importance. At each of the late meetings at Preston and Bolton, ten or twelve original papers of high value were read and discussed; and it has been found necessary to divide the meeting into medical and surgical sections, to give opportunity for the proper consideration of the communications.

Last to be noted, but not least, is the opportunity for friendly intercourse which the Branch meetings afford. The experience of the Lancashire and Cheshire Branch is very strong on this point. In the beginning of 1881, a joint meeting of this Branch and the Staffordshire was arranged to take place at Crewe, and this was most successfully carried out.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

OF most local centres or homes of Branches it may be said, that their own history is coeval with, and embodies, their relations with the Parent Association. Of Birmingham, it must be said that its connection with the Association was intimate long before its Branch was founded; and the influence of its professional leaders has been exercised on our corporate history deeply, widely, and continuously from its dawn.

When Sir Charles (then Dr.) Hastings called the foundation meeting in the board-room of the Worcester Infirmary on July 19th, 1832, none present were more distinguished than Mr. Joseph Hodgson and Mr. W. Sands Cox of Birmingham, with the solitary exception of its leading physician, the venerable Dr. Edward Johnstone, who was unanimously called to the chair. His relative, Dr. John Johnstone, presided at the second anniversary meeting of the Association, which was held at the Philosophical Institution in Cannon Street, Birmingham, on July 1834. Two hundred and fifty members were present, and the success of the Association was then established beyond dis-

pute. Most of the special general meetings of the Association have been held in Birmingham. Its Committee of Council regularly held its meetings there for many years, during which Mr. T. Watkin Williams was the General Secretary.

On the Committee of Council, at a most critical period, no members were more vigilant, hospitable, and public-spirited, than the late Messrs. Edwin Bartleet and M. H. Clayton, and Mr. Vose Solomon. Their influence in the governing body has continued in their successors; so much so, that it would be difficult to point to any Branch sending more active and influential members to our executive, than does the Birmingham and Midland Counties Branch in the persons of Dr. Foster, Mr. T. H. Bartleet, Mr. F. Manby, and Dr. Wade, the Treasurer of the Association.

It is a noteworthy fact that, notwithstanding the proximity of Birmingham to Worcester, and the prominent part which the medical and surgical leaders of the former took, no Branch of the Association was formed there until the Association had been in existence twenty-two years. It was mainly by the instrumentality of Mr. Vose Solomon that a general meeting of members of the Provincial Medical and Surgical Association, residing in Birmingham and the Midland Counties, was held at Dee's Royal Hotel, Birmingham, on Wednesday, December 13th, 1854. Mr. Langston Parker, having been called to the chair, Mr. Solomon moved, and Mr. George Yates seconded, the following resolution, which was unanimously carried: "That a Birmingham and Midland Counties Branch of the Provincial Medical and Surgical Association be formed." A career of almost unbroken harmony and prosperity has succeeded.

The Birmingham men from the first, and continuously, have advocated the representative principle. Their chief local honour, that of President of the Branch, has been allotted in alternate years to a Birmingham and a county man, as will be seen from this list, in which an asterisk distinguishes the Birmingham representatives.

Year.	President.	Year.	President.
1855 ..	*Langston Parker, Esq.	1869 ..	*J. V. Solomon, Esq.
1856 ..	S. J. Jeaffreson, M.B.	1870 ..	Thomas Underhill, Esq.
1857 ..	Edwin Bartleet, Esq.	1871 ..	*Oliver Pemberton, Esq.
1858 ..	E. H. Coleman, Esq.	1872 ..	Thomas Ebbage, Esq.
1859 ..	*J. B. Melson, M.D.	1873 ..	*Furneaux Jordan, Esq.
1860 ..	Edward Moore, Esq.	1874 ..	W. C. Garman, Esq.
1861 ..	*Bell Fletcher, M.D.	1875 ..	*W. F. Wade, F.R.C.P.
1862 ..	H., Esq.	1876 ..	G. F. Bodington, M.D.
1863 ..	*Alfred Baker, Esq.	1877 ..	*Sampson Gamgee, Esq.
1864 ..	H. D. Carden, Esq.	1878 ..	John Tibbits, M.D.
1865 ..	*James Russell, M.D.	1879 ..	*James Johnson, M.D.
1866 ..	T. A. Carter, M.D.	1880 ..	R. Prosser, Esq.
1867 ..	*S. Berry, Esq.	1881 ..	*T. H. Bartleet, M.B.
1868 ..	C. A. Newnham, Esq.	1882 ..	Edward Dewes, M.D.

Dr. B. W. Foster is President-elect for 1883.

The Branch sprang into life in troublous times. The next annual general meeting, held at York on August 15th and 16th, 1855, was a very critical one. An attempt at reform was then negatived, a schism threatened, and a special general meeting was appointed to be held at Birmingham on the 20th of the following November. Mr. Langston Parker gave a loyal rallying exhortation in addressing his Branch in general meeting. His exact words are worth quoting from the original minute-book.

"Let me urge you, gentlemen, to unanimity in the pursuit of the great questions which involve the welfare of the Association and the profession generally. It is by reforming what is wrong in the old Association, and not by creating a new one, that such measures must be accomplished. I can only repeat what I have already publicly stated, that should the Association (consisting of upwards of two thousand members) be broken up by petty personalities and private squabbles, no other can ever be formed in Great Britain which will have the slightest hold on the affection or confidence of medical men."

Such public-spirited and generous words were not wasted. Charles Hastings rose almost above them. Some fancied that love of power might blind him, and that he would be unable to project himself beyond the circle which he had first traced, with Worcester as a centre. The issue justified his best friends and most ardent admirers. He once more proved himself to be a man of the better part of valour, and how a general body must admire, and how they must deplore, a strategic wisdom in conducting a masterly retreat.

The special general meeting in Birmingham on November 20th, 1855, substituted the prefix British for Provincial to the name of our Association; and it was at the same time ordered that the Council of the Association be elected on the principle of absolute representation.

The Secretaries of the Branch have just claims to credit for a very large part of its success. Their names in lineal succession are: Mr. Vose Solomon, Mr. Field, Mr. Oliver Pemberton, Dr. Willoughby Wade, Mr. T. Hiron Bartleet, Dr. Balthazar Foster, Dr. James Sawyer, Dr. Edward Malins, Dr. Rickards, and Dr. Alfred H.

Carter. With the exception of the second on the list, all happily survive, and are amongst the most active and influential members of the Branch.

It is doing no injustice to the gentlemen who preceded and followed Mr. T. H. Bartleet in the important office of Honorary Secretary, to say that his services have been unrivalled. He was elected at a time of unusual depression in the Branch history; he held the office for ten years with such success, that one hundred and thirty-four members of the Branch joined in presenting him with a valuable piece of plate, "in testimony of their obligations to him for his eminent services as Secretary during a period of ten years."

The Branch has only had three treasurers from its commencement. Mr. S. A. Bindley was the first chosen, but resigned after little more than a year's faithful service. Financial success at starting could not be anticipated; and Mr. T. Watkin Williams took office with a deficit on February 14th, 1856. He soon worked a balance on the right side, and not only never receded, but steadily added to the Branch store, during the twenty-five years of his faithful stewardship. He was not allowed to resign without a substantial recognition in the form of a service of plate from the art-stores of Messrs. Elkington. The following is the inscription: "Presented to T. Watkin Williams, Esq., F.R.C.S., in recognition of his very devoted services to the Birmingham and Midland Counties Branch of the British Medical Association as its Honorary Treasurer, for a period of twenty-five years.—Birmingham, November 17th, 1879." Mr. Arthur Oakes was chosen as the next Treasurer, and he continues to administer the Branch finances so thriftily, that he has been able each year to devote £10 as a free gift to the Medical Benevolent Society, and £10 to the Birmingham Medical Institute for the purchase of new books.

The Remuneration to the Medical Officers of Sick Assurance Societies was the subject of a vigorously eloquent speech by Dr. T. P. Heslop at the annual meeting of the Branch, held June 14th, 1867. A Friendly Society's Committee was appointed, and by its agency something was effected towards securing a better working of the sick-club system, with a more just scale of remuneration to the medical officers. With every desire to do justice to this reforming effort, and with the fullest recognition of its necessity, it is impossible not to regret its only partial success. Sick-clubs, with all their faults, have grown up with the aid and concurrence of their medical officers, who have been traditionally looked up to as the friends of the artisans who chiefly compose them. A sudden awakening to wrongs, a peremptory demand for remedy, implied coercive threat by combination, is a policy too much after the fashion of working men. Once more it had to be proved that the breed of black sheep is a very enduring one. Many good men had to go to the wall, and second-raters stepped into their shoes. Happily, both sides gained by experience; and it is not too much to hope that the sick-club question will never again relapse into the very unsatisfactory state antecedent to the Birmingham effort just briefly referred to.

It is doubtful if any presidential address has borne more direct fruit than the one delivered by Mr. W. C. Garman of Wednesbury, at the annual meeting of 1874, on the Treatment of Habitual Drunkards. Mr. Ernest Hart, who was present at the meeting, on the invitation of the President and Council of the Branch, suggested the appointment of a Committee to take up the subject, which the late Mr. Dalrymple had especially made his own, and which Mr. Garman had ably taken up. Mr. Hart's suggestion was acted on, and thus was inaugurated the work of the Association on the treatment of Habitual Drunkards.

Our Medical Charities was the subject of Mr. Sampson Gamgee's presidential address at the annual meeting of the Branch held June 26th, 1877. At the close of it, Dr. Balthazar Foster moved, Mr. Arthur Oakes seconded, and it was resolved, that, "in the opinion of this meeting, the introduction of the provident dispensary system offers the best means of checking the excessive increase in the amount of gratuitous medical advice dispensed by our local charities; and that the Council of the Branch be requested to take steps for promoting the formation of provident dispensaries in the town."

The office of Senior Honorary Secretary of the Branch was at this time held by Dr. James Sawyer, the present Senior Physician to the Queen's Hospital. It was largely owing to Dr. Sawyer's tact and influence that a Joint Committee was appointed, equally composed of members of the Branch and of the Midland Medical Society. Mr. Gamgee, who was elected President of the Joint Committee, had said in his address: "A too hasty and too wide application of the provident dispensary system in its crude form, or alloyed with the evils which have crept into it, would only lead the public and us into fresh difficulties." This warning appears to have given the keynote to the action of the Joint Committee. They were in favour of provident dispensaries in the abstract; they allowed full freedom of action

to every member of the profession; but they made this stipulation, as the condition precedent to corporate professional action: "That the governing body of each of the medical charities should signify their willingness to co-operate in an endeavour to check their abuses, while securing relief for all really deserving persons." The governors of the charities took no heed, and the joint medical societies no action.

To complete this very brief and imperfect history of the Birmingham and Midland Counties Branch, it would at least be necessary to recite the work of its vigorous Pathological Section, and of the Microscopical one, which, though no longer in existence, did very good work in its day. Suffice it to record that, by the common consent of the profession in Birmingham and the surrounding district, the local Branch of the British Medical Association has exercised an unchequered influence in promoting the best interests of the profession and of the community generally.

READING BRANCH.

THE Reading Branch was formed on January 23rd, 1856, by the influence of the late Dr. Cowan, who took much interest in the Association, and who was one of the leaders of the movement which, at the meeting at Oxford, changed the whole character of the Association, by starting a weekly journal instead of a volume of yearly *Transactions*, and thus gave the movement a professional influence which it could not otherwise have acquired.

The Reading Branch, from the position of its centre and from the existence of a Pathological Society, started at an earlier date for the discussion of professional subjects, has never acquired a numerical importance, and, with the exception of its annual meetings, its members have only been called together when some subject of special interest has required consideration.

The following is a list of the Presidents and the year for which they served:

Year.	Presidents.	Year.	Presidents.
1856 ..	Charles Cowan, M.D.	1869 ..	G. H. Davis, Esq.
1857 ..	C. M. Burnett, M.D.	1870 ..	W. B. Young, Esq.
1858 ..	George May, Esq.	1871 ..	George May, Esq.
1859 ..	John McIntyre, M.D.	1872 ..	R. C. Shettle, M.D.
1860 ..	R. Woodhouse, M.D.	1873 ..	Alfred Playne, M.B.
1861 ..	T. W. Jeston, Esq.	1874 ..	O. C. Maurice, Esq.
1862 ..	Edward Wells, M.D.	1875 ..	G. May, jun., M.B.
1863 ..	George Pound, Esq.	1876 ..	William Orange, M.D.
1864 ..	Isaac Harrison, Esq.	1877 ..	John Shea, M.D.
1865 ..	N. Crisp, Esq.	1878 ..	Francis Bateman, M.D.
1866 ..	T. L. Walford, Esq.	1879 ..	W. A. S. Roys, Esq.
1867 ..	J. G. Barford, Esq.	1880 ..	Robert Smith, Esq.
1868 ..	Charles Vines, Esq.	1881 ..	H. H. Phillips, M.D.

Mr. G. May, M.B., was the first Secretary of the Branch, and continued to hold office until 1870, when he resigned, and was succeeded by the present Secretary, Dr. Shettle.

In 1857, a petition in favour of the reform of the laws affecting Poor-law medical officers was signed and presented to Parliament.

In 1858, the Medical Reform Bills of the Right Hon. W. F. Cowper and Lord Elcho were supported. At a special general meeting, it was recommended that the members of the Reading Branch should not give information to any insurance office respecting the health of any private patient, except upon the receipt of a fee from the office.

In 1859, the representative of the Council was desired to express to the General Council the unanimous wish of the Branch that Sir Charles Hastings be requested to accept the reappointment of President and Treasurer to the Association.

In 1864, the members of the Branch pledged themselves not to meet in consultation, nor to attend in conjunction with homœopathic practitioners; and, further, that no member of the Branch would meet in consultation any member of the profession who knowingly violated this resolution.

In May 1868, Mr. May was elected to represent the Branch on the Parliamentary Bills of the Metropolitan Counties Branch, in favour of the direct representation of the profession on the General Medical Council, and the course taken by the General Medical Council was approved.

In 1872, some resolutions recommended by the Committee of Council were considered, approved, and a petition to Parliament signed in favour of their being adopted.

In 1875, the Bill for the Restraint of Habitual Drunkards was supported by the Branch.

The practice of advertising medical books in the non-medical press was condemned, and it was recommended that every practicable effort should be made to suppress it.

In 1877, a petition to Parliament was signed to redress the grievances of Militia surgeons.

In 1878, the question of the propriety of admitting lady members to the Association was considered, and their exclusion decided upon by a very large majority.

METROPOLITAN COUNTIES BRANCH.

THE formation of this Branch was decided on at a meeting held in London on November 26th, 1852, under the presidency of Sir John Forbes, M.D.; and the rules for its guidance were agreed on, and officers and a Council were elected, at a meeting held at the Hanover Square Rooms—Sir John Forbes again presiding—on January 11th, 1853. Sir John Forbes was appointed the first President, to remain in office, with a President-elect, Treasurer, Secretary, and Council, until the second annual meeting. In 1859, it was decided that the past Presidents of the preceding two years should be Vice-Presidents of the Branch; and in 1878 the number of Vice-Presidents was increased to four. The subjoined table contains the names of the Presidents and Vice-Presidents, and the number of members, in each year since the formation of the Branch.

Date.	President.	Vice-Presidents.	Number of Members.
1853..	Sir John Forbes, M.D., F.R.S.	—	70
1854..	John Probert, Esq.	—	166
1855..	J. Risdon Bennett, M.D.	—	156
1856..	George Webster, M.D.	—	120
1857..	Edwin Lankester, M.D., F.R.S.	—	—
1858..	George J. Squibb, Esq.	—	95
1859..	Edward W. Murphy, M.D.	Edwin Lankester, M.D., F.R.S.	108
1860..	John Birkett, Esq.	E. W. Murphy, M.D.; E. Lankester, M.D., F.R.S.	109
1861..	Benj. W. Richardson, M.D.	E. W. Murphy, M.D.; John Birkett, Esq.	120
1862..	Robert Dunn, Esq.	John Birkett, Esq.; B. W. Richardson, M.D.	132
1863..	Francis Sibson, M.D., F.R.S.	B. W. Richardson, M.D.; Robt. Dunn, Esq.	175
1864..	Charles F. J. Lord, Esq.	Robt. Dunn, Esq.; F. Sibson, M.D., F.R.S.	200
1865..	Edward H. Sieveking, M.D.	F. Sibson, M.D.; C. F. J. Lord, Esq.	217
1866..	Henry Lee, Esq.	C. F. J. Lord, Esq.; E. H. Sieveking, M.D.	244
1867..	W. O. Markham, M.D.	E. H. Sieveking, M.D.; H. Lee, Esq.	287
1868..	John E. Erichsen, Esq.	H. Lee, Esq.; W. O. Markham, M.D.	303
1869..	Geo. Johnson, M.D., F.R.S.	W. O. Markham, M.D.; J. E. Erichsen, Esq.	369
1870..	T. Heckstall Smith, Esq.	J. E. Erichsen, Esq.; G. Johnson, M.D.	368
1871..	J. Russell Reynolds, M.D.	G. Johnson, M.D.; T. H. Smith, Esq.	366
1872..	Sir W. Fergusson, Bart.	T. H. Smith, Esq.; J. R. Reynolds, M.D., F.R.S.	427
1873..	Richd. Quain, M.D., F.R.S.	J. R. Reynolds, M.D., F.R.S.; Sir W. Fergusson, Bart., F.R.S.	514
1874..	T. B. Curling, Esq., F.R.S.	Sir W. Fergusson, Bart., F.R.S.; R. Quain, M.D., F.R.S.	609
1875..	Robert Barnes, M.D.	R. Quain, M.D., F.R.S.; T. B. Curling, Esq., F.R.S.	600
1876..	Jonathan Hutchinson, Esq.	T. B. Curling, Esq., F.R.S.; R. Barnes, M.D.	582
1877..	Septimus W. Sibley, Esq.	R. Barnes, M.D.; J. Hutchinson, Esq.	582
1878..	Andrew Clark, M.D.	J. Hutchinson, Esq.; S. W. Sibley, Esq.	617
1879..	John Wood, Esq., F.R.S.	S. W. Sibley, Esq.; A. P. Stewart, M.D.	819
1880..	S. O. Habershon, M.D.	A. Clark, M.D.; A. P. Stewart, M.D.	842
1881..	Edwin Saunders, Esq.	R. Farquharson, M.D., M.P.; John Wood, Esq., F.R.S.	846
		Esq., F.R.S.; S. O. Habershon, M.D.; T. Holmes, Esq.	

The President for 1882 is Thomas Bridgwater, M.B. The present number of members is about 900.

The first Treasurer of the Branch was Mr. Joseph Toynbee. On his retirement in 1859, Dr. Edwin Lankester was appointed in his room, and was succeeded in 1866 by Mr. Robert Dunn, on whose death, in 1878, Dr. Walter Dickson was appointed Treasurer, and has since been annually re-elected.

The duties of the office of Secretary were at first entrusted to Dr. T. Ogier Ward, to whom, along with Sir John Rose Cormack, the merit is due of having given the first impulse to the formation of the Branch. In 1857, Dr. A. P. Stewart was associated with Dr. Ogier Ward as Secretary; and, on Dr. Ward's retirement in 1859, Dr. Alexander Henry was elected Secretary. In 1874, Dr. Stewart retired from office, and was succeeded by Dr. Robert Farquharson, in whose place, on his resignation in 1877, Dr. W. C. Grigg was elected. The present Secretaries are Dr. Henry and Dr. Grigg.

OBJECTS OF THE BRANCH.—The Branch was formed soon after it had been decided, at an annual meeting of the Association, that the Journal, which had hitherto been published in Worcester under the title of the *Provincial Medical and Surgical Journal*, should be published in London. At that time, the members of the then Provincial Medical and Surgical Association resident in and near London did not exceed sixty; and it was thought that several of the objects of the Parent Association, such as medical reform, the prevention of illegal practice, etc., would be promoted by the formation of a Branch which, by holding meetings and taking advantage of the facilities for communication, might exercise greater influence than could be exercised by individual members. It was also believed that the formation of the Branch would lead the metropolitan practitioners to take an interest in the Association, and to co-operate with their provincial brethren for

the furtherance of the interests of the profession throughout the kingdom.

It was not thought desirable to make the promotion of medical knowledge by the reading and discussion of papers an object of the Branch, it being felt that this duty was already performed to as great an extent as was consistent with the comfort and convenience of the members by the numerous societies already existing. Occasionally, however, papers on strictly medical subjects have been read; and among them may be mentioned the following: The Use of Alcohol in Acute Diseases, by the late Dr. F. Anstie; Hypertrophy of the Arteries in Cases of Chronic Bright's Disease, by Dr. G. Johnson; the Development of Bilharzia Hæmatobia, by Dr. Spencer Cobbold; the Scientific Value of the Legal Tests of Insanity, by Dr. Russell Reynolds; Chorea, its Prognosis and Treatment, by Dr. F. E. Anstie; Cremation in its Bearings on Public Health, by Mr. Eassie; a case of Cerebro-spinal Paresis, by Dr. Lockhart Clarke; Physiologico-Pathological Conditions of the Circulation in Pregnant Women, by Dr. R. Barnes; Strain in Relation to the Circulatory Organs, by Dr. Milner Fothergill; and Ambulance Service for London, by Dr. B. Howard.

DISTRICT MEETINGS.—In 1878, a series of model by-laws for the guidance of district societies, on the plan long successfully followed by the South-Eastern Branch, were framed; and three districts, the North London, the East London and South Essex, and the South London, were organised. Since that time, numerous meetings for the reading and discussion of papers on subjects relating to medical science and practice have been held in these districts; and they have materially tended to increase the numerical strength and utility of the Parent Association as well as of the Branch.

MEDICAL REFORM.—At the time when the Branch was established, the subject of Medical Reform had been for some time occupying professional attention; and the Parent Association had under consideration a Bill which had been drawn up by Mr. G. W. Hastings. This Bill was, in the session of 1853, introduced into the House of Commons; and, at a general meeting of the Branch held on May 11th, 1853, a Committee was appointed "to watch the progress of the Medical Reform question in the Houses of Parliament; to communicate with the Reform Committee of the Parent Association and with other Medical Reform Committees; and to report progress to this Branch". The Committee met on several occasions, carefully examined the Bill, and made various suggestions in reference thereto. The measure, however, did not pass through Parliament; and the Branch resumed the consideration of the subject towards the end of the year. A special general meeting was held on December 13th, when it was decided that any Medical Reform Bill, to be satisfactory, ought to contain provisions for the application of the representative principle in the election of the members of the Colleges and of the Superintending Council; for a minimum age for obtaining a licence to practise from twenty-one to twenty-two years; and for rendering imperative on persons intending to enter the medical profession a preliminary examination in classics, mathematics, and general science.

In 1861, a Bill having been again prepared on the part of the Association, a special general meeting of the Branch was held on April 24th, to consider the same. The Medical Reform Committee presented a report pointing out the amendments required in the Bill, in accordance with the suggestions of the Branch; and their recommendations were approved. In addition, the inconvenience frequently arising from the existence of three separate Pharmacopœias for England, Scotland, and Ireland was referred to; and a resolution was passed in favour of introducing into the Bill a clause providing for the formation of a Pharmacopœia for the United Kingdom. Mr. Ancell and Dr. Cormack were at the same time appointed to represent the Branch at a conference on Medical Reform about to be held at the College of Physicians; and, at a general meeting on May 9th, they gave a report of the proceedings at the conference, and were thanked for the manner in which they had performed their duties.

In 1855, the Reform Bill of the Association was introduced into Parliament by Mr. Henham; and at the annual meeting on July 17th, the Branch resolved to support the Bill, and to send a deputation to the House of Commons to urge its passage. The deputation consisted of Mr. Ancell, Dr. Cormack, and Mr. W. F. Cowper, who were accompanied by Lord Elcho. The Bill was passed by the House of Commons, but it was not introduced into the House of Lords.

In 1856, the Bill was again introduced into the House of Commons by Mr. Henham. The Reform Committee presented a report pointing out the amendments required in the Bill, in accordance with the suggestions of the Branch; and their recommendations were approved. In addition, the inconvenience frequently arising from the existence of three separate Pharmacopœias for England, Scotland, and Ireland was referred to; and a resolution was passed in favour of introducing into the Bill a clause providing for the formation of a Pharmacopœia for the United Kingdom. Mr. Ancell and Dr. Cormack were at the same time appointed to represent the Branch at a conference on Medical Reform about to be held at the College of Physicians; and, at a general meeting on May 9th, they gave a report of the proceedings at the conference, and were thanked for the manner in which they had performed their duties.

on May 13th; and, at another meeting on May 26th, the Branch, while expressing general satisfaction with the Bill, resolved to urge the necessity of having one-third of the Medical Council nominated by Government from among members of the profession, not belonging to the governing bodies of the corporations or universities.

In 1858, Medical Reform Bills were introduced into Parliament by the Right Hon. W. F. Cowper and Lord Elcho. A special general meeting was held on April 27th, for the purpose of considering the Bills. On this occasion, the Council of the Branch reported that they had taken Mr. Cowper's Bill into consideration, and suggested certain amendments in its details; *inter alia*, the insertion of a clause requiring evidence of preliminary general education. Resolutions were passed in accordance with the recommendations of the Council; and a Committee was appointed to watch the progress of the Bill through Parliament. In the course of the session, the Medical Act was passed.

From this year, the Branch was quiescent with regard to Medical Reform until 1868, when the question of amending the constitution of the General Medical Council came under consideration. At the annual meeting on July 8th, a deputation was appointed to wait on the Home Secretary, for the purpose of urging that one-fourth of the Medical Council should be elected by the votes of the registered members of the profession. On December 8th, a special meeting was held to consider an address on the Direct Representation of the Profession on the General Medical Council, issued by the Committee of Council of the Parent Association; and resolutions pledging the Branch to co-operate in the endeavour to obtain such direct representation were adopted.

On April 21st, 1870, a special meeting of the Branch was held, to consider the present aspect of Medical Reform. The meeting expressed approval of the provision in the Bill then before Parliament for the establishment of a single examining board in each of the three divisions of the United Kingdom, and for the enlargement of the powers of the Medical Council in regard to the compulsory formation of such boards and the supervision of the details of education and examination; but it recommended improvement in that part of the Bill which gave power to the Privy Council to modify the resolutions of the Medical Council. It further strongly advocated that provision should be made for the direct representation of the profession in the Medical Council, by elected members, in the proportion of not less than one-fourth; and expressed the opinion that fees for examination at the national boards, and also, as far as possible, the examinations themselves, should be uniform. A Committee, consisting of the Council of the Branch, with power to add to their number, was appointed to watch the progress of the Bill; and, in the report of the Council at the annual meeting in July 1870, it was reported that the following resolutions had been agreed to.

1. That the Branch should offer its determined opposition to any Bill which gives to the Privy Council more extended or other control over the medical profession than is given by the Medical Act (1858). 2. That the Committee is of opinion that the government of the medical profession should remain in its own hands; and that the Medical Council, when rightly constituted, is the only body which should be entrusted with the general control of the education, ethics, and registration of the profession. 3. That this Committee is of opinion that no Bill will be satisfactory which does not provide for the direct representation of the profession in the Medical Council. 4. That the Medical Council, when amended as above mentioned, ought to have full power given to it for enforcing its decisions. 5. That a copy of the foregoing resolutions be sent to the Committee of Council of the Association.

The report containing these resolutions was adopted by the annual general meeting; and the President was authorised to sign a petition in favour of the direct representation of the profession in the Medical Council.

At a meeting held on May 15th, 1878, to consider the Medical Bill then before Parliament, resolutions were passed in favour of direct representation of the profession in the Medical Council. The resolutions were: 1. That the Branch should offer its determined opposition to any Bill which gives to the Privy Council more extended or other control over the medical profession than is given by the Medical Act (1858). 2. That the Committee is of opinion that the government of the medical profession should remain in its own hands; and that the Medical Council, when rightly constituted, is the only body which should be entrusted with the general control of the education, ethics, and registration of the profession. 3. That this Committee is of opinion that no Bill will be satisfactory which does not provide for the direct representation of the profession in the Medical Council. 4. That the Medical Council, when amended as above mentioned, ought to have full power given to it for enforcing its decisions. 5. That a copy of the foregoing resolutions be sent to the Committee of Council of the Association.

Compulsory Vaccination.—In the early part of 1853, a Compulsory Vaccination Bill was introduced into Parliament by Lord Lyttelton.

It formed one of the subjects of discussion at a general meeting of the Branch held on May 16th, when it was resolved to petition for a delay of the Bill "until a full and complete inquiry should have been made into the causes which had led to the failure of the present Vaccination Act, and into the best means of extending vaccination". A committee, consisting of Dr. Cormack, Dr. P. Fraser, and Dr. Semple, was also appointed to confer with the Government on the subject. On August 1st, the committee had an interview with Lord Palmerston, in order to urge delay of Lord Lyttelton's Bill; and were informed that the Bill would be postponed till next session. It, however, became law; and, at a special general meeting held on December 13th, the Branch objected to it on the ground of its imposing duties without remuneration, and appointed a committee to confer with the Prime Minister and Home Secretary.

At a general meeting on February 14th, 1854, the Vaccination Committee presented a report, including a correspondence between Lord Lyttelton and Dr. Cormack on the Vaccination Act; and a letter from Lord Lyttelton to Sir C. Hastings, asking for the advice of the Association. It was decided, in accordance with the recommendation of the committee, that the Association and its Branches, the medical corporations in England and Scotland, and the Epidemiological Society, should be invited each to appoint three members to form a joint-committee to obtain the opinion of the profession on the Act.

Public Vaccination formed the subject of a paper read by Dr. B. W. Richardson on May 26th, 1866; and on April 2nd, 1871, Dr. E. C. Seaton read a highly instructive paper on some of the Lessons to be derived from the then prevailing Epidemic of Small-pox. On May 22nd, 1878, another paper was read by Dr. Seaton on the Working of the Vaccination Law; and at the same meeting the subject of Animal Vaccination was introduced by Mr. John Greene of Birmingham.

SANITARY ORGANISATION.—This subject was brought before the Branch on January 26th, 1866, by Dr. Druitt, who read a paper on Amendments in Sanitary Laws. The Council of the Branch were desirous to consider whether any and what steps could be taken for the formation of a Board of State Medicine as an integral part of the legislature, and for the consolidation and amendment of the sanitary laws. The Council, having carefully examined the subject, agreed on certain recommendations, which were discussed and approved at an ordinary meeting of the Branch held on March 23rd. They were briefly as follows: that the Health Department of the Privy Council should be a court of appeal in sanitary matters; that the appointment of medical officers of health and inspectors of nuisances should be everywhere compulsory; that the appointment and dismissal of medical officers of health should be subject to the approval of the Health Department of the Privy Council; that the appointment of medical officers of health in counties should be vested in the justices; that the provision of local refuges for those labouring under infectious diseases should be compulsory; and that local authorities should be required to provide carriages for the removal of such persons, and means of disinfecting their clothing, etc. The initiative taken by the Branch in favour of sanitary reform was, in the course of this and the following year, followed up by the Committee of Council and by several other Branches of the Association, as well as by the Social Science Association and the General Medical Council.

On February 23rd, 1867, Dr. A. P. Stewart read a paper on the Working of some Provisions of the Laws relating to Public Health. This paper contained a great amount of laboriously collected and systematically arranged material, and was printed as a pamphlet for distribution.

In the early part of 1869, a Royal Commission was appointed to examine the present condition of Sanitary Organisation. The Branch held a special meeting on June 11th, to consider the constitution of the Commission; and it determined that an endeavour should be made on the part of the Branch, in co-operation with the Joint Committee of the British Medical and Social Science Associations, to obtain the extension of the inquiry to the metropolis, Scotland, and Ireland.

On May 24th, 1871, Dr. Stewart read another paper, on Sanitary Organisation as viewed by the Joint Committee of the British Medical and Social Science Associations, the Royal Commission, and the Government.

On January 31st, 1872, a paper by Mr. Ernest Hart, on Sanitary Organisation, was read and discussed at a general meeting. In subsequently referring to the subject in the report presented to the annual meeting, the Council expressed its disappointment at the conditions in the Public Health Bill then before Parliament, under which union medical officers were to be appointed medical officers of health, and recommended that every effort should be made to procure the rejection of the measure. A petition against the Bill was signed by the President and most of the members present at the meeting.

On January 30th, 1874, a paper was read by Mr. W. H. Michael, on the Public Health Act (1872), its defects, and suggested amendments.

MEDICAL SERVICES OF THE ARMY AND NAVY.—The unsatisfactory state of the medical services of the army and navy was brought under the notice of the Branch at a general meeting on February 13th, 1855; and a committee was appointed to press on the Government the necessity of amended medical administration in the public services. On March 28th, at a special general meeting, the committee presented a report, and were instructed to make suggestions for the improvement of the Army Medical Service to Mr. Roebuck, M.P., and, if necessary, to draw up a petition to Parliament. A resolution was also passed, stating that the systematic neglect of the resolutions of the House of Commons by the Admiralty and naval officers was a main cause of the unwillingness of young surgeons to enter the Naval Medical Service. On May 8th, the Branch, in accordance with the recommendation of the committee, adopted a petition in favour of, *inter alia*, (a) a searching inquiry into the details of the present medical service of the army; (b) equalisation of rank of medical and other officers; (c) the separation of administrative from purely professional duties; (d) the establishment of improved provision for medical instruction, with special reference to naval and military life; (e) selection of medical officers for the public services on the ground of fitness as ascertained by examination. This petition was duly presented to the House of Commons, and was also read to Lord Panmure, who signified his assent to the propriety of most of the changes asked for. The Branch also, at a general meeting on May 26th, adopted a petition for the improvement of the position of assistant-surgeons in the navy. In 1858, new Royal Warrants for regulating the rank and pay of the medical officers of the army and navy were issued. This circumstance was alluded to with satisfaction in the Report of Council presented to the annual meeting on July 19th, 1859.

In 1864, the state of the medical department of the army having again become unsatisfactory, the Branch held a special meeting on June 18th to consider the matter. Resolutions to the following effect were passed: 1. That the changes in the Warrant of 1858, and the non-enforcement of the precedence granted to medical officers by the Warrants of 1858 and 1863, had done much to deter the profession from joining the service; 2. That the terms of Warrants ought to be distinctly defined, and that alterations should only be made in them with publicity, and after due inquiry; 3. That the Warrant of 1858 should be made the basis of future regulations for the medical department of the army; 4. That the opinion of the Branch be embodied in petitions and memorials to the Houses of Parliament, and the heads of the military departments; 5. That the other Branches of the Association should be invited to co-operate. Early in the following month, large and influential deputations of the Branch had interviews with Earl de Grey and Ripon, Secretary of State for War, with His Royal Highness the Duke of Cambridge, and with Dr. Gibson, C.B., Director-General of the Army Medical Department. On each occasion, the opinions of the Branch were explained, and the necessity of improvement in the condition of the army medical officers was strongly urged. These efforts of the Branch were, as stated at the annual meeting on July 4th, 1865, followed by gratifying results, though not to the extent desired. It was at the same time mentioned with satisfaction, that the College of Physicians and the Committee of Council of the Association had taken measures to obtain an improvement of the condition of their medical brethren in the united services. These exertions on the part of the Branch and of the other bodies referred to were followed by the appointment by Government of a Commission of Inquiry into the claims of the medical officers of the army and navy. Of this Commission, Dr. Markham, then editor of the *BRITISH MEDICAL JOURNAL* and a member of the Council of the Branch, who had throughout taken an active part in the proceedings of the Branch with reference to the subject, was a member. The result of this Commission was the concession of the demands originally made and perseveringly urged by this Branch of the Association.

MEDICAL RELIEF OF THE SICK POOR.—This important subject has on several occasions occupied the attention of the Branch. In its early years (1853-55), a committee nominated by the Branch investigated the evils arising from indiscriminate gratuitous medical services. In 1862, the subject was again brought forward; and, by instruction of a general meeting, the Council drew up a series of proposals, with a view of restricting the system of gratuitous medical services. These proposals were approved at a special general meeting on March 25th, 1863; and a committee for the abolition of gratuitous medical services was appointed, with instructions to communicate with the Council of the British Medical Association, and with the corporations, so as to obtain a strong expression of opinion. The administration of our medical

tional meeting should be held in September, in some convenient town in the district. The following table shows the places of annual meeting, and the presidents, in each year.

Year.	Place of Meeting.	President.
1856	Northampton	Henry Terry, Esq.
1857	Northampton	Henry Terry, Esq.
1858	Bedford	Edward Daniell, Esq.
1859	Northampton	J. H. Webster, M.D.
1860	Bedford	T. H. Barker, M.D.
1861	Northampton	D. J. T. Francis, M.D.
1862	Bedford	Robert Ceely, Esq.
1863	Peterborough	William Paley, M.D.
1864	Woburn	Henry Veasey, Esq.
1865	Northampton	George Ashdown, Esq.
1866	Bedford	Edward Lawford, M.D.
1867	Northampton	R. W. Watkins, Esq.
1868	Bedford	C. E. Prior, M.D.
1869	Northampton	William Newman, M.D.
1870	Aylesbury	Charles Hooper, Esq.
1871	Northampton	William Clark, M.D.
1872	Bedford	A. D. Mackay, M.B.
1873	Northampton	J. M. Bryan, M.D.
1874	Buckingham	Robert De'Ath, Esq.
1875	Cambridge	Henry Terry, Esq.
1876	Bedford	H. W. Sharpin, Esq.
1877	Northampton	William Moxon, Esq.
1878	Peterborough	T. J. Walker, M.D.
1879	Bedford	G. P. Goldsmith, M.D.
1880	Northampton	F. Buszard, M.D.
1881	Newport Pagnell	Henry C. Rogers, Esq.
1882	Northampton	C. J. Evans, Esq.

The first Secretaries of the Branch were Mr. Henry Terry, jun., of Northampton, and Mr. R. S. Stedman of Sharnbrook. They held office until the annual meeting in 1860, when they retired, and were succeeded by Dr. J. M. Bryan of Northampton, and Mr. R. C. Hurst of Bedford. In 1862, Mr. Hurst was succeeded by Mr. G. P. Goldsmith of Bedford; Mr. Goldsmith retired in 1870, leaving Dr. Bryan sole Secretary; with whom, in 1871, Mr. W. Moxon of Northampton was associated. In 1877, Dr. Bryan and Mr. Moxon both retired from the office of Secretary. Mr. G. F. Kirby Smith of Northampton was appointed sole Secretary in their room; and still holds office. Dr. Bryan retains the office of Treasurer, which he held in conjunction with that of Secretary from 1860 to 1877. He has also been reappointed Secretary to represent the Branch on the General Council of the Association; and has been since 1873 representative of the Branch Parliamentary Bills Committee of the Association. On his retirement from the office of Branch Secretary in 1877, he was presented with a silver salver, as a testimonial of his services for seventeen years.

The Branch, which consisted of only 38 members at its formation in 1856, now contains 103 members. It holds, besides the annual meeting, an autumnal meeting in each year, at which many valuable papers have been read and discussed. On several occasions, the meetings have been held in conjunction with the Cambridgeshire and Huntingdonshire and East Anglian Branches.

EAST YORK AND NORTH LINCOLN BRANCH.

THIS Branch was founded on November 25th, 1856. It comprises, as its name implies, the East Riding of Yorkshire and the northern part of Lincolnshire.

It holds, in addition to the annual meeting in each year, a half-yearly meeting, and also sessional meetings every fortnight throughout the winter for the reading and discussion of papers.

The Branch has also, from time to time, held meetings and expressed opinions with regard to current events, such as Medical Reform, the Cruelty to Animals Bill, Legislation for Habitual Drunkards, etc.

The meetings have always been held in Hull. The subjoined table gives the names of the Presidents of the Branch since its formation.

Year.	President.	Year.	President.
1857	Humphry Sandwith, M.D.	1870	Kelburne King, M.D.
1858	Sir Henry Cooper, M.D.	1871	J. A. Locking, Esq.
1859	Thomas Sandwith, M.D.	1872	J. F. Holden, Esq.
1860	W. H. Eddie, Esq.	1873	John Morley, Esq.
1861	Sir Henry Cooper, M.D.	1874	G. F. Elliott, M.D.
1862	R. Hardey, Esq.	1875	John Dix, Esq.
1863	F. B. Anderson, Esq.	1876	T. E. Keetley, Esq.
1864	Owen Daly, M.D.	1877	R. H. B. Nicholson, Esq.
1865	R. M. Craven, Esq.	1878	W. H. Sissons, Esq.
1866	W. J. Lunn, M.D.	1879	J. H. Gibson, M.D.
1867	H. M. Leppington, Esq.	1880	T. M. Evans, Esq.
1868	Henry Gibson, Esq.	1881	W. Stephenson, Esq.
1869	Sir Henry Cooper, M.D.		

The office of Secretary has been held by the following gentlemen: Mr. J. A. Locking, the first Secretary; Dr. H. Munroe (elected 1860); Mr. J. F. Holden (1864); Mr. R. H. B. Nicholson (1868); and Mr. E. P. Hardey (1876), who is still in office. The duties of Treasurer have been combined with those of Secretary, except during a few years

from 1875, when Mr. Locking was Treasurer. Dr. J. H. Gibson has been appointed an additional Honorary Secretary, to represent the Branch in the Council of the Association.

NORTH OF ENGLAND BRANCH.

THIS Branch, originally designated the Northern Branch, was established at Newcastle-upon-Tyne in 1864. In November of that year, a circular, signed by Dr. G. H. Philipson, was issued to the members of the Association resident in Northumberland and Durham, calling them to a meeting to be held in the Library of the Newcastle Infirmary, on December 1st, to consider the desirability of forming themselves into a Branch of the Association. At this meeting there were present eighteen members of the Association. The late Dr. D. B. White occupied the chair, and amongst others there were present the late Drs. Charlton and Humble of Newcastle, Dr. Gibb, Dr. Philipson, Dr. Pyle, Mr. Jobson of Bishop Auckland, and Mr. W. C. Blackett of Durham. At this meeting the Northern Branch was formally established, by-laws were adopted for the regulation of the Branch, officers for the ensuing year were elected, and it was decided that the first meeting should take place at Newcastle, in June 1865. Dr. White was elected the first President, Sir John Fife, President-elect, Dr. Philipson, Honorary Secretary and Treasurer, and Drs. Charlton, Embleton, Hardy, and Parker, the first Committee of Management. Up to the year 1871, only one general meeting of the Branch had been held annually; but, owing to the large increase in the number of members, it was thought advisable to hold two additional meetings in the year. At the annual meeting in 1872, it was unanimously resolved: "That three meetings of the Northern Branch, including the annual meeting, be held every year, and that some town in Northumberland, North Durham, and South Durham be chosen for each meeting, so that no two meetings be held in any one of those divisions during the same year." In 1874, it was pointed out that a new Branch of the Association had been formed, called the "North of Scotland Branch". It was in consequence considered advisable that the Branch should in future be called the "North of England Branch", instead of the "Northern Branch", as heretofore.

The subjoined table contains the names of the Presidents, the number of members, and the place of annual meeting in each year since the formation of the Branch.

Year.	Place of Meeting.	Presidents.	No. of Members.
1865	Newcastle	D. B. White, M.D.	53
1866	Durham	Sir John Fife	72
1867	Newcastle	Edward Charlton, M.D.	82
1868	Darlington	John Jobson, Esq.	107
1869	Newcastle	Dennis Embleton, M.D.	149
1870	Sunderland	George Welford, Esq.	227
1871	Tynemouth	J. B. Bramwell, M.D.	238
1872	Stockton-on-Tees	Charles Trotter, Esq.	223
1873	Newcastle	G. T. Heath, M.D.	244
1874	South Shields	Andrew Legat, M.D.	216
1875	Darlington	S. E. Piper, Esq.	231
1876	Morpeth	Matthew Brumell, Esq.	234
1877	Durham	S. W. Broadwell, Esq.	247
1878	Hartlepool	George Moore, M.D.	249
1879	Newcastle	C. H. Philipson, M.D.	247
1880	Sunderland	G. B. Morgan, Esq.	237
1881	Darlington	J. W. Eastwood, M.D.	239

The president-elect for 1882 is Dr. Dennis Embleton, and the annual meeting is to be held at Newcastle.

For the first fourteen years of the existence of the Branch, the duties of Honorary Secretary and Treasurer were most ably performed by Dr. G. H. Philipson, to whose exertions and untiring zeal the Branch may be said to owe its prosperous condition, if not its existence. At the annual meeting in 1878, Dr. Philipson retired from the offices of Secretary and Treasurer, being at the same meeting nominated President-elect, and was succeeded by Dr. T. W. Barron. At the annual meeting in 1881, Dr. Drummond was associated with Dr. Barron in the office of Secretary.

OBJECTS OF THE BRANCH.—These were fully set forth at its formation. They include "the drawing together, at stated intervals, of the enrolled members of the British Medical Association, residing in the locality; the reading of papers; the discussion of strictly professional topics; and the promotion of cordiality by a social dinner; at which meetings, discussions, and dinners, every qualified medical man is a welcome visitor." That these objects have been attained, may be judged from the fact, that upwards of one hundred papers have been read, and more than fifty patients and specimens exhibited, at the various meetings of the Branch.

SANITARY LAWS.—The amendment of these laws early occupied the attention of the Branch. At the annual meeting at Durham, in June

1866, the secretary submitted the resolutions received from the Committee of Council, relating to the recommendations adopted by the Metropolitan Counties Branch, "as to the necessity of pressing on the legislature, by petition or otherwise, the importance of improvement in the sanitary laws." After some consideration, the subject was referred to the Council of the Branch. At the annual meeting in 1867, the Secretary drew attention to the great necessity for some decided course of action for the improvement of the sanitary laws. He submitted Dr. Stewart's essay on the legal and medical aspects of sanitary reform; and mentioned that Dr. Stewart, his object being to diffuse the information as widely as possible, had kindly entered into an arrangement with the publisher to supply copies of the publication, at a reduced rate, to the Branches of the Association. It was unanimously carried: "That, as accurate information from officers of health and inspectors of nuisances is urgently needed, petitions from the Northern Branch of the British Medical Association be presented to both Houses of Parliament, entreating that an annual return be made to Parliament, by all officers of health and inspectors of nuisances, respecting the population and areas of their respective districts, the salaries paid to them, and the duties they are required to discharge."

At a meeting of the Council, in March 1872, the Secretary introduced the series of eight resolutions which had been adopted by the Joint Committee on State Medicine of the British Medical and Social Science Associations, regarding the Public Health Bill, 1872, and also the five resolutions adopted by the Parliamentary Bills Committee of the Association; and stated that he had forwarded copies of the resolutions to twelve local members of Parliament, most of whom had returned favourable answers. The Secretary also presented a form of petition, which was adopted, for presentation to Parliament through the local members, from the members of the Branch throughout the district.

At the autumnal meeting, in September 1872, it was unanimously carried: "That this meeting is of opinion that every endeavour should be made to carry out the Public Health Act in its integrity, and deeply regrets the appointment of non-medical inspectors."

At a meeting of Council, in May 1873, the Secretary reported that a petition from the Branch had been presented to the House of Commons, in favour of remuneration to Poor-law medical officers, for services and information furnished for the purposes of the Public Health Bill.

This subject has also been brought before the Branch on various occasions in the form of papers. Thus, in September 1872, a paper was read on "The Medical Profession in relation to Public Health;" in September 1873, another was read on "The Working of the Public Health Act;" in September 1874, another on "The Health and Morality of Towns and Villages as affected by Sanitary Legislation;" and in April 1879, another on "The Compulsory Registration of Disease."

At the autumnal meeting of members, in September 1877, it was unanimously carried: "That the members of this Branch cordially support the action of the Committee on the Registration of Disease; and, whilst being ready to give every assistance in the suppression of zymotic diseases, they distinctly recognise that it is the proper duty of every householder to give notice to the sanitary authorities of the existence of such diseases."

MEDICAL REFORM.—At the annual meeting, in June 1867, the Branch resolved to support the Medical Council in their endeavours to amend the Medical Act, and unanimously passed the following resolution: "That this meeting considers that it is of the greatest importance that the Medical Act should be amended; that it is highly desirable to afford every support to the General Medical Council in their endeavours to obtain an amended Act; that as soon, therefore, as the Medical Act Amendment Bill is before Parliament, a petition in support of it be forwarded to both Houses of Parliament, and a representation be made to Her Majesty's Government from the Northern Branch of the British Medical Association."

At a special meeting of members, in November 1868, it was unanimously resolved to memorialise Her Majesty's Government, and to present petitions to both Houses of Parliament in support of the Medical Act.

At another special meeting of members, in May 1870, it was unanimously carried: "That the Northern Branch of the British Medical Association regards with satisfaction the clauses of the Medical Act (1858) Amendment Bill, House of Lords, which concern the establishment of single examining boards in each of the three kingdoms; but considers that there is just cause for apprehension from the power which is conferred on the Privy Council over the resolutions of the examining boards, and the medical education. It was also resolved to present a memorial in petition to both Houses of Parliament."

In May 1873, the Branch presented a petition to the House of Commons in favour of the Medical Act (1858) Amendment Bill.

In April 1878, a petition to the House of Lords, on medical reform, was adopted by the Branch.

REPRESENTATION OF THE PROFESSION IN THE GENERAL MEDICAL COUNCIL.—At a special meeting of Council, in November 1868, a letter was read from the General Secretary, directing the attention of the Branch to an address respecting the direct representation of the profession in the General Medical Council. A special meeting was convened for the consideration of the subject; at which meeting, the address of the committee appointed at the meeting of the Association at Oxford, respecting the direct representation of the profession, was read. The members unanimously passed a resolution, approving of the address of the committee. It was also resolved, that a memorial to Her Majesty's Government, and petitions to both Houses of Parliament, be prepared and signed by the President and the Honorary Secretary, in favour of the direct representation of the profession in the General Medical Council. In May 1870, at a special general meeting of members, it was moved: "That the Northern Branch deeply regrets the omission from the Medical Acts Amendment Bill of all provision to improve the method of electing the members of the General Medical Council; and is of opinion that provision should be made in the Bill, not only for such, but for the direct representation of the profession in the General Medical Council, in the following proportion—viz., four representatives to be elected by the registered members of the profession residing in England and Wales; two representatives to be elected by the registered members of the profession residing in Scotland; and two by the registered members of the profession residing in Ireland." The resolution was carried. It was also resolved, that petitions, embodying the resolutions, should be forwarded for presentation to both Houses of Parliament.

STATE OF LEGAL MEDICINE.—In July 1868, Dr. Eastwood having read a paper on "The Uncertainties of the present state of Legal Medicine," the Branch unanimously passed the following resolution: "That this meeting is satisfied that great uncertainty exists in many medico-legal inquiries, and much conflicting testimony is caused by the present state of the law. It therefore approves of the 18th and 19th Sections of the Memorandum on State Medicine, drawn up by a Joint Committee of the British Medical and Social Science Associations, and earnestly hopes that a Royal Commission will be appointed to inquire into these and other matters which require legislative interference."

MASTERS AND SERVANTS (WAGES) BILL.—This subject was brought under the consideration of the Branch at a meeting of Council in May 1872, at which the Secretary reported that, in consequence of an application from several members of the Branch at South Shields, he had addressed communications to the Right Hon. Gathorne Hardy, M.P., Chairman of the Select Committee, and to George Elliott, Esq., M.P., member of the Select Committee, directing their attention to the fact expressed by the Truck Commissioners in their report of June 1871, viz.: "That, while condemning the truck system, they excepted provisions for medical and educational purposes, for contributions to friendly societies and savings' banks." The Secretary also reported that it had been announced that the Select Committee had altered the Bill in the sense indicated, but that it was feared that an attempt would be made to introduce certain provisions as to the tenure of appointments of medical men. The Secretary was instructed to watch carefully the progress of the Bill, and to take action, at once, by communicating with the local members of Parliament, if necessary.

At a meeting of Council, in August 1872, the Secretary reported that, in consequence of the opposition to the Bill in the House of Commons, it was deemed desirable to send the following memorial to the editor of the *BRITISH MEDICAL JOURNAL*, and to certain members of Parliament.

"Masters and Servants (Wages) Bill.—As the deductions for medical purposes are now proposed to be legalised, and as the Bill also includes a provision against unpopular appointments (clause 8, c. 33); and as such provision appears well devised and all that is necessary, it would seem to be undesirable to make the addition that Mr. M. has given notice of, viz.: 'whereby the choice of the medical practitioner by whom it is his desire to be attended, shall be secured to each person'; because—1. It is unnecessary if the proposed provision is approved; 2. It would introduce embarrassment as to the working of the appointments; 3. It is difficult to understand how an organisation can exist, if any individual, on the plea of securing his own choice, be permitted to interfere, by selecting some person, not at all preferable to the one already approved, for the treatment of his fellow workmen, while at the same time the medical man that he is required to make is in harmony with the regulations of his fellow workmen, and forms a portion of the common fund, the advantages of which are open to him; 4. It being only members of the profession, it is impossible to see how any medical man or any number of medical men would agree to

attend a fractional portion of an establishment, for the sake of their individual contributions; 5. The accounts could not be kept at the works. Perplexity would arise, and the masters might become indifferent to such confused arrangements. 6. The plan at present in force is in a great measure that indicated by the Select Committee, is believed to be in accordance with the feelings of the workmen, and has the mutual co-operation of the masters."

LEGISLATION FOR HABITUAL DRUNKARDS.—At the Spring Meeting in 1875, this matter was brought under discussion by the reading of a paper on the subject, and the following resolution was carried: "That the Bill for the management of habitual drunkards brought before the House of Commons by the late Mr. Dalrymple, be the basis for any future action on this subject, with a modification of the 15th clause; and that the members of the North of England Branch be invited to sign a petition in favour of this Bill, to be presented to the Houses of Parliament." The report of the Committee of the Birmingham and Midland Counties' Branch on the Treatment of Habitual Drunkards was read at this meeting. At a meeting of Council in June 1876, the members present approved of and appended their signatures to a petition to the House of Commons, in favour of the Habitual Drunkards' Bill. The Petition was afterwards presented to the House of Commons. At the Spring meeting, in 1878, the Secretary read the report of the Habitual Drunkards Committee of the British Medical Association. It was unanimously resolved: "That Dr. Philipson represent the Branch on the Habitual Drunkards Committee." An interesting account of the working of the Habitual Drunkards Act 1879, was given by Dr. Eastwood at the Spring meeting in 1881.

ADVERTISING MEDICAL WORKS IN THE NON-MEDICAL PRESS.—At the autumnal meeting in 1875 a paper was read on the Prevalent Practice of Advertising Medical Works in the Non-Medical Press, and a resolution condemnatory of the practice was unanimously agreed to.

REPRESENTATION OF MEDICAL INTERESTS IN PARLIAMENT.—At the annual meeting in July 1876, the following resolution was moved and carried by a small majority: "That the Branch desires to bring under the notice of the General Council of the British Medical Association the great desirability of taking steps to obtain and to support a representative in the House of Commons, who shall especially watch over the interests of the medical profession." At the autumnal meeting of the same year, it was reported by Dr. Eastwood that the above resolution had been duly considered by the Committee of Council and the General Council of the annual meeting at Sheffield, and that both bodies were favourable, but did not see how the resolution could be practically carried into effect. Dr. Eastwood pointed out that a good opportunity had occurred at that moment in the vacancy in the representation of the Universities of Glasgow and Aberdeen, and concluded by moving the following resolution, which was carried unanimously: "That, considering the vacancy in the representation of the Universities of Glasgow and Aberdeen, it is very desirable that the opportunity be taken of endeavouring to secure a medical candidate, who shall be a graduate of either University, and that communications be sent to the Presidents of the Glasgow and West of Scotland, and the Aberdeen and Northern Counties of Scotland Branches of the British Medical Association, suggesting this course."

UNQUALIFIED MEDICAL PRACTITIONERS.—At the spring meeting in 1877, a resolution was unanimously agreed to, advocating the prosecution of unqualified medical practitioners by the General Medical Council. A copy of the resolution was forwarded to the General Medical Council. At a meeting of Council in June, a letter was read from the Registrar of the General Medical Council, in answer to the resolution passed at the spring meeting of the Branch, to the effect that, after mature deliberation, the Council saw no cause to alter the determination arrived at.

MEDICAL EDUCATION.—At a meeting of Council in June 1880, the Secretary presented a series of resolutions of the Metropolitan Counties Branch upon Medical Education, which had been forwarded to him from the Committee of Council, by the General Secretary, with a request that they should be submitted to the Branch and reported on. At the annual meeting in June of that year, the resolutions on medical education were read by the Secretary, and, after some discussion, were in turn put to the vote, when three were approved of and two disapproved of by a majority of members present.

CRUELTY TO ANIMALS BILL.—At a meeting of Council, in June 1876, the Secretary was authorised to sign a petition to the House of Lords against the Cruelty to Animals Bill.

BORDER COUNTIES BRANCH.

PREVIOUSLY to 1863, the British Medical Association had made but little progress in Cumberland and Westmorland, there being only about half a dozen members in the two counties. There was no medical

society in the district. When the idea was mooted, it soon became clear that a medical society would have the best chance of success if it were affiliated to the British Medical Association. A small provisional committee was formed, of which Dr. Henry Barnes of Carlisle, and Dr. Walker of Carlisle, were the secretaries. A meeting was convened at Carlisle on May 26th, 1868, when it was resolved to form a Branch of the British Medical Association, to be called the Cumberland and Westmorland Branch. All the members of the profession in Cumberland and Westmorland were asked to join the Branch. The inaugural meeting was held in Carlisle on July 1st, 1868, when forty-two members joined the Branch. Rules were proposed, and office-bearers elected. Dr. Thomas Barnes of Carlisle was elected President; Dr. Henry Barnes Honorary Secretary.

Three meetings were held in each year in different towns in the two counties, and the Branch flourished, but the members never numbered more than seventy, when, on November 22nd, 1873, at a meeting held at Penrith, Dr. Henry Barnes proposed that a committee should be formed to consider the question of extending the Branch to the neighbouring border counties of Scotland. At Keswick, on June 4th, 1874, the committee reported in favour of the extension of the Branch. At the annual meeting, which was held in Carlisle on July 29th, 1874, the necessary alterations in the rules were made, the name of the Branch being altered from "Cumberland and Westmorland Branch" to "Border Counties Branch", to include the following counties, Cumberland, Westmorland, Dumfries, Kirkcudbright, Wigtown, Roxburgh, Selkirk, and Peebles. Twenty new members were almost immediately added to the Branch. Since then, in each year, one meeting has usually been held on the Scotch side, and two on the English side of the Border.

In addition to taking part in such Parliamentary petitions as have received the support of other Branches of the Association, the Border Counties Branch has done good local work. At a meeting held at Penrith on June 23rd, 1869, a paper was read by Dr. Henderson of Kirkby Stephen, on the Remuneration of Medical Officers of Sick Clubs. This led to the appointment of a committee to inquire into the subject, the result being that the report of the committee was sent to all medical officers of sick clubs and benefit societies in Cumberland and Westmorland. At a meeting at Dumfries, on July 23rd, 1875, Dr. Smith of that town moved for a committee to frame a suitable scale of fees for the use of members of the Branch. This resulted in a very decided improvement in the fees paid to many practitioners in the district.

Many papers of great interest have been read and published, which would never have seen the light but for the existence of the Branch; friendships have been formed, cordiality and good feeling promoted, which would not have had such good opportunities for developing had no such society existed. The following table contains the names of the Presidents and the places of annual meeting since the formation of the Branch:

Year.	Place of Meeting.	President.
1868	Carlisle	Thomas Barnes, M.D.
1869	Penrith	Michael W. Taylor, M.D.
1870	Whitehaven	T. F. F'Anson, M.D.
1871	Carlisle	R. Elliot, M.D.
1872	Carlisle	T. S. Clouston, M.D.
1873	Carlisle	R. Tiffen, M.D.
1874	Carlisle	Thomas Green, M.B.
1875	Dumfries	W. A. F. Browne, Esq.
1876	Carlisle	Henry Barnes, M.D.
1877	Carlisle	Stewart Lockie, M.D.
1878	Dumfries	J. Gilchrist, M.D.
1879	Carlisle	R. Maclaren, M.D.
1880	Carlisle	J. A. Campbell, M.D.
1881	Melrose	S. Grierson, Esq.

In 1879, the late Dr. Reeves of Carlisle was President-elect, but he died before the end of the year.

Dr. Henry Barnes was Honorary Secretary and Treasurer from the formation of the Branch, in 1868, until 1875. The marked success of the Branch during this period was greatly due to his unwearied exertions. Upon the extension of the Branch in 1874, Dr. John Smith of Dumfries was appointed joint Secretary. In 1875, Dr. Barnes was succeeded by Dr. Stewart Lockie; he, in 1876, by Dr. R. Maclaren; and he, in 1879, by Mr. J. K. Burt; the present Secretaries being Dr. Smith and Mr. Burt.

The present number of members of the Branch is 102.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

BEFORE giving a history of the Branch as it now exists, it is right to give an account of a similar institution which was formed in the district thirty years ago.

On March 10th, 1852, a meeting of members of the medical profession was held at the house of Mr. James French of Neath—Dr. G.

calling the meeting, and requested Dr. John Moore to explain the steps that had been already taken for the formation of the North of Ireland Branch. This having been done, a series of by-laws were submitted and adopted as the by-laws of the North of Ireland Branch. Officers for the year were then appointed; Dr. James Cumming having been chosen the first President of the Branch; Dr. J. W. T. Smith and J. K. Maconchy, Vice-Presidents. Dr. John Moore was appointed Honorary Secretary and Treasurer, and still holds office. The following table contains the names of the Presidents and Vice-Presidents up to the present time.

Year.	President.	Vice-Presidents.
1874	J. Cumming, M.D.	J. W. T. Smith, M.D.; J. K. Maconchy, M.B.
1875	J. K. Maconchy, M.B.	A. Kidd, M.D.; J. W. T. Smith, M.D.
1876	J. W. T. Smith, M.D.	T. K. Wheeler, M.D.; E. Thompson, M.B.
1877	E. Thompson, M.B.	John Fagan, Esq.; A. Filson, M.D.
1878	John Moore, M.D.	J. W. Browne, M.D.; Sir William Miller, M.D.

The first annual meeting of the Branch was held on Thursday, May 22nd, 1879, in the Belfast Royal Hospital. At this meeting, a resolution was moved by Dr. McKeown, seconded by Dr. John Moore, and passed: "That, in the opinion of this Branch, there should be direct representation of the profession on the General Medical Council; and that the President and Honorary Secretary be instructed to convey such opinion to the members of Parliament representing constituencies throughout the North of Ireland."

The second annual meeting of the Branch was held on Thursday, May 20th, 1880, in the Belfast Royal Hospital; and the third, at the same place, on Thursday, May 26th, 1881.

Besides the annual meeting of the Branch, meetings are held in the months of September, December, and March, at which members exhibit pathological specimens, introduce patients, and read papers and cases.

The Branch numbers 121 members.

SOUTH OF IRELAND BRANCH.

THE opening meeting of this, the premier Irish Branch, was held in Cork on November 14th, 1874, under the presidency of the late Dr. Thomas Gregg, when the rules of debate and by-laws were agreed to. The Branch includes the counties of Cork, Waterford, Kerry, and Limerick, and was established for the reading and discussion of papers on subjects relating to medical science and practice. After the successful organisation of the South of Ireland Branch, Branches were formed in Dublin, Belfast, and Galway.

The subjoined table contains the names of the past Presidents and Vice-Presidents in each year since the formation of the Branch.

Dates.	Presidents.	Vice-Presidents.
1874-75	Thomas Gregg, M.D.	W. Jackson Cummins, M.D.; D. B. O'Flynn, M.D.
1875-76	W. Jackson Cummins, M.D.	D. B. O'Flynn, M.A., M.D.; J. G. Curtis, Esq.
1876-77	H. Macnaughton Jones, M.D.	P. J. Cremen, M.D.; P. Berry, M.D.
1877-78	J. G. Curtis, Esq.	P. J. Cremen, M.D.; J. A. Eames, M.D.
1878-79	J. A. Eames, M.D.	R. O'Reilly, M.D.
1879-80	D. B. O'Flynn, M.A., M.D.	N. J. Hobart, M.D.
1880-81	N. J. Hobart, M.D.	
1881-82	P. J. Cremen, M.D.	

Professor Macnaughton Jones, who originated the idea of and organised the Branch, took the office of Honorary Secretary, which position he held for three years. He was succeeded by Dr. Ringrose Atkins, who continued Secretary until his appointment as Resident Medical Superintendent of the Waterford District Asylum. The first Treasurer was Dr. Augustine O'Connor. The offices of Secretary and Treasurer are now held by Dr. T. Gelston Atkins.

Several important papers have from time to time been read at the meetings, and have afterwards appeared in the pages of the JOURNAL of the Association. Amongst these are to be found a case of Exophthalmos in a Child subsequent to a fall, by Dr. Macnaughton Jones; a paper on Arterio-Capillary Fibrosis, with microscopic specimens and drawings, by Dr. Ringrose Atkins; a case of Cæsarean Section, performed subsequently to the death of the mother, in which a living child was extracted, by Dr. Cremen; etc. Dr. Hayes (Tralee) exhibited the entire parietal and frontal bones of a patient of his, which had separated subsequently to a severe burn. This patient was afterwards exhibited at the meeting of the Association in Cork. The original drawings from which the plates in Professor Jones's *Atlas of Aural Disease*, and also the specimens and original drawings illustrating Dr. Ringrose Atkins's papers on the Minute Changes in the Structure of the Brain and Spinal Cord in various Phases of Insanity, were brought before the Branch.

The most important feature in connection with the history of this Branch is that, in four years after its formation, the idea of bringing the Association to Cork for its annual meeting originated. This

scheme was taken up by the Branch during the presidency of Dr. Macnaughton Jones, who, in conjunction with Dr. Ringrose Atkins, the then Secretary, called meetings of the entire profession in the South of Ireland, who gladly and liberally co-operated in the project: the result being the Cork meeting of the Association in August 1879—a meeting eminently successful both in its social and scientific aspect, and which was attended by over five hundred members of the Association. This meeting was presided over by Professor D. C. O'Connor, LL.D., of Queen's College, Cork, where the meeting was held; the Honorary Secretary being Dr. H. Macnaughton Jones.

Subsequently to the meeting of the Association in Manchester in 1877, Professor Sayre, on his way to America, gave a demonstration, in connection with this Branch, of his treatment of spinal disease by suspension and the plaster-of-Paris jacket.

At a general meeting of the Branch held on December 4th, 1875, a resolution condemning the advertising of medical books and publications in non-medical journals was unanimously adopted. At a meeting held on February 24th, 1880, the resolutions of the Metropolitan Counties Branch relative to medical education were unanimously adopted, with a slight modification in Resolution 2; and at a meeting held on May 29th, 1880, a resolution strongly condemning the practice of counter-prescribing by chemists was unanimously adopted, the meeting being of opinion that such a practice was highly dangerous to the public, and largely detrimental to the interests of the profession.

At a special meeting held on October 2nd, 1880, resolutions were unanimously adopted condemning a medical inquiry that was held in connection with the Cork Fever Hospital. These were, in accordance with the resolution of the meeting, forwarded by the Honorary Secretary for publication in the JOURNAL; and, in consequence of an article which appeared in the JOURNAL, written in the interest of the public, and pointing out the responsibility of hospital physicians and surgeons, an action for libel against the BRITISH MEDICAL JOURNAL was brought, which was subsequently tried in Cork.

The Branch has now 65 members.

GLASGOW AND WEST OF SCOTLAND BRANCH.

THIS Branch took origin in a meeting of local members of the British Medical Association, held in Glasgow on November 30th, 1875. It was announced that there were at the time 86 members of the Association resident in Glasgow, and 75 in the counties of Ayr, Lanark, Renfrew, Dumfries, and Argyle, making 161 in the West of Scotland. It was accordingly resolved that, "in view of the large numbers of the British Medical Association in the West of Scotland, it is advisable that they should be organised into a Branch." A provisional committee was appointed to take steps for the organisation of the Branch, and to draw up a code of laws. A meeting was held on January 18th, 1876, at which the organisation and laws recommended by the committee were considered and adopted. The Branch was therefore formally inaugurated at this meeting.

The first law sets forth that the Branch shall include members of the British Medical Association resident in the counties of Lanark, Renfrew, Stirling, Dumfries, Ayr, Argyle, and Bute, who shall intimate to the secretaries their intention of joining the Branch, and shall pay the annual subscription of 2s. 6d. It was agreed that there should be an annual meeting in June, at which business matters would be transacted, and, if so arranged, discussions on professional subjects take place. At the close of the meeting, there should be a dinner or other social entertainment. It was arranged that a President-elect should be chosen annually, and that, after being President for a year, he should step into the office of Vice-President for two years. This arrangement, borrowed from some other Branches, is a peculiarly good one, ensuring that the person so chosen shall be on the Council for at least four years. At the first meeting, it was necessary to fill up all the offices, and so the standing orders were suspended for the occasion. Professor Allen Thomson was elected President, and Professor G. H. B. Macleod President-elect. At the first annual general meeting, in June of the same year, the office-bearers were all continued, as the half-year during which they had been in office could only be regarded as an odd piece of time.

Year.	Presidents.	Vice-Presidents.
1876	Allen Thomson, M.D., F.R.S.	D. Fraser, M.D.; J. Grieve, Esq.
1877	G. H. B. Macleod, M.D.	Allen Thomson, M.D.; D. Fraser, M.D.
1878	Andrew Fergus, M.D.	D. Fraser, M.D.; G. H. B. Macleod, M.D.
1879	W. T. Gairdner, M.D.	G. H. B. Macleod, M.D.; A. Fergus, M.D.
1880	Bruce Goff, M.D.	A. Fergus, M.D.; W. T. Gairdner, M.D.
1881	D. Yellowlees, M.D.	W. T. Gairdner, M.D.; Bruce Goff, M.D.

Professor George Buchanan is President for 1882.

Several matters of public interest have come before the Branch during the short period of its existence. In April 1877, there was a special meeting to consider the Habitual Drunkards Bill, then before Parliament. Resolutions were passed that legislation on the subject was desirable, and directing the President, in the name of the Branch, to petition the House of Commons in favour of the Bill before it.

MEDICAL REFORM.—This subject came before the Branch in June 1878, and the following resolutions were passed. We quote them in full, as they may be regarded as embodying the general feeling in the district. "1. That this meeting, having considered the radical nature of the changes in the mode of conferring licences to practice contemplated by the Bills for the amendment of the Medical Act (1858), now before Parliament, is of opinion that such sweeping alterations can only be effected by a careful investigation and satisfactory proof of the inefficiency of present arrangements. 2. That this meeting is of opinion that, in the constitution of the General Medical Council, the medical profession should be directly represented. 3. That, in the absence of distinct information as to the supposed defects of present arrangements, and considering the problematical nature of the advantages from an untried scheme; in view, also, of the very material changes which the Lord President's Bill has undergone since first introduced, there is an apparent case for the appointment of a Select Committee or a Royal Commission to inquire into the whole matter. 4. That the secretaries be directed to prepare a petition to Parliament embodying the previous resolutions, and containing a prayer for the appointment of a Select Committee or a Royal Commission, the same to be signed by the chairman of this meeting and forwarded for presentation to the House of Commons." A motion, "That a conjoint scheme ought to exist in each part of the kingdom," was defeated by a large majority. The question of medical reform again came recently before the Council of the Branch, and they saw fit, in the name of the Branch, to protest against certain resolutions contained in the Report of the Medical Reform Committee, presented to the British Medical Association at their meeting at Ryde in August 1881. These resolutions proposed that the Faculty of Physicians and Surgeons of Glasgow, and the Apothecaries' Societies of London and Ireland, should cease to give licences, and should also be deprived of the power of sending representatives to the General Medical Council. The Branch held a general meeting on December 15th, 1881, and approved the action of the Council.

MEDICAL BENEVOLENT FUND.—At the meeting in December 1881, the Branch agreed to ask each member to subscribe five shillings annually, to the British Medical Benevolent Fund, to be collected by the Treasurer along with the regular subscriptions.

MEDICO-ETHICAL COMMITTEE.—At the meeting of the Branch, in June 1880, the President, Dr. Goff, chose as the principal topic of his address the subject of Medical Ethics. At the close of his address, it was formally moved, "That it be remitted to the Council to form a Medico-Ethical Committee, with powers to nominate the members of it." The Council appointed a subcommittee to go into the matter. This subcommittee prepared a draft constitution, which was considered and amended at two meetings of Council, and presented to the Branch at its meeting in June 1881. It was adopted at this meeting, and a committee was appointed to act as the Medico-Ethical Committee of the Branch. The duty of this committee is to consider and endeavour to arrange any disputes occurring between members of the Branch. It is also open to medical men, not members of the Branch, to ask the committee to adjudicate between them. In case of a dispute between a member and a non-member, they are to be asked to refer the matter to the committee; but, if this be not agreed to, then each is to nominate a friend, and the two thus appointed will ask a member of committee to be present, and to act as a non-medical to judge and decide in the case.

It is the duty of the committee to take into consideration all professional matters brought before it by any member of the Branch.

The membership of the Branch has been nearly stationary during the few years of its existence. It has always been just above or just below 140, and at present is 136.

DUBLIN BRANCH.

When the Branch of the South of Ireland—the premier Irish—Branch of the Association resident in Ireland had no local organization, the Association in the country was an Honorary Secretary for Ireland. The position of the Honorary Secretary of the Association was then held by Dr. J. W. Moore, who was also the Honorary Secretary of the Association in the country. The Honorary Secretary of the Association in the country was then held by Dr. J. W. Moore, who was also the Honorary Secretary of the Association in the country. The Honorary Secretary of the Association in the country was then held by Dr. J. W. Moore, who was also the Honorary Secretary of the Association in the country.

Dr. J. W. Moore filled the office of Honorary Secretary for a period of six and a half years; and the courteous and able manner in which he discharged his duties during that period, deserved the cordial recognition and vote of thanks he received from the Association. Dr. George F. Duffey of Dublin was appointed, in 1877, Honorary Secretary to the Association in Ireland, on the resignation of Dr. J. W. Moore. We have not been able to ascertain what the number of our associates in Ireland was at this time, as compared with the number in 1870. But the establishment of the South of Ireland Branch in Cork, in 1874, by the energy of Professor H. Macnaughton Jones, M.D., had given a considerable stimulus to the progress of the Association in Ireland. Owing to the small number of medical men in the majority of the towns, and the distances of these from each other, the formation of numerous local Branches (such as exist in England) would be impracticable in Ireland. It was felt, however, that there should be a Branch of the Association for each of the four Irish provinces; and this, we are glad to say, has since been accomplished. Although unsuccessful efforts had been previously made to form a Branch of the Association in Dublin, Dr. Moore's successor saw no reason why one should not be established in the Hibernian metropolis. Accordingly, a few weeks after taking up his duties, a preliminary meeting was convened by him, as Honorary Secretary for Ireland, "to consider the propriety of forming a Branch of the Association in Dublin." This meeting was held on May 15th, 1877, and was attended by eleven members of the Association. The late Dr. Hayden, then Vice-President of the King and Queen's College of Physicians, and at the time of his death President of the Branch, was in the chair; and it was unanimously resolved: "That a Branch of the British Medical Association be formed in Dublin and its vicinity, to be called the Dublin Branch." This resolution was confirmed at a subsequent general meeting of members of the Association, held under the presidency of the then President of the King and Queen's College of Physicians (Dr. Gordon), in the College Hall. Dr. Alfred Hudson was appointed the first President, and Mr. George H. Porter (Surgeon to the Queen in Ireland) President-elect; and the support the movement at once secured was shown by the fact, that the leading men among the profession in Dublin consented to serve on the Council of the Branch. The Honorary Secretary of the Association for Ireland was elected the first Honorary Secretary and Treasurer of the Branch.

OBJECT OF THE BRANCH.—At the time of its formation, there were about 130 members of the Association residing in Leinster, chiefly in Dublin and its immediate vicinity. In consequence of not being organised, these members had no voice in the affairs or in the management of the Association, and were unrepresented on its councils. The object its founders had in establishing the Dublin Branch was to supply this want by an adequate corporate existence, as well as to further the fundamental objects of the Association, and the interests of the Irish members of the profession in particular. It was also clearly understood that the Branch would not run counter to the Irish Medical Association, but would endeavour to work with and aid that association, by assisting it with all the influence which an organised metropolitan Branch would be likely to have with the executive of the parent body. As the various societies of Dublin provided ample opportunities for the consideration and discussion of purely medical and scientific topics, it was deemed sufficient to hold but one annual general meeting of the Branch, as a rule—at which, if necessary, matters of professional or public interest could be discussed, and an opportunity be also afforded to the members of meeting socially. In the words of the report of the Council, adopted at the first annual general meeting of the Branch, its aim therefore was "to co-operate with the profession in England and Scotland, as regards those national and imperial interests which bear on the welfare of the profession in the three kingdoms alike, and to cultivate among its members a spirit of kindly intercourse, fraternity of feeling, and recognition of our common aims and interests."

MEDICAL EDUCATION.—This subject early engaged the attention of the Branch. It was referred to in the second annual report; and, on the 27th February 1879, a Subcommittee of the Council, consisting of the Rev. Dr. Haughton, Dr. Grimshaw, and Dr. E. H. Bennett, was appointed to watch the progress of the various Bills then before Parliament relating to medical education. The following month, Dr. Grimshaw was elected by the Council to attend a meeting of the Medical Reform Committee of the Association. He was authorised to express the opinion that no Bill should be considered satisfactory which did not contain among its provisions one to the effect, that absolute uniformity should be enforced as to curriculum of study, standard of examination, and fees payable by candidates, in all parts of the United Kingdom; and also, that the responsibility of framing examination rules should rest on the General Medical Council. The view of the Council of the Branch on this subject were in perfect accord with those

of the Council of the Irish Medical Association, whom Dr. Grimshaw conjointly represented on the occasion.

COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES.—At the third annual meeting, Dr. J. W. Moore, at the request of the Council, brought this important measure for the improvement of the public health before the Branch. After a discussion, the President of the King and Queen's College of Physicians moved, and the President of the Royal College of Surgeons in Ireland seconded, the following resolution, which was unanimously adopted: "That this Branch is of opinion that the compulsory and early notification of the occurrence of cases of epidemic diseases, in a large city like Dublin, is of the greatest importance." The Council having been directed to take steps to promote the attainment of this object, secured the assent of the College of Physicians, the College of Surgeons, the Irish Medical Association, and of the Lord Mayor (Mr. E. Dwyer Gray, M.P.) and the Corporation of Dublin, to the principle of the proposed measure. The outcome of this was the introduction by Mr. Gray of the Notification for Infectious Diseases (Ireland) Bill. But, as the provisions of the Bill were not acceptable to the bulk of the profession, and the method of notification proposed in it not that approved by the Association, Mr. Gray's Bill met with a great deal of opposition last session, and did not get a second reading. Accordingly, in January 1882, a Joint Committee of the Branch and of the Irish Medical Association drafted a Bill which received the approval of both these bodies, as well as that of the King and Queen's College of Physicians in Ireland, and of the Royal College of Surgeons in Ireland. This Bill—which has been introduced into Parliament this session by Mr. Meldon, M.P., Q.C.—provides that it shall be compulsory on the person in charge of an individual suffering from an infectious disease to notify the sanitary authority. At the same time, it gives a discretionary power to the medical attendant, if he shall deem it advisable or necessary to do so, to notify the sanitary authority himself. Should the medical attendant undertake to do this, he then alone becomes responsible for the notification. Mr. Gray has also reintroduced his Bill this session, but both Bills stand blocked; and there is no prospect of any Bill of the kind passing in the present state of the public business.

PUBLIC AND PROFESSIONAL QUESTIONS.—Among other matters which the Dublin Branch has had before it, and on which from its organisation it has been able to take action, were such topics as the Habitual Drunkards' Bill, and the Vaccination Laws Amendment Bill. The Council petitioned in favour of the first and against the second of these measures. The grievances of the Irish Prisons Surgeons also received the attention of the Council; and, at the important conference in London in 1879, on Animal Vaccination, the Branch was represented by the late Sir Edward Sinclair, head of the Vaccine Department of the Local Government Board in Ireland.

Thus, during the five years the Dublin Branch has been in existence, it has striven by local union to raise the status of medicine, and to bring its members into more "active physiological relation" with the parent Association in England. With a small exception this year, the number of members in the Branch has annually and steadily increased, as shown by the subjoined table; and its past Presidents are men of whom the Dublin School of Medicine may feel proud.

Year.	President.	Vice-Presidents.	No. of Members.
1877.	Alfred Hudson, M.D.	—	93
1878.	George H. Porter, M.D.	Robert McDonnell, M.D., F.R.S.; T. Hayden, F.K.Q.C.P.	132
1879.	Samuel Gordon, M.D.	T. Hayden, F.K.Q.C.P.; A. H. McClintock, M.D.	144
1880.	R. McDonnell, M.D., F.R.S.	A. H. McClintock, M.D.; H. H. Head, M.D.	162
1881.	T. Hayden, F.K.Q.C.P.	J. T. Banks, M.D.; G. H. Kidd, M.D.	175
1882.	G. H. Kidd, M.D.	Edward Hamilton, M.D.; Lombe Athill, M.D.	171

The annual meeting and dinner of the Branch is held, by the kind permission of the President and Fellows, in the King and Queen's College of Physicians, on the last Thursday in January.

STAFFORDSHIRE BRANCH.

UNTIL this Branch was formed, Staffordshire was without a Medical Society, although, on the average, about 250 medical men resided within its area. From time to time local societies have been established; these flourished, dwindled, and then ceased to exist. A few years ago, the want of a Medical Society was much felt, the only one existing being the North Staffordshire; but, as heretofore all local efforts as regards permanency had failed, it was determined by a trio of surgeons—viz., Messrs. Folker, Weston, and Vincent Jackson—that an attempt should be made to promote the formation of a County Medical Society.

This proposal was discussed at a meeting of the North Staffordshire Medical Society specially convened for the purpose; and the following resolution was unanimously adopted: "The North Staffordshire Medical Society, after an independent existence of twenty-five years, wishing to extend its influence and usefulness, resolved, at a meeting of members held at Stoke-upon-Trent on Thursday, April 9th, 1874, to amalgamate itself with the British Medical Association."

In furtherance of the above resolution, the medical profession of the county was invited to assemble at Stafford on April 30th, 1874. The meeting was a large and representative one, the chair being occupied by Dr. Weaver, the President of the North Staffordshire Medical Society. The formation of a Staffordshire Branch of the British Medical Association was at once agreed upon. The draft of the rules and regulations for the government of the Branch was approved, and the first meeting was fixed to take place at Stoke on the last Thursday of the following October. Mr. Garner of that town was elected the first President; Dr. Weaver (Longton) and Mr. Yates (Newcastle) Vice-Presidents; Mr. Vincent Jackson and Mr. Ralph Goodall, Secretaries; Mr. Weston, Treasurer. The election of the Council was deferred until the annual meeting.

The two following extracts, being Nos. 5 and 15 of the Branch Code of Rules, will explain the guiding principle of the promoters—the principle being that, while the Society should essentially be a county one, yet its usefulness would be more general, and its popularity more likely to be maintained and sustained, if its movements were of an itinerant character—a feature, on the one hand, which would do away with the possibility of its inanity, as occurred when the *locale* was stationary; and, on the other hand, might stir up an interest and freshness in its proceedings specially, as well as in professional work, objects, and aims generally, in the various medical centres and districts which it yearly visited.

"The annual meeting of the Branch shall be held in the last week of October at Stoke, Stafford, and Wolverhampton in rotation; and afterwards—in that is to say, once in every four years, if it be thought desirable—in some other town."

"The three general meetings of the Branch shall be held in November, February, and May, at Stoke, Stafford, and Wolverhampton in succession."

CRUELTY TO ANIMALS BILL.—On July 27th, 1876, a special meeting of the Branch was held, to consider and discuss the provisions of Lord Carnarvon's Bill. The meeting, which was largely and influentially attended, unanimously agreed that, upon general and scientific grounds, the Bill ought to be strenuously opposed. The following resolutions were approved, and a copy was directed to be sent to members of Parliament.

"That this meeting unanimously agrees in the opinion that Lord Carnarvon's Cruelty to Animals Bill should be strenuously opposed, and for the following reasons: 1. That the entire gist of the Bill seems to be directed towards preventing, or at any rate very considerably limiting, experimental research, such research being undertaken in the interests of humanity; 2. That, fettered by such restrictions as this Bill would place on so-called vivisection, it would almost inevitably follow that many truths not yet arrived at would be left undiscovered, to the great disadvantage of all classes of people; 3. That, the medical profession having been always distinguished for its benevolence and kindness, to pass the Bill in its present form would be to cast an unmerited stigma on an honourable and humane body of gentlemen."

In the annual report of the Branch Council (1876) this subject is again referred to. The Council say, "The agitation against this Bill, which the British Medical Association commenced, and which its weekly JOURNAL promoted and most ably encouraged, and which was powerfully aided by the many denunciations and outspoken incontrovertible argument which the able speakers of the representative medical deputation which waited upon the Government so fearlessly uttered, and who so convincingly proved that, if the measure was not materially modified in many of its clauses, not only would it arrest scientific research, but would strike a blow at the endeavour which is now being made to make the medical art more precise as well as more rational, was at last so far successful that a compromise was agreed to, and the Bill was allowed to become law, with the understanding that its baneful portion should be annulled."

DENTAL PRACTITIONERS' BILL AND MEDICAL ACTS AMENDMENT BILL.—During the year 1878, the above Bills were brought under the notice of the members; and in consequence of certain objectionable clauses in each, petitions in opposition to both were numerous signed and directed to be forwarded to the House of Lords and to the House of Commons.

COMBINED MEETINGS OF BRANCHES.—A very successful meeting of the members of the Staffordshire and the Shropshire and Mid-Wales

to this table is added a list of exploratory incisions and partial removal of fibro-cystic tumours of the uterus. Mr. Wells still strongly recommends that, after cutting away the tumour, the cut edges of peritoneum should be sewed over the raw surface of the uterine stump, which is, in his practice, returned into the abdominal cavity and not secured by a clamp. The author feels very hopeful that, by adopting this method of treatment of the uterine pedicle, by arresting hæmorrhage by the use of his improved pressure-forceps, and "by careful attention to all needful antiseptic precautions, the removal of uterine tumours may henceforth be undertaken with a far more confident expectation of a successful result than could have been reasonably entertained a very few years ago". He admits, however, the value of the extraperitoneal treatment of the uterine pedicle, with compression by Koerber's *serre-naud*, as shown by the successful results of Dr. Bantock and the other operators at the Samaritan Hospital.

In a special chapter on partial amputation and complete excision of the uterus, we find a full account of the author's case of removal of a gravid cancerous uterus, already recorded in these pages last autumn. Mr. Wells does not, however, speak favourably of excision of the uterus. He shows that the question has a different aspect during pregnancy and in the non-gravid state. Something must be speedily done to save the life of a pregnant woman; whilst in cases of cancer of the uterus where pregnancy does not exist, a positive diagnosis can seldom be made when the disease has not extended so far as to put excision beyond all reasonable hopes of success, and at a later stage, if the disease be evident, but confined to the cervix, less severe measures, such as caustics, the cautery or amputation of the cervix, are preferable to so hazardous an operation as total extirpation. In cases where the fundus is affected, Mr. Wells is rather in favour of excision of the uterus by the vagina, provided that it be performed at an early stage by surgeons who have practised all the difficult details of manipulation, necessary for such a proceeding, on the dead body.

Mr. Wells's opinion on the use of antiseptic precautions in ovariotomy will excite deep interest, although the author has already made public many of his views on the question, in discussions before societies. We find Mr. Wells now expressing himself as entirely in favour of Listerian surgery, which has enabled him to discard the clamp and the drainage-tube. Yet he is far from attributing the recent brilliant results in his own and in the experience of other surgeons to Listerism alone. "The question", he writes, "of what proportion of my late results may be due to following the details of Lister's antiseptic plans remains undecided. They certainly have not brought me to the point of seeing no deaths from septicæmia, as promised by some of their enthusiastic promoters, nor have they advanced my success in operating beyond what was obtained without it; but they seem to have made convalescence more easy and rapid, and to have reduced the number of deaths from septic disease, and perhaps might have prevented every one of the deaths among my last seventy-one hospital cases; for not one of these suffered from any accidental causes of death, such as took off at least twelve of the sixteen who died among my antiseptic cases, and are almost always met with in any equal number of patients." He qualifies the merit which might be considered as due to antiseptics owing to the very favourable results in his more recent cases, all performed antiseptically, by observing how the patients in that series were all private cases, and therefore had advantages over poorer subjects, whilst he (the operator) has recently been free from hospital influences, and never attends necropsies or cases of infectious disease. Yet "it appears by my reports that four of my last sixteen deaths were caused by septicæmia, so that antisepticism has not abolished this plague of abdominal surgery." Mr. Wells has never suffered from carbolic poisoning, nor seen it in his patients; he takes it into account, however, on the authority of other surgeons, and speaks of the possibly depressing influence of the cold from the spray.

Under the heading, "Recent Extensions in Ovariotomy", we find an important chapter. By "recent extensions" the extirpation of normal ovaries is signified. Mr. Wells cannot be said to speak favourably of this operation. He believes that it has a very limited application, even as a remedy for bleeding uterine fibroids, and is so open to abuse, that its introduction in mental and neurotic cases is only to be thought of after long trials of other tentative measures, and the deliberate sanction of experienced practitioners.

The treatment of the ovarian pedicle depends almost as much, according to Mr. Wells, on the use or rejection of antiseptics, as on the length or shortness of that part of the tumour in any particular case. To the author's mind one great merit of the antiseptic system is that it has made the intraperitoneal system, which was once the less, now the more successful method. Formerly septic changes, now seldom observed, were frequent within or around the ligatured pedicle and the many dis-

advantages of the extraperitoneal method, only counterbalanced by its greater success before the days of antiseptics, have no longer to be endured. In tying the pedicle Mr. Spencer Wells does not interlace the loops of silk. This can be effected by simply crossing the two ends of the double ligature on one side of the transfixed pedicle, before tying each of those ends to the corresponding part of the ligature on the other side. This practice is adopted, we understand, by most other operators; but Mr. Wells rather avoids it, as he believes it probable that, in tying the second knot, the first may be dragged upon and loosened. He is also in favour of drawing the ligatures as tightly as possible, believing that, unless the silk form as deep a groove in the pedicle as can be made by drawing it very tight, the surfaces of peritoneum on each side are less likely to unite, cover up the silk and maintain the vitality of the stump. Others, judging from the sloughy condition of the distal portion of a tightly ligatured pedicle, discovered more than once at a necropsy, have asserted that it is more dangerous to draw the ligatures a little too tight than a little too loose—that is to say, tight enough to prevent any serious hæmorrhage, but not so tight as to cut off all supply from the distal part of the stump; but Mr. Wells differs entirely from this opinion.

In the preface to this new edition Mr. Wells remarks that, however we may congratulate ourselves on what has been done and can be done by operation to save the lives of women subject to ovarian and uterine tumours, the scientific aspect of the question leads us to look for the restriction of the area for the application of our surgical measures, and to hope that pathologists will bring us to such an understanding of the origin, causes, and nature of these diseases as will give us the means of arresting their development and progress, and perhaps obviate the necessity for excision. In the pathological portion of this work, we find a recapitulation of some of the most recent opinions on the origin of ovarian cysts, or rather an account of the microscopical appearances of portions of ovaries suspected of being in a very early stage of cystic degeneration. The classical writings of Dr. Wilson Fox on the formation of secondary cysts are retained, almost in their complete form, as in the last edition. Mention is made of a true case of fibroma of the ovary, weighing fifteen pounds, which the author removed in 1879. The specimen, now in the museum of the Royal College of Surgeons, has been more than once the subject of discussion, and is a standing proof that pure fibromyoma may occur in the ovary. On the other hand, no mention is made of sarcoma of the ovary, excepting that form associated from the first with cystic disease; but the author, looking at the essentially clinical and surgical aspects of malignant ovarian disease, would probably operate for the removal of any solid tumour "without any theoretical bias as to its pathological classification." The quotation is taken from some observations on cases of "cancer" of the ovary occurring many years ago, when distinctions between sarcoma and carcinoma were less finely drawn than at present.

Amongst other additions to be found in the new edition of Mr. Wells's work is a good account of the results of ovariotomy in the hands of foreign operators. The work is further enlarged by introduction of new details of treatment, new statistical tables, improvements in instruments, and other matters into which we cannot enter through want of space; these details, however, have mostly been already discussed elsewhere by the author, and are collected and epitomised in this edition. Considering the vast amount of medical literature devoted of late solely to the subject of ovariotomy, it is satisfactory to find that most new opinions and facts worth recording, at least as regards the clinical aspects of ovariotomy, are here congregated in the pages of a single octavo volume. Lastly, if the subject of ovariotomy, as a speciality, has been lowered in the eyes of our profession by the occasional display of bitter disagreement among those who devote themselves to the practice of that operation, let all remember how trivial are the grounds of most worldly disputes, whilst, on the other hand, in this particular subject of discussion, the fight has had for its noble aim the diminution of mortality, and the settling of the true value of any system of treatment that may bring about that consummation so devoutly to be wished. The new edition of Mr. Spencer Wells's work is an epitome of the history of ovarian and uterine surgery in its higher flights; and in reading in his pages the record of the establishment and perfection of operations for the removal of ovarian and uterine tumours, we are studying the record of labour that has been the cause of strife, but a strife that, in its results, has proved to be of incalculable benefit to humanity at large.

No name stands out more prominently in the contemporary history of surgery than that of the author of this work, and each edition only adds to the claims which he has already established to be regarded as one of the most fruitful labourers in the cause of science and humanity.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 8TH, 1882.

INDIAN GAOLS.

THE mortality in Indian gaols was, in a characteristically worded question in the House of Commons, again brought under the notice of Parliament, by Mr. O'Donnell. "Mr. O'Donnell asked what punishments, if any, had been inflicted upon the authorities responsible for the excessive mortality in the gaols of Bengal, through deficient diet, during the year 1879 and part of the year 1880."

It will be seen that the question assumes that the excessive mortality was due to deficient diet. It appears that an impression to this effect prevailed in official circles in India—among others, the Lieutenant-Governor of Bengal and the Inspector-General of Gaols there seem to have been of this opinion. Subsequent inquiries, however, tend to show that the connection between the mortality and the reduced diet has been too hastily assumed.

The following table from the *Indian Medical Gazette*, based on Dr. Cunningham's Sanitary Report for 1880, gives a comparative view of the rates of mortality per thousand in the gaols of India during the four years 1877-80.

Bengal	1877	1878	1879	1880
Madras	1877	1878	1879	1880
India	1877	1878	1879	1880

It will be seen from the above that the mortality was general throughout all the prisons in India, pointing to a cause or causes operating over an enormous area. Dr. Cunningham, in the report referred to, under the head of general causes tending to produce high death-rates in Indian gaols, thus expresses himself: "There can be no question that the excessive death-rate in Indian gaols is a reproach; but it is only by studying all the facts, and not those under one head alone, that the truth can be ascertained, and a remedy applied. There can be no doubt that the results are influenced to a great extent by general causes, which are but little known in European countries. To begin with, the gaol population is a very fluctuating population, which rises and falls with the price of grain. As prices range high, it increases; as prices fall, the gaols become comparatively empty. The strength of the prisoners in a province, in other words, is an index of distress among the population; and the gaol of every district to a large extent fulfils the functions of a poor-house as well as of a gaol. Under these circumstances, it is not surprising that very many of the new admissions into gaol are in bad health, suffering in different degrees from the effects of privation. This is more or less the case every year. In years when prices are unusually high, and still more when they verge on famine, these conditions become intensified. This country has lately been passing through such a period, which has more or less affected every part of it. There can be no doubt, moreover, that at the same time epidemic influences have been at work, which have produced most unhealthy years, and these influences have been most wide-spread. The normal death-rate of the people of India has yet to be ascertained with accuracy, but there is enough evidence to show two facts very clearly: first, that, on an average, it greatly exceeds the European

standard; and, secondly, that it fluctuates from year to year in a manner altogether unknown in European countries."

The careful inquiries of Drs. Cornish and David Cunningham, at the time of the famine which prevailed extensively over Southern and Western India, established the fact that, when the natives have been exposed to real privation, even for a limited time, no diet, however nutritious, can restore them to health. Fatty degeneration of the lacteals takes place, and nutrition is impossible. When we consider this in relation with the increase of mortality in gaols, during and immediately after famines, we arrive at one fact which goes no inconsiderable way in explanation of it.

At first, as we have seen, an impression prevailed, even in well-informed quarters, that a deficient diet was the chief factor. Nothing in prison administration is better known than this, that, if to the other depressing causes of imprisonment an insufficient diet be added, an immediate increase in sickness and mortality is the result. But was the diet insufficient? One thing is evident from Dr. Cunningham's report, viz.: "If the diet had been the cause, or even the main cause, of the increased sickness and mortality, it would naturally be expected that these would gradually rise as the diet continued to be used, and be at their maximum when its baneful effects have had the longest time to develop themselves. But this was not the experience of the Bengal gaols during the period under discussion." It is also a notable fact that 61 per cent. of the total mortality occurred in three gaols, viz., Rupar, Lahore, and Rawul Pindi. Was the cause of mortality the same in each? It does not appear so. Respiratory diseases and bowel-complaints were common to all three; but Dr. Cunningham shows that, whereas in Rupar 76 deaths were due to ulcers, Lahore had only one, and Rawul Pindi two, from that cause. Rawul Pindi had 111 deaths from intermittent fever, Lahore 41, and Rupar only three. Then again, although the death-rate in the Rawul Pindi gaol was excessive, the nutritive value of the diet in use was in excess of that allowed to prisoners in England.

The Report of the Sanitary Commissioner with the Government of India contains a most elaborate memorandum on the Dietaries of Labouring Prisoners in Indian Gaols, by Surgeon-Major J. R. Lewis, which will repay careful perusal; we have only space for Dr. Lewis's concluding remarks. "So far as our knowledge of these matters permits of an opinion being formed, it would seem that the dietaries which have been in force in India during recent years have not been insufficient." And Dr. Lewis goes so far as to say "that native labouring prisoners in every province in India have been, weight for weight, better fed than either convict or other prisoners in England". And this significant fact is added as the result of his careful inquiry, "that the lowest diet-scales are by no means associated with the most unfavourable health-returns, but that, on the contrary, in those instances where inquiry has been especially made, the results in this respect were even better than those associated with the most liberal diet-scales." The difficulty of feeding large bodies of men on a hard and fast scale of diet is very great, however necessary and even unavoidable in dealing with the population of prisons. The diet, in round numbers, according to Dr. Lewis, should consist of the following proportions of water-free principles: albuminates 3 oz., carbo-hydrates 18 to 19 oz., and fats 1 to 1½ oz.; or, expressed in terms of nitrogen and carbon, 207 grains of the former, and from 4,500 to nearly 5,000 grains of the latter, with half an ounce of common salt. This diet, if properly cooked, ought, in Dr. Lewis's opinion, to maintain native prisoners of an average weight of 110 lbs. in good health, and at the same time be compatible with the exaction of a fair amount of labour.

We cannot conclude, without adverting to the fact that Dr. Cunningham urges on superintendents of gaols the utmost vigilance to see that the prisoners are not defrauded by the native officials of a portion of their daily food; and from the earnestness with which this is done, we suspect Dr. Cunningham thinks that prisoners in, at least, some gaols have suffered in this way.

THE MEDICAL OFFICERS IN THE COLONY OF BRITISH GUIANA.

ON more than one occasion, we have invited the attention of the profession to the grievances of our brethren serving in the above colony. A letter has recently appeared in one of the colonial newspapers, from the pen of Mr. J. Goodridge Anderson, written from London apparently after a visit to Demerara; and as this gentleman is not a member of the medical profession, but writes, as he says himself, "as a looker on", his testimony, bearing out as it does all that has been alleged as to the ill treatment of its medical officers by the Government of British Guiana, is most important; and we feel it to be our duty to make what this gentleman has written known, for the information and guidance of those who may be looking to colonial service as a career. "In 1873, twenty-five medical men were appointed to as many districts; and during the nine years that have elapsed, thirty-nine more have entered the service to supply the vacancies that have occurred. During the same period, twenty-one have died, eight have resigned, five been dismissed, one returned by the same steamer that brought him out, one retired, and one was superseded. The remaining two are not accounted for. This gives a year and a half as the average time a man remains in the service, and the appalling death-rate of 93.3 per thousand."

Mr. Anderson traces the above most unsatisfactory state of affairs to "*mala fides* and bad behaviour generally" of the Government towards its medical *employés*. Mr. Anderson gives chapter and verse for the accusation he brings against the Government of saving at the expense of each of seventeen medical men, and that by a flagrant breach of the engagement made with its medical officers, from two to five hundred pounds annually. In addition to this, what Mr. Anderson calls "doctor-baiting" appears to be a favourite amusement of the officials in that colony.

Mr. Anderson sums up his very temperate letter in the following significant terms, which intending candidates for medical service in British Guiana should read, mark, learn, and inwardly digest, before committing themselves to a career under the Government of that colony. "No one class of a community can be ill used without the whole of the body politic being sooner or later injuriously affected; and the action of the Government towards its medical officers must shortly result in the impossibility of its obtaining the necessary supply of medical service. Already this supply is so fast diminishing that, in several instances lately, men without legal rights to practise in a British colony have been taken into the service, and the fact that three deaths—two of them suicides—have occurred during the past month, will tend to make unemployed medical men very careful how they place themselves at the mercy of the Government of British Guiana."

RAGS AND INFECTIOUS DISEASE.

DR. FRANKLIN PARSONS has presented to the Local Government Board a lucid and interesting report on the whole question of the spread of infectious diseases by means of rags, and the measures to be adopted to prevent such outbreaks for the future. In an article on the subject which appeared in the JOURNAL on July 3rd, 1880 (vol. ii, 1880, p. 21), we discussed at some length the chances of disease (and especially small-pox) arising through the handling of infected rags; and we do not find that Dr. Parsons has much to add, except by way of expansion, to what we then said.

In the outbreak of small-pox at the well known paper-works of Messrs. Joynson and Sons, at St. Mary Cray, which was the primary occasion for Dr. Parsons's inquiry, it was originally suspected that the disease had been imported through dirty foreign rags coming from Trieste. Dr. Parsons shows cause against this view, and seems more inclined to regard the source of infection as London, where small-pox was then very prevalent. As regards the mode of reception of the infection, Dr. Parsons thinks it probable that it is communicated by the inhalation of infectious dust, rather than by the mere contact of the hands with the dry rags. Dry small-pox matter is little likely to be

absorbed by the uninjured skin; but there can be no doubt that, deposited in the form of dust upon the moist mucous membrane of the throat and air-passages, and inhaled into the lungs or swallowed with the saliva, it is under conditions most favourable for absorption.

On the general question, Dr. Parsons gives a long list of foreign authorities who have admitted the possibility of persons engaged in the rag-trade contracting infection from rags. Several outbreaks of this sort have been recognised in our own country; and if infectious diseases are not more frequently conveyed by rags, it is probably due to the fact that hospitals in which infectious cases are treated do not sell their infected rags, and in private households it is only among the ignorant and careless that such articles would be allowed to pass into the market, since to do so is now a breach of the Public Health Act. Before the rags reach the paper-mills, they have been sorted two or three times, and exposed to the atmosphere, and have thus lost some of their deleterious qualities. The preliminary dusting which rags undergo in some mills must tend to deprive them of any infection which they may have retained, unless the dust shaken out of the rags be allowed to diffuse itself in the air of the workroom, in which case it would favour the spread of disease. It is only during the preliminary stages of paper-making that danger can exist. The boiling and chemical treatment to which the rags after cutting are subjected render them, in the later stages of manufacture, quite innocuous. Moreover, the rags are usually kept a considerable time in stock before use, so that many months must commonly elapse, especially in the case of foreign rags, between their being cast off and their coming into the cutters' hands; and, judging from the analogy of vaccinia, any infective matter which they may contain may be expected to lose activity by keeping. Only one class of paper-mills incur much risk of infection being introduced into them by rags. These are the mills where the finer classes of paper, as writing-paper, are manufactured. Brown paper and other coarse papers are made of old ropes, bagging, and other materials not likely to be infected. In any case, the proportion of infected to uninfected rags must be very small; and seeing that the majority of rag-workers are probably more or less efficiently protected against small-pox by vaccination, and against measles and scarlet fever by previous attacks in childhood, it will be comparatively rarely that an infected rag comes into the hands of a susceptible person. Even should it do so, mere contact with the unbroken skin would probably not convey the disease.

It is not, however, only the workers who come into contact with rags in paper-mills who are exposed to infection. Persons engaged in the preliminary sortings which rags undergo at the hands of collectors and rag-merchants (some of whom employ large numbers of hands) may also suffer. Indeed, it might be supposed that such persons, having to do with the rags nearer to the source, would be exposed to more risks than the cutters in paper-mills. That they do not suffer more, is probably due to the manipulation which the rags undergo in their hands being less than that by the cutters.

Dr. Parsons discusses in much detail, and with considerable breadth of view, the precautions that are possible or desirable to prevent the spread of disease by rags; and on a general consideration of all the complex circumstances of the case, he arrives at the following conclusions. 1. Cases of infection by means of rags do occasionally occur, although, comparatively speaking, not very frequently. 2. Small-pox is the disease most likely to be thus conveyed. 3. All rag-workers should be vaccinated and revaccinated. 4. Dust should be avoided. The preliminary dusting of the rags before sorting is to be recommended, but the dust should not be allowed to contaminate the air of the workroom. 5. Certain measures of disinfection are available, among which exposure to air, fumigation with sulphurous acid, and exposure to hot air or high pressure steam, may be mentioned, each of which has its advantages and drawbacks under certain circumstances. 6. In the absence of means by which it may be known whether or not rags have been infected, the cases in which disinfection would appear specially desirable are (a) rags from places where

epidemics are known to exist; (b) rags in a filthy state; and perhaps (c) foreign rags, especially if coming within the two previous categories. 7. Under existing circumstances, it is not advisable that any obligation as to disinfection of rags, other than that already imposed by Section 126 of the Public Health Act, 1875, should be imposed upon persons engaged in the rag-trade.

PRINCESS MARY, DUCHESS OF TECK, has consented to open the new wards at Richmond Hospital, on Saturday, July 22nd.

CAPETOWN has been recently visited by a serious outbreak of small-pox. The infection is believed to have spread from a spot where some passengers from England were quarantined.

DR. G. W. GRABHAM, medical superintendent of the Earlswood Idiot Asylum, has been appointed Inspector-General of Lunatic Asylums in New Zealand.

KING'S College Hospital will be closed from July 8th to September 30th, both to in-patients and to out-patients, in order to permit of certain structural alterations.

PROFESSOR LISTER has consented to deliver an address at the annual general meeting of the University College Medical Society in October next.

IN London, last week, 2,470 births and 1,303 deaths were registered. The annual death-rate from all causes, which had been equal to 17.9 and 18.6 per 1,000 in the two preceding weeks, declined to 17.5.

ATTENTION is drawn by the Registrar-General to the fact that last week was the first since November 1879 in which no fatal case of small-pox was registered in London. The average weekly number of deaths from this disease in the corresponding week of the last ten years was twenty-two.

PRINCESS FREDERICA'S Convalescent Home, for married women after their confinements, instituted by the royal lady whose name it bears, is now ready for patients; Corfe House, East Molesey, having been taken for a time for this purpose, until sufficient money can be raised to build a permanent home.

A VERY practical expression of loyalty and sympathy has been given by the ladies of Blackheath. Upon hearing of the recent attempt on the life of the Queen, a subscription was set on foot, and a large sum was realised, which will henceforth be known as the Victoria Benefit Fund. The interest will be applied by trustees to provide for the admission of free patients to the Blackheath Cottage Hospital. The Queen has been informed of this thank-offering through Sir Henry Ponsonby, and Her Majesty has expressed her extreme gratification at the kind and loyal feeling of the ladies of Blackheath.

Two persons were this week sentenced to five years' penal servitude at the Central Criminal Court, for a fraud which is far from being an uncommon one. They had advertised a medical book by "Sir John Fleming, M.D.," which vaunted the marvellous effects of hyperphosphate in the cure of all diseases. Fictitious notices from medical journals were inserted in these advertisements; and applicants for the book were requested to write to "Phosphate Hall," Sidmouth Street, W.C. It was shown at the trial that there was no such book in existence, that there was no such person as "Sir John Fleming, M.D.," and that "Phosphate Hall" was a third-floor back room. The fact that, after recent exposures of similar frauds, swindlers of this class should find the wholesale insertion of their advertisements profitable, is alleged to be due to the circumstance that their chief hunting-grounds

are the rural districts, and they can always find plenty of victims among the simple folk who rarely read anything else than the columns of their own local journals. But wisdom is not monopolised by the metropolis, and there are dupes enough among the three millions of London.

WANT of space prevents us from giving full details of the conference of medical teachers with the Committee of the Council of the Royal College of Surgeons, appointed to prepare the resolution in favour of elementary examinations in anatomy and physiology for students terminating their first year of professional study, the examinations to be held by the teachers and lecturers at the medical schools. The conference held on June 26th was largely attended, and the above proposal was almost unanimously accepted as worthy of adoption. It was resolved that these local examinations should be both written and oral, and that the definition of "elementary anatomy and physiology" should be left to the discretion of the teachers, as well as the precise time at which the examination was to be held. It was considered advisable that no student should be admitted as a candidate for the Primary, or Anatomical and Physiological Examination at the College of Surgeons, until six months after passing the proposed local examination. The Association has, some time since, recommended a test for students commencing their second year; the last occasion on which we alluded to this recommendation was in a leader last April (page 626), where the kindred topic of the compulsory two years' interval between the Primary and Pass Examinations at the College was considered.

THE LATE SIR JOHN ROSE CORMACK.

WE are pleased to hear that a contribution of £5 5s. od., towards the funds being raised in Paris on behalf of the family of the late Sir J. Rose Cormack has been received from Dr. Buchanan, of Glasgow. We also hear that Sir Richard Wallace, in addition to subscribing £100 to the fund, has consented to contribute a further annual sum of £100 for two years, to enable the son of the late Sir John Rose Cormack to complete his medical studies. One of the Misses Cormack will, we understand, follow the profession of a nurse.

THE PARKES MUSEUM OF HYGIENE.

THE Parkes Museum was formally incorporated "under licence of the Board of Trade" on June 28th. On the following day, the first meeting of the council of the newly incorporated body was held, under the presidency of Captain Douglas Galton, F.R.S. Mr. Berkeley Hill was elected treasurer, and Mr. Mark H. Judge secretary. The association will consist of life members and annual members, and the council has power to elect honorary members. The alteration in the status of the museum, necessitated by its growing importance, is one in externals rather than in essentials; and it is hoped that measures now in contemplation may extend the usefulness of the museum, so that it may become a centre for instruction alike to the medical profession and the practical engineer.

DARWIN MEMORIAL.

At a meeting of the Executive Committee of the Darwin Memorial Fund, held on June 30th, at the Royal Society's Rooms, Burlington House, it was announced that the total subscriptions already promised or received, amounted to £2,487 13s. od. It was decided that the memorial should take the form of a marble statue; and a sub-committee was appointed to make the necessary arrangements. It was agreed to ask the Trustees of the British Museum for permission to place the statue in the large hall of the British Museum (Natural History), South Kensington. The sub-committee consists of the following:—Mr. W. Bowdler, Sir J. D. Hooker, Professor Huxley, Mr. C. T. Newton, and Sir F. Pollock, with the Chairman, Mr. W. Spottiswoode, President of the Royal Society, the Treasurer, Mr. John Evans, Treasurer to the Royal Society, and the Honorary Secretaries, Professor Bonney and Mr. P. Edward Dove.

MILITARY SANITARY PRIMER.

THE offer of a prize of £100 by the Government of India for the best Manual of Hygiene for soldiers, did not produce any work that was regarded as suitable, and the prize was, therefore, not awarded. The following abstract of a report by the committee appointed to adjudicate the prize has been published in the *Gazette of India* for the information of the competitors. "We have examined the 37 manuals submitted for competition, and are agreed that no one of them is, in all respects, suitable for the purpose for which a manual is required, as prescribed in the notification offering the prize. They all, more or less, contain theories regarding the causation of disease which are doubtful, and some of them are directly at variance with Indian experience. Their general tendency, moreover, is to exaggerate the dangers to health from local and climatic causes, and so to instil an unreasonable dread of Indian service."

MILK AS AN AGENT IN SPREADING FEVER.

IN his recent fortnightly report of the health of Glasgow, Dr. Russell gives a very striking instance of the way in which fever is spread by means of the neglect of due precautions in safeguarding the milk supply of towns. He shows that the number of deaths from fever during the fortnight was nine, of which eight were from enteric and one from typhus. Of the eight deaths from enteric fever five were registered in the western district, and every one of these occurred within a certain area, and the persons were supplied with milk from the same dairy. In the preceding fortnight there was only one death from enteric fever in the western district, the person being also a consumer of this milk, so that in four weeks there have been six deaths registered in the whole district, and in every instance the person had been supplied with milk from the same source. Taking next the number of cases of enteric fever registered, it appears that since May 15th there have been fifty-nine cases registered in the whole extent of the western district, and of these fifty were consumers of one milk; and, in the seven contiguous streets in which these infected persons resided, there has not been a single case discovered, after a diligent house-to-house visitation among the consumers of milk from other sources. Nearly all the affected cases sickened in the third week of May, and none since June 1st, so that the epidemic is clearly at an end, but its area has been most distinctly marked out in relation to the milk supply.

WORK AT THE MORGUE.

THE Paris Morgue received 675 dead bodies between 1869 and 1879. Practical demonstrations were organised there in 1834. In 1877, M. Brouardel, its Medical Inspector, and Professor of Medical Jurisprudence at the Paris Faculty of Medicine, commenced giving lectures at the Morgue on forensic medicine. These are, at the present day, delivered three times a week during the scholastic terms. M. Brouardel has visited, both in France and in other countries, establishments similar in character to the Morgue—that is to say, mortuaries utilised for making researches and furnishing instruction in forensic medicine. He has published in the *Annales d'Hygiène Publique et de Médecine Légale* several interesting reports on this subject, and states that, in order to render the organisation of the Morgue efficacious in furthering the ends of justice and providing sound teaching in medical jurisprudence, it is necessary that the bodies should be preserved intact; that there be rooms set apart where microscopical examinations, chemical analyses, and physiological experiments could be made. A gallery for permanent anatomical preparations and casts, in classified order, is also recommended. M. Brouardel likewise advocates the construction of a lecture-theatre and a special workroom for the professor. A collection of poisons and books on anatomy and medical jurisprudence should be kept on the premises. Dr. Gavinel, who has recently published a work on the Morgue, strenuously urges that a freezing-machine should be placed at the institution, maintaining a temperature of 15° above to 20° below zero Cent. (= +5° to -4° Fahr.) in one compartment, and in another a temperature varying between 4° below and 1°

above zero Cent. (=24.8 and 33.8° Fahr.). A Carré's machine will soon be in working order at the Morgue.

POISONOUS EFFECTS OF WHITE LEAD.

A REPORT by Mr. Alexander Redgrave, C.B., Her Majesty's Chief Inspector of Factories, upon the precautions which can be enforced under the Factory Act, and as to the need of further powers for the protection of persons employed in white lead works, has just been published as a Parliamentary paper. Mr. Redgrave, after referring to previous legislation on the subject of the prohibition of the employment of children and young persons in the occupations of silvering mirrors, the manufacture of white lead, and other injurious processes, describes in detail the processes carried on in white lead works. From this, it appears that the injuries to health arise from the external contact with the skin of the white lead; and Mr. Redgrave is of opinion that much may be done to lessen the dangers of the manufacture of the pigment, in the shape of frequent ablutions, the wearing of special clothes, caps, boots, respirators, and the supply of acid drinks, which should be insisted upon in the most stringent manner by all the manufacturers of white lead; and the infringement of which should be visited by dismissal. Something further may be hoped by the gradual introduction of zinc and other compounds into industrial use, to replace these poisonous lead products. There are now many forms of innocuous zinc and baryta paints and pigments which effectively replace white lead in what is, we believe, its largest use.

THE ISLE OF WIGHT.

A LETTER, which we publish in another column, from Mr. Barrow, will serve to remind a large number of the members of our Association of the agreeable impressions which they received concerning the beauty and health resources of the Isle of Wight, on the occasion of the last annual meeting. The figures which Mr. Barrow records are in themselves sufficiently remarkable to need little comment. Medical influence may be most effectively used in doing justice to the claims of the various health-resorts of these islands, in respect to their climatic characters, the care with which the sanitary arrangements are planned and carried out by the medical authorities, and the extent to which the natural resources of these resorts are backed by intelligent sanitary administration. The medical profession have long been alive to these considerations, but unfortunately it is not in every place that public opinion has yet risen to the level of the exigencies of science, and the fair requirements of those who seek health and recreation by the sea. The excellent show of figures put forward is most satisfactory, and it may be hoped that the whole island will enjoy an increasing popularity—as no doubt will be the fact—in proportion to the extent to which the efforts of the sanitary advisers of the local bodies maintain a high standard of sanitation, and are continuously supported by public opinion and by municipal liberality. The lesson is one which is also applicable in other localities.

THE SALE OF POISONS.

IN the current number of *Macmillan*, Dr. Hubbard calls attention to the subject of the sale of poisons, and the facilities which the present exemption in respect to patent medicines give to the sale of poisons under cover of such patents. It is well known that many of these quack combinations contain potent poisons; and patent medicine duty was paid by stamps during 1880 upon nearly seven millions of medical packages. Dr. Hubbard relates, as a piece of evidence of the facilities with which poisons may be purchased, that he made a personal expedition, accompanied by a child under twelve years of age, into a region of shops. "I sent her alone into oilmen's, grocers', linen-drappers', and other stores where intimations existed that 'patent medicines' were sold. Without hesitation or inquiry of any kind, this child was supplied with any quantity of chloral or chlorodyne, and other articles she asked for, and in a short time she returned home largely supplied with various poisonous drugs and compounds. Had

we extended our journey onwards with the same object, this little child could have procured sufficient poisons to have converted any parish in London into a 'city of the dead'! This facility for dealing with poisonous drugs and compounds under the cover of a government stamp, has many times been pointed out to legal authorities as a source of danger, but one which has not as yet been removed.

THE HEALTH OF UMBALLA.

IN our issue of May 13th, some remarks were made on the health arrangements of the station of Umballa, founded, as we had the best reason to believe, on entirely trustworthy information. A communication has just reached us from a medical officer of position at that station, informing us that only eight cases of enteric fever occurred at Umballa in the year ending May 31st; that there is nearly an entire absence of diarrhoea and dysentery; that malarious fevers prevail there in the months of August, September, and October, on the drying up of the rains. In the month of May, the 9th Lancers have had as low as $1\frac{1}{2}$ per cent. of sick, including all diseases; the Royal Horse Artillery 3 per cent.; and the Leinster regiment 5 per cent. We are also informed by the same authority that the night-soil is removed from the station in covered carts a distance of over a mile from the cantonment, and cast into trenches, which are filled up with earth; in time, the ground is ploughed and crops are grown, and that no bad smell proceeds from the ground. The water for the station is brought from a distance of nearly eight miles in a closed aqueduct, and discharged into closed tanks, from which the only means of exit is through brass taps. We are much obliged to our correspondent for this information, which is very satisfactory. It is needless to add, that nothing was further from our desire than to be unjust to the sanitary officers of Umballa, or elsewhere; we give publicity to this contradiction with pleasure. It remains for those who published the information on which our remarks were founded, to give such explanations as they can.

EFFICACY OF VACCINATION.

ANOTHER remarkable instance of the efficacy of vaccination as a prophylactic of small-pox is related by Mr. Armistead, in his report on the Newmarket Rural District. An alarming outbreak of small-pox came to the notice of the health-officer, who found a man covered with the eruption of confluent small-pox. As this man, together with two brothers who had slept in the same bed, had been in at least two cottages, a serious epidemic was feared. Unfortunately, the district in which the outbreak occurred, possesses no hospital accommodation for isolating cases of infectious disease. Immediate re-vaccination was urged upon the inhabitants, but with very partial success. About the middle of June one the men who had been most active in opposing all the efforts to stamp out the outbreak, took the disease and died of confluent small-pox. From this date Mr. Armistead's advice began to be followed, and several asked to be re-vaccinated who had previously disbelieved in its protective power. In three cases the small-pox was arrested in its incipient stage by revaccination, so that the initiatory fever was followed by an abortive pox, and these were the last cases which occurred. There were in all sixteen cases, of which five were confluent, one semi-confluent, and eleven modified by vaccination. Of the five cases of confluent small-pox one, aged 24 years, had never been vaccinated, and only one of the other four cases had any visible signs of vaccination; but two of them had been vaccinated within two or three days of the appearance of the small-pox eruption, too late, of course, to be of any service in arresting the infection. Of these five cases three died, and for days the recovery of the other two was extremely doubtful. The case of semi-confluent small-pox was a man, aged 57, who had been inoculated when young; he recovered. Of the eleven cases in which the disease occurred in a very modified form, eight had marks of vaccination visible, and in the other three the progress of the disease was arrested by vaccination after the person had become infected with small-pox. Two of these deserve special mention.—(1) An unvacci-

nated child, aged three months, who had been exposed to the strong contagion of confluent small-pox, had a few modified small-pox vesicles, concurrent with the vaccination vesicles. (2) A married woman, who nursed her husband in confluent small-pox, and slept with him, had initiatory fever and other symptoms of small-pox, with a few umbilicated vesicles on the face, which aborted as the vesicles of revaccination matured. Mr. Armistead adds, as a curious coincidence, that very few of the males who went to work were revaccinated in comparison with the females who stayed at home; and twice as many males as females took small-pox, and all the worst and all the fatal cases were amongst males.

THE CONVICT MEDICAL SERVICE.

A CASE of sudden death at the Birmingham Borough Gaol elicited some remarks from the coroner, Mr. Hawkes (as reported in the *Birmingham Daily Post*), with reference to the order said to have been issued by the Home Secretary, which appeared in all the papers, directing coroners to employ medical men other than prison surgeons to make *post mortem* examinations and give evidence on inquests held in prisons. The case was that of a man who died within a few minutes of having been at work on the treadmill, having been previously certified by the surgeon fit for work, and not having himself complained of ill health or inability to perform his task. The coroner, acting on his own discretion, directed an independent medical man to make the *post mortem* examination, informing the jury that he did so in accordance with his usual custom, and not in obedience to any order from the Home Secretary, who, he asserted, had no power to give any order or direct the coroner in any manner as to the performance of his duties. This is very satisfactory so far as the coroner is concerned; but the motives which induce Mr. Hawkes to follow such a practice, and those which influence the Home Secretary to—if he have not given an order—recommend such a proceeding, are equally unsatisfactory to the medical officer, and tend to reflect on his character. Of course, instances may arise where the conduct or practice of a medical man are open to question, when he must accept the situation and be prepared to defend himself; but when no suspicion of neglect or malpractice exists, it is manifestly unjust to act as if he were open to such a charge. A question much more to the purpose is, whether it is right to inflict any punishment which possibly may result in immediate death, more especially a purposeless antiquated punishment like the treadmill. Medical men can understand, though it might be difficult to convince the public, that there are many morbid conditions which may exist without suspicion, and yet which, under certain circumstances, may prove rapidly fatal. The case in point is one—hypertrophy with dilatation. A man with such a heart, when at perfect rest, need not necessarily have a symptom to show that his life was precarious. The same may be said of some aneurysms, arterial and venous. Fatty heart is another obscure disease. A thrombus has been known to lie harmless until some sudden impulse drove it into mischief. And yet, withal, any of these affections may be associated with a generally healthy appearance. This case should prove another warning to prison surgeons, and impress on them their enormous responsibility; and it might also lead those in authority to consider as to whether some mode of punishment to evildoers could not be invented, which is not prejudicial to health or dangerous to life.

HEALTH OF BRIGHTON.

THE following statement of the facts and figures are derived from authentic sources. In the autumn of the past year an unusual amount of typhoid fever occurred, principally in the north part of the town. The disease was clearly proved to have been propagated through the medium of milk; the cause having been found out, further spreading of the disease was at once prevented by the sanitary measures that were taken. For the quarter ending 31st of March last the death-rate of Brighton was unusually high, owing mainly to epidemics of measles and whooping-cough, and to a large number of deaths from diseases of the respiratory organs; in

addition there were a large number of deaths of persons over sixty years of age, out of the average rate for the quarter of 29.2 per 1,000. The deaths over sixty gave a rate of 6.4. The deaths from diseases of the respiratory organs gave a rate of 8.3, and those from measles and whooping-cough 6.1—together 14.4, thus accounting for half the total of deaths from the last two classes of disease. The deaths from the seven principal zymotic diseases during the quarter were made up of 84 from measles and 81 from whooping-cough, making together 165, or a rate of 6.1 per 1,000; deducting these from the total of 224, there is a remainder of 59, a rate of only 2.2 per 1,000. Thus measles and whooping-cough gave 73 per cent. of the total deaths from the seven principal zymotic diseases. The total annual death-rate is therefore thus made up:—

Measles and whooping-cough	...	...	...	...	6.1
Diseases of respiratory organs	...	...	...	...	8.3
From all other causes	...	...	...	...	14.8
					29.2

Out of the 224 deaths from the seven principal zymotic diseases, nearly three-fourths, or 72.7 per cent, occurred in the north district among the children of the poor. The Sussex County Hospital is included in this district. During the quarter ending March 31st there were only 3 deaths from typhoid fever, 2 from diphtheria, and 2 from diarrhoea, which, taken with the statistics now given, clearly proves that the unusually high death-rate was not due to bad or inefficient drainage. During six weeks ending June 24th the average death-rate was 19.6. In the week ending June 24th there were only 2 deaths from measles, 1 from whooping-cough, and 1 from scarlet fever, and no deaths occurred either from typhoid fever, diphtheria, or diarrhoea; there have been no deaths from small-pox during the present quarter ending June 30th. It may be stated that the general annual death-rates in Brighton for the last 6 years were respectively 19.6, 18.8, 21.3, 19.1, 19.8, 19.0 per 1,000 of the population, which, at the middle of the present year, is calculated at 109, 595 for the municipal borough. Of the 20 large towns Brighton had the lowest annual death-rate in 1876; the lowest but one in 1877; competes very closely with Leicester and Nottingham in 1878 for second place; was second in 1879; second in 1880, and had the highest best place in the past year 1881. The annual rates per 1,000 from the seven principal zymotic diseases for the above-mentioned 6 years were respectively 2.5, 1.9, 2.3, 1.4, 2.8, 2.2. Sir Joseph Bazalgette, C.B., C.E., the eminent engineer, has just sent in an exhaustive report on the drainage of Brighton, and the following is the concluding paragraph in that report:—"The branch sewers generally are too small to have enabled me to enter and inspect them, but having regard to their superior inclinations and the condition of the larger sewers which I examined, and which had not such rapid falls, and from the observations and inquiries I have made, extending over several days, I am of opinion that, with some minor exceptions, to which I have already referred, and for which I have suggested various remedies, the general condition of the sewers of Brighton is satisfactory, and there are no just grounds for assuming it to be an unhealthy place; on the contrary, I believe it still deserves the high reputation it has always maintained as a desirable place of resort for those who seek the enjoyment of pure and invigorating air."

THE MUSEUM OF THE ROYAL COLLEGE OF SURGEONS.

THE yearly exhibition of specimens added to the museum of the College of Surgeons was held in the College Committee Room during the past week. From the annual report of the Conservator, Professor Flower, we learn that the new catalogue, upon which Sir James Paget, Dr. Goodhart, and Mr. Doran have been long engaged, has made great progress during the year. The whole of the manuscript, including revised descriptions of nearly 5,000 specimens, of which 1,500 have been added since the publication of the last edition, is completed, and at the meeting of the Council in April last it was ordered to be printed. The first volume, containing a description of the preparations illustrating general pathology, is already in type, and will be ready for

distribution in a few weeks. The second part of the new catalogue, containing the bones and teeth of the animals of the class mammalia, other than man, is nearly complete, and was ordered to be printed at the meeting of Council in January. The portion which contains the orders primates and carnivora is now in the press; and it may be expected that the volume will be issued before the next annual report. The great number of references required to be examined and verified, in order to ensure accuracy of nomenclature (one of the main objects aimed at in this catalogue), makes the progress of the work somewhat slow. The collection of human skeletons and skulls continues to receive large additions. A series of upwards of a hundred skulls from Egypt, mostly from mummies, has been presented by Captain R. F. Burton. Although it is, unfortunately, not possible to ascertain the precise date of any one of these skulls, many valuable indications may be gained from them, relating to the general physical characters of the people to whom they belonged. The appeal made a few years ago by Sir Joseph Fayrer to the medical officers of the army serving in India, to collect skeletons and crania of various oriental races, has been liberally responded to. Among the contributors this year are:—Surgeon-Major S. Coull Mackenzie, M.D., of the Campbell Hospital, Calcutta (who has forwarded altogether eight perfect skeletons to the museum); Deputy Surgeon-General John Shortt, M.D., Madras; Surgeon-Major G. Bidie, M.B., Superintendent of the Government Central Museum, Madras; Mr. Ondaatje, Colonial Surgeon, Ceylon; and Mr. K. S. Nariman, Civil Surgeon, Dohad. The collection of surgical instruments has been increased by the donation from Mr. Charles Hawkins of a series of about twenty-four instruments, which formerly belonged to the late Sir Benjamin Brodie, exhibiting progressive modifications in the methods of removing calculi from the bladder without the use of the knife. Dr. Jamieson, of Shanghai, has also presented some curious trusses of native manufacture. The additions to the pathological series have been unusually large, exceeding one hundred specimens; nearly one quarter of these illustrate diseases of the female organs. Since the last annual exhibition we have already had the opportunity of announcing the lectures delivered by Mr. Eve, and Dr. Garson's demonstrations on comparative osteology. Lastly, it is very satisfactory to find that the number of visitors to the museum is constantly increasing. In the year 1881 as many as 11,284 signed the hall-porter's book. In 1861 the number was 3,669.

SCOTLAND.

SURGEON TO THE QUEEN IN SCOTLAND.

ONE of the vacancies caused by the lamented death of Professor Spence has been filled by the appointment of Dr. P. Heron Watson to be Surgeon in Ordinary to the Queen in Scotland. Dr. Watson has also succeeded Professor Spence as representative of the Royal College of Surgeons of Edinburgh in the General Medical Council.

ANDERSON'S COLLEGE, GLASGOW.

AT the annual meeting of the trustees of Anderson's College, Glasgow, held last week, it was reported that the negotiations between the College and the Royal Infirmary, with the view of amalgamating the two medical schools, were at present suspended, as it had not been possible as yet to find a basis of amalgamation that would be suitable or acceptable to the teachers of the two schools.

THE TUBERCULAR BACILLUS.

AT the meeting of the Glasgow and West of Scotland Branch on the 30th ultimo, Dr. Joseph Coats demonstrated to the members a preparation of sputum from a case of phthisis, in which the tubercular bacillus was well seen. The object was prepared by Ehrlich's method, and shown with Zeiss's one-eighteenth of an inch oil immersion-lens. The bacilli appeared as bright red threads, with beads in them from the formation of spores. Dr. Coats also showed the typhoid bacillus in a preparation from a mesenteric gland in typhoid fever.

CHARGE OF CULPABLE HOMICIDE AGAINST AN ASSISTANT.

A MEDICAL student named Samuel Walter Wright, who for some time acted as assistant to a medical man in Dumfries, was on Thursday committed for trial, it being alleged that he had caused to be administered to a woman an overdose of morphia when she was suffering from pain or cramp in the stomach, and from which overdose of morphia it is alleged she died within fourteen hours. The preliminary charge of culpable homicide was before Sheriff Hope on Thursday, when Wright pleaded "Not guilty", and was committed for trial.

CHILDREN'S HOSPITAL FOR DUNDEE.

A MOVEMENT is on foot in Dundee to make some special provision for the treatment of sick children, and recently a public meeting was held to consider the matter. There was a very general feeling that a special children's ward should be provided in the Dundee Royal Infirmary, the necessary funds being raised by public subscription. The cost of such a ward, it was thought, would be about £300 a year. A large and influential committee was appointed to carry out the object and co-operate with the directors of the Royal Infirmary.

MORISONIAN LECTURES, EDINBURGH.

THE third and fourth lectures of this course were delivered by Professor Hamilton on Friday and Tuesday. On Friday the lecture comprised: The Basal Ganglia and their Connections; the Peduncles of the Thalamus; the Inner and Outer Capsules; the Band of Vicq d'Azyr; the Lenticular Nucleus Loop; and a Consideration of the Functional Value of the Basal Ganglia in Man. In Tuesday's lecture, the Connections of the Motor and other Cortical Centres with Internal Portions of the Brain, and with the Medulla Oblongata and Spinal Cord were described, as well as Gratiolet's Optic Expansion and Meynert's Sensitive Tract. It will be seen from the foregoing how thoroughly the subject is being treated, and we trust that the lectures will be published, so as to afford those not able to attend them an opportunity of becoming acquainted with the more modern knowledge of the structure and functions of the various parts of the nervous system.

HEALTH OF GLASGOW.

THE medical officer's report for the fortnight ending June 24th shows that there were 470 deaths registered, giving a death-rate of 24 per 1,000 living. In the corresponding fortnight of last year, the mean temperature was higher, the rainfall somewhat less, and the death-rate almost exactly the same. The number of deaths from pulmonary disease was 156, being a death-rate of 8 per 1,000 living, and constituting 33 per cent. of the total deaths. The number of deaths from fever was 9, viz., 8 from enteric fever, and 1 from typhus. There were 29 deaths from the infectious diseases of children, viz., 21 from whooping-cough, and 8 from measles. Not a single death from scarlet fever was registered during the fortnight—a circumstance which has not occurred since August 1874.

THE CHAIR OF SURGERY IN EDINBURGH UNIVERSITY.

THE Court of Curators of Edinburgh University held a preliminary meeting last week to consider the vacancy in the Surgery Chair. The Curators agreed to hold a meeting in July, subsequent to July 10th, by which date all intending applicants are requested to send in their applications and testimonials. It is to be hoped that the election will be made at the proposed meeting before the close of the summer session. So far as can be learned, there are but four candidates, all of them at present in the Edinburgh School, namely, Messrs. Bell, Chiene, Duncan, and Heron Watson.

HEALTH OF EDINBURGH.

IT may be remembered that, some months ago, there was an outbreak of typhoid fever in the southern suburbs of Edinburgh, and, the attention of the sanitary authorities being directed to the matter, instructions were given as to purification of the Pow Burn. At a meeting of

the Public Health Committee of the Edinburgh Town Council, held on Tuesday, Dr. Littlejohn, the medical officer of health, submitted a map of the localities in which cases of typhoid fever had occurred in the southern districts during the last two months, amounting in all to 23 cases; with one exception, they were all at a considerable distance from the Pow Burn. It was resolved to continue the cleansing and disinfection of the Burn. It was also reported to the meeting that, during the past month, the deaths from measles (which was previously epidemic) numbered 11, as compared with 36 for the previous month; that deaths from all the zymotic diseases only numbered 27, and these consisted of—fever, 7; diphtheria, 2; scarlet fever, 7; and measles, 11. The intimation sent to the medical officer of health by practitioners in Edinburgh referred to 70 cases of fever, 13 of diphtheria, 153 of scarlet fever, and 209 of measles. The mortality for June was 18.49 per 1,000.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending June 24th, it appears that the death-rate in the eight principal towns during the week was 22.4 per 1,000 of estimated population. This rate is 2.8 above that for the corresponding week of last year, and 1.6 above that for the previous week of the present year. The lowest mortality was recorded in Leith, viz., 15.6 per 1,000; and the highest in Paisley, viz., 27.5 per 1,000. The mortality from the seven most familiar zymotic diseases was at the rate of 3.5 per 1,000, or 0.5 below the rate for the previous week. Whooping-cough was the most fatal epidemic in Glasgow and Edinburgh. Acute diseases of the chest caused 111 deaths, or 6 more than the number registered during the previous week. The mean temperature was 55.2°, being 5.7° above that of the week immediately preceding, but 1.2° below that of the corresponding week of last year.

CENTENARY OF THE LUNATIC ASYLUM, ETC., MONTROSE.

ON Thursday, June 29th, there was commemorated, at Montrose, the centenary of the Montrose Royal Lunatic Asylum, Infirmary, and Dispensary. The institution was founded in 1782 by Miss Susan Carnegie of Charleton, and has therefore entered now on the one hundred and first year of its usefulness. The commemoration took place at Sunnyside, in the new asylum buildings; and was attended by many gentlemen interested in the institution, who dined, and inspected the whole of the buildings and grounds. It was mentioned that the present asylum had cost £50,000; in addition to which there is also the valuable farm, acquired by the directors some years ago.

IRELAND.

THE census returns for the County of Fermanagh, now issued, show that the population in 1881 numbered 84,879, being a decrease of 8.5 per cent. on the previous returns.

WE record with regret the death of Dr. Alexander Filson of Portaferry, county Down, which took place on the 28th ultimo, at the comparatively early age of thirty-eight years. Dr. Filson was a doctor in medicine and master in surgery of the Queen's University in Ireland; and was a much esteemed and respected member of the profession.

FEVER IN QUERNSTOWN.

IN consequence of the very imperfect disinfecting of clothes and other articles, belonging to houses in Queenstown where patients suffering from typhus fever have been removed, the disease is spreading. Dr. Townsend brought the matter under the notice of the Town Commissioners last week; and it was resolved, on his suggestion, that the Commissioners should adopt the temporary expedient of taking the disinfecting of certain houses into their own control, for a week or so, until the disease was checked.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE annual election of Fellows into the Council of the College took place on Thursday, the 6th instant, when out of a constituency exceeding 1,200 Fellows, 246 recorded their votes, one being invalid. In the absence of Sir Erasmus Wilson, the President, Mr. Spencer Wells, the Senior Vice-President, occupied the chair. There were three vacancies to be filled by the retirement in rotation of Mr. John Marshall, Mr. Alfred Baker, and Mr. Henry Power. These three gentlemen all stood for re-election, and Mr. George Lawson, Mr. John Croft, and Mr. N. Charles Macnamara were also nominated. The result of the polling was as follows:—

Mr. Marshall	...	165	including	5	plumpers
Mr. Power	...	144	"	3	"
Mr. Croft	...	103	"	21	"
Mr. Baker	...	72	"	10	"
Mr. Lawson	...	67	"	9	"
Mr. Macnamara	...	48	"	8	"

The successful candidates were consequently Messrs. Marshall, Power, and Croft; of whom the last is a new member of Council. Mr. Croft is an able, accomplished, meritorious surgeon, whose success in achieving the objects of his professional ability will be welcomed by a large circle of friends. But this reflection will be tempered with others less agreeable by those who note, that, for no reason whatever other than the desire to favour a metropolitan candidate, the eminent provincial surgeon who sought re-election was passed over. It was pretty widely stated—and was, we believe, generally understood throughout the provinces—that there was not to be any serious opposition to the re-election of the provincial candidate on this occasion; and on this account there was not made any such public or organised movement in the provinces as, it is now evident, was necessary to secure the re-election of Mr. Baker. It is certain that this result, and the circumstances under which it has been brought about, have aroused a considerable feeling of resentment. Provincial surgeons had been assured rather loudly of late that they might rely on the justice and good feeling of their brethren who have the advantage of being on the spot. These assurances, however, have proved somewhat hollow. There can be no doubt, we believe, that had Mr. Baker been resident in London, his re-election would have been regarded as a matter of course. His present rejection, purely on the ground of provincial residence, and without such open notice of intended hostility as is commonly given, is bitterly resented, and will certainly not soon be forgotten. The lesson taught by this election will not unlikely be much taken to heart on a future occasion.

MILITIA SURGEONS.

THE following is a copy of a communication, which has been addressed to the Secretary of State for War by Mr. Ernest Hart, on behalf of the Parliamentary Bills Committee of the British Medical Association.

"To the Right Honourable H. C. Childers, M.P., Secretary of State for War.

"Sir,—Referring to the answer which you are reported to have made on Thursday, the 15th ultimo, in Parliament, to a question put by Mr. O'Shaughnessy, on the subject of the compulsory retirement of militia surgeons without compensation, may I be permitted to bring under your notice, in continuation of the last communication which I had the honour of addressing to you, the enclosed Editorial article on page 962 of the BRITISH MEDICAL JOURNAL, of June 24th, 1882; and to ask, as Chairman of the Parliamentary Bills Committee, whether you would be willing to appoint a committee, before which the militia surgeons might be heard, as requested; or before which the Parliamentary Bills Committee of this Association may be heard on their behalf. If this course should not commend itself to you, I beg leave to draw your attention to the suggestion, that one of the militia surgeons should be authorised to institute an amicable suit in a court of law, from which an authoritative decision might be obtained of their legal status in this matter.

"Trusting this, or some more favourable course, may receive your assent,—I have the honour to be your faithful servant,

"ERNEST HART,

"Chairman of the Parliamentary Bills Committee."

GENERAL COUNCIL

OF

MEDICAL EDUCATION AND REGISTRATION.

SESSION, 1882.

Wednesday, June 28th.

DR. ACLAND, President, took the chair at 2 P.M.

Preliminary Scientific Examination.—Dr. HALDANE presented the report of the Committee on Preliminary Scientific Examination. It stated that the Committee had, in April 1881, presented a report, in which it was recommended "that the Recommendations of the Council at present in force in respect of the natural science subjects at the Preliminary Examination be not changed." Instead of this, the following amendments were adopted (in 1881).

1. "That it be recommended to the several licensing authorities under the Medical Act, to consider whether they can separately or conjointly take steps to promote the establishment of a Preliminary Scientific Examination, and to require of all candidates for their respective licences that, after passing the preliminary examination in general education, and either before commencing the purely medical curriculum, or at latest before the end of the first year thereof, they shall pass such a Preliminary Scientific Examination as is proposed."

2. "That the whole subject be referred to the same Committee, with a request that, after they have received and considered the answers from all the medical authorities, they report thereon, and that their report be sent to each member of the General Council preparatory to its consideration at the next session of the Council."

A letter in terms of the first of these amendments was, accordingly, sent by the registrar to each of the medical authorities. Answers from five bodies only had been received, and these consisted mainly of an expression of their adherence to the opinions expressed in their former communications. The Committee believed that the reason the other bodies had not answered the registrar's letter was, probably, that they had nothing material to add to their former statements. Under these circumstances, the Committee, having no fresh matter before it, adhered to its former report.

On the motion of Dr. HALDANE, seconded by Dr. STORRAR, it was resolved that the report be received and entered on the minutes; also:

"That the Recommendation of the Council at present in force in respect of the natural science subjects in the Preliminary Examination be not at present changed."

Examinations in General Education.—Dr. STORRAR moved:

"That a Committee be appointed to consider and report to the Council on the list of bodies whose Examinations in General Education are at present recognised by the Council."

The number of bodies whose Preliminary Examinations were recognised by the Council was very great, and probably some of them might be dropped altogether; a large number of them were superfluous. He had given notice of the resolution; but he was doubtful whether it was expedient to bring it forward. Important changes were being made; especially the surrender of the general examinations by the Royal College of Surgeons of England—an example which he hoped to see followed. He thought it would be better to defer the consideration of the subject for another year; but would move the resolution *pro forma*, in order to obtain the opinion of the Council.

The Reverend Dr. HAUGHTON seconded the motion, observing that he thought the present time most opportune for bringing it forward.

Mr. MACNAMARA supported the motion. There ought to be an *Index Expurgatorius* of the examining bodies recognised by the Council. The Royal College of Surgeons of Ireland accepted the Council's list; but knew nothing about the bodies. The examination in general subjects was conducted in the College of Surgeons in Ireland by a board composed of members with university degrees, entirely distinct from the professional examiners. The College would, however, be glad to get rid of the trouble if an equally good substitute could be provided.

Mr. COLLINS said that the Apothecaries' Hall of Ireland was quite willing to give up the examinations in arts.

Mr. TURNER said that it did not appear to be known that no names of examining bodies were put on the list until a careful examination of their claims had been made by the Executive Committee; none were admitted indiscriminately. The Council ought to encourage sympathetic relations between this country and the colonies and British pos-

sessions in medical matters; and if the examinations were shown to be good and sufficient, they should be recognised.

Dr. HUMPHRY said that, when an application was made by an examining body for recognition, a statement of the nature and character of the examinations was always required by the Executive Committee before the application could be granted. The Executive Committee thought it desirable to recognise the preliminary examinations conducted abroad as far as possible, as this encouraged students to come to this country for their professional education.

Sir WILLIAM GULL suggested that application should be made to the answers to the questions in the examinations, as well as the question themselves.

Dr. STORRAR having briefly replied, the motion was adopted. The Committee was appointed to consist of Dr. Storrar (Chairman), Dr. Fergus, Mr. Turner, Rev. Dr. Haughton, Mr. Macnamara, Dr. Humphry, Mr. Teale, and Mr. Marshall.

Personation at Examinations.—Mr. MACNAMARA moved:

"That it is desirable that this Council should know what provisions, if any, are taken to ensure the impossibility of 'personation' at the examinations of the several bodies, the certificates of which are accepted by them as satisfactory evidence of preliminary examination; and that the Executive Committee be requested to inquire into, and report upon, this subject, previous to the next meeting of the General Medical Council."

He said that, some time ago, it came to the knowledge of the Branch Council for Ireland, that a large sum of money had been offered to a practitioner to pass an examination for a student. At almost the same time, the Royal College of Surgeons of Ireland was informed that a student, who was said to have passed the preliminary examination of the College, had not been in Ireland. He could not, however, say whether this was true; as all endeavours to find the student in question had failed. A young military friend, in dining with him, had told him that personation was common; and that one man had passed not only for himself, but for three others. He was also told, that a grinder in Dublin kept men for the purpose of passing the preliminary examinations at the College of Surgeons. The system followed there, by which candidates were known to the examiners by numbers alone, favoured the deception. There was no evidence that a candidate at the examination was really the person he professed to be. He had been present at an intermediate examination of the University of Dublin; it was entirely written; and he thought this could not be so satisfactory as one which was also partly *viva voce*. The College of Surgeons hesitated to adopt the intermediate examination in consequence of the absence of the *viva voce* test. The College of Physicians of Ireland had reported that last year 11 of the 13 candidates found deficient in preliminary education came from the College of Surgeons of Ireland; and he believed that in all the cases there had been personation. Candidates for the final examination at the College could not be personated, because they were all known. There was no known case in which men educated solely in England or Scotland had sought the licence of the College.

The Rev. Dr. HAUGHTON seconded the motion. The gentleman to whom the offer of money had been made had sent the letter to the Registrar, Mr. Miller, who had forwarded it to Dr. Steele, the Branch Registrar for Ireland. The Irish Branch Council had considered the matter; but the student who was reported to have offered the money could not be identified.

Mr. SIMON asked how it was that the candidates at the final examination of the College of Physicians in Ireland appeared to be much more numerous than those at the primary examination.

Dr. AQUILLA SMITH said that many of them were already licentiates of the College of Surgeons. The note of the College of Physicians as to deficiency in preliminary education was made in compliance with an order of the Council.

Mr. TEALE said that the visitors of examinations were much struck with the defects in preliminary education. The Council had some time ago asked for information regarding such deficiency, but in too indefinite a manner. There should be a small committee to communicate with the examining bodies; or there might be special visitors of the preliminary examinations.

A letter from Mr. MARSHALL and Dr. PITMAN, the

following letter to the President of the Council was read:—

"1, Upper Wimpole Street, Cavendish Square, W., June 28th, 1882. SIR.—I am directed by a Committee, consisting of members of the General Medical Council, of the British Medical Association and of the Obstetrical Society of London, four of whom are past Presidents, to request that the General Medical Council will be

pleased to receive them as a deputation to confer with the Council upon the Draft Bill for the Registration of Midwives in England and Wales.

—I am, Sir, your obedient servant, J. H. AVELING, Chairman of the Board of Examiners of Midwives for the Obstetrical Society of London."

It was decided that the deputation should be received the next day (Thursday) at a quarter past 4 P.M.

Visitation of Examinations.—The report on the visitation of examinations of the medical and surgical corporations in 1881-82, and the remarks on the reports by the bodies visited, was laid on the table.

Mr. MARSHALL moved, Dr. HUMPHRY seconded, and it was resolved:

"That the reports on the visitation of the examinations of the medical and surgical corporations of the United Kingdom, and the Remarks on those reports by those bodies, be received and be appended to the minutes of the present session of the Council."

Dr. PITMAN moved, and Dr. QUAIN seconded:

"That a committee be appointed to consider the visitation reports, which have been submitted to the Council and sent to the licensing bodies, and the Remarks of the licensing bodies thereupon, and to draw up a report thereon for the present meeting of the Council."

Mr. TEALE, who had visited the examinations in conjunction with Dr. W. T. Gairdner and Mr. William Stokes, read a statement on the subject. He said that he was the only member of Council who was a visitor; and the visitations were on this occasion exceptional, as the whole of the medical corporations had been visited by the same persons. The visitors had undertaken their task with a sense of responsibility, with a desire to act fairly towards the examining bodies, and to state their opinions honestly to the Council. Any one seeing all the examinations must form some opinion as to their relative merits. The task had been arduous and anxious; but the visitors had done it with a sense of public duty, and with a desire to express their opinion moderately and fairly. The object had not been altogether to search out whether a body had been doing its duty, but also to collate the examinations and draw conclusions from them as a guide for the future. The visitors were convinced that the competition among the corporations was not downwards, but upwards. Examinations by which the best work of the student was elicited were very costly affairs; and hence any waste of examination power by increasing the number of examinations was a national loss. It was a waste of power that the College of Surgeons should examine in midwifery and medicine, and the College of Physicians in surgery; these bodies should combine, not only to insure efficiency of examination, but for economy. He believed that the future welfare of the educated classes of the community ought to be greatly influenced by the action of the Medical Council in regard to examinations.

The Rev. Dr. HAUGHTON moved as an amendment, and Dr. AQUILLA SMITH seconded:

"That the Council proceed to the consideration of the Report on the Examinations, 1881-82, of the Medical and Surgical Corporations of the United Kingdom, and the Remarks of said Corporations on the Report."

After a discussion, in which Dr. Quain, Dr. Haldane, Mr. Simon, Mr. Turner, Mr. Macnamara, and Sir William Gull took part, the amendment was carried; and, on being put as a substantive motion, was agreed to. It was also resolved to proceed on the following day to consider *seriatim* a series of conclusions arrived at by the visitors, respecting the mode and material of examinations.

Sir WILLIAM GULL moved, Mr. SIMON seconded, and it was resolved:

"That Mr. Teale be requested to furnish the Council with a copy of his statement now made; and that the cordial thanks of the Council be given to the visitors of the examinations in 1881-82, namely, to Mr. T. Pridgin Teale, Professor William Tennant Gairdner, and Professor William Stokes, for the laborious, careful, thorough, and unbiassed performance of those duties which they undertook so liberally, and with such large sacrifice of their private interests."

It was also resolved, on the proposal of Dr. QUAIN, seconded by Dr. PYLE, that Mr. Teale's statement be prefixed to the report of the visitors in the printed volume.

Apparently Insufficient Period of Professional Study.—A letter from Mr. W. Berry of Wigan was read, calling attention to the fact that a person resident in that town was registered in 1879 as a medical student, and in 1881 as a Licentiate of the King and Queen's College of Physicians in Ireland. It was resolved:

"That the registrar be directed to send the letter from Mr. Berry to the King and Queen's College of Physicians in Ireland, and ask for information from the College on the subject."

Thursday, June 29th.

Dr. ACLAND, President, took the Chair at 2 P.M.

Reports of the Visitation of Examinations.—The Council formed itself into a Committee for the consideration of the conclusions drawn up by the visitors of examinations.

Mr. TEALE moved: "That it is desirable that every 'primary' or 'first part' examination should include dissections by every candidate." He said that the visitors had, as far as was possible, to consider the examinations in their relation to professional study. Of late, the requirements of the examining boards had been enlarged, and much more was required of the student than formerly. They were, therefore, brought face to face with the necessity for considering what should and what could be required of the students, so that both the education and the examination might be the best attainable. The present system was not what it should be, considering the labour expended by students, teachers, and examiners. One great principle with visitors had been, to bring about the development of practical studies, studies which would be useful in the profession, so as to do away as far as possible with cramming. The cramming system caused great perplexity to teachers, who should be able to teach with reference only to the acquisition of the knowledge, and without any idea that what they were teaching had any concern with examination. It was not intended that the conclusions of the visitors should become recommendations of the Council; but discussion on them would be of very great value. The proposal made on this resolution was not universally approved; but the dissections were carried out at certain examinations. The Royal College of Surgeons of England stated that the requirement of actual dissections at the primary examination had been for many years repeatedly under consideration; but that any advantage which might be gained therefrom would not be commensurate with the practical difficulty as to space, time, and supply of subjects—especially during April and May. At the College examinations, candidates were required to produce evidence of having dissected, and were examined on recently dissected parts. The Royal Colleges of Physicians and of Surgeons of Edinburgh expressed the opinion that "few anatomists would consider that such dissections as could be made in half an hour by nervous anxious candidates could be a fair test of their manual dexterity or anatomical knowledge, while it would be an enormous waste of time which could be better spent in testing their real knowledge." There was also in Edinburgh a lack of the supply of the necessary material. The visitors regarded actual dissection as the best test, if not the only real test, of anatomical study.

Sir WILLIAM GULL seconded the motion. The real difficulty lay in the fact that the number of candidates was out of proportion to the number of subjects that could be made available. The late Dr. Sharpey had a high opinion of the value of dissections in examinations.

Dr. LYONS could bear testimony to the advantage of testing the knowledge of students by dissections. At the recent primary examination of the Royal University of Ireland, there had been no difficulty in dealing with a large number of students, and obliging each of them to dissect. The whole subject of anatomical examinations required the careful consideration of the Council; for in no matter was there more cramming and artificial knowledge.

Dr. PYLE said that the University of Durham had long ago instituted an anatomical examination.

Mr. MACNAMARA regarded the proposal as too mild. Some years ago, he brought before the Council a motion in favour of enforcing dissections; it was seriously argued, but the result was the adoption of a "milk-and-water" recommendation, that "candidates should understand that they may have to perform dissections," etc. If the Council believed that dissection was of vital importance, it should pronounce a decided opinion. Professor Kedfern had said to him that a deficiency of subjects was rather an advantage, as it led to the deeper structures being dissected for the sake of economy. He (Mr. Macnamara) entirely agreed with this, and believed that in such circumstances students should be prevented from depending on being required to do a merely superficial dissection. It had been said that the examinations would be as good if the candidates were required to describe parts already prepared; but this would be no evidence of dissection, for the knowledge could be obtained from plates, lectures, and cramming. What was wanted was what the late Mr. Hargrave used to call "scalpellar anatomy." As to the bugaboo of nervousness, students who knew their work would do it well, without any such feeling. He moved as an amendment: "That every 'primary' or 'first part' examination should include dissections by every candidate."

Dr. PYLE seconded the amendment.

Mr. SIMON said it was felt strongly that it was desirable that every

primary examination should include dissections; but at present this was impossible.

Mr. MARSHALL said that the College of Surgeons of England admitted that advantage might attend the requirement of dissections at the primary examinations. He found it difficult, however, to support Mr. Macnamara's amendment; for, if it could not be carried out, mischief would result. To supply the subjects for dissection at the examination, the dissecting-rooms would have to be starved of subjects; and, of the two, he thought the education of the student of the more importance than his examination. In the last two years, the numbers of candidates at the primary examination of the Royal College of Surgeons were 940 and 1,091; and it would have been impracticable to supply bodies for dissection.

Mr. TURNER regarded the amendment as unnecessary and impracticable. His experience had taught him that it was possible to carry out a sound testing examination in anatomy without requiring actual dissection. The examination should be conducted on a recently dissected part; not on dried structures or specimens preserved under glass, except for supplementary purposes. He believed, as an examiner of much experience, that he could in this way judge as well of the acquirements of a candidate as if he saw him dissect. In the University of Edinburgh, also, he had a personal knowledge of the candidates to a very great extent, and knew what each man had been doing. He approved of the existing recommendation of the Council, that candidates should understand that they might be called on to dissect; it was a check on the lazy students. The deficiency of subjects was even greater in Edinburgh than in London; and it would not be possible there to carry Mr. Macnamara's proposal into force.

Dr. HUMPHRY hoped that the Council would not pass an impracticable resolution, but would adopt Mr. Teale's proposal. He had always advocated dissection at the primary examination; and, having been much impressed by the manner in which it was conducted at the Queen's University in Ireland, he had got it introduced at the examinations in Cambridge. The increasing number of candidates, however, rendered it doubtful whether a sufficient supply of subjects could be always obtained. He agreed, however, with Mr. Turner that actual dissection was not absolutely essential, for the candidates who could give the best demonstrations were those who could dissect.

The discussion was continued by the Rev. Dr. HAUGHTON, Dr. BANKS, Dr. HERON WATSON, Sir W. GULL, Mr. SIMON, Mr. MARSHALL, and Dr. QUAIN.

The amendment was put to the vote and lost. Dr. HERON WATSON moved, as a further amendment, and Dr. PETTIGREW seconded:

"That, when circumstances permit, it is desirable that every 'primary' or 'first part' examination should include dissections by every candidate."

This amendment was also negatived; and the original motion was put to the vote and carried. The Council then resumed.

Registration of Midwives.—A deputation from a Subcommittee appointed by the Parliamentary Bills Committee of the British Medical Association, consisting of Mr. Ernest Hart, Dr. W. Playfair, Dr. J. H. Aveling, Mr. Sibley, and Dr. Holman, waited upon the General Medical Council, on the subject of the draft Bill for the registration of midwives.

Mr. ERNEST HART said he should make a very short statement on the subject of the Bill which had, he believed, been sent to the Council from the Lord President of the Privy Council. He would first say that three members of the Subcommittee, Dr. Barnes, Dr. Priestley, and Mr. Nelson Hardy were prevented from being present. He had received a letter from Dr. Barnes, in which he said "he could only express his entire concurrence in the objects of the deputation, and his earnest desire to see a formal registration of midwives carried out". The question of the registration of midwives—or rather, perhaps, of their education, of which registration was only a small part—had been brought successfully before the members of the Local Government Board and the Privy Council. It had been brought before the Obstetrical Society of London, and also before the General Medical Council, on several previous occasions. The first occasion on which a considerable movement was made to bring it into a shape fit for legislation was in 1873, when a deputation from the Parliamentary Bills Committee of the British Medical Association waited upon the President of the Poor-law Board. A statement was then prepared, which estimated that there were 10,000 women practising as midwives, and calling themselves midwives, in England and Wales; and that they assumed that title at their will and pleasure, without any necessary previous education, without any power of regulating the functions which they performed, without any evidence of their fitness to perform them, or of their moral character or skill. Some statistics were produced then by Dr. Hall Davis and Dr. Robert Barnes, which showed the danger arising, through the increase of mor-

talities, from such a want of knowledge. Dr. Hall Davis showed that the actual mortality of women attended by skilled midwives in the wards was less than the mortality of women generally; and he attributed the difference to the fact that, while the former were attended entirely by skilled midwives, the population generally were attended by these many thousands of unskilled women; and that the excessive mortality was due to their want of knowledge. It was also pointed out that the Government, in the absence of such legislation, was compelled to employ persons calling themselves midwives. Since then, a Bill had been prepared and measures brought in by which veterinary surgeons and others were regulated. The result of this deputation was that the President of the Poor-law Board expressed very strongly, on the part of the Government, a sense of the importance that some measure should be taken of the kind indicated. He therefore transmitted these documents to the Privy Council with an expression of their desire that that department would take up the subject. Subsequently the Obstetrical Society again gave attention to the subject; and in the hands of successive presidents the matter had been very thoroughly sifted by the Obstetrical Society, and they appointed a committee, who laid down data as to the limitation of the functions and education of midwives, and afforded materials upon which might be based a measure for the purpose of regulating the education and conduct of these persons. It was, he thought, the President (Dr. Acland) who had brought under the notice of the General Medical Council the desirability of doing something to regulate the conduct of midwives, and to get some little control over them. Subsequently, in the course of the discussion which arose on the Duke of Richmond's Bill as to the necessity of still further amending that Bill, it became evident that it was desirable to separate this question of midwives from the general question of medical education. A Royal Commission was appointed to which the Duke of Richmond's Bill was referred, and this part of the question was left aside to be treated separately. Under these circumstances, finding that, at the end of several years, the matter was being left open indefinitely, Dr. Aveling communicated with him (Mr. Hart); and it being found that many leading members of the Obstetrical Society were interested in the subject, the present Committee undertook to get a measure drafted on the bases and in the spirit of the proposals which had been laid down by the Obstetrical Society of London. This Bill had been drawn on these lines, and he would only say generally of the Bill that while it was thought right and respectful to the Medical Council that their approval should be obtained, and that they should be constituted the leading authority to control the subject, the Bill had been so drafted as to limit the responsibilities of the Council to the matter of control, and to limit its work also to the duty of control. The object had been to enable the Council to appoint a midwifery board—including a considerable proportion of general practitioners—quite distinct in itself, to which the Council would delegate its powers generally. It had been sought to remove from it any burden of expense, and they desired it to be particularly understood that no expense would be thrown upon the Council whatever. They would simply appoint a board, and, approving the regulations named by that board, transmit them to the Privy Council. Every effort had been made in the Bill to make the machinery as simple as possible, and to make the expense as little as possible, and for that purpose local examination boards were created. They would not be required to meet very often, their fees would necessarily be limited, their work would be elementary, and they will be constituted of resident practitioners. A wide latitude was allowed for the board itself, subject to the control of the Medical Council. It was no part of their object to set up or to attempt to create a superior class of educated persons; on the contrary, it is intended and expected that the midwifery board would act entirely on the lines laid down, which were intended for the use of the poorest women; that they would limit the examination and regulate the duties so as to continue to employ the class of women who were already doing midwives' work, on the conditions laid down in the regulations of the Obstetrical Society, the general limit being attendance on natural labour.

Dr. W. PLAYFAIR said he was interested, as President of the Obstetrical Society, in the drawing up of this scheme. He might perhaps observe that the members of the Obstetrical Society in this matter was taking away any difficulties which might arise. It was, he thought, a very good initiative, their cooperation in the matter was a very valuable one.

Dr. AVELING thought the whole question lay in a nutshell. What he wished to impress was that there were from 10,000 to 11,000 women practising as midwives in this country, and 60 per cent. of the poor women in the manufacturing towns and villages of this country were attended in their confinements by midwives. The result was that many of these poor women lost their lives and the lives of their children

through the unskilled and uncontrolled attendance of these midwives. It was unusual for any class of Her Majesty's subjects to be subjected to the treatment of unqualified persons. A captain at sea was not allowed to have the control of a vessel, or a druggist was not allowed to make up medicines, and so risk the lives of persons, without showing that he possessed proper skill; and midwives should be under the same control. They had expressed a wish for this control themselves, and the Matrons' Aid Society, which was entirely made up of midwives was now urging the matter, and had laid a petition before Parliament urging that something should be done to improve their status.

Dr. HOLMAN (Reigate) said, as a country practitioner, he would say lives were continually lost in consequence of the attendance on poor women of ignorant midwives, and invaluable time lost before the medical man was summoned to their assistance. Many of these midwives were women who drank hard, and persons who ought not to be trusted with the lives of women in labour. If the present Bill were passed it would confer a very great boon upon a large class of medical practitioners.

Dr. AVELING said at the last meeting of the Obstetrical Society, an uterus was exhibited which had been taken from a woman's body by a midwife in mistake for the after-birth.

Mr. SIBLEY said that the Bill had been very carefully framed. It was distinctly a medical matter, and therefore the General Medical Council was the natural guardian of such a movement. In all the proceedings connected with this Bill, the only function of the Council would be to nominate a midwifery board and afterwards to control their action, so that the amount of labour it would cast upon the Council would be very trivial, and the boon conferred upon the public, and especially upon practitioners, he thought would be very considerable.

Mr. MACNAMARA asked what induced the committee to omit Ireland from the Bill. That which was so desirable for England he thought would be very advantageous for Ireland.

Mr. ERNEST HART said the Bill was confined to England in the first place because the movement for several years had been an English movement, and because it is in England that a total absence of the regulation of midwives exists. Ireland, he believed, was much better off in this respect than England. They thought if the experiment answered successfully for England, it would be a matter of great satisfaction to those interested if Ireland applied to be included in the operations of the Bill. They would desire Ireland to act spontaneously in the matter. The same remarks applied to Scotland. England and Wales had a special case, and they proposed therefore to make this an English Bill.

Mr. TURNER asked if it were intended that the members of the Midwifery Board should be paid for the time and services they gave. He did not think this was clearly stated in the Bill. It was stated in clause 32: "and the remuneration of the members of such boards, and the practice of registration under this Act, and the fees to be paid in respect thereof, provided that such fees shall in no case exceed a sum of £2 as an examination fee, and £1 as a fee for registration." There would be the expenses of the central registration office, and the expenses of the local examining boards. Was it intended that the Midwifery Boards should be paid? and was the calculation of £1 for a registration fee looked upon as sufficient to discharge the various expenses which would be incurred in connection with the working of the scheme?

Mr. HART said under clause 6 it was provided that "all monies received under or for the purposes of this Act shall be paid or accounted for to, and held by, the treasurers, and shall by them be applied for the purposes of this Act." The extent to which the Midwifery Board would be paid would no doubt depend upon the sums which arose under those clauses, and it was difficult to say beforehand what those sums would be. The Midwifery Board would have the whole of the fees arising, and supposing there were ten thousand midwives, they would be able to calculate by the number of practitioners what would be the probable number of midwives who would present themselves annually for education and registration. It was thought, seeing that the labour performed by the Midwifery Board would be but small, that the fees available should not be large. But he thought it would be better to adjust the question of fees after they had had the scheme under consideration. Their belief was that the fees which would arise under the Bill would be adequate.

Dr. HUMPHRY asked for information as to what was the feeling of medical men in the country generally; was it favourable or otherwise?

Dr. HOLMAN said that this subject had been frequently spoken upon in the Branches of the British Medical Association; it had been repeatedly laid before the members in the JOURNAL; and he had heard

it referred to both at meetings and by country practitioners, among whom he had largely moved. He could state that local practitioners were almost unanimously in favour of a Bill of this description. This was essentially a Bill emanating from the Parliamentary Bills Committee of the British Medical Association, as well as from the Obstetrical Society, an association which included 9,000 medical men in all parts of the United Kingdom.

The Rev. Dr. HAUGHTON did not complain of the omission of Ireland from the Bill. Practically, the Bill was less wanted by Ireland than by England and Wales; but he was of opinion they would have less difficulty in passing it through Parliament if they altered the proposal in the Bill as to conferring upon England and Wales the right to practice in Ireland and Scotland. There were some excellent institutions in Ireland for the education and regulation of midwives, and he considered there should be an acknowledgment of the existence of such institutions, and a recognition of their diplomas.

The PRESIDENT thanked the deputation very much for bringing this matter before the Council; to speak more exactly, for favouring the Council with their views on the subject. The Council had received a copy of the Bill from the Lord President of the Privy Council, and a committee had already been appointed to consider the matter; and one of the functions of that committee would be to give its fullest consideration to the statement which Mr. Ernest Hart had just been so good as to put before them. He would only add that the Council was deeply interested in this subject, as Mr. Hart had very truly said. It was cognisant of what took place at the Local Government Board nearly ten years ago, also with the particulars of the Duke of Richmond's Bill, and the committee of inquiry into the subject. He mentioned these points to assure the deputation that for a long time the Council has been interested in the subject, and was very grateful to the deputation for attending and stating their views. He was sure he might say, on behalf of the committee of the Council, that they would give the very fullest consideration to the observations of the deputation in the course of their deliberations, and before they were submitted to the Government.

After thanking the President for the opportunity which had been afforded them, the deputation withdrew.

The Report of the Visitors on Examinations.—The Council again formed itself into a Committee to consider the report of the visitors.

Mr. TEALE moved, and Sir WILLIAM GULL seconded:

"That, in view of the great and increasing range of chemical and physiological science, it is particularly desirable, in regard of those subjects, that examining bodies should comply with Recommendation 40 of the Council, and that candidates should be apprised beforehand of the limits of the examinations in these subjects.

Dr. HERON WATSON moved as an amendment, and Dr. PETTIGREW seconded:

"That the question as regards physiology be considered apart from that of chemistry."

The amendment was negatived, and the original motion was put to the vote and agreed to. The Council then resumed.

Report of the Finance Committee.—Dr. QUAIN presented the report of the Finance Committee, and moved that it should be received, entered on the minutes, and adopted. The motion, which was seconded by Dr. PITMAN, was agreed to. The report stated that the income of the General and Branch Councils for the year ending January 1st, 1882, had been £6,509 7s. 11d., an amount which was £362 11s. 1d. less than the income of the year 1880. The expenditure during the year 1881 had, however, been only £4,786 14s., which was less than the expenditure of 1880 by £517 14s. The excess of income over expenditure for the year 1881 amounted to £1,722 13s. 11d., the excess of income for the previous year, 1880, being £1,568 1s. The chief item of expenditure wherein there had been an increase during 1881, was the visitation of examinations, which amounted to £920 19s. 6d. In the house expenses, there had been an increase of £93 5s. 5d., owing mainly to repairs carried out; and the production of the *Medical Register* had cost £28 3s. 3d. beyond the amount expended on this item during the previous year. The principal items of diminished expenditure of the year 1881, as compared with 1880, were as follows. (1) Fees paid to members of Council, amounting to £493; (2) publication of the *Pharmacopæia*, amounting to £483 5s.; (3) printing, £253 14s. 1d.; (4) law expenses, £83 19s.; and (5) salaries and retiring allowances, £68 4s. 7d. (the latter have now ceased). While, therefore, the total increase of expenditure in respect of certain items was £1,050 1s. 2d., the total decrease in respect of other items amounts to £1,486 13s. 9d., showing, on the whole, a decrease in expenditure of £436 12s. 7d. The average yearly income and expenditure of the General and Branch Councils during the last seven years exceeded the average yearly expenditure by £434. The sum of £1,279 17s. 10d.

(made up of the following items: visitors' fees, £791 14s.; travelling and hotel expenses, £135 6s.; and printing, stationery, shorthand writers' fees, etc., £352 17s. 10d.) had been already expended in the visitation of the nine medical corporations, and various other sums, in respect of expenses incurred, had yet to be paid. In the receipts of the Dental Registration Fund for the year ending January 1st, 1882 (690 16s. 2d.), there was an increase of £74 8s. 11d. over those of last year; while the expenditure, £1,143 7s. 3d., had been less by the sum of £660 3s. 4d., leaving the deficiency of income for the year £457 11s. 1d. compared with a deficiency of £1,192 3s. 4d. in 1880. Pursuant to instructions given to them at the meeting of the English Branch Council in 1881, the treasurers had invested £4,015 in the purchase of £4,000 consols, in the names of the trustees of the Branch Council, thus making a total now invested under this trust of £29,000 consols.

Alleged granting of a Qualification after Insufficient Professional Study.—Communications were read respecting a medical practitioner registered in September 1877, with the Licence of the Apothecaries' Hall in Ireland, whose case had been brought under the notice of the Council by the South Australian Branch of the British Medical Association. The further consideration of the subject was adjourned.

Friday, June 30th.

Dr. ACLAND, President, took the chair at 2 P.M.

The Report of the Royal Commission.—Mr. MACNAMARA asked the President "whether it is proposed to take into the consideration of this Council the Report of the Royal Commission; and if so, whether this will be done during the present session, at an autumnal session this year, or at the Council's next year's meeting."

In answer to this question, the PRESIDENT stated that, as the Council was aware, no public notice of motion bearing on the subject had been put into the Council's programme of business, and that he had not received private notice from any member of the Council of his intention to move in the matter.

The Report of the Visitation of Examinations.—The Council resolved itself into a Committee for the consideration of the conclusions arrived at by the visitors. The following resolutions were adopted, after discussion, which principally had reference to the manner in which they should be expressed.

Moved by Mr. TEALE, seconded by the Rev. Dr. HAUGHTON: "That, at the final examination, candidates should be practically examined in anatomy in its relation to practical medicine and practical surgery."

Moved by Mr. TEALE, seconded by Sir W. GULL: "That it is desirable that in every final examination for a surgical diploma, candidates should, as far as practicable, be required to perform operations on the dead subject, in accordance with the intention of the Council's Recommendation 44."

Moved by Mr. TEALE, seconded by Sir W. GULL: "That the application of bandages and splints should be required in every surgical examination."

Moved by Mr. TEALE, seconded by Mr. TURNER: "That the practical examinations in chemistry should be conducted in a laboratory."

Moved by Mr. TEALE, seconded by Dr. PETTIGREW: "That it is desirable that the recognition of microscopical specimens, normal and morbid, should form a part of the examinations for medical and surgical diplomas."

Mr. TEALE moved: "That in oral examinations, where the time allotted is strictly limited, for instance, to ten minutes or a quarter of hour, there is a serious risk that candidates of average ability, who have been conscientiously taught and fairly prepared in their work, may be rejected owing to misunderstanding or nervousness, and this is a hazard which, reacting as it does injuriously upon study and teaching, ought to be, if possible, avoided by allowing a margin of additional time for satisfying the examiners in all such cases. The actual practice of certain boards, and especially of the Colleges of Physicians, shows that this suggestion is not impracticable, although it may be more or less difficult to carry out where the numbers are very large. The visitors think that no mere difficulty of mechanism should be allowed to interfere with its being adopted as a measure of justice to candidates."

Mr. TEALE said that the visitors had been directed by the Council to examine into the causes of the numerous rejections by the examining boards. They had been much impressed by the number of rejections; especially at the Royal College of Surgeons of England. The system there was most complete; and perhaps the very completeness itself led to unnecessary rejections of candidates of good repute among those

was implied in the motion. He did not understand what was meant by the statement that some examiners tried to find out the ignorance of the candidate, rather than his knowledge. Dr. Lyons had contrasted education and examination. They were reciprocal; each had reference to the other. A good examination was essential to getting a good education; and the Council, in seeking to render examinations perfect, were doing what tended to improve education. He thought that a veto should be never given by less than two examiners, and then only in cases of great ignorance. At the College of Surgeons of England, a candidate who received a veto at one table almost always had low marks or a veto at the others; but, if he had good marks, an opportunity was given for revising the decision. The question was, whether the right ones were rejected. Many of his pupils at Cambridge went to the College of Surgeons, and he could almost say beforehand with certainty who would and who would not pass. Mr. Turner had given an opinion in favour of extension of time. The question was, whether a definite period had disadvantages. It had a certain advantage; it led the examiner to proceed to his work at once, and did not allow him to hesitate before beginning, thereby allowing the candidate to become nervous. There was little nervousness among the candidates at the oral examinations at the College of Surgeons; and he attributed this to their being attacked at once. He allowed that nervousness often indicated ignorance. He would support the resolution so far as it was applicable to a few exceptional cases.

Dr. PETTIGREW supported the motion, on the ground that everything possible should be done to avoid the rejection of candidates. He thought examination of less value than sound education and training. The education of the student should be complete, so as to develop his reasoning powers. If a little latitude as to time were allowed, many well prepared men would escape being taken at a disadvantage, and rejected.

Dr. HALDANE thought the question one of detail, for the consideration of the examining bodies rather than of the Medical Council. In the majority of cases, a quarter of an hour was sufficient for a *viva voce* examination; if not, the examining boards could make a change. He had witnessed examples of attempts, on the part of examiners, to bring out the ignorance of the candidates, and had seen time lost thereby. Sharpness in answering was much marked in candidates from Ireland.

Dr. PITMAN said that, at the College of Physicians of London, it was formerly the practice to limit the time; but this was found to act unfairly on the candidates; better answers were obtained when the time was extended. Nervousness did not necessarily imply ignorance. He knew a case in which a well taught student, a pupil of Dr. Humphry, was in great fear of rejection.

Dr. QUAIN said that examiners should be allowed a few additional minutes at the oral examinations. When examiners sought to find out the ignorance of candidates, he believed it was often done to display their own knowledge.

Mr. MARSHALL said that the number of cases in which candidates were rejected at the College of Surgeons, by the veto of an examiner, was very small. He was in favour of a fixed time; but would allow an extension of time in certain doubtful cases, of which, at the College, there were very few.

Mr. SIMON said that it was important that the examinations should be so conducted that certainty of results might be expected; and he agreed with the conclusion of the visitors, that such certainty could not be depended on if the time for examination were limited. He had watched the oral examinations at the College of Surgeons, and would have often required more time to arrive at a conclusion as to the merits of the candidates.

Dr. CHAMBERS said that in some cases the oral examinations were supplementary to the written, and in others independent of these; and he thought that in the latter case more time should be allowed.

Sir WILLIAM GULL said that sufficient consideration was not given to the students, who ought to be protected when under examination. Of a given number of students, there should be no doubt as to which of them should be rejected, assuming that a certain number of rejections must occur.

Dr. PETTIGREW said that examinations were necessary evils; and too much importance should not be attached to them.

The discussion was continued by Dr. BANKS, Dr. STORR, Dr. HUMPHRY, the Rev. Dr. HAUGHTON, Mr. MARSHALL, and Mr. TEALE; after which the motion was put to the vote and carried. The Council then resumed.

Report of the Pharmacopœia Committee.—The following report by the Pharmacopœia Committee on (1) the preparation of the next edition of the *Pharmacopœia*, (2) the Addenda thereto, pursuant to instructions given by the General Council on April 26th, 1881, was presented, and,

on the proposal of Dr. PITMAN, seconded by Dr. AQUILLA SMITH, was ordered to be received, entered in the minutes, and adopted.

"The Committee have to state that after due inquiry they have not obtained sufficient information to enable them to report in accordance with the terms of the Council's resolution, 'That it be an instruction to the Pharmacopœia Committee to report to the Council year by year as to addenda.' The Committee report further that the present stock of the last edition of the *Pharmacopœia* amounts to 2,550 copies, and that the average annual sale is about 1,000 copies; thus a fair estimate may be obtained as to the period at which it will become necessary to supply a new edition. With a view of taking steps towards the publication hereafter of another edition of the *Pharmacopœia*, the Committee make the following recommendations: 1. That the Pharmacopœia Committee be a standing committee until the issue of the work; 2. That the Committee be authorised to appoint from amongst its own members a Subcommittee, to assign to it such duties as it may think fit, and to take such other steps as may be necessary for fulfilling the duties assigned to it; 3. That a sum not exceeding £100 *per annum* be placed at the disposal of the Committee."

Unqualified Assistants.—It was moved by Dr. CHAMBERS, seconded by Mr. BRADFORD, and agreed to:

"That a Committee be appointed to consider the abuses which arise from the employment of unqualified assistants by registered practitioners, and to report to the Council whether any means can be adopted for checking these abuses."

Monday, July 3rd.

Dr. ACLAND, President, took the chair at 2 P.M.

Report of the Visitation of Examinations.—The Council resolved itself into a Committee for the consideration of the conclusions arrived at by the visitors.

Mr. TEALE moved:

"That, with a view to economy of the time of the examiners, it is desirable that when a candidate has obtained rejecting marks in the written portions of an examination, he should not be required to proceed to the oral."

He said that this system was in force in the Royal College of Surgeons in Ireland, and also, he believed, in that of Edinburgh. The proposal was objected to by the English College of Surgeons. The visitors had been struck with the valuable work done by the examiners throughout the kingdom. Unless a large number of highly qualified teachers offered themselves for the work from an *esprit de corps*, the licensing boards would have a difficulty in finding competent examiners. This was one reason for retaining the examination of candidates in the hands of the profession itself, and not allowing it to fall into the hands of the State. Economy of the examiners' time was necessary; and unprepared candidates should be cut off at the written examination, so as to allow more time for the others. There was also another proposal, which he did not yet expect to find approved—viz., that the written examinations should be carried on at the seats of education.

Mr. MACNAMARA seconded the motion. He thought that time should be allowed to elapse between the written and the oral examinations, sufficient to allow rejected candidates to be informed that they need not appear at the latter.

Dr. HERON WATSON would suggest that unsuccessful candidates should be required to be examined in those subjects only in which they had been rejected. They should be permitted to take up the subjects in detail.

Mr. SIMON objected to the proposal to allow candidates to pass their examinations by instalments. With regard to Mr. Teale's proposal, he might vote for it in the Council of the College of Surgeons; but whether it was for the Medical Council to press it, was another question.

After a discussion, in which Dr. HUMPHRY, Dr. QUAIN, Mr. MARSHALL, the Rev. Dr. HAUGHTON, Dr. SCOTT ORR, and Dr. HALDANE took part, Sir WILLIAM GULL moved the previous question as an amendment, which was seconded by Dr. LYONS.

The amendment was lost; as was also the original motion.

Mr. TEALE moved, and Dr. BANKS seconded:

"That it is desirable that the subject of mental disease should have serious consideration in any revision of curriculum and examination-rules."

The motion was negatived.

It was moved by Mr. MACNAMARA, and seconded by Mr. COLLINS:

"That this Council note with approval the suggestion, so far as hygiene is concerned, by Dr. Gairdner and Mr. Stokes."*

* The suggestion was as follows: "That considering the great importance of preventive medicine and hygiene to the general practitioner, these subjects ought to

Mr. SIMON moved as an amendment, and Mr. TEALE seconded:

"That, considering how important it is to all medical practitioners to possess a competent knowledge of hygiene and preventive medicine, the Council takes note of the suggestion of Dr. Gairdner and Mr. Stokes that these subjects ought to form a more independent part than they do of the examinations of all corporations."

This amendment was carried; and, when it was put as an original motion, the following amendment was moved by Dr. LYONS, and seconded by Dr. AQUILLA SMITH:

"That the words 'preventive medicine' be omitted."

This amendment was negative, and the foregoing amendment by Mr. SIMON, having now become the original motion, was then put to the vote and carried.

Unqualified Assistants.—It was moved by Dr. CHAMBERS, seconded by Dr. PITMAN, and agreed to:

"That the following be the Committee on the uses and abuses of unqualified assistants: Dr. Chambers (Chairman), Mr. Simon, Dr. Lyons, Dr. Pyle, Mr. Marshall, Dr. Heron Watson."

Tuesday, July 4th.

Dr. ACLAND, President, took the chair at 2 P.M.

Charge against a Registered Practitioner.—The Council was occupied during the whole sitting in the investigation of a charge of disgraceful conduct. The subject was brought under the notice of the Council in the following letter, dated June 8th, from Mr. R. H. S. Carpenter, the Secretary of the Medical Alliance Association.

"Gentlemen,—I have to apply to you to remove from the *Medical Register* the name of David Beatson Murdoch, for disgraceful conduct in the practice of his profession, as described upon oath during the proceedings of two inquests held by Sir John Humphreys on the 7th instant, a report of which, taken from the *Telegraph* of to-day's date, I herewith inclose to you. You will see the various addresses of Dr. Murdoch, ranging from Dalston to the East India Road, in the accompanying report."

The case was first investigated by the English Branch Council, and placed by them in the hands of the Registrar, to be brought before the General Council.

Mr. FARRER, the solicitor to the Council, stated that he had, in accordance with instructions, summoned Mr. Murdoch to attend the meeting. The charges against him were, 1. That he had a number of "dispensaries" at which he employed unqualified assistants; 2. That he allowed unqualified persons to sign in his name false certificates of death; 3. That, in cases under the care of his unqualified assistants, he presented himself at the last moment so as to be able to sign a certificate. Mr. Farrer was of opinion, with regard to the second and third charges, that there was no evidence that it was Mr. Murdoch's habit to act in the manner stated. He (Mr. Murdoch) had stated that false certificates had been signed without his authority, and there was no evidence that he had given such authority. There was, however, proof that he had employed unqualified assistants, both in the evidence given at the coroners' inquests and in his own letters. The evidence at the inquests, which was laid before the Council, showed that two children, who had died, had been attended at a so-called "Provident Dispensary" at 149, St. Leonard's Road, by an unqualified person named Gouverneur Hamilton Griffin, calling himself also "Colonel" Griffin, acting as Mr. Murdoch's assistant.

Mr. MURDOCH had addressed to the Council a letter, some of the more important paragraphs of which are subjoined.

"I fully admit my fault in not having inquired thoroughly into the antecedents of the man who has brought upon me so much trouble—I mean Mr. G. H. Griffin. I was aware that he had assisted another medical man, and I learned that he was well spoken of by all classes of patients, many of whom stated that he cured their complaints, that he

was clever (to use a popular expression), and they praised his kind attention and gentlemanly demeanour. I myself was misled into the belief that he was a man in whom I could repose confidence. He informed me that he had studied medicine and law in Canada, and that he possessed a Canadian diploma.

"I have been much blamed because a certificate of death with my name subscribed was handed to the parents of the deceased by Mr. Griffin. I told the coroner's officer, and also Dr. McGill, who made the *post mortem* examination, that I knew nothing about the child's death, and that I had not written the certificate, which has now proved to be nothing more or less than a forgery.

"I swore before the coroner, I have since sworn in the presence of a Commissioner of Oaths, and I have confirmed my oath before a magistrate, that I have never authorised anyone to sign a certificate of death, or to use my name for such a purpose.

"I acknowledge my error in employing unqualified assistants, although I have never expected them to do more than treat common cases, such as coughs and colds, simple diarrhoea, etc., which many people would treat themselves without consulting a medical man. I know that it is no excuse for me to say that it is a constant custom in the profession to employ unqualified men, and that I err with the multitude of my professional brethren.

"I see now the evil of such a system, and I assure you, gentlemen, I have learned a sad lesson.

"In conclusion, I ask your pardon. I promise to exercise more discretion in future, and I trust that you will have no reason to complain of my professional conduct. I shall not employ another unqualified assistant, except for subordinate duties, unless he be under the direct surveillance of a legally qualified man; and, further, I will not undertake more duties than I can fully and conscientiously perform."

Mr. MURDOCH was called in, and questioned by Mr. Farrer, and by several members of the Council through the President and Solicitor. His replies were generally in accordance with his letter.

The Council deliberated in private for more than two hours, after which Mr. Murdoch was again called in, and informed by the President that the Council had adjudged him, in the words of the Medical Act, to have been "guilty of an infamous conduct in a professional respect," but that they had decided not now to remove his name from the *Register*, he having promised to desist from the practice of which complaint had been made.

Wednesday, July 5th.

Dr. ACLAND, President, took the Chair at 2 P.M.

Mr. Hartley Dixon and the Apothecaries' Hall of Ireland.—A charge made by the South Australian Branch of the British Medical Association against the Apothecaries' Hall of Ireland, for admitting Mr. Hartley Dixon to examination without a sufficient period of professional study, was considered.

Mr. COLLINS, the representative of the Apothecaries' Hall, gave an explanation, which was accepted by the Council as satisfactory.

Name Removed from Register.—The name of William Story, who had been convicted of arson, and sentenced to penal servitude, was ordered to be removed from the *Register*.

Dental Business.—A considerable part of the sitting was occupied with the discussion of business relating to the Dental Act.

A more complete account of the proceedings on Wednesday will be given in next week's JOURNAL. The Council had not completed its session on Thursday.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL.

NOTICE OF MEETING.

A MEETING of the Committee of Council will be held in the Council Room of Exeter Hall on Wednesday, the 12th day of July next, at two o'clock in the afternoon.

The following Sub-Committees will also meet at the Offices of the Association, viz., on Tuesday, the 11th, at five o'clock, the Scientific Grants Committee; at six o'clock, the Trusts Funds Sub-Committee; on Wednesday the 12th, at eleven o'clock, the Office and Printing Sub-Committee; at twelve o'clock, the Journal and Finance Committee.

The Medical Reform Committee will also meet at the Offices of the Association, on Tuesday, the 11th instant, at 8.15 in the evening.

FRANCIS FOWLER, General Secretary.

161A, Strand, London, June 27th, 1882.

COMMITTEE OF COUNCIL:

NOTICE OF QUARTERLY MEETINGS FOR 1882: ELECTION OF MEMBERS.

MEETINGS of the Committee of Council will be held on Wednesday July 12th, August 9th, and October 18th. Gentlemen desirous of becoming members of the Association must send in their forms of application for election to the General Secretary not later than 21 days before each meeting—viz., July 19th, and September 27th, in accordance with the regulation for the election of members passed at the meeting of the Committee of Council of October 12th, 1881.

November 4th, 1881. FRANCIS FOWKE, *General Secretary*.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH.—President, EDWIN SAUNDERS, F.R.C.S.; President-elect, THOMAS BRIDGWATER, M.B. The thirtieth annual meeting of this Branch will be held at the Crystal Palace, Sydenham, on Wednesday, July 19th, at 4 P.M. Dinner at 6 P.M.; tickets 12s. 6d. each, exclusive of wine.—ALEXANDER HENRY, M.D., W. CHAPMAN GRIGG, M.D., Honorary Secretaries.

NORTHERN COUNTIES (SCOTLAND) BRANCH.—The annual meeting of this Branch will be held at Nairn on Wednesday, July 12th. Members desirous of reading papers or other communications are requested to forward the titles to the Honorary Secretary by the 30th of June.—J. W. NORRIS MACKAY, M.D., Honorary Secretary and Treasurer, Elgin.

THAMES VALLEY BRANCH.—The annual meeting of the Branch will be held in the Board Room of the Richmond Hospital on Thursday, July 13th, at six o'clock. Members desirous of bringing forward any subject for discussion are requested to communicate with the Honorary Secretary, E. L. FENN, Richmond.—June 20th, 1882.

NORTH OF ENGLAND BRANCH.—The annual meeting will be held in the Library of the Newcastle-on-Tyne Infirmary on Thursday, July 13th, at 2.30 P.M. Dr. Eastwood, the retiring President, will resign the chair to Dr. Embleton, the President-elect, who will deliver an address. Dinner at the Douglas Hotel at 5 P.M.; tickets 6s. 6d., exclusive of wine.—T. W. BARRON, M.B., Durham; D. DRUMMOND, M.D., Newcastle, Honorary Secretaries.—June 21st, 1882.

YORKSHIRE BRANCH.—The annual meeting of this Branch will be held at Leeds on July 26th, at 3 P.M.; T. R. Jessop, Esq., in the chair. Members intending to read papers are requested to communicate at once with ARTHUR JACKSON, Secretary, Sheffield.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—The annual general meeting of the Branch will be held at 198, Union Street, Aberdeen, on Saturday, the 29th instant, at 2 P.M. Hospital visit at 11.30 A.M. Dinner at the Palace Hotel, Union Bridge, at 3 o'clock P.M.—R. J. GARDEN, J. URQUHART, Honorary Secretaries.

BORDER COUNTIES BRANCH.—The annual meeting will be held at Carlisle on Friday, July 21st. Gentlemen who intend reading papers are requested to communicate with one of the Honorary Secretaries, JOHN SMITH, M.D.; J. KENDALL BURT, M.B.

EAST YORK AND NORTH LINCOLN BRANCH: ANNUAL MEETING.

THE twenty-sixth annual meeting was held at the Infirmary, Hull, on May 24th. The President, Dr. OWEN DALY, M.D., in the chair. Thirty-four members and visitors were present.

New Members.—Six gentlemen were elected members of the Branch.

President's Address.—Dr. DALY's paper was a review of modern medicine, and his remarks were illustrated by references to the researches of Bright, Addison, Graves, Hodgkin, Dickinson, Sir William Jenner, Duchenne, Pasteur, Tyndall, and Koch. The influence of the microscope, and other modern instruments of precision which aid diagnosis, was referred to, and the paper closed with some remarks on treatment.

A vote of thanks to the President for his address was unanimously carried.

Hydatid of the Liver.—Mr. R. H. B. NICHOLSON exhibited a patient who had been aspirated for this disease. The cyst refilling, a free opening was made, and a drainage-tube was inserted. Subsequently the patient had consolidation of the base of the right lung, and he soon afterwards coughed up a quantity of hydatids. He was now well.

Scarlatina, Mastoid Abscess, Trephining: Recovery.—Mr. H. THOMPSON read the notes of this case, which was one of extreme interest.

Progressive Muscular Atrophy.—Dr. FRANK NICHOLSON showed a girl, the subject of this disease.

Cases of Aneurysm.—Mr. CRAVEN mentioned two cases which had lately been under his care. One was a large femoral aneurysm, which was completely cured by ligation of the external iliac artery. The other was a large diffused popliteal aneurysm, for which amputation had to be performed two hours after admission, the patient being

blanched and very feeble. He regretted to say that the man had been treated by a medical man in conjunction with a chemist previous to admission.

Epileptiform Neuralgia.—Dr. ELLIOTT showed a man suffering from this disease, the paroxysms of pain coming on every five minutes, and lasting about a minute and a half.

Fractures of the Leg.—Dr. LUNER related the particulars of three cases.

Two papers were postponed.

During the evening a large number of members dined together at the Vittoria Hotel.

STAFFORDSHIRE BRANCH: GENERAL MEETING.*

THE third general meeting of this session was held at the Bell Medical Library, Cleveland Road, Wolverhampton, on Thursday, May 25th, 1882; present: Mr. J. K. WYNNE, President, in the chair, and twenty-five members.

New Member.—Mr. E. A. Elkington (Newport) was elected a member of the Branch.

Homœopaths and the Membership of the Association.—The Honorary Secretary announced that he had received a letter from the President of the Council, which he would read. It was as follows.

"Hiliary Place, Leeds, April 12th, 1882.

"Dear Sir.—At the quarterly meeting of the Committee of Council, held on April 12th in Exeter Hall, the subject of the relation of the Association to homœopathy was again very earnestly discussed; and, as President of the Council, I was requested to communicate officially to you the feeling of the Committee of Council on the subject. In some Branches of the Association, a feeling appears to have arisen that the Committee of Council is indifferent on the subject; and resolutions passed by three Branches—the South-Western, the Staffordshire, the East York and North Lincolnshire Branches—would seem to indicate that, at any rate, in some districts, such an impression exists. To the unfortunate utterances of the readers of the Addresses at the annual meeting at Ryde, the Committee of Council is of opinion that it must, in a great measure, attribute this feeling; and it most unfeignedly and sincerely regrets it. It seems, however, to have been forgotten or ignored, that scarcely were the addresses delivered, ere I, in the name of the Committee of Council, publicly repudiated any complicity on its part with the readers, in the subject matter of the addresses; and that the readers themselves, in a no less public and candid manner, fully exonerated the Committee from any responsibility for or participation in their views. Notwithstanding this action, however, the feeling once originated has appeared to grow, and has culminated, in some Branches, in the passing of resolutions calling upon the Committee of Council rigidly to enforce By-law 3 of the Association. By-law 3 is to the following effect:—

"Any member may be expelled from the Association by a Resolution of the Committee of Council if carried by three-fourths of the members present, subject to confirmation at the next Annual Meeting, and he shall thereupon cease to be a member, and shall not be eligible for re-election. One month's notice of the intention to propose such resolution shall be given to any member affected thereby.

"Thus the Committee of Council is called upon to take the very extreme step of expulsion from the Association of such homœopaths as may have been either unwittingly admitted, or who, having obtained admission as regular practitioners, have subsequently become homœopaths. That the central portal of the Association (admission by the Committee of Council) is most rigorously guarded no one will, I think, deny; but that, here and there, a single candidate, not known to be of homœopathic tendencies, may from time to time obtain admission, is scarcely to be avoided in a body numbering as many as 10,000 members; and when it is remembered that, besides the central portal, applicants are admitted by the Councils of the Branches also, it will be seen at once that this possibility is largely increased. As to the non-admission of homœopaths to the Association, the Committee of Council feels confident that the voice of the Association would, without doubt, be practically unanimous; and, acting upon this belief, it makes the admission of a homœopath, as far as lies in its power, an impossibility. At any rate, it fails to see how entrance to the Association can be more effectually guarded than it is. The Committee of Council has not, therefore, as your Branch would appear to suppose, shown any sympathy with homœopathy. This is clearly shown (1) By its public repudiation of the views expressed by the readers of addresses at Ryde; and (2) By its habitually declining to admit a homœopath. As regards the expulsion of those already elected by the Branches, the Committee feels that, by affording them an excuse to pose before the

* This report was received Monday July 3rd.

public as martyrs, it would do them more good than expulsion would do them harm. The Committee would also remind your Branch that no one has ever been expelled from the Association on any mere question of opinion in medical matters. In the very few instances in which expulsion has been resorted to, it has invariably been on the ground of conduct technically infamous, *i.e.*, essentially derogatory to the profession. The Association in general meeting at Bath, when there was a feeling with regard to female members quite as hot as has ever been manifested by the profession against homœopathy, yet declined, by a large majority, to expel a female member. This seemed to the Committee of Council to show that the feeling of the Association was against the expulsion of anyone except for 'infamous conduct'; and, in spite of the warm feeling shown by three Branches on the homœopathic question, there is not before the Committee of Council any evidence that the Association is with them. Of thirty-one Branches, three are in favour of expulsion, one has declared against it, and twenty-seven have taken no steps. Lastly, it would be very injurious to the Association if the Committee of Council resorted to the expulsion of a member and the annual meeting declined to confirm its action, as required by By-law 3.—Believe me, my dear Sir, yours obediently, C. G. WHEELHOUSE, President of the Council."

In discussing the letter, many members expressed regret that the Committee of Council did not see their way to enforce By-law 3 of the Association; but, as it was considered that the question of the expulsion of members of the Association who practise homœopathy would probably be discussed at the next annual meeting, it was considered unadvisable to pass any further resolution.

Collective Investigation Committee.—Communications from the Collective Investigation Committee of the Association were read; these were referred to the Branch Council, with the instruction that a local subcommittee should be appointed.

The JOURNAL of the Association.—The following resolution was proposed, seconded, and unanimously passed: "That, in the opinion of this Branch, the JOURNAL of the Association should be more fully the medium of record of the transactions of the Branches of the Association than it is; and that the papers read, and the records of clinical observations, should have precedence of other contributions to the JOURNAL; moreover, that they should be more fully reported, and be published at an earlier period after communication than has hitherto been done." It was also resolved that a copy of the resolution be sent to the President of the Committee of Council, and to the honorary secretary of each Branch.

Proposed Increase of the Tax on Carriages.—On the proposition of Dr. C. ORTON, it was unanimously agreed that the petition to the House of Commons, which was then submitted, and which had been prepared by the Parliamentary Bills Committee of the Association, in opposition to the proposed increase by the Chancellor of the Exchequer of the tax on carriages, should be signed by those present and others, and afterwards be forwarded to Mr. Staveley Hill, Q.C., M.P., for presentation.

Communications.—The following communications were made.

1. Mr. Lawson Tait showed a large Suppurating Kidney, with a Stone in the Pelvis, which he had removed from a girl eighteen years of age. The patient had recovered without any interruption, and the wound was quite healed now, a month after the operation.

2. Mr. Tait also showed a specimen of double Hydrosalpinx, the tube on the left side having contained seven pints of fluid. The removal of the tubes was a matter of extreme difficulty, but the patient made a rapid recovery.

3. Mr. Falker exhibited the Ovaries of a case of Oophorectomy, which he had removed the previous day, and promised to give full particulars of the case at the next meeting. The right ovary weighed 342 grains, the left 120 grains.

4. Mr. Stanton showed the Uterus, with left ovary and Fallopian tube, removed from a married woman aged 43.

5. Mr. Stanton also showed the Esophagus from an old man in whom a large piece of bone and meat had become impacted, for which he had been operated.

6. Mr. Stanton showed a man fifty years old, admitted into the Wolverhampton Hospital seven months since, suffering from retention of urine. He had been operated on by the German. All attempts to pass a catheter having failed, the perineum was incised, and a catheter introduced under either: a large quantity of blood-clot having been turned out, the urethral laceration was sought for. It was now apparent that not only was the urethra torn completely across, but that the ends were much separated; the proximal portion was found first, and a director passed through it into the bladder. A silver catheter was then introduced into the meatus, and conveyed along the distal portion of the urethra into the groove of the director, and along the director, which

which was emptied. The ends of the urethra were brought together, and, being carefully approximated, were sutured in three places. The catheter was retained in the bladder for six days, no urine being detected passing through the perineum. The wound soundly closed; and, when the man was discharged, he was supplied with soft catheters of large size, having been instructed how to pass them. In the presence of the meeting, he easily passed into the bladder No. 12 French catheter.

7. Mr. Jackson also exhibited two male adult patients who had recently undergone Excision of the Head of the Humerus for disease of the shoulder-joint. The portions of bone removed in each case were exhibited, the specimens having been beautifully cleaned by being placed by Mr. Saunders, one of the pupils, under an ant-hill.

8. Mr. Jackson also showed a Tumour which he had recently removed from a female aged 55. The tumour, of rapid growth, occupied the anterior two-thirds of the alveolar process of the upper jaw, extending backwards into the mouth along the palate processes, and upwards somewhat into the nasal cavities. An extensive removal of the front and lateral portions of both upper jaws was required for the complete detachment of the growth, which, after a careful examination, was declared by Dr. Mortimer to be alveolar sarcoma. The woman made a rapid recovery, and returned to her home in the United States.

9. Mr. Edgar Flinn read a paper on the use and abuse of the services of Unqualified Assistants.

NORTH OF IRELAND BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held in the Board-room of the Royal Hospital, on Tuesday, June 15th, at 4 o'clock. The meeting was very largely attended. The President, E. C. THOMPSON, M.B., Omagh, occupied the chair.

Report of Council.—The Honorary Secretary, Dr. MOORE, read the Report of Council. It detailed the work performed by the Branch during the past year; it mentioned the accession of a number of new members; and it expressed regret at the loss sustained by the Branch in the death of Dr. C. D. Purdon. The report gave a very satisfactory account of the progress of the Branch, which now numbers 123 members. It contained a recommendation from the Council, that two at least of the quarterly meetings should in future be held in some of the larger central towns of the province.

The financial statement showed a satisfactory balance in favour of the Branch.

The Council's report and the Treasurer's statement of accounts were adopted, and ordered to be entered on the minutes of the Branch.

Superannuation of Poor-law Officers.—The petition in favour of the Poor-law Superannuation Bill was brought before the meeting, and the President and Honorary Secretary were authorised to sign it, and to have it sent forward for presentation.

The JOURNAL.—A resolution from the Staffordshire Branch of the Association was submitted to the meeting; but, as there were no complaints from this Branch on the subject to which it referred, it was decided that no action should be taken.

Collective Investigation.—A communication was read from Dr. Macdonald, the honorary secretary of the Collective Investigation Committee, requesting the co-operation of the Branch, and the formation of a subcommittee. The meeting heartily approved of the objects of the Committee, and the Council of the Branch, with the president and honorary secretary, were appointed a subcommittee to assist in carrying out the work of the investigation.

President's Address.—The PRESIDENT then delivered his retiring address, which was a most able and interesting one.

Professor CUMING moved, and Sir WILLIAM MILLER and Professor DILL seconded, a hearty vote of thanks to the President for his able and carefully prepared address.

Dr. D. A. CHARLES read notes of a case of gunshot wound of the neck.

Officers and Council.—The following were elected officers for the ensuing year. President: John Moore, M.D. Vice-Presidents: Sir William Miller, M.D., and J. Walton Browne, M.D. *Resolutions of Branch on Council of the Association:* Dr. James Cuming, Sir William Miller, William McKeown, J. W. Byers, T. K. Wheeler, and J. M. Palmer. *Members of Council:* Dr. James Cuming, J. W. Byers, Mr. Fagan, Drs. R. F. Dill, R. Esler, A. J. McFarland, W. S. Mackenzie, J. M. Palmer, A. Macdonald, J. K. Maconchy, E. Thompson, George Gray, D. A. Charles, and A. B. Vesey. *Honorary Secretary and Treasurer:* Alexander Dempsey, M.D.

The meeting terminated at the Imperial Hotel at seven o'clock, when one of the most successful meetings the Branch has yet held was brought to a close.

SOUTHERN BRANCH: ANNUAL MEETING.

The ninth annual meeting of the Southern Branch was held on Thursday, June 22nd. The chair was taken by the retiring President, ERNEST ELLIOTT, M.D., who afterwards resigned it to W. C. MACLEAN, M.D., C.B., the new President. Thirty-eight members were present.

Letters of apology for non-attendance from several members were read.

Collective Investigation.—Dr. COUSINS brought before the members of the Branch the subject of the Collective Investigation Committee of the British Medical Association, and suggested that a subcommittee should be formed. He thought it was a grand idea to have the attention of practitioners in large towns directed to collective investigation, and the object of the committee was to utilise the large quantity of important materials which were at present lost from the fact that there was no regular system adopted among practitioners for registering their views and opinions. The speaker then passed round cards on which they could record the result of their observations, and said it would bring a large quantity of useful information, which would be of immense advantage to this Committee of Investigation, and would be the means of sifting a large number of important cases. The general practitioners were the backbone of the profession, and if they took particular notice of unsettled questions it would be well for science and for the individual practitioner.—Mr. HUSBAND said it was important that the suggestion thrown out should not end in mere talk, as it was what was wanted that there should be a register of facts taken by different practitioners. Some Branches were already well organised, and a great work had been done there. It was the wish of the Association that they should get the opinion of medical men scattered far and wide, and who were quite as capable of observing as their brethren in London, and could record their opinions as accurately.—Dr. COUSINS proposed:

"That the honorary secretaries of the various districts form a Provisional Committee of the Southern Branch of the British Medical Association for carrying out the purpose of the Collective Investigation Committee."

Mr. HUSBAND seconded the proposition, which was unanimously adopted.

Papers.—The following papers were read.

1. Mr. H. J. MANNING (Salisbury): A Note concerning the Homicidal Impulse. In the unavoidable absence of the author, the paper was read by Dr. Trend. The writer stated that there few medical men who were not at some time called on to pronounce as to the soundness of some person whose sanity was in dispute, and some had to defend their opinion in courts of law. Two months ago, he was requested to examine the person who had committed no less serious an act than firing at the Queen, and who did not appear to those who examined him a lunatic. He (Mr. Manning) found him under a delusion, particularly that common one of persecution, and was examined on the subject in court. He desired to call attention to the unsatisfactory position in which medical men were placed who were called upon to give such an opinion. The law on the subject was supposed to be laid down in 1847, when Macnaughten fired on the secretary of Sir Robert Peel in mistake for that statesman, and was acquitted on the ground of insanity. The reply of the judges to questions then put to them was that to establish a defence on the ground of insanity, it must be shown at the time of committing the act a person must be labouring under such a defect of reason as not to know the nature and quality of the act, or if he did know that he did not know that he was doing wrong. That was considered at the time a very satisfactory test, but medical science had not stood still, and the judgment must now be pronounced misleading. His own experience was that the person committing such acts rarely knew that he was doing wrong, or the impulse was too strong; and he was driven to that conviction by the evidence of persons themselves, who, when recovered from their disease, assured him that they recollected doing specific acts they knew were not right, but they had no power to control their actions. Hence, when at the trial he had referred to he was asked in cross-examination whether he considered the accused knew that he was doing wrong, he felt bound to reply that he thought the action was wrong, but he was impelled to do it by an unsound delusion, which power he was unable to resist. That reply was considered to criminate instead of excusing. A week later, he received a letter from an unknown correspondent. The letter stated that the writer was an homicidal and suicidal maniac, though up to the time of writing he had only thought of these things, having by God's help, in answer to agonising prayer, not carried his thoughts into effect. The writer then described how, after an attack of nervous debility, he felt an irresistible impulse to murder his father, but was able to abstain from obeying his impulse. He described the veritable

precipice on which he stood, and stated how, after the impulse to murder his father, he had been filled with the demon of destructiveness. He dared not carry a stick for fear of smashing the windows; and when walking the streets, he felt impelled to strike someone; while, when in a railway station, he felt the impulse to throw himself or someone else under a train. He had striven not to yield, but felt he was in peril. He hoped that he would never be led to commit such an act as he had described; but if he should fall, he should call on the recipient of his letter, and ask him to produce it, giving signs by which he might be known if such an event happened. He also said that he exercised more discipline and self-control in a week than some had in a lifetime, and that he would write again if he got better, and said that the letter was not a hoax, also that he had thought it his duty to sacrifice his favourite child, as Abraham was tempted to, but had refrained. Dr. Manning went on to say that time would not allow him to enter on the wide field of thought the letter opened, or to linger on the fringe of so vast a subject; but it could not but excite sympathy. The genuineness of the letter he thought there was no doubt about, and he desired it to be remarked that it assailed with irresistible force the lawyer's test of unsoundness to which he had referred; and secondly, that it was a further and convincing proof—if further proof were needed—that unsound homicidal impulse was no vain imagining of theoretical experts, but unquestionably a startling pathological fact.—The CHAIRMAN said the subject had excited considerable attention, and he invited discussion on the matter.—Dr. SAMPSON mentioned a case that was brought home strikingly to him on the subject of Dr. Manning's paper.

2. Mr. CÆSAR: Cases of Pleurisy and the Operation of Tapping the Chest.

3. Dr. COUSINS: on the same subject.

Different medical instruments were shown by each gentleman.

New President.—The PRESIDENT said he had to vacate the chair which he had occupied during the past year, and he thanked them for the way they had accorded him their support. He was very glad to introduce Dr. Maclean as his successor. Dr. Maclean then took the chair amid applause.

The Treasurer's Account was read by Dr. Cousins, which showed that the receipts were £47 10s. 9d., the subscriptions being £23 12s.; the expenditure amounted to £21 15s. 4d., which left a balance in hand of £25 15s. 5d.

Annual Meeting in 1883: President-elect.—Mr. HUSBAND stated that it was advisable to visit one important place after another, and to no better place could their Branch go than the good old city of Winchester, which, though not now the capital of this great empire, possessed objects of great interest, and was always ably represented both in the medical and surgical profession. He proposed "That the annual meeting of the Southern Branch of the British Medical Association should be held in Winchester in 1883, and that Dr. England be the President-elect."—Mr. S. S. DYER seconded the proposition, which was adopted.

Officers.—Mr. CÆSAR proposed the re-election of the officers, with the exception that Mr. L. Leslie was put in the place of Dr. England (the president-elect) as a vice-president. The proposition was seconded and adopted.

Honorary Secretary.—The PRESIDENT moved the reappointment of the honorary secretary, and spoke in praise of the services he had rendered to the Branch.—Mr. HUSBAND seconded the proposition, and said there was not a Branch more ably represented than the Southern by Dr. Cousins.—The proposition was agreed to, and Dr. COUSINS, in response, said he was pleased to see the Branch so flourishing as it was, and he expressed his thanks to the president and the different assistant honorary secretaries for the assistance they had rendered him. In 1875, they had 110 members, but now they had nearly 300.

President's Address.—The PRESIDENT delivered his address. He remarked that domestic affliction prevented his taking the chair at the last annual meeting of the Branch in Southampton. He said he reflected with pleasure on the fact that Dr. Orsborn, late of Bitterne, had discharged the duties of the chair. Dr. Orsborn had been a few days ago struck down by one of those maladies which, although the outcome of slow antecedent structural changes, was sudden in its final attack. He expressed the sorrow all felt at this calamitous event, and sincere sympathy with Dr. Orsborn's family. He offered, in the name of his professional brethren of Southampton and neighbourhood, a hearty welcome to their visitors. Dr. Maclean reviewed briefly the work of the International Congress in 1881, referring especially to the address of M. Pasteur. He also spoke of the agitations directed against medical men, such as antivaccination, antivivisection, and the agitation against the Contagious Diseases Acts, attributing them to ignorance of physical facts. In regard to this subject, he said: "We

have in this country a considerable number of rich, well-meaning, but not always wise, people of both sexes, who are uneasy in their minds because they have nothing to do; some of them, perhaps, with a melancholy consciousness that they can do nothing, but who long to take up some 'cause'. Such fall an easy prey to the sharp-witted paid agents and secretaries to the various agitating societies to which I refer, which would perish in six months were it not for the activity of the paid officials, whose business it is to stump the country, and to whom agitation means daily bread. Such men, as a class, get in time to be demoralised by their work, and become unscrupulous in assertion and statements on the platform and in the press. For a long time our profession regarded the sayings and doings of such with amused contempt, thereby, as I maintain, committing a grave mistake; leaving the two most powerful means for good or evil—the press and platform—at their sole disposal. And so it has come about that while rabbits by the thousand can be and are submitted daily to the twelve hours' torture of the trap; while winged and ground game may be shot or wounded to any extent by unskilled sportsmen; while hares may be coured, foxes hunted to death; while calves may be killed in slaughter-houses by methods so cruel that they cannot be mentioned, merely that refined people may eat their flesh of a delicate colour; while wealthy cockneys may blow pigeons to bits or unskillfully maim them at Hurlingham, under the misused name of "sport", and as an excuse for betting; while our housemaids may poison, or in any other way destroy, becatombs of mice—Professor Stevenson may not, without a warrant from a Secretary of State, sacrifice half-a-dozen, even to aid in bringing to justice the basest murderer of our time. Who can doubt that, had the sayings of the agitators to whom I refer been, in good time, subjected to the searching criticism of Simon, Paget, Huxley, or the crushing exposition of their folly by Virchow, the Act of Parliament which now makes physiological experiment penal—except under conditions almost impossible to comply with to any good purpose for the advancement of the science, on which, as we have seen, the art of healing depends for future progress—would never have disgraced the statute-book. The Congress made a noble protest against it, which certainly had some effect on the more thoughtful and educated part of the public—the class that needed no repentance—but had none on the interested agitators, or on their well-meaning, but not always wise, followers." The President also passed in consideration the agitation against the Contagious Diseases Acts, the state of the lunacy laws, and the proper position of trained nurses in hospitals.

Dr. TREND proposed a vote of thanks to the president for his address. —Dr. ELLIOTT seconded the proposition, and it was carried with acclamation. —The PRESIDENT briefly replied, and the meeting concluded.

Excursion.—Some of the members of the Branch made an excursion to and over Royal Victoria Hospital, Netley, under the direction of the president; while the Ordnance Survey Office, by kind permission of Major-General Cooke, R.E., C.B., was open for the inspection of the members. Captain Hussey acted as guide, while Mr. B. Sanders showed the photo-zincographic process, the various documents taken by its means and other original documents in his possession.

The Dinner took place in the Masonic Hall. The chair was occupied by the President, the vice-chair being filled by Dr. J. W. Cousins; and, in addition to many of those present at the meeting in the morning, there were also present Mr. Henry Power (London), Surgeon-General Longmore, C.B., Dr. Cheesman, Rev. H. H. Pereira, Mr. Beresford Turner, Mr. Basevi Sanders (Southampton), Mr. Parkinson (Wimborne), and Dr. Allden (Shirley).

CAMBRIDGESHIRE AND HUNTINGDONSHIRE BRANCH: ANNUAL MEETING.

THE annual meeting of this branch was held at the Town Hall, Wisbech, on Friday, June 23rd. Previously to the meeting the President-elect, Mr. GROOM, received the members at luncheon at his house. The chair was taken at 2.30 P.M. by the retiring president, HERBERT LUCAS, Esq. About thirty members were present.

New Members.—Mr. W. H. Copley (Wisbech), and Mr. C. M. Sheild (Cambridge) were elected members of the Association and Branch.

Representatives in the General Council.—The following were elected: G. M. Bacon, M.D.; J. B. Bradbury, M.D.; C. F. Hodson, Esq.; and H. Stear, Esq.

Council of Branch.—The above named gentlemen, with all the past presidents, were elected as the Council of the Branch.

Secretary.—Dr. B. Anningson was re-elected Honorary Secretary.

Future Meetings.—It was agreed to hold two meetings in 1883; the

first in combination with the East Anglian Branch at Lynn, the second with the South Midland Branch at Bedford.

Collective Investigation.—A large and representative Committee, with Dr. Anningson, the Branch Secretary, as Registrar, was formed to assist the Collective Investigation Committee in their work.

New President.—Mr. LUCAS, the retiring President, introduced the new President, Mr. GROOM, who welcomed the members, and referred to past and present worthies of Wisbech, also to the meeting held there in 1858. He noticed the efforts of medical men in the cause of the sanitary improvement of towns, of which Wisbech appeared to be a good example.

A Vote of Thanks to the late President and to Mr. Groom was carried by acclamation.

Papers.—The following were read:

1. Dr. P. W. Latham: Case of Acute Rheumatism and Delirium Tremens, with Hyperpyrexia treated by Cold Bath and Salicylic Acid.
2. Dr. R. N. Ingle: Past and Present Teaching as to the Use of Ergot.
3. Mr. Herbert Lucas: Remarks on Antiseptic Surgery, with cases.

The reading of papers by Mr. Hough on a Case of Retained Fetus, and by Dr. Humphry on a Case of Absorption of the Skull after a Blow, was deferred for want of time.

Dinner, etc.—The dinner took place at the Rose and Crown Hotel at 5.30.

The North Cambridgeshire Cottage Hospital, the Museum, the Clarkson Memorial, and the Saw-Mills were open for the inspection of members, but there was little time for visiting them.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH: ANNUAL MEETING.

A MEETING of this Branch was held on June 27th, at which twenty members were present.

Officers and Council.—The following were elected: President, W. Strange, M.D. (Worcester); Vice-President, S. S. Roden, M.D. (Droitwich); Honorary Secretaries, G. W. Crowe, M.D. (Worcester); H. C. Moore, Esq. (Hereford). The Council was re-elected, with the addition of Mr. Vevers. *Representatives on the General Council:* S. S. Roden, M.D., H. Vevers, Esq., Stanley Haynes, M.D., and T. W. Walsh, Esq.

New Rules.—The following new rules were proposed and adopted.

"1. Any gentleman wishing to become a member of this Branch shall pledge himself that he is not practising, and will not in future practise, homeopathy, or any kind of irregular practice. 2. The name of any member may be removed from the roll of this Branch by a resolution carried by a two-thirds majority at a meeting of the Branch specially convened for this purpose, of which meeting fourteen days' notice shall be given. 3. Any member of this Branch whose subscription shall have remained in arrear for two years shall receive a written notice of the same from the Honorary Secretary; and should he not pay the same by the next quarterly meeting of the Branch, he shall cease to be a member of the Branch."

The BRITISH MEDICAL JOURNAL.—The Honorary Secretary having read a letter from the Secretary of the Staffordshire Branch, having reference to the manner in which communications from Branches are noticed in the JOURNAL, it was proposed by Mr. BUCK, and seconded by Dr. RODEN, and carried unanimously: "That no action be taken in the matter by this Branch."

Notification of Infectious Diseases.—Dr. RODEN proposed, and Mr. TURNER seconded: "That a petition be drawn up and presented to Parliament to the effect 'that while this Branch is in favour of notification of infectious disease being made to the sanitary authorities, it is against this notification being made compulsory on the medical man in attendance'." A discussion followed; and the motion was eventually carried.

Collective Investigation.—Dr. MAHOMED, secretary of the Collective Investigation Committee, attended the meeting of the Branch, and a local committee was formed, with Dr. G. W. Crowe as Honorary Secretary.

Dinner.—The members dined at the Star Hotel after the meeting.

Two lectures were delivered by Mr. James Startin, at the St. John's Hospital for Diseases of the Skin, Leicester Square, W.C., on Wednesday, July 5th, and Friday, July 7th, 1882, at four o'clock. Lecture I. On Acne and its Treatment. Lecture II. A Clinical Lecture on some Uncommon Eruptions of the Skin; illustrated by living specimens. 1. Nanthelasma. Two cases, children. 2. Neuroderma. Two cases, male and female children. 3. Leucoderma. Two cases, male and female adults. 4. Neurotic excoriation, in a child. 5. True Eastern Leprosy—adult. 6. The Prurigo of Hebra—child. With remarks upon their characters, cause, symptoms, diagnosis, and treatment.

CORRESPONDENCE.

THE HEALTH OF RYDE.

SIR,—May I ask you to insert in your next impression the following extract, from the report of our medical officer of health, and also one from Dr. Grove's paper, read before the Association at their last annual meeting? I by no means wish to vaunt Ryde as a favoured place, nor do I wish the public to believe that it is perfect as to its sanitation, and that it does not yet require several additions and improvements, to make it a locality to be held up as a complete pattern for other health-resorts.

I can endorse all that the medical officer says as to the rate of mortality. The cases of zymotic diseases yearly decrease: and, as the internal arrangements of our houses are improved, so will such cases.

The sanitary authority of this borough have decided to keep a register of all houses, certified by their surveyor to be properly and efficiently drained; such register to be at all times open to the inspection of visitors and others.

I do not hesitate to say that the water supplied to this borough from the springs at Ashy and Knighton (four and six miles distant), is most abundant, and of an unexceptionably pure and wholesome character.—I am, sir, yours faithfully,

BENJ. BARROW, J.P., Mayor of Ryde, President of the Association.

Extract from the annual report of the officer of health (A. Woodwards, Esq.): "Last year, the death-rate in the borough of Ryde was 13.1 in the 1,000; excluding 19 who died in the infirmary, and not belonging to the borough, it was only 11.1. This death-rate has never been previously reached. The Registrar-General classes the Isle of Wight amongst the most healthy of watering-places."

Extract from paper by Dr. Groves of Carisbrook: "It is unquestionable that the sanitary authority are keenly alive to the requirements and interests of the borough; and, as time goes on, under improving systems of sanitation, Ryde, if not already, is destined at no distant date to become the queen of watering-places."

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Monday, July 3rd.

Royal Commission on the Condition of the Thames.—Sir J. M'GAREL-HOGG asked the President of the Local Government Board whether his attention had been directed to the fact that Mr. Abernethy, C.E., and Dr. Williamson, F.R.S., two of the members appointed on the Royal Commission to inquire into the condition of the Thames, had already prejudged the questions to be submitted to the Commission, Mr. Abernethy having stated on the 7th of December, 1875, at a meeting of the Institution of Civil Engineers: "As Sir Joseph Bazalgette was present, he wished to take the opportunity of expressing an opinion he had long formed that the half measure of discharging the sewage of the metropolis in the Thames at Crossness would eventually turn out a source of great pollution to the river"; and, further, having appeared before the Commission appointed to inquire into the presence of deposits in the Thames arising from sewage at Crossness as a witness to support his former expressed opinion as to pollution; and Dr. Williamson having expressed opinions to the same effect in reports to the Conservators of the Thames, stating that "the Metropolitan Board of Works have carried the nuisance a little further down the river", and "that the decomposition of organic matter in these mud deposits (meaning mud deposits alleged to be deposited from sewage thrown into the Thames from the works of the Metropolitan Board of Works) keeps up a constant source of pollution of the river"; and whether, under these circumstances, the Government would reconsider the constitution of the Commission.—Mr. DODSON said in reply: When these two gentlemen were placed upon the Commission, the Government were not aware that they had expressed any opinion upon the question; but even if they had been aware that such was the case, it would not have altered their decision. The hon. member must be well aware that the mere fact of having expressed an opinion is no disqualification for a member of either branch of the Legislature acting on a Committee, or for such member or any other person serving upon a Royal Commission. In the present case, the opinions quoted appear to have been expressed some years ago, and having regard to the professional eminence and the high character of the gentlemen referred to, the Government cannot for a moment suppose that they will fail to discharge the duty of a quasi-judicial position with complete impartiality.

The Public Health (Fruit Pickers' Lodgings) Bill was read a third time.

The Spread of Small-pox.—Mr. J. TALBOT asked the President of the Local Government Board whether he had been able to ascertain the truth as to the small-pox patient who was alleged to have gone from Guy's Hospital to the Stockwell Hospital on a public conveyance; and whether, with the view of preventing the spread of disease, he would endeavour to arrange that the authorities of the various metropolitan hospitals should have ready access to the ambulances provided by the Metropolitan Asylums Board or by the parochial authorities for the purpose of conveying infectious persons to the hospitals appointed for their reception.—Mr. DODSON said, in reply: I have now ascertained that the person referred to came to Guy's Hospital among the crowd of out-patients who resort there, and was found to be suffering from small-pox; and that he was advised to leave the out-patient room, and apply for admission to a small-pox hospital through the intervention of the parish authorities, and without exposing himself unnecessarily so as to endanger others. The going to the Stockwell Hospital on a public conveyance appears to have been entirely the man's own act, for which the medical officer at Guy's was in no sense responsible. It is evident that the governing bodies of the London hospitals have at present much difficulty in dealing with these cases when they present themselves, as they have no accommodation for them; and I have now under consideration the arrangements which should be adopted for the temporary retention of patients of this class until they can be removed, and for rendering the ambulances of the managers of the Asylums District and the parochial authorities more readily available for their removal.

Vaccination.—Mr. HOPWOOD asked the President of the Local Government Board whether the Board was prepared to advise the public which of the two modes of vaccination now in use was to be preferred—namely, the one with the matter derived from arm to arm, or the one with the lymph from the calf recently provided by the Department; and whether it had been shown that tubercle may be transmitted by such lymph.—Mr. DODSON said, in reply: The Board have every confidence, after their long experience, in vaccination from arm to arm; but they have not yet had experience on a large scale of vaccination direct from the calf. Both are believed to be equally trustworthy; but I am not prepared to advise my hon. friend or any other person which he should select. It is not within the knowledge of the Board that tubercle has been transmitted by lymph from the calf.

The second reading of the Vivisection Abolition Bill is deferred till Tuesday, July 18th.

Mr. Warton, Mr. Heneage, and Mr. Robert Fowler have given notice that they will, on the second reading of the Vaccination Acts (Compulsory Clauses Repeal) Bill, move that it be read a second time upon that day three months.

Mr. ROUND has asked for a return showing, for each county in England, the number on January 1st, 1881, and the cost of pauper lunatics during the year ended at Lady-Day 1881, or at the period when the financial year terminated in 1881, distinguishing the sources from which the expenditure was defrayed, and including all payments made by union, country, or borough authorities during the same year, with a statement showing the aggregate expenditure on land, buildings, and alterations by each authority within the county since the erection of its asylums, and a statement of the debt at present outstanding; the return to include similar information for each borough providing a separate asylum; together with a similar return for Scotland and for Ireland.

Mr. HERBERT GLADSTONE will bring in a Bill to repeal so much of the Friendly Societies Act, 1875, as relates to quinquennial returns of sickness and mortality.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in Anatomy and Physiology at meetings of the Board of Examiners, on the 1st and 3rd instant, and when eligible will be admitted to the pass examination.

Messrs. Francis H. Knaggs, Thomas Rhodes, Edwin Greenough, George Wilson, and Herbert W. Pilgrim, students of the Edinburgh School; James Lazenby, William J. Ruddock, William M. Yeoman, and Joseph T. Roberts, of the Newcastle School; James T. Simpson, Ambrose Atkinson, and Albert E. A. Pearson, of the Leeds School; Harold B. Shaw, B.A., William H. Smart, B.A., and Francis M. Haig, B.A. Cantab., of the Cambridge School; Robert H. Rains, William Arnold, and Joseph A. Tooner, of the Manchester School; William Evans, Edward P. P. Macloahlin, and Robert C. Owen, of the Liverpool School; George F. A. Da Costa, and George Vincent, of the Aberdeen School; George C. Helps, and Arthur Bullied, of the Bristol School; Robert J. B. Howard, of the McGill School; John St. L. Clarke, of the Dublin

School; Donald F. Macpherson, of the New York School; Henry D. McCulloch, of the Calcutta and Glasgow Schools; James Calvert, of St. Bartholomew's Hospital; Walter J. Reed, of the Birmingham School; and George R. M. Pollard, of Guy's Hospital.

Sixteen candidates were rejected, including one for six months.

The following gentlemen passed on the 4th instant.

Messrs. Herbert L. Williams, Carl Frese, Octavius S. Fisher, Henry A. Marsden, William J. Fern, and John Aspinall, of the Manchester School; Thomas E. Hillier, B.A., George D. Haviland, B.A., Joseph S. Hinnell, B.A., and Herbert C. W. Jones, B.A., of the Cambridge School; Roland J. Riley, and Ernest Maberly, of the Birmingham School; Henry Waite and George Forden, of the Leeds School; John E. Nevins, of the Liverpool School; George R. Hall, of the Newcastle School; William A. Barham, of St. Bartholomew's Hospital; and John A. Fox, of Guy's Hospital.

Ten candidates were rejected, including one for six months.

The following gentlemen passed on the 5th instant.

Messrs. Edward C. Hare, Alfred H. Fowler, Albert W. Webb, and John D. Hughes, of Guy's Hospital; William B. Yates, John B. Mann, and John H. White, of the Manchester School; William Mackonochie, and William R. N. Maloney, of St. Mary's Hospital; Hugh Walsham, of St. Bartholomew's Hospital; Arthur G. Laidler, of the Newcastle School; Felix C. Kempster, of the Westminster Hospital; Frederick Thomas, of the London Hospital; and Percy R. Stevens, of St. George's Hospital.

Fourteen candidates were rejected, including five who had an additional three months.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, June 29th, 1882.

Aslett, George Stratton, Oaklands, near Carmarthen.
Beavor, Hugh Reeve, King's College Chambers, Strand.
Chadwick, Montague, Philpot Street, Commercial Road.
Edwards, George Frederick, Derby.
Fenwick, Edward Henry, 20, Harley Street, W.
Fink, George Herbert, Regent's Park College, N.W.
Lynnan, Robert Garner, The Quarry, Stoke-on-Trent.
Penhall, William, 14, Fumival's Inn, E.C.
Milton, Herbert Meyrick Nelson, Richmond Terrace, Clapham.

The following gentlemen also on the same day passed their Primary Professional Examination.

Smith, John Charles, Charing Cross Hospital.
Spiller, Frederick Winstanley, Birmingham Hospital.

At the recent examination for the Prizes in Botany given annually to medical students by the Society of Apothecaries, the successful candidates were: 1, John Barker Smith, St. Thomas's Hospital, Gold Medal; 2, Charles Percival Smith, St. Bartholomew's Hospital, Silver Medal and Books.

MEDICAL VACANCIES.

The following vacancies are announced:—

BELMULLET UNION.—Medical Officer for Knocknallower Dispensary District. Salary, £100 per annum, with £10 yearly as Medical Officer of Health, registration, and vaccination fees. Election on the 10th instant.

BURY ST. EDMUNDS FRIENDLY SOCIETIES MEDICAL AID ASSOCIATION.—Resident Medical Officer. Salary £200 per annum. Applications by July 15th.

CAMBRIDGE COUNTY LUNATIC ASYLUM.—Assistant Medical Officer. Salary, £100 per annum. Applications by July 15th.

CENTRAL LONDON SICK ASYLUM DISTRICT.—Assistant Medical Officer. Salary £100 per annum. Applications to the Clerk, Cleveland Street, Fitzroy Square, W., by July 15th.

CHARING CROSS HOSPITAL.—Surgical Registrar. Salary, £40 per annum. Applications by July 15th.

CHILDREN'S HOSPITAL. Birmingham—Assistant Resident Medical Officer. Salary, £60 per annum. Applications by July 18th.

COUNTY ASYLUM. Shrewsbury—Junior Assistant Medical Officer. Salary, £100 per annum. Applications by July 15th.

CUMBERLAND INFIRMARY. Carlisle—Assistant House-Surgeon. Salary, £60 per annum. Applications by July 25th.

FLINTSHIRE DISPENSARY.—House-Surgeon. Salary, £100 per annum. Applications by July 15th.

GUY'S HOSPITAL.—Resident Medical Officer. Salary £120 per annum. Applications by July 15th.

HACKNEY DISPENSARY.—Medical Officer. Salary, £120 per annum. Applications by July 15th.

HACKNEY DISPENSARY.—Dispenser of Medicine. Salary, £60 per annum. Applications by July 15th.

HARTLEY HOSPITAL.—House-Surgeon. Salary, £80 per annum. Applications by July 15th.

LONDON HOSPITAL. Whitechapel, E.—Junior Assistant Surgeon. Applications by July 15th.

LOYAL LANCASHIRE LODGE OF ODDFELLOWS (Manchester Unity)—Applications to J. Holwell, Secretary, 2, Southdown Place, Devon.

NORTH EASTERN HOSPITAL FOR CHILDREN. Hackney Road—Assistant Medical Officer. Salary, £100 per annum. Applications by July 15th.

ROYAL ACADEMY OF MEDICINE.—Lecturers in Medicine. Applications to the Society, Apothecaries' Hall, E.C.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington—Lecturer on Histology and Experimental Physiology. Applications to the Dean by July 17th.

ST. MATTHEW, Bethnal Green.—Assistant Medical Officer. Salary £150 per annum. Applications by July 12th.

ST. THOMAS UNION, Devon—Medical Officer and Public Vaccinator. Salary, £90 per annum. Applications by July 13th.

THE CANCER HOSPITAL, London and Brompton (Free)—House-Surgeon. Salary, 75 guineas per annum. Applications by July 29th.

SUSSEX COUNTY HOSPITAL, Brighton—Assistant House-Surgeon. Salary, £40 per annum. Applications by July 26th.

WAREHAM AND PURBECK UNION.—Medical Officer of Health. Salary, £100 per annum. Applications by July 25th.

WEST ROSEDALE IRONSTONE COMPANY, Limited—Medical Officer. Salary, £70 per annum. Applications by 12th instant.

MEDICAL APPOINTMENTS.

BLACKBURN, H. B., M.R.C.S., appointed Medical Attendant to the Home for the Aged Poor, St. George's Road, Notting Hill, W.

BREWER, C. S., L.R.C.P., appointed Junior House-Surgeon to the Birkenhead Borough Hospital, vice C. J. Willey, M.B., resigned.

CROWTHER, G. D., L.R.C.P., appointed Assistant House-Surgeon to the Infirmary, Halifax.

DUNDEE, J. Junior, L.R.C.P., appointed Medical Officer for No. 8 Dispensary District to the Belfast Union, vice J. Dundee Senior, M.D., deceased.

GRADHAM, G. W., M.D., appointed Inspector of Lunatic Asylums, New Zealand.

NEWMAN, W. H. C., M.B., appointed House-Surgeon to the Evelina Hospital for Sick Children, vice J. Phillips, M.B.

O'BRIEN, C. M.D., appointed Medical Officer for Pallaskeury Dispensary District to the Rathkeale Union, vice G. L. Griffin, L.R.C.P.I., deceased.

POPE, Percy, M.R.C.S. Eng., L.R.C.P. Ed., appointed Poor-law Medical Officer for the Weald District, Hendon Union, vice J. R. Pope, M.R.C.S. Eng., L.S.A., deceased.

QUICKE, W. H., M.R.C.S.E., appointed Clinical Assistant to the Western Ophthalmic Hospital, 155, Marylebone Road, vice P. S. Jakins, M.R.C.S., resigned.

ROBERTS, T. A., M.R.C.S., appointed Medical Officer for the Chapel Hill District to the Boston Union, Lincolnshire, vice C. Blades, M.R.C.S., deceased.

ROUTH, A. M.B., appointed Physician-Accoucheur to the St. Pancras and Northern Dispensary, vice R. T. Smith, M.D., resigned.

SLATER, D. J., M.R.C.S., appointed Resident Clinical Assistant to the East London Hospital for Children, vice R. Sanderson, M.B., resigned.

SMALLMAN, B. F., L.R.C.P.I., appointed Medical Officer for the Sutterton District to the Boston Union, vice J. A. Storey, L.R.C.P.

SYMONDS, C. J., F.R.C.S., appointed Surgeon to out-patients to the Evelina Hospital for Sick Children.

WALKER, C. E., M.B., appointed Medical Officer of Health to the Darlington Rural Sanitary Authority.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

BATEMAN.—On July 5th, at Whitechurch, Oxfordshire, the wife of Francis Bateman M.B.Lond., of a daughter.

MARRIAGES.

ARMSTRONG—CARDEW.—On the 5th inst., at Christ Church, Reading, by the Rev. T. Teignmouth Shore, Chaplain in Ordinary to the Queen, and the Rev. Haydon Cardew, uncle of the bride, Henry George Edward Armstrong, third son of the Rev. J. H. Armstrong, Vicar of Staines, to Annette Ethel, eldest daughter of the Rev. F. Cardew, Chaplain of the Royal Herks Hospital.

CONFORT—FLOWER.—On Tuesday, the 4th of July, at St. George's Church, Hanover Square, by the Revd. Wm. Heath Marsh, Rector of Lambeth, North, and vicar of the bridegroom, Alfred Cooper, Esq., F.R.C.S., to Lady Alice Flower, widow of the late Herbert Flower, Esq., and youngest daughter of the late Earl of Fife, K.T.

GABB—WILSON.—On the 4th instant, at the Parish Church, Mitcham, by the father of the bride, Claud Baker Gabb, of Havting, to Ada Katherine, eldest daughter of Rev. D. F. Wilson, Vicar of St. Andrew's, Havting.

STAMP.—On the 4th inst., at St. James's Church, London, by the Rev. J. G. H. Stamp, Vicar of St. James's, to Miss Alice Stamp, daughter of the late Mr. Stamp, of Pembroke House, 1, London Avenue, and Miss Alice Stamp, Esq., R.N., of Winchester Terrace, Chelsea.

DEATHS.

KERSWILL.—On the 27th June, at St. Germans, Cornwall, Robert Kerswill, M.R.C.S. Eng., aged 74.

LING.—June 28th, at Abbotsford, Torquay, Edward Clayton Ling, M.R.C.S., L.S.A., of Darfield House, Aldborough, Suffolk.

NEWINGTON.—On July 3rd, Samuel Newington, M.A., M.R.C.P., of Ridgeway, Titchhurst, aged 63.

SHARPE.—On the 4th inst., at Red Hill, near York, William Henry Sharpe, F.R.C.S., formerly of Birmingham, and for many years a member of the late Francis Kiernan, F.R.C.S., a member of the Council of the Royal College of Surgeons.

GUY'S HOSPITAL.—The following appointments have been made at this hospital. *House-Surgeons:* W. H. C. Newnham, B.A. (Cantab.), M.R.C.S.; R. H. Perks, M.R.C.S., L.R.C.P.; L. E. W. Stephens, M.R.C.S., L.S.A. *House-Physicians:* T. M. Day, M.R.C.S., L.R.C.P.; O. J. Currie, M.R.C.S.; J. A. P. Price, M.B. (Oxon.), M.R.C.S., B.A.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....	Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopaedic, 2 P.M.
TUESDAY.....	Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 2 P.M.
WEDNESDAY...	St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopaedic, 10 A.M.
THURSDAY....	St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.
FRIDAY.....	King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.
SATURDAY....	St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—	Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin M. Th.; Dental, M. W. F., 9.30.
GUY'S.—	Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.
KING'S COLLEGE.—	Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th., 3; Throat, Th., 3; Dental, Tu. F., 10.
LONDON.—	Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.
MIDDLESEX.—	Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.
ST. BARTHOLOMEW'S.—	Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopaedic, F., 12.30; Dental, Tu. F., 9.
ST. GEORGE'S.—	Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopaedic, W., 2; Dental, Tu. S., 9; Th., 1.
ST. MARY'S.—	Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., Tu. F., 2; Eye, Tu. F., 9.15; Ear, M. Th., 2; Skin, Tu. Th., 1.30; Throat, M. Th., 1.45; Dental, W. S., 9.30.
ST. THOMAS'S.—	Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.
UNIVERSITY COLLEGE.—	Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. T., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.3.
WESTMINSTER.—	Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with Duplicate Copies.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

THE CHAIR OF PATHOLOGY IN THE GLASGOW UNIVERSITY.

SIR,—I am glad to think there is a likelihood of a chair of pathology being endowed in connection with Glasgow University. Such a want has been felt for years, though general pathology has been somewhat compulsory since 1874 or 1875, I think. An Erasmus Wilson, Peabody, or Coutts, does not turn up every year; and I hope the graduates of the University will show their appreciation of Dr. Campbell's motion by making it a financial success. It will be a simple matter indeed for her graduates to raise £6,000; and this sum, say at three and a half per cent., would realise a very fair amount combined with the class fees.

As soon as the scheme is "floated," I will give five guineas towards it. It has been a wonder to me that schools, colleges, and universities, have not adopted this plan for many other purposes, for in unity there is strength. Medical men have many calls on their hard earnings, and many bad bills; but this is unique and soul-inspiring when we reflect on other universities. Wishing the scheme all success, I beg to remain, yours, etc.

RICHARD McDUGALL, M.B. and C.M. Glas. Univ.

Murrumburrah, Sydney, New South Wales, May 16th, 1882.

SIR,—I should be obliged if you would kindly mention, in answer to many inquiries, that the inhalation-respirator I described in the lecture published last week can be obtained of Messrs. Corbyn and Co., 300, High Holborn, who have undertaken to make it for a few pence.—Your obedient servant,
I. BURNEY YEO.
44, Hertford Street, July 5th.

TITLE OF DOCTOR.

SIR,—Your correspondent in the JOURNAL of July 1st, "M.R.C.P.," says that the public are totally wrong in supposing men with M.D. after their names have studied harder or passed a more stringent examination than men who have obtained the M.R.C.S. and L.R.C.P. I consider he is wrong himself, and the public are right. If not, why do men, after having obtained diplomas in London, go either to Cambridge, Durham, or elsewhere, and work hard for another year, and then often fail, if the examinations are equal in every respect? Why should they want to study any more? I presume "M.R.C.P." would class Durham among the easier universities. I have seen there men with the F.R.C.S., and few without a double diploma, obtained in London, working hard for the final M.B., and many sent back after all. It is not uncommon there to see half the double qualified gentlemen sent back for six months' more study. I again ask: If the London examinations are equal, why this extra study and failure?

"M.R.C.P.," I suppose, will certainly allow that those who take the M.B., and then the M.D., have certainly to pass a more difficult examination in arts, and therefore must be better educated men. I think your rule is a very wholesome one, viz., not to style anyone except a M.D. "Dr.," and that you do not think, like a gentleman who holds the diploma of the College and Hall thinks, near me, that all quacks are "Drs." "I only put plain Mr. on my plate," he said to me the other day. I replied, I did not know what else he could put, except apothecary or surgeon; you certainly could not put "Dr." I consider that any man with any dignity about him would not allow himself to be called "Dr." without he was a M.D., M.B., or a F.R.C.P.; and if anyone constantly addressed him as "Dr.," he would politely inform them that he did not possess that title.

Men with dignity, I believe, always wish to be styled what they are, not what they are not. The whole bother, in my humble opinion, could be settled if university men agreed to take away "Dr." from their plates, and merely put M.B. or M.D.; the public would soon know what it meant; then all the rest could be "Drs." I would also advise men who have borne the heat and burden of the day, to always use their M.B. after the M.D., to clear themselves from the gentlemen who have obtained the M.D. after being in practice for so many years.—I remain, your obedient servant,
VENETA QUESTIO.

SIR,—I should be glad to hear of a home for epileptics (female), suitable for one of the respectable lower class, where the charge would be reasonable.—I am, etc.,
MEMBER.

LEWIS'S MEDICAL LIBRARY.

SIR,—In the letter of "A Country Member," which appeared in the JOURNAL of July 1st, in reference to the subject of cheap editions of medical books, allusion is made to a supposed difficulty in procuring books from my library by subscribers and book-clubs in the country. Fearing that this may possibly create an impression among those members of the profession residing out of London, who are not at present in connection with the library, that its utility is limited to London subscribers only, perhaps you would kindly allow me to say that, so great are the facilities now for sending boxes of books with rapidity to long distances (the boxes are provided by me), that we find no difficulty whatever in supplying the needs of our numerous subscribers residing in all parts of England, and even in Scotland, Ireland, and on the Continent. That the distance is no obstacle is sufficiently attested by the fact, not only of the subscriptions being renewed year after year, but from the constant accession of new subscribers living far away from London.—I am, sir, yours respectfully,
H. K. LEWIS.
136, Gower Street, London, W.C., July 1st, 1882.

SIR,—A patient of mine, suffering from carcinoma, has been advised to drink Missisquoi water, Franklin, Co. Vermont, U.S.A., which is said to have a local reputation in cases of cancer. Can anyone tell me how to obtain analysis of this water, or whether there be any truth in the statement, or if it be simply charlatanerie?—I am, etc.,
UN ABONNEUR.

* It is said that the alleged effects of the water in question depend on the silica it contains. Silica has long been known as a remedy for cancer; and an interesting paper on the subject will be found in the *Edinburgh Medical Journal* for November 1874. The waters of Tepitz in Bohemia, and of Gastein in the Tyrol, also contain silica.

TREATMENT OF ACNE.

SIR,—All who have had any experience in the treatment of acne will agree with your correspondent, Dr. Clifton Wray, who says, much of the acne we see is due to the baneful habit of masturbation amongst the young adults, both male and female; this is my experience also; and if medical men would only have the courage to closely question their young patients suffering from this disease, and, if they find it to be the cause, as is so often the case, to abjure them to desist, they would confer upon their young patients an incalculable benefit, morally and physically, let alone their bad complexions, for which there is no specific cure—but careful attention to all these matters will do far more for them.—I am, sir, your obedient servant,
JAMES STARTIN.

16, Sackville Street, W., July 4th, 1882.

CLINICAL LECTURE ON CASES SHOWING THE UTILITY OF A LAMINATED PLASTER SPLINT.

By FURNEAUX JORDAN, F.R.C.S.,

Surgeon to the Queen's Hospital; Professor of Surgery, Queen's College, Birmingham; Consulting Surgeon to the Women's, the Skin and Lock, and the West Bromwich Hospitals.

We have now in the wards, and always have had during the last few years, several cases showing the use of a simple splint—a splint so simple, that I think we may not inaptly call it the universal splint. I will tell you in a few words what it is, and go more into details afterwards.

Take a few sheets of muslin, put them one over another, spread plaster-of-Paris between them, roll or fold up this "layered" sheet in any convenient form, dip it in water a few moments, lift it out of the water and very gently squeeze it, spread it out neatly and smoothly, and you have a soft sheet of splintage ready for any purpose which splints can secure. This sheet may be little or big; it may envelope a finger or a limb, or the trunk, or the trunk and the head, or the trunk and the lower limb. It is simply drawn under the part, and folded over it. The drawing under, the folding over, and the trimming by means of scissors, are the work of a time measured by seconds. The part is kept in one unaltered position by intelligent force until the sheet sets—a time measured by minutes. A firm, durable, and perfectly fitting splint is thus obtained, which may be left on for weeks or months.

Here is a woman who came in with a tucked knee, the result of joint-disease of some standing. The knee was flexed at a right angle, and the head of the tibia was slightly displaced backwards. Under ether, and by a contrivance to which I shall refer again, we straightened the knee. A prepared laminated plaster splint, having been dipped in water and unfolded, was drawn under the limb, folded over it, and allowed to set before the extending forces were relaxed. In another ward, we shall see a fractured femur treated by a similar method; the pelvis, thigh, and upper part of the leg being enveloped in a layered plaster splint. All our broken thigh-bones are treated in this way, with this signal advantage—we get them up on crutches in a fortnight. Our broken tibiae we get up in a few days. Some of you have recently seen a case of osteitis of the wrist enveloped in a laminated splint, a hole in which let the thumb pass through.

This layered plaster splint is, in principle, the exact opposite of the plaster roller. For the lower limb, especially for the lower limb and pelvis, the unrolling of plaster bandages is a slow and tedious proceeding, and necessitates many movements and many positions.

The principle of lamination or stratification in the construction of plastic splintage may, with suitable change of detail, be extended to other materials; but I have hitherto found the checked muslin and thinly spread plaster in superimposed layers the most generally useful—useful in fractures, joint-diseases, spinal diseases; useful, in short, wherever rest, immobility, and support are needed.

The laminated plaster splint is quickly and easily made. The surgeon first determines how much of the limb or trunk it is well to cover. A pattern is then cut. One of the layers of checked muslin does very well for this purpose, as it is stiff enough to keep its shape, and is easily marked with a pencil. Afterwards, other pieces of muslin are cut of the same size and shape. Six or seven layers make a good average splint; three or four will do for a child; eight or nine may be needed for a heavy, restless, or delirious patient. The first layer is laid flat on the table, and sprinkled with a stratum of good dry powdered plaster, which is smoothed over with a spatula or paper-knife; on this, with its margins corresponding, is placed the next layer of muslin, which in its turn is sprinkled with plaster. The process is repeated until all the layers are in place. The splint is then slowly and carefully folded or rolled up and kept dry, ready to be dipped in water when wanted. The water—let this be well understood—immediately passes through any number of layers of muslin and plaster, thoroughly drenching them both in less than sixty seconds.

The part to be encased is drawn into position, and held so until the plaster partially sets. If the fingers of the extending hand be in the way, as when the foot is included in the splint, a temporary sling of webbing or plaster over the instep and heel may be used, which can be drawn out or relaxed afterwards. A flannel bandage, or layer of wadding or jersey, is next applied without traction. The splint is now dipped in hot water (hot for comfort and for more rapid setting) for a minute or so. When taken out, it is very gently squeezed, being still quite sloppy and limp. When the water is pressed out too freely, the sheet will be sandy, friable, and difficult to apply. The splint is then unfolded, and drawn out in a perfectly soft and smooth sheet; it is next put under the ailing part, and simply folded over. The overlapping margins instantly and firmly adhere to each other. Traction should be most carefully avoided; perfect neatness is enough. The layered plaster splint is applied with as much ease, as regards limpness and adjustability, as is a fomentation; but it is a fomentation which sets, and, with rock-like firmness, lastingly holds the part in any given position.

In the upper limb, the laminated sheet should be large enough to overlap two or three inches; in the lower limb, the overlapping should extend to three or four inches; in the trunk, to five or six. A pair of strong sharp scissors easily trims the splint while it is still wet. Redundance may be now curtailed, or windows made. To get a neat fit opposite joints, especially flexed joints, as the elbow and ankle, the margins of the splint may be notched at each side, or V-shaped bits may be cut out. The corners of a paper box suggest methods of dealing with the elbow. Windows may also be made, and redundancies curtailed very readily, by means of a sharp scalpel, when the plaster is partially set. When the splint is quite dry, a Hey's saw may be used. When it is wished that a sixth or fourth of a whole limb shall be visible, a longitudinal strip is easily removed with a knife in the early setting stage—a stage which lasts long enough for any desired degree of carving. Windows, scollops, or openings of any kind, do not weaken a splint; and it is better to make them opposite bony prominences, breasts, and other compressed parts, as well as opposite abscesses, wounds, and compound fractures. If it be desired, a sheet-splint may be put on at first, so as to leave a longitudinal strip uncovered. If so, a separate outer layer of muslin must be large enough to overlap, and be fixed with a row of pins for a few minutes. I have adopted this method several times; but I much prefer the overlapping method for ease of application and for efficiency. If, in rare cases, an exposed strip be desired, the carving method in the setting stage is preferable. In the upper limb, a gaping longitudinal splint may be conveniently held in place by a few turns of bandage until the setting is firm.

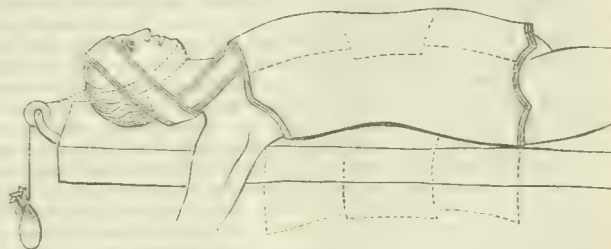


Fig. 1.—Application of Laminated Plaster Jacket.

It is convenient, in making a very large splint, to envelop, say, the trunk, or the pelvis and the lower limb; to put it on in two or three pieces made to overlap each other. Where the layered pieces overlap, they amalgamate and form a perfectly homogeneous and continuous splint.

I will now describe the method of putting on the laminated splint in a few of its more simple but most useful applications. I begin with a simple method of applying a plaster jacket. It may be put on under the tripod—an advantage when the tripod is needed. I usually adopt the horizontal posture, as advocated by Dr. Walker. Three layered pieces, averaging about thirty-six inches by seven or eight inches, are prepared. These three rolls are easily packed, and may be carried any distance. If any suspicion of dampness exist, hold them over a fire a few minutes in a frying-pan lined with a newspaper. Marks having been previously made on the mattress opposite the axilla and the trochanter, the pieces, when taken out of water, are so arranged that the patient, sitting in readiness, lies down upon them. The middle piece is neatly and leisurely folded over the trunk (encased in a jersey) first; next, the upper and lower pieces are folded over, their

margins freely overlapping the central piece. The upper and lower pieces are so applied as to make a waist—the overlapping ends of the upper piece tending upwards, the ends of the lower piece tending downwards. It might be naturally feared that the margins of the pieces would be sudden or prominent. On the contrary, the margins are graduated; and, if the water have not been pressed out too freely, the continuity of the splint is so complete that they cannot be found. The armpit and groin portions should be quite freely cut out when the plaster is partially set.

I have for several years used a laminated plaster jury-mast, which fixes the head and neck in one immovable block—so immovable that, if the finger move the spine of the ilium, the head is moved at the same time; or, if the head be turned, the trunk is turned with it. The jury-mast is a layered strip (eight to ten layers), about forty-five or fifty inches long by two and a half or three wide. The deformity, if any, of cervical caries should be alleviated by horizontal mild pulley-extension, maintained by a chin and occiput sling for some weeks or months before the jury-mast is put on. It is put on thus. The patient reclines



Fig. 2.—Application of Plaster Sheet Splint for Fractured Femur and Hip-disease.

on a narrow table and a mattress with no pillow, pulley-extension with webbing being kept up until the plaster sets. The prepared multiple strip, rolled up at each end, after being dipped a few moments in water, is unrolled, stretched, and smoothed; its centre is then applied to the forehead well away from the eyes; the two ends are next carried to the back of the neck, where they cross—one end being carried under the neck first, then the other. They are drawn firmly enough to closely embrace the head and back of the neck; the ends are then brought forward, and cross each other again in front of, or near, the sternal notch, where they are lastly fastened by a plaster jacket laid ready to be put on in the manner I have just described. Before the laminated strip is applied, the hair is cut short, and a double strip of flannel, with cotton-wool about the ears, is applied by the same method as the plaster strip. Before the strip sets, its upper margin should be partially everted from the angle of the jaw to the sternum, giving thereby much ease to the neck, especially when the jaw is moved. Possibly the principle of this jury-mast may be carried out in

The plaster sheet-splint for fractured femur and for hip-disease is also put on in three pieces, and, when applied, forms one continuous splint, embracing the pelvis, the thigh, the knee, and the upper part of the leg. The piece first put on embraces the upper part of the thigh and the pelvis spica-wise, the ends crossing over the trochanter. Overlaping this, and fixing the ends, is the pelvic piece, which is so and placed as to embrace the pelvis and the upper part of the thigh, and half the leg. All these pieces are drawn under the patient, and put in place before any one of them is folded over. Moreover, the needed position is also obtained before the folding over begins. The margins of the third piece may need a cut here and there, to avoid wrinkling. The fixity is so complete that, as a rule, it is not necessary to remove the splint until the bone is healed. In the case of a fracture of the femur, the patient should be kept in the position of the knee, and the leg, with a splint to the knee, should restore a good position before the plaster is put on. In some time, crutches and a patten on the

sound foot may be used. This splint is cheap, durable, and simple, and, to my mind, superior to Thomas's splint. Diffused pressure is better than the pressure of stems and bands.

Perhaps the greatest utility of the laminated splint is seen in the treatment of knee-disease, especially in that stage where chronic and persistent flexion exists. I straighten the tucked knee by a peculiar but simple method. Either being given, extension is made from the ankle; but, what is much more efficient, direct pressure is made on the knee by means of a long broad strap of adhesive plaster thrown over the knee, the ends being passed through a hole in the table underneath the knee. As you see, I have here a table full of round holes, each a little more than an inch in diameter; but one or two apertures in an ordinary table will do. In keeping up good positions while sheet splints are setting, a peg or two stuck in suitable holes help to steady the extending hands. To return to the knee; when the limb is enveloped in flannel, one assistant takes charge of the ankle, another has the strip of plaster (already fixed on the knee) in his care. A layered plaster splint, of sufficient size to embrace two-thirds of the thigh and two-thirds of the leg, is dipped in water, unfolded and smoothed, and

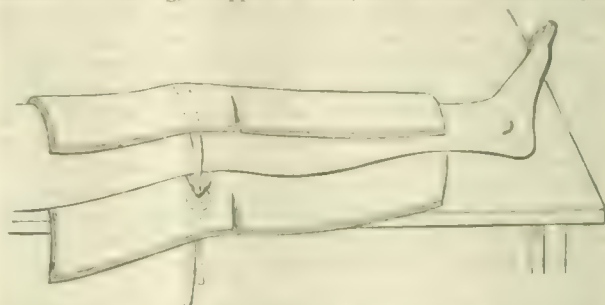


Fig. 3.—Application of Splint in Disease of Knee.

drawn under the limb, the knee of which lies over the opening; a slit is cut with sharp-pointed scissors in the sheet; the adhesive strap is passed through the slit and the hole; the limb is now gently but firmly drawn into position; the knee-strap, with traction made under the table, doing the greater part of the work. The best possible position being obtained, the sheet is lastly folded neatly over the limb, and the position maintained until the plaster is sufficiently set. The assistant in charge of the knee-strap fixes it in a given position by drawing it tightly against the edge of the aperture. This knee-splint should be worn several months, and renewed from time to time until the knee is practically well. A slit in a plaster sheet in no way weakens it, and the principle may be usefully adopted in applying plaster splints elsewhere. In fractures of the elbow, a band thrown temporarily across the bend of the elbow, and carried through a slit opposite the olecranon, readily keeps the parts in place until the sheet sets. [In the illustration, the bevelled margins of the laminated splints are given as distinct sheets, for diagrammatic clearness.]

THE HOSPITAL OF ST. JOHN OF JERUSALEM.—The Prince and Princess of Wales, and the Princesses Louise, Victoria, and Maud, visited the Hospital of Saint John of Jerusalem and Saint Elizabeth of Hungary, Great Ormond Street, on Monday afternoon. The Hon. Mrs. E. Coke and Colonel A. Ellis were in attendance. Their Royal Highnesses were received by Cardinal Manning and the Earl of Granard, President; the Earl of Ashburnham, Vice-President of the British Association of Knights of Malta; and Sir George Bowyer, Senior Knight of Justice, to whose munificent zeal the erection of the convent attached to the hospital and the beautiful adjoining church is due. The hospital is nursed by Sisters of Mercy aggregated to the Order of St. John; and the Rev. Mother Prioress conducted their Royal Highnesses through the wards, assisted by the Earl of Granard and Sir George Bowyer. The distinguished visitors frequently paused and spoke most kindly to the patients, and expressed their warm approval of the kindly care taken of the patients, who are principally sufferers from incurable or prostrating maladies not readily admitted into other hospitals. There are between forty and fifty beds, a large number being for children, and as yet only female patients are taken, though it is hoped that hereafter a hospital for men and boys will be established. After passing through the wards, their Royal Highnesses visited the church, which, as already mentioned, Sir George Bowyer built at his own cost for the service of the Order, convent, and hospital; and the decoration and vestments of which are of a very splendid character—some having been presented by the late Pope Pius IX., and the altar being a gift of the Grand Master of the Order.

NERVE-SECTION IN THE TREATMENT OF NEURALGIA.*

BY WILLIAM CADGE, F.R.C.S.,

Surgeon to the Norfolk and Norwich Hospital.

THAT the division of nerves (neurotomy) and the removal of portions of nerves (neurectomy), as methods of treatment for neuralgia, have fallen into disfavour and neglect in this country, can, I apprehend, admit of no question. The subject is very cursorily mentioned in the more recent text-books of medicine and surgery, and seldom with much approval. The late Dr. Anstie thus speaks of it: "A few words must be given to the rather uninviting subject of the surgical treatment of inveterate neuralgia. The section of a neuralgic nerve, or rather the excision of a piece, is still, I suppose, to be reckoned among the measures which it may be occasionally justifiable to employ. Nothing, however, either in the two cases of its use which I have seen, or in the records of similar operations, would lead me to recommend it in any case. The relief given is nearly always very transient; and, indeed, the nearly infallible certainty with which the pain returns in the central end of the divided nerve is only what I should expect from the many considerations which point to the central origin of the nerve as the most peccant part. With such remedies in our hands as the subcutaneous injection of morphia, etc., I cannot see that we need be tempted to perform such an operation for the sake of a temporary alleviation."

My object now is to combat this sweeping condemnation, and to endeavour to replace the operation on the list of proper remedies for a most intractable disease. The objections alleged against it are, that it is unscientific, that the relief it affords is always very transient, and that the discovery of the hypodermic use of morphia has made it unnecessary.

In replying to these objections, let it be understood that I am dealing with only one form of neuralgia, that of the fifth nerve, and not even with the milder forms of that, such as brow-ague, migraine, clavus, etc.; but only with that confirmed, violent, and agonising variety known as tic epileptiforme, or tic douloureux; a variety which, so far as my reading and observation go, is, in the great majority of cases, wholly incurable, and not unfrequently is uncontrolled and unmitigated by any and every remedy.

To the objection that neurotomy is unscientific, I might reply, No matter, if it be useful; but it is held to be unscientific only on the theory, maintained by Anstie, that nearly all neuralgias, except those which are obviously due to mechanical causes, have their origin in atrophy or other defect of the sensory root and starting point of the nerve; and this being so, how can neurotomy of one or several branches control the central disease? Let me at once say that, even admitting, which I do not, that trigeminal neuralgia is always of central origin, it is certain that very frequently the exciting causes of the attacks of pain are causes which begin at and affect the periphery of the nerve; and, if the trunk of the nerve be divided, these peripheric stimuli cannot reach the central organ, and the pain is no longer excited. The centric theory, however, cannot be maintained; it is grounded chiefly on the hereditary nature of neuralgia, on the frequent accompaniment of debility in some form, and on the effect of exhausting habits, such as sexual and alcoholic excess. It must, however, be admitted that the theory rests on no pathological evidence, that it does not explain why the disease should be limited to any individual nerve, and does not account for those cases in which no heredity or exhausting habits can be discovered. It is, perhaps, nearer the truth to say that, with our present knowledge, or rather ignorance, of the true pathology and seat of neuralgia; and, while we admit that Anstie's theory may correctly apply to and explain many instances, it is conceivable and probable that, in many cases, there is some change in the nutritive or trophic condition of the nerve itself or of some of its component fibres, and that this change may exist near the periphery, in the course or at the central origin of the nerve. All this, however, is mere speculation; but I would maintain that, in the absence of definite knowledge on these points, it is not just to speak of neurotomy as an unscientific remedy.

It is said that neurotomy is at best very transient in its effects; but on this point I would ask, What remedy is otherwise than very transient? and further, is any other remedy comparable to it for lasting effects? These questions can, perhaps, best be answered if I state, as briefly as I can, the result of some of those cases in which I have practised neurotomy for tic douloureux. I will only mention four cases.

One or two others I can only speak of as having had immediate relief, but I know nothing of their subsequent history.

The first case of which I have notes occurred in the practice of Dr. Pearse of Botesdale; the patient was a robust, ruddy-faced, healthy-looking farmer, aged 74. The pain was of the spasmodic form, and affected chiefly the parts supplied by the infra-orbital nerve. It had existed about nine months, was of fearful intensity and utterly uncontrolled by any medical treatment, and only slightly mitigated by morphia used subcutaneously. Chloroform was administered, and I divided the infra-orbital branch of the fifth freely and fully. The bleeding was free, and a ligature was required; the wound was left open, but it fell into easy apposition, and readily healed in a few days. This was on November 28th, 1872. The relief was immediate and complete, and the immunity lasted for nearly a year. Then the pain recommenced, after exposure, and shortly became so severe that speaking and eating were almost impossible. He soon became importunate for a second operation, and, on November 25th, 1873, just a year after the former proceeding, I again divided the nerve. The effect was not so immediate; he had pain and spasms for a few days, then they ceased entirely, and he was well again. In November 1874, he called on me to say that he was quite a new man; could eat, drink, and sleep well; cold had no ill effect, and his face was not tender. In June 1875, the pain returned, and gradually increased to such fearful paroxysms, that he insisted on further operative treatment; and, on October 26th, 1875, nearly two years after the last operation, I again divided the same nerve. It was noticed that the cheek on the affected side was nearly as sensitive as on the other side, notwithstanding that the nerve had been twice cut. The relief on this occasion was not so marked or immediate; for a month, the pain continued severe, but was in some measure subdued by injections of morphia and atropine; then it ceased, and for some months he was free. He went to reside at Ipswich, and I have no further record of his case but this: he died about the end of 1880, and Dr. Pearse wrote to me very recently, saying, "I believe he had paroxysms of pain at intervals up to the time of his death, but in a modified form compared with the attacks at Burgate". The relief afforded by neurotomy in this instance may be measured by the urgent request of the patient for its repetition; to say the least, it afforded him several years of comfort.

The next case was one chiefly of frontal neuralgia, due to exposure to cold, followed by severe unilateral herpes, exactly corresponding to the distribution of the supra-orbital nerve. The patient, a lady, aged 38, was under the care of Mr. Joy of Northwold. When I first saw her, one whole side of the forehead up to the vertex was black, from nitrate of silver; when this came off, the skin was left altered in its nutrition, and showing patches of dead white appearance over the seat of pain. No treatment was of the least benefit. Steel, quinine, arsenic, cod-liver oil—everything failed. She saw two distinguished London physicians. The first prescribed belladonna and veratrum; the other gave cannabis Indica fully, but all to no purpose. The pain was of lightning-like intensity over the forehead, temple, and up to the top of the head. In despair, she came to Norwich, and I divided and cut out a piece of the supra-orbital nerve. Before the operation, she could not bear the touch of a ribbon or a breeze of wind; after it, the whole right side of the forehead was numb and painless, and she was unconscious of any sensation. Still there was pain in the temple corresponding to the superficial temporal branches of the first and third divisions of the fifth. She was very pleased with the result of the operation, but anxious that the temporal nerves should be divided. I thought it best, however, to wait for a month. This was in April 1868. The pain continued absent, and numbness complete, over the forehead, but in the temple and top of the head it persisted. On June 16th, she returned, and urged me to do something more, saying, "pray cut fully, anywhere and everywhere". I made a free incision along the zygoma, dividing the temporal artery, and with it the temporal branch of the auriculo-temporal nerve. I am sorry to say I cannot report the result of this case: my notes break off, and the patient left the country soon afterwards; and all I can say is, that she returned to Lynn well satisfied with the immediate effect of what had been done.

The third case was a gentleman, aged 46. He had suffered for twenty years from tic douloureux, affecting the right side of the face and head, of a spasmodic and paroxysmal character, of frightful severity, and for the last year so frequent, that he had scarcely a day or night of freedom. Five years previously, I had prescribed a very precise and rather spare diet; and for a year or two, while he observed these rules, he had far less pain; but, being irksome, the rules were relaxed, and the pain returned. The worst spots of pain—and we know how neuralgia is apt to concentrate its worst agony into painful points—were in the temple and over the eyebrow; but all three divisions of the nerve were more or less affected. Every possible remedy had been tried, and

* Read before a meeting of the East Anglian Branch.

failed. Morphia was used nightly for five or six weeks, at first with relief, but its effect wore off, and he ceased to care for it. As a last resource, in November 1873, I divided both the supra- and infra-orbital nerves. The operation did not have the usual immediate effect; but, in a week or two, he called on me, looking vastly improved; all the haggard and worn aspect had passed off, the pain had left him, and he was well. He was free from pain for nearly a year, then the nerve united, sensation returned, and with it the pain. I have recently heard from this patient to this effect: "I have not used morphia now for some years, and, although I have frequently suffered greatly, the pain has not been so unbearable as formerly."

The last case I will describe occurred last year, in a lady, aged 78, who had suffered acutely for seventeen or eighteen years with the spasmodic form of tic, chiefly affecting the supra- and infra-orbital branches. No other drug than morphia had given the slightest relief, and this used hypodermically had lately lost its early good effect. On July 6th, 1881, I gave ether, and divided both branches of the nerve. The relief was complete so far as the frontal pain was concerned, but the pain continued along the course of the infra-orbital, so much so, that I began to doubt whether I had really cut the main branch; the ether required care in a person of her age, and the double operation made me rather hurried. A fortnight afterwards, I again divided the infra-orbital, this time cutting far and wide, and clipping out a small piece. The relief was complete, and most satisfactory to the patient. The wound healed in a few days, and gave no trouble. She is a patient of Dr. Wilcox of North Walsham, and he has informed me within the last few weeks that there had not been a vestige of pain since the operation, ten months ago; eating is easy, whereas it used to provoke violent paroxysms; and some sensation has returned in the parts supplied by the cut nerves. I have no doubt that this lady, bordering though she is on the age of eighty, will, if the pain should recur, peremptorily call for a repetition of the little operation which has already afforded her nearly a year of happy freedom from all suffering.

The fair comment on these and similar cases, I think, should be, that neurotomy, in properly selected cases of inveterate facial neuralgia, is an operation so easy, simple, and painless, so capable, in almost all cases, of conferring prolonged relief, and so absolutely free from all risk, that it is not only justifiable, but it is our bounden duty to offer and recommend it when all other measures have failed.

On the continent, operations of various kinds are, it would seem, more frequently resorted to for the relief of facial neuralgia than in this country. Continental surgeons not only practise neurotomy and neurectomy, but, in order to reach the nerve at points nearer its origin, they have resected the upper and lower jaws. Wagner has reported 135 cases of operation, chiefly neurotomy, of which 9 wholly failed, 6 died, in 1 the pain returned after a few days, in 32 after the lapse of some months, in 20 after two to three years, in 18 in which a relapse took place, and did not recur from some months, in 25 for some years, and in 24 cases the result is not given. Considering that these were all intractable, severe, and obstinate cases, you will probably not disagree with Wagner's conclusion, "that neurotomy stands on a scientific basis, and is of high practical value" (*vide* Ziemssen's *Cyclopadia*, vol. xi, p. 128).

I have mentioned properly selected cases, by which I mean those in which the pain is chiefly confined to the parts supplied by the supra- and infra-orbital and mental branches; these nerves are easily reached, and divided or resected; other branches may be got at, and I have once divided the auriculo-temporal, but these other branches are smaller and less definitely placed than the three I have mentioned. I have recently seen a very severe case with reference to nerve-section; the pain was trifling in the region supplied by the supra- and infra-orbital branches, but chiefly in the temporal and superior dental branches, which cannot be reached by any ordinary or simple operation. I naturally hesitated to divide the nerves which were not directly concerned in the pain, and leave those intact which were, and I advised delay. There would, however, have been fair ground for operating, since, if it be true—and it is true—that facial neuralgia is sometimes caused by irritation in remote nerves, as in gastric and intestinal disorders, so it is possible that section of a nerve near to but not immediately the seat of pain, may yet produce such a change as to lead to improvement; and, in corroboration of this view, I may remind you that, in two at least of the cases now reported, the patients were able, after the operation, to eat without pain, although I had only divided the supra- and infra-orbital nerves, and had not touched the dental branches. Properly selected cases would also, of course, include those in which the neuralgia was due to peripheral rather than to central causes; but, even in the latter, and perhaps more numerous class of cases, neurotomy, as I have already said, by preventing the conduction of all external morbid stimuli, may and does constitute a very

important palliative remedy. But it is said that the hypodermic use of morphia has made neurotomy unnecessary. Now we are all, I presume, ready to admit that morphia thus used for inveterate facial neuralgia has a far higher value than any or all other medicinal remedies or specifics, and it may equally be admitted that, so long as morphia succeeds in subduing pain, nerve-section need not and should not be contemplated; but we know also that, in some persons, morphia cannot be borne; that it produces evils which lead patients to consider the remedy to be as bad as the disease; and especially—and this constitutes its greatest drawback—the system under its use generally acquires such a tolerance of the drug, as to necessitate larger and larger doses to procure relief, until it becomes either toxic or almost ineffectual. The extent to which this tolerance may reach will be illustrated by a very remarkable case, which I have recently seen with Dr. Vores of Yarmouth. I had hoped that Dr. Vores would make the case the subject of a special communication; but, failing that, I will now give a brief notice of it. The patient is a strong, healthy-looking man, aged 59. He has been subject to facial neuralgia for about seven years, during which time the pain has steadily increased in frequency and in intensity. At first, it was controlled by injecting four drops of the solution of morphia (one grain to twelve minims), but this dose produced such giddiness and heaviness, that he was obliged to sit or lie down after it. By degrees, the dose was increased in frequency and in quantity until, at the end of 1880, he often used from 30 to 80 minims in the twenty-four hours. In August 1881, he had a period of fearful agony; and when Dr. Vores was called in on the 8th, he found that, on each of the two preceding days, he had used 130 minims, or nearly 11 grains. There being not the slightest symptom of narcotism, the morphia was increased to 10 minims every hour. Still no hypnotic effect was produced. A solution of double strength was now prepared, viz., 1 grain in 6 minims; and, on the 12th, he injected, during four hours, 120 minims, or 20 grains of morphia. Then croton-chloral was substituted in 20-grain doses, at short intervals. After the second dose, the patient refused to take any more, as it in no way relieved his suffering. He returned to the morphia, and, in the next twenty-four hours, he injected one ounce of the stronger solution, that is, 80 grains of morphia. There was not, however, the slightest symptom of narcotism. At no time did he sleep more than ten minutes; the bowels became relaxed; the urine ammoniacal, as it had done on former occasions; and the paroxysms gradually diminished. During this attack, there was no headache; his intellect was perfectly clear, except that on two days there was at intervals slight delirium, probably due to want of sleep; and he took nourishment freely at intervals after an injection. In a few days, he had reduced the morphia to 20 grains daily, and gradually, the paroxysms becoming less severe, the quantity was still further diminished to what he calls his usual habit, 3 to 5 grains daily. Dr. Vores, in his report of the case, asks, very naturally, was he justified in resorting to these heroic doses? And he replies, and I think we shall admit the validity of his reply, that he knew not what better to do; and also that he was supported in his treatment by no less an authority than Trousseau, who, in a similar case, had given or used 60 grains of sulphate of morphia daily, without producing narcotism. This, however, is a trilling amount compared to that in a case described by Billroth, in which 18 grains of morphia were injected twelve times a day—that is, 216 grains daily—by a syringe made to hold 2 drachms. Billroth adds: "By this means, he had intervals when the pain was endurable, and could get sleep for an hour or two. Finally, he became reduced to a skeleton, and died of exhaustion."

Before concluding, I desire to say a few words in favour of the dietetic plan of treatment, a plan which I have found of very signal value even in aggravated cases; and this is not remarkable, when we remember how beneficial this treatment by regimen generally is in many chronic incurable diseases, such as asthma, epilepsy, etc.; and when we remember, too, that in facial neuralgia the patients are frequently of advanced age, when teeth are going or gone; how often extraction of teeth has been practised in the vain hope of relief; and how impossible it is for the sufferers to use artificial teeth. Under these circumstances, and knowing that mastication and deglutition are apt to produce intense pain, patients are prone either to deprive themselves of proper food, or to bolt it in a state only too likely to disarrange the digestion. By dietetic treatment, I mean solid vegetable and animal food so intimately blended into a *purée*, and mixed with clear soup or beef-teen, as to form a thick fluid, which contains all the food-elements necessary for health, which can be so easily swallowed as to be very welcome to these patients, and which should be administered in sufficient but exact quantity day by day and year by year. Did time permit, I could demonstrate by cases the remarkable success of this mode of treatment, but I must forbear; and I will only further say that, when this method and the hypodermic injection of morphia have failed, as in too many cases they are sure to

fail. I think it is our clear duty to resort to nerve-section. In the words of Billroth, "Are we, by discarding operations for the division of nerves, to throw on one side a remedy which is not in itself attended by any serious risk? Are we to renounce a remedy which can give these most unfortunate of all sufferers a prospect of recovering, if only to some slight extent, some general feeling of health for the time which they have still to live? Let us, as surgeons, imagine ourselves confronted by a patient for whom this treatment is absolutely the only resource. Can we avert our eyes from the sufferer's glance when he begs, if only for some relief, some easement, some hope?" There can be no doubt as to the answer we should return to such an entreaty. There can be no doubt as to what our course of action should be.

CASE OF STRUMOUS DISEASE OF THE KIDNEY, CONSIDERED IN RELATION TO NEPHRECTOMY.*

By HENRY F. A. GOODRIDGE, M.D., F.R.C.P.,
Senior Physician to the Royal United Hospital, Bath.

E. B., aged 17, a nursemaid, was admitted into hospital on November 7th, 1879. She was said to have been always of spare habit of body, but of fairly good health until eighteen months previously, when her strength began to fail. Six months later, her appetite failed, and for now about nine months she had been gradually losing flesh. She had had a tendency to incontinence of urine since the age of 13. Pus and blood had been detected in her urine by a medical man who had seen her from time to time, as well as noticed casually, as sediment, by her friends, for the preceding six months; and she had had, occasionally, pain in micturition. Lately her bowels had been much relaxed, and she had felt some pain in the right knee on walking. She had never been troubled much with pain in the loin; she had had no swelling of the feet; she had never menstruated.

On admission, she was greatly emaciated, weighing only sixty-two pounds; and she showed no signs of puberty. She was somewhat pale; her temperature in axilla at midday was 100° (at 9 P.M., 103°); her pulse was 136, and her respirations were 32 in the minute. The mucous membrane of her mouth and throat was red, and her tongue was preternaturally clean. Elastic resistance was perceptible in the right lumbar region, with corresponding dulness on percussion and tenderness on pressure. Examination elsewhere elicited only negative results.

November 9th. She had slept well. Her appetite was fair; her temperature was 100° (morning and evening); pulse 108; her bowels had not been opened since admission. She had passed 28 ounces of urine during the preceding twenty-four hours, of specific gravity 1010, acid when voided, but soon becoming alkaline, coagulating with heat and nitric acid to one-sixth in the tube, and showing numerous pus-corpuscles under the microscope.

November 10th. The bowels had acted twice; there was no pus with the faecal matters. She was ordered to take three grains of sulphate of quinine thrice daily.

November 14th. On account of some tendency to diarrhoea, fifteen grains of compound kino powder were given the preceding evening, since which the bowels had been quieter. Her nights had been good; her temperature was now 98.6° in the morning and 98.8° in the evening; her pulse was 132. She passed 24 ounces of urine in the twenty-four hours, of specific gravity 1010, with one-sixth of albumen, and showing microscopically about the same quantity of pus-corpuscles as before, some red blood-discs, and crystals of lithic acid.

November 17th. There had been some return of diarrhoea, requiring the kino-powder to be repeated. Her weight was the same as on admission. Her urine had much the same characters. A smooth roundish elastic tumour could be distinctly felt in the right loin, and impulse communicated to the same in front was transmitted to the hand applied behind.

There was a slight recurrence of hectic during the next few days, and the quantity of purulent matter in the urine seemed to vary a good deal.

November 29th. Though still pretty free from pain, she began now to have bad nights, and sickness with anorexia became a not unfrequent trouble. Occasionally, too, there was the tendency to diarrhoea.

December 6th. With an aspirator, some blood-stained urinous fluid was drawn off from the pelvis of the right kidney, containing abundance of pus-corpuscles. She was now passing upwards of 20 ounces of urine in the twenty-four hours, of specific gravity 1020, and coagulating to only one-sixth in the tube.

December 8th. She began to have nocturnal enuresis.

December 11th. Again 20 ounces of urine were collected, of specific gravity 1020, and coagulating only to one-twelfth.

December 12th. The patient having been put under bichloride of methylene, an incision was made by my colleague, Mr. Fowler, at the outer border of the right quadratus lumborum muscle; and, the finger introduced feeling the pelvis of the kidney, a trocar of the aspirator was thrust into it, and half an ounce of blood-stained urinous fluid, similar to that previously obtained, was withdrawn. No calculus could be detected. A drainage-tube was inserted into the pelvis of the organ, and retained there; the wound being dressed and the whole operation conducted with strict antiseptic precautions. To procure sleep, hypodermic injections of morphia were now occasionally found necessary.

December 14th. On removing the dressings, there was a free discharge of pus from the drainage-tube.

December 16th. There was much healthy-looking pus on the dressings; but sickness just now was frequent.

December 21st. The discharges on the dressings were offensive, and the temperature rose to 102°. The patient was very weak, and her mouth was aphthous.

The feverishness subsided; but, with increasing failure of sleep and appetite, and at last sickness after everything, she gradually sank, and died on December 30th. The latest note respecting the drainage was on the 26th: "A good deal of discharge on the dressings."

NECROPSY, thirty hours after death.—Emaciation was extreme. The intestines and abdominal viscera were very pale, and the omentum was reduced to the finest web. Upon removal of these organs, the right kidney was found to be converted into an elongated fluctuating tumour extending from about the twelfth dorsal vertebra to near the brim of the pelvis. There were no morbid appearances external to it, nor was there any sign of inflammation around the spot where the opening was made during life. On puncturing the pelvis of this kidney, a considerable quantity of apparently healthy pus escaped. The capsule, which was thickened, was stripped off with difficulty. This being done, two yellow nodules, containing soft caseous matter, were discovered on the surface of the cortex at the posterior part, the smaller one being of the size of a pea, and the larger that of a walnut. On section, the cortical and medullary portions were found to have been extensively destroyed by caseating and suppurating processes, and what remained was studded with caseous and puriform deposits; while the pelvis and calyces were so dilated that an almost sacculated appearance was imparted to the organ. The mucous lining of the same was a good deal thickened; that of the ureter likewise; but there was no obstruction of this tube. No milary tubercle was detected anywhere. The right kidney weighed five ounces. The left one was enlarged, as also its ureter; its capsule was non-adherent. On removing it, a small nodule, of the size of a pea, containing cheesy matter, was observed at one spot; otherwise, both cortical and medullary structures appeared to be quite healthy. The urinary bladder was contracted and empty. The liver weighed fifty-two ounces; on roughly testing with the iodine-solution, no amyloid change was detected. The spleen weighed five ounces, and was rather soft. There was no enlargement of the abdominal glands. In the thorax, there was no effusion in either pleura; but there were some old adhesions of the lower lobe of the left lung. Both lungs otherwise collapsed fairly, and they were free from tuberculous or other deposits in their parenchyma. There was about an ounce of straw-coloured serum in the pericardium, and the heart weighed six ounces and a half. The head was not examined.

REMARKS.—At the time when this case occurred, the subject of nephrectomy had hardly come to engage the attention of the profession to the extent that it has done since. Certainly the question of this operation as applicable to it was never entertained. The object contemplated, and for which I sought the aid of my surgical colleague, was to provide, by artificial opening and drainage (nephrotomy), a more free exit from the kidney of the pus and other products of disease than appeared to be quite possible by the natural passage. Gravitation, it was thought also, might be made to assist and facilitate the discharge. It must be confessed, however, that the undertaking was attended with but little success. Perhaps earlier operation and a larger opening into the pelvis of the kidney might have yielded better results. The drainage-tube doubtless slipped out of its place during the last two or three days of life, when the patient was almost too weak to allow of regular dressing, and the wound closed. It is noteworthy that there was no perinephric inflammation or trace of mischief external to the kidney. But, assuming nephrectomy to be established as a recognised surgical procedure, it becomes an interesting question whether such a case as I have related be not a suitable one for its performance. We had here a completely disorganised kidney, a source of ruin to the health and of exhaustion to the strength of the patient; the fellow-

* Read at a meeting of the Bath and Bristol Branch.

sented elsewhere, if the full quantity have been dispensed, the order or prescription would be null and void. If this should be impossible, I would suggest that only one druggist, in a population of ten thousand, should be licensed to sell poisons of this description; and that his premises and books should be regularly inspected by a Government inspector, like the brewers and beer-shops; that his term of licence should be two or three years, when another druggist in the town should have his turn. This plan should be so arranged as not to interfere with the dispensing of physician's prescriptions.

Another subject, bearing somewhat on the above, demands our attention; and that is, the prevention of the use of arsenic in the manufacture of our wall-papers, dress-fabrics, etc. The common idea is, that the only papers which contain this poison are certain green shades; this is a great error. A case in point came under my notice very recently. Being suspicious that a newly decorated house had something to do with the constant illness of the children I was attending, I had nine pieces of different paper examined, only one of which number contained any green, and I found that seven contained arsenic in large quantities. Now, if these papers be not varnished, what happens is this. The rooms are exposed frequently to the damp atmosphere; then, on a fire being lighted, the heat on the dampish walls causes the surface of the paper to pulverise; and you will find, by brushing your coat-sleeve over the surface, that it will be covered with dust containing all the colouring matter of the paper. That this will give rise to irritation of the mucous surfaces of a child's eyes, nose, and throat, I think you will most of you allow. Surely, if decorations cannot be made without the mixture of such a poison, the sooner we go back to the old plan of having our sleeping-rooms and nurseries white-washed, the better. I therefore consider steps should be taken to put a complete stop to this evil, and this, I conceive, should come under the Sanitary Act. Dressmakers have told me that they often suffer for days from sore-throat, and irritation of the eyes and nose, after making up ladies' ball-dresses of bright green gauze. Surely, this should no longer be so; and I do think it is through the members of our profession that this matter should be brought under the notice of the Government. And I consider one of the primary duties of an Association like ours is to point out to our legislators these evils which exist, and help them in framing measures for strengthening any Acts of Parliament which treat on this subject.

ON THE USE OF BELLADONNA IN CERTAIN CASES OF HERNIA.*

By W. SMITH BATTEN, M.R.C.S.Eng., Bromsgrove.

I BRING before your notice a few crude suggestions on the treatment of certain cases of hernia by the administration of belladonna. In the first place I will mention the cases, and then proceed to the physiological action of the drug in question.

The first case is that of an old man, A. B., aged 79, by occupation a postman, remarkably healthy and muscular for his time of life, who had suffered from hernia of the right side for some years. About a week before sending for me, he had been wheeling a heavily laden barrow, when he felt the rupture suddenly give way, causing him great pain. He immediately went into the house and applied hot flannels, etc., which had always given him relief on previous occasions. He continued this treatment for some days, until the woman who nursed him, finding he had had no relief from the bowels since the accident, and that he began to vomit by the mouth what ought to have gone the other way, sent for medical aid. I was called in on the 4th of May, 1878, and tried all the ordinary recognised means for reducing the hernia, which failed, the patient refusing to be placed under chloroform. I gave him two grains of opium pill, and ordered his immediate removal into the Cottage Hospital. On admission, I met my colleagues in consultation, and they decided an operation was the only means of saving life; but one gentleman, having unfortunately shown a piece of cold steel, so alarmed the patient, that with all our persuasion we could not induce him either to take chloroform or to undergo the operation. In this state I found him an hour afterwards, more dead than alive; and the idea then struck me—having only lately heard some very excellent papers on the use of belladonna in obstruction of the bowels and its physiological action thereon—that the drug might be of service in the present case. I therefore ordered the patient half-drachm doses of the tincture, to be taken every half hour. I saw him in two hours' time, when he had taken four doses. The pupils were slightly dilated, and he complained of slight dryness of the throat, but the rupture could not be moved. I

again saw him in an hour; the pupils were largely dilated, and the rupture passed up easily. No vomiting occurred during the administration of the drug. Unfortunately, about two weeks after this, while doing some garden work, contrary to orders, his truss not being properly adjusted, the rupture again came down. Reduction again failed, but three half-drachm doses of the tincture every half hour overcame the difficulty. Having ordered a new truss, the patient has not again required my assistance, and at present is well and in good health.

The second case is that of a baker's assistant, a pale, pasty youth aged 19. I was sent for about half-past two in the morning of March 8th, 1880. He had been suffering from a child from hernia of the right side, and the previous night had been lifting a heavy load of bread, when his rupture came down by the side of his truss. He was placed in a hot bath; taxis was applied and chloroform administered, but to no effect. I immediately gave him scruple doses of tincture of belladonna every hour. In four hours I again saw him; he was entirely under the influence of the drug; the pupils were largely dilated, and he was complaining of dryness of the throat. I tried but failed to reduce the rupture, and being afraid, on account of his youth, to administer more of the drug, told the patient to work at it himself; but he fell asleep, and when I called again in a couple of hours and awakened him, he put his hand down, saying, "It's gone up, sir." I see him constantly, and he has not again been in trouble.

Belladonna, on its active principle, atropia, in small doses, acts on the circulatory system by increasing the frequency of the pulse with rise of the arterial pressure. In large doses, it causes a fall of arterial pressure with the pulse still increasing. Upon the heart itself, atropia acts as a direct depressant poison, though for this end a very large dose of the alkaloid must be administered.

Brown Séquard says positively "that the drug has the power of exciting the muscular fibres of the arterioles." Wharton Jones (in the *Medical Times and Gazette*, 1857, p. 28) announces the fact that, if atropia be dropped upon the web of a frog's foot under the microscope, the vessels can be seen to contract.

Meurot, as the result of his studies on the frog's web, concludes that in the first stages of the poisoning a very slight contraction of the vessels takes place. Wood also says, "the evidence derived from direct observation of the capillaries seems to me to be, on the whole, decidedly in favour of their contraction by minute doses of belladonna, and that the rise of arterial pressure just spoken of, is due to a contraction of small vessels."

Acting upon the abdominal canal, belladonna is a powerful excitant of the contracted muscle. Phillips says that in large doses it produces paralysis in the ganglionic apparatus of the intestinal canal, and possibly in the unstriped muscular fibres themselves. There can be little doubt, however, that the drug acts directly upon the bowel as a stimulant and co-ordinator of muscular action, and thus, secondarily, as a controller of any irregular spasmodic action that may be present.

In conclusion I would say that, though the knowledge of the physiological action of some of our most important drugs on the living human organism is at present in a very crude and undigested state, doubtless from timidity on the part of the medical practitioner to push their action till some decided physiological symptoms are apparent, still I think that, of all drugs, since the discovery of its alkaloid by Mein in 1831, none have called for greater research as to its physiological action and its therapeutic properties than belladonna, and that the action of the drug in the two cases I have mentioned has been to lessen the calibre of the congested vessels of the constricted bowel, and contract the non-striated muscular walls of the protruded gut, and thus to render its reduction into the abdominal cavity more easy.

ANIMAL VACCINATION IN INDIA.—Animal vaccination continues to be carried on in Bombay, Poona, and Kurrachee, a total of 470 heifers having been inoculated last year with successful results in 456 instances. Thirty or forty animals were operated on month by month. The months of August and September show a larger proportion of failures than any other months, while from January to June only one failure is recorded out of 236 operations. In Bombay, animal lymph alone is kept up; in Poona and Kurrachee, both human and animal lymph is in use. The total cost of the animal vaccine arrangements was 2,700 rupees.

SURGEON-MAJOR G. C. CHESNAYE, Indian Medical Service Bengal Establishment, has been appointed Honorary Surgeon to the Viceroy of India, in succession to Surgeon-Major R. W. Cunningham, M.D., deceased.

* Read before the Worcestershire and Herefordshire Branch.

ABSTRACT OF LECTURES

ANATOMY, PHYSIOLOGY, AND ZOOLOGY
OF THE EDENTATA.

Delivered at the Royal College of Surgeons of England.

By W. H. FLOWER, LL.D., F.R.S.,
Hunterian Professor of Comparative Anatomy.LECTURE VIII.—ANATOMY OF THE ARMADILLOS (DASYPODIDÆ)
(continued).

THE organs of generation differ much from those of the families previously described. There is nothing like a cloaca, the urino-genital and the anal apertures being far apart. In the male, the penis is of great size, though simple in structure, cylindrical, and tapering towards its apex. It consists chiefly of the corpora cavernosa, which are fixed posteriorly to the rami of the ischium, as in higher mammals. The corpus spongiosum, sometimes described as absent, forms a thin covering to the urethra, and does not dilate at its extremity, either into a glans or bulb. The testes are internal. There are a well-developed prostate and Cowper's glands in all, but vesiculæ seminales only in the genus *Tatusia*. In the female, the uterus is simple, and the vagina has no median partition as in the Sloths and Anteaters. The great size of the copulating organs is evidently, as long ago suggested by Professor Owen, related to the difficulties which would otherwise be interposed to sexual congress by the arrangements of the dermal armour, which, of course, do not occur in the Sloths and Armadillos. The foetal membranes have not been fully described; but there is no reason to suppose that they differ essentially from those of the *Myrmecophagidæ*, the placenta being said to be oval or discoidal. A. Milne Edwards has described a remarkable condition in *Tatusia*, in which genus he found four fetuses contained in a common chorion, attached to a single placenta of a zonary form, apparently the result of the coalescence of four originally distinct placentæ. Most Armadillos have but one or two young at a birth, but *Tatusia* a much larger number, sometimes as many as ten; but, as they have but four mammae, many of the young in these cases are said to die. The other *Dasypodidæ* have only two mammae, pectoral in position.

Fossil remains of Armadillos have been found by Lund and others in the caves of Brazil, in deposits of pleistocene age. Some of them are attributable to genera still existing, but others are assigned to distinct modifications of the type called *Euryodon*, *Chlamydothrium*, *Eutatus*, etc.

In the same region, but still more abundantly in the fluvial deposits which cover the country in the neighbourhood of Buenos Ayres, and associated with the *Megatherium* and *Mylodon*, are found the remains of one of the most remarkable forms of mammals yet discovered. The first known example of this group received, in 1839, the name of *Glyptodon* from Professor Owen, and of *Hoplophorus* from the Danish naturalist Lund, almost simultaneously; but by the former name they are usually known. They differ from the existing *Dasypodidæ* in their large size, and in having the carapace composed of one whole piece (formed by the union of a multitude of bony dermal scutes), without any movable joints in the middle part; and in having also a ventral piece or plastron. The upper surface of the head was protected by a cephalic shield, as in the Armadillos. The facial portion of the skull was very short. The zygoma was complete, and furnished with a process like that of the Sloths, but formed into a single bone. The teeth in all the known species were, on each side, above and below, all much alike, and were either leaves or flutings in the outer and inner surface into three nearly distinct lobes. It is this similarity of the teeth that suggested Professor Owen's name of *Glyptodon*. The vertebral column was more strongly modified than in any other of the existing Edentata, for the spinal processes were, as it was, in the form of a single bone.

The carapace was composed of a single piece, and was covered with bony scutes, which were, in the North-Eastern species, bristly clothed with bristle-like hairs. In all the known species they are quite alike. The mouth is elongated and narrow, and the tongue is short, though the tip is bifid. The tail is long, vermiform, flattened towards the tip; the retractor and sterno-glossal muscles arise from the hinder extremity of the immensely prolonged ensiform cartilage of the sternum. The stomach has thick muscular walls and lining membrane, and a special gland near the middle of the great curvature, consisting of a mass of complex secreting follicles, the ducts of which terminate in a common crifice. The interior of the stomach is nearly always found to contain a number of small stones, swallowed apparently, as in birds, for the purpose of aiding the triturating powers of the organ. There is no cæcum. The liver is provided with a gall-bladder. In the male, the testes are situated in the inguinal canal, and the penis is well developed and separated by a distinct process from the base of the penis.

The female genitalia resemble those of many Ungulates, and are quite different from those of the American Anteaters, the uterus being bicornuate, and the placenta diffuse and non-deciduate.

The lumbar and sacral vertebrae all coalesced to form a solid tube. The anterior seven or eight caudal vertebrae were free and well developed;—the remainder were small and united. The complex joint at the root of the neck allowed the head to be retracted within the carapace, the anterior orifice of which would then be blocked up by the bony shield which, judging from the analogy of existing Armadillos, covered its upper surface. The limbs were very strong, and the feet broad and short, resembling externally those of an elephant or tortoise. The pelvis was very massive, and of remarkable shape; the crests of the ilia, and the median ridge formed by the conjoined spines of the sacrum, formed together a T-shaped piece, upon which the weighty cuirass was suspended. No clavicles have yet been found. The fore foot had never more than four toes. In some genera (*Panochthus* and *Hoplophorus*), the first is wanting, and in others (*Glyptodon* proper) the fifth is absent. In *Dedicurus*, both outer toes are missing, leaving only three. The hind foot had usually five toes, though the hallux might be absent. All the ungual phalanges were broad and flat. The tail was of moderate length, enclosed in closely united bony plates, usually arranged in rings, and often provided with knobs or spikes, like a fabled giant's club. The bony scutes, of which the carapace was composed, are computed at from 2,500 to 2,800. As many as eighteen species of animals of this family have been described, arranged by Burmeister in five genera—viz., *Hoplophorus*, *Panochthus*, *Dedicurus*, *Glyptodon*, and *Schistopleurus*—distinguishable by the number of toes on the feet, and the characters of the carapace.

The remaining Edentata all belong to the old world. Those of the family *Manidae* present some very singular characters. They are covered externally (except the under surface of the body and inside of the limbs) with large imbricated horny scales, with scattered hairs growing in the intervals; and, like the American Anteaters, they have no teeth, and a long, vermiform and protractile tongue. They are usually called *Panama*, or Scaly Anteaters; are all of small or moderate size; inhabitants of the hottest parts of Asia and Africa; terrestrial and burrowing; and feed mainly on Termites. One small African species climbs trees. They can roll themselves up in a ball when in danger. Their peculiar elongated form, small head, short limbs, long, gradually tapering tail, and scaly covering, give them, on a superficial inspection, more the appearance of reptiles than of mammals. The skull is somewhat of the form of an elongated cone, with the small end turned forward, very smooth, and free from crests and ridges. There is no distinction between the orbits and the temporal fossæ. The zygomatic arch is usually incomplete, owing to the absence of the malar bone. There is no distinct lacrymal bone. The palate is long and narrow. The pterygoids extend back as far as the tympanics, but do not meet in the middle line below. The tympanic is ankylosed to the surrounding bones, and more or less bullate, but not produced into a tubular auditory meatus. The rami of the mandible are very slender and straight, without any angle or coronoid process. From near the anterior extremity of the upper edge a sharp cervical tooth-like process projects upwards and outwards. There are no clavicles, and no third trochanter to the femur. The ungual phalanges are bifid at their terminations. The caudal vertebrae have very long, strong, transverse processes, and numerous chevron bones. The tongue is long, vermiform, flattened towards the tip; the retractor and sterno-glossal muscles arise from the hinder extremity of the immensely prolonged ensiform cartilage of the sternum. The stomach has thick muscular walls and lining membrane, and a special gland near the middle of the great curvature, consisting of a mass of complex secreting follicles, the ducts of which terminate in a common crifice. The interior of the stomach is nearly always found to contain a number of small stones, swallowed apparently, as in birds, for the purpose of aiding the triturating powers of the organ. There is no cæcum. The liver is provided with a gall-bladder. In the male, the testes are situated in the inguinal canal, and the penis is well developed and separated by a distinct process from the base of the penis. The female genitalia and placentation resemble those of many Ungulates, and are quite different from those of the American Anteaters, the uterus being bicornuate, and the placenta diffuse and non-deciduate.

Family *Orxetoroidæ*. The best known of this family is the *Orxetor*, or Aardvark, which is found in South America, and is distinguished by its long, vermiform, and protractile tongue. It is covered with bony scutes, which are, in the North-Eastern species, bristly clothed with bristle-like hairs. In all the known species they are quite alike. The mouth is elongated and narrow, and the tongue is short, though the tip is bifid. The tail is long, vermiform, flattened towards the tip; the retractor and sterno-glossal muscles arise from the hinder extremity of the immensely prolonged ensiform cartilage of the sternum. The stomach has thick muscular walls and lining membrane, and a special gland near the middle of the great curvature, consisting of a mass of complex secreting follicles, the ducts of which terminate in a common crifice. The interior of the stomach is nearly always found to contain a number of small stones, swallowed apparently, as in birds, for the purpose of aiding the triturating powers of the organ. There is no cæcum. The liver is provided with a gall-bladder. In the male, the testes are situated in the inguinal canal, and the penis is well developed and separated by a distinct process from the base of the penis.

small anterior teeth are shed before the series is completed behind. In the adult, they number usually five on each side, above and below, of which the first two are simple and compressed; the next two larger and longitudinally grooved at the sides; the most posterior simple and cylindrical. The structure of all these teeth is quite peculiar among mammals, though resembling that of some fishes. Their summits are rounded before they are worn; their bases do not taper to a root, but are evenly truncated and continually growing. Each tooth is made up of an aggregation of parallel dental systems, having a slender pulp-cavity in the centre, from which the dentinal tubes radiate outwards; and, being closely packed together, each system assumes a polygonal outline, as seen in transverse section. No evidence of any vertical succession of teeth has been discovered. The skull is moderately elongated, the facial portion subcylindrical, and slightly tapering. The zygoma is complete and slender. The tympanic is annular, and not ankylized to the surrounding bones. The mandible is slender anteriorly, but rises high posteriorly, with a slender recurved coronoid process, and a small oval condyle, which looks as much forwards as upwards. Vertebrae, C 7, D 13, L 8, S 6, C 25. The large number of lumbar vertebrae is peculiar among Edentata. The tongue is less vermiform than in *Myrmecophaga*, being thick and fleshy at the base, and gradually tapering to the apex. The salivary apparatus is developed much in the same manner as in that genus, but the duct of the submaxillary has no reservoir. The stomach consists of a large subglobular cardiac portion, with a very thick, soft, and corrugated lining membrane; and a smaller, muscular, pyloric part, with a comparatively thin and smooth lining. There is a very distinct ileo-caecal valve, and a considerably sized caecum; also a gall-bladder. The penis is rudimentary. The uterus more bicornuate than in *Manis*, the two cornua opening separately into the vagina. The placenta is broadly zonular. The fore feet want the pollex, but all the other digits are well developed, with strong moderate-sized nails, suited for digging.

Extinct Edentata of the Old World.—Certain remains, chiefly of bones of the limbs, found in France and Greece, and assigned to genera called *Macrotherium* and *Ancylotherium*, united provisionally in the family *Macrotheriidae*, indicate the existence of animals of large size, inhabiting Europe during the middle tertiary epoch, the characters of which appear to indicate a generalised Edentate form; or something intermediate between the Edentata and the Ungulata. In the structure of the phalanges, they most resembled the *Manidae*; but there is some evidence that they possessed teeth. Some fragment from the Eocene of Paris are still more doubtfully assigned by Gervais to the order.

SURGICAL MEMORANDA.

COMPOUND COMMUNED FRACTURE OF THE SKULL: PUNCTURE OF THE BRAIN AND PROTRUSION OF THE CEREBRAL SUBSTANCE: RECOVERY.

On September 2nd, 1881, I was urgently summoned to a boy, named William Conolly, thought to be dead or dying. On my arrival, I found him in the following condition. The whole of the right parietal bone was broken in, with parts of the occipital, temporal, and left parietal, with an extensive lacerated wound penetrating the brain, and a good deal of the cerebral substance protruding the wound; some lying over the surface, mixed through the blood and hair. The boy was suffering from shock at the time, the face being very pallid, though not extremely cold; he had previously vomited partly digested food, mixed with blood and mucus. The pupils were dilated, perfectly equal; no strabismus; the pulse was weak and slow. He was unconscious. The accident had occurred about ten minutes previously, about two hundred yards from his own residence, where I saw him. This boy was, with some companions, climbing a tree, and was on a branch, about thirty feet from the ground, when he slipped, or the branch gave way with him, and he fell to the ground, head foremost, his head striking on a sharp-pointed stone, about as large as a man's head. The sharp point of the stone pierced the brain, as well as the broken and loose pieces of bone. Dr. Scott, of this town, had been summoned at the same time, and continued to treat the case with me to the end. We decided on not interfering further than to apply a very weak antiseptic lotion on lint. In less than three hours, the boy recovered consciousness, and was able to partially describe the cause of the accident. He said he felt nothing but "a sore head" and "very weak." About five months afterwards, a piece of bone came away, about half an inch long by a fourth of an inch broad, and, shortly afterwards, another smaller piece, and two or three more subsequently. During the treatment, there was a good deal of creamy-looking, not offensive pus. At this time, the wound has granulated over, and is

perfectly closed and healed, and feels firm and hard under pressure. Though there is a good deal of depression on the right side of the head, it is every week filling up and getting more on a level with the other side.

During the whole progress of the case, the temperature hardly rose above normal, and never was up to 100°; nor was the pulse different in character or frequency from health. The only treatment was the weak cold antiseptic water lotion, which was kept constantly applied on lint, and mild aperients as required.

I think this case worthy of record from the extensive nature of the injury, involving the scalp, bone, dura mater, arachnoid, and brain itself; the rapid recovery of consciousness after such injury so caused; the absence of fever; the slight constitutional disturbance from so great an injury; and the simple treatment to which he was subjected. Rest in a darkened room, quiet, the weak antiseptic lotion, and occasional aperients, constituted the whole treatment necessary. This lad had been noted at school for his intelligence, application, and mental activity; and there appears to be no failure in these respects. There is not the slightest strabismus, the pupils are perfectly equal, and he has not developed the slightest paralytic symptom.

JOHN WYBRANTS OLPHERTS, L.M., L.R.C.P.Ed., L.R.C.S.Ed.,
Certifying Factory Surgeon for Lurgan, etc.

PATHOLOGICAL MEMORANDA.

DILATATION OF THE STOMACH AND STRICTURE OF THE PYLORUS.

I HAVE lately read some observations on three cases of dilatation of the stomach, before the members of the Reading Pathological Society. One specimen was a pylorus, taken from a man under the care of Mr. Richardson, my partner. The patient died rapidly, rather than suddenly. On opening the abdomen, the stomach was seen much more distended, descending to the umbilicus. I happened to cut through its coats, when a bloody coloured fluid escaped. When I was prepared for its examination, I extended the incision through its whole length. It was filled with coagulated blood—not less than four pints, probably more. Hæmorrhage was plainly the cause of death. An examination of the mucous membrane of the stomach failed to find an ulcer. On removing the organ the pylorus was found hardened, and was seen to be irregular or uneven, the forefinger not easily passing through it. The duodenum was cut across, and the stomach removed. No doubt as to stricture could be entertained. It was probably scirrhus, and, if so, an explanation of the source of the ulcer and consequent hæmorrhage was afforded. As to the cause of the dilatation, this I believe to have been the stricture of the pylorus. Mr. Richardson told me the patient was obliged to live principally on slops; that, whenever he took solid food, it produced on its way to the stomach a sense of "scraping"; that, when at work, he would often stoop, resting on his knees, which would be followed by eructation of gas, and relief. Over the heart, Mr. Richardson heard a double *bruit*, which led him to consider that his symptoms depended on heart-mischief. This organ, however, showed no signs of disease, but the aorta was dilated, thin, and atheromatous, showing here and there a very thin spot. His age was 47. He belonged to the cavalry, and was a pensioner.

A second case I attended (first in the order of time), in which our late esteemed and able physician, Dr. Cowan, diagnosed dilatation of the stomach. A *post mortem* examination revealed stricture of the pylorus, and confirmed the diagnosis as to dilatation. This patient, a male also, died December 12th, 1871, aged 51.

The third patient I did not attend, seeing him only at his sister's on his way for change of air. I knew nothing of the diagnosis; all I heard was a narrative of stomach symptoms. He was pale in an aggravated form, so as to lead to a suspicion of malignant disease. His bowels were confined, and he had a frequent desire to empty them. A pill of one grain of the watery extract of aloes brought on action, followed by a discharge of blood, fainting, and death two or three hours afterwards. A *post mortem* examination, at which his medical attendant was present, revealed a dilated stomach and stricture of the pylorus. It was hardened, and it was difficult to pass the forefinger through it. We entertained no doubt as to there being stricture and dilatation. His age was 52, and he died June 8th, 1880. No cancerous deposit was found.

The ages of these three cases is worthy of remark—51, 47, 52. Dilatation was found in all, and also stricture of the pylorus. That dilatation should be diagnosed is of the highest importance; but the inference I should be inclined to draw from these cases is, that stricture of the pylorus exists, and is the cause of the dilatation. And when I say that stricture exists, I do not mean that there is obstruction; on the contrary, the pylorus neither forbids the passage of the contents of

[illegible]

awake during the night, and she was unable to move her arm on account of the pain. The following day (15th), the swelling reached to the tips of the fingers; her pulse was frequent (144) and irregular, and her temperature still kept high. She had slept well after a bromide draught, which was subsequently repeated at times when her sleep was disturbed. By this time the wound in the breast was almost well. On the 17th the right side of the neck and right arm began to swell, so that on that date both arms and both sides of the neck were in a swollen condition. The oedema in the left lower limb was much less; the right foot was still swollen; the pulse was full, regular, and 136 per minute. Next day the right arm was more swollen, and the whole of the front of the chest was swollen, so that all prominencies and depressions in that part were obliterated; both sides of the neck and face were swollen, especially the left. She could hardly open her mouth to swallow; pain over the left eyebrow and in the left ear was also present. The left external jugular vein could be felt as a cord beneath the fingers. The swelling had all but gone from the left leg, though the right foot was still oedematous; the pulse was 112, small, and irregular; the temperature varied from 90.2° to 100.2° during this and the following day. In two days more she could open her mouth easily; the pains over the left eyebrow, and in the left ear were less, as was also the swelling of the left arm. The treatment adopted for these swellings in various parts was the same as that used in the leg first affected; viz., glycerine and belladonna, warm fomentations, and perfect rest. During the preceding critical period, stimulants, strong beef-tea, and milk at short intervals were well taken. On the 22nd, the left upper extremity had nearly entirely regained its natural condition, but the swelling in the right upper extremity had increased, and had extended as far as the fingers. On April 25th, this swelling was slightly better, but the right external jugular vein was then felt to be completely blocked, feeling like a cord to the fingers.

Dr. Bastian remarked that here again the external veins seemed to have become obstructed coincidentally with some restoration of the circulation through the deeper veins. The legs had regained their normal appearance, excepting some slight oedema of the left ankle. The patient continued to pass urine involuntarily at times. Her temperature was only slightly raised (never above 100°). Pain in the face was still present. On April 27th the swelling of the right upper extremity was much diminished. A vein on the inner side of the right arm, another at the lower border of the left pectoral muscle, and both jugulars, could be felt to be blocked, but the left jugular vein was not so hard as formerly. The wound in the breast had completely healed. The patient's general condition had improved, her appetite was better, she slept well, and her temperature was normal. Some large patches of belladonna rash were present in various parts of the chest and arms; this disappeared in three or four days. On May 1st the swelling of the tissues immediately around the blocked veins was less, though the left jugular itself was still cord-like. The oedema had completely subsided all over the body. Various veins, before invisible, were now found to be blocked; viz., the median cephalic and the posterior ulnar of the left side. There was still pain in most of the joints on movement. The right ear had begun to discharge a serous fluid. The temperature was normal. On May 10th the right external jugular, the left median cephalic, and the left posterior ulnar veins could still be felt. She suffered a good deal from neuralgia in the occipital region. On May 17th this had disappeared; the veins, formerly blocked, could hardly be felt, and she could move her joints without suffering pain. Her right ear continued to discharge, and the membrana tympani was seen to be ruptured. She had now complete control over her bladder. Since May 4th temperature had been normal, or slightly subnormal. On May 28th she began to sit up a little in the evening, but was very weak. The veins formerly blocked could no longer be felt. She continued to gain strength, and on June 5th was well enough to go to the Convalescent Home at Eastbourne. On June 21st the patient was still at Eastbourne, and was progressing favourably, becoming stronger every day.

[The earlier notes of the case were taken by Mr. P. R. Griffiths, M.B., B.S., late House Physician.]

WHITECHAPEL.—Mr. Liddle's quarterly reports being so full and complete, his annual report resolves itself into little more than a summary of the year's statistics. From the report for 1881 it appears that the number of births registered during the year, amongst an enumerated population of 7,301, was 2,566, and the deaths 2,351, including 446 non-residents in the London Hospital. Excluding the deaths of non-residents, the rate of mortality was 26.6 per 1000, against 24.3 in 1880. The deaths from zymotic diseases were 307 in number, including 47 from small-pox, 88 from measles, 26 from scarlet fever, 91 from diarrhoea, and 36 from fever. Including hospitals, the zymotic death-rate was 14.5 per 1000.

REPORTS OF SOCIETIES.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.

THURSDAY, MAY 18TH, 1882.

HERBERT DAVIES, M.D., in the Chair.

Some of the Newer Operative Procedures in Abdominal Surgery.—Sir WILLIAM MAC CORMAC read a paper on this subject. He first alluded to the antiseptic treatment of wounds, and to the protection which that method afforded to operations involving the opening and exposure of the abdominal cavity. A woman, aged 68, was under his care with an immense ovarian cyst. He attempted to remove the tumour in the ordinary way; but, in consequence of its being intimately adherent everywhere, was compelled to desist; and, during an attempt to separate the connections of the tumour, he found that he had caused a rent in the bladder four inches in length, out of which a considerable quantity of urine escaped. The wound in the bladder was sutured, the abdominal cavity carefully cleansed, the edges of the cyst attached to the external wound, and two large drainage-tubes inserted. An aseptic condition was maintained throughout. Notwithstanding her advanced age and the extent of the injury, the patient made an uninterrupted and complete recovery. Sir William expressed his belief that, with due precautions, the abdominal cavity might be laid open, and closed again, without causing any appreciable risk to the life of the patient. He referred also to the performance of many operations involving the hollow viscera, or the mode of evacuation of abscesses or hydatid cysts, in two stages, so that the second, more important and dangerous, part of the operation became extraperitoneal; as in cases of abscess or hydatid cyst in the liver. After mentioning the necessity for efficient drainage after many operations involving the abdominal cavity, Sir William Mac Cormac spoke of excision of the intestine. The excision of a diseased portion of cancerous gut he considered a great advance in abdominal surgery, as it substituted an attempt to procure a radical cure for a mere palliative procedure. This operation was first successfully performed by Martini of Hamburg, and similar operations had recently been performed in this country by Mr. Marshall and Mr. Bryant. In cases of intussusception and of hernia with gangrene of the gut, the necrosed portion of the intestine had been removed, and the two divided ends sutured together, with success in several instances. Sir William next spoke of nephrotomy and nephrectomy. The morbid conditions for which the latter operation had been undertaken up to the present time included fistula of the ureter, calculous pyelitis, pyonephrosis, new growths, malignant disease, floating kidney and injuries of the organ. He narrated a case of removal of the entire uterus by abdominal section, for cancer of the cervix, and presented the patient herself in a condition of perfectly restored health. He also showed the parts removed at the operation. The woman, thirty-three years of age, married, but without children, had previously enjoyed good health. The catamenia were regular, but sometimes painful. She was a flower-seller, much exposed to the weather, and not absolutely abstemious. She began to feel ill last July; but, until the middle of September, no very definite symptoms declared themselves. Then she had pain in the lower belly, with vomiting and headache, and she occasionally had pain when the bowels acted. At the end of September, she had an attack of constipation, also a rigor; and the pain became so severe as to confine her to bed. On admission to hospital, under the care of Dr. Ord, the patient was found to be suffering much pain, chiefly in the left iliac region, where a distinct fulness could be felt. A bimanual examination disclosed an intimate connection between this and the body of the uterus, which moved with it. Great difficulty was experienced in emptying the bowel. A daily purgative of castor-oil had to be administered, and complete obstruction threatened from time to time. On November 29th, Sir William examined the patient. A large cauliflower growth protruded from the os. The growth was hard, and secreting a large quantity of sanious discharge. It presented the features of epithelial carcinoma. It involved the whole of the os, but did not encroach on the vagina. The fulness in the left iliac region suggested secondary deposits or involvement of the lymphatic glands. Dr. Gervis and Dr. Cory also examined the case, and were of opinion that there was carcinoma of the cervix and os uteri. The tumour in the pelvis now caused great difficulty in the evacuation of the bowels, and produced several attacks of more or less complete obstruction. Sir William determined to interfere, and the first step he took was to remove the growth and the os with the actual cautery, both for purposes of diagnosis, and to render the subsequent removal of the uterus less likely to be attended with septic contamination. The patient was thus

relieved of the horribly foetid discharge from the vagina; but the symptoms of obstruction continued, and it was determined, without further delay, to open the abdominal cavity, and remove the presumed diseased uterus with its appendages. On January 2nd, 1882, an incision was made, commencing two inches below the umbilicus, and reaching to the symphysis pubis. The pelvis was found to be blocked by a tumour which completely concealed the uterus. It was the pressure of this tumour against the rectum which had caused the intestinal obstruction. It was semi-elastic or fluctuating, and adherent everywhere. It was punctured with a trocar, and a quantity of foetid pus escaped. The greatest difficulty was experienced in preventing the pus from entering the peritoneal cavity. With some difficulty the tumour was apparently contained in the right broad ligament, and from its adhesions and removed, together with the right ovary and the uterus. The left ovary was not interfered with. It seemed healthy: the patient was somewhat collapsed, and it was necessary to conclude the operation, which had lasted upwards of an hour. The pelvic cavity was cleansed thoroughly, and a large T-shaped, double-barrelled drainage-tube introduced into it through the vagina. The lower pelvic outlet was not sutured or closed in any way. The external abdominal wound was closed as after ovariectomy; an elastic rubber catheter was introduced into the bladder, and the patient was placed in an antiseptic dressing continuous with the two wounds. The patient subsequently suffered severely from acute bronchitis, probably due to the prolonged exposure, but otherwise no symptoms of importance occurred during the after-treatment. In order to keep the wound pure, the pelvic cavity was daily washed out three or four times with eucalyptol lotion, of the temperature of the body. It was found that the rubber drainage-tubes, from the heat and pressure, easily collapsed in the vagina, and that efficient drainage could only be maintained by keeping them open by means of glass tubes. A month after the operation, the abdominal wound was firmly closed, and the fundus of the vagina had almost healed. There was not the slightest tendency to prolapse of the abdominal contents at any time. The patient had since returned to work, and enjoyed apparently complete health. On being recently examined, there was not the slightest appearance of any tendency to recurrence, nor any prolapse of the vaginal roof. How long the patient might remain free from relapse, was a question which could only be decided by future observation.

In review the history of the operation of excision of the pylorus. The first successful operation of this kind was performed by Professor Billroth of Vienna, who was followed by Rydygier and Wölfler, although Péan was the first to execute the operation. It was performed for the first time in this country by Mr. Southam of Manchester, but not successfully. Altogether, up to the present date, the operation had been performed sixteen times, fifteen of the cases being for cancer. Eleven terminated fatally; five recovered, and lived for various periods. Cancerous obstruction of the pylorus would prove the most frequent indication for the operation. From the stomach increased, the organ dilated, sometimes enormously; there was constant vomiting after food; great emaciation occurred, and the patient became more and more exhausted, until death closed the scene. As soon as a diagnosis could be made, the operation should be undertaken.

When the tumour was freely movable, the operation might be performed with the most favourable results.

The operation of the pancreas, as performed by the late Mr. Southam, was a most successful one. If the pancreas was found to be the seat of disease, it should be removed.

Had done so in six cases, and no ill consequences followed.

Remark from

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

ANNUAL GENERAL MEETING, JULY 7TH, 1882.

GEORGE CRITCHETT, F.R.C.S., Vice-President, in the Chair.

Treasurer's Report.—Mr. J. F. STRETFIELD's report showed that the finances of the Society were in a satisfactory condition, the balance this year being considerably larger than last year.

The CHAIRMAN, in a short address, congratulated the Society on its flourishing condition. It now comprised 158 members, of whom a very large number were derived from the country and the colonies. In order to facilitate the candidature of gentlemen in the colonies, the Council intended to propose an alteration in the rules which would permit the election of candidates from India or the colonies, on the signature of two teachers at the medical school at which they had been educated. He referred to the large number of papers which had been read before the Society, and stated that the Council found it necessary to propose to hold an additional meeting in the next session. He concluded by regretting the loss the Society experienced in the retirement of Dr. Stephen Mackenzie from the post of secretary.

The proposed alteration in the rules referred to by the Chairman was carried unanimously.

Miner's Nystagmus.—Dr. OGLESBY (Leeds) contributed a paper, in which he contended that this disease was due to organic cerebral changes, which were at first temporary but finally became permanent. These changes were induced by venous engorgement, consequent on the constrained position in which colliers were obliged to work. He endeavoured to support this theory by citing cases in which nystagmus was associated with epilepsy. He found that the movements remained in abeyance when the patient was erect and at rest, but returned at once on assuming the attitude of a miner at work. The attacks of epilepsy (*fetit mal*) only came on, he believed, when the nystagmus had been in existence for some time. He did not think that errors of refraction had anything to do with the causation of the disease. In one case only had he found treatment by drugs do any good; in this case the nystagmus ceased after strychnine had been taken for six weeks.

Mr. NETTLESHIP said that he had made inquiries by letter in various parts of the country where this disease was met with. He gathered from the replies that it was confined to coal-miners. Dr. Hudson of Redruth never saw it among the native Cornish miners, but occasionally met with it among coal-miners imported from the north. In these he found that it disappeared after a time. He believed it was caused by the foul air, the dim light, and the necessity of keeping the eyes continually fixed in one direction.—Dr. THOMAS (Swansea), showed a number of slides to the head were frequent antecedents.—Dr. W. A. BRAILEY said that he considered the evidence of central lesion slight. He attributed it to weakening of certain muscles caused by the fixity of gaze, and found that he could produce nystagmus in himself by fatiguing one set of muscles.—Dr. STEPHEN MACKENZIE said that Dr. Hughlings Jackson had remarked to him that he had never met with any evidence of organic disease in miners, who all had nystagmus, leaning on one eye, and that it differed from that of other miners. He had never seen any optic signs of congestion or of organic disease, even in cases of long standing. He had seen many cases, and found nearly all of them cured by strychnine. Internal remedies were of no use, and the only cure was by strychnine.—Dr. OGLESBY said that he had seen a case of nystagmus might be cured by strychnine, but that it was not a permanent cure.

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ptoms, it was argued, were due to a lesion of the cerebral centres for the upward and downward movements of the eye.

The Movements of the Eyelids in association with the Movements of the Eyes.—Mr. LANG and Dr. FITZGERALD contributed a paper, in which they contested the opinion expressed by Dr. Gowers, that the movements were due to the fact that the lids were closely moulded to the globes, the edges of the tarsal cartilage fitting into the sclero-corneal sulcus. The paper pointed out that the movements still continued, even when the lower lid was withdrawn from contact with the globe; or if the eye be reduced to a mere stump. The inferior tarsus was connected with Tenon's capsule by a fascial expansion, and to this connection was due the downward movement of the lower lid on looking down; in addition, the upper and lower lids were closely connected at the inner and outer canthus—so that depression of the lower lid must be accompanied by a lowering of the upper lid; and, conversely, any elevation of the upper lid must also raise the lower lid. In order to permit the descent of the upper lid, the levator palpebre muscle must be relaxed; this relaxation was attributed by Dr. Gowers to a reflex inhibition set up by contraction of the inferior rectus, or by a stretching of the fibres of the levator by the movement of the globe. The authors of this paper, on the other hand, rejected this theory—quoting cases in which both upper lids descended normally on looking down, although the inferior rectus on one side was paralysed, and the globe motionless; they suggested that the phenomenon was due to the existence of associated centres for the movement of the eyes and the lids together.—Dr. GOWERS thought that the authors would have some difficulty in proving that the corneal and scleral prominences did not affect the movements of the eyelids, for it was proverbially difficult to prove a negative. In looking upward, the prominence of the sclerotic did bulge forward the lower lid; when the eyeball was rotated upwards, there was not, he believed, a simple rotation on the antero-posterior axis, but the sclerotic was actually moved forward. If the descent of the lid was caused by the contraction of the inferior rectus, the movement ought to be at its slightest towards the end of the movement, whereas it was greater then; again, the authors attributed the upward movement to the connection of the lower lid to the canthus, whereas he held that there was no movement of the canthus, but a rotation of the lids on the canthus; here, too, the movement of the eyelid was least at the latter part of the movement; whereas, by the authors' theory, it ought to be greatest then. The same objection applied to their theory to explain the descent of the upper lid in looking down; further, the movement of the lower lid was much slighter than that of the upper, which it was supposed to produce. In facial paralysis, the lower lid might not be much affected, and the amount of movement which remained depended on the degree to which the eyelid fell away from the globe; it was least therefore in old people, where the elasticity of the tarsal cartilage was lost.—Mr. COUPER did not agree with Dr. Gowers, in believing that the movements of the eyeball were more than axial movements; Von Grafe had, he thought, demonstrated this.—Dr. HORROCKS said that, with regard to the theory that the lower eyelid was moved upwards through its attachment to the upper at the canthus, it was discredited by the fact that, when the upper eyelid was moved upwards passively, the lower lid was stationary; and the same held good with regard to the upper, when the lower was depressed. If the lower lid was moved away from the eyeball, there was no movement of the eyelid when the globe moved.—In reply, Dr. FITZGERALD said that it was easy to demonstrate that the movement of the canthus did occur; and Mr. LANG said the prominence bulging forward the lower lid, as referred to by Dr. Gowers, was not the sclerotic, but the orbital part. The upward movement of the lower lid was least at the end of the excursion, because its connection with the eyeball became tense. The capsular prolongation (the existence of which had been doubted by Dr. Horrocks) was, he observed, a part of a fascia, which was elsewhere attached to the tarsus; finally, he had found that the movements of the lower lid would take place in the absence of the eyeball.

Micrococci in the Interior of the Eyeball.—Mr. RUDALL (Melbourne, Australia) contributed a short paper on this subject. The eye had been destroyed for destructive gonorrhoeal ophthalmia, and was excised about ten weeks after the onset of the disease. The cornea had sloughed, and the lens had disappeared. In a yellowish mass which united the iris to the remains of the cornea, actively moving micrococci were discovered.

Acute Glaucoma caused by Atropine and cured by Eserine.—Mr. SNELL (Sheffield) read the notes of this case. The patient was a lady aged 35, who, on May 9th, consulted another surgeon. Atropine was used to test her refraction, which was found to present a high degree of hypermetropia; the solution of atropine used was strong, and was frequently instilled. Symptoms of unmistakable glaucoma commenced

on May 13th, and two days later, when she first consulted Mr. Snell, the tension of the right eye was + 2; vision was reduced to counting fingers, and pain was intense. The patient declined iridectomy; but the use of eserine (in the form of discs) was followed by almost immediate relief of pain, and restoration of vision, while the tension returned to the normal. The other eye also became the seat of "coloured rings", and some increase of tension; eserine afforded relief to this eye also. The surgeon by whom she was first seen assured Mr. Snell that there was not then any indication of glaucoma, but the patient mentioned some symptoms which appeared like the prodromata of the affection.

Tests of Vision best adapted for Service at Sea.—Dr. W. A. BRAILEY, after referring to the practical importance of defects in sailors in distinguishing form and colour, and the frequency with which such defects might be presumed to be present, stated that there was no test of sharpness of sight for form for either officers or sailors of the British mercantile marine, and that the examination for colour-vision, which applied to officers only, was very imperfect. The Board of Trade, however, had made one step in advance when, about two years ago, it refused to admit to his first step as officer any one failing to pass the colour-examination. He thought the best course would be to create a superior class of sailors, who should occupy responsible positions as "look-out men" and helmsmen; such a class already existed in the French Navy. The tests recommended by the International Medical Congress were the best, with slight modifications; he advocated the use of coloured spots viewed by reflected daylight, and coloured glasse of transmitted artificial light, on the principle of Donders. Dr. Brailey concluded by describing a modification of Donders's lamps, which he found more convenient, and made some suggestions with regard to ships' lights.

Living Specimens.—Mr. JULER: Extensive Central Choroiditis, in a patient the subject of syphilis and hypermetropia. Mr. A. CRITCHETT: 1. Neuro-retinitis in a Syphilitic Patient; 2. Extensive Retinitis following Injury to the Head.

Card Specimens.—Dr. STEPHEN MACKENZIE: Microscopical Sections of Neuro-retinitis with large hæmorrhagic Extravasations into the Retina from a Case of Idiopathic Anæmia.—Drs. MAGNUS and JOY JEFFRIES: Chart for Colour-Testing, and a Series of Coloured Discs; the person to be tested is required to mark the discs with the colours on the chart.—Dr. BRAILEY: (1) Microscopical Specimens and Drawings of a Peculiar Form of Cyclitis; (2) Drawings of Cyst-like detachments of the Pars Ciliaris Retinæ.—Mr. MCHARDY: Results of a Spectroscopic Examination of a Black Cataract, made by Dr. MacMunn of Wolverhampton. He found that the colouring matter had some analogies with the colouring matter of hairs, and might properly be regarded as a cuticular, and not as a blood, colouring matter.

The Society adjourned until next session.

REVIEWS AND NOTICES.

SARCOMA AND CARCINOMA: THEIR PATHOLOGY, DIAGNOSIS AND TREATMENT. By HENRY TRENTHAM BUTLIN, F.R.C.S., Assistant Surgeon and Demonstrator of Surgery, and of Diseases of the Throat, St. Bartholomew's Hospital; lately Erasmus Wilson Professor of Pathology, Royal College of Surgeons. With four Lithographic Plates. London: J. and A. Churchill.

THIS work represents, in a collected form, the lectures delivered by the author at the Royal College of Surgeons in 1880 and 1881, with additional cases appended to the statistical tables, and with observations on clinical diagnosis and treatment. Mr. BUTLIN's claim to be ranked as a high authority on the pathology of tumours depends not so much on the fact that he has delivered a series of discourses before a learned body, as on the numerous contributions which he has made during the past nine years to the *Transactions of the Pathological Society* on the histology of new growths. The value of these particular contributions lies not alone in their individual merit, which is indisputably high. They afford standing proof that the author of *Sarcoma and Carcinoma* has not merely collected bran new theories, and compiled his lectures upon such scientific novelties, with the assistance perhaps of some original but desultory microscopic work, and the seductive reasoning of pages of argument, based more on mental ingenuity than on practical research. We know that the work under consideration is the result of years of patient observation, and it is interesting to note its almost purely descriptive analytical character, as contrasted with the picturesque philosophy which abounds in the writings of many contemporary workers who cannot, by the kind of proof to which we have

above referred, claim so long an experience of the practical details of their subject.

It may surprise, or even disappoint many young enthusiasts to find nothing about what we may term the pathogeny or pathogenesis of cancer and sarcoma in this work. We cannot discover a single reference to mesoblasts and hypoblasts, and their relation to the seat of origin of the two forms of malignant tumour. Let such readers bear in mind a practice common among British judges, provoking ridicule from the thoughtless. When counsel or witness bring forward the name of some person not directly associated with the case on trial, or quote some newspaper opinion, the judge "does not know" and "has not read." The comparing of an inference from practical details with another inference from responsible opinion demands such reproof. I do the same. The author of this work probably "has never seen a hypoblast." In actual fact he may have viewed dozens of hypoblasts under the microscope, and pondered over them. But he has not "seen" them in the sense that he has seen sarcomas and carcinomas for years, hence he makes no comparison, and puts up no theories. No man can make profitable comparisons, in his own mind, when he knows far more of the one than the other. Mr. Butlin avoids this common source of error, but unfortunately many have not been so discreet. He bases his work on clinical and microscopical research, but insists on the careful study of records, not theories, collected from surgical literature. "In this manner not only may the general laws of malignancy haply be discovered, but in the meantime a fair history may be obtained of the sarcomas and carcinomas of each individual region of the body."

In the abstract reports of Mr. Butlin's lectures which have appeared in our pages in the course of the past two years, we have already seen his researches on the appearance of tumours as affected by anatomical situations. The chapters on central and subperiosteal bone are very interesting. Owing to their minuteness it is not possible for us to enter into any critical estimate of the value of these chapters depends on the description of every bone of the body, and to judge the question fairly, we should have to consider in detail malignant diseases of the human skeleton. The most interesting portion of the work is the sarcoma and carcinoma of the testis, is the author's opinion in new growths affecting that gland. He discusses the malignancy of cartilaginous tumours of the testis, and states that in malignant disease, where the tumour is of cartilaginous tissue, it is chondrification of sarcoma that has taken place, not, as hitherto supposed, sarcoma of chondroma. These reasons are based on the fact that in malignant disease, where the cartilage is found to be younger than the sarcomatous portion of the tumour. Pure enchondroma of the testis appears to be in no way

The malignant affections of the oesophagus are of particular interest in these days, when so many palliative operations are undertaken for the relief of the patient. The operation of oesophagotomy, already been utilised in the treatment of the disease, has been the subject of much discussion on gastrostomy and kindred operations. The decision should be performed in those cases where there is little faith in gastrostomy or in the operation of oesophagotomy. It has not been able, since his lectures were given, to find a authentic instance of sarcoma of the oesophagus. It is in the chapter on malignant diseases of the tongue that we find one of the most remarkable passages in the generally even descriptive tenour of the entire work. Pathology, like history, repeats itself; once more we are told that there is a personal factor to be considered in judging all opinions,

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growth on the tongue before this change in the epithelium can, with certainty, be detected.

Like many other learned works of the present day, *Sarcoma and Carcinoma* is published in a highly original and picturesque form as to binding, in strong contrast to the stern, uniform black cover which, not many years ago, invested nearly every work on medicine and science.

HOSPITALS AND THE STATE: HOSPITAL INCOME, EXPENDITURE, AND NURSING. By HENRY C. BURDETT, F.S.S. Pp. 31. London: Churchill.

MR. BURDETT'S name is well and favourably known to the medical profession; for, though not a medical man himself, there are few among us who have done as much as he has to call attention to the defects of hospital administration, to recommend cottage hospitals, and to develop the Home Hospitals Association. On all these subjects he has earned our gratitude by the reforms which he has helped to introduce.

The work before us consists of a paper which Mr. Burdett read at the congress of the Social Science Association held at Dublin in 1881. The question raised was this—Is it desirable that hospitals should be placed under State supervision? At the close of the discussion which followed the reading of the paper, a resolution was adopted instructing the council to take steps for securing the immediate appointment of a Royal Commission. The paper is now printed in a separate form for general circulation, and it ought to be carefully studied by all those who take part in the management of hospitals, dispensaries, and convalescent institutions. The tables which are appended to the paper supply, we believe, the only accurate statistics of hospital income and expenditure, prepared upon an identical basis, which has ever been published.

There is a very general consensus of opinion at the present time among hospital reformers, that a Royal Commission of inquiry would do much to improve our medical charities. If we look only at the metropolitan area, the distribution of the hospitals is not such as to meet the wants of the poor. The recommendation of a Royal Commission might bring about an improvement in this respect; while, if we look closely into the administration of each separate hospital (as Mr. Burdett has done), we shall see discrepancies which certainly call for the intervention of a strong hand.

The income and expenditure of the various hospitals is a study in itself. The comparatively small use which, in some instances, is made of a wealthy endowment, and, on the other hand, the comparatively large use which is sometimes made of very slender resources, shows that the strong light of a public inquiry would be likely to do a great deal of good; and with regard to the internal management of the hospitals, we shall all agree with Mr. Burdett when he says:—"It is desirable that every hospital and medical institution intended for the relief of the suffering poor shall be administered by a board of management, subject to periodical election by the governors, upon which board the medical staff of the charity should be represented." How much more good might have been done, how many unseemly disputes might have been avoided if the principle advocated by Mr. Burdett had always been recognised.

A TREATISE ON THE DISEASES OF THE NERVOUS SYSTEM. By JAMES ROSS, M.D., M.R.C.P., Assistant-Physician to the Manchester Royal Infirmary; Consulting Physician to the Manchester Southern Hospital. London: Churchill.

THIS work consists of two large volumes of nearly sixteen hundred pages. The perseverance and judgment required for the accomplishment of such a task as the compilation of this treatise could be possessed by no ordinary physician. In short, Dr. Ross has supplied a want which has long been felt, a work, however, which few would consider as a contribution to the literature of the subject.

It is a work of the average size, and of the average nature of the literature of the subject, and it is a work which, we think, will be found to be a valuable addition to the literature of the subject.

A work of the average size, and of the average nature of the literature of the subject, and it is a work which, we think, will be found to be a valuable addition to the literature of the subject. The ordinary reader will be struck by the number of strange and unaccountable facts, many of these have been long known, but one feels somewhat appalled when one comes to the end of the work, and finds that the author has not been able to find a satisfactory explanation of many of the facts which he has recorded. It is necessary to indicate differences which were previously undetected. For this reason, we are not disposed to cavil at an elaborate nomenclature

so long as it is used judiciously. Indeed, we ought rather to look upon it as an indication that neurology is becoming a more concise and exact science.

The anatomical and physiological properties of the nervous system are described at great length. Although the bulk of the work is thereby much increased, there is no doubt that this preliminary matter is absolutely essential; the ordinary text-books are quite insufficient for the purpose. If we may so express ourselves, the anatomy and physiology of the nervous system must, in a treatise like the present, be considered from a clinical and pathological stand-point. Dr. Ross has evidently seen the importance of this subject, which he has treated in a most lucid and careful manner. The various forms of electricity, and their use for diagnostic and therapeutic purposes, receive the attention which they undoubtedly demand.

In the preface, Dr. Ross tells us that he had intended to supply a copious bibliography, but was deterred from so doing in consequence of the unexpected size which his work had attained. This omission, we have no doubt, is a mistake, and Dr. Ross would do well to remedy it in the next edition. This "treatise" is really a book of reference, and, as such, should contain the authorities quoted in the text. Surely even a hundred extra pages would not really increase very materially the bulk of the work, whereas the advantage would be very great to the busy physician. If necessary, some pruning in another direction might be made. Detailed clinical histories, however interesting they may be, are not advisable in a systematic treatise. If it be really necessary to allude to certain special or rare cases, let the allusion be brief. We simply throw out this suggestion, because it is not improbable that Dr. Ross will find in a few years that he will have to determine whether his work is to be a mere text-book or a dictionary.

The illustrations throughout are well executed and judiciously chosen. The photographs are admirable, and well represent the various attitudes and deformities assumed in such affections as progressive muscular atrophy, pseudo-hypertrophic paralysis, paralysis agitans, and hemiplegic contracture.

The classification of disease is not altogether irreproachable. The difficulty of the task is undeniable, but it is not easy to understand why, for example, pseudo-hypertrophic paralysis should be grouped with infantile spinal paralysis, progressive muscular atrophy, and labio-glossolaryngeal palsy. It would have been more convenient, if Dr. Ross had arranged that the volumes might be more equal in size. A separate index for each volume would also, in our opinion, be advantageous. However, we are not disposed to dwell on these comparatively unimportant points. Taken as a whole the work is excellent—certainly by far the best in the English language. The style is clear and concise, the illustrations numerous, and the general get-up of the book in every respect highly satisfactory.

This treatise will undoubtedly find a place in the library of most physicians, and we may assert unhesitatingly that it will prove a valuable addition to the classical literature of the profession.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

NEW IRON WIRE SPLINTS WITH SLIDING BARS.

THESE splints will be found very convenient and economical in hospital practice. They are made of stout iron wire, and are fitted with sliding bars and movable hand and foot plates. When they are well

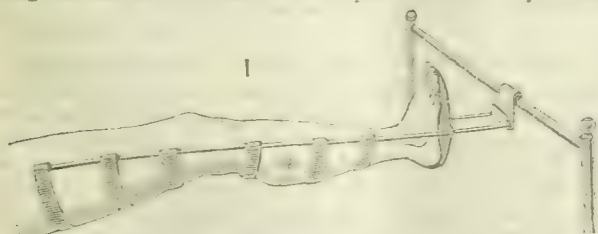


Fig. 1.—Iron Wire Splint, suspended on crossbar.

padded, a few turns of a bandage will be found sufficient to secure the limb. The sliding bars can be placed in any position, so that the injured parts can be relieved of all undue pressure, and any wounds can

also be readily examined and dressed. The crossbar of the convertible surgical apparatus (see BRITISH MEDICAL JOURNAL, June 11th, 1881) forms a simple and convenient splint-rest, occupying no space in the

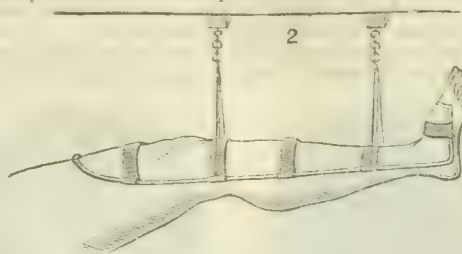


Fig. 2.—Suspension with Front Splint.

bed, permitting a free circulation of air, and also adjustment at any required elevation. The splints are especially adapted for the treatment of injuries and other disorders in which it is essential to secure

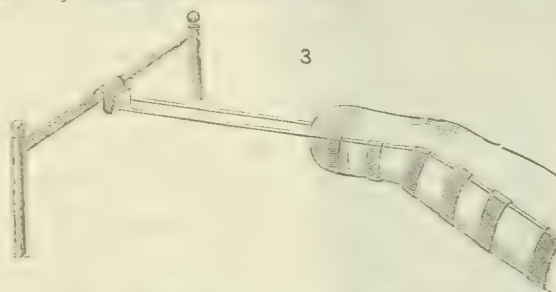


Fig. 3.—Splint adapted to give rest and elevation after operation.

absolute rest and elevation; therefore, in cases of severe wounds of the extremities, injuries of the joints, simple and compound fractures,



Fig. 4.—Arm Splint with metal hand piece.

Figs. 5 and 6.—Iron Wire Splints, showing shifting bars.

with displacement and extravasation, and also in cases of amputation, they will be found extremely serviceable.

The splints are manufactured by Messrs. Arnold and Sons, of West Smithfield.

JOHN WARD COUSINS, M.D. Lond., F.R.C.S.,
Surgeon to the Royal Portsmouth Hospital.

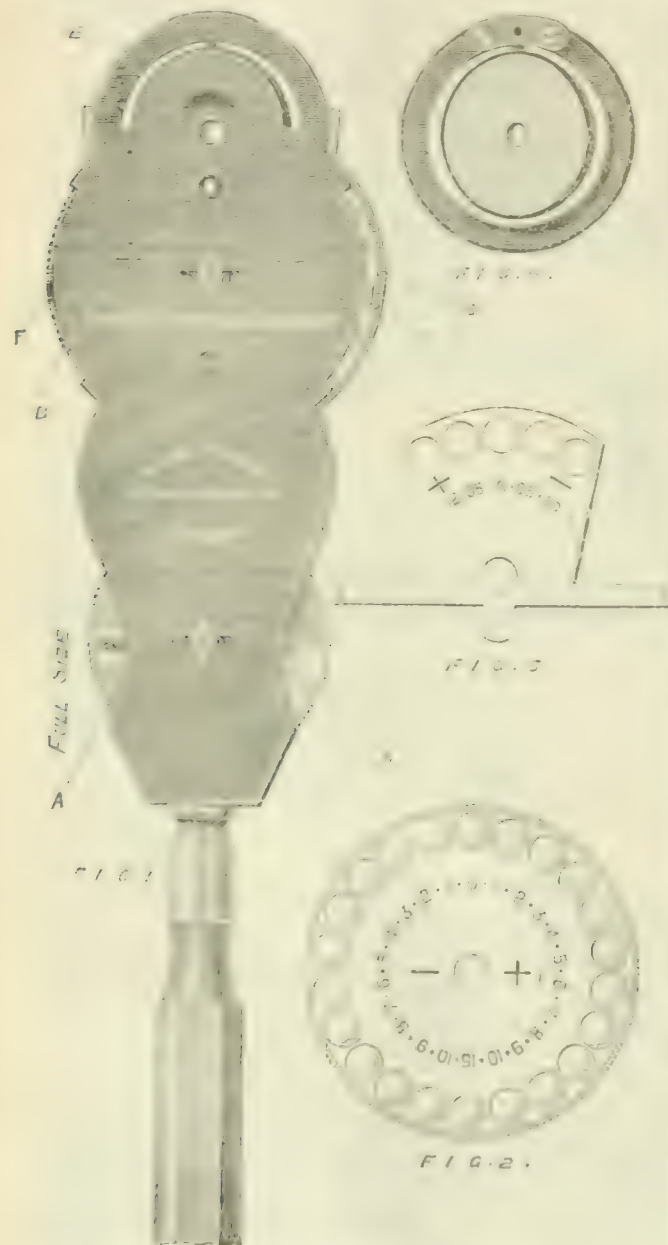
AN IMPROVED OPHTHALMOSCOPE, FOR REFRACTION AND OTHER PURPOSES.

THIS instrument (Fig. 1) consists of a disc (Fig. 2) containing two series of spherical lenses; one convex 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 dioptries; the other concave 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, and 15 dioptries. The disc is milled at the edge, as shown at B (Fig. 1), and is made to revolve to the right or left by means of two other milled discs, one of which, A, is worked by the index finger of the hand holding the instrument. A sector (Fig. 3) of a similar disc is placed behind this for occasional use. It contains spherical lenses of +0.5 D, +12 D, and

—0.5 D, —20 D, and can be moved to right or left by the index finger of the hand holding the instrument by moving the knob F (Fig. 1).

The power of the lens in use belonging to the disc is shown at C. The power of the lens belonging to the sector is shown at D. The change of each lens is indicated by an audible click.

A small mirror (Fig. 4 and Fig. 1 E) of eight centimetres focal length, is attached by means of an universal joint, so that it can be



placed in front of the eye. The instrument is held by a mirror of larger size and power than the one shown in Fig. 1 for the indirect method.

For the indirect method, let the patient be seated with his head resting on a support. The instrument is held by the right hand, the index finger of the left hand being placed on the knob F. The instrument is moved to the right or left by the index finger of the left hand, and the power of the lens is changed by the thumb of the right hand. The instrument is held in a plane parallel to the cornea of the eye, and the reflection of the fundus is seen in the mirror. The instrument is held in a plane parallel to the cornea of the eye, and the reflection of the fundus is seen in the mirror. The instrument is held in a plane parallel to the cornea of the eye, and the reflection of the fundus is seen in the mirror.

at 20 millimetres from the cornea. Then, by a little lateral or vertical movement, a thorough illumination of the fundus is obtained.

For the indirect method. Change the mirror E for one of larger size and of focal length 25 to 30 centimetres. Place yourself quite opposite to the patient, at a distance of 40 to 60 centimetres. Leave the lamp as before, or place it just above the patient's head. Use your right hand and right eye for the mirror. Hold a large convex lens (about 15 D) at from 3 to 6 centimetres between the left index finger and thumb, resting the little finger on the patient's forehead, and keeping the radius in extreme pronation and the elbow well elevated. Take care that the patient does not move the head to the right or left. For left eye, tell him to turn his eyes towards your left ear; this will enable you to see the optic disc; then tell him to look at your forehead, then outwards, inwards, upwards, and slightly downwards; this will show the yellow-spot region, the outer, inner, upper, and lower peripheries respectively. For the right eye, tell him to fix his eyes on your right little finger; this shows the optic disc: find the rest of the fundus as in the left eye.

For vitreous opacities, especially when very minute, a plane instead of a concave mirror is sometimes helpful. Sit in front of the patient, at about 30 centimetres, with the lamp as before. Tell him to look at the mirror, then upwards, then at the mirror, then upwards again. The opacities are then detected in a mobile condition.

The instrument is supplied at a moderate price by M. Pillscher, Optician and Scientific Instrument Maker, 88, New Bond Street, London, W.

HENRY JULER, F.R.C.S., Senior Assistant-Surgeon and Pathologist Royal Westminster Ophthalmic Hospital; Clinical Assistant Royal Ophthalmic Hospital, Moorfields.

DRAINAGE-TUBE FOR EMPYEMA.

MESSRS. ARNOLD have made, at my suggestion, a form of drainage-tube, which I have found very useful in cases of empyema, and which is also applicable to other purposes.

As the figure A shows, the tube itself is made with a closed rounded end like a catheter, so that, by means of a stylet inside it may be very readily introduced through a narrow opening or passage. The shield (B) serves to keep it in position; the central tube of this shield being strung over the drainage-tube, and the flat disc lying upon the chest-wall.

The fit of the inner tube within the outer one should be so tight, that it cannot be readily shifted except by stretching, and so narrowing it. If holes be cut only in that part of the tube which lies within the chest, and the open end of the tube be kept in some receiving vessel or small bottle suspended from the waist, it is possible to keep the patient almost entirely free from the discomfort of discharge about the chest-walls and into the clothing: and washing out may be conveniently effected.

PHILIP J. HENSLEY.

IODIFORM IN TOOTHACHE.—Schaß, in the *Deutsch. Med. Zeit.*, No. 12, recommends iodoform, on account of its gently caustic action, as an anodyne application to exposed tooth-nerves. The circumstance that a single or repeated application of iodoform does not produce any irritation, much less inflammation of the periosteum, and the decided benefit of the treatment in a clean and unobstructed canal, make it especially suitable for the purpose, particularly when the treatment of a temporary filling. The author uses a paste consisting of iodoform, powd., grs. 60; kaolin, grs. 60; carbolic acid, grs. 8; glycerin, q. s.; oil of peppermint, grt. 10. Triturate the iodoform, kaolin, and oil of peppermint with enough glycerin to form a thick paste.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 15TH, 1882.

THE GENERAL MEDICAL COUNCIL.

THE session of the General Medical Council, which concluded on Saturday last, lasted eleven days. It was one of the longest on record; thus differing from that which was held in April 1881, which was remarkable for its short duration.

The recent session was also remarkable for the number of new members, of whom there were no fewer than five. Mr. John Marshall, a Vice-President of the Royal College of Surgeons, took his place as the representative of that body in the room of Sir James Paget. Dr. T. King Chambers has succeeded the late Dr. Rolleston as the representative of the University of Oxford. The Royal College of Surgeons of Edinburgh has filled the vacancy caused by the death of Professor Spence, by the election of Dr. Patrick Heron Watson. The Apothecaries' Hall of Ireland has sent as its representative Mr. Thomas Collins, in the room of Dr. Leet, who has retired after having held a seat in the Council from its first establishment; and Dr. R. D. Lyons, M.P., has been appointed the Crown nominee for Ireland, in the room of the late Dr. McClintock. Besides the President, Dr. Acland, who for many years represented the University of Oxford, there now remain, of the original members of the Council, only Dr. Storrar, the representative of the University of Dublin, and Dr. Aquilla Smith, the representative of the King and Queen's College of Physicians in Ireland.

One of the chief topics which occupied the attention of the Council was a report presented by the visitors of examinations. This duty had been entrusted to Mr. Teale, a member of the Council, Dr. W. T. Gairdner of Glasgow, and Mr. William Stokes of Dublin; who visited during the last and the present year the professional examinations conducted by the medical corporate bodies in the United Kingdom. The results of their observations were embodied in a report occupying 230 octavo pages, which was laid before the Council. It consisted of three parts; first, general expressions and special remarks; second, a detailed description of examinations; and thirdly, documents relating to the examinations. The first part contained a series of conclusions as to the changes which the visitors thought desirable in the conduct of medical examinations; and it was this portion of the report which came specially under discussion in the Council.

One most important question raised in the discussion was the practicability of enforcing actual dissection on every candidate at the primary examination. By some of the members, this was held to be possible; while, on the other hand, it was shown that at some of the examinations, which were attended by a very large number of candidates—notably the primary examinations of the Royal College of Surgeons of England—it would be impossible to carry out the conclusions of the visitors, that candidates should be required to perform dissections. The conclusion was adopted by the Council in a modified form, as was also an analogous one respecting the performance of operations on the dead subject at the final examinations. The difficulty in carrying out the proposal of the visitors lay in the dearth of subjects; and it was strongly urged that to make dissection absolutely necessary at the primary examination would deprive the dissecting-rooms of the not

over abundant material used for teaching purposes. At a subsequent stage of the session, a motion was adopted, on the proposal of Dr. Lyons, for the appointment of a committee to inquire into the causes of the deficiency of subjects, and to suggest a remedy. In the course of his remarks, Dr. Lyons made a suggestion which is certainly worth consideration: namely, that for the purpose of testing the skill of the candidates in dissection, the bodies of lower animals, such as the horse, might be used.

A long discussion also took place regarding the time allowed for *viva voce* examinations. The visitors stated as their opinion "that, in oral examinations, where the time allowed is strictly limited, for instance, to ten minutes or a quarter of an hour, there is a serious risk that candidates of average ability, who have been conscientiously taught and fairly prepared in their work, may be rejected owing to misunderstanding or nervousness; and this is a hazard which, reacting as it does injuriously upon study and teaching, ought to be, if possible, avoided by allowing a margin of additional time for satisfying the examiners in all such cases." This expression of opinion led to an important discussion. The Rev. Dr. Haughton and some other members held that it was possible to decide within a few minutes whether a candidate should be allowed to pass or be rejected, and believed that "misunderstanding and nervousness" were terms convertible with "stupidity and ignorance". On the other side, the existence on the part of many fairly well prepared candidates of the feeling well known to students as "funk" was clearly shown to exist; and it was pointed out that some candidates were much more ready at answering oral questions than others. It was also stated that this difference was to a great extent dependent on race, Irish students being much quicker in answering than Scotch. Ultimately, it was decided to recommend that additional time should be allowed for the purpose of satisfying the examiners in all cases, in which there was reason for doubting whether the candidate had had sufficient opportunity of proving that he possessed the knowledge required.

Another conclusion at which the visitors arrived was that, "in any future revision of the curriculum, the subjects of hygiene, ophthalmology, and mental disease, will demand serious consideration, and perhaps admission, under careful limitations, as distinct elements of examination." A motion expressing the desirability of mental disease receiving serious consideration in such circumstances was negatived; and Mr. Teale, who had charge of the visitors' report, refrained from asking the opinion of the Council as to ophthalmology and hygiene. A special suggestion of Dr. Gairdner and Mr. Stokes, in which Mr. Teale apparently did not concur, was to the effect "that, considering the great importance of preventive medicine and hygiene to the general practitioner, these subjects ought to form a more independent part than they do of the examinations of all corporations." The Council decided merely on "taking note" of this suggestion; and subsequently the subject of mental disease was directed to be included in the terms of the resolution.

Other suggestions of the visitors respecting examinations in anatomy in its relations to medicine and surgery, the application of bandages and splints in surgical examinations, the conduct of examinations in practical chemistry in a laboratory, and the recognition of healthy and morbid microscopical specimens, were approved.

The proposed registration of midwives was one of the subjects which came under the notice of the Council. A copy of the Bill which had been prepared with the sanction of the Parliamentary Bills Committee of the British Medical Association, and placed in the hands of the Government by a recent deputation, was sent by the Privy Council to the Registrar of the Medical Council, with a request that the Council would make such remarks thereon as they might think desirable. A deputation of the Subcommittee appointed by the Parliamentary Bills Committee to draw up the Draft Bill also had an interview with the Medical Council, and explained the objects of the measure. The Council appointed a Committee to examine the Bill, who, after a careful examination, brought up a report, expressing general approval

of its objects, and suggesting certain changes. In the discussion, the propriety of the Council assuming responsibility with regard to midwives was contested by some members, especially Sir William Gull and Mr. Simon; the opinion of the majority, however, was in favour of undertaking the moderate amount of responsibility which the Bill sought to lay on the Council. The Council adopted certain portions of the report of the Committee, having reference mainly to general principles; and recorded as the opinion of the Committee, other portions in which verbal alterations were suggested, more or less affecting the details of the Bill. The report of the Committee was finally adopted, and was ordered to be sent, with a copy of the minutes of the debate on the Bill, to the Lord President of the Privy Council.

A Committee was appointed by the Council, to examine the list of bodies whose preliminary examinations in general education were recognised. In accordance with the recommendations in the report of that Committee, it was decided to place on the list of recognised examinations the examinations of the Intermediate Education Board of Ireland, provided that the certificates contained all the subjects required by the Council. It was also decided to send a copy of the minutes of the Council, recommending the discontinuance of special preliminary examinations for medical students, to those medical corporations which still held them. In reference to this subject, the representatives of the Royal College of Surgeons in Ireland and of the Apothecaries' Hall in Ireland stated that these bodies would be quite prepared to relinquish their special examinations in favour of those of the Intermediate Education Board, if such examinations were conducted in a satisfactory manner. The Registrar was also directed to send a circular to each of the Indian, colonial, and American bodies whose preliminary examinations are recognised, asking for certain particulars: viz., the percentage of highest and of pass marks; the number of candidates at examination; and copies of the examination-papers.

An important matter was brought under the notice of the Council by Mr. Macnamara, at whose instance a resolution was passed, directing the Executive Committee to inquire into the extent and nature of the measures taken to prevent personation of candidates at the preliminary examinations. It appeared that a bribe of £200 had been offered to a practitioner by a student, to induce him to pass certain examinations for the latter. The gentleman whom it was thus attempted to bribe, however, very properly forwarded the letter to the Registrar of the Medical Council; and an inquiry into the matter was instituted. It does not appear, however, that the student who acted in this disgraceful way has yet been caught. In the course of his speech, Mr. Macnamara made some remarks, which would indicate that the practice of personation at examinations is carried on to a greater extent than is commonly supposed. If the information given to him, and which he reported to the Council, be at all correct, it is most important that not only the Council and its Executive Committee, but the various boards whose preliminary examinations are recognised, should take the matter into most serious consideration, with the view of preventing the disgraceful impostures which were alleged to be perpetrated.

A charge of professional misconduct against a registered practitioner occupied the Council during the whole of one day's sitting. Inquests were held, a few weeks ago, on the bodies of two children, who had died while nominally under the charge of Mr. D. B. Murdoch, a practitioner in the eastern district of London, but in reality under the care of an unqualified person, employed by him as an assistant. It came out in the evidence that Mr. Murdoch had several "dispensaries," at which unqualified persons were employed; and it was also alleged that he had allowed his unqualified assistants to issue certificates of death in his name. The matter was brought before the Council by the Medical Alliance Association; and the solicitor of the Council summoned Mr. Murdoch to appear before that body, on a charge of professional misconduct in a professional respect. Mr. Murdoch appeared before the Council, acknowledging no error in his professional conduct, but denying—and stating that he had decided on each case that he

had ever authorised his assistants to issue death-certificates; he also alleged that the signature in the cases specially referred to was a forgery, committed by a person named Griffin, one of his assistants. He also expressed contrition for his misconduct, and promised to desist from the course of conduct of which complaint was made. When Mr. Murdoch appeared before the Council, in obedience to the summons, he repeated, in answer to questions, the chief statements of his letter. A long deliberation, from which the public were excluded, was held by the Council, the result of which was that Mr. Murdoch was declared to have been "guilty of infamous conduct in a professional respect"; but it was decided that, in consideration of his promise to desist from his improper practices, his name should not be removed from the *Register*. Such conduct as that of Mr. Murdoch is, no doubt, deserving of severe reprobation, even allowing that, in the matter of the death-certificates, he was the subject of imposture. The Council, however, acted judiciously in the lenient course which they pursued; and it is to be hoped that Mr. Murdoch will—as he has already given indications of doing—return to the honourable path from which he has strayed, and that others who hold lax views of professional morality will take warning, lest they should come under the notice of the Council without being able to plead so successfully as Mr. Murdoch did. At a subsequent period of the session, the Council decided to bring the case of the man Griffin, who was alleged to have forged Mr. Murdoch's signature to death-certificates, under the notice of the Registrar-General.

Another matter of a personal nature brought before the Council was the case of Mr. Hartley Dixon; regarding whom a representation was made by the South Australian Branch of the British Medical Association, to the effect that he had obtained the licence of the Apothecaries' Hall in Ireland without having gone through the proper course of study. Mr. Collins, the representative of the Apothecaries' Hall, explained that that body had acted under the power given to it by an Act of Parliament, but which was exercised only in rare cases, where, after investigation, a departure from the ordinary rules appeared to be justified. It appeared, also, that Mr. Hartley Dixon had commenced his professional education in England more than twenty years ago, and had since then practised, in an irregular way, in Australia. The explanation was accepted by the Council as satisfactory. It is to be trusted that, so long as it is permissible for any examining board to make serious departures from the ordinary rules guiding the course of education and examination, such exceptions will be very rare. The members of the South Australian Branch deserve high commendation for the course which they took in bringing this apparent misconduct of the Apothecaries' Hall under notice.

Various matters in connection with the functions of the Council in regard to the Dentists' Act came under notice. An account of the proceedings will be found in our reports of the daily meetings.

A copy of the report of the Royal Commission on the Medical Acts was forwarded to the Council by the Commissioners. Nothing, however, was done in relation to it; it being apparently the general feeling of the Council, that they should wait for the introduction of a Bill before proceeding to take any steps in the matter.

RECENT RESEARCHES ON BACTERIA.

IV.—MALIGNANT ŒDEMA.

ONE of the most frequent sources of error in experiments on anthrax is the contamination of the cultivating fluid with a form of bacillus, at first sight resembling the bacillus anthracis, and called by Koch the bacillus of malignant œdema, from the symptoms to which it gives rise. We referred to them as the probable source of error in Buchner's experiments; and it may be interesting, in relation to our last article, to mention some facts recently made out with regard to this organism. Though at first sight the two organisms resemble each other very closely in form, yet they differ in various important particulars. The bacilli of malignant œdema are a little broader than the others, and the joints, instead of having rounded convex ends, are concave at their ends; the

joints are also enlarged at the point where they join. This concavity of the ends of the rods is peculiar to anthrax bacilli, and can serve as a definite point of diagnosis. The oedema bacilli are generally in active motion, while those of anthrax are motionless; but this is not a constant character of the oedema bacilli. Another point of great importance is the mode in which infection may be produced by these two microphytes. For the causation of anthrax, it is sufficient to make a minute scratch, not tearing the whole thickness of the skin, and to inoculate this with the bacilli, while the oedema bacillus is without effect unless it be introduced into the subcutaneous cellular tissue. This is especially the case with guinea-pigs, but in mice it is difficult to scratch the skin without opening up the cellular tissue, and infection with oedema bacilli generally follows such an experiment. If, however, the very tip of the ear be selected, the cellular tissue is not opened, and thus an inoculation at the tip of the ear of mice may be used as a means of distinction between bacillus anthracis and the oedema bacillus.

This disease has been made the subject of a special investigation by Dr. Gaffky (see *Mittheilungen des Kaiserlichen Gesundheits-Amtes*, Berlin, vol. i). The organism is apparently identical with the *vibrio septique* of Pasteur, though he had not seen the pure disease, for to produce it he always injected large quantities of blood or exudation containing other forms of bacteria as well, and thus got not only the local and general effects of the oedema bacillus, but also the local effects of the other organisms introduced. After the injections, as carried out by Pasteur, there was extensive oedema in the subcutaneous cellular tissue, often with development of gases, and the animals rapidly died. On *post mortem* examination, the most important alterations were found at the point of injection and in the neighbourhood, and here also the bacilli were most numerous, the blood being free from them at the moment of death.

This disease is very readily produced by the introduction of a small quantity of garden-earth under the skin of an animal (rabbit, guinea-pig, or mouse). The animals become ill very soon, there being no distinct incubation-stage, and death occurs after twenty-four to forty-eight hours. Spreading from the point of infection, the subcutaneous cellular tissue and the intermuscular cellular tissue become oedematous and reddened, the spleen is enlarged, soft, and of a dark reddish blue colour, but the other organs are not altered to the naked eye. No bacilli, or only very few, are found in the blood of the heart immediately after death; but the fluid obtained after section of the various organs contains numbers of these moving rods. The longer the time which has elapsed after death, the more numerous do the bacilli in the tissue and the blood become; they grow best in the dead body, thus differing from other pathogenic organisms. On section of the organs, the bacilli are found in the cellular tissue almost exclusively towards the surface; they apparently spread into the organs from the cellular tissue around. They may also form plugs in the capillaries, though this is rare. In some cases, putrefaction rapidly occurs, but in others it is apparently retarded.

With regard to the cultivation of these organisms outside the body, it has been found by Pasteur, Joubert, etc., that they will not develop in the presence of oxygen, but grow readily when carbonic acid gas is substituted for oxygen in the cultivating flasks. This observation was confirmed by Gaffky, who grew them in the interior of potatoes removed from the air. These bacilli caused death when injected into the subcutaneous cellular tissue, thus showing that they were the true *materies morbi*.

Of great interest is the question of the relation of these organisms to those found by Lewis in the blood of asphyxiated animals, especially of rats—an observation confirmed by Gaffky, when the bodies of asphyxiated animals were kept for twenty-four hours at a temperature of 38° to 40° Cent. Koch thought that they were probably identical organisms, and this has been proved to be the case by Gaffky. These organisms are found most frequently in the blood of horses, and Koch explains this by the slower cooling of their bodies. In smaller animals, these organisms, which probably come from the intestine, do not

develop readily unless the body be kept at a temperature of about 38° C. Dr. Gaffky asphyxiated a guinea-pig, and then placed the body in an incubator. In twenty-four hours, the body was much swollen from gas-development, and from the natural orifices bloody fluid exuded, containing numerous moveable bacilli indistinguishable from oedema bacilli. Everywhere throughout the body, more especially in the subcutaneous cellular tissue, these bacilli were present in large numbers. A drop of fluid from the cellular tissue was injected into a second guinea-pig. This animal died on the following day, with the typical appearances of malignant oedema. A minute quantity of the oedematous fluid, diluted with distilled water and injected into a third guinea-pig, was followed by the same result.

This disease, though spoken of by Pasteur as septicæmia, is clearly distinct from what ought to be included under that head, and is not identical with Davaine's septicæmia, or with the other forms of septicæmia described by Koch. The facts which have been mentioned, however, show that, without a complete knowledge of the bacilli of malignant oedema, and without the exercise of great caution, confusion may arise between them and those of anthrax, etc., and erroneous statements may be promulgated with regard to the pathology and cure of the latter disease.

MEDICAL DUTIES OF THE METROPOLITAN BOARD OF WORKS.

THE annual report of the Metropolitan Board of Works, recently published as a Parliamentary paper, is not without a considerable interest for the medical profession, since the Board exercises many medical functions, though, strangely enough, it has no professional adviser. As to the sanitary state of the Thames, the Board report that samples of the water have from time to time been taken from various parts of the river, and carefully analysed, with a view to ascertaining to what extent, if at all, the water bore traces of pollution. The investigation is still being continued, but, from the reports which have been already made, the Board "has every reason to believe that it will be found, upon careful examination, that the water of the Thames, from Hampton to below Woolwich, is not in an abnormal state, and that its condition is not to be attributed to the sewage-discharge into the river." So rapidly, however, has the metropolis increased since the construction of the sewage-reservoirs in 1864 and 1865, that they have on certain occasions become charged, and have overflowed into the river during the flood-tide. To remedy this defect, the Board have resolved to enlarge the reservoir, so as to provide fifty per cent. additional storage, which "will effectually prevent the overflow from the reservoirs into the river." As regards the regulation and registration of dairies, cowsheds, and milkshops, the Board report that 11,777 persons have been registered, 955 of whom are the occupiers of licensed cowsheds, the remainder being dairymen or milksellers only. The premises have been under uniform inspection; and considerable improvement in the sanitary arrangements and in the conduct of the business has, especially as regards the cowsheds, resulted. The Board state, however, that whilst in the larger dairies and milk-stores much improvement has taken place, and they are generally in a satisfactory condition, yet it has not been found possible to obtain much improvement in the shops where milk is sold, especially in poor neighbourhoods. With the limited powers possessed by the Board, it has only been practicable to obtain improvement in cleanliness, and to separate, as far as possible, from the place of storage all substances likely to contaminate the milk. 12,920 inspections of dairies, milk-stores, and milkshops, were made during the year by the Board's inspectors.

With regard to the protection of infant life, "all practicable measures have been taken for making the provisions of the Act known, and for the discovery and punishment of persons acting in contravention of it." Inquiries were made in 191 instances as to unregistered houses, in which were found 370 children, 154 of whom were under the age of one year, 72 above one and under two years of age, and 144 above two

years of age. Forty-two infants died at unregistered houses, 34 under the age of one year, 6 above one and under two, and 2 above two years. These infants were mostly illegitimate, and were under the sole care of the persons taking charge of them, many of whom were old and quite unfitted for the duty. The infants were frequently found to be improperly kept, and the persons in charge of them often depended entirely upon the few shillings a week which they received for their keep. The Board remark that no opportunity has yet been found by the Government for acting on the suggestions made by them for the amendment of the Act with a view of making it more effective. These suggestions are that (1) the operation of the Act should be extended to infants under five years of age, and to the keeping for hire of any number of infants; (2) where two or more adults live together and take children for hire, they should be severally liable; (3) parents should not be relieved of their responsibilities in respect to their infant children by the payment of sums of money to other persons for adopting them; and (4) registered persons should be required to give notice of removal, and, upon the discontinuance of their registration, to surrender the register.

DR. BURNEY YEO has been appointed Physician to the Life Association of Scotland.

A RUSSIAN Medical Congress will shortly be held at Moscow, after the opening of the exhibition at that city. Among the chief subjects of discussion will be papers on the recent epidemic of diphtheria in Russia, and the mutual relations of State Medical Legislation and Local Sanitary Laws.

IN consequence of the extensive prevalence of measles at Workington, it has been decided, upon the recommendation of the medical officer of health, to close the whole of the Board schools in the town.

DURING the last six years, an epidemic of measles has occurred at Sunderland every other year, the immunity from the disease enjoyed one year being followed by an increased and excessive mortality in the next. Referring to the subject in his annual report, Mr. Harris observes that it is certainly remarkable that last year was no exception to this apparent rule, for the usual immunity followed the epidemic of 1880.

ON Wednesday last, at University College Hospital, Mr. Christopher Heath excised the kidney in a young child. The organ was the seat of a rapidly developing sarcomatous growth. The operation was completed without much loss of blood, and the condition of the child was hopeful until the following morning; it then somewhat rapidly sank, and died eighteen hours after the operation.

THE Committee on the Contagious Diseases Acts will, it is stated, meet on July 27th to consider their report. A report is now being drafted by Mr. O'Shaughnessy, the chairman of the Committee. The inquiry is said to be the longest which a Committee of the House of Commons has undertaken for many years past, it having lasted for a period of four years, and no fewer than forty thousand questions having been put to the various witnesses. As the evidence is voluminous, it is possible that Mr. O'Shaughnessy's draft report may not be ready by the above day, in which case the Committee will meet at a later date.

REFERENCE is made by Mr. Harris, in his report on the epidemic at Sunderland, to an accidental discovery of the existence of scarlet fever in a milk-maid. An inquiry was made in the neighbourhood among the people in whose homes deaths from the disease had occurred, and it was found that in four instances the people had been supplied with milk from the infected source. Mr. Harris was unable to discover

how many non-fatal cases owed their origin to the same source. Had the presence of scarlet fever been notified in the first instance, it is not unreasonable to conclude that these deaths would never have happened.

MR. THOMAS MADDEN STONE, the venerable and genial Clerk to the Royal College of Surgeons, has retired from that office, which he has filled for thirty years. Mr. Stone was assistant-librarian to the College from 1832 to 1852, so that he has served that institution for half a century. Mr. Stone received, as a gift from several members of the profession, a silver presentation salver, with a tea and coffee service, on his retirement from his first appointment in December 1854.

STRENUOUS efforts are being made by the health-authorities of America to prevent the introduction of small-pox into the United States. Systematic inspections are now made of all emigrants by the medical officers of steamships and by the health-officers of the several ports of arrival, with a view of vaccinating all those who are found to be unprotected. At New York, the Board of Health has issued a code of regulations for the examination of all immigrants coming from or through any foreign port where small-pox exists. Bills of health are required by the quarantine officials, and the medical officers of vessels have to verify under oath the number of persons considered to be protected by vaccination.

At a meeting of the Council of the Poor-law Medical Officers' Association held at their rooms, 3, Bolt Court, Fleet Street, on July 6th, it was resolved that the annual meeting of the Association should be held at Worcester during the jubilee of the British Medical Association, at an hour and day hereafter to be locally determined, due notice of which will be given. The Council trust that all Poor-law medical officers resident in the adjacent counties will, if practicable, put in an appearance, as many important subjects bearing on the well-doing of the service will be brought forward—notably the amendment of the Superannuation Act. The Council hope that, if any gentleman have any grievance to complain of, he will communicate the facts connected therewith to Dr. Rogers, 33, Soho Square.

ALTHOUGH we have reason to believe that unusual activity prevails in the Army Medical Department, no orders have, as yet, been issued by the authorities, nor can any instructions that may have been given to staff-surgeons be made public at present. No military operations against any foreign power have actually commenced, the movements of troops recently reported in the daily papers being from one part of Her Majesty's dominions to another, and these troops are accompanied, as usual, by their medical officers; should any strategic designs be contemplated, it is obvious that they would not be revealed by the authorities, and army medical arrangements of necessity come within the general secrecy which must at present be enforced with regard to all matters concerning Her Majesty's forces. Certain paragraphs which have appeared in the daily papers, relating to matters concerning the Army Medical Service, are, we understand, neither official nor accurate. We have good reason to believe that eight field hospitals and two bearer companies will shortly be assembled at Aldershot. No surgeon to Her Majesty's army was on board any of the British war-vessels that commenced the bombardment of Alexandria on Tuesday morning, either officially or merely as a spectator.

UNQUALIFIED PRACTITIONERS AND CERTIFICATES OF VACCINATION. AT a meeting of the Wolverhampton board of guardians this week, the clerk reported that his attention had been called by the vaccination officer to a document purporting to be a certificate of the successful vaccination of a child named Bratt, the signature being that of Alfred Freeman, a medical practitioner of Wolverhampton, with an intimation that the vaccination was performed for, instead of by, him. This, the clerk said, was not a certificate which any authority could take as

legal and satisfactory. On inquiry, he found that the vaccination had been performed by an unqualified medical man, who acted as Dr. Freeman's deputy. The clerk was instructed to write to the Local Government Board for advice on the matter.

MILITIA SURGEONS.

THE Chairman of the Parliamentary Bills Committee has received a communication from the Secretary of State for War, informing him that a further communication will shortly be made to him on the subject of the case of the militia surgeons, respecting his communication to Mr. Childers of the 28th ultimo published in the JOURNAL of last week.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

THE twentieth annual meeting of this Society was held in the Board Room of the Infirmary on the evening of June 6th, 1882. The twentieth annual report expressed satisfaction at the number of members and the work of the Society for the closing session. A report of the Commission upon Woolsorters' Diseases, appointed eighteen months previously by the Society, was read and ordered to be printed for private circulation amongst the members, previously to its general discussion at a forthcoming meeting. Votes of thanks were accorded to the retiring officers, and the following gentlemen were elected to serve for the succeeding year. *President:* H. Butterfield. *Treasurer:* T. C. Denby. *Secretary:* D. Goyder, M.D. *Committee:* J. Craig, M.D.; W. H. Ellis; J. Appleyard, M.B.; W. G. Burnie. *Pathologists:* T. Wilmot and J. Appleyard, M.B. *Auditors:* S. C. Hirst and J. Dunlop, M.D.

THE BOMBARDMENT OF ALEXANDRIA.

Up to noon on Thursday no telegrams had been received at the Navy Medical Department, conveying any information about the precise nature of the injuries received by the officers and sailors of Her Majesty's navy wounded during the bombardment of Alexandria. The health of the entire naval force is most satisfactory. The surgeons on board the vessels engaged in the action have full instructions as to the disposition of the wounded under their charge, and are ready to land all sufferers, and to erect temporary hospitals for them on shore, if that be possible and necessary. As the latest telegrams announce that the work of the ships is over, and that any further action must be on shore, it is most likely that all that have been wounded up to the present time will remain on board their respective vessels, where they will be most free from disturbance.

DR. RIPTON.

WE have received from a correspondent in Alexandria a short note concerning the late Dr. Ripton, whose massacre in Alexandria was recently reported. The deceased gentleman was an Irishman, the son of the late Dr. Ripton of Dublin, who, besides practising medically to some extent, preached among the natives. He was a man of quiet and amiable disposition, but had excited some ill feeling among the Arabs, so that about the beginning of last winter he fell into the hands of Egyptian soldiers, who maltreated him while he was taking a morning walk near the ramparts. Being in the habit of preaching to the natives, he was no doubt a marked man. Our correspondent at Cairo, who has passed a large part of his life in the country, writes that it is quite well understood here that the massacre had a politico-fanatical origin. He adds: "Had Admiral Seymour landed his men at Alexandria when he was urged to do so, we should have had a terrible massacre at Cairo, as the preachers of the Holy War, Nedim and his companions, after lighting the spark at Alexandria, came up here."

MEDICAL FEVER RISKS.

At a dinner held recently in aid of the funds of the London Fever Hospital, it was stated that no less than 492 doctors and nurses had contracted fever, of whom 83, or 17 per cent., had died; and that of 33

resident medical officers, 22 had taken the fever, and 8, or 36 per cent., had died. It is not stated from what diseases the staff suffered, so that no positive conclusion can be formed as to whether the conditions in which they lived might or might not have been unsuitable. We find, however, that there have been only seventeen cases of fever amongst the staff during the last ten years; of these, five died, all of typhus. Murchison said that none of the nurses of this hospital contracted enteric fever in the discharge of their duties; but that every attendant on the typhus patients who had not had the disease previously, did contract it, with very rare exceptions. It is, therefore, not surprising to find that, amongst the large staff that must have been employed at the London Fever Hospital till now, nearly five hundred were attacked; and, if they had "typhus", as is only too likely, a mortality of 17 per cent. is not high. The London Fever Hospital has done good work, and, if supported, will continue to do so; but we doubt if the public health wants of a place like London can be supplied by a body dependent for its support on voluntary contributions.

LAUDANUM TO INFANTS.

A FATAL case of poisoning of an infant is reported from Keyworth, and is remarkable for the alleged smallness of the dose. A "drop" of laudanum was administered one afternoon with castor oil, to an infant, three weeks old, for the cure of diarrhoea, to which the child had been subject from its birth. Shortly after, the child became suddenly very ill. At half-past five on the same afternoon it was seen by Mr. Percy Blumer, when the child was lying with contracted pupils, livid lips, skin covered with perspiration, small pulse, and slow respiration. It could be roused with difficulty, and speedily relapsed into its former state. Notwithstanding the administration of emetics, and the use of cold effusions, the child died thirteen hours after it was first seen by Mr. Blumer. Death from one drop of laudanum has occurred before, but the repetition of an ascertained case of death after such a dose is worthy of record, if only to impress on the public and the profession the danger attending the administration of opium in any form to young children.

ANIMAL VACCINE.

M. DE PIETRA SANTA has addressed to the Académie de Médecine a memoir on animal vaccine, in which he points out that statistics, experiment, and clinical observation prove that the results of vaccination and revaccination with animal vaccine are useful, efficacious, and prophylactic. The results obtained during the last three years in the gratuitous vaccination service of the French Society of Hygiene fully confirm the conclusions presented by Professor Depaul in 1866, and adopted by the Académie de Médecine. If daily practice uncontestedly establishes that vaccination and revaccination are the most tutelary therapeutic weapons with which to combat an epidemic of variola before its outbreak, and even during its evolution and spread, it is of the utmost importance to popularise and encourage the culture of animal vaccination, for the reason that it places at all times in the hands of physicians an abundant source of vaccine lymph of excellent origin and of indisputable efficacy.

CESOPHAGOSTOMY.

DURING the last session of the Clinical Society, Mr. Reeves read a paper on the treatment of cesophageal stricture, in which he advocated the operation of making a permanent opening in the cesophagus, in preference to gastrostomy, which has proved so fatal. It may be recollected that, in the second case of gastrostomy, then related by the author of the paper, healthy tube was reached *post mortem*, without great difficulty; and the impression of this case, coupled with the fact, that cesophageal stricture is commoner in the upper part of the tube, induced Mr. Reeves to recommend a cervical exploration before proceeding to gastrostomy. Recently, an opportunity has occurred to carry this plan into effect. A man, aged 63, under the care of Dr. Stephen

Mackenzie, at the London Hospital, was referred for operation to Mr. Reeves, who, after consultation with his colleagues, and with the approval of Mr. Adams and Dr. Mackenzie, successfully performed the operation. On reaching the œsophagus, which was recognised with difficulty on account of its walls being cancerous, a large elastic catheter was introduced, and tied in. A further account of the case will appear in due course. Meantime, the operation is of interest, as showing that the suggestions offered by the author of the paper, at the Clinical Society, have been proved to be quite practicable, and tend to bring this rather rare and difficult operation within the range of practical surgery, and possibly to offer advantages over gastrostomy.

GASTROSTOMY.

MR. LANGTON has recently performed this operation at St. Bartholomew's Hospital on a young child. The patient was suffering from a stricture of the œsophagus, produced by having swallowed a quantity of potash ley about six months earlier. The patient was seen at the consultation on June 22nd, and Mr. Langton was then supported by his colleagues in the determination to attempt to relieve the child, who was nourished solely by enemata, by opening the stomach. Under these circumstances, the first part of the operation was performed on June 24th; and five days later the stomach was opened, and a soft tracheotomy tube introduced. The patient recovered well from the operation, and there was no general peritonitis; but it gradually sank, and died of exhaustion a week after the gastric fistula was first used for the introduction of food.

HAMPSTEAD HEATH.

HAMPSTEAD HEATH, which has long enjoyed the reputation of being a pleasant and easily accessible health-resort, where invalids and children, who, during the summer months, flock in such numbers, may find health and recreation, is, we fear, soon likely to lose its present free and agreeable character. The sturdy athletes, who assemble so largely on the east side of the Heath for cricket and football, not content with this appropriation, are making strenuous efforts to monopolise the west side also. The Hampstead Vestry, who are said to approve of this step, should, we think, before making such a concession, consult the wishes of the population of Hampstead itself, which numbers between 30,000 and 50,000 people, and to whom the Heath virtually belongs, and who at least should be the last to be debarred from the advantages which the Heath possesses as a pleasant health-resort for children and adults. This, however, will be the case if some energetic movement be not set in action to resist the efforts which are being made to obtain it. Should they succeed, the use of the Heath by children will be attended with considerable danger—so much so, that parents will hardly care to run the risk of sending them there at all, and the comfort and convenience of invalids and students will be severely interfered with.

CHOLERA AND QUARANTINE.

CHOLERA declared itself during the end of May in the island of Penang, in the Malacca Straits, not far from Singapore. There exists constant communication between Penang and Singapore, also between Batavia and the principal ports of Java and Borneo. The International Councils of Health of Egypt and Constantinople have, in consequence, established the following regulations. All vessels carrying merchandise exported from the Dutch possessions in the Malay Archipelago, or from Singapore to Suez and Egypt, shall undergo twenty days' quarantine, if they come from the Straits of Malacca, or from the Gulf of Persia. Vessels coming from the Straits of Malacca, or from the Gulf of Persia, are to undergo seven days' quarantine. Vessels coming from all the ports of the Ottoman Empire, Hedjaz, Yemen, the Mediterranean, and the Persian Gulf. These provisions are to be put into force as soon as the season is near when the Indian monsoon sets out on a regular course to the only places. Some uncertainty exists as to whether the regulations apply to vessels from Calcutta, which is a port of call for vessels from the Straits of Malacca, and from the Gulf of Persia.

were 300 deaths during last April from cholera, and 104 from April 29th to May 6th. The Sanitary Council of Constantinople has decided, if the sanitary condition of the far East do not improve, to adopt a measure which was suggested at the International Conference of Constantinople. A strict surveillance will be kept over all vessels coming from the Indian Ocean, and bound for the Red Sea. This measure is aimed especially at the vessels carrying pilgrims; the Council being desirous to leave unhampered the commercial traffic. The large steam-packets and merchant-vessels voluntarily observe all hygienic precautions.

DR. F. W. BARRY.

THE appointment of Dr. F. W. Barry as Medical Inspector to the Local Government Board is likely to be a very popular one, for Dr. Barry's exceptional abilities and industry are well known to the sanitary medical service. During his short tenure of office as Medical Officer of Health for the Craven Combined District, he succeeded in getting a quite surprising amount of work done by the local authorities, and even inspired the members with something of his enthusiasm for sanitary improvement. His selection by the Colonial Office for the responsible post of Principal Medical Officer of Cyprus, in the early part of 1880, was a tribute to the conspicuous energy of his work; and, during his sojourn in the East, he has done much to organise a system of hygiene in the island. It is understood, however, that there is no longer any necessity in Cyprus for an officer with the functions assumed by Dr. Barry; and the Local Government Board are fortunate in being able to find his services at their disposal now that a vacancy has occurred in their department through the resignation of Dr. Beard. For some time past, Dr. Beard's health has been in a very unsatisfactory state, and he has done wisely in relinquishing duties which were too great a tax upon his powers of work. Dr. Beard was originally appointed to the Medical Department of the Privy Council by Lord Ripon in 1870, having been previously in practice at Brighton. For a number of years, his services have been exclusively engaged in the inspection of public vaccination; but no doubt this arrangement will be materially modified in the case of his successor.

SIR ERASMUS WILSON.

IN returning thanks at the dinner of the Fellows of the College of Surgeons last week as Senior Vice-President in the place of the President, Sir Erasmus Wilson, Mr. Spencer Wells said he had great pleasure in informing the Fellows that the President had sufficiently recovered from his severe illness to have left London for his marine residence at Westgate; that he was gaining strength, and that it is hoped that, by passing the next winter in the south of England, or in some warmer climate, he might return next year, and take his usual place in Society with all his accustomed cheerfulness and genial courtesy. Mr. Spencer Wells went on to say that, since the Fellows dined together last year, the Queen had conferred a title upon the President which he richly deserved, not only for his benefactions to the college and to our profession, but to the nation. He has endowed the College by a gift of £5,000, which—originally destined to found a chair of dermatology—and thus assist in the advancement of a branch of science and practice which Sir Erasmus has illustrated with such great ability—has now become more widely useful in the establishment of a curatorship and lectureship in connection with the pathological department of the museum. Our profession generally he has benefited by his large benefactions to the Royal College of Surgeons, and by founding and supporting the Royal College of Pathology in the University of Aberdeen. The Fellows are indebted to him for his munificent contributions to the College, for his gift of Cleopatra's needle, for his gift of the Egyptian obelisk, and to the new College of Music. When it is known that these gifts together amount to a sum of £60,000, we cordially concur in Mr. Spencer Wells's concluding remark, that the College may well be proud of what their President has done; for, as he said, it was not like the legacies of Radcliffe and

Sloane, left by will to be used after the death of the donor, but a free gift during the lifetime of the man who had made the money by the hard work of many years.

HOSPITAL DEATH-CERTIFICATES.

GUY'S Hospital has again incurred the censure of a coroner's jury. Mr. W. J. Payne concluded an adjourned inquest on the bodies of three newly born children, who died shortly after birth. The feature of each case was that a student from Guy's Hospital attended at the confinement, and owing to the peculiarity of the death-certificates given from the hospital, the local registrars refused to accept them. However, Mr. Henry Austin, house-physician at Guy's Hospital, deposed to making the *post mortem* examination on two of the bodies, and said that the students in each case had done all that was necessary in a proper manner. The cause of death was a want of vitality—both children being exceedingly puny. Had properly qualified men been sent the result would, doubtless, have been the same; but he was bound to admit that, in the last instance, the student was to blame in not informing the staff that the case was serious, and that the child could not possibly live, as a fully qualified man would then have been sent. The custom of the hospital was to allow the students to attend and not call for any superior skill while they were satisfied they could do without it. With regard to the method of signing the certificates, it was the common practice to sign them on the report of the students and without seeing the child at all. In reply to the coroner and jury, the witness said they were quite aware that by the Act of Parliament they rendered themselves liable to a fine and two years' imprisonment by pursuing this course. Witness could see also that for the staff to sign certificates on mere information might sometimes lead to serious results. In the third case, the certificate stated that the child had died of convulsions. The coroner said the inquiry had revealed a blot on the hospital system, and he would take care to lay all the facts before the Registrar-General. The jury returned a verdict of death from natural causes in each case, and added a rider censuring the hospital authorities for not sending properly qualified persons to see the dead bodies before granting certificates for the registrars.

A GOOD EXAMPLE.

THE volunteer medical service, it is admitted, is not in a very satisfactory state, except perhaps in some metropolitan corps. It is refreshing to learn that a country battalion in the North has lately made a most praiseworthy effort to bring up the efficiency of its medical staff. At the recent inspection of the 2nd Battalion North Yorkshire Volunteer Rifles, the surgeons and their ambulance detachment marched past in rear of the regiment. After the combatant ranks had been inspected and manoeuvred, the inspecting officer, Colonel Mockler, reviewed the medical department, which consisted of Surgeon-Major J. W. Taylor (Scarborough), Acting-Surgeon W. T. Colby (Malton), and Acting-Surgeon R. Bruce Low (Helmsley), together with one sergeant and twelve bearers. The equipment comprised three stretchers (Machure's pattern), a field companion, haversack, water-bottles, etc. The men looked clean and soldier-like. Dr. Taylor put them through the stretcher drill, lifting and carrying wounded (which were supplied by a squad from one of the companies). The improvised methods of aiding wounded on the battlefield were then shown—e.g., stretchers made from rifles and rugs, carrying wounded men in various postures on two, three, or four-handed seats, etc. All these movements, which were smartly executed, were watched with great interest by a large crowd of spectators. At the close of the drill, Colonel Mockler presented to each bearer the certificates of proficiency which had been gained by all at an examination conducted by the Army Medical Department some weeks previously. These certificates were signed by Surgeon-General Shelton (northern district) and Brigade-Surgeon Tippetts, and certified to the bearers' proficiency in stretcher and ambulance drill, as well as in field dressings. Each man is now entitled to wear a brassard on his right arm, with a red cross displayed on a white ground. The

training of these bearers has been carried out by Dr. Taylor with great zeal and assiduity. He has spared no time or trouble to render these men efficient. Few volunteer regiments can boast of so highly trained an ambulance detachment. Colonel Mockler complimented Dr. Taylor on the results of his labours, and addressed a few words of commendation to the men, after which the detachment was dismissed. It would be well if the senior surgeon of each volunteer regiment would take this example to heart, so that in time our citizen army would be better able to take the field, if ever that day should come.

DEATH UNDER ETHER.

FOR the following account of a case of death from ether, administered by Ormsby's inhaler, we are indebted to Mr. Lawson Tait of Birmingham.

"A patient, aged 45, was sent to me from Liverpool with a large abdominal tumour, for which she was very anxious to have an operation performed. She was extremely anæmic and feeble, and at first sight it appeared to me perfectly hopeless to attempt anything. Rest and care in the hospital so far improved her, that I agreed to her urgent request to attempt either the removal of the tumour, which was clearly uterine, or of the uterine appendages. At 9 A.M. on June 26th, she was put under the influence of ether by my assistant, Mr. Raffles Harnar. The ether used was supplied by May and Baker of London, and is described as 'absolute anhydrous methylated sulphurous ether, .717'. Less than half an ounce was put on the sponge of the inhaler; and the instrument was placed over the patient's face, with the air-valve open. It is difficult, under such circumstances, to give an accurate statement of time and the sequence of events; but I think the air-valve was kept open about three minutes, and was certainly not closed more than two minutes before I noticed that the pulse of the right wrist, which I was observing, was gone. Dr. Burnie of Nottingham was observing the pulse of the left wrist, and, in answer to my remark, stated that the pulse could be felt in the wrist on his side. The breathing was perfectly regular and deep. I lifted an eyelid, and saw the peculiarly dilated pupil which I have seen once before, and which meant death. Dr. Burnie now said the pulse was gone, yet breathing was still going on. The inhaler was immediately removed, and the breathing was assisted. It rapidly failed, however, and in spite of the inversion of the patient and the continuation of artificial respiration, we got nothing more from the patient than one gasp. Death took place at the heart at least one minute before respiration was interfered with. No incision had been made. Dr. Saundby made a careful *post mortem* examination, and reports that the tumour was uterine, and that the chief feature was the remarkably small size of the heart. It weighed only four ounces, and Dr. Saundby says, 'I have never seen so small a heart in an adult.' The right side was filled with clot and the left side was empty. The muscular tissue of the organ was somewhat granular, but this may have been due, Dr. Saundby thinks, to *post mortem* change. The right kidney had some cysts, and there was some puckering of the left. The capsules were a little adherent and the surfaces smooth, rather pale, and the cortices narrow. Nothing else of note was observed. At the time of the death, I regarded it as one of asphyxia due to the inhaler; and the condition of the heart confirms, it seems to me, this view. Until three weeks before this death, I had for years used ether dropped outside a single layer of a towel, spread over the patient's face. I had a strong prejudice against the use of an inhaler, by which the patient breathed over and over again the same volume of ether and air. That such a plan may be safe in the great majority of cases, may be true; that it saves both time and ether, cannot be denied; but that it will prove unsafe in such an exceptional case as this was, I think, is quite evident. My conclusion is that as no economy of time or ether will compensate for such a disaster, I shall revert to the use of the towel, and certainly shall never again employ any inhaler in which the same fluid is rebreathed."

THE OPHTHALMOLOGICAL SOCIETY.

THE annual general meeting of this Society was held on the 7th instant; and plentiful evidence of its flourishing condition was afforded by the address of Mr. Crichtett, who presided in the absence of Mr. Bowman, and by the report of the Treasurer. The Society has met with a good deal of support among our brethren practising in India and the colonies; and an alteration in the rules was made at this meeting which permitted of the election of colonial candidates, 'per-

sonally unknown to members in England. One of the most distinctive qualities of the meetings of this Society has always been the large number of gentlemen interested in ophthalmic medicine in the provinces who have attended, read papers, or in other ways contributed to the interest of the proceedings. The Secretaries especially are to be congratulated on the very great success which has attended their efforts; the retirement of one of these gentlemen, Dr. Stephen Mackenzie, drew from the Chairman an expression of regret mingled with gratitude for past services. A very interesting paper on the Movements of the Eyelids, by Dr. W. A. Fitzgerald and Mr. Lang, reopened a much discussed subject, and brought up Dr. W. R. Gowers, who defended the position taken up in his well known paper read before the Royal Medical and Chirurgical Society; it is the movements of the lower lid which are most difficult to account for. Dr. Gowers maintains that the tarsal cartilage (so called) is kept, by its own elasticity, chiefly in close contact with the globe, and that it lies in the slight groove which exists at the junction of the cornea and sclerotic, so that the movements of the lid are determined by those of the eyeball. The view taken by the authors of the paper read the other evening is, that the depression of the lid is produced chiefly by the inferior rectus muscle, which acts upon it indirectly through the medium of a tendinous expansion from the capsule of Jevon's. Probably the truth is that both causes are efficient and coincident causes of the movements. The following gentlemen were elected to serve the various offices of the society for the ensuing year:—*President*, William Bowman, F.R.S., LL.D., etc.; *Vice-Presidents*, George Critchett, W. H. Broadbent, M.D.; C. E. Fitzgerald, M.D. (Dublin), Henry Power, Frederick Mason (Bath), Augustin Prichard (Clifton); *Treasurer*, J. F. Streatfeild; *Secretaries*, John Abercrombie, M.D., E. Nettleship; *Other Members of Council*, James E. Adams, Edwyn Andrew, M.D. (Shrewsbury), W. A. Brailley, M.D., R. Brudenell Carter, W. R. Gowers, M.D., R. Marcus Gunn, C. Higgins, George Lawson, Stephen Mackenzie, M.D., Charles Macnamara, J. Vose Solomon (Birmingham), T. Shadford Walker (Liverpool).

SCOTLAND.

SICK CHILDREN'S HOSPITAL, EDINBURGH.

PROFESSOR ANNANDALE has been appointed, by the Directors of the Royal Sick Children's Hospital, Edinburgh, consulting surgeon to that institution, in place of the late Professor Spence. A vacancy also occurred in the office of pathologist to the hospital through the appointment of Mr. D. J. Hamilton as Professor of Pathology in Aberdeen University; this was filled up at the same meeting by the election of Dr. G. Sims Woodhead, Demonstrator of Practical Pathology in Edinburgh University.

PROPOSED CHILDREN'S HOSPITAL IN DUNDEE.

A PUBLIC meeting, in favour of the proposed Children's Hospital in Dundee, was held last week. It was proposed to provide a special ward in the Dundee Royal Infirmary for the treatment of indigent sick children. The various proposals made at the meeting were warmly responded to—one gentleman offering to maintain a cot, in addition to his subscription to the general fund. An influential committee was appointed to carry out the intentions of the meeting, and to co-operate with the directors of the infirmary.

ANDERSON'S COLLEGE, GLASGOW.

FROM the annual report of this institution, which has just been made public, it appears that the classes in the different departments continue very satisfactory. As regards matters medical, the report states that the negotiations with the managers of the Royal Infirmary for the amalgamation of the two medical schools have fallen through for the present, as it had been found impossible to arrange terms which would be acceptable to the teachers of both institutions. We find also one other

point of considerable importance alluded to in the report, and that is, that the Medical Faculty have under consideration the advisability of removing the medical school of Anderson's College to the west end of the city, in close proximity to the University and Western Infirmary; and they hope soon to submit a definite plan for the removal.

THE PROPOSED NEW COMPULSORY CLASSES IN EDINBURGH UNIVERSITY.

AT a meeting of the University Court, held on Monday, the subject of the proposed new compulsory classes of practical materia medica was considered from various points of view. Several of the dispensaries, and the Scottish Branch of the Chemists' and Druggists' Association, appeared by deputations, and were heard as objecting to the proposed compulsory character of the class; while, for the Senatus, the Dean of the Medical Faculty (Professor Fraser) and Professor Greenfield were heard. The Court, having heard both parties, resolved to postpone decision until the October meeting, meantime the objectors to consider the report of the Senatus on the subject, and to forward to the Court, previous to the end of September, a printed statement of their views on the subject. At the same meeting of the Court, it was agreed to add to the rules regarding applications for recognition by teachers of medicine that applicants should furnish a general statement of the apparatus, illustrative specimens and diagrams, or other apparatus at their disposal, for the teaching of their classes.

DEATH OF DR. ANDREW BUCHANAN OF GLASGOW.

WE regret to have to announce the death of Dr. Andrew Buchanan, late Professor of Physiology in the University of Glasgow. The sad event took place on the 9th instant. Dr. Buchanan had attained the ripe age of eighty-four years, thirty-five of which were spent as Professor of Physiology. Appointed surgeon to the Glasgow Royal Infirmary at a comparatively early age, he filled this post with marked success, and his name will always be associated with his modification of the operation for the removal of stone from the bladder by means of a rectangular staff. Experience and research have also conclusively proved the truth of his theory as to the production of fibrin in the coagulation of fluids. For some years prior to his death, Dr. Buchanan had retired from the more active duties of his profession to enjoy the rest he had so well earned, but he was at all times ready to give a helping hand to any good cause towards the prevention of disease and the alleviation of suffering. His loss will be much regretted by a large circle of friends.

IMPORTANT CONCESSION TO EDINBURGH STUDENTS.

AN important concession to common sense, and especially to second year students, has been proposed by the Senatus, approved by the Edinburgh University Court, and requires only the approval of Her Majesty in Council. This consists in students being permitted to appear for examination in chemistry, botany, and natural history (first professional examination) when they have completed their attendance at these classes. The regulation which is in force at this moment is not only absurd and unjust, but highly prejudicial to the student. Briefly stated, it is this: if a student begin his studies by attending botany and natural history in, say, summer 1882, chemistry in winter session 1882-83, he has still practical chemistry to attend in summer 1883; and he is thus permitted to appear for examination in October 1883; the only thing hindering him from passing at the end of the winter session 1882-83 being, first, his want of practical chemistry (which could easily have been overtaken in the same session he was attending the chemistry class); and, secondly, the regulation compelling him to wait till October. But this injustice is trifling, compared with that done to the man who at present begins his studies in a winter session. Take such a case. He attends chemistry in the winter session 1881-82; botany, natural history, and practical chemistry, in summer 1882. He has, therefore, completed his attendance necessary for examination; but the

regulation here exerts its baneful influence, for he is not allowed to appear till April 1883. That is to say, during his second winter, when his whole attention should be given to such elementary studies as anatomy, dissecting, physiology, surgery, and hospital attendance, he has hanging over him an extensive examination in botany, natural history, and chemistry. It is scarcely credible that such a regulation should have existed, and existed so long; and undergraduates of medicine in Edinburgh University are to be congratulated, not on the ground of privilege, but simply on that of right and justice about to be done to to them.

IRELAND.

FOR the vacant coronership for Queen's County, there are three candidates: Messrs. Dunne, Quicke, and Higgins, the last two named being medical practitioners.

LIGATURE OF THE INNOMINATE ARTERY.

MR. THOMSON's case is at present progressing favourably. On the thirtieth day (Saturday, July 8th), there was some bleeding through the sinus, which had been closed for two days and then reopened. The bleeding stopped spontaneously, and has not recurred. The patient's temperature remains normal; the left radial pulse is 88. The tumour is much reduced in size, and perfectly pulseless; some pulsation is apparent in the region of the ligatured vessel. No pulsation can be detected in the right carotid, temporal, or radial arteries.

HEALTH OF IRELAND: QUARTERLY REPORT.

THE births registered during the quarter ended March 31st amounted to 32,686, being equal to 25.7 per 1,000; and the deaths to 24,873, or 19.6, being 2.9 per 1,000 under the average rate for the corresponding quarter of the five years 1877-81. The returns for the quarter are unusually favourable, the mortality being the lowest on record since 1874. Zymotic diseases caused 2,091 deaths, of which 567 were due to measles, 519 to fever, 313 to diarrhoea and cholera, 306 to scarlatina, 183 to whooping-cough, 120 to diphtheria, and 83 to small-pox. Considerable modifications have been made in the arrangement of the tables attached to this report as compared with those previously. The tables are now arranged according to the registration provinces, counties, superintendent registrars' districts (Poor-law unions), and registrars' districts, instead of into "registration divisions", etc., as formerly. It has been found by experience that, as the registration divisions did not correspond with any generally recognised geographical division of Ireland, they conveyed but little meaning to the public. The other modification introduced into the tables is the including therein returns concerning the progress of vaccination. Under the Vaccination Acts, all children born in Ireland are required to be vaccinated within three months, or a reasonable excuse shown by their parents or other custodian why they have not complied with the law. Thus, if a child has not been certified as successfully vaccinated, it is the duty of the person having charge of the child to show by medical certificate that the child is unfit for vaccination during this period, or that the child has died. The important relation of the state of vaccination to the prevalence of small-pox is obvious, and hitherto no attempt has been made to compile a complete record of all the vaccinations performed in Ireland. An accurate and very full return of all "public vaccinations" has been annually published by the Local Government Board, and it is with a view of supplementing that return, and reporting more frequently on the state of vaccination, that the new vaccination returns have been added to the quarterly report. The form in which the return has been obtained and tabulated has been adopted after careful consideration with the Local Government Board, and has been carried out under a new regulation approved of by his Excellency the Lord Lieutenant on February 3rd, 1882.

GENERAL COUNCIL

OF

MEDICAL EDUCATION AND REGISTRATION.

SESSION, 1882.

Wednesday, July 5th.

DR. ACLAND, President, took the Chair at 2 P.M.

Mr. Hartley Dixon and the Apothecaries' Hall of Ireland.—MR. MACNAMARA called the attention of the Council to a communication made by the South Australian Branch of the British Medical Association respecting Mr. Hartley Dixon, who, it was stated, had obtained the licence of the Apothecaries' Hall in Ireland without having passed through the required period of professional study. He would ask the representative of the Apothecaries' Hall to explain the apparent irregularity.

MR. COLLINS said that an Act of Parliament gave the Apothecaries' Hall power to depart from its regulations in certain cases. The authorities of the Hall had been charged with carelessness. To this he would answer, that all the papers sent in had been referred to a committee of which he (Mr. Collins) was a member, and had received most careful consideration. They took into consideration the fact that Mr. Dixon had begun his medical studies two years before the Council came into existence; that he had resided twenty years in the warm climate of Australia; and that his health had been injured by residence in Scotland—in fact, he was threatened with consumption. They had certainly departed from their own regulations as to the curriculum of study, and from the recommendations of the Council, inasmuch as they admitted Mr. Dixon without a preliminary examination, without apprenticeship, and without a complete course of study. There was, however, power to act thus in special cases. About the year 1840, they were called on by the Government in Ireland to admit to examination a number of gentlemen, mostly retired naval surgeons, who were dispensing medicines in contravention of the Apothecaries' Act in Ireland. The licentiates of the Hall threatened these gentlemen with prosecution; and the latter memorialised the Government, and a strongly supported petition was signed, desiring that they might be enabled to be put on a legal footing. The authorities of the Hall were informed by some of the leading members of the Irish bar that the Act allowed them to examine candidates simply as to their knowledge and competency. The Hall acted on that opinion in regard to the practitioner in question, and had since occasionally done the same in exceptional cases. They were virtually entitled to examine *sine curriculo*; but they had always endeavoured to act in conformity with the regulations of the Medical Council. In the present case, justice to the individual indicated that he might be admitted to examination. He moved:

"That, having considered the communication from certain members of the South Australian Branch of the British Medical Association with regard to the case of Mr. Hartley Dixon, and the reply of the Apothecaries' Hall of Ireland thereto, and having now heard a further statement on the subject from the representative of the Apothecaries' Hall of Ireland, the Council is of opinion that it is unnecessary to take further steps in the matter."

MR. MACNAMARA seconded the motion, which, after a few remarks from the Rev. Dr. HAUGHTON and Mr. SIMON, was carried.

Restoration of Names to the Register.—An application was received from a formerly registered practitioner, whose name had been erased in consequence of his having been convicted of a misdemeanour and sentenced to two years' imprisonment. Some doubts having been expressed as to the power of the Council to restore names thus erased, it was moved by Dr. PITMAN, seconded by Dr. CHAMBERS, and resolved:

"That the opinion of counsel be taken as to whether the Council has power to restore to the *Medical Register* the name of a person erased under Section 29 of the Medical Act."

Removal of a Name from the Register.—The Registrar was directed to erase from the *Register* the name of William Story, who had been convicted of setting fire to a house, and sentenced to five years' penal servitude.

The Registration of Dentists.—An extract from the dental minutes of the meeting of the Executive Committee on July 18th, 1881, was read. It consisted of a letter from Mr. J. Smith Turner, the Honorary Secretary of the British Dental Association, with a legal opinion and explanatory resolution, and asking that these documents might be laid before the General Medical Council. The explanatory resolution was as follows: "That in strict conformity with the practice uniformly followed

of placing before the Medical Council any facts or opinions, bearing upon the administration of the Dentists' Act, of which the Association may have become possessed, the joint opinion of Sir John Holker, Mr. R. S. Wright, and Mr. G. A. R. Fitzgerald, upon the meaning of Section 6, Subsection (c), be at once forwarded to the Medical Council: that the Association venture to hope the Council will cause to be placed on their minutes the accompanying joint opinion, together with the high legal opinion of Mr. (now Mr. Justice) Bowen, read before the Council in July 1880, with the opinion, also then read, of Mr. G. A. R. Fitzgerald; and that the Association earnestly hope, in the presence of a great preponderance of high legal opinion in favour of a correction of the *Dentists' Register*, the Council will restore to the *Register* the recently erased descriptive terms 'with medicine', 'pharmacy', etc.; and at its convenience proceed to the correction of the *Register* by the erasure of names registered in the midst of doubt, or take such other steps as may lead to the production of a *Register* legally correct." On the receipt of this, the Executive Committee had passed the following resolution: "That the Committee acknowledge the receipt of the foregoing communication, and inform Mr. J. S. Turner that, in the opinion of the Committee, the steps requisite to be taken to try the correctness of the course taken by the General Council, under the advice laid before it, rest with the Dental Association, and not, as suggested in the opinion now forwarded, by the removal of a name which, in the judgment of the Council, is registered in conformity with law."

An extract from the dental minutes of the meeting of the Executive Committee on November 11th, 1881, was also read. Mr. J. S. Turner had addressed another letter to the Registrar, asking that a memorial on the subject of the removal of certain names, and certain legal opinions, be laid before the Council. On the receipt of this, the Executive Committee placed the documents and legal opinions in possession of the Council, having reference to registration under the Dentists' Act, in the hands of Mr. Farrer, the solicitor to the Council, for the purpose of his further advising the Committee thereon.

On the motion of Dr. PITMAN, seconded by Dr. QUAIN, the communications from the Executive Committee were received, and ordered to be entered on the minutes.

Mr. FARRER, the solicitor of the Council, attended; and, having reviewed the several communications submitted to him, stated that he could not advise the Medical Council to act otherwise than they had done under the advice of counsel. The legislature had intended that the rights of all persons engaged in *bona fide* dental practice should be preserved, without limitation.

It was moved by Dr. STORRAR, and seconded by Dr. PYLE:

"That the opinions of Mr. Bowen, Mr. Fitzgerald, the Solicitor-General, and Sir John Holker, in regard to the registration of dentists under the Dentists' Act (1878), be entered in the General Council minutes."

Sir W. GULL moved as an amendment, and Dr. LYONS seconded:

"That the opinion of counsel for the guidance of this Council, for the registration of dentists, be considered confidential, and be not entered in the General Council minutes."

The amendment was carried; and, on being put to the vote as an original motion, was again carried.

Dr. STORRAR required that the names and numbers of those who voted for and against the amendment, respectively, and of those who did not vote, be taken down. For, 15: Dr. Pitman, Mr. Marshall, Mr. Bradford, Dr. Chambers, Dr. Humphry, Dr. Haldane, Dr. Watson, Dr. Pettigrew, Dr. Aquilla Smith, Mr. Collins, Dr. Quain, Sir William Gull, Mr. Simon, Mr. Teale, Dr. Lyons; *Absent*, Dr. Pyle, Dr. Storrar, Mr. Turner, Mr. Macnamara, Rev. Dr. Haughton, Dr. Fergus; *Did not vote*, 2: The President, Dr. Scott Orr; *Absent*, 1: Dr. Banks.

It was moved by Mr. TURNER, seconded by Mr. SIMON, and agreed to:

"That the Council are not prepared to take steps, as suggested by the Dental Association, to erase names from the *Register* which have been placed therein by the Council under legal advice."

THURSDAY, July 6th.

Mr. AUSTIN, President, took the chair at 2 P.M.

Continuation of the Minutes of Examinations.—The report of the Council on the subject of the examination of candidates for the diploma in surgery, was read, and the following resolution was passed: "That the Council do not recommend the removal of names from the *Register* which have been placed therein by the Council under legal advice."

It was moved by Mr. TURNER, seconded by the Rev. Dr. HAUGHTON, and agreed to:

"That the report of the Council in Committee on the Visitors' Conclusions be received and entered in the minutes."

Mr. TEALE moved, the Rev. Dr. HAUGHTON seconded, and it was resolved:

"That the Council adopt the following clauses of the report: 1. 'That it is desirable that every primary or first part examination shall include dissections by every candidate. 2. That in view of the great and increasing range of chemical and physiological science, it is desirable, in regard to those subjects, that examining bodies should comply with the Council's Recommendation 40, and that candidates should be apprised beforehand of the limits of the examination in these subjects. 3. That it is desirable that, at the final examinations, candidates should be practically examined in anatomy, in its relation to practical medicine and practical surgery. 4. That the application of bandages and splints should be required in every surgical examination. 5. That it is desirable that in every final examination for a surgical diploma, candidates should, as far as practicable, be required to perform operations on the dead subject, in accordance with the intention of the Council's recommendation 44. 6. That the practical examinations in chemistry should be conducted in a laboratory. 7. That it is desirable that the recognition of microscopical specimens, normal and morbid, should form a part of the examinations for medical and surgical diplomas.'"

It was moved by Mr. TEALE, seconded by Mr. MACNAMARA, and agreed to:

"That the Council direct the attention of the authorities to the following resolutions of the Council in Committee: 8. 'That in oral examinations, notwithstanding any general rule which limits examinations, for instance, to ten minutes or a quarter of an hour, a margin of additional time for satisfying the examiners in all doubtful cases should be provided. 9. That, considering how important it is to all medical practitioners to possess a competent knowledge of hygiene and preventive medicine, the Committee takes note of the suggestion of Dr. Gairdner and Mr. Stokes, that these subjects ought to form a more independent part than they do of the examinations of all corporations.'"

It was moved by Dr. BANKS, seconded by the Rev. Dr. HAUGHTON, and agreed to:

"That the subject of 'Mental Disease' be added to those of 'Hygiene' and 'Preventive Medicine' in the foregoing reference to the medical authorities."

Mr. MARSHALL moved, Mr. TEALE, seconded, and it was resolved:

"That the Council adopt Clauses 1 to 7 of the report of the Council in Committee, and direct that they be transmitted, with the resolutions of the Council relating to oral examinations, and to the subjects of Mental Disease, Hygiene, and Preventive Medicine, to all the medical authorities."

Mr. TEALE moved, Sir WILLIAM GULL seconded, and it was agreed to:

"That copies of the Visitors' report, the remarks by the bodies visited, and the resolutions of the Council thereon, be sent to all the medical authorities and medical schools of the United Kingdom."

Registration of Midwives.—A report from the Committee on the draft Bill for the Registration of Midwives was presented, and was ordered to be entered in the minutes.

Erasure of Names from the Register and Forfeiture of Medical Titles.—Dr. PITMAN moved, and Mr. SIMON seconded:

"That it would be desirable that, in any amendment of the Medical Acts, provision be made as regards persons whose names may be removed from the *Register* under the Dentists' Act, that every such person shall lose all titles and honours which he may at the time hold from any of the medical authorities; subject, however, to the further provision that any such person, if he so desire, may afterwards renew to such person the forfeited title, on condition of its not being again registrable under the Medical Acts, except with consent of the General Medical Council."

After discussion, the motion was withdrawn by permission of the Council.

Preliminary Examinations.—A report from the Committee on Preliminary Examinations was read, and ordered to be entered on the minutes.

Dr. AUSTIN, President, took the chair at 2 P.M.
The Council resolved into a committee to examine the Bill for the Registration of Midwives. Mr. MARSHALL, chairman of the Committee, presented the report of the report. He said that the Committee were of opinion that the Council should come to some decision on the matter. The Council

had taken the subject into consideration in 1877. The Committee, after careful consideration, had decided to recommend that the Council should accept the responsibility which it was sought to put on them, and should appoint the Midwifery Board. It was essential that the Council should accept the responsibility, for its object was to protect the public in all medical matters. If the Council decided to be only a sanctioning body, and Parliament made it undertake greater responsibility, its position would be very undesirable. It would be far better to grapple with the subject in a decided and bold way. The duties which it was proposed that the Council should undertake were not degrading. It would be a high and creditable action to accept the responsibility of appointing a midwifery board and superintending local boards.

The Rev. Dr. HAUGHTON seconded the motion. He had been at first inclined to require that Ireland should be included in this Bill, but had given way in view of the growing need for regulation of the practice of midwifery in England and Wales.

Mr. SIMON agreed with the Committee on most points, but he feared that their trouble would be in some degree taken in vain. He thought that the Committee would have done well to define certain principles on which the Legislature should act. He suggested that this portion of the report should be first adopted, and moved an amendment to that effect.

Sir WILLIAM GULL said that the Council was established to legislate for medical men.

Dr. QUAIN pointed out that the Council, according to this Bill, were not to be called on to form a scheme for the examination of midwives, but only to nominate a board, who were to report their proceedings to the Council.

It was decided that the several portions of the report should be accepted *seriatim*.

Mr. MARSHALL moved, Mr. SIMON seconded, and it was resolved:

"That the following subsections *a*, *b*, *c* of Section 1 of the Report of the Committee be adopted, as resolutions (*a*, *b*, *c*) of the Council: (*a*) That, in view of the absence of any complete and satisfactory provision for the proper training and due qualification of the women who now act as midwives amongst the poorer classes of the community in England and Wales, it is—as expressed in a resolution of the Council, agreed to on May 24th, 1877, and communicated forthwith to the Lord President of her Majesty's Privy Council—desirable to provide by legislation for the following two objects: first, that means under legal sanction should be provided for giving credentials of qualifications to competent midwives; and, secondly, that the lives of women in labour should, as far as practicable, be protected from the incompetent. (*b*) That, for the attainment of these objects, the essential conditions of any legislative enactment are the due training, examination, certification, and registration of a class of qualified midwives, subject to this further condition, that women now practising as midwives may, if certified to be of good moral character and to possess a competent knowledge and experience, be granted certificates under the enactment and be placed upon the *Register*. (*c*) That, whilst all registered midwives should be entitled to certain privileges, they must also be subject to supervision and control."

Mr. MARSHALL moved, the Rev. Dr. HAUGHTON seconded, and it was resolved:

"That the following Subsection D of the Report be adopted as Resolution D of the Council: D. That, though agreeing with the limitation of the proposed enactment for the registration of midwives, in the first instance, to England and Wales, the Committee does not see any objection to the subsequent extension of legislation for a similar purpose to Scotland and Ireland."

"That the following parts of Subsection A of Section 2 of the Report be adopted as Resolution E (*a*) of Council: E (*a*). That it may be made competent to the General Medical Council to delegate to the English Branch Council any functions and duties which, under the Draft Bill, are proposed to be assigned to it, except that of making representations to the Privy Council."

It was moved by Mr. MARSHALL, and seconded by the Rev. Dr. HAUGHTON:

"That the following part of Subsection A of Section 2 of the Report be adopted as Resolution E (*β*) of the Council: E (*β*). That these functions and duties be as follows: (*a*) the appointment of a Midwifery Board and its maintenance by the filling up of vacancies; (*b*) the reception of an annual report for the Midwifery Board, as to money received and expended, as to the proceedings of the Board, and as to any suggestions made by the Board; (*c*) the power to request or demand information from the Board; (*d*) the duty of transmitting the annual report of that Board, with comments approving or disapproving it, to the Privy Council; (*e*) the duty of receiving from the Privy Council the ex-

amination rules framed by the Midwifery Board, and giving an opinion to the Privy Council upon them; (*f*) that of receiving notices of and commenting on any modifications made in those rules by the Privy Council; and, lastly, (*g*) that of giving an opinion to the Privy Council on the scheme for regulating the duties and practice of registered midwives."

Mr. SIMON moved as an amendment, and Sir W. GULL seconded:

"That, as regards the proposals made in the Draft Bill to assign certain functions and duties to this Council, the Council is not prepared to accept the responsibility in unconditional and obligatory terms, such as are used in Clause 4 of the Draft Bill; but that the Council would not object to be made, under permissive law, the Sanctioning Medical Authority in the proposed matter: with duty, in that capacity, to approve or disapprove any scheme which the Obstetrical Society (or others) might bring before it for such purposes as are in question."

The amendment was negatived.

A further amendment was moved by Dr. LYONS, and seconded by Mr. COLLINS:

"That this Council desires to see established an efficient system of education, examination, and registration of midwives, for the care during labour of the women of England and Wales; but the Council is of opinion that the duties should be discharged, as in Ireland, by the various teaching and licensing authorities, chartered lying-in hospitals, obstetric societies, and such like bodies; and that this Council is prepared to accept the general supervision of this great work, but is not prepared to accept administrative or accounting functions in regard to a scheme which will probably include from 10,000 to 20,000 persons, over whom it would not be possible for it to exercise the requisite supervision and control."

This amendment was negatived, and the original motion was then put to the vote and carried.

The following resolutions, moved by Mr. MARSHALL, seconded by the Rev. Dr. HAUGHTON, were agreed to:

"That the following Subsection B of Section 2 of the Report be adopted as Resolution F of the Council: F. That, as regards the proposition made in the Draft Bill, that any of the funds at the disposal of this Council or of any Branch Council, might be devoted to the purposes of an enactment to secure the registration of midwives, the Council is of opinion that this is undesirable, and that such portion of Section 34 as relates to those funds should be omitted from the Bill."

"That the suggestions of the Committee in Section 3 of the Report, and other proposals contained in the Draft Bill, be forwarded to the Privy Council, as opinions of the Committee."

The principal suggestions referred to in the last resolution were to the following effect:—

"*a*. That it deserves consideration whether the objects of the proposed legislation could not be attained by equally effectual, but more simple and economical, means than those indicated in the "Draft Bill". Thus: That the number of members on the Midwifery Board might, instead of being from seven to eleven, be five, of whom two should be general practitioners.

"That the proposal to appoint a General Registrar, and annually prepare and print a correct copy of a complete Register of Midwives for the whole of England and Wales should be reconsidered; whether, in fact, local registers and local registrars would not suffice, these last-named officers (preferably some existing county or district officials—such, for example, as registrars of births, deaths, and marriages), to have charge of the registers, and to have the power of making alterations in and erasures from the registers, in consequence of change of residence, cessation from practice, or death, assigned in the "Draft Bill" to the proposed General Registrar.

"*b*. That, as proposed, women who have obtained a certificate of having passed an examining board, duly recognised under the enactment, should be registered in a list (A), and those who have not passed such a board in another list (B).

"*c*. That, as proposed, persons so registered should be allowed to practise in any part of Her Majesty's dominions.

"*d*. That the persons described as having passed an examination before a competent board, supposing it to be duly recognised as such under the enactment, and having received a certificate from such competent board in any part of Her Majesty's dominions, as well as in any British colony or foreign country, entitling her to practise, etc., may be admitted to be registered in list (A), and not merely in list (B).

"*e*. That power should be given to the medical authorities to have an opportunity of informing themselves of, and objecting to, the rules for regulating the duties and practice of midwives, just as they are to be consulted on the examination rules."

There were also other suggestions relating to several alterations in the Bill, more or less modifying its details.

Mr. MARSHALL moved, the Rev. Dr. HAUGHTON seconded, and it was agreed :

"That the Council, whilst offering no opinion as to the appropriate time for legislating on this subject, recommends that, in the event of a Bill being brought before Parliament, a copy of the measure, and notice of changes in it, should be communicated to the Council."

The Council was resumed; it was resolved that the report be received, adopted, and entered in the minutes.

Saturday, July 8th.

Dr. ACLAND, President, took the chair at 11 A.M.

Registration of Midwives.—It was moved by Mr. MARSHALL, seconded by the Rev. Dr. HAUGHTON, and agreed to :

"That in answer to the letter from the Privy Council Office, of date June 24, 1882, the Report on the Draft Bill for the Registration of Midwives in England and Wales, adopted by the Council on July 7, 1882, be transmitted to the Lord President of the Privy Council, together with the Minutes of the Council."

Personation at Examinations.—It was moved by Mr. MACNAMARA, seconded by the Rev. Dr. HAUGHTON, and agreed to :

"That the attention of the Executive Committee be called to a charge against a medical student, as considered by the Irish Branch Council on May 31st, 1882, and reported in the *Daily Telegraph* on June 30th, 1882."

Anatomical Teaching and Examination.—Dr. LYONS moved, Dr. PYLE seconded, and it was resolved :—

"That a Committee be appointed to inquire into, and report upon, the deficiency of subjects for anatomical and surgical teaching and examinations, and to suggest such remedies as they may deem expedient; and that the following be the members of such committee: Dr. Lyons (chairman), Mr. Marshall, Dr. Pyle, Dr. Humphry, Mr. Turner, Dr. Fergus, Dr. Heron Watson, Mr. Macnamara, Rev. Dr. Houghton."

In moving the resolution, Dr. LYONS suggested that the bodies of inferior animals, such as the horse, might be made useful.

Preliminary Examination.—It was moved by Dr. STORRAR, seconded by Dr. PYLE, and agreed to :

"That the Registrar of the Medical Council be instructed to address a letter to the Registrar of the University of Durham, suggesting for the consideration of the University whether the time has not arrived when it is expedient for the University to discontinue their 'registration examination for medical students.'"

Persons.—It was moved by Dr. QUAIN, seconded by Mr. [unclear], and agreed to :

"That it be remitted to the President of the Council to bring under the notice of the Registrar-General the case of G. H. Griffin, an unqualified person, who, in certain death-certificates, forged the name of a registered practitioner named D. B. Murdoch."

Preliminary Examinations.—It was moved by Dr. STORRAR, seconded by the Rev. Dr. HAUGHTON, and agreed to :—

the Intermediate Education Board of Ireland—junior grade, middle grade, and senior grade—be placed in the list of examinations recognised by the Council, provided the certificates contain all the subjects required by the Council."

It was moved by Dr. STORRAR, seconded by Mr. SIMON, and agreed to :

"That the Registrar be instructed to address a letter to the following bodies: the Apothecaries' Society of London; the Royal College of Physicians and Surgeons of Edinburgh; the Faculty of Physicians and Surgeons of Glasgow; the Royal College of Surgeons in Ireland; the Apothecaries' Society of Ireland; calling their special attention to the following recommendation of the Council: 'It is desirable that the examinations in general education should be left to the Universities, and to such other bodies engaged in general education and examination as may from time to time be approved by this Council.'"

It was moved by Dr. STORRAR, seconded by the Rev. Dr. HAUGHTON, and agreed.

[illegible]

By order of the Executive Committee, Professor Turner's letter has been forwarded to the various dental examining boards, with a request that they would take it into consideration and favour the Executive Committee with any observations thereon. Replies were accordingly received, which were read.

It was moved by Mr. TURNER, seconded by Dr. HERON WATSON, and agreed to :

"That one year's *bona fide* apprenticeship with a registered dental practitioner, after being registered as a dental student, may be counted as one of the four years of professional study."

Mr. TURNER moved, and Dr. HERON WATSON seconded :

"That the three years of instruction in mechanical dentistry, or any part of them, may be taken by the dental student either before or after his registration as a student; but no year of such mechanical instruction shall be counted as one of the four years of professional study unless taken after registration."

Dr. LYONS moved as an amendment, and the Rev. Dr. HAUGHTON seconded :

"That, in the opinion of this Council, it is desirable that the dental student shall spend a period of three years in the study of mechanical dentistry."

The amendment was negatived. The original motion having then been put to the vote, was carried.

Registration of Medical Qualifications in the Dentists' Register.—It was moved by Sir W. GULL, seconded by Dr. STORRAR, and agreed to :

"That any or all of the qualifications in Schedule (A) of the Medical Act be registrable by registered dentists in the *Dentists' Register*."

Memorial from the British Dental Association.—A memorial from the Representative Board of the British Dental Association was read in which it was stated that, "in the opinion of the Board, the time has now arrived when exceptional examinations should be altogether discontinued by all the licensing bodies in favour of strict uniformity of educational test already adopted by one or two, otherwise the value of the licentiate'ship will be greatly deteriorated as a guarantee of professional competence. By Section 22 of the Dentists' Act, the Council have the power to supervise these examinations."

Supposed Infringement of the Dentists' Act.—A letter was read, which had been referred to the General Council by the Executive Committee, from Mr. J. W. Sadler, a registered dentist, calling the attention of the Medical Council to the fact that a late pupil of his, "T. L. Callender, not being qualified, has commenced practice in Burton-on-Trent, and announces himself as in practice with Mr. Godding, M.R.C.S., Surgeon-Dentist, though there is no Mr. Godding in Burton-on-Trent." A letter from the British Dental Association was also read, asking permission to prosecute Mr. Callender and Mr. Godding.

It was moved by Sir W. GULL, seconded by Dr. HUMPHRY, and agreed to: "That this Council give to Mr. James Smith Turner the power to take up the cases of Mr. Callender and Mr. Godding, referred to in the foregoing letter." (Mr. Turner is the honorary secretary of the British Dental Association.

Executive Committee.—It was moved by Dr. AQUILLA SMITH, seconded by Dr. BANKS, and agreed to :

"That the powers and duties heretofore delegated to the Executive Committee be vested in the said Committee until the next meeting of the General Medical Council."

Votes of Thanks.—The following resolutions, proposed by Dr. AQUILLA SMITH, and seconded by Dr. BANKS, were carried by acclamation :

"That the thanks of the Council are hereby cordially tendered to Dr. Acland, the President, for his efficient services during the present session of the Medical Council."

"That the cordial thanks of this Council are eminently due, and are hereby tendered, to Dr. Pitman, for his services as Chairman of the Business Committee."

"That the cordial thanks of the Council are eminently due, and are hereby tendered, to the Treasurers, Dr. Quain and Dr. Putnam, for their services.

THE PRESIDENT expressed to the Council the high sense he entertained of the value of the Registrar's services, and trusted that the Council would be as ready to transmit their thanks to the able and efficient officer as he was to accept them. He then said that the Registrar's duties were complicated and that the office. It was then moved by J. A. H. SMITH, seconded by Dr. BANKS, and carried.

"That the best thanks of this Council are eminently due, and are hereby given, to the Registrar for his efficient services in carrying on the work of the Council."

ASSOCIATION FOR THE ADVANCEMENT OF MEDICINE BY RESEARCH.

A MEETING of the Association for the Advancement of Medicine by Research took place at the Royal College of Physicians on Wednesday, the 12th instant. There were present Sir James Paget, in the Chair, Sir Risdon Bennett, Sir Joseph Fayrer, Sir Henry Thompson, Dr. Andrew Clark, Professor Humphry (Cambridge), Mr. Bowman, Mr. Lister, Dr. Wilks, Dr. Matthews Duncan, Professor Michael Foster (Cambridge), Professor Burdon Sanderson, Mr. Benjamin Barrow (Ryde), Professor A. Gamgee (Manchester), Dr. Balthazar Foster (Birmingham), Dr. Buchanan, Dr. Lauder Brunton, Professor Gerald Veo, Dr. Payne, and Dr. Pye-Smith.

The Treasurer reported that he had received from Sir William Mac Cormac £300 from the surplus funds of the International Medical Congress, and that the funds of the Association now exceeded £1,200.

The Secretary reported that many eminent men in the provinces had consented to act as corresponding members, and that Branch committees were being established in some of the principal towns.

The Executive Committee recommended that, as a first step in the direct promotion of research, Mr. Watson Cheyne should be requested to undertake the verification of the results lately obtained by Koch on the subject of tuberculosis, and the comparison of these with the results obtained by Toussaint and other observers.

The following resolution was proposed by Dr. BURDON SANDERSON, seconded by Mr. BENJAMIN BARROW of Ryde, and carried unanimously: "That the Council approve the recommendation of the Subcommittee to raise funds for the payment of competent persons engaged in researches in medical science; that they regard the subject selected (tubercle) as peculiarly eligible, and sanction the expenditure recommended."

It was proposed by Professor LISTER, seconded by Professor GAMGEE, and carried unanimously: "That the Treasurer be requested to issue circulars asking for subscriptions or donations for the object of Resolution 2; and that the corresponding member be requested to further this effort."

The Executive Committee reported that they had selected several papers explanatory of the methods and objects of scientific research in physiology, pathology, and therapeutics; and recommended that they be reprinted. They also mentioned that, some papers which they desired to reprint having appeared in certain journals, the rules of which did not allow reprinting until a year had elapsed from the appearance of the papers, they had been obliged to defer the reprinting.

It was proposed by Sir RISDON BENNETT, seconded by Sir HENRY THOMPSON, and unanimously carried: "That the Council authorise the publication of the various pamphlets and papers selected and to be selected by the Executive Committee; and direct that they be distributed as widely as possible by the corresponding and ordinary members of Council, and also sold in such manner and at such prices as the Executive Committee may determine."

The Executive Committee reported that communications with the Home Office had led to what promised to be a more satisfactory arrangement, with regard to the issue of licences and certificates, under the Act 39 and 40 Vict., cap. 77.

It was proposed by Sir JOSEPH FAYRER, seconded by Dr. BALTHAZAR FOSTER, and unanimously carried: "That the Council congratulate the Executive Committee on the promising results of their representations to the Home Office, and beg them to continue their efforts in the same direction."

The Executive Committee reported that effectual steps had been taken for meeting the Bill for the Total Abolition of Scientific Experiments on Animals, which was down for the second reading on the 28th of June last. The pressure of public business had prevented the Bill from being discussed, but it had been useful in showing the strong support which medical science may count on in the House of Commons. A memorandum, which had been prepared for this occasion, setting forth the necessity and utility of experiments in physiology, pathology, and therapeutics, was laid before the Council and discussed.

It was proposed by Dr. MATTHEWS DUNCAN, seconded by Sir RISDON BENNETT, and unanimously carried: "That the memorandum as amended be distributed, with the sanction of the Council, among members of Parliament and others interested in the advancement of medical science."

BRIGADE-SURGEON W. G. N. MANLEY, V.C., lately serving in the Bengal Presidency, is to act as Principal Medical Officer of the Woolwich District, pending the arrival from India of one of the next promoted deputy surgeons-general.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council of the Royal College of Surgeons was held on Thursday, the 13th instant.

Mr. John Croft, of St. Thomas's Hospital, who was elected last week at the annual election of the Fellows of the College, took his seat.

The minutes of the ordinary meeting of Council, held last month, were read, and, with certain exceptions, confirmed.

Mr. Thomas Spencer Wells, of Upper Grosvenor Street, was elected President of the College, in the vacancy occasioned by the retirement of Sir Erasmus Wilson; and Mr. John Marshall, of Seville Road, senior surgeon to University College Hospital, and Mr. John Cooper Forster, of Upper Grosvenor Street, formerly surgeon to Guy's Hospital, were elected Vice-presidents of the College for the ensuing year. Professors Hutchinson, Flower, and Parker were re-elected to the respective Hunterian chairs which they hold. Mr. Henry Power was appointed Arris and Gale Lecturer on Anatomy and Physiology for the ensuing year.

Mr. Thomas Madden Stone, at his own request, on the ground of ill-health, was not reappointed to his office, which he has held, including that of assistant-librarian, for a period of upwards of fifty years; and it was referred to the President and Vice-Presidents to consider his case and report thereon to the Council.

A memorial from the teachers of anatomy, objecting to the resolution of Council that a single course of lectures on that subject be all that is required for the membership of the College, was read, and referred to the Nomination Committee; and the consideration of the minute of Council regarding it was deferred till the report of that committee is received.

A letter was read from the Medical Committee of St. Bartholomew's Hospital, objecting to the proposed establishment of an examination to be held at the end of the first year, and conducted by the teachers. The letter was referred to the joint committee of the Council and teachers to report upon to the Council.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL:

NOTICE OF QUARTERLY MEETINGS FOR 1882: ELECTION OF MEMBERS.

MEETINGS of the Committee of Council will be held on Wednesday, August 9th, and October 18th. Gentlemen desirous of becoming members of the Association must send in their forms of application for election to the General Secretary not later than 21 days before each meeting—viz., July 19th, and September 27th, in accordance with the regulation for the election of members passed at the meeting of the Committee of Council of October 12th, 1881.

November 4th, 1881.

FRANCIS FOWKE, *General Secretary*.

BRITISH MEDICAL ASSOCIATION:

FIFTIETH ANNUAL MEETING.

THE Fiftieth Annual Meeting of the British Medical Association will be held at Worcester, on Tuesday, Wednesday, Thursday, and Friday, August 8th, 9th, 10th, and 11th, 1882.

President: BENJAMIN BARROW, F.R.C.S., Consulting-Surgeon to the Royal Isle of Wight Infirmary.

President-elect: WILLIAM STRANGE, M.D., Senior Physician to the General Infirmary, Worcester.

An Address in Medicine will be delivered by W. F. WADE, F.R.C.P., Physician to the Birmingham General Hospital.

An Address in Surgery will be delivered by WILLIAM STOKES, M.D., F.R.C.S.I., Professor of Surgery in the Royal College of Surgeons, Ireland.

The business of the Association will be transacted in Eight Sections, viz.:

SECTION A. MEDICINE. (Council Room, Guildhall).—*President:* Thos. Clifford Allbutt, M.D., F.R.S. *Vice-Presidents:* George W. Balfour, M.D.; William Henry Broadbent, M.D.; G. H. Philipson, M.D.; *Secretaries:* Edwin Rickards, M.B., 14, Newhall Street, Birmingham; H. Ashby, M.D., 13, St. John Street, Manchester.

SECTION B. SURGERY. (Recorder's Court, Guildhall).—*President:* Augustin Prichard, F.R.C.S. *Vice-Presidents:* T. W. Walsh,

F.R.C.S.; Reginald Harrison, F.R.C.S.; T. H. Bartleet, M.B., F.R.C.S. Secretaries: F. E. Manby, F.R.C.S., 10, King Street, Wolverhampton; Richard Clement Lucas, M.B., F.R.C.S., 18, Finsbury Square, E.C.

SECTION C. OBSTETRIC MEDICINE. (Committee Room Assembly Room, Guildhall.)—*President:* William Leishman, M.D. *Vice-Presidents:* Henry Vevers, M.R.C.S.; J. G. Sinclair Coghill, M.D.; Arthur W. Edis, M.D. *Secretaries:* C. J. Cullingworth, M.D., 25, St. John Street, Manchester; Tom Bates, L.R.C.P., Worcester.

SECTION D. PUBLIC MEDICINE. (Civil Court, Shire Hall.)—*President:* Alfred Carpenter, M.D. *Vice-Presidents:* Alfred Hill, M.D.; Horace Swete, M.D.; E. T. Wilson, M.B. *Secretaries:* Geo. Haynes Fosbrooke, jun., M.R.C.S., Bidford, Redditch; Francis Edward Atkinson, L.R.C.P., Settle, Yorkshire.

SECTION E. ANATOMY AND PHYSIOLOGY. (North Wing Committee Room, Guildhall.)—*President:* George M. Humphry, M.D., F.R.S. *Vice-Presidents:* S. S. Roden, M.D.; Frank Payne, M.D.; Gerald Yeo, M.D. *Secretaries:* J. B. Haycraft, M.D., Mason's College, Birmingham; James Shuter, M.B., F.R.C.S., 58, New Broad Street, London.

SECTION F. PATHOLOGY. (South Wing Committee Room, Guildhall.)—*President:* J. Hughlings Jackson, M.D., F.R.S. *Vice-Presidents:* W. R. Gowers, M.D.; H. T. Batlin, F.R.C.S.; Wm. Smith Greenfield, M.D. *Secretaries:* Sidney Coupland, M.D., 14, Weymouth Street, London; F. Treves, F.R.C.S., 18, Gordon Square, London.

SECTION G. OPHTHALMOLOGY. (County Grand Jury Room, Shire Hall.)—*President:* James Vose Solomon, F.R.C.S. *Vice-Presidents:* David Everett, F.R.C.S.; Frederick Mason, M.R.C.S.; Edwyn Andrew, M.D. *Secretaries:* Geo. Edwin Hyde, L.R.C.P., Worcester; J. A. Nunneley, M.B., 22, Park Place, Leeds.

SECTION H. OTOTOLOGY. (City Grand Jury Room, Shire Hall.)—*President:* W. Laidlaw Purves, M.D. *Vice-Presidents:* Geo. P. Field, M.R.C.S.; A. H. Jacob, M.D.; E. Cresswell Baber, M.B. *Secretaries:* J. J. Kirk Duncanson, M.D., 22, Drumsheugh Gardens, Edinburgh; Peter McBride, M.D., 20, Alva Street, Edinburgh.

Honorary Local Secretaries: George W. Crowe, M.D., Shaw Street, Worcester; H. C. Moore, M.R.C.S., 7, King Street, Hereford; Thelwell Pike, M.D., 2, Montpelier, Great Malvern.

Honorary Treasurer: G. A. Sheppard, M.R.C.S., Worcester.

2.15 P.M.—Meeting of Council. (Committee Room off Assembly Room, Guildhall.)

3 P.M.—Meeting of Council. (Committee Room off Assembly Room, Guildhall.)

4.15 P.M.—Reports of Committees. (Assembly Room, Guildhall.)

5 P.M.—General Meeting. (Assembly Room, Guildhall.)

9.30 A.M.—Meeting of Council. (Committee Room off Assembly Room, Guildhall.)

11 A.M.—Meeting of Council. (Committee Room off Assembly Room, Guildhall.)

1.30 P.M.—Meeting of Council. (Committee Room off Assembly Room, Guildhall.)

3.10 P.M.—Meeting of Council. (Committee Room off Assembly Room, Guildhall.)

7.45 P.M.—Special Meeting. (Great Hall, Shire Hall.)

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2. Dr. Balfour on Chlorotic Murmurs.

3. Dr. Leech on the Treatment of Cardiac, Hepatic, and Renal Dropsy.

The following papers also have already been promised.

EYERS, J. W., M.D. The Previous Symptoms in cases of Perforation of the Bowel in Enteric Fever.

DR. D., M.D. Auscultation of the Trachea and Mouth in the Diagnosis of

DR. L., M.D. Treatment of Phthisis by Alpine and Marine Climates.

FLINT, Austin, M.D. The Combined Diagnosis of Pulmonary Disease.

HOVELL, D. De Berdt, Esq. The Latent Period of Typhoid.

KNOTT, J. F., L.R.C.P. The

LEDIARD, H. A., M.D. A

LITTLE, J. Fletcher, Esq. N

MALET, Henry, M.D. The Differences between Binaural and Uniaural

RALPH, C. H., M.D. Solvent Treatment of Renal Calculi.

RICHARDS, E., M.B. Chorea and its relation to Rheumatism.

SAUNDY, K. M.D., and EALES, H., Esq. The Ophthalmoscopic Appearances

in Anæmia.

SEGGWICK, W., Esq. The Extended Influence of Atavism in Hereditary Disease.

STURGES, Octavius, M.D. The Province of Therapeutics outside the

W. R., M.D. Jaundice

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Dr. McCall Anderson (Glasgow), Dr. W. Carter (Liverpool),

Dr. Austin Flint (New York), Dr. F. T. Roberts (London), Dr. W. R.

Thomas (Sheffield).

SECTION B.—SURGERY.

1. Mr. J. Greig Smith will open a discussion on Early Operative Treatment of Joint-disease as a Preventive of Excision, in which it is hoped the influence of Antiseptics in Excisional Surgery will be discussed.

2. Mr. Howard will open a discussion on Bone-setting.

ADAMS, W., Esq. On the Selection of Cases for Forcible Movement in the Treat-

BANKS, W. HITCHCOCK, M.D. The free removal of Cancerous Mammas with

Cure of Hernia by Removal of

BARTLETT, T. H., M.D. On the Ligation of Large Arteries: with Cases.

BARTON, R., Esq. On the use of the

BROWNE, H. Langley, Esq. Statistics of Ten Years' Surgery at West Bromwich

Hospital.

Dr. Thomas, Esq. A

Pressure, the other by means of Snell's Arterio-Constrictor, the operative

COATES, W. Martin, Esq. On the treatment of Bronchocele. Enlarged Glands,

Housemaid's Knee, by ti

is Injection of

The following subjects have been arranged for discussion in the various Sections.

A.—MEDICINE.

1. Dr. W. S. Hayfair will open a discussion on the Systematic Treatment of Aggravated Hysteria and allied forms of Neurasthenic Disease.

A discussion on the causes, its relation to preventive treatment, will be opened by

- COLLINGWORTH, Charles J., M.D. Case of Double Uterus with complete Septum Vaginae.
 DEWAR, John, Esq. Hystero-epilepsy.
 EDIS, A. W., M.D. The Rational Treatment of Menorrhagia.
 ELDON, George, M.D., C.M. The Stomachic Disorders of Uterine Disease.
 GARTANG, T. W. Harrop, Esq. Urethral Caruncle.
 JACKENOTHAM, James, M.D. Urethrocele and Vaginal Cysts.
 NEWMAN, W., M.D. Treatment of Vascular Tumours of the Urethra.
 RIDGEN, George, Esq. The Management of some Abnormal Head-presentations.
 ROBERTS, C. H. F., M.D. The Etiology and Treatment of certain Varieties of Dysmenorrhoea.
 SAMPSON, W., M.D. Bromic Ether as an Anesthetic in Obstetrics.
 TAYLOR, Lawson, Esq. Parallel Histories of two Cases of Bleeding Myoma.
 THORNTON, J., Esq. Knowles, M.B., C.M. On Hegar's Operation for Uterine Fibroids: with Remarks.
 WALLACE, John, M.D. Note on the existence of Temporary Albuminuria in the Acute Stages of Perimetritic and Parametric Inflammations, as well as in the Chronic Suppurative Stage.
 WALTER, W., M.D. A successful case of Transfusion of Blood after severe Post Partum Hemorrhage.

SECTION D.—PUBLIC MEDICINE.

The following papers have been promised.

- BOND, F. T., M.D. Scarlatinal Sore-throat, and its relations to other Throat-affections.
 CARTER, W., M.D. Notification of Infectious Diseases by Medical Men.
 DRYSDALE, C. R., M.D. The Death-rate as affected by Food Supplies.
 DYKE, T. J., Esq. Closing of Schools in times of the Epidemic Prevalence of Contagious Fevers.
 FLEMING, Francis, M.D. Quarantine in Theory and Practice.
 NORMAN, M.D. Public Medicine aspects of the Alcohol Question.
 MOORE, Charles, F., M.D. Short Notes on Vaccination.
 MILLICAN, K. W., Esq. Ten Years of Sanitary Progress.
 NISALE, R., M.D. A ready means of surrounding Patients with absolutely Pure Air.
 PAGE, Herbert, M., Esq. Closure of Parochial Schools during the Prevalence of Zymotic Diseases.
 SLADE-KING, E. J., M.D. Mutual Relations of Medical Officers of Health and Private Medical Practitioners.
 SWETE, Horace, M.D. Sanitation in Hospitals: Drainage and Water-supply, past and present, of the Worcester Infirmary.
 VACHER, Francis, Esq. The Transmission of Disease by Food.
 WILSON, E. T., M.B. Some Peculiar Features of a Recent Epidemic of Measles at Cheltenham.

SECTION E.—ANATOMY AND PHYSIOLOGY.

The following papers have been promised.

- BRADLEY, W. A., M.D. On some points in the Anatomy of the Ciliary Body.
 CATHCART, C. W., M.D. 1. Movements of the Upper Limb of the Trunk. 2. Movements of the Ulna in Pronation and Supination.
 CLARKE, W. Bruce, M.B. On cases of Arrested Development of the Diaphragm, with specimens.
 COOK, T., Esq. On the Continuation of the Intrinsic Muscles of the Tongue in Man with the Extrinsic Muscles (accompanied with dissections).
 DORAN, Alban, Esq. On Cysts in association with the Broad Ligament.
 GARSON, J. G., M.D. On the effects of Artificial Distension of the Rectum on the other Pelvic Viscera.
 GASKELL, W. H., M.D. Observations on the Innervation of the Heart.
 GRIFFITH, W. S. A., Esq. On Nerves of the Uterus.
 HAY, Matthew, M.D. 1. Cane-Sugar Ferment. 2. Absorption of Salts in the Alimentary Canal.
 HAYCRAFT, J. B., M.D. A New Process for the Estimation of Uric Acid in Urine.
 HOGGAN, George, M.D. 1. On the Functions of the Lymphatics as deduced from the Anatomy of their Radicles (with microscopical demonstrations). 2. On the characters and position of the Ultimate Nerve-terminations in the Skin and Hairs as affected by causes extraneous to the Nervous System (with microscopical demonstrations).
 KEEBLEY, C. B., Esq. On the actual use of the Crucial Ligament of the Knee-joint.
 LOCKWOOD, C. B., Esq. On Abnormalities of the Cæcum and Colon, with reference to Development.
 MORRIS, Henry, Esq. On the Ligamentum Teres, and its Uses in Man and other Animals.
 PARKER, W. K., Esq., F.R.S. On the Visceral Arches of the Mammalia.
 ROBSON, A. W. Mayo, Esq. 1. On the Position of the Abdominal Viscera. 2. Specimens of Brain hardened and prepared by Giacomini's process, with explanation of the method of preparation.
 STRETTON, L., Esq. A case of Bifid Dorsal Spines in the Human Subject.
 SYMINGTON, James, M.D. Some Peculiar Features in the Cranial Venous Circulation.
 WALSHAM, W. J., Esq. On the Anatomy of the Triangular Ligament, and Pelvis Fascia.
 WILLIAMS, W. Roger, Esq. On Contraction of the Stomach.

Tables will be provided in this Section for the exhibition of microscopical objects.

SECTION F.—PATHOLOGY.

1. A Debate on the Morbid Anatomy and Pathology of Diabetes will be introduced by Dr. D. J. Hamilton, of Aberdeen. The following gentlemen are expected to take part in the discussion: Dr. Pavy, Dr. S. Mackenzie, Dr. Dreschfeld, Dr. Saundby, and others.
 2. Mr. Jonathan Hutchinson will open a debate on the Origin of Tumours. The following gentlemen have already intimated their intention to take part in the debate: Dr. Thin, Dr. Sangster.

Mr. H. T. Butlin will give a Microscopical Demonstration upon the chief forms of Tumours.

Dr. W. R. Gowers will give a Microscopical Demonstration upon Diseases of the Spinal Cord.

The following papers are promised.

- BARLING, Gilbert, M.B. Colloid Sarcoma of the Breast.
 HADDEN, W. B., M.D. Specimens Illustrating Degeneration in the Spinal Cord.
 ROECKEL, W. J., Esq. A Contribution to the Pathology of Vascular Growths of the Rectum.
 SANGSTER, A., M.B. On Rodent Ulcer.
 SAUNDY, R., M.D. Changes in the Sympathetic in Bright's Disease.

There will be a table for the exhibition of wet specimens connected with this Section in the room provided for the meeting. There will also be an exhibition of microscopic objects connected with Pathology in the same room.

SECTION G.—OPHTHALMOLOGY.

1. Dr. Edwyn Andrew will open a discussion on Extraction of Senile Cataract in its Capsule: modes of procedure.

2. A discussion on the following subject will be opened by Mr. E. Nettleship: To what extent do the signs derived from the examination of the Eye and its Appendages, contribute to the localisation of Central Nervous Diseases?

3. A discussion will be opened on the treatment of detachments of Retina and Vitreous Opacities by Subcutaneous Injections by Mr. G. E. Hyde, and John A. Nunneley, M.B.

The following papers have been promised.

- ANDREW, Edwyn, M.D. 1. Removal of Lens in its Capsule. 2. Remarks on two Cases of Dislocation of the Lens. 3. A New Mode of Treating Sympblepharon.
 COWELL, George, Esq. On certain Modifications of von Gräfe's Operation for Extraction of Cataract.
 CRITCHETT, Anderson, Esq. The Operative Treatment of Congenital Cataract.
 GROSSMAN, K., M.D. A new Operation for Glaucoma.
 JULER, Henry E., Esq. The Application of Retinoscopy to the Diagnosis and Treatment of Errors of Refraction.
 SMITH, Priestley, Esq. 1. Atrophy of the Optic Nerves, with Continuous Dropping of Fluid (cerebro-spinal?) from the Nostril—two cases. 2. A new Registering Perimeter.
 SNELL, S., Esq. Cataract-extraction by a Shallow Lower Flap, with particulars of 120 operations.
 TAYLOR, C. B., M.D. 1. On the employment of Sponge-grafts, in the formation of a Stump after Extirpation of the Eyeball. 2. On the division of the Optic and Ciliary Nerves as a substitute for Enucleation, with *précis* of twenty cases. 3. On the instillation of Eserine as a preliminary to Cataract-extraction, with an easy and safe method of performing Iridectomy, and lacerating the Capsule in such cases. 4. On temporary Ankyloblepharon and the Transplantation of the Skin *en masse*, in cases of Injury and Disease of the Eyelids. 5. The Author's Experience of Motair's Eye-shades for the Diminution or Exaggeration of the Effects of Tenotomy in cases of Strabismus. 6. On the Cure of Severe Cases of External Strabismus without dividing the External Rectus.

SECTION H.—OTOLOGY.

1. A discussion on the connection between Diseases of the Ear and General Medicine will be opened by Mr. George P. Field. The following gentlemen have promised to take part in this discussion: Dr. A. H. Jacob (Dublin), Mr. Thomas Webster (Redlands, near Bristol), Mr. Lennox Browne (London), Dr. Cresswell Baber (Brighton), Dr. Kirk Duncanson (Edinburgh).

2. A discussion on Auditory Vertigo, especially in regard to its Differential Diagnosis, will be opened by Dr. Woakes. The following gentlemen have promised to take part in this discussion: Dr. McBride (Edinburgh), Dr. Cresswell Baber (Brighton).

Drs. Hughlings Jackson, Clifford Allbutt, and Gowers, have promised to take part in the discussions, provided their other duties permit.

The following papers have been promised.

- BARR, J., M.D. Practical Observations on the use of the Galvanic Cautery in Disease of the Ear.
 BROWNE, Lennox, Esq. 1. On the Connection between Diseases of the Ear and General Medicine. 2. The Local Treatment of Diseases of the Ear.
 CASSELLS, J. P., M.D. Antiseptic Aural Surgery.
 ELLIS, Richard, Esq. Notes on a case of Deafness following Concussion of the Brain.
 MCBRIDE, P., M.D. The Physiology of Auditory Vertigo and some other Neuroses produced by Ear-Disease.
 TORRANCE, Robert, Esq. Remarks on Syphilitic Cochlitis.

No communication shall occupy more than fifteen minutes, and no person shall be permitted to speak more than once, or for more than ten minutes, during the discussion thereon. A short abstract of each paper must be sent to the secretaries of the Sections in which it is to be read, not later than July 25th.

N.B.—Members who desire to take part in the discussions, or to read papers, are earnestly requested to communicate without delay to the Secretaries of the respective Sections.

ness, and go far beyond the general law of the country. The reports of Mr. Ernest Hart on this subject have each year been published in the JOURNAL, and, after consideration by the Parliamentary Bills Committee, have been forwarded to the Government, with the suggestion that means should be taken to exercise a stricter control over such private legislation, and to obtain a fuller hearing for persons representing the medical interests.

"Mr. Slater-Booth, late President of the Local Government Board, promised a deputation of the Parliamentary Bills Committee that this subject should receive early attention, and this year a mixed Committee of the House of Commons has been appointed, of which Mr. Slater-Booth is the chairman, and to which all such Bills have this year been referred.

"In the case of the Accrington Bill, which is a typical measure of the kind, now being examined before a Committee of the House of Commons, it has been intimated that local medical men will have the right to appear before the Committee and to contest the principle of any of the regulations to which they object. It will be important that medical men in each district should take careful note of the clauses of any local Bill proposed, and should, if necessary, take steps to be represented before the newly-appointed Committee on Police and Sanitary Regulations of the House of Commons.

"The necessity of regulating and controlling the practice of midwifery by the class of midwives has long been universally admitted. The Parliamentary Bills Committee has long since called the attention of the Government to the fact that 11,000 women are now believed to be practising as midwives in this country without any provision being made for their education, or any tests being applied as to their fitness to practise. The Obstetrical Society and the General Medical Council have made representations on the same subject, and legislation has long been promised and inefficiently attempted. The attention of the Parliamentary Bills Committee having again been called to the subject this year, it has, with the assistance of the following eminent members of the profession, drafted a Bill on the basis of the regulations unanimously agreed upon by the Obstetrical Society some time since, and accepted as a basis by the Parliamentary Bills Committee: Dr. Priestley, Dr. Quain, Dr. Aveling, Dr. Playfair, Mr. Sibley, Dr. Holman (Reigate), Mr. Nelson Hardy, Dr. Barnes, Dr. Grigg, and Mr. Ernest Hart.

"The Militia surgeons of England have a great grievance, inasmuch as, by an order issued on the 1st of January, 1881, medical officers of the Militia service are now informed that no medical officer will be entitled to remain in the force after he has attained sixty-five years of age, and they are now compelled to retire at that age without receiving any pension or retiring allowance. Continuous efforts have been ineffectually made to redress this grievance, but some further cases having again occurred which have called attention to the special hardship of the circumstances, a correspondence has been carried on by the Chairman of the Parliamentary Bills Committee with the Secretary of State for War, calling his attention in detail to these points, and arrangements have been made by which parliamentary support will be secured to a motion in Parliament on behalf of the Militia surgeons, with the assistance of some of the military and medical members of Parliament.

"The Chancellor of the Exchequer has proposed to increase the carriage-tax, and as such increase must fall with peculiar hardship upon a considerable class of medical practitioners, especially perhaps on those practising in the country, the Parliamentary Bills Committee have arranged, with the assistance of the various Branches, to make energetic representations to Mr. Gladstone on the subject, with the view of obtaining some exemption for medical men from the increase of the tax in respect of carriages which they use for the purposes of their profession. Petitions with this object have been sent up to Parliament from various towns in the Branch, and also by your Council on your behalf.

"With a view to placing the investigation of disease upon a more satisfactory basis, the Committee of Council, on the motion of Professor Humphry of Cambridge, have, during the year, appointed a 'Collective Investigation Committee', with Dr. Mahomed as Secretary, to organise subcommittees of workers in all the Branches, who shall collect the requisite data in their respective areas, and forward the same to the Central Committee for analysis and tabulation. Cards have been issued for this purpose, and already subcommittees have been formed in East and West Sussex Districts, and are in process of formation in the remaining Districts of the Branch. The expenses of the Investigation Committee are to be defrayed from the funds of the Association.

"At the annual meeting of the Association at Ryde last year, it will be in your recollection that the subject of homeopathy unfortunately found undue prominence in both the addresses in Medicine and Surgery. Since that time, the various Branches of the Association have been

greatly agitated by the question of the expulsion of homeopaths from the ranks of the Association; and in some, resolutions have been passed calling upon the Committee of Council to summarily expel these undesirable members, in accordance with the spirit of the resolutions on the subject at the annual meetings of the Association at Brighton, Edinburgh, and Canterbury. Your Council are glad to learn that this subject has had the most full and careful consideration by the Committee of Council, and they understand that they have come to the decision that no one who practises homeopathy should be admitted to the Association, but that no member already admitted should be expelled on that ground. Your Council believe, taking into consideration the great difficulties attending the expulsion of members on matters of opinion, if this regulation be less stringent than some would desire, it will nevertheless be satisfactory to the great body of the members of the Association."

The *Financial Statement* showed the income to have been for the past year £179 2s. 7½d., and the expenditure £95 8s. 4½d., leaving a balance in hand, on June 3rd last, of £83 14s. 3d.

The statement and also the report were received and adopted.

Medical Benevolent Fund.—Dr. HOLMAN proposed that £10 10s. should be voted as a donation to the Medical Benevolent Fund.—Mr. HODGSON (Brighton) seconded the proposition, and it was carried unanimously.

Vote of Thanks.—A vote of thanks was accorded to the Council, and the auditors and scrutineers (Messrs. Osborn and Long of Dover), for their services during the past year.

Honorary Secretary.—On the motion of Dr. HOLMAN (Reigate), Dr. Parsons was unanimously requested to continue to discharge the duties of the office.

Place of Meeting in 1883: President-Elect.—A very cordial invitation from the profession in Hastings and St. Leonard's having been read by the Honorary Secretary, Dr. EWART (Brighton), moved that "The place of meeting for 1883 be Hastings, and that the President-Elect be Dr. F. Bagshawe (St. Leonard's)."—This was seconded by Dr. RANKING (Tunbridge Wells), and carried unanimously.

After the meeting, some of the members drove to Sherwood, the residence of Dr. Siemens, and witnessed the effect of the electric light upon the vegetation of wheat and oats. Others visited the grounds of the Earl of Abergavenny at Eridge Castle; or inspected the fine collection of pictures of Sir David Salomons, at Broomhill.

Dinner.—At half-past five, upwards of seventy members and visitors dined together at the Royal Kentish Hotel; Mr. BLACKALL MARSACK, President, in the Chair.

Representatives of the Branch on the General Council of the Association.—The following were elected: J. V. Bell, M.D.; R. E. Bowles, M.D.; J. M. Burton, Esq.; A. Carpenter, M.D.; G. Eastes, Esq.; J. H. Galton, M.D.; E. Garraway, Esq.; W. J. Harris, Esq.; W. Hoar, Esq.; G. F. Hodgson, Esq.; C. Holman, M.D.; H. Lanchester, M.D.; S. Monckton, M.D.; W. Withers Moore, M.D.; A. Napper, Esq.; A. A. Napper, Esq.; J. Reid, Esq.; E. Noble Smith, Esq.; J. H. Stowers, M.D.; W. K. Treves, Esq.; T. Trollope, M.D.; E. W. Thurston, Esq.

Members of Council of the Branch.—The following were elected—making, with the above named representative members, the Executive Council of the Branch: F. Bagshawe, M.D.; C. O. Baylis, M.D.; J. Braid, M.D.; F. S. Byass, M.D.; C. W. Chaldecott, Esq.; T. Eastes, M.D.; E. F. Fussell, M.B.; E. II. Galton, Esq.; J. Ewart, M.D.; C. N. Hayman, M.B.; F. Hedley, M.D.; D. W. C. Hood, M.D.; F. A. Humphry, Esq.; J. L. Jardine, Esq.; J. T. Penhall, M.D.; J. E. Ranking, M.D.; G. Rigden, Esq.; B. Roberts, M.D.; J. S. Turner, Esq.; W. J. Tyson, M.D.; S. Woodman, Esq.; J. L. Worship, Esq.

A MORGUE FOR QUEENSTOWN.—A Morgue is urgently required at Queenstown; and attention has, on more than one occasion, been directed to try and obtain a proper receptacle for dead bodies (pending an inquest) in that seaport. The coroner recently had some correspondence with the Chief Secretary, who informed him that the subject had been brought before the Local Government Board, who had received a report from the clerk of the Queenstown Town Commissioners, stating that, in such cases where bodies were found floating in the harbour, and not washed ashore, the Harbour Board being the proprietors of the harbour, it would be a hardship to have the Commissioners put to the expense of building a morgue. Owing to divided and conflicting authorities, the establishment of a morgue appears as far off as ever; but, if the Town Commissioners were to construct it, they could afterwards have the expense recouped to them, should they not be liable themselves, from the body whose duty it is to provide a want so urgently required.

with a brief and concise sketch of the North Devon Infirmary and North Devon Dispensary, their work and progress and present needs.

Report of Council.—Dr. REES PHILIPPS, Honorary Secretary, read the report of the Council. During the past year, the loss from deaths and resignations had been much above the average, but it had been more than made up by the election of new members. Twenty-two gentlemen had been elected members of the Branch at their quarterly meetings, and the total number now stood at 180, or a gain of three on the previous year. At the last annual meeting, the balance in hand was £13 12s. 1d.; but the quarterly meetings had greatly increased the expenditure, and although the receipts had amounted to £21 19s., the balance had been reduced to £10 18s. 10d. The proposal made at the last annual gathering to hold quarterly meetings had proved successful, meetings having been held at Exeter, Plymouth, and Liskeard; and the Council recommended Exeter, Plymouth, and Falmouth, for next year's quarterly meetings. The Collective Investigation Committee of the parent Association was in full working order; and at the Liskeard meeting several members were nominated to serve as representing this Branch. The Secretary, Dr. Mahomed, Assistant-Physician at Guy's Hospital, had kindly come to give full information regarding the work of the Committee and what the Association expected. The Council also recommended the appointment of three local secretaries for different districts. Petitions had been forwarded to both Houses of Parliament (1) for the repeal of the Vivisection Act, inasmuch as its working had hitherto been injurious to scientific progress; (2) in favour of the Officers' Superannuation Bill; (3) in opposition to Mr. Gladstone's proposed additional tax on carriages. Questions in relation to homœopathy had deeply stirred the profession; and as the subject would be reviewed at Worcester in August, it would be well for them now to express their views.

The PRESIDENT moved that the report be received and adopted, which was seconded by Mr. SQUARE, and carried.

Officers and Council.—On the motion of Mr. SQUARE, seconded by Mr. LEWIS, Mr. Bulteel of Stonehouse was elected President-elect for the ensuing year. Seven new members for the Branch Council were elected, and nine members as representatives of the Branch in General Council at Worcester, in August next, were elected. Dr. Rees Philipps was re-elected Honorary Secretary, Dr. Hudson speaking warmly of that gentleman's devotion to the duties of the office. Mr. Davy was appointed honorary local secretary at Exeter, for East and North Devon; Mr. Square, at Plymouth, for South Devon and East Cornwall; and Dr. Hudson, at Redruth, for West Cornwall.

Compulsory Registration of Infectious Diseases.—Dr. SLADE-KING (Ilfracombe) introduced this subject. He said that the Public Health Act had been worked and accepted in a smooth way by the profession, as it was an Act marked by extreme moderation. Lately, however, there had been a tendency to depart from that moderation, and force upon the profession some legislation which, at all events, in the form it at present was taking, apparently was very objectionable. He thought none would deny that the early notification of infectious disease was not only desirable, but was all-important for the proper sanitary working of the sanitary authorities in this country. That notification had been obtained hitherto, partly on the voluntary system by the medical practitioners, and partly through voluntary payments made by various sanitary local authorities, and partly by the general tongue of rumour; and most important work on the basis of early notification has been done. In 1877, the corporation of Bolton were enabled to pass a local Bill which compelled medical men to give compulsory information of the cases of infectious disease which they might meet with in the houses of their private patients, and that was done under the pressure of severe penalty; and the position of things in which many of the boroughs in the North of England were placed was this: that a medical man, for the absurd sum of 1s., and under a penalty of £10, was obliged to diagnose and to give early information of contagious and infectious disease in any family he might be called on to attend. The working of this Act was not only not left in the hands of the medical officer of health, but in the hands of common informers, and how soon the notification was to be given was left in their hands. Let them take, for instance, the diagnosis between scarlatina and German measles. He thought there was a difficulty the first day in forming a very definite idea; and yet on the face of things, as they now appeared, a medical man might be liable to be prosecuted simply because he had made a mistake in diagnosis, and to be held up to ridicule by the public. Local authorities were endeavouring, and were succeeding, by this piece-meal legislation, in taking the profession in various localities in detail, thus destroying their power of co-operative action. If the information of the existence of disease among their private patients was worth having, it was worth paying well for. He moved:

"That, in the opinion of this meeting, the compulsory notification of

cases of infectious disease to health-authorities is desirable, but that the piecemeal legislation by which private medical men are gradually being compelled under heavy penalties to give early information of cases of such disease occurring in their private practice is most unsatisfactory, and is an unwarrantable interference with their rights as private citizens."

Mr. DEANS seconded the motion.—Dr. WOODMAN agreed with the motion, but he thought it would be better to add something to the effect that the householder should be compelled to give the information. As a medical officer of health at Exeter, he objected to the medical men being obliged to do it, as it would prevent people calling in medical aid. He knew cases in point in which children had been treated without a medical man until they got dropsy, because they were afraid that their medical man would report.—Dr. CRICHTON supported Dr. Woodman's views, and said it was an invidious thing that medical men should have to do such duty.—Mr. PEARCE thought the medical men should be paid, as they would be obliged first of all to give the householder the information, as the householder's opinion would not be received.—Dr. THOMPSON did not object to give the necessary information; but, on the other hand, it should be known that they had a right to a fee.—After one or two suggestions, the resolution ultimately took the following form: "1. That, in the opinion of this meeting, the compulsory notification of cases of infectious disease to health-authorities is desirable; 2. but that the piecemeal legislation by which private medical practitioners are being compelled under heavy penalties to give early information of all cases of infectious diseases occurring in their practice is most unsatisfactory, and is an unwarrantable interference with their rights as private citizens; 3. That the householder should be compelled under penalties to give such notice; 4. That medical men should be compelled to give certificates on demand of the householder for a fee of not less than 2s. 6d."—Dr. HUDSON said the matter was discussed at the meeting last year, and similar resolutions carried, so that the Council's hands would now be strengthened.—The resolution was then put to the meeting, and carried unanimously.

Homœopathy.—Mr. SQUARE introduced the subject of homœopathy, referring to the action the Branch had taken against the introduction of homœopaths into the British Medical Association. He moved: "That we approve of the resolution with regard to homœopaths passed at Liskeard and Plymouth meetings, and trust our representatives at the General Council will take steps at Worcester to have the Committee of the Council remodelled in accordance with our views."

The motion was seconded by Dr. CRICHTON, and was carried unanimously.

Collective Investigation.—Dr. F. A. MAHOMED (London) addressed the meeting on behalf of the objects of the Collective Investigation Committee. He said they had already sixteen Branch Committees organised, and he hoped soon to have a large number more all over England. They had in hospitals excellent opportunities of observing the terminations of organic disease, so that when a man had got an advanced disease of his kidney or his lung, they were well able to diagnose, and they had, perhaps, the privilege of telling his friends he was likely to die; but practitioners all over England had an opportunity of observing these people for years before their kidneys, etc., became diseased. They wanted practitioners really to give them the life-history of patients of this sort with regard to organic disease, and they wanted to know what diseases prevailed in certain districts, and to put the observations to the test. Also they wanted to know the diseases among certain operatives in certain districts, and to know the special diseases of every trade. Observations from all parts of the country must tend to benefit medical science.

Communications.—Interesting cases were read by Mr. Square, Mr. Pearce, and Dr. Woodman.

Vote of Thanks.—Mr. BULTEEL moved a hearty vote of thanks to Dr. Hudson for the able way in which he had filled the office of President for the past year. This was seconded by Dr. THOMPSON, and carried with acclamation.

Dinner.—In the evening the members dined together at the Golden Lion Hotel, Mr. Harper in the chair, and Dr. Rees Philipps in the vice-chair. The Vicar of Barnstaple and some other friends were present as visitors. With the toast of the British Medical Association, proposed by Mr. Square, the name of Dr. Mahomed was associated, who, in replying, said he believed that the Association had a very great future before it, and he hoped everyone present would give their earnest efforts to the promotion of its best interests. He was afraid that doctors were such busy men that they had not much time for public work; but as time rolled on they would have to do far more public work than they had done already, and the British Medical Association must be the great means for organising them for public work.

LANCASHIRE AND CHESHIRE BRANCH: ANNUAL MEETING.

THE forty-sixth annual meeting of this Branch was held at the Town Hall, Chester, on June 28th, under the presidency of Dr. McEwen. A large number of members attended.

President's Address.—The President read an address on the improvements which had taken place in the sanitary arrangements of prisons during his experience.

The Annual Report of the Council was then read. "The past year has been one of unusual activity in the history of this Branch. No less than four general meetings have been held in the interval between the last annual meeting at Preston and the present occasion. Two of these were ordinary meetings for the reading and discussion of medical and surgical papers, and two were called for the consideration of special business. The first ordinary meeting was held at Bolton last October, and the second at Blackpool in May. In both instances over one hundred members attended, and at both important papers and communications were read.

"Both special meetings were called at the instance of the Council; the first (in Liverpool last September) to consider the relations of the British Medical Association to homœopathic practitioners; the second at Manchester, in February, to discuss the subject of the compulsory notification of infectious diseases. Both of these meetings excited much interest not only among our own members, but throughout the Association at large, and many communications were received by the secretary from those desirous of knowing the views held in this Branch on these matters.

"The official report of these meetings has appeared in the JOURNAL of the Association, necessarily in a brief form. In the case of the meeting on Notification of Infectious Disease, a full report of the discussion was sent up and published in the JOURNAL. Since our last annual meeting, admirable and extensive reports of the papers read at our ordinary meetings, and of the discussions which followed, have appeared in the *Liverpool Medico-Chirurgical Journal*, over twenty pages in each number being devoted to this purpose.

"The Council have to report a very considerable advance in our numbers during the past twelve months. In June, 1881, our number was 736. During the year that has elapsed thirteen members have died, and twelve have resigned or left the district. The deaths include three resident in Blackburn. Mr. Skaike, who was President of the Branch in 1874; Dr. Cheesbrough, local secretary for Blackburn, and Mr. Rae. Ninety-four new members have joined, which brings our present number to 805. Twenty-four of these new members belong to Bolton or its immediate neighbourhood, their accession being largely due to the indefatigable efforts of Dr. de Vere Hunt of that town, whose name is to be proposed to you to-day as local secretary of the Branch at Bolton.

"In view of the great and growing size of our Branch, it comes to be a question whether its organisation and effective action might not be much promoted by further increasing the number of our local secretaries.

"The Council regret they cannot at present announce any invitation for the annual meeting of 1883. Under ordinary circumstances, Liverpool would be next in rotation: but, in view of the certainty that the annual meeting of the Association will be held in that city in 1883, it is not expedient that the annual meeting of the Branch should also be held there.

"The finances of the Branch are in a satisfactory state.

	£	s.	d.
Income to January 1st, 1881	55	0	9
Income to January 1st, 1882	92	2	6
Balance	146	3	3
Expenditure for 1881	68	3	5

Balance 77 10 10

The following gentlemen were elected. Mr. Skaike, who was President of the Branch in 1874; Dr. Cheesbrough, local secretary for Blackburn, and Mr. Rae.

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M.D., Manchester; J. Harker, M.D.; A. Jamison, M.D.; St. Helens; L. Jones, M.D.; J. Lambert, M.D.; D. J. Leech, M.D.; E. Lund, Esq.; W. Manifold, Esq., Liverpool; J. Dixon Mann, M.D.; H. Colley March, M.D.; G. W. Mould, Esq.; Rushton Parker, Esq.; Chauncey Puzey, Esq.; E. Rayner, M.D.; D. Lloyd Roberts, M.D.; T. L. Rogers, M.D.; J. Ross, M.D.; S. Spratley, M.D.; C. Thorpe, Esq.; T. S. Walker, Esq.; A. T. H. Waters, M.D.; J. W. Watkins, M.D.; F. P. Weaver, M.D.; C. White, Esq.; W. Whitehead, Esq. *Ordinary Members of Council:* E. Adam, Esq.; J. J. Ayre, Esq.; W. C. Barnish, Esq.; R. Caton, M.D.; J. Corns, M.D.; A. Gamgee, M.D.; R. A. Gaskell, Esq.; A. Hamilton, Esq.; J. A. Harris, M.D.; C. Johnson, Esq.; H. R. Ley, Esq.; W. Musson, Esq.; J. J. Popjoy, Esq.; W. Pountney, M.B.; A. Ransome, M.D.; C. Bothwell, Esq.; J. Somerville, Esq.; A. W. Stocks, Esq., Salford; G. Thomson, M.D.; E. Waters, M.D.

The General and Local Secretaries were reappointed. Dr. de Vere Hunt was appointed Local Secretary for Bolton.

Mode of Election of Council.—Dr. ROGERS proposed an alteration in the law of election to the Council. It was agreed that the President, Vice-Presidents, and Drs. Rogers, Royle, Rayner, and Vacher, form a committee to consider and report on the law of election to the Council.

The Parliamentary Bills Committee.—Dr. W. CARTER drew attention to the recent action of the Parliamentary Bills Committee, and moved a resolution, "That the constitution of the Parliamentary Bills Committee is unsatisfactory, and requires remodelling." This was seconded by Dr. FITZPATRICK, and carried by a very large majority.

The Royal Commission on Medical Reform.—Dr. E. WATERS reported the resolutions passed by the Medical Reform Committee of the Association, approving of the newly issued report of the Royal Commission on Medical Reform.

Collective Investigation.—Local committees were appointed in Liverpool and Manchester, to co-operate with the central committee in carrying out the combined investigation of disease: in Liverpool, Drs. Glynn, Carter, Campbell, Paul, Barron, Rich, Barr, and Davidson; in Manchester, Drs. W. Roberts, Ashby, Leech, Bury, Dreschfeld, Hatton, and Ransome.

Luncheon and Dinner.—The members and visitors were entertained at lunch by the Chester members of the Branch before the meeting. The dinner took place at the Grosvenor Hotel, when over eighty were present, including Mr. E. Hart, the editor of the JOURNAL.

CORRESPONDENCE.

ADMINISTRATION OF ANÆSTHETICS.

SIR,—As the Junior Assistant Administrator of Anæsthetics at St. Bartholomew's Hospital, I feel it my duty to take notice of your report of the death under chloroform. As you state that the patient died of the administration of anæsthesia, i.e., in the structure of the heart, there is no doubt; but, from the latter part of your report, I am led to differ. The other organs besides the heart were found healthy. There were extensive adhesions of the right lung; congestion of both lungs, but not more than would be accounted for by the artificial means used in the administration of the anæsthetic. The heart was, as you state, enlarged, and the left ventricle contained a half; but it was not rigid, and presented no pathological appearance. The striated muscle of the heart was not degenerated. The striated muscle of the heart, but at the same time granular degeneration, with an occasional fat-globule; and, though I cannot call it an extensively degenerate heart, I cannot call it healthy. The liver weighed five pounds and a quarter, and the spleen was also enlarged, and there was no pathological appearance of the coronary arteries.

I must repeat, in the most emphatic terms, that the examination of the heart is necessary in any case. For that form of heart disease which is the result of the administration of anæsthetics, the heart is the organ of interest. The heart was found healthy, and the patient died of the administration of chloroform, and I have given it in my report.

I must repeat, in the most emphatic terms, that one of the leading medical papers has published a report of a case of death under chloroform, in which the heart was found healthy, and the patient died of the administration of chloroform, and I have given it in my report.

during life, you will be conferring a great benefit on the profession at large, including your obedient servant,

J. LIONEL STRETTON, L.R.C.P.Lond., M.R.C.S., L.S.A., Eng.
St. Bartholomew's Hospital, E.C.

The "Junior Assistant Administrator of Anæsthetics at St. Bartholomew's Hospital" may console himself with the reflection that "we are none of us infallible, not even the youngest of us". What our correspondent means by "the cause of anæsthesia", it is hard to say. But this cause may, we presume, be best advanced by the exercise of care. If it be an error at all, it is a professional, and not a popular, conviction that physical examination of the patient may afford some warning of danger. The opinion that it ought to be invariably resorted to is supported by some of the most experienced administrators of anæsthetics. It would not be difficult to multiply authorities; one who is readiest to hand—Dr. Ringer—after saying that chloroform may be administered "to all persons irrespective of their condition", "provided due care is observed", goes on to say: "No doubt a dilated or a fatty heart adds to the patient's risk, and enforces on the operator more care and anxiety" (*Handbook*, seventh edition, p. 342). It is just this due care that it is wise not to omit; and, in opposition to the opinion of our correspondent, many will continue to believe that, even in fatty degeneration of the heart which is not secondary to more pronounced disease, many things may be seen and felt which will put the administrator on his guard, though they may not enable him to make a diagnosis with certainty. We have no intent to censure any, well knowing the anxiety with which every man who is called on to administer an anæsthetic must approach that duty; with reference to this particular case, we said that no examination of the heart "could have revealed any dangerous condition of the organ". There is no censure here; we merely insist on the principle that systematic attention, even as a matter of routine, to the minutest details, which may tend to the greater safety of the patient, is most desirable; and by such means especially, if by any, in our present state of knowledge, the number of deaths under anæsthetics may be diminished, and confidence in the inestimable boon of anæsthesia be strengthened and established.

THE ORIGINAL FOUNDERS OF THE BRITISH MEDICAL ASSOCIATION.

SIR,—I have been making inquiries if any of the original founders of our Association, who met in this city on July, 1832, are still alive. I cannot hear of any. Perhaps the best way to attract the attention of any survivors of Sir Charles Hastings' little band will be your kindly inserting this inquiry in the JOURNAL.

Should any of them be still among the living, they would be most heartily welcomed at our forthcoming jubilee in August.—Faithfully yours,
WILLIAM STRANGE, M.D., President-Elect,
Worcester, 1st July, 1882.

THE FIRST YEAR'S EXAMINATION IN ANATOMY AND PHYSIOLOGY PROPOSED BY THE COLLEGE OF SURGEONS.

SIR,—As there appears to be some misapprehension respecting the character of the first year's examination proposed by the College of Surgeons, and the questions which are involved in it, may I be permitted to draw the attention of the school authorities to the real issues which are contained in the proposition?

The grounds for holding such an examination are ostensibly the following: that it is desirable that an examination in anatomy and physiology should be held in each medical school at the end of the first year of study; and that it is desirable that the schools should exercise greater control over their students than they do at present.

But the real questions are these: Is it desirable that the school-teachers should hold an examination in anatomy and physiology at each school on behalf of the College of Surgeons? and is it desirable that the schools should look to the College of Surgeons for powers to enable them to control their students? The schools which regard a first year's examination in anatomy and physiology as desirable, already hold such an examination, but of their own free will, and not for the advantage of any licensing body. And the best managed schools find no difficulty in controlling their students, and therefore do not need to look to the College of Surgeons for assistance. It is of the utmost importance in considering this subject, that the apparent grounds and the real grounds for holding this examination for the College should be kept separate in the minds of all those who are interested in this question.—I remain, sir, yours obediently,
HENRY T. BUTLIN.

47, Queen Anne Street, W., July 13th, 1882.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.

Duty on Coffee.—In Committee of Ways and Means.

Mr. COURTNEY moved the following resolution:—"There shall be granted and paid to Her Majesty, her heirs and successors, upon every half pound weight of any article or substance called by any name of coffee or chicory, or prepared or manufactured for the purpose of being in imitation of or in any respect to resemble or to serve as a substitute for coffee or chicory, which is sold or kept for sale in the United Kingdom, and also upon every half pound weight of any mixture of such article or substance as aforesaid with coffee or chicory, which is sold or kept for sale in the United Kingdom, the duty of excise of one penny." The resolution was agreed to and reported to the House.

Monday, July 10th.

Artisans' Dwellings.—Sir S. NORTHCOTE (in the absence of Sir R. Cross) asked the Secretary of State for the Home Department whether the Government would endeavour to secure the passing of a Bill during the present session to carry into effect the general recommendations of the Artisans' Dwellings Select Committee.—Mr. SHAW-LEFEBVRE, on behalf of the Home Secretary, replied that it was the intention of the Government to endeavour to pass such a measure in the present session.

Lunacy Regulation Amendment Bill.—This Bill was read a second time.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE SWANSEA PROVIDENT DISPENSARY.

THIS institution appears to be remarkably well managed, and yet the number of members that it has enrolled is but small. The report for 1881 shows that the receipts from Provident members were £196 1s. 4d. This was considerably less than the sum received in 1880. The honorary subscriptions were £23 19s. 6d. as against £14 16s. 10d. in the previous year. The total number of members on the books was 1,316. At the close of the year £115 17s. 8d. was divided among the medical officers.

The Swansea Hospital supplies the Dispensary with drugs at one quarter of the cost prices, thus recognising the relief the Dispensary affords to the hospital by treating those whose means are insufficient for a private medical attendant, but who are not so destitute as to have recourse to the Hospital.

During the past year the dispensary has abolished the entrance fee for members joining in health, and has raised the sick members' entrance fee to 7s. 6d., as it was found that when 1s. was charged as an ordinary entrance fee, and 5s. as the sick members' fee, the number of sick members approximated to, and occasionally exceeded, the number of ordinary members. A collector has also been appointed to call upon the provident members. He receives 10 per cent. on all that he collects, and 1d. for each new member. These changes are in the right direction, as they are calculated to encourage systematic providence and thrift, and we trust they may conduce to the prosperity of the dispensary.

THE SOUTHAMPTON DISPENSARY.

THIS institution was founded nearly sixty years ago as a charitable dispensary. But within the last few years a Provident branch has been introduced; and the two departments are now carried on side by side. Both branches seem to be in a flourishing condition. Last year the number of patients admitted by Governors' letters of recommendation was 1,613, which, together with 213 remaining on the books at the end of 1880, made a total of 1826 who received gratuitous medical aid during the twelve months.

During the same period there were admitted into the Provident department 1,061 new members, making the total number of Provident members, standing on the books at the close of the year 5,430. But of this number only 3,610 could be reckoned as regular subscribers. 2,638 received medical attendance. The sum of £350 was divided among the five medical officers.

THE MACCLESFIELD INFIRMARY.

THE past year has afforded another example of the gradually increasing demand upon the resources of the infirmary, the preceding year's number of patients was in excess of 1879, and again the Medical Officer's return shows that the indoor patients treated are 95 more this year than last. The accidents and urgent cases are also more. The

whooping-cough, showed a decrease; but, on the other hand, the deaths from fever increased from 6 to 44; the distribution of the disease was essentially limited and endemic. No district of the borough could be said to be absolutely free from sporadic cases; but, except in one comparatively small area, no greater amount of disease existed than is usually found at that time of the year. The outbreak occurred in October; and an analysis of the dates of the attacks of the sufferers shows that, of those whose illness was reported between October 1st and December 31st, no less than 29 per cent. dated their first symptoms from the last week of October. A smaller number, about 18 per cent. of the whole, began to ail during the week previous; while, during the two weeks which followed, the proportions were 20 and 11 per cent. of the whole respectively. From that time, the number of fresh cases began rapidly to decrease—nearly all the fresh cases occurring in houses or families where previous cases had existed. Dr. Cameron attributes no blame for the causation of the epidemic either to the water or to the milk supply. Nor does he think that the epidemic was due to general sewer poisoning, but that it arose chiefly from a defective midden system. He says: "In the tubs, middens, and soil-pipes and stone drains, was contained the requisite nidus of organic matter, into which the stools of typhoid patients having been received during a period when, for several weeks, the rainfall and moisture of the air had been below the average, and during the latter part of which the temperature was high, and organic poison became fruitful and multiplied. Hence the rapid outbreak over a limited infected area." In a chapter devoted to a statement of the means taken to prevent a recurrence of the disease, the health-officer suggests additional hospital accommodation, and a more complete system of nuisance removal, especially from places of public resort. Dr. Cameron also recommends additional sewer ventilation and flushing. During the year, the total deaths registered were 1,797, being fewer by 29 than those registered during 1879. Zymotic diseases caused 203 deaths, of which 74 are attributed to diarrhoea, 55 to "fever", 33 to measles, 23 to scarlatina, and 12 to whooping-cough. To phthisis 208 fatal cases are ascribed, and 251 to bronchitis and broncho-pneumonia. Heart-disease caused 84 deaths.

WATFORD.—Dr. Brett has little to report for the past year. The total deaths which happened in the district during the year amounted to 205 (including 48 in the workhouse), equal to a rate of 20.35 per 1000. Scarlet fever was rarely absent, which the health-officer attributes chiefly to the difficulty in obtaining isolation in the crowded houses of the poor, and of their obstinate prejudice in refusing to go into the infirmaries provided for them. Five cases of typhoid came under notice, two of which were due to sewer-gas, and the other three were imported. The zymotic deaths amounted to 25, giving a death-rate of 2.48 per 1000. A series of cases of small-pox, recorded by Mr. Brett, are instructive. A gentleman had all his servants revaccinated, except the cook, who refused to have it done. She caught small-pox, and was sent into the country, where she died in a few days. Four men from Watford carried her to the grave, two of whom caught small-pox and one died. The survivor was sent to the infirmary, but came out four weeks after admission; twelve days after, the man living next door had small-pox.

OBITUARY.

ALEXANDER FILSON, M.D., PORTAFERRY.

DR. ALEXANDER FILSON, who died on the 28th ultimo, at the early age of thirty-eight years, was the son of Dr. Filson, who held the position of Dispensary Medical Officer for the Portaferry District, county Down, and enjoyed a large practice there for many years.

After pursuing a course of studies in the Belfast and Dublin schools, he graduated in 1865; and in a short time succeeded to his father's practice and appointments.

He was appointed, very shortly after he became qualified, to take charge of a hospital in the village of Cloughy, when that district was visited by a severe epidemic of cholera. In this trying position, his indefatigable zeal, his practical turn of mind, and his sound professional training, came to his assistance, enabling him to achieve the necessary reforms; and he had his reward by seeing the dreadful scourge stamped out in a very short time.

He brought about many reforms in sanitary matters in the town and its neighbourhood, and it was his constant study to make the homes of the poor and their surroundings both healthy and comfortable.

He designed and had constructed an ambulance for conveying poor patients to the workhouse, who were suffering from fever or other diseases.

It is in constant use in the district, and is the greatest boon to the poor sufferers. It will last as a memorial of his ingenuity and philanthropy. As a member of the British Medical Association, he was rarely absent from its meetings, and at the time of his death was one of the Vice-Presidents of the North of Ireland Branch. The cause of his death was malignant disease of the stomach. He leaves a young widow and two children to mourn his loss.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Board of Examiners, on the 7th instant, and when eligible will be admitted to the pass examination.

Messrs. F. St. John Bullen, Albert Wilson, and Julius Labey, students of St. Thomas's Hospital; George A. G. Simpson and Edward Nason, of the London Hospital; Frank J. Malden and Harold C. Halsted, of St. Bartholomew's Hospital; Spencer Hurlbutt and Fairman L. Mann, of St. Mary's Hospital; Hyde Marriott and Herbert A. Seagrove, of University College; Bernard F. Hartzorne, of the Middlesex Hospital; Thomas R. Rolston, of Guy's Hospital; and Reuben Levi, of the McGill School.

Fourteen candidates were rejected.

The following gentlemen passed on the 8th instant.

Messrs. George C. Henderson, Benjamin J. Innis, William M. Gabriel, and Edward Jessop, of St. Bartholomew's Hospital; John R. Wilson, Alfred W. Popert, Ebenezer Bryceon, and Richard P. Mitchell, of the London Hospital; Haygarth M. Addison, Charles Fryer, William Lansdale, and E. Wilberforce Goodall, of Guy's Hospital; George M. Bluett, Shirley L. Woolmer, Walter G. Earle, and Robert F. Bowie, of University College.

Eight candidates were rejected.

The following gentlemen passed on the 10th instant.

Messrs. Hugh Vallance, Joseph D. Howe, William F. Tronson, Montagu W. Oldham, and Geoffrey C. Stamper, students of Guy's Hospital; Charles D. Hamilton, James Malpas, Francis J. Butt, Henry L. Kemphorne, and Arthur G. M. Creagh, of University College; Alexander G. R. Foulerton, Frederick C. Evill, and George F. Sydenham, of St. Bartholomew's Hospital; Alfred H. Burns, of St. Thomas's Hospital; Thomas E. Hornby, of the London Hospital; J. F. Howard Clarke, of the Charing Cross Hospital; and Louis E. S. Beer, of the Middlesex Hospital.

Eleven candidates were rejected, including one who had an additional three months.

The following gentlemen passed on the 11th instant.

Messrs. John A. Cones, John J. Henning, and Ernest E. Gould, of St. Bartholomew's Hospital; C. Hotham Evans, H. Craven Smith, and E. Herbert Thane, of University College; Hugh J. Roberts, John W. Sandoe, and Edward S. Marder, of Guy's Hospital; William G. Weaver and Charles R. Davidson, of the Westminster Hospital; Alfred J. Wright, of the Charing Cross Hospital; Robert Evans, of King's College; and H. Tancred Marriott, of St. George's Hospital.

Fourteen candidates were rejected, including one for six months.

The following gentlemen passed on the 12th instant.

Messrs. Percy C. E. Billups, Reginald Koettlitz, Edwin C. Greenwood, and Herman G. Hilbers, of Guy's Hospital; Charles G. Satchell, George Cormick, C. B. d'Eyncourt Chamberlain, and F. Anderson Smith, of University College; Edward J. Bower, Walter M. Hardy, and Arthur W. Harris, of the Charing Cross Hospital; William R. Woodall and Sidney H. Youel, of St. Bartholomew's Hospital; Frank G. Arnison and Thomas H. Maddison, of the Middlesex Hospital; William E. Evans, of St. George's Hospital; Joseph B. Drew, of St. Mary's Hospital; and William H. Baker, of St. Thomas's Hospital.

Six candidates were rejected, including one who had an additional three months.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 6th, 1882.

Adkins, George, South Devon Hospital, Plymouth.
Graham, George Hubert, Croydon.
Harris, Frederick William Henry Davie, Ivy Bridge, Devon.
Samut, Richard Philip, Trinity Square, Borough.

The following gentlemen also on the same day passed their Primary Professional Examination.

Rigby, Percy Alfred, St. Thomas's Hospital.
Donovan, Daniel William, Steven's Hospital, Dublin.

At the recent examination for the Prizes in Botany given annually to medical students by the Society of Apothecaries, the successful candidates were: 1, John Barker Smith, St. Thomas's Hospital, Gold Medal; 2, Charles Percival Smith, St. Bartholomew's Hospital, Silver Medal and Books.

UNIVERSITY OF DUBLIN.—At the Trinity Term Examination for the Degree of Bachelor of Medicine (M.B.), held on Monday and Tuesday, June 12th and 13th, the successful candidates were arranged in the following order of merit.

James Chute, Thomas Robert Bradshaw, Benjamin Morgan Dockrell, William F. Law, William H. Bennett, Walter H. Loughheed, Michael McHugh, William

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....	Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopaedic, 2 P.M.
TUESDAY.....	Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.
WEDNESDAY...	St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopaedic, 10 A.M.
THURSDAY....	St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.
FRIDAY.....	King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.
SATURDAY....	St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—	Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin M. Th.; Dental, M. W. F., 9.30.
GUY'S.—	Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.
KING'S COLLEGE.—	Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.
LONDON.—	Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.
MIDDLESEX.—	Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.
ST. BARTHOLOMEW'S.—	Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopaedic, F., 12.30; Dental, Tu. F., 9.
ST. GEORGE'S.—	Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopaedic, W., 2; Dental, Tu. S., 9; Th., 1.
ST. MARY'S.—	Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., Tu. F., 2; Eye, Tu. F., 9.15; Ear, M. Th., 2; Skin, Tu. Th., 1.30; Throat, M. Th., 1.45; Dental, W. S., 9.30.
ST. THOMAS'S.—	Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.
UNIVERSITY COLLEGE.—	Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. T., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.3.
WESTMINSTER.—	Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with Duplicate Copies.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

VESICO-VAGINAL FISTULA.

SIR,—“A Physician” asks for information on the above subject. About twenty years ago, I met with a case supplying a positive answer to question No. 2. A woman suffering from vesico-vaginal fistula (induced by neglect for several hours on the part of a midwife, in a case of arm-presentation, in which I had to effect delivery by eversion) became pregnant, after an ineffectual attempt to close the fistula by operation. I was sent for at about the fourth month of pregnancy, on account of a severe attack of hæmorrhage, which, however, had ceased on my arrival, and never recurred. I attended her at full term, and nothing remarkable happened during the birth of the child. Post Partum hæmorrhage (evidently from atony of the uterus) occurred to a considerable extent, but speedily subsided. Apart from this, there was neither difficulty nor danger in the confinement, although I quite expected both.

Query—Was the hæmorrhage at the fourth month due to tearing of the edges of the fistula? I thought so at the time, being unable to assign any other cause.—I remain, sir, yours truly,

JOHN EWENS,

Surgeon to the Hospital for Women and Children, Bristol.

ALPHA.—To notice such productions is only to give them additional notoriety, which is the main object sought.

CARRIER PIGEONS.

SIR,—So many of my correspondents have asked me how to manage pigeons for country work, and their questions involve so many points of detail, that I shall be greatly obliged if you will allow me to condense the salient points of management into the form of a letter in the JOURNAL.

1. They should be kept to themselves as far as their pen goes; they should have a high cleanly house, with plenty of side room in it for breeding boxes; and the roof of their house, for easy recognition when they are homing, should be white-washed.

2. A very excellent plan to let them know the locality and learn their home-beatings, is to allow them exercise, at first along a plank, placed at one end at the opening from their house, and placed at the other end on the roof of an adjoining building, the plank to be roofed with wire right along, arch-wise, so that they cannot fly out, but only walk backwards and forwards along it.

3. When they have perambulated thus for some days, they should be taken, one by one, to some high hill near and allowed to fly home; each day the distance should be increased, and before being entrusted to convey messages, they should be taught to take a trial-fly home over some piece of water, as I find that they become rather bewildered at first when traversing large tracts of water.

4. Fly them for choice, at first, at noon; avoid misty days, but rainy days, if clear, they will not mind.

5. When trained to fairly long distances, they can be packed in convenient baskets, sold for the purpose by Hartley of Woolwich (from whom, by the way, I got all my original stock), and taken in the cart, or hung on the tricycle.

6. The best way to prepare messages is as follows. Purchase one of the ordinary letter-books used by solicitors for their copying presses, as they are of good, strong, thin paper, and a black pencil or an eagle pencil will write firmly and well on them. Having written your message or prescription, fold it up flatly and neatly, and wind it high up round the thigh of one or other leg, or even of both legs, if your messages be long and numerous. Then bind string firmly round, avoiding cruel tightness, which I have often seen, and which is quite unnecessary. The bird is now ready to toss. He can be caught when he arrives home with a butterfly-net, as he will most probably fly straight into his house, especially if you have kept him before his outing short of water.

7. Now arises the question, How can you tell the bird's arrival? The neatest plan is as follows. The entrance to the pigeon-house should be a small door of wire, to which the birds soon become quite accustomed, and walk through it; and when they are through it, it should swing back again. It is very easy to attach to this a light wire communicating with a bell in the house, or in the stables or harness-room, and the wire need only be attached when messages are expected. I believe myself that it would be quite easy to make the door in its backward spring strike the sensitive button of an electric bell; but this I have not tried, finding the other plan quite satisfactory.

Of course, anyone wishing to do much work with pigeons must keep a good stock, but I cannot warn my brethren sufficiently against the annoyance they will experience if they toss two birds together. The effect will be that the birds will “lark” about together, and go anywhere but “home”. A good interval should exist between the flights.

I fear when pigeon-keepers have arranged everything, there will still be one enemy to overcome, viz., cats. I lost eight long-distance birds in a few weeks by feline depredations. I have tried all cures, and there is only one of any avail, and that is infallible. Train a bull-terrier to respect pigeons as he would ferrets, and let his home be in the pigeon-house; train him also to hate a cat; and you may safely leave your pigeons to his charge, and the birds soon become used to his company. My pigeon-house is now the grave of many a feline reputation; and for the cats, I might almost inscribe over the door of my wing-telegraph department, “All hope abandon ye who enter here!”—Your obedient servant,

GEORGE H. R. DABBS, M.D.

Shanklin, Isle of Wight, June 27th, 1882.

SIR,—I should be glad of information of the total number of deaths caused by the administration of nitrous oxide gas.—Yours truly,

W. CALWELL.

Wellington, Salop, July 8th, 1882.

MEMBER (Liverpool) should communicate with one of the Medical Defence Associations, of which it is to be hoped he is a member.

TEA AND TARIFFS.

WE learn from a writer in the *Pall Mall Gazette* that, in 1841, the consumption of tea in this country was 41,459,000 lbs.; in 1851, it was 58,500,000 lbs. Up to this date, the duty on it was 2½d. per lb. In 1853, Mr. Gladstone began his grand campaign against the tariffs. Tea was one of the first articles attacked, and the duty was reduced to 1s. 10d. per lb.; in 1854, it stood at 1s. 6d.; in 1855-6, it was raised to 1s. 9d.; from 1857 to 1862, it stood at 1s. 5d.; in 1863-4, at 1s.; and in 1865, it was reduced to 6d. per lb., where it now stands. The rapid growth in the consumption during these years has been perfectly marvellous. So great has it been that, last year, 1881, it reached the enormous total of 160 millions of pounds, against 58 millions in 1851, when the duty stood at 2½d. The revenue derived from it at 6d. per lb. duty reached a total of over four millions sterling, against a revenue of about six millions in 1851, so that this enormous relief to the people—to say nothing of the indirect advantages, such as the stimulus to trade—has been secured without very much loss to the revenue, and has largely increased the comfort and happiness of the people.

REMARKS

CASES IN WHICH THE WHOLE OR PART OF THE PLACENTA WAS RETAINED FOR A LONGER PERIOD THAN USUAL AFTER DELIVERY OF THE CHILD:

REMOVAL OF THE RETAINED PORTION BY HAND, WITH REMARKS.

By J. BRAXTON HICKS, M.D. Lond., F.R.S., F.R.C.P., etc.,
Obstetric-Physician and Lecturer at Guy's Hospital, etc.

THE very important rule, of long standing, that the placenta, if retained, should always be removed, is now, almost without exception, so implicitly followed, that its great value can scarcely be fully realised. Certain conditions, however, do from time to time arise, where it is very difficult, and in some instances impossible, to follow this rule absolutely; and some cases occur in which there has been a difficulty in recognising the fact, that either a fragment has remained behind, or a secondary lobule has been formed outside the area of the apparently normal placenta.

The circumstances which will prevent our removing the placenta, or portions of it, are either the firm closure of the uterus, or the firmness of the adhesion. It is generally in cases of premature expulsion of the fœtus that the uterus closes so firmly as to prevent our entering. Seldom it is in the fully developed organ that we are unable, at any rate with the assistance of chloroform, to pass our hand sufficiently far as to empty the uterus. Besides these obstacles to the removal of the placenta, or portions of it, we may desist from immediately removing it in consequence of the condition of the patient: as, for instance, in a patient hovering between life and death from sudden or abrupt hæmorrhage already arrested. In cases where bleeding is still continuing, it would be unwise to wait, because the shock of operating will not affect the system so much as the loss; whereas, if the bleeding have been checked, besides saving the patient from the shock of handling, it will be an advantage to wait till the shock of the hæmorrhage has passed off, and the general balance of the circulation is restored, and the heart has received blood from the outlying smaller vessels of the extremities, etc.

A certain number of cases of retained portions or whole of the placenta having occurred to me, I have thought it may be useful to give a brief account of some of them, in order to show that, whenever the removal of the placenta is not carried out, a very proximate and positive danger is impending. I have not included cases of abortion before the fourth month; but in all cases, at all periods of pregnancy, I consider the rule above referred to holds good—namely, to endeavour to remove the portion of placenta retained. Yet, in abortions, if the os uteri have contracted rigidly, it may be wise to wait a day or two to see what nature may do; for I have seen the placenta expelled the day after vigorous, though ineffectual, attempts at removal had been made, and this, no doubt, is the experience of many practitioners; but, having also seen, not only severe and protracted hæmorrhages, but still worse, many times, fatal pyæmia follow on the detention of the secundines in both early and late abortions, I consider it safer by far if, after waiting a day or two without result, we pass a sponge-tent, or some form of dilator, and remove the adherent portion. After the fourth month or so, the os is more dilatable; and, generally speaking, we may enter two or more fingers, without much trouble, with or without dilatation. In all cases, greater facility is obtained by the assistance of an anæsthetic.

Most of the cases here related were attended by what has been called "secondary hæmorrhage"; and in all the cases of secondary hæmorrhage I have attended, two only were not owing to the presence of the whole or a portion of the placenta. These I have added at the end of this paper. And, again, in all the cases of retained placenta, offensive discharge were present, except in one. Hence, in cases of hæmorrhage occurring during the puerperal state, coupled with offensive discharges, we may expect to find a portion of placenta.

In cases indeed of sharp and severe hæmorrhage, without offensive discharge, it is safest to explore the uterus; and, even where the hæmorrhage is not severe, yet repeated and fresh, it will be best to explore; and if continued offensive discharges occur, with or without hæmorrhages, it is also well to explore the cavity of the uterus. We shall be

the more urged to carry out this, if, in addition, we find the patient feverish.

If difficulty be found for the finger to reach the fundus, though this is more common in premature expulsion than in delivery at full term, I need hardly remind my hearers that the hand, placed on the uterus, above the pubis, will generally bring down the fundus on to the tips of the fingers, and every portion of the cavity will be brought thus within its reach.

One remarkable case of secondary hæmorrhage was told me by the medical attendant, where, at the first monthly period after delivery, so much hæmorrhage occurred, and such a relaxed state of the uterus was present, that he was able to pass his hand into the uterus, and remove the clots which filled it to the size of "a seven months' conception." There was in this case no remnant of placenta.

In our endeavours to remove the placenta or its fragments, it is never wise to remove the hard nodules—the products of an effusion between the uterus and the serotina, and extending amongst the villi—which are occasionally met with at the seat of the adhesion. It is better to gently detach all the healthier parts, and to bruise down with the fingertips all the softer portions between the nodules, and then to remove the loosened pieces, than to forcibly tear away the nodules or the firmly attached stems of the villi. If we leave these behind, they do not putrefy, but slowly disintegrate. It is best to wash out the uterus, after the above process, with either a weak solution of iron or with some disinfectant; and to repeat the latter every day for some days. The danger is great if we remove the nodules; we shall probably pull off some portion of the uterine tissue, and a fatal hæmorrhage will be the probable result. I have seen such a case.

CASE I. Retained Placenta; Death from Hæmorrhage fifteen Hours afterwards.—This was a case attended by a most incompetent person, who permitted the placenta to remain in the uterus without any attempt to remove it. The patient had had a natural labour, but the placenta remained *in utero*, for what reason I could not find out—certainly it was not adherent. I was asked to see her twelve hours afterwards. She was nearly dead from loss of blood, which was still going on freely, and the discharges were already offensive. I passed my hand into the vagina, and without difficulty withdrew the placenta, which was still partially in the uterus. The placenta was quite offensive. She sank two or three hours afterwards.

CASE II. Complete Adhesion of Placenta at Abortion at Four Months' Pregnancy: Retained a week: Secondary Hæmorrhage.—I was asked to see a woman who had borne five children, who had between the fourth and fifth months' pregnancy, suddenly expelled the fœtus, followed by a rather sharp hæmorrhage. Her medical man attempted to remove the placenta; but he found it impossible from the closed state of the os. After much trial, he sent for me. I endeavoured to pass one finger; but the passage was closed so firmly, that, even assisted by firm counter-pressure from above, I could not succeed. She objected to take chloroform; and, as hæmorrhage had ceased, it was agreed to wait, in hopes that the uterus might relax and expel the placenta. Six days had elapsed when I was suddenly summoned to her, a most violent hæmorrhage having occurred. I found her blanched, half collapsed, and torpid from anæmia. The os was more patent than before; I could pass one finger through and feel the placenta. I found it, however, as fixed as possible, very solid, and altogether tougher than normal. I could not detach it in the usual way. I could only make any impression on it by pressing the fundus down on to the tip of the finger inside the uterus, and then break it up by fretting it away bit by bit, till by the same manoeuvre I had brought every portion of the inner surface into contact with the finger. This, of course, was a work of much time. The fragments were removed from the uterus. She recovered slowly from the anæmia, with some slight inflammation of the left femoral vein.

CASE III. Complete and most Firm but Simple Adhesion of Placenta, at Full Term in Four out of Five Labours: Recovery.—A primipara patient of Guy's maternity was delivered of the child, but the placenta did not follow, and the student in charge, not being able to manage the case, sent for me. Three hours had elapsed before I saw her, without, however, any hæmorrhage. I attempted removal, but found it impossible to distinguish the margin of the placenta from the uterine wall. Her surroundings not being favourable for treatment, I had her brought into the hospital. This was done; and, as no bleeding had occurred, I waited to see what nature would do, leaving instructions to send for me on the slightest occurrence of bleeding. About twenty-four hours afterwards, some slight uterine action occurred, and with it some loss of blood. I proceeded therefore to remove the placenta. Passing my hand to remove it in the usual way, I found the same difficulty of distinguishing the margin in every direction. I therefore pushed my finger through the centre of the placenta till I arrived at the uterine wall,

the distinction there being plain enough. Starting from this, I separated the placenta till I arrived at the margin, which then was not very difficult to separate. I found the membranes very firmly adherent, but detached them by care. But little bleeding occurred during the removal. She recovered well afterwards. She came into the hospital to be delivered at her next labour. The same condition existed, but was not quite so severe. At the third labour she was again admitted, and so much hæmorrhage occurred that I thought she would die before I could remove the placenta, which was adherent as before. On the removal, however, the bleeding ceased. At the fourth labour there was but little trouble; but the fifth was similar to the first in character. Neither upon the placenta nor their fragments was any sign of inflammatory change to be perceived, nor could any nodules be felt on the uterine surface at the time of their removal, nor any sign of inflammation of the chorion. It appears to me that the condition which gave us so much trouble was an imperfection of the natural process, by which the decidua membranes are shed from the uterine surface and fixed on the ovular membranes. This seemed retarded, and equivalent to the condition of two or three months' pregnancy.

CASE IV. Secondary Hæmorrhage: Adherent Placenta: Portion of Placenta Remaining after Removal of Greater Part: Recovery.—I was asked to see a lady, delivered twenty-four hours; a constant and free blood-loss had continued ever since, and her medical attendant was anxious lest there were a portion of placenta remaining in the uterus. The labour, he said, was a languid one, and when the child was born the uterus did not contract well, the placenta remaining within it. Friction, etc., were employed, but hæmorrhage was the only response. He therefore proceeded to remove the placenta, but found it adherent in part, and that part in the upper chamber of an hour-glass contraction. He thought that he had removed all, and put the parts together afterwards, and at the time believed the placenta complete. This, however, was an error, for I found on examination a large mass, partly clot, partly placenta, filling the vagina and passing up into the uterus, and adherent some distance within the os, which expanded to three or four inches. I peeled this off with some difficulty, the patient straining down much, and helping in the expulsion of a large mass of the size of two fists. On further examination, I found a long and firm fragment. Passing into the still existing upper chamber and following it up, I ascertained that it was attached to the high point of the fundus. It was with some difficulty separated, but pressing the fundus down from above the pubes gave much help to the finger within. The hæmorrhage at once ceased, and the patient felt much easier afterwards, for there had been much urging and backache, and condition of distress. I had found before removal of the portion the uterus very high, being pushed up by the mass which was in the os and vagina. As far as I could make out, the placenta had been diseased; the serotinal surface was yellow and thickened, and parts were firm and consolidated to some depth; but, as clots of very recent date infiltrated it irregularly, it was difficult to say what amount of effusion had existed.

CASE V. Labour at Seventh Month: almost Fatal Hæmorrhage immediately afterwards. Placenta universally and very firmly adherent: allowed to remain for two days: Irritative Fever: Removal: Recovery.—The wife of a medical man suddenly miscarried at the seventh month. On the instant of the delivery of the fœtus, a most alarming hæmorrhage occurred: she was nearly dead. Her husband tried to remove the placenta; but, finding it universally and firmly adherent, he thought it best to desist from removing it, considering her pulseless condition, especially as the bleeding had ceased by this time. A medical friend was sent for, who, arriving some hours later, thought it best to wait for a little more recovery. Next day, no fresh symptoms had occurred; but, toward the thirtieth hour, the discharge began to be offensive, and the pulse and temperature rose. I was sent for; it was thirty miles from London and six from any town, and late at night. I had no intimations as to the nature of the case; consequently, I had no suitable instruments, nor possibility of getting any. I found that no further bleeding had occurred, but the discharge was quite offensive; the pulse 130 per minute; the temperature 105°; the tongue brown; and the mind wandering. There could be now no doubt as to what was occurring, nor any as to what should be done. She was therefore placed under chloroform. Passing my hand into the vagina, and two fingers through the os, which would not dilate for the whole hand, I found the placenta most firmly adherent, and it was impossible to remove it by the finger. The only forceps I could find was a long weak pair, used for tents; and guided by the finger, by torsion movements, bit by bit I removed the whole, much assisted by pressure externally on the fundus—thus bringing every portion of the uterine surface within range of the finger and forceps. It required much time; but only a few nodules and stems of villi were left. No bleeding occurred during the operation. It was very interesting to note that, before four hours had elapsed, the

pulse had dropped to 100 per minute; the temperature to 101°; and the mind was clear. She rapidly lost all anxious symptoms, and made a recovery much better than might have been expected. The anæmia, however, remained for a long time; and indeed now, about eight years after, is still apparent. There was also amenorrhœa for two or three years, very slowly passing away. But she is sterile. The uterus was about the usual size.

CASE VI. Adherent Placenta: Half removed at first, the remainder six hours afterwards, under Chloroform: Recovery.—My advice and assistance were sought by a medical friend, in respect of a case of labour where, after the birth of the child, the placenta was retained. He had attempted its removal, passing the hand into the uterus. He had with much difficulty removed about half, but it was very firmly adherent, and the patient was very restive; so that, without chloroform, he felt he could not complete the removal of the rest. He thereupon desisted and asked my help. It was about six hours after delivery that we got the patient under chloroform. There had been a little hæmorrhage during the interval, but it was increasing, with some pain. I found half the placenta adherent to the upper part of the uterus, covered by a clot at its lower part. I had the greatest difficulty in detaching the portion; it was very dense next to the uterine surface, to which it adhered, and nodules of inflammatory products were left behind, as also some of the stems of the villi; all the softer parts of the villi were bruised down and removed, and the uterus was cleared of all the debris. No hæmorrhage of any moment occurred during the manipulation, nor any afterwards. She recovered without the slightest check, as indeed after an ordinary labour.

CASE VII. Secondary Hæmorrhage, seven days after Delivery at full Term: Portion of Placenta retained: Removal of it: Recovery.—Mrs. — was delivered naturally, and apparently the placenta had come away whole. About seven days afterwards, however, a rather severe uterine hæmorrhage took place, repeating itself three or four times in a week, till she was much reduced. Offensive discharge had by this time occurred, and irritative fever also. Being asked to see her, I found the os uteri somewhat patent; and felt a mass, about the size of a small orange, firmly attached to the interior of the uterus. Assisted by external pressure, I removed with the finger the mass; after which the bleeding ceased, and the fever gradually subsided. For some months, however, there was chronic metritis.

CASE VIII. Secondary Hæmorrhage a week after Labour: Portion of Placenta retained: Removal: Death.—Mrs. —, multipara, was delivered naturally; afterwards the discharges were offensive, and there was irritative fever. About a week afterwards, she was seized with severe flooding, which, coupled with the febrile condition, brought her into a very low state. I was asked to see her; and, on examination, found a mass, of the size of a small orange, firmly adherent to the uterine walls. The os uteri being open, I readily removed it with the finger. The bleeding ceased; but she never rallied, dying in a typhoid state a few days later.

CASE IX. Secondary Hæmorrhage, five days after Delivery: Portion of Placenta retained: Removal of it: Recovery.—Mrs. B., multipara, about five days after a natural delivery, had severe loss of blood from the uterus. But before this there were irritative fever, and pains in the lower abdomen. I found cellulitis and a bulky uterus; and, through the open os, discovered a mass of placenta, about the size of an orange, attached within. This was peeled off with some little difficulty, owing to its firm attachment and to the cellulitis. After the removal, she had no further loss of blood. This was fortunate, as she had already become extremely anæmic, and reduced by feverishness. She made a very slow recovery; with some subsequent suppuration, I believe.

CASE X. Secondary Hæmorrhage, a week after Delivery: Portion of Placenta retained: Removal: Recovery.—Mrs. —, multipara, had been delivered naturally. Some oozing of blood had occurred, more than normal, after a few days. But shortly this became so severe, that she was very reduced in strength; besides this, there was much fever. The discharges were offensive. She looked pale and haggard. I found, through the patent os uteri, a portion of placenta still attached to the uterus. This was not difficult to remove; and she gradually recovered.

CASE XI. Secondary Hæmorrhage, six days after Delivery: Portion of Placenta retained: Removal: Recovery.—Mrs. —, multipara, had a natural labour, excepting that the discharges became offensive. Six days afterwards, she was seized with a violent uterine hæmorrhage; which continuing, a second medical man was sent for, who said that there was nothing particular. I was then asked to see her. I advised his passing a sponge-tent, in advance of my visit, as he told me the os was closed. This he did. I found the uterus retroverted; the tent had well opened the os, and through it I detected a mass of adherent placenta, of the size of a Tangerine orange. This I peeled off. The hæmorrhage ceased, and she made a good recovery.

CASE XII. *Secondary Hæmorrhage after Delivery at Full Term: Portion of Placenta retained: Removal: Death from Low Fever.*—Mrs. —, multipara, a delicate woman, was delivered naturally. Everything proceeded well till a week after delivery, when a most violent hæmorrhage occurred, and I was called to see her. The bleeding had stopped, but she was extremely blanched, and scarcely able to be touched. It was with great difficulty I could examine her, without her falling into a condition of collapse. I, however, found the os uteri closed, but the uterus was rather large. No offensive discharge had been present. There was no loss going on, and I recommended her to be left for a time till she had rallied, but that, if bleeding recurred, the os was to be plugged with a sponge tent, and exploration made. There was no bleeding nor offensive discharge afterwards, but now and then light oozing of watery blood. However, about five days after the flooding, slight pains came on, and I found the os patent, and a mass of placenta within. I abstracted this without difficulty by the assistance of an ovum-forceps, and all oozing ceased. However, slight feverishness came, and she gradually fell into a "typhoid" condition, and died about three weeks after delivery. The pulse was 120 all the time through, but there was no increase of temperature till the last week.

CASE XIII. *Secondary Hæmorrhage after Abortion: Retention of Portion of Placenta: Removal: Recovery.*—Mrs. R., multipara, had apparently expelled a four months' ovum. All went on well for five or six days, when a large loss of blood occurred. As it continued, I was asked to see her. I found the os uteri patent, but the uterus retroflexed. I passed my finger within, pushing up at same time the fundus with another in the vagina. I detected a mass about the size of Tangerine orange. With a little management it was removed, and she made a good recovery.

This case is a sample of a large number, such as doubtless occur in every large private and consultant practice, the condition of flexion being a potent factor in the retention. In contrast to the foregoing cases, it may be useful to note two cases of secondary hæmorrhage, one of which was fatal, without retention of a portion of placenta.

CASE XIV. *Secondary Hæmorrhage a Week after Delivery: Retroflexion of Uterus: Death from Loss of Blood.*—Mrs. —, an Irishwoman, aged about 30, healthy, had a natural labour at full term. There had been some more than usual loss of blood a few days afterwards; but at about a week later a very severe attack completely blanched her, and rendered her unable to move in bed. On examining, I found a uterus by no means bulky for the time, but deeply retroflexed, packed tight into Douglas's pouch. I pushed it up; it went up with a jerk, without my using much force. It remained up, and the bleeding entirely ceased. But she never rallied, and, lingering on for a few days, died from the anæmia.

CASE XV. *Secondary Hæmorrhage a Week after Labour, from Mental Excitement: Recovery.*—This patient had been delivered naturally. On the tenth day after she was suddenly exposed to mental excitement. She had been sitting up some days. Suddenly a severe uterine hæmorrhage came on, and I was called to her. It then had ceased, except slight oozing. I found the uterus rather bulky and spongy; but no further trouble arose. She was kept horizontal and quiet some time afterwards.

Of course, it is possible that in these last two cases there may have been some portion of placenta remaining, but there was no evidence of it. In the first I think it was scarcely possible, with so small an uterus.

NOTE ON THE ANTISEPTIC TREATMENT OF PHTHISIS.

By J. BURNEY YEO, M.D.

SINCE the delivery of my lecture, which was published in the JOURNAL of July 1st, my attention has been directed to some very recent reports, published in Germany, bearing on the antiseptic treatment of phthisis. Dr. Fränkel (*Centralblatt*, June 10th) has been making experimental injections of antiseptics into the pulmonary tissues of animals—such as carbolic acid, boracic acid, iodoform, tartrate of alumina, etc.

These injections were not attended with any constitutional disturbance; and the *post mortem* examinations showed the existence of extravasations and simple inflammatory changes in the lungs; and, in later stages, the formation of cicatricial tissue. On the strength of these results, he proposes that similar injections should be made into the foci of disease and their neighbourhood, with the view of modifying the morbid process, and of limiting its extension by cicatricial barriers.

In a patient with fetid expectoration, he administered six injections, each of fifty minims of a five per cent. solution of carbolic acid. It excited no reaction and no cough, but had no effect on the expectoration. I mention these experiments without, for the present, offering any opinion as to their value, merely to show the activity with which this subject is being investigated in Germany.

It will also, doubtless, interest the readers of the BRITISH MEDICAL JOURNAL to hear that Professor Oertel of Munich, in a volume he has just published on the *Therapeutics of the Organs of Respiration*, devotes about 350 pages to the subject of "Inhalations"; in which he speaks highly of the use of a five per cent. solution of benzoate of soda, atomised—i.e., inhaled in the form of fine spray. He has observed a very cleansing effect to follow its use in the ulcerative lesions of laryngeal phthisis; and he infers, from this, that a similar favourable action may be exercised on the lesions of more deeply seated parts: on the bronchial ulcerations and softenings, and on the walls of cavities. The expectoration is facilitated—increased at first, and subsequently diminished. Mycotic processes and decomposition of the secretions are arrested; and the absorption of secretions is thus favourably modified, and is less likely to be pyrogenic or specifically infective. He also points to the importance of thorough cleansing of the mouth and fauces; the appetite is thereby improved, and the stomach is spared the infliction of decomposing oval secretions. The swallowing of a certain amount of the solution he considers of great value, as he believes it operates in diminishing the fever. He duly discredits the marvellous results claimed for this plan of treatment by Rokitsansky; but sees no reason to deny the correctness of Schüller's impressions, as to the results of his experiments on animals, performed under conditions very different from those obtaining in the subjects of advanced phthisis. He, moreover, expresses a confident belief that, by this and other antiseptic modes of inhalation, very good effects will be attainable.

A FURTHER SERIES OF CASES OF IMMEDIATE CURE OF INGUINAL HERNIA.

By W. DUNNETT SPANTON, F.R.C.S. Ed.,

Surgeon to the North Staffordshire Infirmary.

SINCE reading a paper on the subject of the cure of hernia, in 1879, I have a record of nine additional cases, all of which have been followed by a good result. And I believe the reason why the number is not larger, is to be found in the general prejudice which exists in the profession against all operations of this class. The patients and their friends know little or nothing about such matters, and they have to be taught. It would be interesting to know how many members of the Association have any personal knowledge of such operations. We find them all classed in text-books under one category for reprobation, and are led to infer that all alike are necessarily unsafe or inefficacious. If the operation were practised on a large scale, and a fair trial generally given to it by those accustomed to operative surgery, less weight would probably be attached to the opinions of those who profess to teach others on a subject of which they have themselves no personal practical experience.

The following is a record of the more recent cases.

CASE I. *Right Congenital Inguinal Hernia.*—Elijah M., aged 5, living at Newcastle, was admitted into the North Staffordshire Infirmary, under my care, on January 3rd, 1880. He was a healthy boy, who, on admission, had a right congenital hernia, which had been observed from infancy. It had gradually increased in size, and was, when down, about the size of a large hen's egg, and readily reducible. The inguinal ring easily admitted a finger. On January 8th, under chloroform, the operation was performed in the usual manner, the screw being left in position. Some chloroform-sickness ensued.—January 9th. He had retention of urine, necessitating the use of the catheter. In every other respect, he was going on well. Temperature 99° Fahr. On January 10th, the patient did not complain of any pain. The parts were quite quiet. The catheter was still used. Temperature 99.2°.—January 12th. The discharge from the wound was rather free, and there was some surrounding irritation. Temperature 99.2°. On January 15th, he had some oedema of the scrotum and penis, and the parts around the wound were considerably inflamed. The instrument was taken out. Temperature 99.4°. On January 16th, the swelling was somewhat increased, and the scrotum was tense. There was a free purulent discharge from the track of the instrument, along which there was a hard cord to be felt. There was no impulse at the ex-

ternal ring. Temperature 99.4°. An evaporating lotion was applied. On the 17th, the swelling and discharge continued. The urine was still drawn by the catheter. Poulitices were applied. Temperature 102.4° (the highest in the course of the case).—January 20th. The swelling was subsiding: pain was insignificant. There was no retention. His general condition was good. Temperature 99.4°. On January 27th, a free discharge of pus had caused the swelling to subside. Temperature normal. On February 3rd, the swelling was nearly gone, and the discharge had quite ceased. There was no sign of any return of the rupture.—February 23rd. The wound had perfectly healed. There was a firm band of adhesion along the whole line of the inguinal canal. No impulse could be felt on coughing or crying. The right testicle was slightly enlarged. He was allowed to get up, wearing a pad. On March 10th, he left the Infirmary quite well, with no tendency to any return of the hernia.

CASE II. *Right Oblique Inguinal Hernia.*—Frederick T., aged 7, living at Hartshill, was admitted into the North Staffordshire Infirmary on April 3rd, 1880. The patient, a healthy little fellow, had shown no sign of hernia until a fortnight before admission, when it was first observed. No cause could be assigned for it; there had been no strangulation. The hernia was scrotal, and the ring large enough easily to admit the forefinger. The testis had descended. On April 10th (after the usual preliminary treatment), under chloroform, the screw instrument was introduced, no difficulty being encountered. The scrotal wound was brought together by a suture, and the whole secured with pads of lint and bandage. After operation he was rather restless, and some small doses of an opiate were administered.—April 11th. He was going on well: less pain; no sickness nor retention. He took food freely. Temperature 100°, morning; 99° evening. On April 12th, he seemed cheerful, and apparently had no pain. The scrotum was rather red and inflamed; and slightly oedematous. The wounds were dressed; they looked quite healthy. Temperature 98.5° morning, 99.2° evening.—April 14th. The parts were less inflamed. The instrument remained in good position, and he did not appear to have the least pain. The bowels were moved. Temperature 98.8°.—April 18th (8 days). The instrument was removed, no chloroform being required. There was some, but not much discharge, and the surrounding parts looked healthy and quiet. He was ordered full diet. Temperature normal. On April 21st, he seemed quite well and happy. The wounds were rapidly closing; there was very slight discharge.—April 23rd. The parts were quite healed. A thick band could be felt along the track of the instrument, and no impulse was perceived on coughing. On May 8th, he was allowed to get up, wearing a pad. There was no tendency to impulse, nor any giving way of the firm occluding plug. On May 10th, he returned home, quite well.

CASE III. *Right Oblique Inguinal Hernia, treated with Chromic Catgut Ligature.*—Mary B., aged 26, married, residing at Boother, was admitted into the Infirmary under the care of Mr. Folker, February 19th, 1881. The patient, usually healthy and strong, noticed a right inguinal rupture five years ago, at first about the size of a nut. She could not assign any cause for it.—On admission, there was a rupture which came down to the size of a large duck's egg, and was easily reducible. It was often painful, and always a source of great discomfort. On February 27th, the operation was performed under the influence of ether, and carbolic acid spray. My colleague, Mr. Folker, kindly assented to my suggestion in this case to use a ligature of chromic catgut, which had been carefully prepared according to the plan directed by Mr. Lister. An incision was made in the right labium, and the subcutaneous tissues separated as far as was practicable, so as to invaginate as much as possible into the inguinal canal subcutaneously. A screw having a large eye at its point was then introduced in the same manner in which the ordinary screw is employed, and made to transfix both pillars of the hernial canal at three points, at the same time passing through the intervening invaginated tissues. The point of the screw, emerging at the labial wound, was threaded with the catgut and then slowly withdrawn, bringing the ligature with it. This being detached from the needle, was allowed to remain *in situ*, each end being secured to a glass rod about three inches in length, so as to maintain it on the stretch, and by that means secure the apposition of the pillars of the canal. The whole was covered with protective and carbolic gauze and bandage. Evening temperature 100° Fahr. (highest). On February 28th, she complained of pain, and had been sick. An opiate was given, and the catheter had to be used. Temperature 99°. She progressed favourably, without any untoward symptom, and on March 5th the dressings were removed. Very slight irritation was seen, and the ligature remained firm. On March 7th, the wound was dressed again, in consequence of the patient having complained of considerable pain. There was no inflammation: the

ligature was firm. Temperature 99°. She had pain, chiefly in the groin and down the thigh.—March 14th. The glass rod was removed, and the ligature left in. Temperature 98.5°. On March 21st (three weeks after operation), the ligature showing no sign of absorption, and being loose, was withdrawn: it was found to be almost unchanged, being hard and wiry, and the discharge was but slight. Temperature normal.—April 2nd. The wound had quite healed. The pad was still kept applied. On the 6th, the parts in the line of the hernial canal felt hard and firm; no impulse could be felt on coughing. She was allowed to get up, wearing a pad. On April 9th, she left the hospital quite well, no sign of any hernia existing. This was the first instance in which the chromic catgut was used; and I shall have some further remarks to make concerning it afterwards, in considering the relative merits of the screw and the ligature.

CASE IV. *Left Encysted Hernia, with Hydrocele of the Cord.*—Augustus B., aged 13, a warehouse-boy living at Shelton, was admitted under my care on January 15th, 1881. He was a somewhat sickly looking boy, not very strong, but free from positive disease; he had never suffered from any illness. A swelling had been observed about the left side of the scrotum, at its upper part, along the line of the cord, for a long time; but was not noticed at birth, and its actual duration was uncertain. On admission, the left side of the scrotum was of the size of a large hen's egg, somewhat constricted about the centre, and the lower portion evidently contained fluid. A distinct impulse was felt on coughing; and this, the upper part, disappeared with firm pressure—the hydrocele remaining. The testis was felt quite at the lowest part of the scrotum, and distinct from the tumour above. There was clearly an encysted hydrocele of the cord, with infantile hernia, the sac of the tunica vaginalis being apparently unimplicated. (See sketch.) There being some difference of opinion expressed as to



Diagram representing Encysted Hernia complicated with Hydrocele of the Cord.

the precise nature of the affection, we placed the patient on good diet, iodide of iron, and cod-liver oil, until February 5th, when I tapped the hydrocele, with the result of rendering the hernia more distinct, the testis remaining separated from it by the contracted funicular process. The nature of the case being now apparent, on February 16th, under chloroform, the operation was performed in a similar manner to that in the previous case. But in this one I used a ligature of tendon from the long extensor of the deer, given to me by my friend Mr. Garner: the tendon had been prepared by maceration in a watery solution of carbolic acid, then rolled and dried, and afterwards kept in carbolic oil. The scrotal wound was closed also with soft tendon sutures. The whole was carried out under carbolic spray, and Lister's dressings completed the operation. Temperature same evening 98.6°. On February 14th, he had been very sick since the operation, but made little complaint of pain. Temperature 99°.—February 21st. He had progressed quite favourably, the temperature never having risen above 99°, and he had no pain whatever. The sickness, which seemed chloroformic, soon ceased. His general health was now good. The parts were dressed to-day under carbolic spray. There was no discharge, no inflammatory blush; the ligature showed no signs of absorption, but was white and swollen up in the wounds.—February 28th. The parts were again dressed. There was no discharge beyond slight serous moisture at each ligature wound. Each end of the ligature was

cut through so as to remove the glass rod, leaving the tendon *in situ*. As far as it could be seen, it appeared to have undergone very little change. Temperature 99.2°. On March 8th, the dressings were removed. Only a few drops of discharge escaped from each opening. The upper one was now closed by granulations, and no trace of the ligature could be discerned; the lower end of the ligature with the knot was adherent to the wound, but the knot remained exactly the same. This was now cut away. The scrotum was of normal size, and the inguinal canal seemed firmly closed. No impulse could be felt on coughing.—March 27th. The wounds were firmly healed; the parts around quite natural. There was no sign of any tendency to return of the rupture. He was allowed to get up. On April 7th, he returned home quite sound.

CASE V. *Right Congenital Inguinal Hernia*.—Albert B., aged 11, living at Hartshill, was admitted under my care on April 2nd, 1881. He was not a strong boy, but free from positive disease. There was a tubercular family history. The hernia had been observed, more or less, from early childhood, and had been partially controlled by the use of a truss. This had been worn for a long time, but the hernia showed no sign of disappearing. His friends were anxious to obtain admission for the boy into a public orphan school, and secured a presentation for that purpose, but he was at once rejected on account of the rupture. In consequence of this, his friends desired to have a cure effected if possible so as to render him eligible for admission to the school. On April 9th, the usual preliminary preparation having been made, the operation was performed in a similar manner to that described in the last two cases, but without spray, and using ordinary carbolic catgut for ligature. He was very sick afterwards (from chloroform). Evening temperature 99°.—April 10th. He passed a good night, and said he was free from pain. The sickness ceased. There was no retention of urine. Temperature 99.6°.—April 14th. The dressings were removed. The discharge was very slight. The ligature remained in position, and there was very little surrounding irritation. Temperature, morning, 98.2°; evening, 98.6°.—April 19th. The ligature was cut away, and the glass rod removed. The discharge was slight, purulent. Temperature, morning, 98.2°; evening, 98.6°. On May 2nd, the parts were dressed again; they were still discharging rather freely. The wounds showed very slow tendency to heal. Temperature 99.4°. He was ordered some syrup of phosphate of iron and lime. On June 1st, the parts were quite healed. He was allowed to get up, wearing a pad. The discharge had been rather profuse, and healing had gone on very slowly, due probably to his constitutional tendency, but also, I think, to the catgut having acted in some measure as a seton, although it had become absorbed eventually. No impulse could be felt, and the line of the hernial canal appeared tolerably firm. On June 6th, continuing to improve, he returned home.

CASE VI. *Left Inguinal Oblique Scrotal Hernia*.—William H., aged 19, a jugmaker, living at Florence, was admitted under my care April 6th, 1881. A pale, sickly-looking, young man, he had strained himself in lifting a weight about twelve months before. A very slight rupture was perceived at first, but it steadily increased, and, on admission, was of the size of a closed fist. It was easily reducible, and the ring very patent. He had worn a truss without any benefit. On April 16th, after usual preparation, ether was administered, and a screw instrument introduced as in former cases, and left in. Carbolic spray and Lister's dressings, with all antiseptic precautions, were used. There was no sickness afterwards. Temperature, evening, 99.6°.—April 18th. With the exception of some sickness, he had progressed well, but complained of much pain. The wounds were dressed to-day; they were looking quiet, with very slight discharge. Temperature 100°.—April 19th. The pain continuing severe, an enema was administered, which afforded some relief. Temperature 100°.—April 21st. He still complained of discomfort. He had a rather troublesome cough, and was ordered to take some linctus and castor-oil. Temperature 100.4°.—April 22nd. His bowels had been relieved by oil, with relief to the pain. The dressings were renewed. There was very little irritation or discharge. Temperature, morning, 99°; evening, 100.2°.—April 25th. He was going on well. The instrument was removed. The discharge was slight. The surrounding parts were quiet. Temperature 100°.—May 2nd. The Listerian dressings were relinquished. The wounds had healed, except superficial granulations; they were dressed with boric lint. Temperature normal.—May 14th. He was allowed to get up; and, on the 16th, he returned home quite sound, there being no impulse on coughing, and a firm band occupying the site of the hernial canal. This was one of the firmest and best results I have yet met with, although it will be observed that there was less active irritation than in many of the others.

CASE VII. *Left Congenital Inguinal Hernia*.—John E. B., aged

five months, living at Newcastle, was admitted under my care June 24th, 1881. Since the child's birth, a small rupture was noticed on the left side, situated at first near the external abdominal ring, but gradually reaching lower down, and more rapidly so of late. On admission, it was about the size of a pigeon's egg. Always a cross child, he has been much more so lately; and, according to his mother, "never lay awake five minutes good" since his birth. This being the case, and the absurdity of a truss at such an age being apparent, the parents wished to have an operation performed, as it had been noticed that the child invariably cried when the rupture was down. On June 27th, under chloroform, the usual operation was performed with a screw of the smallest size. No difficulty was experienced. A ball was fixed on the point, and a pad of gauze strapped across the handle of the instrument, to secure it, no bandage being applied. No sickness occurred afterwards, but the child continued very restless.—June 28th. The parts were slightly inflamed around the wound; there was very slight swelling. Oil was frequently applied as a dressing. The bowels were moved. Temperature 98.5°.—June 30th. During the night and early morning, the child had some slight convulsions, which soon passed off. There was some swelling and redness about the scrotum. The instrument was not moved. Some chloral hydrate, with bromide of potassium, was ordered to be taken occasionally. Temperature 100.8°. On July 2nd, under chloroform, the instrument was removed. A thick cord could be felt along the line of the hernial canal, as if the parts were well agglutinated. A light truss, with the pad well oiled, was kept applied, as no dressings could be properly used. On July 8th, the sutures in the scrotal wound were removed. This wound, which was necessarily disproportionately large in so young a patient, was healing but slowly. Even when he cried, no impulse could now be felt.—July 9th. Seemed well and free from pain, lying awake "good" longer than he had ever done since he was born. No impulse could be felt when the child cried or struggled, and the line of the inguinal canal remained hard and firm. He left the infirmary; the mother being highly gratified with the happier condition of the little patient.

CASE VIII. *Large Double Congenital Scrotal Hernia*.—Henry M., aged three years and a half, living at Bucknall, was brought to me in July 1881. He was a fairly developed child, in good health. He had bronchitis when very young, and occasionally had had a cough since. The rupture was noticed on both sides at birth; but during the last eighteen months it had greatly increased, causing much discomfort and pain. His mother said that, for a long time, "it had been grievous to see the child; after running about a little while, he would come in quite exhausted, lie down in the cradle, and cry himself to sleep." Both hernie were of very large size, the inguinal ring on either side admitting two fingers. Several trusses have been tried, but were quite ineffectual to restrain the hernia, even for a short time. He had a tight phymosis, with long prepuce. The parents were very anxious to have something done; and, unpromising as the case looked, I deemed it right to operate, taking one side only at a time, lest the pressure on the urethra might give rise to troublesome retention. Accordingly, after a dose of castor-oil, on July 6th, I operated with the screw-instrument, and at the same time performed circumcision, Mr. Russell administering chloroform. The screw was allowed to remain, and the whole covered with lint dipped in eucalyptus-oil (one part to four of olive-oil); and a pad of eucalyptus-gauze and bandage completed the dressings. In the evening, the child, being rather restless, had some small doses of morphia. Temperature 98.6°.—July 7th. He had passed a good night; no sickness. He seemed to have no pain, or very little. There was slight oedema of the scrotum; the surrounding parts looked quiet. Temperature 98.5°.—July 8th. Going on well. The wound of the scrotum looked quiet. Temperature 98.5°. He took food freely. Eucalyptus-oil was applied each day.—July 9th. He slept well, but was more restless to-day. The swelling of the scrotum was gone. There was slight sanguineo-purulent discharge from the lower wound; no blush. The bowels acted twice naturally. He passed urine freely. Temperature, evening, 101°.—July 10th. He had a good night, and was evidently free from pain. There was slight discharge. The India-rubber ball was rather buried in the scrotal wound. He took food well. Temperature 98.6°.—July 13th. His progress was quite favourable. Temperature normal each day. Under chloroform, the screw was removed easily. The wounds were very quiet, with slight discharge; no swelling. There was a firm cord along the line of the canal. His general health was quite good.—July 20th. He was quite well; the wounds were healed, and the parts quite firm.

CASE IX. *Double Scrotal Congenital Hernia*.—This operation was performed on the foregoing patient, for the left hernia, on July 21st, 1881, under similar circumstances to those described in the last case. The result was equally satisfactory so far. There was already a firm

hard cord along the line of the inguinal canal; and the patient's general health seemed none the worse for the double operation.

REMARKS.—This gives a total of thirty-four cases operated on by this method, and of these thirty are known to be more or less completely cured. Many of them I have frequent opportunities of observing, and most of the older patients follow some laborious occupation. The boy J. B. (Case XII of first series), who was operated on exactly three years ago, continues to work on a farm, and needs no truss; and the second case I had—a large scrotal hernia, in which no truss had been of use—operated upon in October 1878, remains as firm as ever. In three of the recent cases a ligature of some kind was used, and in two of these the result was satisfactory. The chronic gut ligature, however, did not behave as such a ligature ought to have done, but rather caused additional irritation, and acted almost like a seton. It is worth noting that when a ligature was used, the local irritation was greater than in most of the cases in which the screw was retained. There can be little doubt of the greater safety of an operation under Listerian measures, and in these instances the danger is reduced to a very small one indeed. If with such a minimum risk we can cure our patient of a troublesome and probably dangerous complaint, it seems to me the duty of the surgeon to advise such a course. Patients and their friends only too willingly rest satisfied with the advice which is usually given to "procure a truss." A friend of mine lately sent a patient of his for advice on this matter. The first surgeon he saw in London advised an operation for the radical cure; a second advised the use of a truss "so long as he was in a country where good trusses can be got;" and the third recommended the use of a truss without any qualification. Here are three surgeons in the highest rank of the profession all differing in opinion as to the course to be pursued in an ordinary case of congenital hernia. Suppose for a moment the patient breaks or loses his truss, and he happens to be in a country where good trusses could not be procured, what was to become of his hernia then? He has on the one hand the prospect of wearing an irksome instrument for life, inasmuch as "every time the hernia comes down, any good that may have been derived is necessarily done away with, and the treatment has to begin, as it were, anew" (Erichsen). On the other hand, by an operation while young, the patient can be so effectually cured of his defect, as to be independent of any such assistance. Again, how many trusses do we meet with among the working class which are really efficient? It is by no means a rare event to find an ill fitting, half worn out truss rubbing on a strangulated rupture when brought into hospital, and in these cases a tolerably certain prognosis may be made. For those who can afford the luxury of a well-fitted and frequently renewed truss, the argument against their use loses some of its force no doubt; but this is not so with respect to the majority of those for whom they are required—who have laborious work to do, and in whom an efficient and speedy cure is the more needed.

The most suitable cases for cure are, I think, those occurring in the young. Probably a larger proportion of cases date from early life than is usually acknowledged; and if all those occurring in childhood were cured, surgeons should in this way be enabled to render sound some thousands every year, the majority of whom now become life-long sufferers, with the permanent appendage of a truss.

If a child have hare lip, or talipes, or nævus, we do not wait until he is an adult, nor do we attempt to cure any of these by compression or artificial apparatus, but we cure them forthwith. Although death has occurred after each one of them, I have never heard this circumstance put forward as an argument against such operations. Why should not the same reasoning be applied with regard to hernia in the young? We find as a rule that young patients bear such operations of expediency better than adults; and in the baby five months old, whose case I have referred to, no constitutional disturbance worth recording was observed. This little patient is now quite well, and there is not the slightest sign of the hernia even when crying, although no truss or any kind of support has been worn since the first fortnight after the operation. What would the opponents of operative procedures do with such a case? A truss was of no use; the child was continually crying, and the rupture became every day larger. Now the child is as happy as most children of his age, and by a fortnight's treatment is made sound for life.

In such cases, there ought no longer to be any hesitation on the part of surgeons generally as to the choice of the course they will pursue.

P.S.—Since the foregoing paper was written, the number of cases has reached fifty-one, all of whom have recovered. The details of the

Summary of Cases operated upon for Immediate Cure of Hernia, showing Ages and Result.

Date.	Name.	Age.	Hernia.	Result.	Remarks.
Dec. 5, 1877	Wm. H.	18	Oblique inguinal	Cured	Slight return after 6 months; but, with use of truss, since quite cured.
Oct. 7, 1878	Thos. B.	4	Congenital oblique inguinal	Cured	Very large. Truss was of no avail. Remains perfectly well now.
Nov. 9, 1878	Alfred S.	15	Right oblique inguinal	Cured	No support required afterwards.
Jan. 1, 1879	Anne B.	9	Left oblique inguinal	Cured	Remains sound.
Jan. 11, 1879	Samuel T.	11	Right oblique inguinal	Cured	Hydrocele of cord found after operation; since disappeared. Remains well.
May 10, 1879	Wm. B.	8	Right congenital inguinal	Cured	Remains well.
June 7, 1879	Thos. K.	26	Right oblique inguinal	Cured	Had scrofulous disease of testis. Keeps quite sound.
June 21, 1879	Geo. W.	8	Right oblique inguinal	Cured	Afterwards tendency to return behind the cord; but has never increased.
June 28, 1879	L. R.	3	Right congenital inguinal	Cured	Closure very firm.
July 19, 1879	Wm. J. T.	9	Right inguinal oblique	Cured	No impulse can be felt.
July 22, 1879	Wm. J. D.	13	Left oblique inguinal	Cured	No impulse on coughing.
July 26, 1879	John B.	11	Right oblique inguinal	Cured	Works now on a farm.
July 31, 1879	Eliz. W.	20	Right oblique inguinal	Cured	
Oct. 7, 1879	Mrs. S.	127	Right oblique inguinal	Relieved	Twelve months after, a tendency to return, but never to same extent as before operation.
Aug. 23, 1879 } Oct. 10, 1879 }	Fred. J.	4	Right congenital inguinal	Cured	Operated on twice; the first failing from insufficient hold of the pillars of canal. Second operation effectual.
Aug. 30, 1879	Thos. P.	20	Right oblique inguinal	Cured	No support needed afterwards.
Sept. 13, 1879	Albert C.	6	Right congenital inguinal	Cured	No impulse on coughing.
Oct. 11, 1879	Wm. C.	3	Right congenital inguinal	Cured	Weakly child. Considerable orchitis.
Nov. 17, 1879	Mary F.	27	Right oblique inguinal	Cured	Married since. Keeps quite sound.
Nov. 22, 1879	Fred. D.	6	Right oblique inguinal	Cured	
Nov. 15, 1879	John C.	7	Left congenital inguinal	Cured	
Jan. 10, 1880	Eliz. M.	8	Right oblique inguinal	Relieved	Hernia caused by application of Savre's spinal jacket. Bubonocoele left.
Jan. 10, 1880	Daniel A.	11	Right oblique inguinal	Incomplete closure	Result occasioned by too profuse summation. Better, however, since operation.
Jan. 12, 1880	Chas. E.	8	Left congenital inguinal	Cured	"Canal occupied by firm plug."
Jan. 1880	Boy		Congenital	Cured	Similar to last case.
Jan. 8, 1880	Eliz. M.	8	Right congenital inguinal	Cured	Free suppurative along canal. Firm cord resulted.
April 10, 1880	Fred. T.	8	Right oblique inguinal	Cured	Whole canal firmly closed.
Feb. 27, 1881	Mary B.	26	Right oblique inguinal	Cured	Chronic-catgut ligature used, with Lister's spray.
Feb. 16, 1881	Augustus	13	Left encysted hernia	Cured	
April 9, 1881	Albert B.	11	Right congenital inguinal	Cured	
April 16, 1881	Wm. H.	19	Left congenital inguinal	Cured	
June 27, 1881	John E. B.	5 ms.	Left congenital inguinal	Cured	
July 6, 1881	Henry M.	3½	Left congenital inguinal	Cured	Left side of above case operated on with screw.
July 21, 1881	Same patient	3½	Ditto	Cured	Left side of above case operated on with screw.

UNIVERSITY OF BRUSSELS.—Of seventeen students who recently presented themselves for the M.D. degree, Brussels, nine received their diplomas; and Mr. Marmaduke James Hart, M.R.C.S. England, L.S.A. London, came out first with "distinction" in the third Doctorate.

AMPUTATION IN SENILE GANGRENE.

By NELSON C. DOBSON, F.R.C.S. Eng.,
Surgeon to the Bristol General Hospital.

WITH reference to amputation in senile gangrene, nearly all authorities agree that it is not wise to undertake the operation; it therefore requires some courage and some convictions to justify any surgeon in advocating a course which is in opposition to generally received opinion. The case which I shall presently narrate, and in which I amputated with most gratifying success, with other cases I have seen, must afford my justification for the line of treatment I consider advisable under certain circumstances in cases of senile gangrene. It is true that, from time to time, surgeons have recommended amputation, and notably the late Mr. James of Exeter; but, even when they have done so, it does not appear that any very precise directions have been given for the guidance of those who may wish to follow such recommendation. For my own part, I should not for one moment wish it to be understood that an indiscriminate amputation is to be adopted in all cases of senile gangrene; that, given any case of spontaneous gangrene occurring in old people, therefore or necessarily the treatment is to be amputation. On the contrary, I believe the greatest discrimination must be exercised in selecting the proper case for amputation. I will presently endeavour to state under what circumstances I consider amputation in senile gangrene to be necessary; but I would here remark that I believe the antiseptic method of treating amputations in these old people is just sufficient, in consequence of preventing suppuration and a prolonged call upon their enfeebled nutritive powers, to turn the scale in favour of amputation. Two remarkable instances of this have recently come under my own observation. The history of one of these cases is as follows.

W. G., aged 62, a farm-labourer, always living in the country, was admitted into the Bristol General Hospital under my care on November 19th, 1881. Though not strictly aged, yet he was old—old, that is, in his appearance and the signs of degeneration, especially of his arterial system, as might be seen and felt in his superficial arteries. His heart was free from valvular disease, but feeble in action. He was thin and somewhat shrunken, but had always been temperate; and his kidneys were free from disease. He had suffered a good deal from exposure during the previous severe winter. About three weeks before admission, he had noticed a slight dark spot on the fourth toe of the right foot; soon his little toe of the same foot became similarly affected. Two toes of his left foot also showed signs of failing circulation in them. On admission, the two smaller toes of the right foot were distinctly gangrenous, with no attempt at demarcation. The foot also was swollen and red. The toes themselves were black, dry, and shrivelled. He suffered considerable pain. Both feet and legs were enveloped in cotton-wool, and elevated on pillows. He was put on a generous diet, with four ounces of brandy; iron and quinine, with cod-liver oil; and opium to relieve the pain. The pulse was 80, regular. The radial arteries were atheromatous and tortuous. No pulsation could be felt in either anterior or posterior tibial, nor in the popliteal artery, though pulsation could be traced in the femoral to the bottom of Hunter's canal.

November 22nd. A line was beginning to form on the fourth toe, but also a fresh one on the third toe. The darkness of the left foot had almost disappeared.

December 9th. The patient had severe diarrhoea, with febrile disturbance, a dry tongue, and a temperature varying from 103° in the evening to 99° in the morning. Pulse from 112 to 96, and irregular. The gangrene had spread somewhat up the outer side of the foot. The parts were dressed with iodoform and boracic lint.

December 20th. The toes were distinctly separated, and the bone was just nipped through. The gangrene seemed to have halted, as it had done once or twice before, but soon spread again with renewed activity; and from this point it spread vigorously, soon involving the outer side of the foot and dorsum, going up the leg, and accompanied by redness, oedema, and marked inflammatory conditions locally; whilst the smell was most offensive. This was controlled, though not entirely subdued, by iodoform. Things went on from bad to worse until, on January 9th, when I had not seen him for two or three days, I found the gangrene had extended to three inches above his ankle. He was extremely feeble, quite unconscious, with a low muttering delirium. He could not be roused, and apparently he was moribund.

However, as he could swallow, I ordered his brandy to be increased, and gave him sulphuric ether. I discussed the question of amputation; but it seemed so hopeless that I did not do it. Next day, he was not worse; and, feeling sure that he was being poisoned by the offensive products of his own gangrenous limb, and that he could not live more than a few hours if left to himself, I determined to give him what appeared to be the forlorn hope of amputation. Ether was administered as an anæsthetic, and I removed his thigh by the circular method at the lower third, with antiseptic precautions. The femoral artery was patent at the point of section, and was secured by catgut ligature. He had twelve ounces of brandy in the next twelve hours. In the evening, his pulse was 75, and his temperature 96.5°. Next day (January 11th), his temperature had fallen as low as 95°, but at 12 A.M. it registered 96°. I need not detail his case further. On the 16th, six days after the operation, all the stitches were removed. The stump had healed; but there was a small dark patch, as large as the little finger-nail, which I believe to have been caused by the thinness of flap at this point. This had existed since the operation. However, it remained aseptic throughout, and gradually separated without extending. This fact is worth mentioning, as showing the behaviour of a small slough under antiseptic precautions. He is now practically well, though I did not allow him to get up before the 27th, seventeen days after the operation. It was singular to notice how quickly (after his recovery from the shock of the operation) his delirium and other symptoms of septic absorption left him. His delirium disappeared on the second day, although for days before he had been drowsy, delirious, and even comatose, at times.

Such is the history of the case. I feel that his life was literally saved by the operation; he could not possibly have lived for twenty-four hours unless something were done for him by amputation. He was dying of septic absorption—poisoned by his own decomposing tissues. I confess I looked upon the operation as a somewhat forlorn one; but, taking the view I did of his symptoms, and that he must inevitably die if left to himself, I determined to amputate, feeling sure that gangrene would not recur in the stump, as I could feel the femoral artery patent at the point of operation; and that, if he survived the shock of the operation, he might recover. But there was just the point, that he might have already received such a dose of septic material that he might not survive this. There can be no question that, even when the circulation of the blood in a gangrenous limb is completely stopped, and when clots have already formed in both arteries and veins, the sphacelated part may act as a source of infection. Kussmaul's experiments show that absorption of substances into a gangrenous part takes place. He injected iodide of potassium under the skin of a gangrenous limb, and found evidence of it in the urine four hours afterwards. Charcot, than whom none can have had a larger experience of diseases of the aged, says: "It cannot be doubted that putrid substances from sphacelated parts may themselves penetrate into the circulating current." He has frequently observed this in cases of spontaneous gangrene, the result of atheromatous obliteration of the chief arterial trunks.

On one other occasion, I removed the thigh at the lower third in a patient aged 68, for spreading senile gangrene. He lived a month, but broke down from bed-sores at the end of that time, with signs of feeble reparative processes in the flaps; and eventually died of pyæmia. In this case, the femoral was blocked at the seat of ligature. I have now no doubt in my own mind that, had I treated this patient antiseptically, and taken all the precautions that I did in my last case, I should have pulled him through also.

There is now in the hospital a remarkable case, which my colleague Mr. Lansdown has kindly permitted me to mention, in which he amputated just below the knee in an old broken-down albuminuric man, aged 72, for spreading senile gangrene, and where the stump has already healed.

These cases alone would be sufficient to show that the powers of repair even in the very aged are, when carefully husbanded, sufficient to heal even large amputation-wounds. This point is clear. I feel now that I delayed amputation too long in my last case. I say this, even though the result was successful. In similar cases, I should in the future amputate much earlier. Even one life saved, as this man's was, is a distinct triumph of our art. I would thus formulate what I have to say with reference to amputation in senile gangrene.

1. I would not amputate in those cases where the patient's strength was fairly good, where there was a fair prospect that a line of demarcation would be formed, where he was not suffering great pain, or where the pain was readily controlled by small doses of opium, and where symptoms of septic absorption were absent.

2. I would advise amputation in all those cases where the patient was not extremely aged—i.e., over seventy-five or seventy-six—in which the pain was very severe, the gangrene rapidly spreading, and

in which marked symptoms of putrid poisoning were manifesting themselves; and I would amputate irrespectively of the patency or otherwise of the main artery at the spot selected for amputation—preferring, of course, patency.

3. In cases of amputation under such conditions as I have mentioned, I would amputate above the knee for gangrene of the leg, above the elbow for gangrene of the hand or forearm. Even when the main artery is blocked, the collateral circulation is generally sufficient to carry on the nutrition of a comparatively short stump. This is my reason for a comparatively high amputation. The mere fact of the possibility of rapid healing of a large stump in even very old persons is a sufficiently well established fact in surgery to need comment. The point I would further insist on is that, with antiseptic precautions, there is usually a minimum stress laid upon the powers of repair, which is especially useful in dealing with such cases as those we are now considering. I may further add, that my colleague Mr. Coe has long advocated views similar to those put forward in this paper, and has had several successful cases.

ABSTRACT OF LECTURES

ON THE

ANATOMY, PHYSIOLOGY, AND ZOOLOGY OF THE EDENTATA.

Delivered at the Royal College of Surgeons of England.

By W. H. FLOWER, LL.D., F.R.S.,
Hunterian Professor of Comparative Anatomy.

LECTURE IX.

THE more important results which follow from the facts collected to date in the foregoing lectures, may be thus stated.

The existing Edentates readily group themselves into five distinct families, of the limits of which there is no reasonable doubt. These are: 1. The *Bradypodidae*, containing two genera, *Bradypus* and *Choloepus*; 2. The *Myrmecophagidae*, containing three distinct modifications worthy of generic rank—*Myrmecophaga*, *Tamandua*, and *Cyclothorus*; 3. The *Dasyopodidae*, which may be divided into two sections, one containing the genus *Tatusia*, which, in the presence of milk-teeth, the structure of the fore feet, as well as in many characters of the visceral anatomy, stands apart from all the other Armadillos; and another, including the genera *Dasyppus*, *Nemurus*, *Priodon*, *Tolypeutes*, and *Chlamyphorus*, which are clearly all modifications of a common type, although the latter shows such a striking difference in the character of its dermal armature that it might make a section apart, if its internal structure were not so closely similar to that of *Dasyppus*; 4. The *Manidae*, containing about seven species, the slight modifications of which are scarcely worthy of being considered generic; 5. The *Orycteropodidae*, with one genus containing two closely allied local forms and species. The three first-named families are inhabitants of the New, the last two of the Old World. The families of which all the members are extinct, are the *Meatheriidae* and *Glyptodontidae*, both American and post-tertiary; the one related to the *Bradypodidae*, and the other to the *Dasyopodidae*. The Tertiary forms are less known; but those of the New World may be provisionally grouped under Marsh's name of *Moropodidae*, and those of the Old World as *Macrotheriidae*.

In the general relationship of these families, it has been customary with all recent zoologists to group them into two divisions, often called suborders; the *Phyllophaga*, *Phyllophaga*, or *Tardigrada*, including the *Bradypodidae* and *Megatheriidae*; and the *Entomophaga* or *Vermilingua*, containing all the others, unless, as in some systems, *Orycteropodidae* is placed in a distinct division.

It is now generally accepted, or the families merely arranged in their supposed relationship, the Old World Anteaters, or *Manidae*, are invariably closely associated with the New-World Anteaters or the *Myrmecophagidae*, and the latter are widely separated from the Sloths.

This being the view generally accepted at the present time, it is not surprising that the *Manidae* and *Myrmecophagidae* are considered as forming a distinct suborder, and are placed in a distinct division.

The bonds which unite the *Manidae* to the *Myrmecophagidae* are of a very different nature from those which unite the *Bradypodidae* to the *Myrmecophagidae*.

and the absence of teeth. These characters are exactly analogous to those found in the *Echidna* among Monotremes, the Woodpeckers among Birds, and the Chameleons among Reptiles. The fact probably is that, in countries where termites and similar insects flourish, various distinct forms of vertebrates have become modified in special relation to this abundance of nutritious food, which could only be made available by a peculiar structure of the alimentary organs.

To commence with the skeleton, one of the most striking characters by which the *Myrmecophagidae* differ from ordinary mammals, is the presence on the posterior dorsal and the lumbar vertebrae of accessory articulating surfaces, below the true zygapophyses common to all mammals, and situated upon a process which projects backwards from the side of the arch, and interlocks into the succeeding vertebra in a tenon-and-mortice fashion. These articulations are found equally well developed in the *Megatheriidae* and in the *Dasyopodidae*. The existence of similar articulations in the genus *Bradypus*, even in a rudimentary form, is extremely significative. It may be said that they almost prove that the Sloths are descended from animals in which they existed in a fully developed form. On the other hand, like as in some respects the vertebral column of *Manis* is to that of *Myrmecophaga*, not a trace of either of these articulations or of the processes on which they are situated is to be found in the former. In *Orycteropus* also, they are entirely absent. On this ground alone, we might be justified in assuming that the Old-World Edentates are not closely related to the American forms.

Nothing can be more different than the characters of the sternum of *Myrmecophaga* and of *Manis*. In the former, the numerous meso-sternal segments are small, laterally compressed, and articulated with each other and with the strongly ossified sternal ribs by synovial joints. In the *Manis*, the sternum is broad and flat, and the sternal ribs only partly ossified, and connected with it in the normal manner. In these characters, the *Bradypodidae*, *Megatheriidae*, and *Dasyopodidae* agree with the Anteaters, and *Orycteropus* is more nearly related to *Manis*.

The gigantic post-tertiary Edentates of the New World, *Megatherium* and its allies, throw much light upon the close affinity of the Sloths and true Anteaters. By common consent, they have been placed among the former, when the order is divided into two divisions, and are spoken of as "Ground Sloths"; yet, in many important characters, perhaps in all those not relating to the functions of prehension and mastication of food, they are quite as near, if not nearer, to the Anteaters. They may truly be regarded as intercalary types, bridging over the gulf which now exists between them. The teeth are certainly those of the Sloths, even to the actual number in most genera; but the diminution of that number in *Carolodon* leads towards their total suppression in *Myrmecophaga*. In the lengthening of the anterior part of the skull in *Megatherium*, but more strongly marked in *Scelidotherium*, the commencement of the *Myrmecophaga* type is clearly seen; and that they had tongues, longer and more protractile than those of existing Sloths (perhaps even prehensile, as Professor Owen suggests), is very probable. The vertebral column, ribs, sternum, and tail is far more *Myrmecophagine* than *Bradypodine*. In the scapula, they possess a character which is shared both by Sloths and Anteaters, but by no other mammal; the coracoid bone and the coracoid border of the scapula join over the coraco-scapular notch, converting it into a foramen. The recent discovery of clavicles in a rudimentary state in all three species of *Myrmecophaga* adds another common character to the group, though perhaps not one of first class importance. It must, however, be noted that in no species of *Manis* has any trace of a clavicle been found. The flattening of the femur, and development of a linear ridge along its external border, is common and peculiar to the Sloths, Anteaters, and *Megatheres*. The special characters of the manus in these three families are all derivations from a common type; but in this portion of their organisation the *Megatherioids* show their relationship with the Anteaters much more than with the Sloths. In the mode of setting the foot to the ground, and the absence of claws upon one or more of the outer digits, the difference is most surprising. The manus of the *Pangloss*, on the other hand, although presenting some superficial resemblance, is formed on a different type, in most respects more conformable to that which is found among mammals, but it has the peculiarity (which it shares with all known Carnivora) of connate scaphoid and lunar bones, and the ungual phalanges with deep median clefts, resemble those of *Perameles* among the Marsupials. Passing from the osteological characters, we find in the arrangements of the arterial system of the limbs, of the reproductive organs, both male and female, and the placenta, a close resemblance between the Sloths and Anteaters. In *Manis*, on the other hand, these important parts are formed on quite a different plan.

Many other minor considerations might be adduced which tend to confirm the fact that *Manis*, if allied at all to the Sloths, must have separated from the original common stock before this had given

off the *Bradypodidae*: or, in other words, that the Sloths and Anteaters, with the Megatherioids intervening, are far more nearly allied to each other than either is to the Pangolins.

It now remains to examine the position of the other families.

The *Dasypodidae* or Armadillos are in many respects remarkably specialised, more particularly in the characters of the integumentary structures; but, taking the whole of their organisation into consideration, they have undoubtedly near affinities to the other American Edentates, and are probably members of the same group, though not so nearly related to either of the other families as those are to each other. The Glyptodonts form an allied group, agreeing in most essential features, but also presenting some very singular special modifications.

Lastly, *Orycteropus* is a form in most respects perfectly apart from all the others. The structure of its teeth alone would almost entitle it to be placed in an order by itself, were it not for the practical inconvenience of doing so. Its reproductive organs, both male and female, and placentation, are formed upon a principle unknown in other Edentates, or, in combination, in other mammals. The placenta, as described by Professor Turner, is broadly zonular, but whether deciduate or not is at present undetermined; probably the latter. As Balfour remarks, this type of placenta might be easily derived from that of *Manis*, by the disappearance of the foetal villi at the two poles of the ovum; while the small size of the umbilical vesicle indicates that its zonary placenta is not, like that of the Carnivora, directly derived from a type with both allantoic and umbilical vascularisation of the chorion.

Although palæontology has revealed the existence of a vast number of the Edentates by which the New World was tenanted in the Pleistocene age, and has given us a more perfect idea of their characters than is known of almost any other extinct forms, unfortunately the history of the group throughout the period of the true Tertiaries is at present almost a blank. The presence of a large species probably allied to *Manis* in the Siwalik fauna is indicated by a single phalanx, described and figured by Lydekker under the name of *M. sindiensis*. No animals, attributed with any certainty to the Edentata, are known of Eocene age. The few scattered and imperfect remains of supposed Edentates, *Macrotherium* and *Ancylotherium*, of the European later Miocene formations, and the similarly imperfect, and as yet not fully described *Moropus* and *Morotherium* of corresponding ages in North America, indicate that animals existed at that time of large size, presenting characters in some respects allied to the existing members of the order, but in others so different, that they cannot be placed in any of the existing families. *Macrotherium*, for instance, appears to have limb-characters which ally it to the Ungulates. As far as can be surmised at present, the affinities of these early forms were rather with the existing members which survive in their own part of the world, than with those of a different hemisphere. *Macrotherium* certainly appears to present more resemblance to *Manis* than to the American Edentates. The first fragments of it which were found were attributed by Cuvier to a "*Pangolin gigantesque*." But some evidence has since been found in favour of its having possessed teeth. So far, this is quite what might be expected; but it certainly throws very little light either upon the mutual relations of the existing forms, the steps by which the present state of things has been brought about, or, what would be still more interesting, their affinities with mammals of other groups.

The general conclusions which a renewed study of this group have led to, may be summed up as follows. All the American Edentates at present known, however diversified in form and habits, belong to a common stock. The *Bradypodidae*, *Megatheriidae*, and *Myrmecophagidae*, are closely allied, the modifications seen in the existing families relating to food and manner of life. The ancestral forms may have been omnivorous, like the existing Armadillos, and gradually separated into the purely vegetable and purely animal feeders; from the former are developed the modern Sloths, from the latter the Anteaters. The Armadillos are another modification of the same type, retaining some more generalised characters, as those of the alimentary organs; but in other respects, as their defensive armature, remarkably specialised.

The two Old-World forms, *Manidae* and *Orycteropidae*, are so essentially distinct, both from each other and from all the American families, that it may even be considered doubtful whether they are derived from the same primary branch of mammals, or whether they may not be offsets from some other branch, the remaining members of which have been lost to knowledge.

Alphonse Milne-Edwards, in discussing the inferences to be derived from the study of the placentation of the Edentates, has maintained that one of two views must be accepted—either that it shows that no value can be attached to this organ in seeking natural affinities, or that the Edentates as we know them now are not a homogeneous order, but

should be separated into several distinct natural groups. It is to the latter view that he gives the preference. It need scarcely be remarked, that the observations related in the present lectures lead to a similar conclusion.

CLINICAL MEMORANDA.

A CASE OF GENERAL EMPHYSEMA COMPLICATED WITH CONCUSSION OF THE BRAIN.

ON March 2nd, I was sent for to see W. D., aged 60, who had met with an accident from a tree falling on him. On arrival, about two hours after the occurrence, I found him suffering from concussion of the brain, the insensibility being complete; pulse 62. The emphysema was general, so much so, that I was unable to discover which side of the chest was injured, or the exact nature of the injury. The second day the patient was still unconscious. Temperature 99.6°; pulse 80; respirations 32. The eyelids and penis were greatly swollen. The third day after the accident, the patient recovered consciousness, and was greatly annoyed at being unable to see, and at the difficulty he experienced in micturition. I punctured both eyelids, and was quite surprised at the way in which the wind whistled out, the relief being very rapid, and in an hour or two the patient was able to see comfortably. The penis gave more trouble, the incision made in it not reducing the swelling as much as I had expected. The patient was able to leave his bed one month and two days after the accident, the emphysema having entirely disappeared. I diagnosed that two ribs of the right side had been fractured immediately at and below the inferior angle of the scapula. I still keep the part supported with soap-plaster, only allowing very gentle walking exercise. My reasons for sending these brief notes are: the rapidity with which general emphysema occurred, the difficulty of diagnosing the exact nature of injury to ribs or lung, and the very great relief obtained by a few punctures.

ROBERT B. WYBRANTS, M.A., M.R.C.S.E.,
Wincenton, Somerset.

DRAINAGE IN ANASARCA.

THE following case shows how large a quantity of fluid may be removed in a comparatively short space of time by Dr. Southey's drainage-tubes for anasarca, provided that the patient be kept day and night in the sitting posture with the legs hanging down.

Emily D., aged 39, for years the subject of chronic bronchitis, was admitted into the Radcliffe Infirmary under the care of Dr. Tuckwell, suffering from advanced emphysema, dilated heart, and general anasarca. The urine contained no albumen. Notwithstanding rest in bed and various diuretics, including digitalis, she became completely waterlogged. One of Dr. Southey's fine drainage-tubes was introduced near each external malleolus, and a third into the dorsum of one foot, the patient being placed in a chair with the extremities dependent. In less than twenty-four hours, fourteen pints of fluid escaped; and during the next five days, respectively, the number of pints was ten and a half, nine and a half, five, four and a half, and two, making in the six days nearly six gallons. Three weeks later, from only two tubes, three gallons and a quarter of fluid drained away in three days. Between the first and last drainings, no medicine was taken; after the last, she took fifteen minims of copaiba three times a day for a month. It is now eight weeks since the tubes were removed; there has been no considerable reaccumulation, and all urgent symptoms are relieved.

ALFRED F. STREET, M.B. Cantab.

OBSTETRIC MEMORANDA.

OCCCLUSION OF OS UTERI IN LABOUR.

MRS. C., a spare thin woman, aged 40, married two years ago, and had miscarried twice. She fell pregnant again last November, and noticed soon afterwards that she had a good deal of thick yellow discharge. Early on the morning of July 1st, she awoke in a fright from a troubled dream, and found she was in pain, and loosing much fluid from the vagina. She was seen at 10 A.M., when the vaginal walls were found wet and relaxed, but the finger could not be inserted through the cervix. Sickness and labour-pains continued with increasing violence all through the day and following night, and, at 11.30 A.M. on the 2nd, her condition was as follows. The foetal head was pressing well down on the pelvic brim, but was everywhere covered by a soft thick membrane, in which no aperture could be felt. The finger passed all round the presenting tumour, but was arrested superiorly by the cervico-vaginal *cul-de-sac*, a little posterior to the most dependent

part of the tumour, and slight dimpled depression could be detected: but the most patient attempts to get the tip of the exploring finger through it were unsuccessful, though there certainly existed a pin-hole opening through which the liquor amnii had discharged. The point of a catheter with a stout stilette was then directed against the centre of the dimple, and with but moderate force was pushed through into the uterus, and freely moved about; and, on its withdrawal, the finger could be passed through, and the aperture still further dilated. Small and medium sized Barnes's bags were next used; and, as the woman was much exhausted, the labour was terminated by the long forceps, chloroform being kindly administered by Mr. Minors of Rolvenden.

I report the case because the condition is a rare one. It is not referred to either in Ramsbotham's *Midwifery* or in Barnes's *Obstetric Operations*. Playfair describes it, and gives as its cause "the agglutination of the margins of the os uteri from inflammatory mischief during the early months of pregnancy. A case is also described in Smellie's *Midwifery*, New Sydenham Society's edition, in a note to page 408, vol. II; and I am acquainted with the details of another case, in which an attempt was made to deliver the head with forceps, whilst still invested by the thinned cervix. Upon the error being discovered, a crucial incision was made, and the head rapidly passed, but the case was lost. In the one now reported, the patient made an uninterrupted recovery. THOMAS JOYCE, M.D. ED., Cranbrook.

RUPTURE OF CORD IN UTERO.

MRS. H., a multipara, had a very tedious labour. Her former labours had always been quick, and as the uterine contractions were now regular and strong, and as there was no apparent obstruction, I was quite at a loss to account for the delay in the descent of the head. Suddenly, after a strong pain, it came down, accompanied by a rather profuse hæmorrhage, the cause of which could not be ascertained. When the child was born, I found the cord ruptured, and the greater portion of it wrapped round the child's neck and arms, only about three inches being left attached to the placenta, which was easily expelled by manual compression. The explanation of the delay in the descent of the head was, that the portion of free cord between the placenta and the child was too short to allow it, until ruptured by a strong uterine contraction, and this rupture of the cord was probably the cause of the sudden hæmorrhage which accompanied the sudden descent of the head. J. JOHNSTON, M.D., Bolton.

THERAPEUTIC MEMORANDA.

THE EXTERNAL APPLICATION OF TINCTURE OF IODINE IN ERYSIPELAS.

On February 6th, I was hastily called to a patient who lives five miles away, and who, on December 9th, 1881, had her right mamma excised for cancer. The day before, all was going on very favourably, but during the night, she became sleepless and in great pain all over the right side. I found erysipelas extending from about two inches above the cicatrised flaps, to the umbilicus, and from thence to the spine. Having no solution of nitrate of silver with me, I asked her husband if he had any tincture of iodine in the house. Knowing that he had used it some time previously, he produced a small bottleful, and a camel-hair brush, with which I painted a ring all round the edge of the inflamed surface. On completion, I looked to see if I had missed any part, and I found that I had an inch of clear skin, inside my ring where I first began; I then painted that portion, and watched its effect. I could distinctly see the blood receding, leaving the surface of its usual natural colour. This led me to paint the whole surface, even the edges of the cicatrix. My patient in a short time, expressed great relief. On my visit next day, I found the erysipelas quite gone, and since then there has been no return of it. I have since treated fourteen cases, both idiopathic and traumatic, with the iodine, and in all, with the same satisfactory result. One case, where the face and head were affected, by parting the hair and well wetting the scalp, it required only one application. Another well-marked case of inflammation of the absorbents of the arm, caused by a wound in the thumb, the relief was immediate and complete. I communicated the result of my experience to my friend Mr. C. White of this town, who has tried it in one case of erysipelas of the scalp with the same success. CHRISTOPHER N. SPINKS, Warrington.

THE TREATMENT OF STRUMOUS ABSCESS AND ULCER WITH IODOFORM.

I READ with great regret the article, in the BRITISH MEDICAL JOURNAL of the 17th ultimo, on the danger attending Iodoform as a dressing, as I have in several cases used it, and with uniformly good results.

In one case that I have at present under treatment, the results have been most satisfactory. A lad, aged 14, was brought to me nearly a year ago, who had been under treatment for over six years then, and "suffered many things of many physicians," with very little benefit. When I first saw him, his legs were covered either with strumous abscesses or large indolent ulcers, with the integument hanging loosely about them. There was also an abscess about the left elbow-joint. Under treatment, most of the ulcers and abscesses were healing; but two large ones remained most intractable—one in front and to the outer side of the left thigh, and one over the right tibia, though I put him through all the routine treatment, and more.

About three weeks since, I prescribed Iodoform ointment (thirty grains to the ounce), with vaseline and four grains of muriate of morphia; and, two days ago, had a letter from the boy's mother, from Portrush, in which she said: "Nothing ever did T— so much good as that last ointment; one ulcer is perfectly healed, and the other almost." I think it my duty to add my mite to the testimony in favour of Iodoform; and also to say that, hitherto, I have met with no bad symptoms from its use externally. I would be glad to know the best antidotal treatment to pursue, in case of poisonous symptoms arising during its use, as I feel very loth to dispense with the use of a drug which has produced such beneficial results in my hands, and yet would desire to guard my patients (many of such cases being necessarily very young persons) from the evil consequences described.

J. WYBRANTS OLPHERTS, L.R.C.P.E., L.R.C.S.E., L.M.
Lurgan, County Armagh.

SURGICAL MEMORANDA.

SEQUEL TO A CASE OF RECTO-URETHRAL LITHOTOMY, IN WHICH THE STONE CONTAINED A TUNNEL FOR THE PASSAGE OF URINE.

At the Manchester meeting of the British Medical Association, in 1877, I showed the calculus, referred to in this JOURNAL on January 19th, 1878, to Mr. Cadge, who expressed his conviction that it was not, as I had supposed, of prostatic origin at all; and that its situation in the prostatic urethra was probably due merely to the arrest of its passage. Mr. Cadge's opinion proved to be perfectly correct; and the calculus, furthermore, turned out to be urethral. This I had the opportunity of ascertaining, in consequence of the death of the patient in December 1878, after an operation intended for the relief of recto-vesical and urethral damage.

At the *post mortem* examination, the prostate was found entirely unaffected, but of the smallest size usual in the adult state; whereas, the spot that had been occupied by the extraordinary calculus was that part of the deep perinaeum traversed by the membranous urethra, of which merely portions remained, in what was really a spheroidal sinus. A section of the stone has been made and its composition determined by Dr. Campbell Brown, Professor of Chemistry in University College, Liverpool, who has kindly reported thus: "Chiefly phosphate, much ammonia, very little lime, a little magnesia, organic matter, only a trace of urates, possibly a little oxalate. The small stone, extracted from the penile urethra, has a white phosphatic nucleus, excentrically attached to additional material, but with its own concentric layers. It has probably a composition not differing from that of the other." These calculi are now in the museum of the School of Medicine, Liverpool.

RUSHTON PARKER, B.S., F.R.C.S., Professor of Surgery in University College, Liverpool.

A RED CROSS HOSPITAL TRAIN.—At the International Exhibition held in Milan last year, one of the most interesting objects in the Section of Hygiene was an hospital railway-train, exhibited by a Venetian firm. This train, which was complete in every particular, and fitted up just as it would be in active service, has lately been practically tested on the line from Spoleto to Rome. The experiment, which was thoroughly successful, was carried out under the direction of the Secretary-General of the Italian Red Cross Society, assisted by a Government official from the Ministry of War, and by a superior officer of the Army Medical Department. The particular line of railway was selected on account of its sharp curves and steep gradients: and the carriages were driven at various rates of speed, and brought to sudden stops, just as they might be in war time. All the tests applied were satisfactorily filled. Those who have seen the tedious and painful process of placing wounded men in ordinary railway-carriages will at once perceive the immense services which might be performed by a well appointed hospital-train, moving in the rear of an army, between, say, the first and second lines of surgical assistance.

REPORTS

OF
MEDICAL AND SURGICAL PRACTICE IN THE
HOSPITALS AND ASYLUMS OF GREAT
BRITAIN AND IRELAND.

MANCHESTER ROYAL INFIRMARY.

EXCISION OF THE TONGUE, FOLLOWED BY TRACHEOTOMY AND
SUBSEQUENT GASTROSTOMY: RECOVERY.

(Under the care of Mr. WALTER WHITEHEAD.)

SAMUEL S., aged 40, a cabinet-maker, was admitted on January 7th, 1882. No feature in his previous or family history could be elicited which had any bearing on the disease for which he sought relief. He stated that nine months previously he first noticed a pricking sensation in the neighbourhood of the right tonsil, and that shortly afterwards he experienced pain on the same side of the head, as though he had a combined attack of face- and ear-ache. He had a tooth, which he believed to be the cause of his suffering, drawn, without any benefit. Shortly after this, he discovered a small hard nodule situated on the middle third of the right side of the tongue, corresponding to the situation of the tooth which had been extracted.

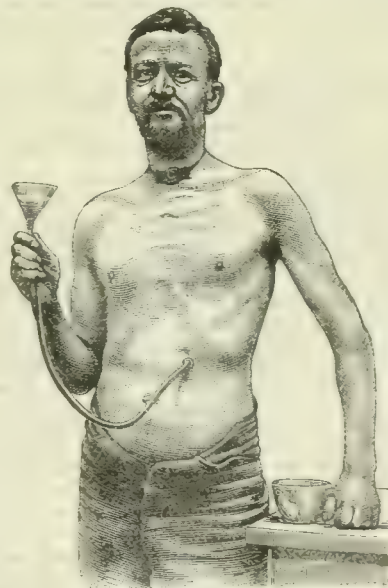
On examining the mouth, after admission, the right posterior half of the tongue was found infiltrated with a hard mass extending down into the floor of the mouth, and upwards on to the dorsum. The surface of the tongue was not ulcerated, but one side was bound down to the floor of the mouth. The fauces, from the soft palate to behind the posterior pillars, were deeply excavated, the edges of the sore being hard, ragged, and infiltrated. There was no perceptible glandular enlargement. He complained of lancinating pains in the right external auditory meatus, extending to the right side of his head. A significant depressed cicatrix was noticed over the sternum, and also a scar, with a serpiginous outline, of the size of a florin, in the third intercostal space, suggestive of syphilitic origin—a suspicion, however, not substantiated by any other evidence. The voice was not affected, and he could swallow without much difficulty. He derived great relief from taking liberal doses of Batley's solution at bedtime. From January 17th to February 16th, he was treated as an out-patient, his condition being then regarded as beyond surgical treatment. He was again admitted, however, in consequence of his increased sufferings, and his irresistible pleadings that something might be done to relieve his intolerable condition. On February 18th, the entire tongue was excised close to the base with scissors, by the method advocated by Mr. Whitehead. During the operation, the lingual arteries spurted for a moment, but were easily secured and twisted. It was remarked that, during the administration of chloroform, respiration was interrupted whenever the tongue was drawn towards the left side; and that air entered the lungs more freely when the tongue was dragged well over to the right. This was explained by the right side of the pharynx being more completely blocked by the growth than the left side, so that, when the tongue was pulled to the left, it entirely obliterated the remainder of the pharyngeal aperture. This obstruction was so marked, that it suggested the possibility of imminent suffocation should any cedema, extension of the morbid growth, or inflammatory thickening, follow the operation. Consequently, on the following day, tracheotomy was performed about one inch below the cricoid cartilage. A silver tube was worn for the first few days, after which, on February 25th, an India-rubber tube was substituted. The patient expressed himself relieved, slept well the night after the operation, and did not complain of pain the morning following. He was fed entirely for the first four days by enemata, each enema consisting of four ounces of beef-jelly, and one egg, administered every four hours. His bed was surrounded by a tracheotomy-tent, and steam was kept going night and day until February 27th.

March 8th. The first stage of the operation of gastrostomy was performed, chloroform being administered through the tracheal tube. The operation consisted in making an oblique incision two and a half inches long, parallel to the left costal margin, commencing opposite to the ninth rib. The various structures were divided down to the peritoneum, which was opened. The stomach was easily brought out of the wound and attached to the margin of the skin by about a dozen carbolised sutures; the stitches being passed only through the serous and part of the muscular coat of the stomach. This stage of the operation was conducted under strict antiseptic precautions. The patient was again fed by enemata, and no other food was given for five days. Ice, however, was permitted, and freely indulged in by the patient. No gastric inconvenience whatever resulted from the operation, and the wound was left undisturbed for three days. The first time the wound

was dressed, the exposed surface of the stomach was found to be covered by a coating of lymph; and the edges of the wound looking healthy. On the fourth day, the temperature had risen to 104°, but without the patient complaining of any special inconvenience beyond a troublesome cough, which, together with the elevation of temperature, was evidently caused by a badly fitting tracheotomy-tube, that, for some reason, had partially collapsed. After this had been changed for a more suitable one, the coughing speedily subsided, and the temperature became normal. When the wound was dressed on the fifth day, it looked very clean. Feeding by enemata was continued for twelve days, although small quantities of milk were allowed to be swallowed from the fifth day.

On March 19th, the stomach was opened by the introduction, in a direction obliquely upwards, of a trocar about the size of a No. 3 catheter. After withdrawing the trocar and leaving the cannula, a No. 2 gum elastic English catheter was introduced through the cannula into the stomach, and the cannula was withdrawn, leaving the catheter in the wound. The catheter was retained in the wound, but the gastric fistula was not utilised for feeding purposes until April 3rd, twenty-six days after the first stage of gastrostomy. After this, the patient was fed regularly by a simple siphon, constructed out of about three feet of India-rubber tubing, with a small bone nozzle at one end and a two-ounce glass funnel inserted into the other. The man very soon acquired sufficient dexterity to introduce the nozzle through the gastric fistula himself, and by elevation of the funnel ample pressure was obtained, and fluid nourishments easily introduced into the stomach. The smallness of the opening into the stomach, and the direction of the fistula, which was purposely made oblique, afforded a valve-like guard to prevent the return of the food after it had been introduced into the stomach—an inconvenience which not unfrequently occurs in cases of gastrostomy, when a large and direct opening has been made into the stomach.

The accompanying woodcut, from a photograph admirably taken by Mr. Lafosse, represents the patient during the act of feeding; and shows the elevation necessary for the free entrance of fluids into the stomach.



REMARKS.—The considerations which suggested this triple operation, and which appeared to justify the course taken, were the following. The patient's sole prospect, when readmitted on February 16th, was that of a speedy death, either by suffocation, starvation, or exhaustion from the severe and continuous pain. The base of the tongue was extensively diseased, and the pharynx was becoming rapidly blocked by epitheliomatous growth. The possibility of removing the whole of the disease was out of the question; and the only prospect of benefiting the man appeared to be by the establishment of a communication with the alimentary canal and with the lungs in the rear of the growth, an endeavour to stem the tide of the disease, and the removal of those combined sources of irritation which in all such cases tend to increase the activity of malignant growths. No other organ in the body than

the tongue affords more conclusive evidence of the doctrine that local irritation precedes and intensifies heterologous growths. Epithelioma of the tongue, as is well known, usually commences from the irritation caused by the sharp edge of a tooth, the frequent contact of a pipe, or the acid products of consumed tobacco; and the progress of the disease is undoubtedly accelerated by the movements of the tongue, and the passage of food over the unhealthy surface.

The application of a line of surgical treatment calculated to combat these several adverse influences was carried out with the following results. 1. Excision of the tongue secured, so far as the movements of the tongue were concerned, physiological rest, and, thus, the removal of one cause of suffering and one source of irritation. Patients with cancer of the tongue are unanimous in attributing the pain they suffer principally to the movements of the tongue, and state that, when the organ is at perfect rest, the pain rapidly subsides. 2. Tracheotomy minimised the disturbing influences of respiration, and averted the apprehended danger from suffocation. 3. Gastrostomy supplied a means of diverting the food-traffic; and, whilst removing another source of irritation, it afforded an assurance against compulsory starvation. The removal of the tongue relieved all the patient's sufferings; and so complete was the relief, that he has never had occasion to take a single sedative since the operation to the present time. The fact that the patient gradually gained in weight nearly a stone will be accepted as a proof that the man's general health did not suffer by the means adopted for his benefit. It is almost unnecessary to state that the growth continued to gain ground; but nothing could be more obvious than the retarded speed observed after the operation, compared with its previous rapid progress. Notwithstanding the loss of his tongue, the obstruction in the pharynx, and the opening in the trachea, the patient can articulate with remarkable distinctness, and can make all his wishes known without the use of signs or writing. The patient was present at a meeting of the Manchester Medical Society in April, and was shown in Blackpool to the members of the Lancashire and Cheshire Branch of the British Medical Association on May 17th, and remains to all appearances in precisely the same condition of health at the present date, July 17th. The sequel remains to be recorded; but in the meantime there exists the written testimony of the patient in grateful acknowledgment of the relief he has derived from the operations.

SOUTH DEVON HOSPITAL, PLYMOUTH.

GASTROSTOMY: TRACHEOTOMY: DEATH: NECROPSY.

(Under the care of Mr. PAUL SWAIN.)

[Reported by Mr. GODFREY CARTER, House-Surgeon.]

ELIZA W., aged 40, married, was admitted on January 24th, 1882, for rapidly increasing difficulty in swallowing. She presented a wasted appearance, had a feeble husky voice, a languid manner, and was easily cyanosed on exertion. The skin was clear, and of good colour. There was no history of hereditary cancer, syphilis, or neurosis. The history of the case was as follows. She had good health up to three months before admission; there was then a gradual invasion of dysphagia, without any known cause; she never had syphilis, and had never swallowed any irritating substance. The difficulty was first with solids, which seemed to stick behind the cricoid cartilage, and cause momentary shooting pain up the side of the neck and into the left ear. Her condition rapidly became aggravated, until, on admission, only a few ounces of fluid could be swallowed daily.

The finger, passed far back into the pharynx, could discover nothing. The cervical glands were not enlarged, and the evidence to be obtained by examination of the neck was negative, beyond a feeling of abnormal fixity about the larynx. Although there was a marked prominence about the fifth and sixth cervical spines, there were no signs of disease. When efforts at deglutition were made, a few drops were felt to pass, and the remainder was returned, sometimes blood-stained, and (if milk) frothy. Before admission, her medical attendants failed to pass the smallest bougie. Craving for food was very distressing. The vomiting apparently only followed on starvation. The viscera were healthy. The heart was feeble; the pulse 90. The arterial system was in good condition. The bowels were moved slightly about once in two days.

From the day after admission, she was failing rapidly, in spite of nutritious food every four hours.

The disease was considered to be a malignant disease of the oesophagus high up. A consultation was called in consultation; and the patient, having been placed under methylene, in the semi-prone position, Mr. Swain proceeded to open the stomach by Mr. McGill's method. The advice of the consultants having been taken, an incision two inches and a half long was made beneath the line of the costal cartilages on the

left side, under full antiseptic precautions. The abdominal cavity was opened; the stomach was picked up, after some little difficulty, and attached to the edge of the wound, by the portion as nearly subjacent to it as possible. A circular portion was enclosed by twelve fine silver wire sutures, not passing through the entire thickness of the wall of the stomach, and the wound was dressed with Mr. McGill's salicylic silk.

On the following day (February 11th), she was fairly comfortable. There was some tympanites. The tongue was dry, and there was great thirst. The temperature was normal. She was given ice to suck, and one-sixth of a grain of morphia was injected subcutaneously.

On February 14th, being the fourth day after the operation, the wound was examined under the spray. Adhesions were good; and, without any anæsthetic, Mr. Swain completed the operation by making a crucial incision into the stomach cavity. Two ounces of warm milk and lime-water were at once injected. The antiseptics were discontinued, and the wound was dressed with silk. There was almost immediately a desire to go to stool; and, thirty minutes afterwards, she passed a small semi-solid light-yellow motion, like milk tinged with bile. This caused some little anxiety, as it was the first time the bowels had been voluntarily moved since admission. The catheter was used daily every six hours on account of dysuria.

February 15th. Every six hours, an India-rubber catheter was passed through the stomach opening, and four ounces of milk and lime-water injected. The rectal nutrient enemata of milk, quinine, and brandy were continued every six hours. On February 19th, she was not so well; the throat felt sore. The skin around the wound looked red, and a clear acid bitter fluid, answering in tests to gastric juice, flowed intermittently, or could be expressed by gentle pressure upon the abdomen close by.

February 22nd. The general powers remained fairly good, but fluid continued to be ejected from the wound, and was becoming fecal: there was also a feeling of sickness, with retching of blood-stained fluid.

February 22nd. She was more feeble, and the rectal injections had been returned during the last twenty-four hours. She felt weak and drowsy. Perfect rest for the stomach and rectum was ordered for twenty-four hours, and brandy was injected subcutaneously.

February 24th. The stomach retained injections as before. Peptonised milk was tried but disagreed. The rectal enemata were discontinued.

February 26th. She was much better, and was taking six ounces of milk and lime-water every four hours. There was no sickness and no pain. She still sucked ice at will, and water returned, sometimes blood streaked. During the last night she felt something uncomfortable about the throat when sucking ice, and suddenly found she could swallow with perfect ease. No pus was thrown up; only a little blood-tinged water.

March 6th. She was stronger and better in health. The wound looked red, and there was an escape of blackish acid fluid from it; but milk swallowed by the mouth appeared at once at the opening in the stomach. To prevent the wound from closing, a tube was passed daily, and then the opening was strapped over. A pint of pure milk, with two eggs, was swallowed daily, without pain.

Since her admission the temperature had ranged about 97°, but since food had been taken by the mouth it had gradually risen to normal. The introduction of food by the stomach-wound was generally followed by a desire to have the bowels moved; but from the first day after the operation, the length of time between the injection and the passage of a motion gradually increased, and soon there was only one motion daily. The nature of the motion remained the same—light, flocculent, bile-stained, and of slight fecal odour.

March 8th. Deglutition was fairly good, but Mr. Swain considered it advisable to feed by the stomach-wound only, so as to give the gullet perfect rest. The patient, in the meantime, had gained very much in strength. Accordingly an India-rubber tracheotomy tube was introduced, and milk, eggs, minced mutton, and brandy were passed through it at regular intervals. Ice was again given to suck by express desire.

March 16th. The deglutition was failing again slowly. There was some harshness of breathing, and the voice was almost gone. Examination of the neck showed no apparent change.

March 17th. She suffered from dyspnoea during the night. Her expectoration was anxious, and breathing was rather laboured. At a consultation it was decided to open the windpipe at once. Under methylene, Mr. Swain performed tracheotomy high up, and introduced a Durham's tube. The breathing became perfectly easy. From about this time she began very gradually to fail, although retaining a fair amount of food. The power of swallowing was slowly failing, and

the same blood-stained water was frequently dribbled from the mouth, though never any appreciable amount of pus. The temperature gradually fell again to 97°. The emaciation became very extreme, in spite of supplemental enemata. She lay from day to day almost without moving, generally with closed eyes. The extremities became cold and the nails bluish, until on April 12th (eight weeks after the gastric operation) she was rapidly sinking. She motioned not to give her food, as it seemed to rise up into her throat and choke her. Raised well up on a bed-rest, she soon became pulseless and died in sleep, breathing quite easily to the end.

The *neeropsy* was made twenty-four hours after death. The appearance of the body was that of starvation. The viscera were healthy; the larynx and pharynx were removed together, with the trachea and alimentary canal down to the duodenum. Beyond this point the intestines were fairly healthy, and contained some thin fecal matter. The rectum was loaded. In the upper portion of the oesophagus, just below the level of the cricoid cartilage, was a patch of epithelioma, surrounding the tube for an inch in extent. It had a flat surface, and was raised about the thickness of a shilling. Its free surface was like a rough tongue, and there were two fine bands of adhesion between the opposing surfaces, which readily broke down. From a small hole in the base of the growth, and exactly below the cricoid cartilage, pus welled up, proceeding from a small suppurating cavity between the oesophagus and trachea, but having no other outlet. The tracheotomy opening was in front of this at the same level, and the tube passed well below it. The stomach was in keeping with the rest of the organs as regarded size, and a quantity of milk and egg was found in its interior. The opening into it was only three and a half inches from the pylorus and one inch from the lower margin. Union to the abdominal wall was good, and there appeared to have been only sufficient local peritonitis to form a good adhesion of half an inch around the gastric aperture.

MERE UNION INFIRMARY.

SENILE GANGRENE: EMBOLISM OF THE SUPERFICIAL FEMORAL ARTERY: AMPUTATION OF THIGH: MODIFIED LISTERISM: RECOVERY.

(Under the care of Mr. HERBERT A. SMITH.)

JOHN W., aged 70, was admitted on February 21st, 1882. He stated that he had not suffered from privation, chilblains, or cramp, but that, after sleeping for a week in a damp bed, he experienced pain and numbness in the great toe of the right foot. To alleviate this he placed the foot in warm water, which (after raising the water to nearly the boiling point) produced a scald extending across the toes. On admission he presented a careworn, haggard, and depressed look, and was in pain, which he referred to the right foot; the great toe and the terminal phalanges of the next toe were cold, senseless, and purple. The skin was detached in patches over the dorsum of the foot and the great toe; there was surrounding oedema, and some fetor. The pulse was 104, compressible and regular; the temperature was normal. The heart-sounds were normal, and depression was not marked. Three days after admission the scalded cuticle was dry and shrunken, the anterior half of the foot cold, insensible, and discoloured. Pulsation was only detected in the anterior tibial artery; though feeble, it was synchronous with that in the radial.

The gangrene, on the sixth day, invaded the whole foot, and during the course of the next week included the lower two-thirds of the leg. Pulsation was feebly detected in the popliteal artery on the tenth day, but not afterwards. The spread of the gangrenous process (now purely dry) seemed arrested; on the fourteenth day, however, preceded by a broad zone of inflammatory dusky swelling, it crept up to within an inch and half from the tibial tubercle in front, but remained three and a half inches below the knee behind. The line of demarcation was now established. The inflamed belt at that time, though narrower, was more intense, and acutely tender; the limb throughout remained semiflexed, and movement gave pain.

By the nineteenth day the dry brown contracted skin at the summit of the dead parts became detached; and, fetor increasing (met by iodoform and chloride of lime), amputation appeared to be indicated, and was desired by the patient. Pulsation was now absent below the upper part of Scarpa's triangle. After a consultation with Mr. T. Woods, of Gillingham, it was decided to amputate through the knee-joint by the double flap operation, making the chief flap from behind, and removing the patella. The patient was brought under the influence of chloroform. A putrescent odour arose on the first incision, and it was therefore decided to perform a circular amputation at the junction of the middle and lower third of the thigh. The tissues at this level were healthy, but the femoral artery was occluded, feeling like a cord

over fully an inch and a half from the wound, and its contents (unorganised coagula) crumbled between the fingers. Esmarch's bandage being loosened, the femoral and other vessels were tied; of these the descending external circumflex in front, and the comes nervi ischiadici behind, were greatly enlarged, as were the perforating arteries; the femoral was evidently blocked up to the profunda. The wound was irregular. Two drainage-tubes were inserted, and the ordinary antiseptic dressings applied; the spray was not used. The total quantity of blood lost during the operation was under one and a half ounces.

March 16th. The wound was dressed, owing to discharge externally, mostly of blood. The patient slept four hours.

March 21st. Union was unimpeded, and the wound was free from smell.

On March 22nd, a bed-sore over the sacral spines was detected, and a patch of gangrenous skin was about to detach itself. The progress of the patient was unimpeded.

March 27th. He complained of some thirst, insomnia, and pain in and around the bed-sore.

March 28th. The slough of the bed-sore was thrown off. The posterior sacral ligaments were exposed. The sac was dressed with vaseline of resorcin (one drachm to one ounce).

April 1st. There was no odour from the bed-sore; but the stimulation was a little too active, rendering the margins of the sore pale, but no irritation was felt. The vaseline was ordered to be used weaker.

From the last date, the stump gradually healed without a bad symptom; and, saving a period of one month, which the ligature of the comes nervi ischiadici took to become detached, leaving in its track a troublesome sinus, his convalescence was established by the end of the fifth week, the bed-sore alone being a source of anxiety. Change of posture, cleanliness, and daily dressing, however, soon completed the healing process. At the end of the following week, a cicatrix of an inch and three-quarters had been formed well behind and beyond the pressure of the end of the femur. He was then ordered an artificial leg, and passed out of notice. The highest recorded temperature was 99.4°; and there was a complete absence of surgical fever or its allies. The wound was aseptic throughout.

REMARKS BY MR. SMITH.—Had I seen Mr. Hutchinson's clinical lecture in the BRITISH MEDICAL JOURNAL of January 7th, I should have felt it my duty to "have gone from the first high up in the operation", and to "have thought of the patient's life rather than the length of his stump", in this case of senile, as of traumatic gangrene, as "amputation in proximity" is generally unfavourable. As it was, no time was lost. The exciting causes of the gangrene in this case were mechanical—viz., cold, then heat; the cold, by suspending the vitality of the part, previously low; the heat, by calling a column of blood which the torpid vessels were incapable of sustaining; hence a block in the circulation, and general peripheral stasis by the inflammatory action set up. The gangrene thus began as a primary thrombosis, followed by an embolism of the companion arteries, as no cardiac or arterial lesions were detected; the process being due, in the main, to a tardy establishment of the collaterals on blocking of the main vessels at different bifurcations—the failure to effect this being indicated objectively and periodically by different areas of invasion prior to the arrest of the gangrene. Recovery would seem to be based upon—(1) amputation high up; (2) the small quantity of blood lost; (3) arrest of the gangrene, and final establishment of collateral circulation; (4) good constitution and recuperative power of the patient. And this recovery took place in spite of age, of the size of the limb removed for unfavourable disease, of the embolism "high up", and of sloughing of the sacrum.

THE PRESERVATION OF ORGANIC BODIES.—Professor Christiani has been showing samples of a new method of preservation, consisting of a series of organic bodies coated galvanoplastically; a mulberry leaf, a crab, a butterfly, a beetle, the brain of a rabbit, a rosebud, and other objects, were silver-, gold-, or copper-plated, and showed all details of their outer form, down to the finest shadings, very well preserved. As to the process (which is patented by the inventor), it was stated that the objects to be preserved, being put, living or dead, into a solution of silver nitrate in alcohol, then dried, and treated with sulphuretted and phosphuretted hydrogen, form good conductors, which, brought in the usual way into the galvanoplastic bath, can be coated with any desired thickness of a metallic deposit.

DR. THOMAS ALEXANDER, for some time medical officer at the Great Western Railway Works at New Swindon, has been appointed to fill the post of medical officer for the Government Railway Service at the Cape of Good Hope.

REPORTS OF SOCIETIES.

EPIDEMIOLOGICAL SOCIETY.

WEDNESDAY, MAY 3RD, 1882.

G. BUCHANAN, M.D., F.R.S., President, in the Chair.

Filaria Sanguinis Hominis, Lymphocoele, Lymphuria, and other Associated Morbid Disorders.—A paper on this subject by Dr. PROSPERO SONSINO of Cairo was read. After stating his reasons for believing in the identity of the parasitic hæmatozoon, described by him in 1874, with that found by Manson, Lewis, and others, in China and India, the author gave an analysis of ten cases met with by him in Egypt. The milky fluid obtained by tapping the lymphocoeles, or milky hydroceles, coagulated spontaneously; and in it, as well as in the blood of the patients, filarix were found. In two instances, the patients suffered from hæmaturia, and their urine contained the ova and embryos of Bilharzia, as well as the filarix. In five out of the ten cases of filarial disease, lymphuria was present. The attacks came on suddenly, while the patient was in full health, and began with severe lumbar pain, and frequently ischuria, followed by the passage of milky urine, occasionally mixed with blood. The urine usually contained fibrinous casts, due to the coagulation of the lymph in the bladder; and it was only when these began to break down that micturition could be performed. The urine was sometimes acid, sometimes alkaline, but more often neutral, of specific gravity varying from 1010 to 1020, and contained filarial fatty molecules, and a large quantity of albumen, with some fibrin. In one case only, in every other respect identical with the five previously mentioned, no filarix could be found either in the blood or in the urine. This might possibly be due, as Manson supposes, to the patient harbouring mature filarix of one sex only. The theory of the obstruction of the lymphatic channels by the mature worm, with consequent lymphangitis and adenitis, lymphatic dilatations and rupture, with extravasation or lymphorrhagia, seemed the most likely to explain the various phenomena associated with the presence of filarix in the blood and tissues. The filaricus lymphuria, or hæmato-lymphuria, differed from the hæmaturia due to Bilharzia in being intermittent, with long intervals of apparently complete recovery, while Bilharzia-disease lasted for years, and, when of long standing, the urine assumed the characters due to cystitis, and was often associated with gravel, or symptoms of stone in other parts of the urinary tract. The association of the two worm-diseases in the same person was merely accidental, though Bilharzia-disease was far more common, in Egypt at least, than filariasis. Another very common worm-disease in Egypt was that produced by ankylostoma duodenale, which, when present in large numbers, gave rise to the malady first described by Griesinger as *Egyptian chlorosis*, and known in Brazil as *intertropica hypohæmia*. Its ova and embryos might be found in the feces, but the adult worm would be dislodged from the duodenum and jejunum only by very powerful purgatives. Of other embryos, the author found tænia, especially *T. inermis*, very common; *Ascaris lumbricoides*, as well as *Oxyuris*, were very often present, and hydatids were not very rare. *Tænia nana*, *Distoma heterophyes*, *Trichocephalus dispar*, and *Pantastomum constrictum*, were not found by Dr. Sonsino, and he discovered guinea-worms (*Filaria medinensis*) only in those who at some previous time had been out of Egypt. From observations recently made, he was able to confirm the statements of Manson and Myers as to the greater nocturnal frequency of the *Filaria sanguinis* in the blood of infected persons, and he also found them in the stomach of mosquitos. He had not been able to notice any of the developmental changes described by Manson and Lewis, and hence concluded that the mosquito probably played with filarix a part similar to that of some birds with respect to vegetable seeds.—In the discussion which followed, the President, Sir Joseph Fayrer, Dr. Spencer Cobbold, Dr. Stephen Mackenzie, Dr. Muir, and others took part; and a vote of thanks having been unanimously accorded to Dr. Sonsino, the Society adjourned.

WEDNESDAY, JUNE 7TH, 1882.

GEORGE BUCHANAN, M.D., F.R.S., President, in the Chair.

The Form of the Epidemic Wave and some of its Probable Causes.—Dr. ARTHUR RANSOME read a paper on this subject, of which the following is a summary. 1. The course of an epidemic through a country may be compared to a wave rising and falling, again to rise after an interval which, in the same disease, is remarkably regular. This observance of periodic times is probably due to the fact that a certain density of the population at the susceptible ages is necessary before a disease can spread with the vigour of an epidemic. (See Epidemic Cycles, &c.) 2. In

some diseases, such as scarlet fever and whooping-cough, and perhaps small-pox, there is evidence, in the hundred years or more of mortality returns from Sweden, of more wide-spread variations in the course of these complaints—a variation of fifteen to twenty-five years in the case of scarlet fever, of fifty years in whooping-cough and small-pox. No explanation could be given of these latter variations. In scarlet fever, it was supposed to be due to the susceptibility of adults to this disease. The form of the epidemic was best to be studied by means of a regular registration of disease, such as was in use in St. Marylebone and Manchester, in Preston and Birmingham—not from mortality statistics. From these data, it was observed—3. That the curve of an epidemic is usually very irregular; and its oscillations were shown to be due (a) to the lighting up of fresh centres of infection; (b) to variations in sanitary conditions; and (c) to atmospheric influences affecting equally two distant places, the coincidence of curves in Manchester and London being very striking. 4. A pre-epidemic period of several months, or even two years, was found to exist in small-pox and scarlet fever; and a shorter period in whooping-cough and measles. This preliminary period was probably due to the need for the establishment of many distinct centres of infection. 5. A recrudescence of the epidemic was often to be found; and this was probably due to a fresh intensification of a previously attenuated virus—perhaps, in accordance with M. Pasteur's observations, in consequence of the deaths of very young or enfeebled persons. 6. The general form of the epidemic wave might partly be accounted for by the theory of infection spreading like a spark in tinder; but it was more probably due to a steady attenuation of the virus in passing through a succession of individuals. 7. The preference of certain epidemics for different seasons of the year was usually to be explained by the prevalence of diseases at those seasons of organs chiefly affected; also by the epidemic disease. A local predisposition to the disease was thus established; and we might thus explain the "epidemic constitution" of certain years, and the "pestilential type" of disease common during epidemics.—In the discussion which followed, the President, Dr. Longstaffe, Inspector-General Lawson, Surgeon-General Murray, Dr. Dickson, Surgeon-Major Don, and Dr. Scriven took part.

YORKSHIRE BRANCH.

WEDNESDAY, MAY 10TH, 1882.

Enucleation of a Small Uterine Fibroid after Delivery.—Mr. GARSTANG, of Dobcross, read a paper on Operative Interference in Midwifery. This was illustrated by a specimen obtained from a case recently occurring in his practice, which was unique in the experience of the members present at the meeting. Mrs. H., a multipara, in delicate health, but with no history of any uterine disease, was delivered of a female child on December 27th, 1881. The second stage of the labour was unusually short and easy, the third stage abnormally prolonged. Three quarters of an hour after the birth of the child, all the usual means of removing the placenta having failed, Mr. Garstang introduced his hand into the uterus, and found the placenta firmly adherent to the fundus. After carefully breaking through some adhesions, the placenta came away easily, and was removed by traction on the cord with the disengaged hand: the hand in the uterus detecting something further still adherent. This substance was at the moment believed to be an additional piece of placenta, and it was therefore considered necessary to remove it. Very careful manipulation brought it away without any great difficulty. The patient made a very good recovery, and both she and the child are doing well. On examination of the last substance removed, it was found to be a hard nodular tumour, of a flattened ovoid shape. Its circumference was $7\frac{1}{2}$ inches in one direction, and $6\frac{1}{2}$ inches in another; its thickness $2\frac{1}{4}$ inches. It was obviously a submucous fibroid; for a careful examination of the placenta led to the belief that it had really developed in the uterine wall, and not in the placenta itself. It would be an interesting question, whether the placenta became developed over the site of the tumour, and, if so, whether by accident or by some determining cause; or whether, on the other hand, the development of the tumour was due to the attachment of the placenta at that particular point.—The case was criticised by the President, Mr. BALL (York), and Mr. WHARLHOUSE (Leeds), who both considered that, while the case might be held to be justified by its success, the risk attending the operation was such that confirmatory cases would be needed before it could be generally adopted.

M. NICOLAS ANSIEUX, Dean of the Medical Society of Belgium, Professor of Ophthalmology at the University of Liege, has recently died in that city. He was eighty years of age, and had been Professor during fifty years.

REPORTS AND ANALYSES

AND

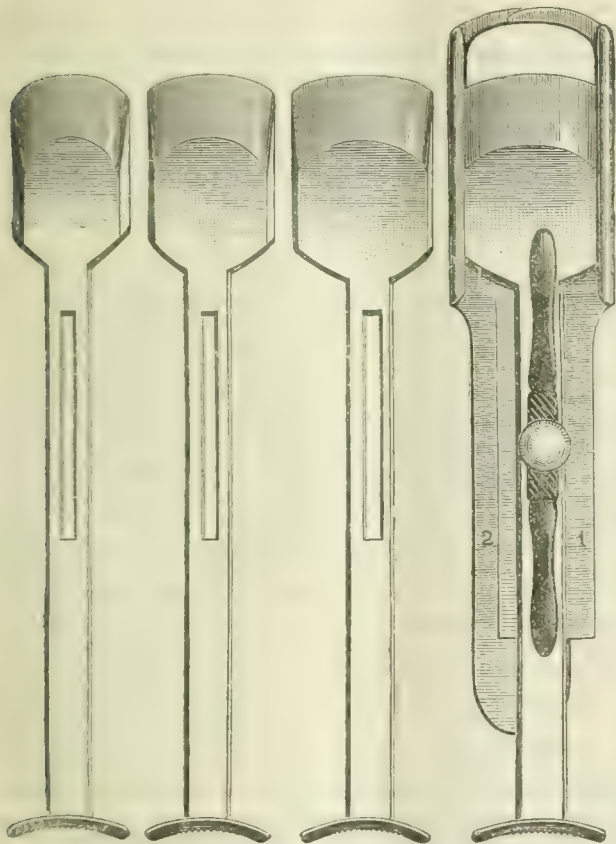
DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

THE "ADJUSTABLE" TONSILLOTOME.

I BELIEVE it is an acknowledged fact that, in order to remove successfully an enlarged tonsil, with a tonsillotome, it is important that the ring of the instrument should accurately fit the gland to be excised. As tonsils vary in size, it thus becomes necessary to have a set of tonsillotomes, usually five or six, and of different sizes. It is in order to obviate this difficulty, that I have devised the instrument pictured.

The accompanying plate shows the upper surface of the tonsillotome, *i.e.*, that which looks towards the centre of the mouth when the instrument is in position. It will be seen that there are two plates (1 and 2), which glide one upon the other, being bevelled off to fine edges at their contiguous margins, thus as far as possible always presenting a flat surface for the knife to glide upon. These plates are fastened together behind with two binding screws, worked with a key, which enables them to be so securely fastened as to prevent any chance of their slipping. In order to adjust the instrument, the binding screws are to be loosened, the existing blade removed, and another size introduced, the blades, as may be necessary, being either diverged or approximated.



The advantages I claim for the instrument are these.

1. It can be adjusted to suit any sized gland, as the number of blades is practically unlimited.
2. It is portable, providing, as it does, one instrument instead of many.
3. It is cheap, being half the price of an ordinary set of five instruments, which is the number usually required.

The instrument pictured was made for me by Messrs. Mayer and Meltzer.

GEORGE STOKER, L.K.Q.C.P.I., M.R.C.S., etc.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 22ND, 1882.

EXAMINATIONS FOR FIRST YEAR'S STUDENTS.

ON turning to the Report of the Subcommittee of the Committee of Council of the British Medical Association on Medical Education, January 1881, we find that upwards of two hundred of the past and present teachers of our medical schools, and a large number of general practitioners in and around London, were consulted by a special committee for their opinion on several questions relating to medical education. The report informs us that, through the replies received, it was found that a large majority of general practitioners were in favour of introducing an examination in anatomy and physiology at the end of the first year of a student's curriculum. Ten years previously, the Medical Teacher's Association had come to the conclusion that it was desirable that there should be a professional examination for medical students at the end of the first year, and they recommended the Educational Committee of the General Medical Council to enforce the principle. That Council, we are reminded by the report, declined this suggestion, on the grounds that there was "a disadvantage in having so many examinations, as regards both students and examiners." The general practitioners in favour of the first year's examination pointed to the large percentage of students who never succeeded in obtaining a diploma to practise, and to the numerous rejections at the primary examination at the Royal College of Surgeons. It was therefore believed that, under the existing system, the teachers are unable to improve our medical schools. It was urged very strongly that a first year's examination should be instituted, a test of such a nature as to enable school authorities to weed out idle men from among our students—men who, by continuing about our schools of medicine, are not only an useless burden to their relations, but a positive evil to their more industrious associates. It was likewise indicated, by the gentlemen consulted by the special Committee, that the proposed examination would encourage all students to work hard at anatomy and physiology during their first winter session. This first professional examination should be held at the school or other convenient place.

In conclusion, the Subcommittee appointed to consider this resolution, as well as many others affecting medical education, reported to the Committee of Council of the British Medical Association their adoption of this resolution in the following form: "That provision should be made for compelling students, before the commencement of their second year, to pass an examination in their first year's studies; these examinations might be conducted by recognised school authorities under the supervision of the General Medical Council."

The recent proceedings of the Council of the Royal College of Surgeons of England with regard to this identical question must be fresh in the memories of our readers. The College Council proceeded in precisely the same manner as did the Committee of Council of the Association eighteen months before them. A circular was forwarded to all teachers of anatomy and physiology. The first question in the circular was: "What is your opinion on the propriety of holding the proposed examination in elementary anatomy and physiology after the end of the first year of professional study?" The other questions related to the scope of the examination, and to exceptional cases which it

might involve. Mr. Marshall had previously succeeded not only in getting the assent of the College Council to the issue of this circular, but also in arranging a conference of teachers with a special Committee of that Council. This conference was held at the end of last month, and the first year's examination was almost unanimously recommended by all that were present.

We have recorded the action of the Association and its imitation by the Council of the College of Surgeons; but there is yet a third act of this medical education drama to be fairly considered. At the quarterly meeting of the College Council immediately succeeding the conference of teachers, a letter was read from the Medical Committee of St. Bartholomew's Hospital, objecting to the proposed establishment of an examination to be held at the end of the first year, and conducted by the teachers. This letter was referred to the joint committee of the Council and teachers, to report upon to the Council. A further letter from a member of the staff of St. Bartholomew's Hospital, who has had great experience in the professional and social training of students, was published in our columns last week. We have good reason to believe that it reflects the feelings of junior teachers, demonstrators who do the most active part of educational work, as compared with lecturers less in contact with individual students, in several other schools of medicine. It is fair that we should consider both sides of the question in this matter, just as we did recently with regard to the proposed regulation forbidding students to present themselves for the final College examination till two years after passing the primary. A large majority of medical men in practice, and a second large majority of senior teachers, are in favour of a first year's examination. Such decisions appear conclusive, and deserve the most respectful consideration. But we must not ignore the complaints of the hard worked demonstrators of anatomy and junior private tutors, who see and study the character of the student even in their own homes. These younger teachers believe that the proposed examination would be unfair to superior students, and would force slow-learning, but worthy young men, to hurry through their studies, and all for the purpose of purging the school of some half dozen lazy men, who after two or three years of idleness and odious self-comparison with their more creditable companions, often have the sense to take to work or to try a more congenial vocation than the medical profession. The legality of making a school into a preliminary licensing body is also gravely questioned. All kinds of regulations, open oral examinations before Fellows of the College, and specially appointed "Visitors," have hitherto kept the standard of different examiners at Lincoln's Inn Fields as level as can possibly be expected. But how can a level standard be maintained in all the London schools? Some special commissioners, it has been suggested, will here be needed, or else one or more schools may damage their reputations by laying themselves open to charges, that increased yearly admissions of students may be due to an over liberal indulgence and a low standard in the first year's examination.

ON DIRECT ELECTRICAL STIMULATION OF THE HEART IN THE LIVING SUBJECT.

TWENTY years ago, M. Groux, a young Frenchman who had a congenital fissure of the sternum, was in the habit of exhibiting himself at hospitals and medical societies for the purpose of showing the phenomena of the heart's action under exceptionally favourable circumstances. That unique case is, however, now put in the shade by that of Catharina Serafin, a charwoman from Upper Silesia, who in 1878 was operated upon by Dr. Kolaczek of Breslau for an extensive enchondroma of the left anterior chest-wall, which rendered the removal of a large portion of the thorax necessary. After having for some time suffered from pyo-pneumothorax, the patient recovered, and was shown by Dr. Kolaczek to the German Surgical Congress. Since then, the action of the heart, which had thus been laid bare, has been studied by several observers; and ultimately the "living specimen" was re-

ceived into Professor von Ziemssen's *clinique* at Munich, where the case has been thoroughly investigated in all its bearings. Von Ziemssen has published his report in the last number of the *Deutsches Archiv für Klinische Medizin*, from which elaborate paper we cull the following particulars.

The deficiency in the left anterior chest-wall is about nine centimetres wide and eleven centimetres high (3.6 by 4.3 inches). The third, fourth, fifth, and sixth ribs have been resected; and the deficiency thus created forms the opening of a cavity which has the size of two fists, and a depth of about nine centimetres. The skin of the chest-wall has been drawn into this cavity, and constitutes a firm covering of the organs forming the walls of the cavity—viz., the heart (the right and left ventricle and left atrium), the pulmonary artery, the left half of the diaphragm, the remaining portion of the left lung (which still contains air, and is situated by the vertebral column from the apex to the diaphragm), and the external wall of the ribs. The mammilla and the scar left from the operation may be seen quite in the depth of the cavity.

The movements perceptible in this cavity are partly active and partly passive. Amongst the former are the contractions of the two ventricles, the pulsations of the trunk of the pulmonary artery to an extent of from five to six centimetres, the contractions of the left auricle, and the pulsations of the left coronary artery of the heart. The passive movements consist chiefly of a retraction of the heart downwards and towards the left side during deep inspiration; the flattening of the diaphragm appearing like a rapidly induced depression of the bottom of the cavity to the extent of three or four centimetres, in which the heart participates. During expiration, more especially when this is forcible, as in coughing and pressing, the heart is completely squeezed into the deficiency of the chest-wall, which it fills up almost entirely; and this forcible dislocation of the heart does not cause any unpleasant sensations to the subject of the case. Finally, during deep inspiration, a narrow fold, about eighteen millimetres long, becomes perceptible on the surface of the right ventricle, running nearly parallel with, and internal to, the coronary artery, and which faradisation shows to constitute the left phrenic nerve.

The instruments used for the investigation of the heart's action were Marey's polygraph, cardiograph, transmission-sphygmograph, and tambour with a registering lever, Brondgeest's pansphygmograph, and Ludwig's kymographion; and the drawings obtained by the use of these instruments constitute an interesting addition to von Ziemssen's paper. Faradisation of the phrenic nerve was most easily performed immediately below the auriculo-ventricular furrow, by means of a button-shaped electrode of the size of a pea and covered with moist sponge; while the indifferent electrode was placed on the sternum or the dorsal spine. The effect of this was a contraction of the left half of the diaphragm, which was at the same time depressed to an extent of about 3.5 centimetres; the right half of the diaphragm descended at the same time to the extent of one intercostal space. Any deviation of the point of the electrode from the course of the phrenic nerve rendered the experiment unsuccessful; while the tetanus of the diaphragm, if once induced, continued of an equal strength throughout the duration of the electrical stimulation. The heart was at the same time pulled downwards and outwards, and remained in this position as long as the phrenic nerve was tetanised. The proceeding did not cause any pain or other sensations; and the sensitive nature of the nerve-fibres proved from the lower end of the phrenic nerve to the pleura, pericardium, and peritoneum, which had been assumed by Luschka, appears, therefore, highly problematical.

The continuous current was used with the same electrode and in the same place; the indifferent electrode being put on the scapula or the sternum, and the strength of the current being regulated by a Siemens's metallic rheostat with sixty pairs of Krüger's battery in the circuit. The cathode closing contraction (C C C) appeared with 400 Siemens's units, the anode closing contraction (A C C) with six hundred units, and the anode opening contraction (A O C) with 700 units; while a cathode opening contraction (C O C) could not be produced by the

strongest available current. The law of contraction of the phrenic nerve is, therefore, the same as that of the other motor and mixed nerves.

Direct electrification of the heart led to the interesting result, that the action of this organ may be considerably modified by the continuous current; while the induced current has little, if any, effect upon it, even if a considerable power be used. Whether one or both electrodes were used, or whether they were applied to the region of the ganglia in the auriculo-ventricular furrow, on the ventricles themselves, or the apex of the heart, the induced current did not appear to alter the frequency or rhythm of its pulsations; nor was any pain or other sensation caused by the application. The skin covering the cavity being anæsthetic, it was possible to use a current of extreme power; so that, if faradisation of the heart could cause pain, the patient must surely have felt it.

The constant current was used either by means of a solid double electrode, the buttons of which had the size of peas, were covered with moist sponge, and could, by the aid of joints, be fixed in any position which might be desired; or one pole was directed to the heart, while the other was held to the scapula or sternum; or one pole was connected with the two buttons of the double electrode, and the other with the indifferent electrode placed to an indifferent point.

The minimal current-strength which caused an artificial contraction of the heart was 800 Siemens's units for C C C, 1,000 units for A C C, and 1,200 units for A O C, while no available strength was effectual with C O C. It therefore appeared that the formula for the heart's contractions is identical with that obtaining for the other striped muscles. If a higher current-strength was used, the effect was much more striking than with a minimal strength, more especially when voltaic alternatives were used in the metallic circuit. With a minimal strength, the alteration of the normal rhythm was only temporary and inconstant, there being a sort of struggle between the stimulus of normal rhythmical innervation and the galvanic stimulus, so that sometimes one and sometimes the other was seen to predominate. As soon, however, as a current of from 2,000 to 3,000 units was used, a constant electrical rhythm was established, each single galvanic shock being succeeded by a visible and perceptible contraction of both ventricles. C C C was always strongest; and the normal cardiac rhythm, with a frequency of eighty beats in the minute, was changed into one of higher frequency—for instance, of 140 beats; but any kind of rhythm above the normal could be produced *ad libitum*. The pulse was, therefore, artificially rendered alternate. With a frequency of 180 beats, the smaller wave could often not be felt at the radial artery, while when it was 140 the propelling power of the heart was sufficiently great to allow the perception of every single wave in the radial artery. The summit of the very rapid arterial pulses was in general lower than the summit of the normal pulse, and that in direct proportion to their greater rapidity. The same was found to hold good for the sphygmographic depression; in other words, the diastolic relaxation of the ventricle was incomplete, and therefore the ventricle was not completely filled, and the systolic wave proportionately low. It was singular to find that, almost immediately after the application was discontinued, the previous regularity of the heart's action was re-established. When a very powerful current was used, the patient perceived an aching sensation behind the lower portion of the sternum, but no actual pain; and occasionally a similar feeling in the left arm was experienced.

When the current was made to traverse the heart continually—that is, without interruption or reversal of direction—the frequency of the beats was doubled or trebled, but resumed its normal average on opening the circuit. These effects, however, were only caused if the electrodes were placed on the left ventricle about two centimetres downwards from the auriculo-ventricular sulcus, behind the vertical branch of the coronary artery, and on the right ventricle immediately in front of, and on, the phrenic nerve. The area beyond the two centimetres, and on the right ventricle, that further in front, was found to be quite unexcitable. Von Ziemssen thinks that the excitable area corresponds to the ganglia of the heart, and found that their excita-

bility could, by repeated experiments of this kind, be so increased that a current of six or eight times less strength than the initial one was then sufficient to cause the same effect. Whether a weak or a strong current was used, did not seem to make any difference in the strength of the heart's contractions, provided it were sufficient to act at all.

The heart's action may be retarded below its normal frequency by using a powerful current at somewhat long intervals; but the sphygmographic curve thus obtained is not as regular as when the frequency is artificially increased. It is, however, possible to reduce the pulsations from eighty or more to sixty or fifty in the minute. All the effects of the current may also be obtained by sending it through the uninjured chest-walls, one pole being placed to the sternum, and the other to the dorsal spine; and it therefore appears not unlikely to become therapeutically applicable where the heart's action is weakened or otherwise disturbed.

THE REGISTRAR-GENERAL ON MORTALITY FROM SMALL-POX.

THE Registrar-General's forty-third detailed annual report, relating to the year 1880, has recently been issued, and contains some important statistics bearing upon the mortality from small-pox in England and Wales during the thirty-four years 1847-80. During 1879 and 1880, the death-rate from small-pox was unprecedentedly low, and did not exceed 21 and 25 per million of the population respectively; indeed, as we recently pointed out, the English death-rate from small-pox during the last nine years, (1873-81) has not averaged more than 83 per million, which is less than a fifth of the average rate that prevailed during the whole of the pre-compulsory vaccination period of which we have trustworthy statistics. The Registrar-General, however, asserts that, "in discussions concerning the protective influence of vaccination, too exclusive attention is usually given to the change that has occurred, since its introduction, in the death-rate from small-pox at all ages," and then proceeds to discuss at some length the "changes in the death-rate at successive periods of life" that have occurred since compulsory vaccination was enacted. As the causes of death in England were not abstracted in combination with the ages at death until 1847, the inquiry could not be extended further back than that year. For comparative purposes, the thirty-four years 1847-80 are arranged in three periods. The first period embraces the seven years 1847-53, when vaccination was gratuitously offered to the public, and its acceptance was optional. The second period consists of the eighteen years 1854-71, when vaccination was compulsory, but when the machinery for enforcing the law was defective and ineffectual. Further legislation in 1871 provided greater facilities for enforcing vaccination, through the compulsory appointment of vaccination officers by boards of guardians; the third period, therefore, embraces the most recent period of nine years, 1872-80, during which compulsory vaccination has been more efficiently enforced. A table is given which shows the average annual death-rate from small-pox in each of these periods, not only at all ages, but at each of six groups of ages. Unfortunately, the periods marked out by the various Vaccination Acts divide the two years 1871 and 1872, during which prevailed the last severe small-pox epidemic. This, however, does not invalidate the main conclusions of the Registrar-General, which are based upon the varying rates of mortality at successive groups of ages. The Registrar-General's figures conclusively prove that, coincidentally with the gradually extended adoption of vaccination, a marked decline has occurred in the mortality from small-pox at all ages. Attention is, however, especially directed to the fact that this decline has exclusively occurred among children under ten years of age, and almost the whole of it among children under five years of age. Comparing the statistics of the seven pre-compulsory years 1847-53, with those of the nine years 1872-80, during which vaccination has been most efficiently enforced, the mortality from small-pox among infants aged less than 5 years showed a decline of 80 per cent.; and among children aged between

5 and 10 years, the decline was equal to 44 per cent. Over the age of ten years, however, the rate of mortality in the more recent period was actually higher than in the precompulsory period, and this increase is more strongly marked at the more advanced age periods; the increase was slight between 10 and 15 years; 59 per cent. between 15 and 25; 114 per cent. between 25 and 45; and at 45 years and upwards it was equal to 164 per cent.

Having established the fact of the increased fatality of small-pox among adults, concurrently with its marked decline among young children, and even at "all ages", the Registrar-General proceeds to discuss some of the explanations of the decline of small-pox fatality which have been advanced by disbelievers in the beneficial results of vaccination. It is clearly proved that the mortality from other causes does not show either a similar decline among young children, or the increase among adults, which are shown by the statistics of small-pox mortality. In conclusion, it is asserted that "there can be no rational doubt that the death-rate from small-pox fell not only coincidentally with, but in consequence of, the extended use of vaccination." It is admitted, however, that there is much difficulty in explaining why this fall has not been common to all periods of life. The only hypothesis which appears to supply this explanation is that put forward by the Registrar-General, "that the immunity derived from vaccination is both less perfect and less permanent than that conferred by small-pox itself." If it be admitted that the efficacy of vaccination diminishes with the lapse of time, while the protective influence of small-pox remains practically unaltered, it ceases to be difficult to explain the apparent anomaly of the fall of small-pox mortality in early life, and its rise at later ages. Before vaccination became general, few persons escaped having small-pox, either in childhood or at some other time of life; the majority had it in youth, causing a high death-rate at the earlier ages. Those, however, who survived an attack of the disease enjoyed "a practically complete immunity for the rest of their lives"; hence the low death-rates at the later periods of life. Since the almost universal adoption of infant vaccination, however, the relative incidence of small-pox mortality upon the various groups of ages has naturally changed; childhood is now far more successfully protected than it was before the institution of compulsory vaccination; hence fewer children are attacked by small-pox, and the number of adults in the population who are protected by small-pox is constantly diminishing. The profession has long since advocated revaccination at adolescence, and the Registrar-General pertinently points out that the obvious lesson to be drawn from the important figures he now publishes, is that revaccination is necessary to confer upon adults a protection from small-pox equal to that which is conferred upon children by infant vaccination. For the effect of revaccination upon adults, we have only to turn to the experience of medical men, nurses, and attendants, in small-pox hospitals.

As a rejoinder to "the strange doctrine that vaccination is utterly without influence on small-pox," the Registrar-General gives a table showing the age-incidence of small-pox mortality among the vaccinated and unvaccinated in England and Wales, during seven recent years in which the deaths in these classes were separately abstracted. It appears that, among the vaccinated, 33 per cent. of the deaths from small-pox occurred under, and 67 per cent. above, 15 years of age; while, on the other hand, among the unvaccinated, 67 per cent. occurred under 15 years of age, and 33 per cent. over that age. Thus the incidence of small-pox fatality among the vaccinated and unvaccinated is exactly reversed. Apart from the decided decline of the rate of mortality from small-pox since it became compulsory, this marked change in the incidence of the mortality would be a decided argument in favour of the Registrar-General's new figures, which are based upon the necessity for more general revaccination, and the influence of the advantages that have resulted from vaccination which cannot be denied by antivaccinators, and which they are unwilling to accept. Antivaccination organs have, therefore, attacked the Registrar-General's figures with random abuse.

MRS. LEGGE, wife of a farm bailiff near Wantage, has died from the sting of a bee on the forehead, within an hour after the infliction of the injury.

A WHOLE family has been accidentally poisoned at Sallède, near Vic-le-Comte, in the Department of Puy-de-Dôme, by flour containing a lead-salt.

DR. G. G. CRAIG, the Commissioner of Health of Rock Island, has commenced an investigation into the effect of decaying lumber on public health.

SEVERAL heavy cases of medicine and surgical appliances have been despatched by the Medical Department to Cyprus, to be conveyed by a steamer leaving Liverpool for the East.

SEVENTEEN antivaccinators have been summoned at Eastbourne for refusing to obey the order of the local justices to have their children vaccinated. A fine of £1 and costs in each case was inflicted.

AT the Leicester Assizes, in an action by Mr. Mutch (a medical man) and wife against the owners of the steam tramway for compensation for personal injuries to the wife, the jury awarded the plaintiff the sum of £4,500.

WE regret to hear of the death of Mr. Crossby, the medical officer of the Sunderland Workhouse, who was found dead in his bed. He was accustomed to take morphia; and his death is attributed to an overdose of that drug.

THE action recently brought by Dr. Abrath of Sunderland against the North-Eastern Railway Company for malicious prosecution, the hearing of which has occupied the jury several days, has resulted in a verdict for the defendants.

IN another column, we print a letter from a resident of Hampstead Heath, taking another side of the question than that to which we last week drew attention, in dealing with the subject of the prohibition of cricket and other games, except on certain parts of the Heath.

THE corner-stone of the new building now being erected at Worrall for a Children's Hospital was laid, with great Masonic state, on the 3rd instant by Lord de Tabley, Provincial Grand Master of the Masonic Province of Chester, supported by the Grand Lodge of the Province and a large assembly of the brethren.

THE opening of the new wards of Richmond Hospital by Her Royal Highness the Princess Mary Adelaide, Duchess of Teck, will take place to-day, Saturday, at 3.30 P.M., on which occasion Her Royal Highness has consented to receive purses containing not less than five guineas in aid of the building and furnishing funds.

A TELEGRAM from Buenos Ayres officially confirms the sad news of the massacre of Dr. Crevant and his companions by the Tobas Indians. The members of the press at Nancy have opened a subscription to defray the expenses of erecting a monument to the memory of Dr. Crevant, to which the Eastern Branch of the French Geographical Society has subscribed 500 francs (£20).

THE Brighton Town Council have authorised the borough surveyor to carry out the suggestions of Sir Joseph Bazalgette in his report on the drainage of the town. These suggestions include the construction of an additional storm-outlet of the full size of the intercepting sewer from it into the sea opposite the Roedean furnace, and additional storm-outlets at the upper or Hove end of the intercepting sewer: the form-

ation of catchpits of sufficient size under the gullies near the surface ; the connection of sewers where practicable for the purpose of creating a current through them ; and the flushing of the sewers in dry weather.

A HIGH death-rate was recorded in the city of New York during the first quarter of the present year. The total number of deaths registered from all causes was 19,288, representing an annual death-rate of 32.16 per 1,000. Zymotic diseases were fatal to 3,452 persons, against 2,352 in the corresponding quarter of 1881; the increase being due to the fatal prevalence of scarlatina, measles, and whooping-cough. The annual death-rate of 1881 was 31.1 per 1,000.

IN the war preparations at present being made, every precaution is being adopted to provide against the treacherous character of the Arab hordes. The latest orders are that slightly wounded men and the convalescent sick sent from the field hospitals at the front to the hospitals at the base, are to retain their rifles, in order to afford them a means of protection against any parties of the enemy who may attack or try to cut them off.

WE print in another column a report of the last meeting of the London Ambulance Association, which has now assumed a definite shape, and appeals to the public for funds to carry out the aims and intentions which will be found detailed in the report. We think that the plan of placing these swift and easy ambulances at police-stations a very practical and useful one. It will, however, be necessary, when the system is in working order, to take steps to bring the localities where the ambulances are stationed to the full knowledge of the public, so that every one would know where to send or go for a horse ambulance in case of need to convey a patient to the nearest hospital. It would also, we think, be very desirable that these ambulances should be available for the use of any medical man who desires to send to hospital any pressing case of a non-contagious character, and where easy and rapid transit are necessary for the welfare of the patient.

POISONING FROM TINNED MEATS.

ANOTHER case of poisoning from eating tinned meats is recorded at Middlesborough, where a family consisting of four persons, servant, and lodger, were recently poisoned through eating tinned rabbit. The lodger first became seriously ill; but, as he had been ailing, the attack was not attributed to the meat. The rest of the household then ate it, and were all prostrate within two hours. Medical aid was sought, and all the sufferers are now recovering. It is thought that the copers from the tin had become absorbed by the meat.

THE LATE DR. SILVER.

WE deeply regret to have to record the premature death of Dr. Silver, the Senior Physician of Charing Cross Hospital, and for many years prominently connected with the editorial staff of the *Medical Times and Gazette*. Dr. Silver had raised himself to a position of distinction in the profession by dint of great ability and industry. His health had suffered much of late years, and the immediate cause of death was, we believe, gastric and hepatic disease. The funeral will take place on Saturday, the 22nd, at Brompton Cemetery, at one o'clock.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

ON Wednesday, July 12th, a quarterly court of the directors of the above society was held at 53, Berners Street, in the Library of the Royal Medical and Chirurgical Society. Sir George Burrows, Bart., the President, took the chair punctually at 5 P.M. A sum of £1,291 10s. was voted to be distributed among sixty-two widows, seven orphans, and three orphans on the Copeland Fund. The expenses of the quarter were £44 7s. 6d. Seven new members were elected, the

deaths of four reported, and two had ceased to be members. Fresh applications were read from three widows and one orphan; and the death of one orphan, in receipt of grants since 1877, was reported. The consideration of the proposed alteration of the by-laws was postponed till the October court.

AMENDMENT OF THE MEDICAL ACT.

To cure the defect which we pointed out some time since in the University Education Ireland Act, 1879, which failed to make any provision by which the new Royal University of Ireland could appoint a member of the General Medical Council in the same manner as the Queen's University of Ireland was heretofore entitled to do, a short Bill has passed through Parliament, by which the Royal University in Ireland is empowered to choose one member of the General Medical Council. The first appointment is to take effect from the time when the existing appointment made by the Queen's University shall expire, and cease to have effect.

PHYSICIANS IN CYPRUS.

OWING to the non-enforcement of the Ottoman law with regard to medical registration, and the consequent increase in the number of unqualified practitioners (comprising barbers, tailors, prostitutes, etc.), Dr. Barry, the Sanitary Commissioner, recommended that the Government should again bring it into use, enforcing, at the same time, penalties on its non-observance. This was done; and nineteen medical practitioners, on producing the necessary qualifications, were registered. In two cases, gentlemen who had passed through a medical education at a recognised school without taking a diploma, were examined by a medical board, and admitted to practise as medical men of the second class, "officiers de santé".

NEGLECT OF VACCINATION IN BRADFORD.

AN extraordinarily large number of children seem to escape vaccination in Bradford. It appears from the return of vaccination, which Dr. Butterfield includes in his recent report, that of the total births registered during 1880, 6,416, but 5,841, or 91.03 per cent. are finally accounted for as regards vaccination; thirteen cases were postponed by medical certificate, while 418 were entered as removals and cases not found, and 148 were not accounted for in any way. This large number of unvaccinated children in Bradford and the surrounding district is, as Dr. Butterfield well observes, a subject of the very gravest importance, and the source of much anxiety to those who are responsible for the public health. The knowledge that parents can evade the law with impunity is not likely to diminish the number of cases not accounted for.

PROSECUTION UNDER THE BIRTHS AND DEATHS REGISTRATION ACT.

AT Stratford Police Court last week, Mr. Henry Bowden Lyell, M.R.C.S., practising at Walthamstow, was summoned at the instance of the Medical Alliance Association, on a charge of wilfully giving a false certificate concerning the death of an army pensioner, who had died while under the care of Mr. Lyell's unqualified partner. The principal evidence given in support of the charge was that of Dr. Scoresby Jackson, a member of the Medical Alliance Association, and also registrar of births and deaths for the Walthamstow district, who produced the register containing the certificate said to be signed by the defendant. As the witness was, however, unable to swear positively that the signature was in the defendant's handwriting, the summons was dismissed; but it is to be hoped that the proceedings will act as a caution to others to be more careful, in signing these certificates, that they contain nothing but what is true, as far as the certifiers know. Our columns have on several occasions lately borne witness to the great laxity which prevails with regard to this matter, and it seems probable that many practitioners are not aware that, by signing false certificates, they render themselves liable to a penalty of fine and imprisonment.

SMALL-POX AND MILK-DISTRIBUTION.

DR. CORNER, the Medical Officer of Poplar, in a recent report to the Sanitary Committee, makes special mention of a case which came under his notice, and which forcibly illustrates how infectious disease may be spread. The inspector of nuisances, in the course of a house-to-house inspection, discovered that four in one family had been ill from small-pox during the previous five weeks. No medical man had attended the first case; nor had anything been done to prevent the spread of the disease, either in the house or out of it. At the time of the inspection, three had the eruption out; and these, it was arranged, should be removed to the *Alms*. The family was in a dirty and deplorably neglected condition. The father had, during the five weeks in question, been in constant work in the employ of a dairyman, delivering milk, the fact of small-pox existing in his family being kept from his employer. He was, of course, suspended from his employment when the facts were reported by the board to the firm; and it is now under consideration whether proceedings shall not be taken against him for contravention of the provisions of the Dairies, Cowsheds, and Milkshops Order of 1879.

TYPHOID FEVER AT CLAPHAM.

SEVERAL cases of typhoid fever have occurred at Clapham; and, a few days ago, a death from the disease occurred at one of the schools in the district. An impression has gained ground that the spread of the disease has been due to an infected milk-supply; and an examination has been made of the drainage of the school, and of the milk-supply. Some minor defects were discovered in the school drainage; but a complete examination could not be made without taking up the floors, which will be done at the breaking up of the school, when the existing defects will be remedied. An inspection of the dairy exhibited no abnormal conditions, the shop and cow-house being found in a clean state, and the water-supply and drainage satisfactory. A portion of the milk was obtained from Umsbury, near Axminster; and the Wandsworth Board of Works, in whose district the outbreak has occurred, have directed inquiries to be made of the Axminster sanitary authority. The attention of the Local Government Board has been called to the outbreak by Mr. Caine, M.P., a resident in the district.

THE LONDON HOSPITAL.

ON Tuesday last, the Duke of Cambridge presented the prizes to the students and nurse probationers of this hospital, in the presence of a large assemblage of ladies and gentlemen. Mr. J. H. Buxton, the chairman of the house-committee, as chairman of the medical college, thanked His Royal Highness for his kindness in coming there that day, and added that their school was in a very flourishing state. The Duke of Cambridge, having presented the certificates to the various recipients, said it gave him great pleasure to do so. The army could not do without a good body of medical men, and, if he could persuade some of his young friends to enter the service, he should have felt that he had done some good work. So far as the army was concerned, he should welcome them in a black coat as much as in a red one. Dr. Andrew Clark moved a vote of thanks to His Royal Highness for presiding, and the motion was carried unanimously. The proceedings then terminated.

HOSPITAL FOR SICK CHILDREN ON PADDINGTON GREEN.

THE hospital accommodation for sick children in the densely populated districts of West and North-West London, has long been felt to be very inadequate to the needs of this part of the metropolis. About twenty years ago, there was opened, in the neighbourhood of the Edgware Road, an institution for the relief of sick and suffering children, known as the North West London Free Dispensary, for Sick Children, which has been supported mainly by funds collected in those districts which it was originally intended to benefit. Patients from all parts of London have also availed themselves of the advantages offered by this dispensary. That this institution should have proved inadequate

to satisfy the wants of this populous district is not surprising, and those charged with the conduct of the dispensary have for some time sought means for converting this dispensary into a children's hospital. One donation of £700 has been received from a lady, and the funds in hand and promised amount to £970. It is estimated that the cost of the premises fixed upon, consisting of two houses at the north-east of Paddington Green, with alterations and furnishing, will amount to £7,000; and the committee are making an earnest appeal for help to enable them to carry out the proposed plan. Subscriptions and donations should be forwarded to the treasurer, Mr. George Hanbury, 21, Portman Square.

CERTIFICATES OF DEATH.

It should be thoroughly understood by students engaged in attending poor women in their confinement, in connection with the metropolitan hospitals to which lying-in charities are attached, that, in the event of the children not surviving—whether from premature birth, low vitality, or any other natural cause—their certificates, however well intended, are valueless as legal documents. Under the circumstances referred to, and where there is no opportunity of the infant being seen when alive by the qualified obstetrician, it is infinitely better that the death should be notified to the Registrar by the nearest relation present at the death, as the Registrar is then at liberty by the Act to register the death as uncertified, and the friends may proceed with the burial. Should the Registrar have reasonable doubts that there has been violence, or should there be any suspicious circumstances connected with the case, he is always at liberty to delay the burial till he has consulted with the coroner. In the cases referred to last week, which were the subjects of an inquest by Mr. Payne, the city coroner, the latter submitted the facts to the Registrar-General, who failed to discover, notwithstanding the finding of the jury and the remarks of the coroner, that anything had been done by the students or the resident accoucheur contrary to the Act, or for which the hospital authorities were responsible. In the face of illegal certificates, signed by unqualified practitioners, and also by medical men who have never seen the patients, it is but natural that the local registrars should be on their guard against deception; at the same time, when the facts attending the birth and speedy death of the child are clear to every one, it is hard that the friends and relatives should be put to an unwarrantable amount of anxiety and delay for want of the medical certificate, which, under the exceptional circumstances mentioned, the law permits them to forego.

THE BACILLUS OF TUBERCLE.

In reply to many questions which have been addressed to us on this subject, we may say the bacilli of tubercle discovered by Dr. Koch are observed with difficulty, if his method of preparation be adopted. Dr. Ehrlich has devised a mode of preparation (published in this JOURNAL, June 17th, 1882), recently modified by Professor Rindfleisch of Würzburg, by which their presence is more easily detected than by any other hitherto made known. In doubtful cases, this mode of preparation may serve as a valuable agent in diagnosis. In treating the sputum of phthisical patients, or the matter resulting from scraping a tubercle, the thin layer necessary for examination is obtained by placing a small quantity of the matter between two cover-glasses, which are gently pressed together, and easily separated by sliding one over the other. The cover-glasses are then gently heated during a few seconds over a gas-flame, or, what is preferable, they are placed in a stove heated at 100° Cent. (212° Fahr.), for the purpose of coagulating the albumen. Afterwards, they are placed in an alkaline solution of fuchsine (the fuchsine used is only soluble in alcohol), or in violet methylaniline prepared as follows. A mixture of five parts of oil of paraffine and four parts of distilled water is well shaken for some time; then filtered through a damp paper. The filtering gives several cubic centimetres of liquid, to which are added some drops of concentrated solution of aniline. This alkaline solution and the cover-glasses are placed in a cup with a glass cover. The cup, with its contents, is kept half an hour in a stove

heated to 40° Cent. (104° Fahr.). The next step is to let the mixture drain off the cover-glasses by gently shaking them. They are then washed in water containing 2 to 3 per cent. of nitric acid, and afterwards in distilled water. The preparation is then mounted in gum dissolved in glycerine, to which is added a small quantity of arsenious acid to prevent the development of fungi; or carefully dried in ordinary Canada balsam, and examined with the Abey illuminating apparatus and homogeneous immersion. Sections of tubercle hardened only in alcohol are treated in the same way, with the necessary modifications.

PORRO'S OPERATION.

On Wednesday, July 12th, Mr. Knowsley Thornton performed this operation at the Samaritan Hospital, on a woman 38 years of age. The patient was in the fourth month of pregnancy and had not quickened. She was much troubled by a large solid abdominal tumour, rapidly increasing in size. It was hoped that the growth might prove to be a dermoid ovarian cyst, in which case it would have been removed and pregnancy allowed to go on to term, if possible, but every preparation was made for removal of the body of the uterus together with the tumour, if such a proceeding were needed, and this proved to be the case. The tumour was found to be a large fibro-myoma, with so broad an attachment to the fundus and part of the right side of the body of the uterus, that its removal, without simultaneous extirpation of the uterus, was quite impracticable. Mr. Thornton therefore determined to perform Porro's operation, and was guided in his decision by the result of a somewhat similar case, in his wards at the Samaritan Hospital, recorded in the *Transactions of the Obstetrical Society of London*, two years since. In this instance he had removed a uterine outgrowth, with a short and broad pedicle, from a pregnant woman about one year older than the patient now under consideration. Labour pains came on within a few hours after the operation, and she was delivered of a stillborn child, dying five days later from peritonitis. In the present case, therefore, Mr. Thornton did not consider it safe to attempt the almost impossible task of removing the outgrowth alone, nor did he deem it justifiable to sew up the abdominal wound and abandon operative procedures, as the tumour was growing with great rapidity. The entire mass, consisting of the pregnant uterus, and the tumour was, therefore, lifted out of the abdominal wound, and a stout wire, attached to a Koeberlé's clamp, was passed round the cervix. The uterus and its fibroid outgrowth were then cut away, the cervix made secure, and the operation completed with the customary precautions. The entire proceeding was conducted on Lister's method. The patient is now recovering without one single bad symptom; the highest temperature (100.2°), and pulse (108) were on the second day; the wound is dressed twice weekly. Should the case recover completely, and at present there appears to be every probability that it will, this will be the first successful case in the British Isles. One case in Scotland, and a second at Queen Charlotte's Hospital (*BRITISH MEDICAL JOURNAL*, vol. II, 1881, p. 994) ended fatally; and Mr. Spencer Wells's remarkable case of removal of a cancerous pregnant uterus, last October, was a combination of the operations of Freund and Porro. For an exhaustive account, with statistical tables, of Porro's operation as performed by foreign surgeons, we can refer to Dr. Alexander Simpson's interesting clinical lecture published in the *JOURNAL* in June, 1881.

THE CONVICT SERVICE.

A CORRESPONDENT writes:—Much has been written and said in your columns about the medical department of the convict service and its required reforms; but it appears never to have occurred to the agitators that, as long as the older members of the convict service maintain their passive and lamb-like attitude, no reforms are likely to take place. The first thing that occurs to an aspirant to convict service honours, is the peculiarity of senior men remaining if affairs are so black as they are painted. The advice of men who are not prepared to back up their words is valueless; for candidates can hardly be expected to trust in the principle, "Don't do as I do, but do as I tell

you." The new order issued to coroners is, indeed, a severe test to the members of the department; and it now remains to be seen if their endurance has a limit or not. The fact that the three senior assistant-surgeons in the service have resigned, shows that some members of our profession have the courage of their opinions; and that "In pace leones, in prælio cervi", cannot be said of them. There are many points in connection with the service that are as yet untouched upon. Let candidates bear in mind that the assistant-surgeon has to attend the families of the warders, in addition to having all the night-work and early morning duty. When it is remembered that, at some stations, there may be nearly two hundred warders, with their wives and families—and warders' wives are remarkably prolific—besides odds and ends in the shape of mothers and other relations living with them—it is not difficult to imagine this attendance alone is well worth the £210 received by an assistant-surgeon. Candidates should also remember that the assistant-surgeon is entirely under the orders of the medical officer. He cannot move without sanction, and his hours of recreation are simply an arrangement between his senior and himself. The kind of life he will lead depends entirely on his medical officer. And, when promotion arrives, is it to be imagined that smooth water is gained? I fear the cases of several senior officers who have recently left the service tell a different tale.

THE OCCUPATION OF ALEXANDRIA.

WE are informed that Deputy Surgeon-General Ekin, with his staff, and the first field-hospital, are under orders to embark at once for Alexandria; three more army medical officers of high rank will start in a few days. Three surgeons-major have already been despatched to Alexandria from the Mediterranean naval stations, namely, Drs. Tolmie and Riordan from Malta, and Dr. Laurence Corban from Gibraltar. The 1st South Staffordshire Infantry Regiment, and the 3rd King's Rifles, now in garrison at Alexandria, have taken with them all necessary hospital arrangements. In the event of hostilities breaking out—that is to say, if an expedition be really undertaken to attack Arabi Pacha in the interior of Egypt, over and above the mere "police precautions" implied by the present occupation of Alexandria—the barracks at the island of Gozo, in the Maltese group, will be converted into a permanent hospital, and another hospital will be ready at Cyprus. Appliances for the conveyance of the sick and wounded, from the seat of war to the Cyprus and Gozo hospitals, have been prepared, and are now in readiness for immediate use, if required; and a number of litters for the sick and wounded are in course of construction in England. No sick or wounded naval officers, or blue jackets, are on shore at Alexandria, and all wounded at the bombardment will be sent to Malta, when their medical officers on the Fleet consider that they have sufficiently recovered from their injuries to bear removal from their ships with impunity. No mail has as yet arrived, nor have any telegrams been received bearing details of the injuries which proved fatal to Lieutenant Jackson, and the other members of the Royal Navy who were killed last week during the operations of the British iron-clads against the forts of Alexandria. The following is, as we are informed, a correct list of the navy medical officers present at the bombardment. H.M.S. *Invincible*: Fleet-Surgeon S. Sweetman, Surgeons C. Pearson and M. Digan; H.M.S. *Alexandra*: Fleet-Surgeon D. M. Shaw, Surgeons J. C. B. Maclean and C. A. Macaulay; H.M.S. *Téméraire*: Staff-Surgeon J. Buckley, Surgeons H. E. F. Cross and W. Tait; H.M.S. *Monarch*: Fleet-Surgeon M. Rodgers, Surgeons W. Brown and R. McIvor; H.M.S. *Inflexible*: Fleet-Surgeon H. M. N. Sedgwick, Surgeon C. Drake; H.M.S. *Superb*: Fleet-Surgeon D. O'Connor, Surgeons A. R. Joyce and J. A. M'Adam; H.M.S. *Sultan*: Fleet-Surgeon G. Mair, Surgeons T. J. Preston and J. W. Eames; H.M.S. *Condor*: Staff-Surgeon W. H. Putsey; H.M.S. *Cygnet*: Surgeon H. W. D. Walsh; H.M.S. *Decoy*: Surgeon F. Williamson; H.M.S. *Helicon*: Surgeon G. W. Bell; H.M.S. *Penelope*: Staff-Surgeon E. Meade, Surgeon G. Smith; H.M.S. *Bittern*: Surgeon J. W. Davis; H.M.S. *Beacon*: Surgeon C. W. Hamilton.

THE HARVEIAN ORATION.

DR. GEORGE JOHNSON'S recently delivered Harveian oration has been published in book form, and deserves careful perusal by all who desire to follow up the controversy now being carried on by English and Italians respecting the share which Harvey and Cesalpino respectively had in the discovery of the circulation of the blood. The full abstract of the oration, which appeared in the *BRITISH MEDICAL JOURNAL* for the 1st inst. (p. 4), will have already given our readers a very fair account of Dr. Johnson's arguments. Those who wish to read the *ipsissima verba* can now do so at their leisure. The oration consists of a refutation of the arguments adduced by Dr. Ceradini, Professor of Physiology in the University of Genoa, in favour of the position maintained in some circles in Italy that "Cesalpino was, and that Harvey was not, the actual discoverer of the circulation of the blood." Dr. Johnson quotes, as fully as possible, the chief statements and arguments upon which Dr. Ceradini relies to establish his position, and refutes each in turn quite easily and completely. Dr. Ceradini asserts that Harvey, during his studentship at Padua, must have become acquainted with Cesalpino's writings, and have seen therein the true doctrine of the circulation of the blood clearly set forth and completely demonstrated. In reply, Dr. Johnson remarks that "however diligent may have been Harvey's study of Cesalpino's writings, he could never have obtained from them that which is not to be found therein, viz., a knowledge of the circulation of the blood, and that those who pretend to find in these writings the true doctrine of the circulation, endeavour to establish their position by giving to some chance expressions a meaning which the context shows could never have been in the mind of their author. While interpreting Cesalpino's vague and contradictory statements by the light of Harvey's researches, they ungratefully turn upon the real discoverer and accuse him of conscious plagiarism." Again Fabricius, Italy's eminent anatomist, thirty years after the publication of Cesalpino's work, and twenty-five years before Harvey's works saw the light, "had not," as Dr. Ceradini admits, "the most remote idea of a circulation of the blood." The greater portion of Dr. Johnson's very interesting oration is occupied with extracts from Cesalpino's works, quoted by Dr. Ceradini to establish his position, and with Dr. Johnson's excellent confutation thereof. Then follows other passages from Cesalpino's writings, not quoted by Dr. Ceradini, but which, as Dr. Johnson deems, "show most conclusively that Cesalpino could have had no idea of a continuous flow of blood from the systemic arteries to the veins on its way back to the heart." Dr. Johnson concludes with a passage from Harvey's writings, which speaks of the circulation clearly, distinctly, and intelligibly, and he expresses gratitude to Italy for having given our celebrated countryman the anatomical training, without which he could not have made his great discovery. Men of science of all nationalities who reverence the truth—not Englishmen alone, will be thankful to the Harveian orator of this year for his earnest endeavour to reinstate Harvey on that pinnacle of fame from which national jealousies would seek to oust him. We trust that the effect of the oration may be to still for the future these unworthy attempts to rob the great physiologist of his due.

SCOTLAND.

DEATH OF EX-PROFESSOR DICKIE.

DR. GEORGE DICKIE, Emeritus Professor of Botany in the University of Aberdeen, died at his residence, Aberdeen, on the 15th inst.

THE MEASLES EPIDEMIC IN ABERDEEN.

From the report of the Medical Officer of Health for Aberdeen, it seems that during the past month there have been 304 cases of measles in the city, against 463 the previous month, but the decrease in numbers is not accompanied by a corresponding decrease in the fatality, which has been rather larger.

THE GIBSON HOSPITAL, ST. ANDREW'S.

THE foundation-stone of the Gibson Hospital, St. Andrew's, was laid on July 12th, with suitable ceremony. The building will, when completed, be two storeys in height, the frontage to the south will be 100 feet, and to the west and east respectively 61 and 70 feet. From the centre of the south front will rise a tower 80 feet in height. The interior arrangements will be handsome and very convenient, and there will be provision for eighteen inmates, each having a separate room. It is intended for the reception of aged, sick, and infirm poor. The funds for its erection and maintenance were left by the late Mr. Gibson of Duloch.

THE CHARGE OF CULPABLE HOMICIDE AGAINST AN ASSISTANT.

THIS case, which was alluded to in the *JOURNAL* of July 8th, was tried on the 12th instant. The charge was that of having recklessly and culpably administered to the deceased person an overdose of solution of morphia, whereby she died within fourteen hours. It appears that the accused was called to see the deceased, who was suffering from cramp in the stomach, and he administered to her, by hypodermic injection, from twelve to fifteen minims of solution of morphia, whereby death resulted in about fourteen hours afterwards. The accused pleaded guilty, and showed that the fatal consequences resulted from an unfortunate mistake. A fine of £20 was imposed, or one month's imprisonment. Such cases are instructive as a warning to all medical men to be sure of the exact strength of the hypodermic solutions they are employing.

ASSAULT ON DR. WHITELAW.

A NEW invention in the way of robbing the medical profession has just been reported to us from Kirkintilloch. It appears that on the 18th instant, at about eleven o'clock at night, a respectably dressed woman called at the residence of Dr. Whitelaw, and stated that he was wanted professionally half a mile beyond the burgh. After interrogating the woman, Dr. Whitelaw at once accompanied her. On approaching a secluded part of the road, he was suddenly set upon by two men and knocked down, one of them inflicting a severe kick upon the ankle, splintering the bone and dislocating the ankle-joint. His assailants at once proceeded to rifle his pockets; the woman, who was apparently an accomplice, assisting to hold him down. Fortunately, the only property Dr. Whitelaw had about him was a pocket-thermometer, a pocket-knife, and 7½d. in cash, as he had fortunately laid aside his gold watch and chain. When the thieves discovered that this was all that he had, they threatened to shoot him, but finally decamped, leaving their victim lying in the road. After a time, he managed to get up and crawl a distance of about 300 yards, where he got assistance and was carried home, and Dr. Stewart was called to attend to his injuries. The police, who were of course apprised of the occurrence, have not yet succeeded in finding the culprits. Much sympathy is naturally felt for Dr. Whitelaw, who is highly esteemed in the locality. It is discouraging to have to chronicle a case which foreshadows another danger to the hard-worked country practitioner, who so frequently is called to the practice of his art under difficulties of darkness, bad roads, and bad weather. The necessity of, as far as possible, ascertaining if calls to localities at a distance are *bonâ fide*, especially after dark, will doubtless be attended to by our country brethren.

IRELAND.

THE nomination of candidates for the vacant coronership of the Queen's County, took place at the Court House, Maryborough, last week. Mr. Dunne and Dr. Higgins were nominated, and a show of hands being in favour of the latter, a poll was demanded, and the election will be held this week.

ROYAL UNIVERSITY OF IRELAND.

At a meeting of the Senate, held on the 13th instant, degrees in medicine and surgery were conferred by the Vice-Chancellor. Twenty-nine

gentlemen obtained the degrees of doctor in medicine and master of surgery respectively, and fourteen the diploma in obstetrics. At the recent examinations, fifty-two passed the second examination in medicine, and seventy-four the first examination in medicine.

LIGATURE OF THE INNOMINATE ARTERY.

On Sunday, July 16th, Mr. Thomson's case appeared to be progressing very favourably, the patient himself stating that he had never felt so well since the operation as on that day; but on Monday, the thirty-ninth day, at 3 A.M., violent and copious hæmorrhage occurred. It was controlled by shot-bags, which still remain over the seat of operation. On Thursday afternoon, the patient had rallied considerably. The patient, having lived to the forty-second day, has outlived all similar cases excepting Gräfe's, which lived sixty-seven days.

CHANGES IN THE DUBLIN HOSPITALS.

In consequence of the election of Dr. J. Magee Finny to the King's Professorship of Medicine, and to the Physicancy to Sir Patrick Dun's Hospital, it is understood that he will resign his post as Physician to the City of Dublin Hospital. For the vacancy about to be made there are already several candidates in the field, one of the number being Dr. George F. Duffey, Physician to Mercer's Hospital. Dr. Macan, Gynæcologist to the City of Dublin Hospital, will, it is expected, succeed Dr. Atthill as Master of the Rotunda Lying-in Hospital, on the termination of Dr. Atthill's seven years' tenure of office next November. This appointment would cause another change in the staff of the City of Dublin Hospital.

CHARGES AGAINST A MEDICAL OFFICER.

In consequence of some charges of neglect brought against Dr. J. Bellow Kelly, Medical Officer of St. Peter's Dispensary District, Drogheda, a sworn inquiry was held by an Inspector of the Local Government Board, and last week the Dispensary Committee received a communication from the Board in reference to the evidence tendered at the inquiry. The complaints were that Dr. Kelly was guilty of neglect of duty in certain cases in which visiting tickets had been issued; that he had used abusive language, and had employed an unqualified medical practitioner to attend his dispensary patients. On a review of the evidence, the Board considered that Dr. Kelly had frequently employed the services of a Mr. Hamilton to visit patients that he was bound to have attended in person, and they requested that he should be informed that he had no authority to delegate his official duties to any other person.

ROTUNDA LYING-IN HOSPITAL: FATAL ACCIDENT TO A MEDICAL STUDENT.

An inquest was held last week, at the Rotunda Lying-in Hospital, on the body of John George Ryall, who was killed on the 12th instant, at the hospital, by a revolver, which he had with him, accidentally going off. The coroner, in referring to the occurrence, said that the deceased was under the impression that a revolver was necessary for his protection at night. This was another instance of the folly of carrying loaded firearms, which were not only a source of danger to the person carrying them, but also from the chance there might be of using them under the influence of passion. Dr. Horne, assistant-master, deposed that he went into the ward on the previous night where Mr. Ryall was on duty, in company with Mr. Gordon. Witness was leaving the ward, when he heard a slight report; and, on turning back, saw the deceased rush from his chair into the middle of the ward and fall, death taking place soon afterwards. Mr. Gordon stated that Mr. Ryall took the revolver out of his pocket to show it to witness, and in a few minutes took it back; the revolver was carried in what was thought to be the safest manner—namely, five chambers loaded, and the trigger down on the empty one. How the revolver exploded, it is impossible to ascertain; but it ought to be a warning to all carrying loaded firearms.

HISTORICAL SKETCH OF THE PROCEEDINGS OF THE BRITISH MEDICAL ASSOCIATION REGARDING MEDICAL REFORM.

PART I.

THE British Medical Association, in the earliest days of its existence, evinced an interest in Medical Reform; and, at the second meeting of the Association, held at Bristol in 1833, an address was read by Dr. Barlow, in which the subject was discussed. The address was printed separately, and freely circulated amongst the profession as well as amongst the members of the Association.

In 1837, the Association appointed a Committee to watch over the interests of the profession. In 1839, the Committee presented an elaborate report to the annual meeting. They referred to the fact that in March 1834 a Committee of the House of Commons was appointed "to inquire into and consider the laws, regulations, and usages regarding the education and practice of the various branches of the medical profession in the United Kingdom". The evidence relating to the London Colleges of Physicians and Surgeons, and the Apothecaries' Company, was published soon afterwards; but that derived from the provincial medical faculty in England, from the Universities, and from the medical profession in Scotland and Ireland, had not yet appeared; possibly, in consequence of the records of the Committee having been damaged by the fire which destroyed the Houses of Parliament in October 1834. The Committee of the Association therefore considered what other course of proceeding could be resorted to for accomplishing the needed reforms in the profession; and they expressed the opinion that the plan laid down in the regulations for degrees in medicine of the recently instituted University of London, while it provided an improved qualification for the individual practitioner, also prepared the way for the still higher object of insuring perfect competency in the entire body, and in every department. . . . "According to this plan, the Bachelors of Medicine would be the general practitioners of the kingdom, qualified by their education to practise every branch of their art. The Bachelors who should look only to obtaining a legal qualification to practise with public attestation of their competency, would be content so to remain, while the more ambitious would advance to the degree of doctor." The Committee, however, explained that it was not the actual plan of the London University that they recommended; but "all that they asked was, that, instead of having sixteen modes of entering the profession, only one should be adopted; and that, when an entrance was effected, the students should all stand upon an equality." A form of petition was agreed on, praying that "the necessary legislative enactments may be passed for establishing in each of the three divisions of the kingdom one superintending body, founded on the same principles and governed by similar regulations, through whose examination, and by whose licence alone, shall admission to the profession be in future attained." Power was also given to the Central Council to act on behalf of the Association in presenting petitions to Parliament, or adopting such other measures as might be necessary.

In 1840, a Bill was introduced by Mr. Warburton, Mr. Wakley, and Mr. Hawes, which, *inter alia*, embraced provisions for the election of representatives of the profession in the proposed General Medical Council.

In pursuance of the instructions given at Southampton, the Central Council of the Association, on November 21st, 1840, resolved: "That it is expedient to appoint delegates on behalf of the Association to watch the progress of any measure having for its object medical reform, and to confer with delegates who may be appointed by other associations for a like purpose." Dr. Forbes of London, and Dr. Barlow of Bath, Dr. Macartney, late of Dublin, Dr. Cowan of Reading, Mr. Crosse of Norwich, Mr. Ceely of Aylesbury, and Mr. Wickham of Winchester, were accordingly appointed. In February, a conference of medical reformers was held in London, which was attended by all the delegates except Dr. Barlow and Mr. Crosse, and certain clauses were passed, which were understood to form the basis of a Reform Bill. In the course of the month, five of the delegates resigned; and the Council of the Association stated that they did not consider themselves pledged to any Bill which may have been adopted by the conference. Subsequently, the Council entered into communication with the three medical corporations in London, and declared as their opinion, that no measure of reform would be satisfactory which did not provide due protection to the members of the profession; and that no measure would meet the approbation of the profession at large which did not recognise the

propose to enter the profession, previously to their being entitled to claim admission to register in any other grade. The Association disapproved of that part of the Bill which proposed to abolish all restriction on the practise of medicine by unqualified and unlicensed persons; and considered the proposed constitution of a 'Council of Health' as deficient in not affording express representation, either of the physicians and surgeons resident in the provinces, or of the great body of general practitioners throughout the country. In the absence of any provision for the admission of the general practitioners into a participation, on terms honourable to that body, in the corporate privileges of either of the Colleges of Physicians and Surgeons, it appeared essential to the well-being of this numerous and influential body, as well as beneficial to the public interests, that they should be incorporated together, and that the interests of such corporation should be adequately represented in the proposed Council of Health."

At the annual meeting in 1846, the Council of the Association expressed the opinion that, as the proposal for a registration of all qualified practitioners, in the Bill introduced by Sir James Graham in 1844, met with very general approbation, great benefit would result from the immediate carrying out of such a measure, which would not in any way interfere with the adoption of the more extended measures long advocated by the Association. It was resolved: "That a Committee be appointed to advise with the Council in any proceedings which might be necessary to advance the progress of medical reform, and especially to consider the subject of establishing a registry of medical men, and the propriety of memorialising the Home Secretary on the general question." The Committee consisted of Dr. Lyon (Manchester), Mr. Soden (Bath), Mr. Martin (Reigate), Dr. Chambers (Colchester), Mr. Bree (Stowmarket), Dr. Radford (Manchester), and Mr. Norman (Bath). They at once met, and drew up a petition to both Houses of Parliament, to the following effect: "That your petitioners, having been informed of a Bill introduced into your honourable House, entitled 'a Bill for the Registration of the Legally Qualified Practitioners in Great Britain and Ireland', pray that your honourable House will be pleased to pass the same, or some Bill to the same effect, that it may become a law." The Bill referred to was one which was introduced by Mr. Wakley and Mr. Warburton. The petition was adopted; and the Bishop of Norwich, who was present at the meeting, agreed to present it to the House of Lords. The petition to the House of Commons was ordered to be sent to the Home Secretary, Sir George Grey. The petition was duly presented, but, from the late period of the session at which the Bill was brought forward, the measure was not then proceeded with. The Council of the Association, with the concurrence of the Committee appointed at Norwich to advise with them on this subject, addressed a memorial to Sir George Grey, during the recess, explaining the leading principles adopted by the Association in reference to medical reform, and urging the immediate adoption of a registration on some simple and comprehensive plan of all duly qualified medical practitioners resident in the United Kingdom, as a preliminary measure to further changes. Early in the session of Parliament, the Council, through the good offices of Sir Denis Le Marchant, then one of the members for the city of Worcester, succeeded in obtaining an interview with Sir George Grey for a deputation, consisting of the President of the Association, Mr. Crosse, and the President of the Council, Dr. Hastings, accompanied by Sir Denis Le Marchant. The deputation were instructed to impress the principles adopted by the Association, and hitherto acted on in all their reports and published documents, and at the same time to point out the advantages of the registration as a preliminary measure to the present consolidation and future improvement of the great mass of the profession; the importance of an uniform and efficient primary qualification in every branch of medical science to be required from all entering the profession, together with the adoption of the representative system in the constitution of the several governing bodies of the corporate institutions. In compliance with a suggestion made by Sir George Grey to the deputation, the Council endeavoured to obtain a conference with other bodies interested, or which had been active, in the discussion and settlement of these several questions, the right honourable baronet himself undertaking to bring forward and support such a general measure as might be agreed upon by all parties. This endeavour proved ineffectual.

No event of importance in connection with medical reform, on the part of the Association, occurred until March 1850, when the Council at Worcester, having received several communications urging them to take further means of bringing before the Secretary of State the principles advocated by the Association, requested the Branches to give their opinion on the best mode of carrying those principles into effect. Most of the Branches met, and adopted resolutions which were very similar in purpose. A memorial was accordingly founded on them,

which might be taken as embodying the sentiments of a large majority of the Association. The memorial set forth that "the only principles that will be satisfactory are—uniform and sufficient qualification in every branch of medical science; equal right for all so qualified to practise throughout Her Majesty's dominions; and the adoption of the representative principle in the formation of the Councils or governing bodies." The memorialists asked that the Colleges of Physicians and Surgeons should be remodelled in accordance with this principle; and that, after such remodelling, there should be formed a joint board of physicians and surgeons, with the aid, if necessary, of examiners in midwifery and pharmacy, to examine all candidates for admission to the medical profession, and grant licences to practise; further titles being obtainable, after examination, from the Colleges. The memorialists expressed disapproval of the proposed formation of a new "College of General Practitioners", which was then contemplated by some; but they admitted that a considerable section of the Association looked on the formation of such a college as a last resource. In concluding, the memorialists prayed for the granting of new charters to the Colleges of Physicians and Surgeons, on the principles above defined; and also, that the Secretary (Sir George Grey) would "introduce such a Bill during the present session of Parliament as will carry into effect the education and examination of all the surgeons engaged in general practice, by means of the existing institutions."

It does not appear that this memorial was followed by any result; and nothing worthy of note occurred until the end of 1851, when the Association entered on a series of new and important efforts in the cause of medical reform.

THE LONDON AMBULANCE SERVICE.

A MEETING of the Committee of the London Ambulance Service was held on the 12th instant at the Charing Cross Hotel; Sir Edmund Henderson (chief of police), Sir William Robinson, Dr. Benjamin Howard, Mr. Timothy Holmes, Mr. Crossman, and others, being present.

Mr. CROSSMAN (the Chairman of the Committee) reported the satisfaction which in all cases had attended the use of the Howard ambulance carriage, especially for long distances, and of the ingenious stretcher accompanying it for shorter distances. The donations from the *beneficiaries* are very encouraging. It had been found that the general hospitals, for the greater part, felt themselves too poor to work the ambulances from themselves as centres. The chairman, in company with Dr. Benjamin Howard, had therefore, under the auspices of the Chief Commissioner of the Police Department, made an extensive tour amongst the various police-stations, and, in connection with Sir Edmund Henderson, had selected fifteen of them for immediate adoption as ambulance-stations. This plan had, without exception, been found a very welcome one to the policemen and officials, all of whom had testified to the great need of some such arrangement. For the prosecution of this plan it was resolved to ask for public subscriptions of £2,000.

The report and resolution were adopted unanimously.

Sir EDMUND HENDERSON spoke of the present very inadequate provision by the police stretcher and wheelbarrow litter, and that, especially for the more distant stations, the horse ambulances would be simply invaluable. On his part, he could assure them, nothing would be wanting to make the plan as effective as possible.

Mr. TIMOTHY HOLMES spoke of the great satisfaction the Howard ambulance had afforded within his own knowledge, and of the expediency of pushing forward the proposed operations without delay.

Dr. BENJAMIN HOWARD referred to the fact, as shown on a chart before him, that the police-stations selected for ambulance-stations were on or about a four mile circumference around Charing Cross, and would thus meet just the special exigencies of three to six or eight mile distances to the nearest general hospital. Though he hoped for a purely municipal system, he thought it best to do at once what had thus been found immediately practicable, and look to better development afterward. Dr. Howard spoke of St. Bartholomew's Hospital as having exceptional opportunities for the establishment of an ambulance service in the best form, and with least trouble. It had the funds; it was the natural source of such work for the City of London proper. Sir Sydney Waterlow, the Treasurer, both understood and appreciated the system. Coloner Frazer, the Chief of the City Police, was in full sympathy. From his interviews with both these gentlemen, he had no little hope that St. Bartholomew's would seize its opportunity with energy.

A communication from Glasgow showed that the Ambulance Committee—which arose in the wake of the London Committee—had shot

quite ahead in its completeness of organisation and working. By means of the telegraph and telephone, the Howard Ambulance has reached the scene of call, eight miles distant, within fifty minutes of the sending the message, and three mile calls within twenty minutes. The Secretary adds, that all the officials speak of the Howard ambulance carriage in the highest terms, and say that the faster it goes the easier is it for the patient.

The Reading authorities have sent a Committee to London to examine whatever they could find in the ambulance line. They exclusively reported in favour of the Howard ambulances; and one of these, built for their use, is now on view at the Alexandra Palace Life-saving Exhibition, prior to being forwarded to the Reading General Hospital.

ASSOCIATION FOR THE ADVANCEMENT OF MEDICINE BY RESEARCH.

THE following are additional subscriptions since the last announcement:—Dr. Cholmeley, £2 2s.; Mr. Prescott Hewett, £52 10s.; Dr. Bull (Worcester), £1 1s.; Mr. Clinton Dent, £5 5s.; Mr. Laidlaw Purves, £5 5s.; Dr. Wilson Fox, £10; Dr. C. J. B. Williams, £10 10s.; Dr. Burke Shepherd, £5 5s.; Mr. John Marshall, £10 10s.; Dr. Donkin, £1 1s.; Dr. Bowles (Folkestone), £5; Dr. Lucas (Bombay Army), £1 1s.; Dr. Balthazar Foster, £20; Dr. Andrew Clark, £100; Dr. J. F. Payne, £10 10s.; Dr. Arthur Gamgee, £2 2s.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE annual report of the receipts and expenditure of the Royal College of Surgeons from Midsummer-day 1881 to Midsummer-day last was submitted to the Council of the College on Thursday last. From this summary, it appears that the receipts amounted to £18,578 2s. 11d., derived principally from fees paid by the students on their different examinations at the College. The preliminary examinations for Membership and Fellowship yielded nearly one thousand pounds; this is now lost to the institution. The amount received for primary and pass examinations for the Membership was £13,191 3s.; for the Fellowship, £1,172; for the licence in dental surgery, £294. The receipts from members on their admission to the Fellowship, once such a profitable source of income, now only yielded £52 10s. The payments made by Fellows on their admission to the Council and Court of Examiners amounted to £63. The rent of chambers adjoining the College, a wise investment on the part of the Council, amounted to £1,523 14s. 6d. The expenditure was £17,272 2s. 5d., the largest item being in fees paid to Boards and Courts of Examiners and Council, amounting to £7,092 8s. 6d.; the next largest amount is for salaries and wages to the large staff of officers and servants in the three departments of museum, library, and office, viz., £4,122 15s. For rates, taxes, and diploma stamps, the large sum of £1,525 10s. 8d. was required. In the extraordinary expenditure, there appears the sum of £278 10s. 8d. for the *conversazione* to the members of the International Medical Congress. To the respectable balance at the bankers of £2,158 19s. 7d. is now to be added the Bradshaw legacy of £1,000. Altogether, the report is of a very satisfactory character.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL:

NOTICE OF QUARTERLY MEETINGS FOR 1882: ELECTION OF MEMBERS.

MEETING of the Committee of Council will be held on Wednesday, October 18th. Gentlemen desirous of becoming members of the Association must send in their forms of application for election to the General Secretary not later than 21 days before each meeting—viz., September 27th, in accordance with the regulation for the election of members passed at the meeting of the Committee of Council of October 12th, 1881.

November 4th, 1881. FRANCIS FOWKE, General Secretary.

COMMITTEE OF COUNCIL.

NOTICE OF MEETING.

A MEETING of the Committee of Council will be held in the Council Room of the Guildhall, Worcester, on Tuesday, the 8th day of August next, at a quarter past two o'clock in the afternoon.

FRANCIS FOWKE, General Secretary.
161A, Strand, London, July 18th, 1882.

GRANTS FOR SCIENTIFIC RESEARCH.

The Scientific Grants Committee of the British Medical Association desire to remind members of the profession engaged in the researches for the advancement of medicine and the allied sciences, that they are empowered to receive applications for grants in aid of such research. Applications should be made without delay to the General Secretary, at the office of the Association, 161A, Strand, W.C., and must include details of the precise character and objects of the research which is proposed.

BRITISH MEDICAL ASSOCIATION: FIFTIETH ANNUAL MEETING.

THE Fiftieth Annual Meeting of the British Medical Association will be held at Worcester, on Tuesday, Wednesday, Thursday, and Friday, August 8th, 9th, 10th, and 11th, 1882.

President: BENJAMIN BARROW, F.R.C.S., Consulting-Surgeon to the Royal Isle of Wight Infirmary.

President-elect: WILLIAM STRANGE, M.D., Senior Physician to the General Infirmary, Worcester.

An Address in Medicine will be delivered by W. F. WADE, F.R.C.P., Physician to the Birmingham General Hospital.

An Address in Surgery will be delivered by WILLIAM STOKES, M.D., F.R.C.S.I., Professor of Surgery in the Royal College of Surgeons, Ireland.

The business of the Association will be transacted in Eight Sections, viz.:

SECTION A. MEDICINE. (Council Room, Guildhall.)—*President:* Thos. Clifford Allbutt, M.D., F.R.S. *Vice-Presidents:* George W. Balfour, M.D.; William Henry Broadbent, M.D.; G. H. Philipson, M.D.; *Secretaries:* Edwin Rickards, M.B., 14, Newhall Street, Birmingham; H. Ashby, M.D., 13, St. John Street, Manchester.

SECTION B. SURGERY. (Recorder's Court, Guildhall.)—*President:* Augustin Prichard, F.R.C.S. *Vice-Presidents:* T. W. Walsh, F.R.C.S.; Reginald Harrison, F.R.C.S.; T. H. Bartleet, M.B., F.R.C.S. *Secretaries:* F. E. Manby, F.R.C.S., 10, King Street, Wolverhampton; Richard Clement Lucas, M.B., F.R.C.S., 18, Finsbury Square, E.C.

SECTION C. OBSTETRIC MEDICINE. (Committee Room Assembly Room, Guildhall.)—*President:* William Leishman, M.D. *Vice-Presidents:* Henry Vevers, M.R.C.S.; J. G. Sinclair Coghill, M.D.; Arthur W. Edis, M.D. *Secretaries:* C. J. Cullingworth, M.D., 25, St. John Street, Manchester; Tom Bates, L.R.C.P., Worcester.

SECTION D. PUBLIC MEDICINE. (Civil Court, Shire Hall.)—*President:* Alfred Carpenter, M.D. *Vice-Presidents:* Alfred Hill, M.D.; Horace Swete, M.D.; E. T. Wilson, M.B. *Secretaries:* Geo. Haynes Fosbroke, jun., M.R.C.S., Bidford, Redditch; Francis Edward Atkinson, L.R.C.P., Settle, Yorkshire.

SECTION E. ANATOMY AND PHYSIOLOGY. (North Wing Committee Room, Guildhall.)—*President:* George M. Humphry, M.D., F.R.S. *Vice-Presidents:* S. S. Roden, M.D.; Frank Payne, M.D.; Gerald Yeo, M.D. *Secretaries:* J. B. Haycraft, M.D., Mason's College, Birmingham; James Shuter, M.B., F.R.C.S., 58, New Broad Street, London.

SECTION F. PATHOLOGY. (South Wing Committee Room, Guildhall.)—*President:* J. Hughlings Jackson, M.D., F.R.S. *Vice-Presidents:* W. R. Gowers, M.D.; H. T. Batho, F.R.C.S.; Wm. Smith Greenfield, M.D. *Secretaries:* Sidney Coupland, M.D., 14, Weymouth Street, London; F. Treves, F.R.C.S., 18, Gordon Square, London.

SECTION G. OPHTHALMOLOGY. (North Wing Committee Room, Shire Hall.)—*President:* James Vose, F.R.S. *Vice-Presidents:* David Everett, F.R.C.S.; Frederick Mason, M.R.C.S.; Edwin Andrew, M.D. *Secretaries:* Geo. Edwin Hyde, L.R.C.P., Worcester; J. A. Nunneley, M.B., 22, Park Place, Leeds.

SECTION H. OTOTOLOGY. (City Grand Jury Room, Shire Hall.)—*President:* W. Laidlaw Purves, M.D. *Vice-Presidents:* Geo. P. Field, M.R.C.S.; A. H. Jacob, M.D.; E. Cresswell Haber, M.B. *Secretaries:* J. J. Kirk Duncanson, M.D., 22, Drumshough Gardens, Edinburgh; Peter McBride, M.D., 20, Alva Street, Edinburgh.

Honorary Local Secretaries: George W. Crowe, M.D., Shaw Street, Worcester; H. C. Moore, M.R.C.S., 7, King Street, Hereford; Thelwell Pike, M.D., 2, Montpellier, Great Malvern.

Honorary Treasurer: G. A. Sheppard, M.R.C.S., Worcester.

(Committee Room off As-

sembly Room, Guildhall.)

Ten o'clock in the morning.

WEDNESDAY, AUGUST 9TH. (Jubilee day.)

9.30 A.M.—Meeting of Council of 1882-83. (Council Room, Guildhall.)

11 A.M.—Second General Meeting. Address in Medicine.

1.30 P.M.—Luncheon given by the Worcester and Hereford Branch to Members of the Association (limit d to 500), and afterwards presentation of bust of Sir Charles Hastings to the Mayor and Corporation of Worcester. (Great Hall, Shire Hall.)

11.50 P.M.—Sectional Meetings.

7.45 P.M.—Special Service in the Cathedral, at which, by permission of the Dean, Haydn's Sacred Oratorio, "The Creation", will be performed by the Philharmonic Society, assisted by members of the Worcester, Gloucester, and Hereford Choirs, and conducted by W. Done, Esq., Organist to the Cathedral.

THURSDAY, AUGUST 10TH.

9 A.M.—Meeting of the Committee of Council. (Committee Room off Assembly Room, Guildhall.)

10 A.M.—Third General Meeting. Reports of Committees. (Assembly Room, Guildhall.)

11 A.M.—Address in Surgery. (Assembly Room, Guildhall.)

2.10 P.M.—Sectional Meetings.

6.30 P.M.—Public Dinner. Tickets will not be issued later than twelve o'clock on the day of the dinner. (There will be two kinds of dinner ticket: one for those who take wine, and the other for abstainers; 21s. and 14s. each.) (Assembly Room, Guildhall.)

FRIDAY, AUGUST 11TH.

9.30 to 11.30 A.M.—Sectional Meetings.

11.30 P.M.—Concluding General Meeting. Reports of Committees. (Assembly Room, Guildhall.)

3 P.M.—Garden Party, at Madresfield Court, Great Malvern, given by the Lord-Lieutenant and the Countess Beauchamp.

9 P.M.—Soirée of the President and G. W. Hastings, Esq., M.P.

SPECIAL NOTICE.

MEMBERS intending to be present are requested to fill up the form inside the JOURNAL of this week, and stamp and post without delay, intimating at the same time if they intend to bring ladies with them.

SECTION A.—MEDICINE.

1. Dr. W. S. Playfair will open a discussion on the Systematic Treatment of Aggravated Hysteria and allied forms of Neurasthenic Disease.

2. Dr. Balfour on Chlorotic Murmurs.

3. Dr. Leech on the Treatment of Cardiac, Hepatic, and Renal Dropsy.

The following papers also have already been promised.

EYERS, J. W., M.D. The Previous Symptoms in cases of Perforation of the Bowel in Enteric Fever.

DRUMMOND, D., M.D. Auscultation of the Trachea and Mouth in the Diagnosis of Thoracic Disease.

DRYSDALE, C. R., M.D. Treatment of Phthisis by Alpine and Marine Climates.

FLINT, Austin, M.D. The Self-limited Duration of Pulmonary Disease.

HOVELL, D. De Berdt, Esq. The Latent Effects of Shock.

KNOTT, J. F., L.K.Q.C.P. Charcot's Disease of Joints.

LEDIARD, H. A., M.D. A Test for Iodine in the Body.

LITTLE, J. Fletcher, Esq. 1. Neurotic Arthritis. 2. Medical Rubbing.

MALET, Henry, M.D. The Physical Differences between Binaural and Uniaural Stethoscopy.

RALFE, C. H., M.D. Solvent Treatment of Renal Calculi.

RICKARDS, E., M.B. Chorea and its relation to Rheumatism.

SAUNDY, R., M.D., and EALES, H., Esq. The Ophthalmoscopic Appearances in Anæmia.

SEDGWICK, W., Esq. The Extended Influence of Atavism in Hereditary Disease.

SMITH, R. Shingleton, M.D. Two Remarkable Cases of Locomotor Ataxy: with Anomalous Symptoms.

STURGES, Octavius, M.D. The Province of Therapeutics outside the Pharmacopœia.

THIN, George, M.D. A Further Contribution to the Treatment of Alopecia Areata.

THOMAS, W. R., M.D. Jaundice.

WARNER, Francis, M.D. The Study of the Face as an Index of the Brain.

WILLIAMS, C. Theodore, M.D. The Contagion of Phthisis.

The following gentlemen have promised to take part in the discussions: Dr. McCall Anderson (Glasgow), Dr. W. Carter (Liverpool), Dr. Austin Flint (New York), Dr. F. T. Roberts (London), Dr. W. R. Thomas (Sheffield), Dr. Ross (Manchester).

SECTION B.—SURGERY.

1. Mr. J. Greig Smith will open a discussion on Early Operative Treatment of Joint-disease as a Preventive of Excision, in which it is hoped the influence of Antiseptics in Excisional Surgery will be discussed. Mr. Henry Morris (London), Mr. Pridgin Teale (Leeds), Mr. J. F. West (Birmingham), and Mr. Eddowes (Shrewsbury) will take part in the discussion.

2. Mr. Howard Marsh will open a discussion on Bone-setting. Mr. B. Roth will take part in the discussion.

The following papers have been promised.

ADAMS, W., Esq. On the Selection of Cases for Forcible Movement in the Treatment of Stiff Joints; and the method of procedure.

BANKS, W. Mitchell, M.D. 1. The free removal of Cancerous Mammary with thorough clearing out of the Axilla. 2. The Radical Cure of Hernia by Removal of the Sac and Stitching together the Pillars of the Ring.

BARTLETT, T. H., M.B. On the Ligature of Large Arteries: with Cases.

BARWELL, R., Esq. On Boro-glyceride in Surgical Practice.

BROWNE, H. Langley, Esq. Statistics of Ten Years' Surgery at West Bromwich Hospital.

BROWNE, Lennox, Esq. On the Eradication and After-treatment of Nasal Polypi: with Illustration of an Arrangement for Illuminating the Nostril.

BRVANT, Thomas, Esq. Aneurysm of both Popliteal Arteries; one cured by Pressure, the other by means of Speir's Artery-Constrictor, the Operation being conducted under strict Antiseptic Precautions.

COATES, W. Martin, Esq. On the treatment of Bronchocele, Enlarged Glands, Nasy Cysts, Cold Abscess, and Housemaid's Knee, by the Subcutaneous Injection of Iodine.

COWELL, George, Esq. Experiences of Resection of the Hip-joint.

CULLINGWORTH, C. J., M.D. A case of Nephrectomy by Abdominal Section.

DRYSDALE, C. R., M.D. On the Treatment of Secondary and Tertiary Syphilis.

ELDER, George, M.D. Notes on a Successful Case of Nephrotomy and Nephrectomy for Scrofulous Pyelitis.

HARRISON, Reginald, Esq. Case of Litholapaxy, in which a Stone weighing 2½ ounces was removed at one sitting.

LUND, Edward, Esq. 1. On Air-Inflation of the Bowel as the rule of practice in Colotomy, and on the best method of applying it. 2. Exhibition of Model showing 1. Method of Treating Recent Simple Transverse Fracture of the Patella without Instruments.

MAY, Bennett, Esq. 1. A Case of Excision of the Tongue, with a large portion of the Lower Jaw and Floor of the Mouth, for Epithelioma. 2. Case of Excision of a large Bronchocele after preliminary Tracheotomy. 3. Case of Ligature of the External Iliac Artery: with Remarks on the Material for the Ligature of Large Arteries in their Continuity.

MORRIS, Henry, M.B. Remarks on a Series of Cases of Abscesses in Bones.

NICHOLSON, R. H. B., Esq. Cases of Gastrotomy.

PARKER, Rushton, Esq. A Case of Strangulated (?) Omental Hernia.

POZEV, Chauncy, Esq. On Acute Traumatic Malignant Disease.

ROBSON, A. W. Mayo, Esq. On Antiseptic Atmosphere to replace the Carbolic Spray in Operations: with an Account of Experiments and Cases, and a Demonstration of the Apparatus.

ROTH, Bernard, Esq. 1. On Fifty Cases of Spinal Lateral Curvature treated without supports and without suspension. 2. The Early Treatment of Flat Foot.

SUTH, E. Noble, Esq. Demonstration of the Application of some new Mechanical Surgical Appliances.

STEELE, C., M.D. On Bent Tibiæ in Children: Causes and Treatment.

SYMPSON, T., Esq. A Singular Congenital Deformity.

TAIT, Lawson, Esq. 1. A Successful Case of Nephrectomy. 2. Summary of Conclusions derived from 500 Consecutive Cases of Abdominal Section. 3. A third Successful Case of Cholecystotomy. 4. A Series of 100 Consecutive Cases of Ovariectomy performed without any Listerian Details.

THOMSON, W., Esq. 1. Ligature of the Innominate Artery for Subclavian Aneurysm. 2. On Rupture of the Knee-joint and Compound Fracture of the Patella: after Stature of that Bone; Incision; Recovery.

TREVES, Frederick, Esq. On the Treatment of certain Fractures of the Lower End of the Femur.

WEST, J. F., Esq. On Rapid Lithotripsy: its Merits and Demerits.

WHERRY, George, M.B. On a Case of severe Head-Injury.

WHITEHEAD, Walter, Esq. On Amputation by a large External Flap.

SECTION C.—OBSTETRIC MEDICINE.

A discussion on Subinvolution of the Uterus, its causes, its relation to uterine disease, and its preventive treatment, will be opened by Dr. John Williams (London).

The following gentlemen have promised to take part in the discussion: Dr. W. S. Playfair, Dr. Robert Barnes, Dr. Henry Bennet, Dr. Granville Bantock, Mr. Knowsley Thornton, Dr. J. Wallace (Liverpool), Dr. A. W. Edis, Dr. Routh, Mr. Lawson Tait (Birmingham), Dr. J. M. Bennett (Liverpool), and Dr. Sinclair Coghill (Ventnor).

The following papers have been promised.

BANTOCK, George Granville, M.D. Hysterectomy.

COGHILL, J. G. Sinclair, M.D. Notes on Local Medication in Uterine Disease.

CULLINGWORTH, Charles J., M.D. Case of Double Uterus with complete Septum Vagina.

DEWAR, John, Esq. Hystero-epilepsy.

EDIS, A. W., M.D. The Rational Treatment of Menorrhagia.

ELDER, George, M.D. The Stomachic Disorders of Uterine Disease.

GICKSTANG, T. W. Harropp, Esq. Urethral Caruncle.

HACKINGBOTHAM, James, M.D. Urethrocele and Vaginal Cysts.

MADDEN, T. More, M.D. Further Observations on Lacerations of the Cervix Uteri.

NEWMAN, W., M.D. Treatment of Vascular Tumours of the Urethra.

RIGDEN, George, Esq. The Management of some Abnormal Head-presentations.

ROUTH, C. H. F., M.D. The Etiology and Treatment of certain Varieties of Dysmenorrhœa.

SQUIRE, W., M.D. Bromic Ether as an Anæsthetic in Obstetrics.

TAIT, Lawson, Esq. Parallel Histories of two Cases of Bleeding Myoma.

THORNTON, J. Knowsley, M.B., C.M. On Hegar's Operation for Uterine Fibroids: with Remarks.

WALLACE, John, M.D. Note on the existence of Temporary Albuminuria in the Acute Stages of Perimetric and Parametric Inflammations, as well as in the Chronic Suppurative Stage.

WALTER, W., M.D. A Successful Case of Transfusion of Blood after severe Post Partum Hemorrhage.

SECTION D.—PUBLIC MEDICINE.

A discussion on the Public Medicine Aspects of the Alcohol Question will be opened by Dr. Norman Kerr (London).

The following papers have been promised.

BOND, F. T., M.D. Scarlatinal Sore-throat, and its relations to other Throat affections.

CARTER, W., M.D. Notification of Infectious Diseases by Medical Men.

DE PIETRA SANTA, —, M.D. The Typhoid Fever in Paris, 1879-1882.

to Stratford-on-Avon to visit Shakespeare's house, the church and tomb, Shakesperian Museum, etc. The party will then proceed to Warwick and Kenilworth Castles, returning by way of Leamington. 3. An excursion to the Wye, by which the beautiful scenery on the banks of that river may be viewed either from the railway or by boats from Ross to Monmouth. Particulars of these excursions will be published in an early number. 4. There are steamers and pleasure-boats on the river Severn at Worcester, which will afford very enjoyable short trips up or down the river.

DINNER TICKETS.

Applications should be made as early as possible to the Honorary Treasurer, G. A. Sheppard, Esq., Foregate Street, Worcester; accompanied, in all cases, by a remittance of 21s. or 14s.

HOTELS AND LODGINGS.

A list of accommodation will be shortly published in the JOURNAL. Members may apply for information to Messrs. Griffiths and Millington, House Agents, 50, Foregate Street, Worcester.

RAILWAY SERVICE.

THE most convenient trains from Paddington are at 10 A.M., 2.15 and 4.45 P.M., arriving in Worcester 1.50, 6.0 and 7.45. Trains from Birmingham and the North arrive from 9.45 A.M. to 9.30 P.M. Trains from Bristol and the South arrive at 10.2, 12.20, 1.44, 3.22, 5.25, 8.9, 9.16.

Special trains have been engaged to leave Worcester for Birmingham at 11.0 P.M. on the nights of the 8th, 9th, 10th and 11th.

Special trains from Worcester to Malvern and Hereford at same hour on each day.

Special train from Worcester to Gloucester on Wednesday evening at 11 o'clock.

ANNUAL MUSEUM.

The sixteenth annual exhibition of objects of interest in connection with medicine, surgery, and their allied sciences will take place in the Music Hall, Worcester, during the second week of August, 1882. The floor-space of this building amounts to 4,000 square feet. The Committee appointed to take charge of the arrangements for this Museum will be glad to receive—1. Pathological specimens (wet or dry); 2. Drawings or diagrams illustrating disease; 3. Casts or models; 4. Surgical instruments and appliances; 5. Microscopic preparations; 6. Microscopes, thermometers, and other instruments of investigation; 7. Preparations, diagrams, etc., relating to investigations in anatomy and physiology; 8. New drugs, chemicals, pharmaceutical preparations, and dietetics; 9. Sanitary appliances, including drawings or models illustrating the ventilation of hospitals or private dwellings; 10. New medical books. It is intended that the surgical instruments, sanitary appliances, etc., shall be *bona fide* novelties, or improvements on those in common use. The pathological specimens will be arranged in departments.

Exhibition of Instruments and Apparatus.—It is intended to arrange for the exhibition of complete series of instruments, electro-therapeutic apparatus, instruments for physical diagnosis, and appliances relating to sanitary science and public health. Facilities will also be afforded, when requested, for the display of instruments in action, or for special explanation by the exhibitors of apparatus, etc.

The Catalogue.—It is intended to print a catalogue, which will be as complete as circumstances may permit.

Communications, objects intended for exhibition, etc., to be addressed to the Secretary of the Museum Committee, Mr. J. RANDLE BUCK, 29, Sidbury, Worcester. During the week preceding the meeting, all articles should be sent direct to the Music Hall, Worcester, and addressed to the care of the Curator of the Museum of the British Medical Association.

FRANCIS FOWKE, *General Secretary.*

London, July 20th, 1882.

BRANCH MEETINGS TO BE HELD.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—The annual general meeting of the Branch will be held at 198, Union Street, Aberdeen, on Saturday, the 29th instant, at 2 P.M. Hospital visit at 11.30 A.M. Dinner at the Palace Hotel, Union Bridge, at 3 o'clock P.M.—R. J. GARDEN, J. URQUHART, Honorary Secretaries.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The annual meeting will be held at Cardiff on the 25th instant. Fresh nominations should be sent in at once, and

titles of papers, etc., for the meeting, without delay. Further particulars in circulars.—ALFRED SHEEN, M.D.; D. ARTHUR DAVIES, M.B., Honorary Secretaries.—July 5th, 1882.

SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT.—An ordinary meeting will be held at the Crown Hotel, West Cowes, on Thursday, July 27th, 1882, at 4.30 P.M.; Alexander C. Davey, M.D., President, in the chair. Agenda: A Case of Puerperal Fever; J. Jones, Esq.; The Duties of Medical Officer of Health; A. Woodward, Esq.; A Case of Multiple Exostosis, with Remarks on Antiseptic Osteotomy; Dr. Channing Neill; An Extract from Clinical Notes on Nervous Diseases; Evelyn Rich, Esq.; Notes and Specimens of a Case of Tubercular Disease of the Larynx; T. M. Kendall, Esq.; Microscopic Specimen of Scirrhous of the Pylorus; T. M. Kendall, Esq. Dr. Channing Neill will exhibit, under the microscope, a complete series of Pathological Sections demonstrating Scarlatinal Nephritis; also a few Miscellaneous Sections. Gentlemen who are desirous of introducing patients, exhibiting pathological specimens, or making communications, are requested to signify their intention at once to the Honorary Secretary. The first series of cards of the Collective Investigation Committee are now issued, and can be obtained by post from the Honorary Secretary, or at the meeting. Tea will be provided at 6 P.M.; at charge, 3s.—W. E. GREEN, Honorary Secretary.

YORKSHIRE BRANCH.—The annual meeting of this Branch will be held in the School of Medicine at Leeds, on Wednesday, July 26th, at 2.30 P.M., when the following business will be transacted. The President will deliver an address. The report of the Council will be read. The officers and Council for 1882-83 will be elected. The Collective Investigation Subcommittee will be elected. The consideration of the report of the Subcommittee appointed to consider the relation of the West Riding Medical Charitable Society and the British Medical Benevolent Fund; and the application of the South Wales and Monmouthshire Branch concerning the latter. A communication from the Secretary of the Staffordshire Branch relative to the management of the JOURNAL of the Association. Interesting cases will be shown at the Infirmary at 1.30 P.M.; and Microscopic Specimens of Sarcoma will be shown at the same time in the Physiological Laboratory of the School by Dr. Jacob. Dr. Crooke will also exhibit Microscopic Slides, illustrating Micro-Organisms.—The following papers will be read. Dr. Allbutt: Some features of Enteric Fever during the last twelve months. Mr. Wheelhouse will show and explain the following cases: Case in which the entire organs of generation were removed for Malignant Disease two years ago, without return; Case of Deformity of the Lower Limbs in which six separate osteotomies have been required. Mr. Pridgin Teale: Operations for the cure of Irreducible Hernia. Dr. Solomon Smith: Modern study of Micro-Organisms, and its influence on Medical Thought. Mr. Ball: Suicide by Hanging. Mr. G. W. Rhodes: Excision of the Pylorus for Cancer. Dr. Tibbits: On some interesting and important points connected with Enteric Fever. Dr. Fletcher Little: Medical Rubbing. Mr. Whiteley: Notes on two cases of Traumatic Tetanus, with recovery. Mr. Mayo Robson: An operation for the cure of a Deformity of the Hand, due to Division of an Extensor Tendon. Dr. Churton: Cases of Empyema. Mr. McGill: On Corrugated Paper Packing for Splints.—After the meeting, the members will dine at 6 P.M. at the Great Northern Hotel. Tickets (exclusive of Wine) 7s. 6d. each.—ARTHUR JACKSON, Honorary Secretary.

NORTHERN COUNTIES OF SCOTLAND BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held within the Literary Institute, Nairn, on the 12th instant; Dr. BRUCE, of Dingwall, President, in the chair.

Dr. Forbes of Fochabers was, from a professional engagement, unable to be present.

New Members.—Drs. Wm. Haig Brodie, Ogilvie Grant, and D. S. Macdonald, of Inverness, and Dr. Galletly, of Elgin, were admitted as members of the Association and Branch.

Communications.—Pathological preparations were shown by the President and Dr. Duff, of Elgin, the latter reading a paper on a Case of Tumour of Brain under The Right Pons Varolii.

Militia Surgeons.—The Secretary brought before the meeting the grievances of surgeons of militia, as explained in a letter from the Secretary of the Association; and a petition for the appointment of a Committee or Commission to inquire into these grievances was signed by the President and all the members present, and ordered to be transmitted to the Solicitor-General for presentation.

Registration of Midwives.—A Bill for the Registration of Midwives was submitted; and, after discussion, it was resolved that the Bill be generally approved of, and that it should be made applicable to Scotland, as well as to England and Wales.

Collective Investigation Committees to meet Dr. Mahomed on his visit to the North, on behalf of the Collective Investigation Committee, were appointed; Dr. Aitken, Convener at Inverness, and Dr. Mackay at Elgin.

Officers.—The following office-bearers were appointed for next year: President, G. Forbes, M.D., Fochabers; President-elect, Ranald Macallum, L.F.P.S., Ullapool.

Thanks were ordered to be recorded to the members of the Literary Institute for granting the use of their rooms.

Visit to Irrigation Farm.—The meeting having adjourned, the members were conducted by the Provost to the Irrigation Farm, where the process of irrigating the land by the sewage from the town was explained; and thereafter to the baths, which are well worthy a special visit.

Luncheon.—The members then partook of luncheon in the Marine Hotel, and spent a very pleasant afternoon. Dr. Bruce was in the chair, supported by Provost Leslie on his right, and Dr. Macallum, President-elect, on his left hand; Dr. Aitken, Vice-President, was Croupier.

SOUTH-WESTERN BRANCH: ANNUAL MEETING.

THE following matter was omitted from the report of the annual meeting of this Branch which was published last week.

New Members.—Messrs. E. Rouse (Bideford) and E. Sutcliffe (Torrington) were elected members of the Association and of the Branch. W. A. Norman, M.B. (Torrington), Mr. S. O. Lane (Braunton), F. C. Berry, M.B. (Lynton), and Mr. White (Plymouth), were elected members of the Branch.

Branch Council.—The following members were elected to fill the vacancies: C. Aldridge, M.D.; C. A. Hingston, M.D.; R. H. Hughes, M.B.; G. Jackson, Esq.; E. M. Russel-Rendle, Esq.; W. Square, Esq.; and P. Swain, Esq.

Representatives of the Branch on the General Council.—The following were elected: C. Aldridge, M.D.; W. S. Gervis, M.D.; R. Hudson, M.D.; Lewis Lewis, Esq.; W. Pearce, Esq.; J. Somer, Esq.; W. Square, Esq.; J. Thompson, M.D.; and J. Woodman, M.D.

Representative of the Branch on the Parliamentary Bills Committee.—Dr. S. Rees Philipps was elected.

British Medical Journal.—A letter from the Staffordshire Branch having been read and discussed, it was proposed by Dr. WOODMAN, seconded by Dr. ALDRIDGE, and carried *nem. con.*: "That, in the opinion of this Branch, the JOURNAL of the Association should be more fully the medium of record of the transactions of the Branches of the Association than it is; and that the papers read, and the records of clinical observations, should have precedence of other contributions to the JOURNAL: moreover, that they should be more fully reported, and be published at an earlier period after communication than has hitherto been done."

Communications.—The following were made.

1. Mr. W. Pearce: On *Post Partum* Hemorrhage.
2. Mr. W. Square: Four Cases of Mydriasis.
3. Mr. C. Bulteel: Three Cases of Ovariectomy.
4. Dr. Woodman: Case of Comminuted Fracture of Tibia and Fibula, with Wound of Posterior Tibial Artery; Amputation; Recovery.

CORRESPONDENCE.

THE REPORT OF THE MEDICAL ACTS COMMISSION.

SIR,—No one can doubt that the members of the Royal Commission, or those of them, at least, who have agreed upon the report which stands in their name, have the courage of their convictions; for whereas hitherto reformers, however clearly they may have seen the necessity of making sweeping reforms in the medical institutions of the country, have hesitated to propose the disfranchisement of more than two or three insignificant bodies for fear of rousing opposition, here we have a report which throws down the gauntlet alike to time-honoured universities, medical colleges, and other bodies of more modern date; proposes to deprive them all of their representatives on the Medical Council, and to render their diplomas worthless licences to practise. In regard to the constitution of the Medical Council, again, the changes proposed to be made are sweeping and radical. Not only is the number of members to be reduced, but the principle of direct representation, for which our Association has long contended, fully recognised, but a working majority is proposed to be given to the Crown Nominees and Direct Representatives combined (ten out of eighteen), which would enable them to defeat any suggestion on the part of the representatives of divisional bodies, or of the representatives of those chartered institutions which, as Mr. Bland has shown themselves so persistently hostile to the proposed sweeping reforms. Perhaps it would have been better to have done the latter, and allowed the Council to consist solely of Crown nominees as representing the public, and direct representatives of the profession. Given a Council like this, there would be no difficulty in organising a system of medical examinations and examinations, and the numerous than the divisional boards proposed. The divisional boards are, in fact, the worst of evils, and could never have been devised in their present form, had it not apparently been felt necessary to do so. The medical bodies which have existed in the past have been the cause of the present state of things, and have been the chief cause of the agitation for Conjoint Boards. Should the Boards be constituted as proposed in this report, they will form three executive

bodies, representing nothing but the narrow interests of the corporations and other medical authorities who appoint them, having no direct means of intercommunication with one another, and no real desire probably, as regards two out of the three Boards, to make the Conjoint Board system a success. They will have unlimited powers of spending the money of the Medical Council in visitations and other forms of inquiry into schools and examinations, and the Council, though nominally the superior authority, will have no power to interfere with the executive functions of the Divisional Boards; nay, it is not even expected to take the initiative in questions relating to medical education and examination. The reformed Council, in fact, is to have its hands tied, in order that the delegates of the medical authorities may have an opportunity of showing how well most of the Council's present functions can be carried on by the unaided abilities of those to whom its failure hitherto has been generally attributed. This is not giving the new system a fair chance. In mildly suggesting, on a subsequent page, that perhaps the Medical Council has not done all it might have done in the way of visitation of examinations, and of reporting inefficient ones to the Privy Council, the commissioners suggest as one reason for this, "the great power of the individual medical authorities, of which most send a representative to the Council itself"—an observation which, perfectly true as it is, makes it the more astonishing that they should not have considered how well calculated to perpetuate and intensify the same source of obstruction to real progress, is their suggestion to put the real power in all matters relating to medical education and examinations into the hands of boards, consisting exclusively of one or more delegates of each chartered university and medical corporation, "whether now existing or hereafter to be created."

In view of the magnitude and importance of the duties assigned to the divisional boards in this scheme, it seems difficult to discover what would remain to be done by the Medical Council beyond registering the decisions of the boards, and acting as a court of intermediate appeal in cases where those decisions were disputed, the final decision remaining as now in the hands of the Privy Council. It would be the sole licensing authority, but without having the power to appoint a single examiner for its own license, or to suspend any who might be found inefficient. It is true it would have power to visit the examinations and schools; but, as these are duties specially assigned to the divisional boards, it may be assumed that only under very special circumstances would the Council feel justified in interfering with the Boards. There remain the administrative functions in connection with the *Medical Register* and *Pharmacopœia*; but these would hardly be sufficient to tax the energies of eighteen picked men out of the whole profession, and might very well be exercised by the one or two distinguished persons, not members of the medical profession, whose appointment to seats on the Medical Council is recommended in this report.

The suggestions with regard to the fees to be paid by candidates for examination by the divisional boards are so monstrous, that it is hard to believe that any bill embodying them will ever be drafted or laid before either House of Parliament for consideration. They are to this effect: The State sees fit to withdraw from certain public bodies known as medical authorities, the privilege which it in 1858 granted to them, of conferring, not a licence to practise, as erroneously stated in the report, but a title to registration as legally qualified practitioners. It does so for State reasons, and not in the least in the interests of the future candidates, who, upon the whole, may be expected to have a harder time of it in the future with one thoroughly competent Board, than their predecessors have had in the past with many good, bad, and indifferent ones; yet it says in effect to all who apply for admission to the examinations which it requires, "Before we can admit you to the test, you must pay a sum sufficient to cover not only the cost of your examination, and of the various other duties with which the divisional board is charged, including the election of a certain number of its members into the Medical Council, but also to provide compensation for those bodies which would have had a right to make use of you, had we not thought fit to interfere, for good and sufficient reasons, with the legal recognition of their diplomas or licences; moreover, if you come to us from an university with a degree or certificate, you shall not have to pay the compensation portion, but in that case we must be assured that the university from which you come does not claim compensation." Surely the State has no right to demand this. Under the heading of "Privileges conferred upon registered practitioners; restrictions, disabilities, and penalties imposed upon practitioners not so registered," the report is as remarkable for what it omits as for what it demands. There is not a word said with reference to the important question of the compensation of the members of the Medical Act of 1858, and the Medical Act of 1868, and the Medical Act of 1870, and the Medical Act of 1875, and the Medical Act of 1880, and the Medical Act of 1881, and the Medical Act of 1882, except it were of a negative character. The truth

is, that no new privileges were conferred by those Acts but what were already enjoyed by properly qualified men, and were restricted, from and after 1858, to those who were not only qualified, but registered; such as the right to sue for fees, to appear as medical witnesses in courts of law, etc. The report confesses what has indeed been long abundantly evident, that the penal clause of the Act of 1858 has in practice proved unsuccessful, and recommends that unregistered persons should be prevented from assuming titles which lead the public to believe that they are regular medical men. The suggestion that, for the future, prosecutions under the Medical Acts should be undertaken by the Public Prosecutor in England, and by the corresponding legal official in Scotland and Ireland, will commend itself to all who are acquainted with the practical difficulties now encountered in setting the law in motion.

The memoranda appended to the report, in which six of the commissioners differ from it and from one another, are hardly less important than the report itself.—I am, etc.,
H. NELSON HARDY.

REMOVAL OF THE UTERINE APPENDAGES.

SIR,—After Dr. Henry Savage's strong expressions, it is somewhat reassuring to note the placid reception of oophorectomy at the Obstetrical Society. It is comforting to see operations which I have performed and advocated for more than ten years at last accepted; and probably the next comfort I shall receive, will be a statement that they were done in London long before they were done here.

As I hope to be able to lay my experience upon this subject before the Obstetrical Society early next session, and partially before the Obstetric Section at Worcester, I desire now to express a hope that the eminent obstetric physicians who have expressed strong disapproval of such operations, will take advantage of one or other of these opportunities to meet me and discuss the question fully. At the Royal Medical and Chirurgical Society, at the Pathological Society, and at various meetings of less importance, I have given already full and frequent opportunities for criticism of all my cases, and no one has yet appeared to do battle. Yet, by private report and newspaper innuendo, these operations are doubted, disputed, and abused. Will the critics once for all accept my challenge?

The position in which these operations have been placed is due very largely, if not entirely, to the unfortunate nomenclature with which some of their advocates have ushered them in. I desire, for at least the twelfth time, to protest against the word "oophorectomy," as it does not describe the operations, nor indicate the principles on which they are based. The term "spaying of women" is most objectionable, because that means the removal of healthy ovaries from healthy women, an operation against which everyone would protest. I am equally averse to call the proceedings "Battey's operation," because what Dr. Battey has advocated and practised, I, for one, practically have never performed.

May I therefore plead that the operation shall be termed "Removal of the Uterine Appendages," and that the classification of the cases shall be based on the morbid conditions found? That no exact classification can be made I have long asserted, and Mr. Thornton's case proves it. "The ovaries were enlarged and cystic," therefore it may have been really a case of "ovariotomy." "The tubes were full of semipurulent fluid," and it was therefore a case of "pyosalpinx." This being the fact, "oophorectomy," or "Battey's operation," would probably have been an entirely futile proceeding; but "removal of the uterine appendages," as performed by Mr. Thornton, will probably entirely cure the patient.—I am, etc.,
LAWSON TAIT.

DEATHS FROM INHALATION OF ETHER.

SIR,—Referring to the late death during the administration of ether, I wish, in the first place, to point out a most useful remedy, which should always be tried in cases of failure of the heart's action during anaesthesia; and, in the second, to express my regret at having to differ from the conclusion arrived at by so scientific and good a surgeon as Mr. Lawson Tait, viz., that the death was "one of asphyxia due to the inhaler". In cases where the pulse appears to fail, I know of no remedy so good, or so likely to prove efficacious as the immediate inhalation of nitrate of amyl, and I think the drug may be most conveniently carried in small hermetically sealed glass cylinders wrapped round with cotton-wool and silk. The advantage these cylinders possess over the plain glass bulbs is, that, by merely placing one under the foot, and pressing on it, the glass is broken, and the fluid, escaping into the surrounding cotton-wool and silk, is instantly ready for use, and has only to be held before the mouth of the patient to produce the stimulating effect of the vapour on the heart. I do not attach much importance to the administration of this remedy when the respiration fails, the heart's action remaining good. In that case, I believe the best treat-

ment is, to keep up artificial respiration regularly and slowly; but, immediately the heart's action begins to fail, at once administer the vapour of nitrate of amyl.

I feel assured that a careful, intermittent, and long continued administration of this last named drug would prove highly beneficial in cases of insensibility arising from an overdose of chloral.

And now, secondly, as to the cause of death in the present case. The details given are so meagre, that I think one is scarcely justified in ascribing the death to the anaesthetic at all. Most certainly it was not due to asphyxia from breathing the expired air; for, in a case of death caused by carbonisation of the blood, a very evident discoloration and blueness of the skin must have been apparent, while here no such alteration in colour is mentioned, and Mr. Lawson Tait is not the man to have left so important a symptom unnoticed, had it occurred. That the patient did not die from suffocation, or from re-breathing expired carbonic acid, I think is perfectly clear; and, if she died from ether, I fail to see what benefit Mr. Lawson Tait would have derived from using a towel instead of the inhaler. Had he done so, I believe death would have taken place as soon as the irritative vapour of the ether caused the patient to struggle, and thus forced the heart to labour.

The quickest, pleasantest, and, in my opinion, the best method of administering ether is, to give nitrous oxide until the patient is completely anaesthetised, and then to change the face-piece for Ormsby's, without allowing the inhalation of any air whatever, during the first few respirations of ether.

The position in which the patient was placed on the table forms, to my mind, a most important factor in this particular case; for, with a large tumour in the abdomen, when the patient is put into the recumbent position on an operating table, without the shoulders being well raised, the weight of the tumour pushes up the diaphragm, and, altering the position of the heart, greatly adds to the work it has to do. Ether is a cardiac stimulant—not a depressant. Years ago, when I found the pulse flag under chloroform, I administered ether, to which the heart at once responded so satisfactorily, that the operations were finished without anxiety.—I am, etc.,

WOODHOUSE BRAINE, F.R.C.S.

56, Maddox Street, Hanover Square.

THE UNRECOGNISED CLAIMS OF HARVEY.

SIR,—I wish it to be understood that I withdraw the words "in waves" (p. 960), and also "in a wave-like manner" (p. 961), contained in the article on the above named subject in the JOURNAL for June 24th. Although they express the current opinion, yet Harvey believed that the pulsation was a simultaneous shock, and that the elastic walls of the arteries dilated simultaneously, like a glove when blown into (*Opera*, 1766, p. 27; and *Works*, 1847, p. 25). I have not observed that he has corrected this opinion in any other part of his works.

I am led also to make the following statements. Malpighius described those vessels now called "capillaries"; he designated them "tubuli", as distinct separate vessels, and "detected the distinct walls". Although Leeuwenhoek, who, it is singular to have to state, did not show that he was aware of the researches made by Malpighius, described the transit of the blood through the minute ramifications, even to the transit of the blood in single corpuscles; yet he has stated, in Hooke's rendering, "that they are properly termed arteries so long as they convey blood to the farthest extremities of the vessels, and veins when they bring it back towards the heart." Leeuwenhoek, therefore, decidedly did not describe the "capillaries" as separate vessels. Moreover, he did not quite succeed in tracing the transit of the blood through the minute ramifications of the web of the bat's wing, although he has stated that it was his "greatest expectation of success"; and "I used every means I could devise to see the complete circulation of the blood," as the "artery was smaller than the twenty-fifth part of a hair", and "so small as only to admit one or two globules to pass through it at a time". Leeuwenhoek has thus proclaimed the power of his own microscope. He has observed that, while the corpuscles or "globules" in the fish are much larger, and of a flat and oval shape, yet in the bat they appeared to him to be spherical. He, however, appears to have succeeded in observing the complete transit through the minute vessels in the tadpole, even to the transit of the blood in single corpuscles or "globules".

The earliest compound microscope was a cumbersome instrument, much similar in external appearance to a telescope. Jansen's microscopes were six feet in length, and could not have been of much service in physiological researches. The instrument employed by Malpighius in his demonstrations is stated to have been constructed by himself. Leeuwenhoek's microscope consisted of single lenses which were difficult to manage.—Yours faithfully,
E. N.

MEDICO-PARLIAMENTARY.

SIR,—In the JOURNAL of June 24th, you very briefly allude to the benevolent and generous act of a member of the profession, Mr. France, who a second time places a presentation to the Asylum of St. Ann's in the hands of the Council of the Royal Medical Benevolent College for the education of orphan daughters of medical men. I would, for the sake of the widows and orphans, there were many more among us able to follow so noble an example.

There is one other subject in connection with the Royal Medical Benevolent College, which just now has special interest for a large number of your readers, and which has not been noticed in the JOURNAL. I refer to the result of the recent election for foundation scholarships, and for pensioners. It will gratify those who were most anxious to see a change in the mode of election, to know that all the candidates recommended by the Committee of Examination were elected; a striking proof of the successful working of the rule with regard to the mode of election, and of the confidence of the majority of the governors in the judgment of the committee. With reference to the pensioners, the result was not quite so successful, as one only of the two recommended was elected. This may be accounted for in this way: there were twenty-one candidates on the list to fill two vacancies, and several of these, be it remembered, brought up a large cumulative vote from former elections. It was but natural, indeed generous and considerate, of the majority of governors, to wish to save from further disappointment and expense those candidates whose claims had been urged, year after year, without success, even before the new rule came into force. But, at the same time, it was satisfactory to find that an aged member of the profession (eighty-nine years of age), up for election for the third time, and whose chance had hitherto not been very great, was placed at the head of the list of the unsuccessful candidates, and will in all probability be elected on the next vacancy. It is, however, much to be deplored, to find that, while the list of candidates for pensionerships and scholarships is on the increase and more urgent, the income of the college is moving in the inverse ratio, or is at all events quite inadequate to meet its current expenses, so that we have the melancholy satisfaction of knowing that not a tenth part of the candidates can ever expect to be successful.

A more generous response on the part of the great body of the profession to the special appeal lately issued by the Council (ten shillings a year from 20,000), would help to carry glad tidings to those overtaken by misfortune, or to the orphan child of a brother who succumbed early in the battle of life, and without leaving provision behind for one doomed to appeal in vain for our help.

That there is great need for a larger hearted charity among us, was vouched for by the chairman at the annual meeting, Dr. Jonson, who (as is well known) has for long taken a deep and active interest in the welfare of the college, and whose words I trust you will allow me to quote, as they are of wider value as an expression of opinion on the working of the rule which brought about the change in the mode of election of candidates. Dr. Jonson said: With regard to the duty imposed upon the Committee of Examination, speaking more particularly for himself, he might say, not only was he most anxious to carry out the wish of the majority of the governors impartially and conscientiously, but he believed he and his colleagues had fully succeeded in doing so in every way; a view endorsed by the result of that day's election. He was, at all events, quite certain of this, that the comparative claims, merits, and needs of the several candidates had in every instance been most carefully and fairly weighed, before being adjudicated upon. The more thorough investigation made in each case, had occasionally struck a deeper chord of sympathy on behalf of one candidate than another, because of his having been brought more directly and intimately into contact with the friendless or more destitute among them; but he was quite sure that in no case on this account had substantial justice failed to be done. He had also, perhaps, been more forcibly impressed than he was before, or he might have been more conversant with the fact, that a good deal of sympathy was felt among our brethren, especially in the poorer sections of the community, that they had an idea of. Numerous married men were there, who could not supply their families with the necessaries of life; what could they do for the education of their children? At the same time, and consequently they were growing up in utter ignorance of the world, and of the duties of citizenship, and of the part of them which they were to play in the community. He was sure that in the course of the next thirty, and I might say, fifty years, the lives of these children would be a sad and a long one, and that they would be a servant.

JAMES HODGE.

1, Bedford Square, June 26th, 1882.

HOUSE OF LORDS.—Thursday, July 13th.

Irish Pauper Lunatics.—The Earl of Rosse called attention to the report of the Poor-law Union and Lunacy Inquiry Commission (Ireland) so far as it related to lunacy; and asked the Lord Privy Seal whether it was the intention of Her Majesty's Government to propose legislation with the view of carrying out the recommendations of that Commission as to providing in workhouses the additional accommodation so urgently required for the chronic insane.—Lord CARLINGFORD said that he could not pledge the Irish Government to bring in any measure upon the subject, though he admitted that the noble earl was fully justified in calling their attention to the matter.

HOUSE OF COMMONS.—Thursday, July 13th.

Lunacy Districts (Scotland) Bill.—This Bill was read a second time.

Monday, July 17th.

Irish Lunatic Asylums.—Mr. HEALY asked the Chief Secretary for Ireland whether it was the case that, while the officers of English district lunatic asylums might, after fifteen years' service, be awarded a pension or superannuation allowance amounting to two-thirds of the amount of their salaries and of the annual value of their allowances, apartments, etc., the officers of Irish district lunatic asylums, whose salaries were much smaller, could, after twenty years' service, be awarded as a superannuation allowance only one-third of the amount of their salaries alone; whether, if that be so, there existed any sufficient reason for such a distinction between the two countries; and whether the Government intended to place Irish asylum officers on a footing of equality with their English fellows.—Mr. TREVELYAN: The facts appear to be stated with accuracy in the question of the hon. member. The superannuation allowances of these officers are regulated by statute. In the case of the officers of the Irish district lunatic asylums, the principles laid down by the Superannuation Act of 1859 have been adopted; and it is not proposed to introduce any fresh legislation on the subject.

Pollution of the River Thames.—Mr. BRIGGS asked the Chairman of the Metropolitan Board of Works whether, in view of the fact that a Royal Commission had been appointed to inquire into the pollution of the River Thames, he would state what steps had been taken to delay further expenditure of the ratepayers' money upon new metropolitan sewage-works at Crossness and Barking until the report of the said Royal Commission had been presented.—Sir J. M'GAREL-HOOG: I beg to inform the hon. member that, in consequence of the great increase in the population of the metropolis, the Metropolitan Board have been obliged to take measures for the enlargement of the sewage-reservoirs at the outfalls; and the works referred to in the question have been designed to obviate the necessity which has occasionally arisen of allowing the sewage to pass into the river before high water. No money has been spent on them up to the present time; and, in view of the appointment of the Royal Commission, further action in the matter has been adjourned for three months from to-day.

Tuesday, July 18th.

The Medical Acts (1858) Amendment Bill was read a third time and passed.

Wednesday, July 19th.

The Contagious Diseases Acts.—Mr. STANSFELD moved the second reading of this Bill, and contended that the Acts must be either re-
pealed or extended from the garrison towns to the whole country; and
no Government would venture to propose that.—Mr. CHILDERS recom-
mended the House to wait for the report of the committee appointed
to inquire into this subject, before coming to a conclusion upon the Bill
before the House. He moved the previous question, which was agreed
to without a division.

A copy has been presented to the House of Commons of the second supplement to the Tenth Annual Report of the Local Government Commission, containing the report on the

THE French journals, under the title of a "cane player anon," describes a flageolet player who charmed all his hearers by his musical performances at the recent fair held at Neuilly, an eastern suburb. He had formerly suffered from an attack of diphtheria, and he had been well nursed, and his throat was now completely cured. He had been introduced to the fair by the secretary, and he had been playing a circular flageolet, a new instrument of Neuilly, which he had brought through the forest of Vincennes, and he had been playing it so well that his flageolet playing was the only thing that was not criticized by the press.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE DEVONSHIRE HOSPITAL.

THE half-yearly statement, which was submitted to the Committee on the 1st inst., showed that 773 patients had been admitted to the hospital. This is a very large increase upon the number received during the several years in which the extension works were in progress, and a considerable increase upon the number admitted during the first six months of any year since the hospital was opened. Of this number, 566 are reported as having been discharged as improved, 25 as no better, 3 at own request, 1 on account of drunkenness, and 178 remained on the books on the 30th of June. All the 300 beds in the hospital are not as yet available for patients, on account of uncompleted works, but the whole 150 within the power of the subscribers to the charity are now in use, and have been so during the last three months. It is mentioned as a matter of regret that only eighty-nine patients have been admitted during the half-year, under the powers of the Governors of the Cotton Districts Convalescent Fund, and that only twenty-six of these patients are at present in the hospital. It could not but be subject of regret, if the 150 beds assigned to the Cotton Districts, under the arrangements for the hospital extension, should not be occupied by the patients in question, as these districts must necessarily offer a very large number of poor persons suffering from rheumatism, and especially likely to be benefited by the use of the Buxton Waters, and by its mountain climate. There is a power to use these beds upon which the Governors of the Convalescent Fund have the prior claim, if not wanted by them, but the occupation of such beds by patients admitted under the ordinary subscription of one guinea would be beyond the present means of the institution. It has been suggested that these beds, otherwise unoccupied, might be made use of for patients sent by subscribers, if the difference of cost between the guinea and the actual sum required to maintain them were provided by the recommenders. This would facilitate the admission of patients, when more immediate admission might be important, add to the valuable work of the institution, and not increase the pecuniary burdens on the funds.

The large central recreation hall is much used by the patients, and they are thus relieved from many of the inconveniences of wet or cold weather. Here they can enjoy a spacious covered area, which is uniformly temperate and dry, and which is, perhaps, better suited to their wants than any out-door climate.

The post-cards received from the patients six weeks after their discharge from the hospital, and their return to their several homes, continue to be of great interest as to the permanence of the curative work of the institution. Four hundred and sixty-two of these self-reported results have been received during the half-year, and of these 338 are set down as improved, and 124 as no better.

THE BATH MINERAL WATER HOSPITAL.

THIS institution, as our readers are probably aware, is intended for the relief of poor persons, from all parts of Great Britain and Ireland, who are afflicted with complaints for which the Bath waters are a remedy. The hospital, which was founded in 1737, has been greatly enlarged and developed since that date. The number of beds at present provided is 145—88 for males, and 57 for females; and the arrangements are so perfect, that the patients are enabled to bathe almost at their bedsides. The annual report for the present year traces the gradual increase which there has been in the number of patients, in each quinquennial period, since the hospital was opened; and shows that the percentage of patients cured or relieved has also gradually increased from 62 per cent., in the first period, to 91 per cent. in the last period.

CORK MATERNITY INSTITUTION.

THE annual meeting was held last week, presided over by the Mayor of Cork. The annual report, which was adopted, stated that, from want of funds, the work of the Maternity had of necessity been curtailed. During the quarter, 430 mothers were attended to, at a total cost of £123. The necessity for institutions of a similar kind is daily becoming more apparent, for, since their establishment, epidemics of puerperal fever have been diminishing, and consequently the maternal mortality is sensibly reduced. There is one important feature in connection with the Cork Maternity which should not be overlooked, viz., that every year a certain number of trained nurses are sent out; and this is a reason, if no other was forthcoming, that the institution should be liberally supported. A vote of thanks to the medical staff terminated the proceedings.

MILITARY AND NAVAL MEDICAL SERVICES.

ON July 9th, Deputy Inspector-General of Hospitals and Fleets James Taylor died at Portobello, near Edinburgh, at the age of eighty-five. He was for about thirty years in active service, chiefly in Canada, at the Cape, in the Mediterranean, at Ascension Island, and the West Indies. He retired about twenty-five years ago.

INSPECTOR-GENERAL of Hospitals and Fleets Dr. J. Cotton died on July 12th, at the Naval Hospital, Stonehouse, after seven months' illness. He retired from the Service on May 18th of the present year.

SURGEON-MAJOR G. Bainbridge, of the Bombay Medical Department, has been appointed to act for Surgeon-Major A. N. Hojel as Professor of Physiology at Grant Medical College, Bombay.

SURGEON-GENERAL Mackinnon, C.B., having arrived from Malta, has taken up duty at the War Office, as head of the medical branch of the Army Medical Department.

THE next examination of candidates for the Army Medical Department will be held at the University of London (by permission of the Senate), commencing on the 21st August next.

DEPUTY SURGEON-GENERAL S. C. Townsend, C.B., Bengal Medical Department, and Deputy Surgeon-General A. C. De Renz, C.B., Bengal Medical Department, have been awarded Indian good-service pensions.

ON the 5th instant, the officers of the Army Medical Department stationed at Colchester gave a grand ball at the town hall to two hundred guests. The entertainment, which was very well organised, gave great satisfaction.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

COMPULSORY NOTIFICATION OF CONTAGIOUS DISEASES BY MEDICAL MEN.

ON July 11th, a meeting was held at the Lecture Hall, Greenwich, to consider the clause in Mr. Hastings's Bill compelling medical men to notify cases of infectious disease in their practice to the sanitary authorities. Dr. Prior Purvis occupied the chair, and many of those present spoke against the provision, whilst no one spoke in its favour.

The objections may be summarised as follows.

1. It was urged that, as private medical practitioners, they had no right to be forced into a contract with Government to give information for a fee. While thoroughly alive to the great benefits of State Medicine, and aware of the necessity of a notification of infectious diseases, they held that the householder, and not the doctor, should be responsible for the information.

2. Experience had already abundantly shown that where notification was required—as in Poor-law practice—many contagious cases were concealed, and thereby uncontrolled, by no medical advice being sought. This was particularly observed during our late severe small-pox epidemic.

3. An objection was raised to the interference of the medical officer of health with private patients. It was feared that by his powers he would actually become the superior officer of all private practitioners, and thereby occupy a position that could only be warranted by reason of his public appointment. Some medical officers of health objected to receive this power, as tyrannical to the profession.

4. They held themselves as the confidential advisers of their patients, and, while carrying the laws of Preventive Medicine into their private practice, there were occasions on which, without injuring the public, their discretion might be used for the benefit of their patients in not publishing their condition. They might thus retain a confidence which otherwise must vanish.

The following resolutions were unanimously carried.

1. That we form ourselves into an association for the simple purpose of resisting the attempts that are being made to compel medical men to notify cases of infectious disease.

2. That we affiliate with the Liverpool Association formed for a similar purpose.

3. That Dr. Prior Purvis be elected Chairman for the first year, and Dr. Alexander Forsyth Honorary Secretary and Treasurer.

A letter was directed to be sent to the Chairman of Council of the British Medical Association, requesting him to appoint a special time at the annual meeting at Worcester for discussing this question.

All medical men wishing to join the association are requested to send their names to Dr. Forsyth, 12, Park Place, Greenwich. The annual subscription is half-a-crown.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Board of Examiners, on the 13th instant, and when eligible will be admitted to the pass examination.

Messrs. A. J. Glanville Barker and Thomas Phillips, students of University College; Charles A. MacAnally and Ernest R. B. Archer, of Guy's Hospital; James B. Sutton, of the Charing Cross Hospital; and Charles P. Maguire, of the Dublin School.

Eight candidates, having failed to acquit themselves to the satisfaction of the Board of Examiners, were referred to their anatomical and physiological studies for three months, including two who had an additional three months.

With this meeting, the primary examinations for the present session were brought to a close. Of the 252 candidates examined, no fewer than 102 were rejected for three months, including 13 who had an additional three months.

The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 17th instant.

Messrs. Charles J. Parkinson, L.S.A., Greenheys, Manchester; Ernest F. Neve, M.B. Edin., Hurstpierpoint; Herbert H. Ashdown, M.B. Edin., Edinburgh; Siva Prasad Roy, M.B. Calc., Calcutta; John B. Nash, M.B. Edin., New South Wales; George de J. Patterson, M.B. Dub., Dublin; Joseph S. Bolton, M.B. Edin., Finstock, Oxon; Arthur C. Keep, M.B. Edin., Wollaston, Northamptonshire; Malcolm A. Nicholson, M.B. Toronto, East Dulwich; Bernard L. Mills, M.B. Edin., Edinburgh; Granville Jameson, M.B. Edin., Heywood, Manchester; Ernest A. Hyrons, L.R.C.P. Ed., Pedmore, Stourbridge; Narendra Prasanna Linha, L.M. Bengal, Calcutta; Joseph J. Stapleton, M.B. Edin., New South Wales; Joseph Collier, L.S.A., Manchester; and William H. Dobie, M.B. Edin., Chester.

Two gentlemen passed in surgery, and when qualified in medicine will be admitted Members of the College, and nine candidates were rejected.

The following gentlemen passed on the 18th instant.

Messrs. Frank E. Musgrove, Leeds; Arthur H. Wilson, Liverpool; John D. Price, Dudley; William H. Horrocks, Bolton, Lancashire; John Walby, Darlington; John H. North, Walsall; Harold H. idley, Hammersmith; Sandford S. Lessev, Ealing; William C. Wilkinson, Sydney, New South Wales; John S. Withers, Sale, Cheshire; Bowen S. Mends, Blackheath; Walter Scatchard, Boston Spa; George Preston, Barton, near Manchester; Alfred T. Perkins, L.R.C.P. Ed., Stoke Newington; James Montford, L.R.C.P. Ed., Church-street, Manchester; Herbert M. N. Milton, L.S.A., Clapham; and Charles M. Chadwick, L.S.A., Tunbridge Wells.

Two gentlemen passed in Surgery, and when qualified in Medicine will be admitted members of the College, and nine candidates were rejected.

The following gentlemen, having undergone the necessary examinations, were admitted Licentiates in Dental Surgery, at a meeting of the Board of Examiners on the 21st instant.

Messrs. Alfred W. G. Barnard, Putney; Alfred T. Bandy, Brussels; Herbert G. Blackmore, Canonbury; Arthur L. Curie, Hammersmith; Walter Harrison, Brighton; Arthur A. Matthews, Bradford; and Arthur H. Mountford, Weymouth, students of the Midwifery Hospital; Henry G. Read, Finsbury Square; and Alfred Slate, Ockendon Road, of St. Bartholomew's Hospital. (The last named gentleman was admitted a Member of the College on July 24th, 1880.)

Only one candidate was rejected.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 13th, 1882.

Duff, Charles Henry, 201, Gray's Inn Road.
Howe, Percy Wilson, Meadowell London Hospital.
Munckton, Alfred, Lydiard St. Lawrence.
Parkinson, Charles Joseph, Manchester.
Parsons, Charles William, The Crescent, Copeland Road, Hackney.
Reynolds, James Jones, Stoke-by-Clare, Suffolk.

The following gentlemen also on the same day passed their Primary Professional Examination.

Langston, John James, London Hospital.
Munckton, Alfred, Lydiard St. Lawrence.
Parkinson, Charles Joseph, Manchester.
Parsons, Charles William, The Crescent, Copeland Road, Hackney.
Reynolds, James Jones, Stoke-by-Clare, Suffolk.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examinations for the Licences of the College, held on Monday, Tuesday, Wednesday, and Thursday, July 10th, 11th, 12th, and 13th, the following candidates were successful.

For the Licence to practise Medicine.—Messrs. A. J. Glanville Barker and Thomas Phillips, students of University College; Charles A. MacAnally and Ernest R. B. Archer, of Guy's Hospital; James B. Sutton, of the Charing Cross Hospital; and Charles P. Maguire, of the Dublin School.

Mitchell, London; Julia Caroline Mitchell-Swanman, London; Robert James Tate, Manorhamilton; William Henry Stanger, Glasgow; David Williams Whitfield, Chirk, North Wales; Michael Thomas Yarr, Dublin.

For the Licence to practise Midwifery.—Messrs. Alfred Benjamin Bake, Seacombe, Cheshire; Walter Boyd, Dublin; Matthew O'Reilly, Dublin.

For the Licence to practise Medicine.—Messrs. William Bourke, Curraghleigh, Co. Galway; Alfred Adolphus Hayes, Cheltenham; William Reith Scroggie, Co. Down.

At the quarterly First Professional Examination, held on Monday and Tuesday, July 10th, and 11th, the following candidates were successful.

Paul Robert Dillon, Dublin; Mrs. Mary Emily Dowson, London; Annie McCall, London; Agnes Russell, London; Florence Nightingale Toms, London; Jane Harriet Walker, London.

At a special examination, held on Thursday, July 6th, the following candidate received the Licence to practise Midwifery.

Richard Campbell, M.D. Q.U.I., Millisle, Co. Down.

The following Licentiate in Medicine of the College, having complied with the by-laws relating to Membership, pursuant to the provisions of the Supplemental Charter of 1878, has been duly enrolled a Member of the College.

Richard Francis Tobin, Licentiate 1874, Surgeon-Major A.M.D.

ROYAL UNIVERSITY OF IRELAND.—At a meeting of the Senate of the University, held on Thursday, July 13th, 1882, the Right Honourable the Lord O'Hagan, Vice-Chancellor of the University, conferred the following Degrees in Medicine and Surgery and Diplomas in Obstetrics.

Doctor of Medicine.—Percy Allport, Martin Henry Atcock, Thomas Cahill, William Courtney, Timothy Joseph Crowley, Pierce Joseph Daly, Luke Gerald Dillon, Patrick Joseph Galloway, John C. Hackett, William Edward Hadden, Henry Aylmer Haines, Samuel Hamill, Samuel Hamilton, Charles James Holmes, James Macgregor Lithgow, Connor Joseph O'Loughlin Maguire, Robert Carmichael Moore, Patrick O'Gorman, Thomas O'Connell, John Mortlock Phillips, Leonard Robinson, George Atkins Rountree, Arthur W. Sandford, James M. F. Shine, Samuel Stronge, John Wilgar Taylor, Joseph H. Whelan, John W. Williams, James Vance Young.

Master of Surgery.—Percy Allport, Thomas Cahill, William Courtney, Timothy J. Crowley, Charles Daly, Pierce Joseph Daly, Luke Gerald Dillon, John C. Hackett, William Edward Hadden, Samuel Hamilton, Charles I. Holmes, Samuel William Johnson, William Kelly, Daniel Lehane, Edward M'Connell, John J. M'Cormick, Connor Joseph O'Loughlin Maguire, Robert Carmichael Moore, Thomas H. O'Shaughnessy, Leonard Robinson, Robert Leonard Rutherford, Ferdinand A. Purcell, Arthur W. Sandford, James M. F. Shine, Samuel Stronge, John Wilgar Taylor, Joseph H. Whelan, John W. Williams, Charles Wiseman.

Diploma in Obstetrics.—Percy Allport, Thomas Cahill, James Craig, Timothy J. Crowley, Pierce J. Daly, Patrick J. Galloway, John C. Hackett, William Edward Hadden, Charles J. Holmes, William Nelson, Arthur W. Sandford, James M. F. Shine, Joseph H. Whelan, Charles Wiseman.

MEDICAL VACANCIES.

The following vacancies are announced:—

ARDWICK AND ANCOATS DISPENSARY AND ANCOATS HOSPITAL, Mill Street, Manchester.—Resident Junior House Surgeon. Salary £100 per annum. Applications by August 1st.

BRADFORD FRIENDLY SOCIETY'S MEDICAL ASSOCIATION.—Assistant Medical Officer and Dispenser. Salary £120 per annum. Applications by August 15th.

CUMBERLAND INFIRMARY, Carlisle.—Assistant House-Surgeon. Salary, £60 per annum. Applications by July 25th.

DOWNPATRICK UNION.—Medical Officer for Portaferry Dispensary District. Salary, £100 per annum, with £15 yearly as Medical Officer of Health, exclusive of registration and vaccination fees. Election on 8th August next.

DURHAM COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum. Applications by July 24th.

EAST SUFFOLK HOSPITAL.—House-Surgeon. Salary, £100 per annum. Applications by the 24th instant.

EAST WARD UNION.—Medical Officer and Public Vaccinator. Salary, £17 per annum. Applications by the 27th instant.

FLINTSHIRE DISPENSARY.—House-Surgeon. Salary, £100 per annum. Applications by July 24th.

GENERAL HOSPITAL, Birmingham.—Resident Medical Officer. Salary, £130 per annum. Applications by the 21st instant.

GENERAL HOSPITAL, Birmingham.—Resident Surgical Officer. Salary, £130 per annum. Applications by the 21st instant.

HARTLEPOOL'S HOSPITAL.—House-Surgeon. Salary, £60 per annum. Applications by July 24th.

HOSPITAL FOR SICK CHILDREN, 49, 61, Ormond Street, Queen's Square, W.C. Clinical Assistant. Applications to Dr. Lee, 6, Naville Row, W.

KENT AND CANTERBURY HOSPITAL.—House-Surgeon. Salary, £80 per annum. Applications by the 20th instant.

KILKENNY COUNTY INFIRMARY.—Apothecary. Salary, £50 per annum. Election on the 28th instant.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House-Surgeon. Applications by July 24th.

MALLOW UNION.—Medical Officer. Salary, £120 per annum, with £15 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 28th instant.

NATIONAL INFANT HOSPITAL, 129, Great Portland Street. Applications by August 22nd.

NATIONAL DENTAL HOSPITAL, 149, Great Portland Street, W.—House-Surgeon. Salary, £50 per annum. Applications by August 22nd.

RATHDRUM UNION.—Medical Officer for Aughrim Dispensary District. Salary, £120 per annum, with registration and vaccination fees. Election on the 20th instant.

RICCARTSBAR ASYLUM, Paisley.—Assistant Resident Medical Officer. Salary, £60 per annum. Applications to R. Rowand, Inspector of Poor, Paisley.

ROYAL ISLE OF WIGHT INFIRMARY, Ryde.—House-Surgeon and Secretary. Salary £50 per annum. Applications by August 8th.

RUBERY HILL BOROUGH LUNATIC ASYLUM, Bromsgrove.—Assistant Medical Officer as Locum Tenens for seven weeks. Applications to Dr. Lyle, Medical Superintendent.

SOCIETY OF APOTHECARIES, London.—Examiners in Medicine. Applications for the above office to J. R. Upton, Clerk to the Society, Apothecaries' Hall, E.C.

SUSSEX COUNTY HOSPITAL, Brighton.—Assistant House-Surgeon. Salary £40 per annum. Applications by July 26th.

WAREHAM AND PURBECK UNION.—Medical Officer of Health. Salary, £700 per annum. Applications by July 25th.

WREXHAM INFIRMARY AND DISPENSARY.—House-Surgeon. Salary, £100 per annum. Applications by August 8th.

MEDICAL APPOINTMENTS.

ALPIN, W., M.R.C.S., appointed Assistant House-Surgeon to the Metropolitan Free Hospital.

ANDERSON, James, M.D., appointed Assistant Physician to the City of London Hospital for Diseases of the Chest.

BARROW, Roger W., L.R.C.P., M.R.C.S.E., appointed Assistant House-Surgeon to the Liverpool North Dispensary.

BATTEN, R. D., M.R.C.S., appointed Resident Clinical Assistant to the Hospital for Consumption and Diseases of the Chest.

BROOK, W. F., M.R.C.S., appointed Medical Officer to the Fareham Workhouse and District, *vice* W. Barnard, M.R.C.S., resigned.

DENNING, C. E., L.R.C.S.I., appointed Junior Assistant Medical Officer to the County Asylum, Shrewsbury.

FENWICK, Bedford, M.D., appointed Assistant Physician to the City of London Hospital for Diseases of the Chest.

FOTHERGILL, J. Milner, M.D., appointed Physician to the City of London Hospital for Diseases of the Chest.

HANLY, E. A., M.D., appointed Resident Medical Officer to the British Hospital, Buenos Ayres.

MORTON, C. A., M.R.C.S., appointed House-Surgeon to the Stanley Hospital, Liverpool, *vice* A. Macpherson, M.B.

OLIVER, J., M.B., appointed House-Physician to the Hospital for Women, Soho Square, *vice* E. H. Edwards, M.B., resigned.

ORR, H., L.R.C.P., appointed District Medical Officer and Public Vaccinator to the Scarborough Union, *vice* C. W. Scrivener, L.R.C.P., deceased.

OWEN, H. J., M.D., appointed Assistant Physician to the Hospital for Consumption and Diseases of the Chest, *vice* W. Ewart, M.B., resigned.

PEREZ, G. V., L.S.A., appointed Resident Clinical Assistant to the Hospital for Consumption and Diseases of the Chest, to enter office next month.

RAWLE, F., M.R.C.S., appointed Medical Officer to the Titchfield District, Fareham Union, *vice* W. F. Brook, M.R.C.S.

ROWLANDS, W., M.B., appointed Junior House-Surgeon to the Stanley Hospital, Liverpool, *vice* R. Protheroe, M.R.C.S., resigned.

RUSSELL, M. W. H., M.R.C.S., appointed Resident Medical Officer to the Royal United Hospital, Bath, *vice* R. Frott, M.R.C.S., resigned.

TAYLOR, J., M.B., appointed Assistant Medical Officer of the Borough Lunatic Asylum, Newcastle-upon-Tyne, *vice* John J. S. Crampton, L.R.C.P. Eng., resigned.

THOROGOOD, J. C., M.D., appointed Consulting Physician to the City of London Hospital for Diseases of the Chest.

WILSON, J. A., M.B., appointed Assistant Medical Officer to the Govan Poorhouse and Asylum, Merryflats, Govan, *vice* A. Martin, M.B., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

COATS.—On July 14th, at 7, Elmbank Crescent, Glasgow, the wife of Joseph Coats, M.D., a daughter (Olive Mary).

MACLEAN.—On the 11th inst., at 23, Greek Street, Stockport, the wife of Kenneth Maclean, L.R.C.P. (Edin.), of a son.

NEILL.—July 17th, at 3, The Terrace, Ryde, the wife of Channing Neill, M.D., of a son.

SHARPLES.—July 15th, at Wellfield House, Farington, the wife of T. Sharples, Surgeon, of a son.

MARRIAGES.

DAVIES—**DESPARD**.—July 13th, at Stapleton, Bristol, by the Rev. George Despard, assisted by the Rev. William Start, uncles of the bride, David Samuel Davies, M.B. Lond., to Louisa Gertrude, daughter of the late Richard Carden Despard, Esq., C.E.

MACLEOD—**MARJORIBANKS**.—On the 11th July, at the Parish Church, Scotby, Carlisle, by the Rev. George Burnett, Vicar, assisted by the Rev. A. Edwards, Vicar of Kirkland, M. D. Macleod, M.B. Edin., Mem. Brit. Med. Assoc., Medical Superintendent East Riding Asylum, Beverley, to Daisy, youngest daughter of the late Samuel Marjoribanks.

DEATHS.

ANDERSON.—July 14th, at his residence, Southfield House, Hessle, East Yorkshire, Francis Bine Anderson, aged 85. R.I.P.

DODGSON.—On July 10th, at Derwent House, Cockermouth, Henry Dodgson, M.D. Edin., L.R.C.S.E., L.S.A., F.R.A.S., F.M.S., aged 49.

SILVER.—On the 16th inst., at his residence, Upper Tooting, Alexander Silver, M.A., M.D., M.R.C.P., of 2, Stafford Street, Old Bond Street, Physician to Charing Cross Hospital, aged 41 years. (Interment will take place at Brompton Cemetery at 1 o'clock on Saturday.)

HEALTH OF FOREIGN CITIES.—The following statistics, derived from a table in the Registrar-General's last weekly return, afford trustworthy indications of the recent health and sanitary condition of various foreign and colonial cities. In the three principal Indian cities—Calcutta, Bombay, and Madras—the annual death-rate averaged 27.4; it was only 21.4 in Bombay, whereas it was 30.6 in Madras, and 34.8 in Calcutta, where no fewer than 115 fatal cases of cholera were returned. It is scarcely necessary to say that the table does not include the usual return from Alexandria. According to the most recent weekly returns, the average annual death-rate in twenty-one European cities was equal to 25.2 per 1000 of their estimated aggregate population, against 19.2, the average rate last week in twenty-eight of the largest English towns. In St. Petersburg, the rate was as high as 49.5, against 48.9 and 44.4 in the two previous weeks; 24 deaths were referred to scarlet fever and 25 to diphtheria. In three other Northern cities—Copenhagen, Stockholm, and Christiania—the average death-rate did not exceed 22.0, the highest rate being 25.9 in Copenhagen, where 4 deaths from scarlet fever were reported. In Paris, the death-rate was but 20.5, and was considerably lower than that recorded in this city in any previous week of the year; typhoid fever, however, caused 44, and small-pox 11, deaths during the week. The 149 deaths in Brussels were equal to a rate of 19.0 per 1000, and included 6 cases of small-pox. The death-rate in Geneva did not exceed 11.3. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the death-rate averaged 22.2, and ranged from 19.8 in Rotterdam, to 23.8 in Amsterdam, where 6 fatal cases of whooping-cough were returned. The Registrar-General's table includes eight German and Austrian cities, in which the death-rate averaged 28.5 per 1000, and ranged from 20.1 in Hamburg and 25.6 in Vienna, to 36.1 and 37.4 in Buda-Pesth and Breslau; diarrhoeal diseases caused 180 deaths in Berlin and 29 in Breslau; and 10 deaths were referred to small-pox in Vienna, 7 in Buda-Pesth, and 5 in Prague. In three large Italian cities, the death-rate averaged 25.6, and ranged from 21.2 in Rome to 33.6 in Venice; measles caused 14 deaths in Turin, and 5 in Rome; and 6 deaths were referred to typhoid fever in Turin. In four of the principal American cities, the death-rate averaged 23.7; it was equal to 17.7 in Philadelphia, 20.7 in Brooklyn, 28.5 in New York, and 29.2 in Baltimore. Typhoid fever caused 20 deaths in Philadelphia, and small-pox 4 deaths each in New York, Philadelphia, and Baltimore.

A NEW journal devoted especially to neurology is announced to appear soon. It will be published at Naples bimonthly, and will be edited by Professor Francesco Vizioli of that city.

TURPENTINE AND CARBOLIC ACID IN TYPHOID.—Dr. J. F. Peace reports in the *Medical Brief*, fifty-four cases of typhoid fever, of which 30 were treated with carbolic acid, given in one to three drop doses, three to four times *per diem*; and twenty-four were treated with turpentine, given in five to ten drop doses, three to four times a day. The duration of the disease was shortest in those treated with carbolic acid, and they all recovered. Of those treated with turpentine, two died. The supporting treatment was the same in all.

HOME HOSPITAL.—The Goldsmiths' Company has recently made a third grant of £100 towards the extension of the Home Hospital (for Paying Patients), Fitzroy House, Fitzroy Square. The managing committee have also received second grants of £105 from the Clothworkers', Fishmongers', Grocers', and Mercers' Companies, while the Skinners' Company has contributed two grants amounting to £73 10s., and the Merchant Taylors', Salters', Leathersellers', and Vintners' Companies have made grants of 100, 50, and 25 guineas respectively.

STRANGE CASE OF POISONING.—A case of poisoning was investigated this week at an inquest held at Oldham. Mary Ogden had been in delicate health for some time, and her husband obtained a prescription from a Spaniard named Maurice Picano. This prescription consisted of laudanum, peppermint, and essence of camphor. Deceased partook of some, and shortly afterwards she began to be sleepy, and died. The medical opinion was, that deceased had died from an overdose of camphor. The jury censured the chemist, Mrs. Wild, who gave the mixture for the prescription, for not intimating how the medicine was to be taken.

THE following is the complete list of sums subscribed, forwarded to us from Paris by the Hon. A. F. Herbert, M.D., 21, Rue de Muommesnil, Paris, Honorary Secretary.

Secretary.	frs. cts.		frs. cts.
Sir R. Wallace, Bart.	2500	E. Tuckerman, Esq.	125
H. E. Lord Lyons	500	Mr. E. Forbes	150 0
Th. Yeatman, Esq.	250	W. Iellv, M. D.	125 25
J. H. Bennet, M. D.	100	P. Frank, M. D.	250 75
J. D. Mac Gavin, M. D.	500	C. J. B. Williams, M. D.	203 0
Hon. A. Herbert, M. D.	500	W. M. D.	125 25
Ernest Hart, Esq.	250		251 25
J. W. Crane, Esq.			251 25
J. C. Paris	100	J. B. Waters, Esq.	26 95
Monsignor Rogerson	50	Rev. F. Moran	250 0
Rev. A. Mackay	250	Professor Gairdner, M. D.	251 0
Seymour Burrows, Esq.	30	J. G. Swayne, M. D.	263 55
J. Whiteley, M. D.	100	Gilruth, Esq.	25 10
D. Duckworth, M. D.	79 95	R. O. Maughan	100 0
T. B. Curling, Esq.	250 75	G. Montgomery, Esq.	125 50
J. McIntyre, M. D.	263 30	Sir Wm. Gull, Bart.	951
W. H. Barry, M. D.	263 30	Hon. R. B. Hamilton	125 50
D. MacLagan, M. D.	50 50	J. Bell, Esq.	95 0
T. C. Tuchan, Esq.	250	Dr. G. Milroy	75 0
D. Sandilands, Esq.	125	Dr. Mac Farlan	250 0
R. Chandler, Esq.	100	Dr. Geo. Buchanan	131 25
A. Broad, Esq.	100		

CERTIFICATES OF DEATH.

CHAMBER CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

COTY.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopaedic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p. Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopaedic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., Tu. F., 2; Eye, Tu. F., 9.15; Ear, M. Th., 2; Skin, Tu. Th., 1.30; Throat, M. Th., 1.45; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The following questions were put to the candidates at the recent examination for the Licence in Dental Surgery. *Anatomy and Physiology.* 1. Describe the Palate-bone and its connections. 2. Describe the branches of the third division of the fifth pair of Nerves, and specify the structures to which they are distributed. *Surgery and Pathology.* 1. What is the process by which union of an Incised Wound is effected? 2. How can this process be best promoted? 3. What do you understand by a Dislocation of the Jaw? What force produces it? How would you reduce it? *Dental Anatomy and Physiology.* 1. Describe the positions of the Crypts of the several Permanent Teeth, and their relation to the roots of the Temporary Teeth at the age of six years. State what Teeth, complete and incomplete, are found in the jaws at that period. 2. Give briefly the Situation, Function, and Minute Anatomy of the Tissues named respectively Nasopharyngeal Membrane, Membrana Pteriomaxillaris, and Membrana Alveolaris. 3. Give the Dental Formulae of Man, Old-World Monkeys, and New-World Monkeys. Which Teeth of the typical Mammalian Dentition are absent in them? In what respects do the Teeth of the higher Apes differ from those of Man?—*Dental Surgery and Pathology.* 1. In a case of *Pericoronitis* of the lower *Third Molar*, what points to which you would give attention in deciding between the Extraction of Teeth and the Expansion of the Alveolus? How would you proceed to extract? 2. What is meant by *Impacted Teeth*? 3. What is the *Alveolar Process*? 4. What is the *Alveolar Ridge*? and what is the *Alveolar Bone*? 5. What is the *Alveolar Ridge*? 6. What is the *Alveolar Ridge*? 7. What is the *Alveolar Ridge*? 8. What is the *Alveolar Ridge*? 9. What is the *Alveolar Ridge*? 10. What is the *Alveolar Ridge*? 11. 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SINGLE QUALIFICATION.

SIR:—In the letter of "W. B." in the JOURNAL of June 24th, would you
 please send me a copy of the same? I have been waiting for information on
 the subject of the "W. B." letter. I have been waiting for information to sign
 the letter. I have been waiting for information to sign the letter. I have been waiting
 for information to sign the letter. I have been waiting for information to sign the letter.
 Yours truly,
 J. U. I.

Q. I am an M.D. from any British university can legally practice with one qualification on his own account - medical cases. He cannot legally call himself a "physician".

UNPROFESSIONAL ADVERTISING

THE author of the book, Mr. J. H. Smith, has a long and distinguished career in the service of the Government, and his work has been of great value to the country. He is now a member of the Council of the Admiralty, and his book is a valuable contribution to the literature of the subject. The book is written in a clear and concise style, and is well illustrated with numerous diagrams and photographs. It is a valuable work for all those who are interested in the subject, and is highly recommended.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to the Manager, at the Journal Office, 161A, Strand, London, and not to the Editor.

HAMSTEAD HEATH.

SIR,—My attention has been called to a notice in the BRITISH MEDICAL JOURNAL of July 15th, which appears to be written under a misapprehension of the facts, and which I hope you will allow me to correct.

It is not the "Sturdy athletes" who claim to be allowed to play games upon the West Heath. It is the boys and girls and little children, who cannot play on the ground set apart for cricket on the East Heath, and who have lost their accustomed place of recreation since Easter, when the new regulations of the Board of Works came into force. The open level space where for years boys have learnt and practised cricket without having caused annoyance or inconvenience, so far as I am aware, to any passer-by, is at a considerable distance from those parts most likely to be chosen for the walks of invalids and little children, *i.e.*, the high ground at the summit of the West Heath, commanding the fine sunset view, and the path round the side of the Heath leading to the fir trees and to the lower, wilder part now covered with ferns and heather and gorse, and other plants. Not only are the boys now stopped from playing on their old pitch, but all children's games of any kind are forbidden, except on the part of the East Heath devoted to the regular cricket and football matches, where of course it would be unsafe for them to play. At the same time, the old people lose what many of them have felt to be a pleasure, *viz.*, the sight of the boys and girls enjoying their happy and healthy exercise and recreation. It is these new prohibitions which the parents of the children of Hampstead, and the principals of schools for boys and for girls, are anxious to see rescinded.—I am, etc., SARAH W. CASE, Principal of Heath Brow School.

Hampstead, July 18th, 1882.

SIR,—Will some of your readers kindly inform me to what use or uses the shell of the cuttle-fish (*sepia*) can be converted, if any? and if it is of any value, intrinsically or otherwise? and oblige
A SUBSCRIBER.

THE TITLE OF DOCTOR.

SIR,—This question seems to be constantly cropping up in the columns of the medical press; and, like certain diseases, is surely liable to exacerbations, and again to relapses. Why cannot some of us be content with our numerous, and often high-sounding, long-winded qualifications? Why this craving after forbidden fruit? Why, in common honesty and common fairness, cannot we leave the title of Doctor to those who have by usage, and by right a proper claim to it, namely, those who are doctors at an university in the various faculties, it may be of medicine, or law, or divinity? Cannot a solemn appeal be made to our brethren to let this question rest? Let them that be licentiates be licentiates still; for why should Ephraim envy Judah, or Judah vex Ephraim?—Your obedient servant,

COMMON SENSE.

* * There is not any other subject which appears to excite so wide spread an interest as this, or as to which we receive such floods of correspondence. It would not be in accordance with our practice to close the columns of the JOURNAL against any subject which obviously interests large numbers of the profession, or as to which widely differing views are held. Mr. John Simon, for instance, proposes, in a special report appended to the General Report of the Royal Commission on the Medical Acts, recently published, that, in the event of the establishment as recommended of an uniform minimum qualification test and examination by conjoint boards appointed in each division of the kingdom, all registered holders of such diplomas should be legally entitled to the designation of Doctor. The question does not appear to all by any means so simple and so clear as it appears to "Common Sense", or it would have been settled long ago. There is obviously a wide distinction between the use of the letters M.D. and the general designation Doctor, which, it is contended by those who differ from "Common Sense", is by "common usage" as much a designation of a member of a College of Physicians, for example, as of anyone else; it is argued that the title "Physician" is not of common usage, but the word "Doctor" is used in common to signify the same thing, namely, that the person in question is a physician, not by any means that he is necessarily a member of an university, which is indicated by the distinctive letters.

SIR,—In reply to "Vexata Quæstio", I think he cannot have had much experience of the University examinations (London excepted), or he would not talk about "working hard for another year at these, and then failing". In the first place, it is impossible to enter for Oxford, Cambridge, or Durham, without doing the regular three or four years respectively, excepting in the case of Durham, where medical men of fifteen years' standing may be admitted for examination. In the second place, it is a rare thing to hear of rejections at any one of these three, and those who do go up are few and far between, as the whole university course is looked upon as a farce to qualify for practising as a medical man. After graduating in Arts, students who wish to enter the profession almost invariably go to either London, Edinburgh, or Glasgow, to study that which they have not the same opportunities of doing at an university town, and frequently take the diplomas of the Colleges of Physicians and Surgeons. And this is how it should be. If all who enter the profession could afford the time and money to go to Oxford or Cambridge, pass in Arts, then enter a London hospital and take their diplomas, we should have better educated men, both socially and intellectually, than we have at present, when the majority of us find it more convenient and economical to study privately for the classical or preliminary examination. But as to saying that an M.D. at the present day, when most of those who hold such degrees may be from Glasgow, Edinburgh, or some foreign and may be unknown place, is a better and superior man than a member of any of the three Colleges of Physicians and Surgeons, is an absurdity. It is not long ago that M.D.'s were not permitted to practise, but were simply professors or teachers of the theory. At a later date, I believe, by permission of the Colleges of Physicians, some agreement was come to, allowing M.D.'s to practise and to call themselves "Physicians"; but even after this it was, and is still, usual for an M.D. to take the diplomas of the Colleges of Physicians and Surgeons, although latterly M.D.'s have been content to practise without taking the old diplomas.

The unfair advantage taken lately by M.D.'s, and their unsuccessful attempt to stop the immemorial claim and custom of physicians to the title of "Doctor", is as childish as it is mean towards the latter, from whom they obtained the privilege of practising as physicians. The name "Physician" is pre-eminently associated with a member of a College of Physicians, and not an M.D. of an university, who is, like a D.D., a professor. The American Colleges of Physicians grant the

degree of M.D., which it was intended should be granted by the British Colleges, although not absolutely specified in their charters, and it was not deemed necessary at that period, when no one would have thought of disputing it. The title was essentially that of the Physician when the barber-surgeons were shaving and bleeding the people. It is as inconsistent to say Mr. So-and-so, Physician, as Mr. So-and-so, M.D. Members of a College of Physicians become virtually "Doctors of Physic", and no law at present in existence can take the title from them. I have seen an old diploma from the Dublin College of Physicians, wherein it grants the title of "Doctor of Physic", which shows that it was the usual title of a physician.

I must remark upon the bad taste shown sometimes in the medical journals by members of one College depreciating those of another; this I have seen to be especially so with regard to London men. Very often men of one College know little or nothing of other Colleges and their examinations, except from hearsay. I have two examples of M.D.'s in my own town, and they both hail from Edinburgh; they are the only M.D.'s in the town, and if they be samples of superiority I prefer to remain a
MEMBER OF A COLLEGE OF PHYSICIANS.

SIR,—Your correspondent "Vexata Quæstio" makes the following statement in your JOURNAL of July 8th, *viz.*: "I consider any man of any dignity would not allow himself to be called Doctor without he was a M.D., M.B., or a F.R.C.P." Allow me to ask "Vexata Quæstio", if dignity allows a M.B. or a F.R.C.P. to be called Doctor, why should not dignity allow a M. or L.R.C.P. to do the same? It has been declared over and over again that the diplomas of the Colleges of Physicians confer the title of Physician on the holders; therefore, if the holder of one diploma is a Doctor, the holder of the other diplomas is a Doctor also. Is not this the meaning of your correspondent's statement? It is too absurd to deny the right of diplomates of the Colleges to assume the title of Doctor when the holders of university degrees are allowed to use the title conferred by the Colleges of Physicians on their "graduates". It should be acknowledged that as a Doctor is a Physician, so also is a Physician a Doctor.

The question is one for settlement by Act of Parliament, and I hope some day to see the power of conferring medical degrees taken from the deans and dons who have so misused their powers, and placed in the hands of the Colleges of Physicians, who are alone fitted to exercise so important a function, and the anomalous condition at present existing removed by converting the L.R.C.P. into M.B., the M.R.C.P. into M.D., and the F.R.C.P. conferred only on pass Physicians as at present. Thus only can the *quæstio vexata* be smoothed and the exodus to foreign universities stopped.—I am, sir, yours,
L.R.C.P.

* * We have received a great number of other letters on both sides of the question.

POST MORTEM EXAMINATIONS IN PRISONS.

SIR,—As I think you have misinterpreted the circular of the Home Secretary notifying to coroners that all *post mortem* examinations in prisons ordered by them must be performed by independent medical men, and not by the prison surgeon, I write to say that the order only refers to inquiries where *post mortem* examinations are required. Such cases will be exceptional. In an experience of twenty years as a prison surgeon, no *post mortem* examination has ever on any inquest been considered necessary. Unless, therefore, the issue of the circular altogether changes the action of the coroner, I do not apprehend that, in ordinary cases, he will seek to obtain information beyond the sources which he has hitherto used to decide the cause of death.—I am, yours truly,
N. HARDCASTLE,

Surgeon to H.M. Prison, Newcastle-on-Tyne.

Newcastle-on-Tyne, July 3rd, 1882.

* * Assuming our correspondent's view of the Home Office circular to be correct, it amounts to this: that, under ordinary circumstances, the prison surgeon will give evidence as heretofore; but that, in exceptional cases, where a special investigation seems necessary, his evidence will not be accepted—a modification in quantity, but not in quality. However desirable—and instances will occur where it may be desirable—to have a second opinion, that opinion should be obtained in conjunction with the medical adviser of the case under investigation, and not, as it were, to be a check on his veracity.

HOUSE SURGEON (Durham), who asks whether, if a pauper died in a hospital supported by voluntary contributions, the parish officer (relieving) ought to see to the burial arrangements, is referred to an article on this subject which appeared in the JOURNAL of June 17th.

DISEASES OF CHILDREN.

SIR,—If your correspondent will refer to the BRITISH MEDICAL JOURNAL, November 1st, 1879, and to the *Sanitary Record*, December 15th, 1879, he will find reviews of the kind of book he appears to require.—I am, etc.,
M.D.

A PLAGUE OF ANTS.

SIR,—The basement in a house of a patient of mine is infested with small ants, which now threaten to invade the upper rooms of the house. Food has to be isolated by being placed upon dishes surrounded with water, in order to prevent every article of diet from being covered with these pests. Walls have been stripped of their paper; carbolic acid has been freely used; fumigations of sulphur for lengthened periods in almost hermetically sealed rooms applied; but all to no avail—still they come, and defy every effort to stop their progress. Will any of your numerous correspondents kindly say if they have met with a similar condition of things, and what remedies proved the most lasting for the total destruction of these persevering little creatures.—Yours truly,
PERPLEXED.

THE CAUSE OF ACNE.

SIR,—In reference to the very sweeping assertion of Dr. Wray on this subject, I beg to say that I suffered severely from acne between the ages of 13 and 19; and that there was assuredly no such cause present in my case.—Yours faithfully,
M.D.

TOOTHACHE.

SIR,—Suggestions for treatment, not completely novel, but found useful. In the common variety, charge a tooth-brush, having unequal bristles, with common yellow soap, and cleanse all the teeth with it and cold or tepid water. Then smoke a cigar composed entirely of coarse brown paper, and retain the smoke, which contains creosote in vapour, in the mouth for some time; or, apply a drop of carbolic acid on lint, or tinct. opii and ol. juniperi or spiritus chloroformi; give internally small doses of tincturæ gelsemii, ammonia and alkaline carbonates; or, of bromide of potassium and tincture of hyoscyamus. For the neuralgic variety, small doses of quinetum and tincturæ gelsemii.—I am, etc.,
SURGEON.

REMARKS

ON

THE DIAGNOSIS AND TREATMENT OF CHRONIC INFLAMMATION OF THE OVARY.

By LAWSON TAIT, F.R.C.S.,

Surgeon to the Birmingham Hospital for Women.

THE diagnosis of pelvic diseases may be said to have received its first real life from Simpson; for, before his day, no such attention was given to these affections as deserved the name of systematic study. He it was who instituted precise means of physical diagnosis, and upon that he reared methods of treatment which have made a lasting impression on our practice. Like all innovations, Simpson's methods led, even in his own hands, but mostly in those of his friends and old lowers, to an excess of zeal; and the mechanical school of gynaecology, of which he was unquestionably the founder, led many to the belief that, armed with a sound, a speculum, a caustic-stick, and some new-fangled pessary, the practitioner could subdue all the pelvic ailments of women. All these aids, valuable in their way, had their enthusiastic supporters, were declaimed against by others, did an infinite amount of mischief in their turn, and have, finally, been referred to more limited and less hurtful fields of practice.

From the same phase of surgical development arose a number of operative proceedings, each of which has extended our means of relieving human suffering, but each of which went through a course of rough experimentalisation which is now terrible to look back upon. Simpson found that division of the cervix relieved the sufferings in certain cases of dysmenorrhœa, and enabled a few sterile women to become pregnant. Immediately, we had a flood of hysterotomies all over the world, and every sufferer had her cervix divided. Thousands of wholly unnecessary operations of this kind were, and many still are, performed, and not a few deaths occurred from the practice.

Coincident with this innovation, we had the employment of pessaries, fortunately a less hurtful practice, but carried to an extent of uselessness which is positively amusing; and other illustrations of similar strivings in the dark might be given.

From the writings of Dr. Henry Bennet and Dr. Tilt, especially the latter, another new departure was derived; for attention was directed by these authors to the possibility of the ovaries being the seat of the troubles, relief from which was sought in the treatment of the uterus.

Still another impetus, and the greatest of all, in my opinion, was given to gynaecology by Dr. Thomas Keith, who taught us that our traditional fear of the peritoneum was only a bugbear, and that it would serve us as well as any other part of the body if dealt with fairly. After Mr. Spencer Wells had gone on for twenty years operating on hundreds of cases of ovarian tumour, with a mortality of about twenty-five per cent., Dr. Keith persuaded us that ovariectomy could be done with less than six per cent. of deaths. The mortality of Dr. Keith's and my own is now as low as three per cent., and this after we have both tried the so-called antiseptic system of Lister, and have given it up as more dangerous than useful.

The outcome of such splendid work in the removal of ovarian tumours will soon be felt in very many ways, but in one it has already given evidence of another and altogether new direction for abdominal surgery. As long as Mr. Spencer Wells's example ruled our practice, and as long as his high death-rate was the best we could get, we operated on ovarian tumours only when they threatened life, and we delayed the case by mischievous tappings as long as we could. We felt that we were not justified in opening the abdomen for conditions whose severity did not threaten life. Now, however, when the removal of an ovarian tumour is fatal only when the patient has been tapped, or the operation injudiciously delayed, we are justified in performing abdominal section, not merely for the saving of life, but for the relief of suffering.

This new practice has had many good results, not the least of which is, that it is shedding a whole flood of light on the pathology of pelvic disease, and is even helping us to understand the physiology of the female sexual organs. Thus my own practice, the details of which will shortly appear in a special work, has convinced me that the usually accepted doctrine of the coincidence of ovulation and menstruation is wholly erroneous. The ovaries have nothing to do with menstruation; and though I give the opinion with a qualification which may be made necessary by further experience, so far the evidence before me is convincing that the phenomena of menstruation depend upon the

Fallopian tubes and not upon the ovaries. Finally, and of most importance for my present purpose, we are for the first time becoming cognisant of the real conditions involved in the disease recognised as chronic inflammation of the ovaries. For such a purpose as this, an abdominal section has been well said to be of as much value as a *post mortem* examination; I would say it is more valuable, for we have the recent and exact clinical record side by side with the morbid appearances.

We all know that, in its healthy state, the ovary is just like the kidney—it is an organ of the existence of which the owner is profoundly ignorant. Unless it become diseased, it gives no sensations which indicate its existence. But, when diseased, no organ of the body gives such discomfort; and its diseases are often fatal, this result being by no means confined to cystoma.

Acute inflammation of the ovaries is often fatal; and, when not fatal, it generally leads to a state which makes lifelong misery. Though I have seen cases in which no history of an acute stage could be obtained, yet, like the same disease in other organs, chronic inflammation of the ovaries generally begins in the acute form.

The origin of the acute disease is various. It may be in a simple chill, in a hæmatocoele, in an attack of gonorrhœa, in some exanthematic fever, or in miscarriage or childbed. The last two sources are by far the most common, and they present two specific varieties of the disease—interstitial oöphoritis and peri-oöphoritis.

Many of the cases of acute oöphoritis undoubtedly recover, and leave no mischief behind; but, in others, the permanent mischief gives rise to suffering which to men is fortunately inappreciable. Most patients will fix a date, from which they will say they have never known what it is to be well. A woman who has had acute exanthematic oöphoritis, with permanent mischief, will say that, since she had the small-pox, scarlet fever, or acute rheumatism, she has never had her periods as she used to have them. For a time, they were more profuse than before; then they became scanty and painful, the pain increasing as time went on, lasting a week, or even two or three weeks, in every month, rendering her utterly miserable, and being relieved by nothing but narcotics. We examine the pelvis, and find, perhaps, nothing at all. We give her iron and tonics, and all sorts of drugs, and she is no better. She goes to one specialist, and he divides her cervix or amputates it, without relief; to another, who puts in a galvanic stem; to another, who applies some useless pessary; and so on, all in vain. If she marry, she does not become pregnant. If she be in the better ranks of life, rest and luxury, with constant change of scene, make her life endurable; but, if she be the wife of an artisan, her lot is one long unhappiness till the climacteric period is passed; and, during that period of trial, many of these women become drunkards.

Cases of chronic disease arising from acute peri-oöphoritis give usually more specific indications, at least to one accustomed to pelvic examinations. Suppose that it has arisen in some attack during the puerperal month, the patient will say that she was ill with "inflammation of the bowels", and was a long time in getting about; that she has never been pregnant since, and is hardly ever free from pain. The majority of these cases occur in primiparous women; and therefore the first feature in the case to be noticed is often that the patient has had one child soon after marriage, and has never again become pregnant. If the patient be living a married life and bearing children, that alone is proof that she is not the victim of this disease, for it uniformly unsexes the sufferer as far as maternity is concerned. It also unsexes its victims for marital life in all severe cases, for they cannot endure it; and in the milder cases they cannot get well, as long as they have to submit to it.

As far as general symptoms are concerned, they are rarely free from pain; and this is generally intensified during the menstrual week, for the reason that the tubes are always involved. In most of the cases, the tubes are chiefly at fault; for I often find the ovaries cystic or shrivelled, so as to be of little account in explaining the symptoms. There is always pain in the left side in the groin; for, if one ovary be affected, it is sure to be the left. In the exanthematic cases, we have to trust almost entirely to the story of the patient to subjective symptoms; and therefore, in this class of cases, mistakes will be made until we arrive at a more perfect method of diagnosis. In the second class of cases, however, the objective conditions are easily recognised by the practised finger. A fixed and tender mass, composed of the enlarged and probably adherent ovary, or of the occluded and distended tube, will be felt on one or both sides of the uterus through the vaginal *cul-de-sac*; and the peculiar sickening pain felt by the patient when the mass is touched will afford conclusive proof as to its nature.

What is to be done to relieve such cases? The general principles of treatment are those applicable to all such conditions, in whatever part of the body they are met with. The first of all is rest; but, unfortunately

we cannot rest the ovaries or the Fallopian tubes. The former will go on trying to fulfil their function of ovulation; and every month, or oftener, the inflamed organs are temporarily congested by the occurrence of menstruation. Much may be done, however, by absolute rest in bed for the whole menstrual week, and absolute abstinence from intercourse. It is very rare, however, that we can persuade patients to carry out this regimen long enough; and hospital patients will not attend to it at all—indeed, they cannot. Counterirritation by blisters or setons is also to be tried. The only drugs of the slightest use are bromide of potassium and ergot.

After a persistent trial of these without benefit, there remains for consideration the question of removal of the diseased organs—a proceeding which is based on the soundest and most completely accepted rules of surgery. Let us take a perfectly parallel case. From some injury or gonorrhoeal infection, an eye becomes acutely inflamed, and the acute process is followed by intractable chronic inflammation of the structures of the globe—a matter of every-day occurrence. The ophthalmic surgeon removes the diseased organ, to save the patient's discomfort, perhaps the sight of the other eye, perhaps his life. He mutilates the patient most seriously in that part of the body where mutilation is most dreaded. He removes a diseased and useless structure. We remove inflamed and useless ovaries and tubes to relieve suffering, in some cases to save life; and we do not mutilate our patients half so seriously as is done in the removal of an eye. The removal of a diseased eye often fails to save the other, and is then an useless operation. Removal of a cancerous eyeball is always an useless operation, for the disease always returns.

Removal of the inflamed uterine appendages may yet turn out to be a failure for some cases; but it never can be so bad as the removal of an eyeball for cancer; and, in the hands of experienced operators, the operations have quite an equal risk. Besides this, the operation for the removal of the uterine appendages is as yet in its infancy; we have very much to learn about it; yet, in spite of this, in my hands, of thirty-five cases performed for chronic inflammation, there has only been one death, or a mortality of 2.85 per cent.—a mortality which, I have some reason to believe, is less than that of excision of the eyeball. This one death was due to causes entirely preventable, and ought not to have occurred. The operation is justified by its primary success; and my belief is that my mortality, as my experience grows, will not be more than 1 or 2 per cent.

Against the operation, various *a priori* arguments have been brought. The first of these is, that it unsexes the patient. This is a perfectly needless argument, because the disease for which the operation is done has already accomplished this, as it has rendered her barren, and has made sexual intercourse a burden which she ought not to be called upon to bear. It has been said that removal of the uterine appendages destroys sexual desire; but the uniform testimony of such patients as have given evidence is that it has no such effect. But, suppose it did, what nature can any man have who would refuse to his wife relief from suffering, because it would interfere with the gratification of his lust? I am surprised that such an argument has been seriously advanced.

It has further been alleged that useless operations will be performed. Until our powers are perfect, this is very likely. But of what operation in surgery can this be denied? Have we not heard of lithotomies being performed where there was no stone—of amputations carried out where there was no disease in the joint? How many thousands of people have been cut for squint, when what they wanted was a pair of proper lenses?

As a matter of fact, I have found that the mere serious discussion of the operation with a humbugging patient will lead to a diagnosis. If her sufferings be real, she will jump at the chance of relief; if they be not, she declines to take the risk of the operation.

Such an operation as this demands the justification of ultimate success; and here we are on the most difficult ground. The most recent summary of cases is to be found in the second volume of Agnew's *Surgery*, just published, in which 171 cases are tabulated, the work of 100 operators, with a mortality of 19 per cent. This is quite a satisfactory explanation of the opposition with which the operation has been met. I should long since have condemned the proceeding, and have discontinued my practice, if my mortality had been 10 per cent. In fact, I did cease to operate for five years, because my mortality was 20 per cent. Of the forty operators in this table, there are only three who have operated on fifteen or more cases for all causes, not only chronic oöphoritis. These are:

Hegar	42	7 deaths
Batley	15	3 ..
Lawson Tait	30	4 ..

87

14, or 16.6 per cent.

Increased experience, therefore, brings better primary results; and this is more than ever visible, if my whole experience is taken of 75 cases, with only 6 deaths, or 8 per cent. In my recent experience of 61 cases, there have been only 3 deaths, or 5 per cent.; and, confining it to the cases of chronic oöphoritis of 35 cases, there is only 1 death, or 2.85 per cent. It is clearly, therefore, an operation which can be justified by its primary success only in the hands of a surgeon who has large and constant practice in abdominal surgery; and, when it is done by a large number of operators in twos and threes, it can only meet with speedy and well merited condemnation.

Precisely the same kind of argument applies to its secondary results, which, in the hands of inexperienced operators, are admittedly bad. For my own results so far, I have abundant cause for satisfaction; some of my cases are yet incompletely relieved, but by far the majority of them are absolutely cured. The first patient from whom I removed an ovary for pain, nine years and a half ago, was completely relieved of her symptoms, and she remains so to this day.

I cannot burden this paper, already too long, with the recital of cases, but two I shall give as samples of what may be done by this operation; and I select them only because, having been promptly cured themselves, they have ever since been actively engaged in helping to cure others as surgical nurses. One of them is now attached to my own private staff, and has materially assisted in the recovery and cure of many of her suffering sisters.

G. B., aged 24, when placed under my care by Dr. Hammond of Nuneaton, had enjoyed perfectly good health until she was seventeen years old. At that time, she had some kind of low fever, the nature of which she did not know, and no history of it could be obtained. During its progress, she suffered greatly from pelvic pain, and was nine months in getting better, but practically she had never been well since. She had never been free from pain in the back and in both groins, the pain running down both thighs, and being greatly intensified just before and during each menstrual period. She had had a great variety of treatments, the general view being that there was some displacement of the womb. Several operations had been performed, and she wore pessaries for some months. The result of all this was, that she steadily grew worse, and for three years before being placed under my care she had been a helpless cripple.

Her general appearance was that of good health; in fact, she was distinctly robust in appearance. Her menstruation was regular, but scanty, seldom lasting more than two or three days; and during that time she described the pain as being agonising, and those who had watched her saw no reason to doubt her words. My diagnosis in this case was that of cirrhotic oöphoritis, the result of acute inflammation of the exanthematic variety. I proposed to remove the glands; but, when the whole features of the proposal were explained to her, she promptly declined to submit to it, and left the hospital. In October, however, she voluntarily returned, and begged me to operate. I complied with her request upon October 15th, and found the ovaries small, atrophied, and adherent. They afforded, in fact, typical examples of the changes effected in the glands by this disease. The tubes were also adherent, small, and atrophied. The removal of the appendages was difficult, as it nearly always is in such cases. She made a rapid recovery, and left the hospital early in November. She did not menstruate till the end of April 1880, and at that time declared herself greatly improved. I lost sight of her till the 8th September, 1881, when she came to show herself as a perfect cure. She had been for nine months, and is now, engaged as a surgical nurse in a large general hospital, is perfectly fit for her arduous duties, and says she is in perfect health. She menstruates occasionally, but entirely without pain.

J. W., aged 24, began to menstruate at 13, and was regular and free from pain till she was 19. Then she had an acute illness, and ever afterwards suffered intense pain for two days before and during the whole of her periods. The amount of loss became very profuse. She was admitted to Leicester Infirmary, and was there for many months, and obtained considerable relief, the treatment being to a large extent local, by pessaries, etc. After this she went out to service, but had to leave every situation on account of being wholly unfit for work for the greater part of the month. She was treated in several medical institutions, but obtained no permanent relief, and ended by becoming an out-door pauper. She was sent to me in July 1880, when I found the ovaries large and tender, and fixed down behind the uterus. I removed them and the tubes on July 18th, the operation being a very difficult one. The glands were both cystic, and the tubes occluded and distended. She recovered speedily, and in a few weeks entered upon her duties as a nurse. These she has fulfilled, under my directions, ever since, save in an interval, during which she had an attack

of scarlet fever. She has never menstruated since, and has remained perfectly free from pain. She is constantly engaged in nursing abdominal sections, and is one of the best nurses I have on my staff.

A CASE OF EXCISION OF THE PYLORUS FOR CANCER OF THE STOMACH.

By F. A. SOUTHAM, M.B.Oxon., F.R.C.S.,
Assistant-Surgeon to the Manchester Royal Infirmary.

RICHARD S., aged 43, gas-fitter, was admitted into the Manchester Royal Infirmary, under the care of Dr. Ross, on March 13th, 1882, suffering from symptoms of pyloric obstruction, which had first shown themselves about four months previously. The patient, who was much emaciated and was rapidly losing flesh, weighing only 8 st. 7 lbs., was, at the time of admission, unable to retain any solid food, as sickness always came on about an hour after a meal, the vomited matter being at times mixed with a little blood. Fluids, however, if taken in small quantities, were retained by the stomach. The bowels were very constipated, only acting about once a week; and the motions were dark and tarry. The patient complained of considerable pain in the region of the stomach, always increased after taking solid food. On examination of the abdomen as the patient lay on his back, a hard, well defined, somewhat nodular mass, apparently about the size of an orange, could be distinctly felt close to and a little to the right of the umbilicus, corresponding in situation with the pyloric extremity of the stomach. The tumour, which was freely movable, shifted its position with the respiratory movements, and also with the position of the patient, falling to the right or left of the middle line according as he turned to either side. On making pressure over it, considerable pain was felt. No dilatation of the stomach could be detected, and the condition of the other viscera appeared to be perfectly normal. From the history and the symptoms which were present, Dr. Ross had little difficulty in diagnosing the case as one of cancer of the stomach; and as, from the mobility of the mass and the fact that it was perfectly free from any connection with the abdominal walls and adjacent organs, the disease appeared to be limited to the pylorus, the case was considered a suitable one for operative interference.

The patient, having been informed of the serious nature of the operation, and of the risks connected with it, readily gave his consent, as he was anxious to obtain relief, at whatever cost, from the symptoms from which he was suffering. Accordingly, on March 30th, he was transferred to the surgical wards, where he was fed by the mouth on peptonised milk and light custard pudding; for it was found that, as long as he was restricted to this diet, no sickness ensued. As he was very rapidly losing ground, growing daily more emaciated, preparations were made for performing the operation on April 5th. In order that the bowels might be thoroughly cleared out, simple enemata were administered the two preceding evenings, and brought away a large quantity of dark-coloured feculent matter. No food was given by the mouth for twelve hours previously.

The operation was performed at 10.30 A.M. on April 5th, according to the method adopted by Professor Billroth and Dr. Wolfier (*Clinical Surgery*, by Dr. Billroth; New Sydenham Society, p. 493), with antiseptic precautions. Chloroform was administered by Dr. Moritz, and Messrs. Whitehead and Howlett very kindly assisted me. To guard, as far as possible, against the effects of shock, the patient's extremities were carefully wrapped up in blankets, and hot bottles were kept applied to the soles of the feet and sides of the thighs and legs. As soon as the patient was fully anaesthetised, a siphon stomach-pump was passed, and the interior of the stomach was several times thoroughly washed out with tepid water. The necessity of this measure was proved by the fact that a large quantity of dark-coloured grumous matter was brought away, which otherwise would probably have escaped into the peritoneal cavity when the viscus was opened.

The operation itself may be divided into five stages.

1. *Exposure of the Tumour.*—This was effected by a transverse incision nearly six inches in length, carried across the abdomen about two inches above the umbilicus, and dividing the recti muscles. All bleeding having been arrested, the peritoneum was divided to the same extent, and the growth was then freely exposed to view. (Fig. 1.) It was found, as was expected, limited to the pyloric extremity and adja-

cent portion of the walls of the stomach, being perfectly free and movable except at its posterior aspect, where there were a few slight adhesions to some enlarged lymphatic glands which lay close to the head of the pancreas. These having been readily broken down with the finger, the pylorus and diseased mass were drawn forwards as far as possible, so as partially to protrude through the abdominal incision.

2. *Isolation of the Pylorus and Tumour from the Large and Small Omenta.*—The tumour having been drawn forwards as far as its connections allowed, the great omentum was first separated from the greater curvature of the stomach by taking it up in three portions between three double catgut ligatures, and then dividing it between each pair of ligatures with scissors. The small omentum was then separated from the lesser curvature in a similar manner, five double ligatures being used. In this way, the pylorus and diseased mass were completely freed from their connections with both omenta without any hæmorrhage; and, being quite isolated, the tumour could now be drawn forwards through the external wound, so as to lie altogether outside the abdominal cavity. This having been done, a large flat sponge was laid beneath the stomach, so as to cover in the greater portion of the wound, and in this way prevent any prolapse of the intestines, and the escape of any blood, or of the contents of the stomach and bowel, after their division, into the interior of the abdomen. By this means, the remainder of the operation was performed altogether outside the peritoneal cavity.

3. *Excision of the Pylorus and Tumour.*—This was effected in the following manner. A thick silk ligature was tied round the duodenum about an inch and a half from the pylorus, so as to prevent any extravasation of its contents from taking place after its division, and also to guard against its slipping away after its separation from the stomach. The duodenum was then divided with a pair of scissors between the ligature and the pylorus, about half an inch from the tumour and well clear of the disease. The distal portion, with the ligature round it, was then drawn over to the right side, while the stomach itself was divided. This was again effected with scissors, the division being commenced about the centre of the lesser curvature, and carried obliquely across towards the great curvature in a line slightly convex towards the left side. (Fig. 1.) In this way, the pylorus, along with



Fig. 1.—Shows Position of Growth, a, and Lines of Division, a a, of Stomach, b b, of Duodenum.

the tumour, was completely removed. The contents of the stomach, which was almost empty, were soaked up with a sponge; and its interior was carefully washed out with a weak carbolic lotion. Contrary to what one would have expected, the division of the stomach was attended by very little hæmorrhage, only two small vessels on its anterior wall requiring torsion—the result, no doubt, of the powerful contraction of its muscular coat. Nor was the division of the bowel accompanied by any bleeding, the pressure of the ligature round it probably preventing any hæmorrhage. After the removal of the tumour, a mass of enlarged glands surrounding the head of the pancreas was freely exposed to view. Some of these were removed; but, as they were found to involve the biliary and pancreatic ducts, it was thought advisable not to interfere too much with them, for fear of injuring those important structures.

4. *Closure of the Opening in the Stomach, and the Insertion of the Duodenum into it.*—The opening in the stomach was next partially closed by twenty-one silk sutures, commencing from above downwards, i.e. beginning at the lesser curvature, a small opening being left at the great curvature for the insertion of the duodenum. The silk

ligature was then removed from around the duodenum, and the orifice of the bowel was attached to the opening which had been left in the stomach at its greater curvature by means of nineteen silk sutures (Fig. 2). The sutures having been cut short and the sponge removed, the stomach was returned into the cavity of the abdomen; all bleeding points were arrested, and the peritoneal cavity was then carefully sponged out.

In the insertion of the sutures two different methods were adopted, with the object in each case of bringing into contact with one another a considerable margin of the opposed serous surfaces of both stomach and intestine. In uniting the posterior walls of the duodenum and stomach, the sutures were inserted from within (according to the plan recommended by Billroth), the needle being introduced between the mucous and muscular coats of the stomach (S), and then made to pierce both muscular and serous coats; it was then passed in the reverse direction through the coats of the duodenum (D), viz., first through the serous and muscular coats, and then between the muscular and mucous coats. In this way, on drawing tight and tying

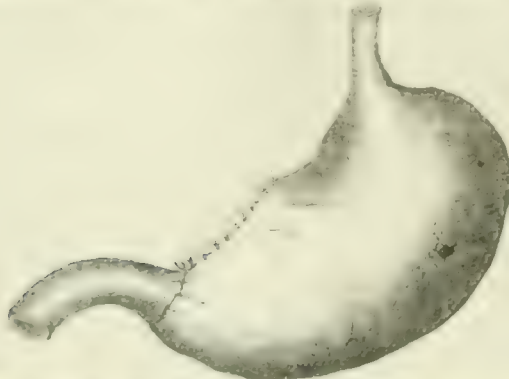
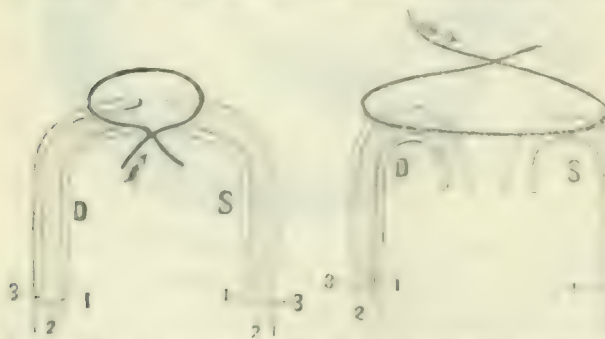


Fig. 2.—Shows condition of Part after Removal, of Growth and Attachment of Duodenum to Stomach.

the sutures, a considerable margin of the serous coats were brought into contact with each other, and the margins of the mucous membrane at the same time fell into apposition, covering over the knot of the suture, which in this way was left between the mucous and serous coats at the point of junction of the stomach and bowel (Fig. 3). In uniting the anterior walls of the duodenum (D) and stomach (S), and also the two cut surfaces of the stomach itself, a



the same method was adopted, the sutures being entered from without. The margins of the cut surfaces were slightly inverted, so that the serous surfaces well into contact with one another, and the mucous surfaces from without, so as to form a double layer of mucous membrane at the junction. The same method was also adopted in uniting the two cut surfaces of the stomach itself, and in uniting the two cut surfaces of the duodenum itself.

5. *Closure of the External Wound.*—This was effected in the ordinary way, by means of nine silver wire and sixteen silk sutures, passed so as to include the peritoneum. Considerable difficulty was, however, experienced in bringing the margins of the wound into contact with one another, owing, no doubt, to the contraction of the divided recti muscles, and I think, therefore, that on this account a longitudinal incision through the abdominal walls would be preferable to the transverse one as recommended by Billroth. The wound was then dressed antiseptically, and, as I regretted afterwards, no drainage tubes were employed. The patient was then removed to bed, the operation having lasted exactly one hour and a half. No sickness occurred during its performance, and a very fair pulse was maintained throughout.

As regards the after progress of the case, nutrient enemata and subcutaneous injections of morphia were administered every four hours. At 1 P.M. (one hour after the conclusion of the operation), pulse 88, full and strong; temperature 97.6°. The patient was sleeping quietly. There was no sickness. The extremities of the skin were warm. At 5 P.M. temperature 98.4; pulse 120. He was quite conscious, and complained of thirst and pain about the abdomen. He appeared to have quite rallied from the shock of the operation. At 10.30 P.M. temperature 99.8; pulse 138, soft but regular. The patient was sleeping quietly; the extremities and surfaces of the body were warm. At 12.30 A.M. temperature 102°. He had been sleeping quietly for some hours. There had been no sickness since the operation. Shortly after this, the night nurse noticed a change come over the patient, and death took place very suddenly about 1.30 A.M., nearly fourteen hours after the conclusion of the operation.

A *Post Mortem Examination* was made the following day by Mr. A. H. Young. He found the internal organs all perfectly healthy. No secondary deposits were present except in the mass of glands, to which reference has been made, as surrounding the head of the pancreas. There was slight injection of the parts in the neighbourhood of the stomach, and a quantity of bloody serous fluid was found in the peritoneal cavity. As regards the parts which had been divided, a certain amount of union had already taken place, a thin layer of lymph having been poured out, as the result of which there was slight adhesion between the opposed serous surfaces of the stomach itself, and also between those of the stomach and the duodenum. The whole of the growth had been removed, the portion of the stomach which had been left, and the bowel itself, beyond the point at which it had been divided, being found perfectly free from any trace of the disease. *Microscopic Examination* of the parts removed at the time of operation (i.e. the pylorus, and about one third of the anterior and posterior walls of the pyloric extremity of the stomach) showed that the growth consisted of scirrhus cancer. The pylorus was entirely surrounded by the growth, its opening being so contracted as barely to admit the tip of the finger. The pyloric extremity of the stomach was also involved, more especially its anterior wall, the mucous surface of which was studded with a number of distinct nodules. The duodenum was similarly affected for about half an inch; beyond this point, the walls of the bowel were perfectly healthy.

Remarks.—With regard to the cause of death, I suppose it must be referred to what is generally included under the term shock; but inasmuch as reaction had become fairly established, the patient appearing to have quite rallied from the effects of the operation, and since death was preceded by a sudden and rapid rise of temperature, I think the fatal result in this, as in many other cases of abdominal surgery, has been due to the somewhat less generally known description as "septicæmia," or "pyæmia," or "pyæmia," that is to say, pure chemical poisoning of the system, the result of a large quantity of poisonous material in the extensive opening made in the peritoneum.

From the nature of the operation, and the nature of the parts involved, it is not probable that the parts involved were perfectly aseptic; and, even if it were, from the physiological law of osmosis, it is not improbable that the fluid, which is poured out into the peritoneal cavity, soon became infected by the fermenting materials which are present in the bowels, and which may find their way into it through the walls of the peritoneum. Hence a septic peritonitis is likely to set in, which may destroy life in a few hours, from a very small quantity of the fermenting material.

The rapid rise of temperature, and the sudden collapse after reaction had become established, and the pouring out of a quantity of sanguinolent fluid into the cavity of the peritoneum are, I think, arguments in favour of this view.

In this case, I think, it is probable that the operation was performed in a perfectly aseptic manner, and that the fatal result was due to the pouring out of a quantity of sanguinolent fluid into the cavity of the peritoneum, which might collect

there, according to the plan sometimes adopted in cases of ovariectomy. As regards the operation itself, which has not hitherto been adopted in this country, it has now been performed on fifteen occasions by Billroth, Wölfler, and others with considerable success, five recoveries having taken place, and one patient was recently described as being alive and in good health—the digestive functions being in no way impaired—eight months after its performance.

It is, I think, therefore well worthy of further trial; but in order that it may be successful, it should only be performed in the early stage of the disease, when the pylorus alone is involved, and where the general condition of the patient is such, that he will be able to bear the severe shock which is necessarily attendant upon so serious an operation.

THE DIAGNOSIS AND TREATMENT OF INTESTINAL OBSTRUCTION.

By H. J. BENHAM, M.D., Ipswich.

Cases of intestinal obstruction are not uncommon; we ought, therefore, to study them carefully: for a prompt and accurate diagnosis of the actual state of matters is of immense importance. Time, instead of clearing up, obscures the diagnosis; superadding symptoms of general peritonitis, which hide the local signs. In acute cases, inflammation of the bowel tends rapidly towards gangrene, rendering operative help more and more useless, if not given at the earliest opportunity. Accurate diagnosis, at the first examination, should therefore be our aim; the right treatment then follows almost as a matter of course. Delay is often more dangerous than the boldest operation.

The diagnosis and treatment of external hernia is tolerably plain and settled. What is needed is, that, in cases where the obstruction is within the abdomen, our diagnosis should become equally certain, and the treatment equally prompt and decided. I would venture to submit that, in forming our opinion, these two great classes of intestinal obstruction (the external and the internal) should be considered together—not relegated, the one to the surgeon, and the other to the physician. Is it not illogical to postpone all thought of operative interference in the one case until it is too late, and the patient is moribund; whilst, in cases of external hernia, with the same general symptoms, the rule would be to operate at once?

The pathognomonic symptoms of intestinal obstruction are absolute constipation and repeated vomiting. If meningitis, peritonitis, renal and biliary colic, can be excluded, these symptoms point to a condition which should forbid all purgatives and irritating measures, and lead to a careful and searching examination. If obstruction be complete, distension of the bowel above soon comes on, with local pain, followed by increasing tenderness from local inflammation; more urgent vomiting; pyrexia; and, ultimately, unless relief be afforded, collapse and death. There is often marked anxiety of countenance, out of proportion to the pain.

In considering these cases, it is well, following Dr. Clifford Allbutt, to divide them, according to their previous history and mode of onset, into three classes.

1. *Chronic*.—Onset gradual, during weeks or months, without any very urgent symptoms.

2. *Late Acute*.—Where, after a chronic course, a more or less acute attack of obstruction supervenes.

3. *Early Acute*.—Where symptoms of complete obstruction develop in a few hours, in a patient previously free from bowel-trouble.

The history should always be carefully noted, if possible, and the order in which the symptoms arose. The more urgent the symptoms, the more prompt must be our treatment; whilst mildness of constitutional reaction, in obscure cases, may justify us in pursuing an expectant and soothing treatment—whereby, perhaps, the inflammation and swelling of the imprisoned bowel may be subdued, and the obstruction relieve itself without operative interference. Enteritis and peritonitis are the complications to be dreaded; should they be increasing, an operation is urgently demanded to save the patient's life; and this is the more likely to succeed, the earlier it is undertaken. In forming our diagnosis, we should first mentally exclude the more chronic causes of obstruction, one by one, till we arrive at the condition present.

Commencing, then, with the *chronic* cases: if there be no abdominal tenderness or pyrexia, the cause may be impaction of feces; stricture, fibrous or cancerous; polypus; tumour or abscess compressing the bowel. If there be abdominal distension, with some pain and tenderness, this may arise from injury to the bowel (of which the history may tell), or it may indicate more or less enteritis and local peritonitis. Should a chronic

course have been interrupted by an acute exacerbation, we have an instance of the *late acute* class, where the conditions are more urgent. Yet here, if we be sure that the original condition was chronic, and especially if we have evidence of an old fixed cause of obstruction in the writhings of distended hypertrophied bowel above it, we may be able, by giving the parts functional rest by almost total abstinence from food, and by soothing by heat, opium, and belladonna, to subdue the inflammation and restore matters to a chronic state, which can be dealt with at leisure. Hence the importance of obtaining an accurate history.

With the late acute cases may be considered a very important group—that of intussusception—which sometimes belongs to the late acute, and sometimes, as in the typical cases, to the early acute class; though it may almost be considered as a class by itself. When it is acute, with frequent tenesmus and passage of blood-stained mucus, with an elongated, painful, movable tumour, the diagnosis is clear. Chronic forms are not so obvious; and there is one condition—perityphlitis, or inflammation around the cæcum and vermiform appendix, which closely simulates intussusception. It may be distinguished generally by a history of pain and swelling antecedent to the vomiting and constipation; and, if there be a doughy or brawny infiltration of the integuments, the case and the treatment become obvious.

All these cases hitherto mentioned should be considered first. In addition to the soothing treatment, a very valuable plan is for the surgeon himself to inject a cupful or more of olive-oil, and then as many pints of warm water or gruel as he can, proceeding slowly and carefully, lest inflamed bowel be ruptured. With due care, this need not happen; and much valuable information is gained as to the site of the obstruction and its cause. By this means, fecal masses may be broken up, and an intussusception may be reduced. If the lower end of it can be felt getting lower and lower, there is every reason to expect success in reduction; but, if there be much tenderness about the tumour, and it do not alter in shape, much care must be exercised. When once the layers are glued together, the only hope of cure lies in the sloughing off of the contained portion, which may occur in four cases out of ten. If there be stricture, injections will do no good, but the contrary. Then it becomes necessary, when it is no longer possible to obtain ease by regulating the diet, and by saline laxatives, or, in some cases, by dilatation, to consider the question of colotomy. This operation is generally neither difficult nor dangerous, and seems far preferable to the habitual use of morphia for months. Should there be tenderness and distension of the cæcum, colotomy should be performed on the right side, even if the stricture be in the sigmoid flexure; but the operation should not be deferred until this is necessary.

Of course, in considering a late acute case, the possibility of there being an external hernia must not be overlooked. Pain shooting down the inner side of the thigh may lead to the discovery of an obturator hernia.

But, if we can certainly exclude all these causes of obstruction, and the case evidently belong to the early acute group, we are brought face to face with a very important because most urgent case. It is no longer allowable to suspend our judgment and wait, hoping that inflammation will subside and all go well. This may happen under judicious treatment, but not in the acuter cases.

The symptoms point to acute strangulation of bowel, either within the abdomen or external to it; and we should judge of the condition of the bowel just as we do in cases of external hernia. Of course, all the usual and unusual sites must be explored; and, if found, the hernia dealt with according to the rules of surgery. But, if none can be found, I contend that these rules are still applicable to the case. If the constitutional symptoms indicate no great amount of damage to the bowel, we may soothe, and wait a few hours, persevering in this line of treatment if there be improvement; but, if the condition of the patient become more and more urgent, there is no time to be lost. If the bowel be running on towards gangrene, it may rupture, and fatal peritonitis rapidly occur. Even the release of the imprisoned bowel may come too late, if its tissues be allowed to mortify first. Therefore it is of the highest importance to realise, as early as possible, the true state of affairs; and, if we feel sure that there is an acutely-strangulated loop of bowel somewhere, it is our plain duty to set it free. This can be done by laparotomy, or abdominal section. The abdomen is opened in the linea alba, the hand introduced, and the bowel released, with as little disturbance as possible. But, if it be in a doubtful state, it should be secured close to the edge of the wound, the abdomen thoroughly cleansed, and drainage provided for. In an early operation, this can be dispensed with advantageously. If there be a history of dragging pains at one spot in the abdomen, following an attack of peritonitis, we shall probably find and divide at that spot a constricting band of fibrous tissue. These are the most hopeful cases. But for impaction

of foreign insoluble bodies or gall-stones, for twists and internal herniæ, laparotomy, performed early, offers the best and almost the only chance, if the strangulation be acute; and I believe the time will soon come when this operation will take its place in surgery side by side with the parallel operation of kelotomy for external strangulated hernia. It is a question of diagnosis. Let us, then, strive to make our diagnosis of these grave cases more thorough and more certain.

CASE OF INTESTINAL OBSTRUCTION, AND ABDOMINAL SECTION.

By CHARLES FIRTH, M.B.,

Assistant-Surgeon to the Norfolk and Norwich Eye Infirmary, etc.

R. C., labourer, aged 49, was admitted into hospital on July 3rd, 1877, with left scrotal hernia, and the following history. He had had a rupture for five years, and had always worn a truss. On June 29th, at 5 A.M., he was carting bricks, when he felt a sudden pain in the left groin, and the hernia became larger. (The truss for the last month had failed to keep up the hernia.) He was sick once on June 29th, but the vomiting became urgent on July 1st, and had continued since. On admission, he had a large left inguinal hernia, which was easily reduced, but the vomiting continued. Pulse weak, and small, 112; tongue white, but moist. The abdomen was tympanitic, tender, and tense. He was very thirsty. The vomited matter was offensive, brownish-yellow, not fecal. The bowels were open three times on June 29th—not since. He had had hiccough since the 29th.

At 10.45 P.M., a consultation was held; and, at 11, under ether, the abdomen was explored, but no strangulation was detected. Stercoraceous vomiting occurred during the operation.

On July 4th, 3 A.M., fecal vomiting continued. There was retention of urine. He had stricture. A No. 3 flexible catheter was passed and kept in.

July 4th, 10.30 A.M. He had a great deal of pain in the abdomen in the night, which was better this morning. The abdomen was very tense. Pulse 128, weak and thready; temperature 97° to 98° ; hiccough continued. Three sutures had given way, and were replaced by others. In the evening, sickness had been much less frequent since 1 P.M., and the vomited matter was not stercoraceous. Temperature 98.3° ; pulse 108.

July 5th. The bowels were opened eight times since 2 P.M. yesterday. He was sick slightly this morning, slept fairly in the night, and had had no pain. Temperature 97.8° ; pulse 104, of fair volume. The tongue was moist; he had no hiccough. Carbolic water dressing was applied to the wound.

July 6th. He was sick once in the afternoon. Pulse 108; temperature 98.2° . At 5 A.M., sickness returned; he had great pain and distension of the abdomen. At 11 A.M., he was vomiting a dark fluid, and was in great pain. The pulse was almost imperceptible, and the extremities cold. At 2 P.M., he died.

Autopsy.—The abdomen was enormously distended, and tympanitic. On opening the abdomen, the coils of small intestine were found firmly adherent to the wound. There was no general peritonitis, but only congestion and loss of polish of the peritoneal surface. The cecum was greatly distended with fluid and sanious fecal matters. One part, as large as half-a-crown, was greatly thinned, sloughy on the inside, and perforated in two places by two pin-point openings. The cecum was found lying under the diaphragm, close to the spleen, the large intestine attached to it by a twisted round the lengthened mesentery of the small intestine, causing a double obstruction. The other organs in the abdomen were healthy.

REMARKS ON THE ADVANTAGE OF THE METHOD OF WIRE LIGATURES FOR THE APPROXIMATION OF DIVIDED BONES.

By T. J. COOPER, M.D., F.R.C.S.,
Surgeon to the Lincoln County Hospital.

ALL surgeons who operate frequently are aware of the extreme importance of placing and preserving the divided surfaces of bones in very accurate apposition. This is especially true in the case of the knee, the ankle-joint, and the like. It is a well known and universally recognised fact, that neglect of this precaution is apt to lead to disastrous results, and to the failure of operations otherwise well planned and satisfactorily carried out. Such neglect is often followed

by ulceration or necrosis of the bones, and the formation of immense quantities of pus. The limb, riddled by sinuses, becomes an incumbrance to its owner, and, in order to save the life of the patient, has to be got rid of by amputation.

Although, twenty-one years ago, Professor Cooper of San Francisco advocated the treatment of fractured patella by means of silver wire, yet, as an addition to other means for obtaining accurate approximation of the sawn surfaces of bones, the use of wire sutures seems scarcely to have met with that recognition among practical surgeons which its merits appear to claim. I therefore, venture to call attention to two cases in which I employed it, and in which it clearly proved of very great service in securing the union of bones in a good position.

The first case was that of a healthy man, thirty years of age, whose foot was run over by a ballast-train on the Great Northern Railway, in consequence of which he was admitted into the Lincoln County Hospital on May 24th, 1881. On examination, the anterior and middle portions of the foot were found to be completely smashed, but the heel was intact. I therefore determined to amputate after Pirogoff's method, retaining the opposed portions of tibia and os calcis in position by the introduction of iron wires. The operation-wound was completely healed in ten days, but it was thought desirable to retain the wires for six weeks, at the expiration of which time the bones were found to be well united. The man staid seven weeks in the hospital. He can now walk well with the aid of a properly adapted shoe.

The other case to which I wish to draw your attention was that of a boy seven years of age, who was admitted into the Lincoln County Hospital on June 20th, 1881, for disease of the knee-joint of three years' duration, following an injury from his having slipped upon the pavement. The knee was much swollen, very painful and tender, and yielded a profuse purulent discharge through a long sinus on the outer aspect of the thigh. The boy was extremely feeble and emaciated, but had no visceral disease. On July 26th, I excised the joint, the incisions being a transverse one below the patella joined by a longitudinal one along the course of the sinus. On exposure of the surfaces of the bones, they were seen to be almost entirely denuded of cartilage, and in the head of the tibia were two masses of caseous material, each of the size of a walnut. These were removed by the gouge. The sawn surfaces of the femur and tibia were brought firmly together by two wire sutures, one on the outer, the other on the inner aspect, and iron splints applied, the posterior one being hollowed out on each side opposite the knee, and the anterior one arched in the corresponding position. These were retained *in situ* by a paraffin bandage, and the limb was swung from a cradle. The wound of the operation was completely healed in about two months, when, as the bones were found united, the wire sutures were removed. Unfortunately, a slough, due to the pressure of the splint, formed over the crest of the tibia; and partly in consequence of the time required for the healing of the sore thus occasioned, and partly from the wretched state of the home of the boy, he did not leave the hospital until October 24th, when he could bear weight upon the limb, which was shortened about an inch and a half.

It will be noticed that, at first sight, this appeared a most unfavourable case for operation, from the ill nourished condition of the child, the great amount of disease of the joint, the presence of a long sinus, and especially from caseous masses being imbedded in the head of the tibia. The termination of the case, however, is singularly satisfactory, as the boy now possesses an excellent limb, but slightly shortened, upon which he can walk well; a result which, I feel sure, is mainly due to the method adopted to preserve the complete immobility of the bones.

These operations were performed under strict antiseptic precautions, and in neither of them was any irritation caused by the wire. With regard to the method of introduction of the wires, it is desirable that the apertures made by the drill should be at least a quarter of an inch from the sawn surfaces, and that the ends of the wire should be secured by twisting round the ends of the wire. It is preferable not to twist these ends more than twice, as otherwise considerable difficulty will be found in effecting their removal. Iron wire, such as that used for the stiletts of elastic gum catheters, in size about No. 22 of the gauge, will usually be found the best.

THE following case is a very interesting one, and is a family history of the kind which is not often met with. It is a case of a woman who was married at the age of 14, and who had a family of six children, her three daughters (aged 25, 19, and 15 years respectively), her son (aged 14), and her son-in-law. Special care should be exercised in the selection of fungi for edible purpose in a wet season like the present when the growth is likely to be profuse and rank.

CLINICAL MEMORANDA.

PYÆMIC PNEUMONIA AND PERITONITIS RESULTING FROM RETENTION OF A PIECE OF SPONGE IN THE VAGINA.

ABOUT the end of July 1881, a woman, aged about 24, came under my care at the St. Marylebone Infirmary, where I was then resident surgeon. When admitted, she was partially unconscious, not being able to answer when spoken to. Her breathing was quick and laboured, and I found that both lungs were completely dull, and no respiratory sounds could be heard, except in the region of the throat. She had no cough, neither did she expectorate. Her abdomen was very tense, and painful when touched. The left knee was considerably swollen. Her eyelids were constantly closed, with both pupils slightly, but unequally, dilated. The pulse was 122, weak, and very compressible; the lips dry and brown, without sordes; the tongue dry, brown, and cracked; the breath very offensive, and the face covered with beads of sweat. The patient never rallied, and died two days after admission. The hectic flush was not present. For about six hours previous to death, the sweating was most profuse.

At the necropsy, both lungs were found to be almost completely solid from congestion; numerous pyæmic abscesses were scattered through their substance. Both pleura were adherent from recent deposit of lymph. (This latter fact was remarkable, as I believe it is rare to get any fibrinous formation in pyæmia.) The surfaces of the pericardium were covered with a fibrinous deposit, not adherent. The fluid in the pericardial sac was of a dirty white colour, which, under the microscope, was found to result from the presence of cells, much resembling pus. The heart was otherwise healthy.

In the abdomen, the peritoneal surfaces were adherent from recent deposit of lymph, and much pus lay in the abdominal and pelvic cavities. Numerous small abscesses were scattered throughout the substance of the liver. The spleen was about three times its average normal size from congestion, but free from abscesses. The stomach, intestines (with the exception of the rectum), kidneys, capsules, and pancreas appeared to be healthy. Both ovaries were congested. The pelvic cavity was full of a purulent fluid, tinged with blood. On removing the pelvic contents, a recto-vaginal fistula was discovered, the indurated condition of its edges showing it to have existed for some time: the whole of the rectum was ulcerated. A large abscess, about the size of an ordinary orange, occupied the posterior cul-de-sac of the vagina, with an opening on its peritoneal surface. The entire vaginal canal and the neck of the uterus were in a state of ulceration. A piece of sponge, three and a half by two inches in size, lay in the upper part of the vagina and partly in the uterus, the os of which was much dilated. It was sodden with a dark, offensive fluid. I concluded that the immediate cause of death was the congested condition of the lungs, hastened by the peritonitis, and that the pyæmic abscesses in the liver and lungs resulted from the ulceration of the rectum, in the same way as hepatic abscess occurs in dysentery. The peritonitis was evidently caused by the rupture of the vaginal abscess into the abdominal cavity.

H. BOYLE RUNNALLS, Saltash.

STRANGULATION OF THE BOWEL.

I BEG to place on record the prolongation of life, after complete strangulation of the bowel, for the term of fifty-four clear days.

Mrs. C., aged 56, had during the forenoon two evacuations from the bowels, and afterwards went out to take tea with friends. The next day, she recognised distension of the belly. Upon the following day (the second), when I saw her, she was moving about and complaining of distension and colicky pains. The next day (the third), I was called to see her; she had now great pain and vomiting. Upon examination, I was enabled at once to diagnose obstruction of the bowels. At the first, the distension seemed to be confined to the smaller bowels; but afterwards the larger were enormously distended, and their vermicular action most marked and frequent. Three or four weeks before death, the sigmoid flexure was greatly distended, and sharply defined by its immobility. There was no evidence from physical examination, either externally, or by rectum or vagina, the uterus being very movable, of the seat or nature of the obstruction. There was an account of antecedent uneasiness in the rectum, manifested by diarrhoea (so-called), and accompanied by a feeling of inefficient evacuation; but not of any bloody or mucous discharge, and the feces were described as being lumpy and not small in calibre. During the whole course of the disease, the pulse varied both in force and frequency. The temperature was first normal, then below normal; and the urine was excreted in proper quantity.

The treatment consisted of the total exclusion of solid food, which was very carefully followed out: unirritating injections; and the hypodermic injection of morphia, night and morning. This drug admirably controlled the vomiting and pain.

At the *post mortem* examination, the bowels were very much congested. A little lymph had very recently been poured out. The bowels were quite free as far as the upper part of the rectum, where it becomes bound down to the wall of the pelvis. Here the bowel seemed suddenly to terminate. Upon removing and opening the gut, there was an annular ring of ulcerated scirrhous, so tight that it supported the weight of three gills of water without leakage.

The interest of the case centres in the fact of disease of this grave character having progressed to complete obstruction without professional aid having been obtained; the apparent suddenness of the attack; the very little light thrown upon the nature of the case by the previous history; and the complete negative evidence of most frequent examinations of the rectum, both by myself and other medical men. I may add, that she was a woman of remarkable placidity of temperament. One sister had died of cancer of an ovary; another of cancer of the breast. She declined all operative procedure.

J. FIELDEN HOWARD, M.D., Shaw.

REPORTS

OF MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

LOWESTOFT HOSPITAL.

CASE OF INTESTINAL OBSTRUCTION RELIEVED BY PUNCTURE OF THE BOWEL.

By JAMES C. WORTHINGTON, L.R.C.P.Ed., M.R.C.S., Surgeon to the Hospital.

RECENT surgery has shown us that portions of the intestinal canal can be removed with favourable results; and this, with antiseptic surgery, has materially strengthened the hands of the surgeon in dealing with a class of cases surrounded with dangers. Still, the contingencies in all cases of "hidden" intestinal obstruction are so numerous, that to minimise them or endeavour to avoid them may well be a matter for our most deliberate consideration.

Thomas C., aged 28, a spare muscular man of average height, a labourer, was admitted into the Hospital on December 24th, 1881. For some time past, he had had occasional attacks of constipation attended with colic and sickness. For these he took purgatives, with the effect generally of producing a little diarrhoea, and then absolute relief. A few days before admission, he had had some diarrhoea. Two days before admission, at nine in the morning, he was suddenly seized with agonising pains at the navel, accompanied with sickness, which became stercoraceous during the next day. He sought medical advice, and was put under the influence of opium, which afforded some relief from pain; but his wife, thinking it necessary he should have immediate relief from the bowels (as upon previous occasions), obtained and administered a strong purgative draught. The effect was great and sudden increase of pain, followed by stercoraceous vomiting. Upon admission into the hospital, he lay on his back with both legs drawn up, tossing from side to side, his countenance pale and anxious-looking, his tongue furred and clammy; he loudly implored for relief from intense pain referred to the umbilicus. He had passed no urine since the previous day. Pulse 76; temperature 99.8°. He had had no relief from the bowels since the pain commenced, and his condition altogether was one of extreme distress. He was at once given a drachm of tincture of opium, and in a short time another half-drachm. These, with a few sniffs of chloroform, relieved his immediate discomfort. Upon examining the abdomen, the muscles were found hard and tense, and there was tenderness over the belly generally, and some dulness on percussion in both flanks. The inguinal regions were carefully explored, and no information was obtained by rectal examination. He had a constant troublesome cough. Three pints of warm water were injected up the bowel; some was retained; that which returned was hardly discoloured and contained but a few floating bits of solid feces. Warm fomentations were applied to the body, and twenty-minim doses of tincture of opium ordered as often as the abdominal pain should reassert itself.

December 25th. At 6 A.M., he passed a small amount of highly concentrated urine. He had no return of the sickness; and during the night he obtained some sleep. The belly, however, showed some distension at the upper part; the muscles were still rigid, and he com-

clot, formed to all appearance before death, was found in the cerebral portion of the internal carotid, and in the middle cerebral artery, on the left side. Below the ligature, a clot existed which was continuous with a very large clot in the aorta, the walls of which were very atheromatous. The clot in the aorta seemed to have formed, at least in part, during life, probably during the period which just preceded death. These appearances were of some interest in connection with the operation of ligature of the carotid for aneurysm of the arch of the aorta.

Section of a Club-Foot.—Dr. BACON showed the foot of an adult, showing talipes equinus. The tendons and fasciæ had been dissected to display the alteration they had undergone; and a careful section in the antero-posterior plane had been made by Dr. Annington, with a view to showing the changes which had occurred in the articulations.—Dr. HUMPHRY said that he had not before seen any such section of a club-foot. Owing to the preternatural flexion, it would be seen, on attentive examination, that the tibia rested on the posterior part of the trochlear surface of the astragalus; while the anterior part, pressed upon by the stretched anterior ligament of the ankle-joint, was completely denuded of cartilage. The associated flexion in the foot in these cases took place almost always between the astragalus and os calcis behind, and the scaphoid and cuboid in front; and in this specimen the scaphoid was in contact only with the under part of the ball of the astragalus; and the upper part of the ball, pressed upon by the superior calcaneo-scaphoid ligament, was like the fore part of the trochlea, quite devoid of cartilage. In the Chinese foot, in which a somewhat similar flexion is artificially produced, the bend is made at a point anterior to this—namely, in the metatarsal bones, which are so bent that the toes come almost into contact with the heel, and the tarsal bones are made prominent anteriorly.

MANCHESTER MEDICAL SOCIETY.

WEDNESDAY, JUNE 7TH, 1882.

JAMES HARDIE, M.D., Vice-President, in the Chair.

Pseudo-hypertrophic Paralysis.—Dr. EDGE showed a case of pseudo-hypertrophic muscular paralysis, in a girl aged 8. The unfrequency with which this disease attacks girls was pointed out, and attention was drawn to the severity of the case—girls being usually affected much less severely than boys. The case was remarkable, also, on account of the facial muscles being enlarged.

Macrostoma, Branchial Fistula, and Accessory Auricular Appendage.—Mr. F. A. SOUTHAM showed a male child, seven months old, affected on the left side of the face with these deformities. The auricular appendage was situated just in front of the ear, which, with the exception of being slightly elongated, was in other respects normal. Just in front of the appendage was the branchial fistula, which ran directly inwards towards the cavity of the mouth, but did not communicate with it. The macrostoma, a fissure at the angle of the mouth, was well-marked; and, from its extremity, a distinct cicatricial line ran directly to the branchial fistula. There was no history of similar deformities in any other members of the family.

Suture of Tendon.—Dr. YEATS showed a case, where he had, six weeks after the accident, united with four catgut sutures the divided ends of the extensor tendon (extensor communis digitorum) of the middle finger, at the metacarpo-phalangeal joint. The skin-wound was united by silver sutures. The operation was done antiseptically. The wound healed in four days; and, three weeks afterwards, the patient had perfect control over his fingers; flexion and extension being perfect. At the end of five months, the finger was quite as strong as before the operation.

Nævus.—Dr. YEATS showed a case of a large venous nævus on the bridge of the nose in a child, which was treated and cured by injecting at one sitting, into different parts of the tumour, through one external puncture, five drops of carbolic acid and olive-oil, equal parts. Care was taken to make firm pressure round the base of the nævus whilst the fluid was injected. The cicatrix that formed was very insignificant.

The Causes of Pigmentation in Addison's Disease, and other Cases.—Dr. McNAUGHT (Boothfold), who read a paper on this subject, said that pigmentation occurred in chlorosis, in idiopathic pernicious anæmia, in pregnancy, and in certain diseases of the female generative organs, as well as in Addison's disease. The pigment was identical in seat and nature in these cases with that of Addison's disease; and the causes which produced it were probably alike in all. The nervous system played a very powerful part, but could not be the chief cause, because it was not involved in every case of pigmentation. Anæmia, on the other hand, existed in every case; and it was this condition of the blood which rendered pigmentation physically possible. The suprarenal capsules had no influence over the pigmentation of Addison's dis-

ease, and the abdominal and sympathetic ganglia had been found unaffected. Addison regarded the disease as a peculiar form of anæmia; and the examination of the blood in his cases showed great excess of white corpuscles. Greenhow denied that there was any alteration of the blood; but the author had found great increase of white corpuscles in a case of his own; and, further, the symptoms of the disease—breathlessness on exertion, giddiness, headache, loss of heat, tinnitus aurium, etc., as well as the persistence of subcutaneous fat—were typical of anæmia. The exact seat of the deposit of the pigment was determined by the influence of light and irritation of the skin from any cause, controlled by the sympathetic nerves.

Iodoform in Phthisis.—Dr. DRESCHFELD read a paper on the internal administration of iodoform in phthisis. Many pathologists having now for some time held the view, that tuberculosis was an infectious disease, depending on the presence of micro-organisms (a view which had received strong support by Koch's important researches), and that tuberculosis, phthisis, and scrofulosis were closely allied, if not identical pathological processes, the author was led, guided by the excellent results obtained in the local treatment of scrofulous diseases by iodoform, to try the administration of this drug in phthisis. This experience extended over more than six months; and the results so far obtained were satisfactory. The iodoform was given in the form of inhalation, and internally in the form of pills (one grain per dose), mixed with creasote and dextrine. The best results were obtained in cases of incipient and acute phthisis; in chronic cases, the results were less satisfactory; in a few cases of laryngeal phthisis, the local application of iodoform powder to the ulcerated surface of the larynx was followed by immediate relief, and clearing of the ulcers—without, however, producing healing of the ulcers. The conclusions arrived at were these. 1. Iodoform is well borne by the patient, without producing nausea or gastric irritation. 2. Owing to its anæsthetic properties, it relieves the irritation in the throat, and the cough, especially in incipient phthisis. 3. In some cases, it increased the digestive powers and appetite, and relieved the vomiting. 4. It reduces slightly the temperature in cases of phthisis with raised temperature. 5. In no case have any bad results followed the inhalation of iodoform. 6. Hæmoptysis forms no counter-indication for its administration (in some cases, hæmoptysis entirely disappeared on the administration of iodoform). 7. In incipient phthisis, iodoform seems to arrest the disease.

OBSTETRICAL SOCIETY OF DUBLIN.

SATURDAY, JUNE 10TH, 1882.

JOHN A. BYRNE, M.B., President, in the Chair.

Fibroid Polypus.—Dr. MORE MADDEN showed a fibroid polypus which he had removed from the uterus of an unmarried woman, aged 30, who had suffered for four years from profuse uterine hæmorrhage. The tumour was attached high up within the cavity of the uterus. He exhibited another fibroid tumour which he had removed. In this case, there had been no hæmorrhage, but there was an albuminoid discharge from the vagina.

Ovarian Tumour.—Dr. MACAN showed portions of an ovarian tumour which he had removed from a woman in the City of Dublin Hospital. It was an interligamentous growth. Within the tumour was a fungoid growth. There was no pedicle. The case did well, except for some symptoms of carbolic acid poisoning.

The Rational Treatment of Anterior and Posterior Displacements of the Uterus.—The discussion on Dr. MACAN's paper on this subject was resumed.—Dr. MORE MADDEN did not agree with Dr. Macan that the normal position of the uterus was one of extreme ante flexion; moreover, he regarded the downward displacement as a real displacement. In his opinion, extreme ante flexion was never found without symptoms of disease resulting. The bimanual method of treatment he regarded as better fitted for demonstrations on the dead body than for practising on living women.—Dr. PUREFOY did not quite agree with Dr. Macan in his views regarding the action of chronic metritis on the uterine walls. Many of the highest authorities stated that it produced softening, not rigidity of the walls. He thought that the bimanual method was best used in retroflexions.—The PRESIDENT regarded the normal position of the uterus to be one of slight ante flexion. In his experience, ante flexion as a disease was extremely rare. When the uterus was enlarged from chronic metritis, or from tumours, it was not unfrequently greatly anteverted. Retroversion he regarded as very common, especially in unmarried women.—Dr. NEVILLE did not think the normal position of the uterus was definable, as it was incessantly moving with each inspiration and movement of the abdominal parietes and viscera, as well as with the bladder. The abnormal position, however, could be expressed by saying that it meant any position in which

the uterus could not move freely. Schultze had stated that the normal fundus uteri was flexed at a right angle with the cervix. This he could not think possible. Frozen sections showed, and clinical experience verified, the fact, that the normal condition of the uterus was not one of flexion. With regard to the mode of action of Hodge's pessary, Hodge laid particular stress upon the fact that the posterior arm of the pessary fixed the cervix high up, as did the pessaries shown by Dr. Macan.—Dr. DILL and Dr. DARBY also took part in the discussion; and Dr. MACAN, in reply, said that the fundus uteri moved through an arc of forty-five degrees during the emptying of the bladder. When the bladder was evacuated, it rested on the pubes. He agreed that the real action of Hodge's pessary was to press back the cervix, not to lift the fundus. The acuteness of the angle of ante flexion depended much on the length of the uterus, and especially of its vaginal portion. If the angle of flexion were greater than a right angle, and if the uterus did not move with the motions of the viscera, the position should be regarded as abnormal. Ante flexions rarely required treatment, and even pathological ante flexions often produced no symptoms.

SATURDAY, JUNE 17TH, 1882.

JOHN A. BYRNE, M.B., President, in the Chair.

Additional Traction in Forceps Cases.—Dr. DUKE exhibited some original instruments for the purpose. He considered the subject from two points of view: first, as to the amount of force which it was justifiable to employ before adopting craniotomy; and, secondly, as to the best way of applying such force. Dr. Barnes had laid it down that, in any case where the long forceps could be applied and locked, it should be used before resorting to other means, especially craniotomy. As a general rule in such cases, a good forceps and the ordinary amount of force were capable of effecting delivery; but, in cases where there was much disproportion between the size of the head and the pelvis, it was necessary to employ additional force. M. Tarnier's forceps, first suggested to Dr. Duke the idea of his own, and Dr. Waters of Lichfield had also an instrument for the purpose; but neither of them suited satisfactorily. Dr. Duke had his retractors made light and curved to follow the required bends, and they were applied to each blade of the forceps before putting it on. If the amount of traction so obtained were not sufficient, he had a belt made, into which the handles of the retractors could be fixed, and thus the whole weight of the body be applicable for traction-purposes; and, to avoid slipping, a pair of spiked toe-caps were applied to the feet. He had used the retractors during his residency in the Rotunda Hospital, in all cases of difficult labour, and with the best results. In cases of narrow pelvis, extra traction was often less dangerous than allowing the head to "mould", or even than turning; for the long-continued pressure was more likely to do harm than more severe pressure for a short time, in which opinion Dr. McClintock agreed. He then quoted cases in which he had used his retractors and belt.—Dr. DILL (Belfast) approved of Dr. Duke's instruments for obtaining additional traction. He, however, thought Galabin's forceps for many cases preferable to Barnes's forceps and Duke's retractors. He thought it a question of vast importance to decide the exact amount of force, measured in foot-pounds, which it was justifiable to employ in any given case, so that there would be some more reliable standard than that contained in such expressions as a "reasonable amount", an "extreme degree", and so forth.

—The PRESIDENT did not think that it was often necessary to employ such traction as Dr. Duke had described, but thought there was too great a tendency to shrink from applying much force. He thought the fault was in not applying enough, and preferred stronger force for a shorter time.—Dr. HAUGHTON had made experiments to determine the physical constants of natural labour, and the pressure exercised by the uterus and the abdominal muscles. He had also, with the late Sir E. Sinclair, tested on living subjects the amount of traction required in various cases, and had often found the dynamometer to register 100 lb. of traction as exercised in a forceps delivery.—Dr. MACAN protesting on the forceps at all while the head was above the brim. Tarnier had stated that the advantage of his forceps was that it made traction in the right direction, not that it gave additional power, and Dr. Macan did not think that Dr. Duke's arrangements gave any additional power: it only changed the direction in which the traction was applied. Dr. NICHOLSON, Dr. DILL, and Dr. HAUGHTON, stated that they only used his retractors in the cases recorded, and in no other since, which

JULY 1882.

J. A. BYRNE, M.B., President, in the Chair.

unmarried woman. She was very anæmic, and had suffered long from severe uterine hæmorrhage. Twelve tumours had previously been removed from her, in Liverpool, under similar circumstances. The os uteri being dilated for forty-eight hours, the tumours were picked out, principally by means of the finger. They were easily separated from the postero-lateral walls of the uterus, in which they were embedded. Seven tumours, of the interstitial fibroid nature, were removed. The woman recovered satisfactorily after the operation; but, in a year, she again complained of the former symptoms, and the hæmorrhage recurred. She then placed herself under the care of Dr. Kidd.—Dr. KIDD said that, when the woman came to him, she was very anæmic and much exhausted. An uterine examination discovered the presence of several tolerably large tumours, such as Dr. Byrne had shown. He operated, but the woman sank and died on the third day.

Hæmorrhagic Tumour.—Dr. HENRY showed a tumour, which had been expelled from the uterus of a woman in the Rotunda Hospital on the previous day. In March last, she menstruated normally, but her period did not appear in April. In May, at the menstrual period, she felt something moist come away, and then a gush of blood followed. In June, she expelled a three months' fetus; and, on June 30th, the mass now shown came away, it having been previously felt in the uterus. The tumour consisted apparently of blood-clot, to which remained attached the membranes, placenta, and cord of the fetus expelled eight days before.—Dr. KIDD thought the case was one of what had been called "hæmorrhagic polypus."

Lacerations of the Cervix Uteri.—Dr. MORE MADDEN read a paper on this subject. He did not consider that such lacerations, the result of parturition, had received their due share of attention. The subject was more than ever of importance, since the frequency of its occurrence was on the increase, owing to the more free employment of the long forceps. He wished especially to bring the question of the treatment of cervical fissures by tracheloraphy, as introduced by transatlantic gynecologists, before the Society. After reviewing the literature of the subject, he stated that cicatrices, resulting from fissures of the cervix uteri, were the most common cause of tedious labours, and were especially common after version, or the use of the long forceps. Notes of several cases of *post partum* hæmorrhage, from rupture of the cervical walls, were read, in most of which the labour was unusually precipitate. It was to be expected that, where fissures had cicatrised, there would be rigidity of the os, rendering subsequent deliveries more difficult, and increasing the probability of rupture. Many of the affections formerly ascribed to other causes, were now known to be the result of previous fissuring, or laceration of the cervix. Such fissures, causing inflammation of the ligaments, tended materially to the production of uterine displacements. The treatment of fissures was often difficult. If possible, it was best to bring the fresh surfaces together with sutures; but that was frequently impossible in the recent state. The actual cautery, or potassa cum calce, or nitric acid applied locally, was at times successful. Tracheloraphy had been, in his hands, sufficiently successful to warrant its continuance. If the operation failed to cure, he was in the habit of amputating the cervix, a practice which he recommended.—Dr. KIDD said that there were two conditions in which cases came for treatment: one, when partially recent, the mucous membrane being still thick and vascular, and soft; the second, where the parts had completely cicatrised over. In the latter condition, he had frequently operated; but not in the former. He thought the chances were against such cases doing well.—Dr. HENRY thought that, if cases were seen early enough, there would be but little necessity for the operation. He drew attention to the peculiar pain felt in old cases of rupture, where there was a fissured ulcer of the cervix; such cases, he thought, usually required operation.—Dr. DUKE showed an instrument which he had designed for tracheloraphy; it was better, though older, than that figured in Emmet's book.—After some observations from the PRESIDENT, Dr. MADDEN replied.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JULY 5TH, 1882.

J. MATTHEWS DUNCAN, M.D., President, in the Chair.

Extra Uterine Gestation.—Dr. DALY exhibited a specimen of tubal gestation, in which rupture of the cyst had taken place in the third month. The patient lived four days after the rupture. The nature of the case was diagnosed by Mr. DALY, and the diagnosis was confirmed by the post-mortem examination. The specimen was a small, dark, fleshy mass, about the size of a walnut, and was found to contain a dead fetus of the third month. On section, it was found to be a tubal pregnancy, the embryo being situated in the fallopian tube, and the placenta attached to the inner wall of the tube. Dr. WILKINSON, Dr. DILL, and Dr. HAUGHTON, all agreed that the case was a typical example of extra uterine gestation, and that the rupture had occurred in the third month.

ligament, especially where, as in this case, the diagnosis was reasonably clear.—Mr. LAWSON TAIT agreed with Dr. Wiltshire. In case of doubt, an exploratory incision would settle the diagnosis, was safe, and more satisfactory than tapping.—Dr. ROUTH observed that a decidua was present. By dilatation of the cervix, the presence of such decidua might be ascertained, and the diagnosis in a doubtful case settled.—Dr. CARTER thought operative interference advisable in these cases. The specimen showed how easily the cyst might have been removed.—Dr. CHAHBAZIAN (Paris) described the case of an actress, who died in Paris from rupture of an extra-uterine gestation so suddenly, that poisoning was suspected. In such a case no operation could have been performed.

Removal of the Uterine Appendages.—Mr. LAWSON TAIT showed fifteen specimens of uterine appendages removed by him since December 1881, for hydro- or pyo-salpinx. The symptoms were pain aggravated by walking, by marital intercourse, and at the menstrual period. Five cases were due to gonorrhœa, and four either due to, or aggravated by pessaries. In most, the operation gave immediate and complete relief. In all there was improvement; none had died. He objected to the terms "spaying," "castration of women," "normal ovariectomy," because they implied that healthy ovaries were removed, an operation which he had never done. He thought the operation of doubtful value in nemasthenic cases. Of these he had only done four, and at present was not disposed to go farther. For myoma its mortality was less than that of lithotomy in the male, and its results more certain. For the class of cases from which the specimens exhibited were taken, it was the only means which offered a hope of relief.

Uterine Tumour.—Dr. CARTER showed an uterine tumour, weighing sixteen and a half pounds, removed by him. The pedicle had been secured by *Koerber's serre-nœud*.

The Relation of Backward Displacements of the Uterus to Painful Menstruation.—A paper on the above subject by Dr. HERMAN was read. It was admitted that there were cases of backward displacement of the uterus, accompanied with dysmenorrhœa, in which the menstrual pain was relieved when the uterus was elevated and straightened. The author found, from his own experience and that of others, that such dysmenorrhœa was slightly commoner with retroflexion than with retroversion. The object of the paper was to inquire into the explanation of these facts. Three theories had been advanced to explain them. One was, that the dysmenorrhœa was due to narrowing of the canal at the point of flexion, and consequent obstruction to the outflow of menstrual blood. The author pointed out that there was anatomical evidence that the uterus might be bent to any extent, without causing any hindrance to the escape of menstrual blood; that there was no anatomical evidence that flexion ever obstructed the canal, except when the uterus was fixed by adhesions, or its wall thinned by senile atrophy; and that this theory did not explain clinical facts. Another theory was, that the dysmenorrhœa was due to congestion, from strangulation of vessels at the point of flexion. The author found no anatomical evidence that any such strangulation ever occurred; and that the theory did not explain clinical facts. A third was, that the dysmenorrhœa was due to congestion, produced by the pressure of the utero-sacral ligaments upon the veins running in the broad ligaments. The author found that the disposition of the parts concerned was such as to permit such pressure; that one case had been recorded, in which there was anatomical proof that such pressure had actually occurred; that this theory was, therefore, supported by anatomical evidence, and that it explained clinical facts. The author's general conclusion was the following: "That while dysmenorrhœa accompanying retroflexion is often, it may be generally, dependent upon other concomitant conditions, yet that there are cases in which it is simply the result of the displacement; and that in such the dysmenorrhœa is probably entirely due, not to the flexion, but to the veins of the broad ligaments being compressed against the utero-sacral ligaments.—Dr. HEYWOOD SMITH thought that the symptoms accompanying retroflexion were generally due to other concomitant conditions, the flexion only in the minority of cases causing symptoms. The constriction at the point of flexion was apparent only, not real. In one case, he had divided *per rectum* the utero-sacral ligaments; a low form of peritonitis followed, but the uterus had since remained in the normal position.—The PRESIDENT said that Dr. Herman had finally disposed of two great and unduly prevalent errors. The first was that, in flexion of the uterus, there was a projecting spur, or stricture, obstructing the passage of blood or fluid; the second was that, behind the imaginary obstruction, the uterine cavity was dilated. Much of the reasoning, both in this paper, and in the one discussed at the last meeting, turned on *pain*. Pain was too ill-defined a term to be wisely made the basis of conclusions; we had no good means of measuring its degree or kind, and nothing was more wanted. One woman would call excruciating what

another would speak of as trivial. The utero-sacral ligaments could, in many women, be felt by the finger. Ever since the paper of Dr. John Williams, which had pointed out their action, he had attended to this matter clinically; but his observations had yielded him nothing of sufficient importance to lay before the Society. Descent of the uterus, so as to be grasped by the utero-sacral ligaments, was a rare event.—Dr. HERMAN said it was impossible to avoid reasoning from pain; and he thought that, by taking a large number of cases, errors due to the incorrect statements of a few individual patients became neutralised. He did not think that the cases in which the utero-sacral ligaments caused congestion of the uterus, were more than a small minority.

REVIEWS AND NOTICES.

CLINICAL SURGERY. EXTRACTS FROM THE REPORTS OF SURGICAL PRACTICE BETWEEN THE YEARS 1860-76. By Dr. TH. BILLROTH, Professor of Surgery in Vienna. Translated from the Original and Edited, with Annotations, by C. T. DENT, F.R.C.S., Assistant-Surgeon to St. George's Hospital; Surgeon to the Belgrave Hospital for Children. With nine Lithographs and twenty-nine Woodcuts. London: the New Sydenham Society.

The name of the author of this work is in itself a sufficient recommendation of the value of its contents; the form in which this English edition is published, is uniform with the handy and well-printed publications already issued by the New Sydenham Society; and, with regard to general considerations, it only remains for us to bestow a full share of commendation on Mr. DENT, who has done his duty as a translator admirably—a duty by no means easy, when the intricacies of German prose composition have to be rendered into English. As for any special criticism, it is perfectly vain for us to enter into particulars. In the limited space which our columns afford, of the clinical surgery of every part of the human body: for that comprehensive subject, as the title implies, is presented in these pages in an almost complete form; indeed, it is even harder to find out what is not included in Professor BILLROTH's work, than to discuss all the subjects on which he can instruct and enlighten us. The translator has added notes and entire chapters on the more recent labours and experiences of the author; the most valuable of these additions is an appendix, "On the Removal of the Pylorus for Cancer." Here we find, in a complete form, the cases already recorded in the first volume of the JOURNAL for 1881, where Professor Billroth and a colleague performed this operation; and, in addition, this appendix is embellished by a very useful plate, which will greatly facilitate the description of the lines of incision, the method of applying sutures, etc. The main part of the work includes long reports and observations on the more important questions connected with clinical surgery, together with a great number of rare cases and surgical "curiosities." Professor Billroth's opinions on the principal subjects of surgical interest must be well-known to our readers; in this work they are collected, in a convenient manner, for study and reference.

MANUAL FOR THE PHYSIOLOGICAL LABORATORY. By VINCENT HARRIS, M.D.Lond., M.R.C.P., Demonstrator of Physiology at St. Bartholomew's Hospital, etc., and D'ARCY POWER, M.A.Oxon., M.R.C.S., late Assistant Demonstrator of Physiology at St. Bartholomew's Hospital. Second Edition. With Forty Illustrations. London: Baillière, Tindall, and Cox.

THIS valuable little handbook was first published in 1880, when we had occasion to point out its merits. In the new edition, the pages on the practical histology of tissues and organs still constitute the most useful part of the work. In addition, we find a somewhat ambitious section on instruments used in elementary physiological research, and an account of some of the more important experiments conducted by means of these contrivances. This innovation is quite in conformity with the title of the manual, the first edition being, indeed, purely histological and chemical. The illustrations greatly increase the value of the new edition, especially where they aid in the verbal description of different varieties of microtomes, warm stages, hæmacytometers, and other appliances not readily to be explained to the uninitiated without the assistance of engravings. In ordering such instruments of a dealer, it is very important that the beginner, when forced to rely upon a manual alone, should know the look of what he intends to purchase. The appendix, on testing urine, is very good. Once more, as in speaking of the first edition, we sincerely trust that the student who purchases this manual will prepare each tissue according to the printed directions, and not merely learn the description of its structure by heart.

NOTES ON BOOKS.

Dr. Neale's "Medical Digest."—The appearance of the second and much-enlarged edition of the *Medical Digest*, by Dr. Neale, will rekindle feelings of gratitude to the author; and many could testify to the help derived from the first edition of this work in the prosecution of medical and scientific research, and still more who must acknowledge its usefulness in giving references available in the matter of journals, *resumés* and reviews. It would be difficult to appreciate too highly the care and discriminating judgment which characterise the compilation and arrangement of its subject-matter. For the last thirty-five years, the author tells us, he has spent on the average four hours a day in this work, which must be regarded, as it really is, as a labour of love.

The great richness of the index, and the various designations of subjects contained in it, form an important feature in the usefulness of the book. We seem to see there a digest of reference on almost any subject connected with medicine, under almost any heading; and, on turning to the body of the work, we find in most instances an admirable *catalogue raisonné* of the chief journalistic publications on the question. The reader cannot do better than turn to the sections (referred to in the Preface to the book) on Phthisis and Typhoid Fever, as well as to others of equal importance, in order to see what a mass is put into a small compass, and how much the labour of making reference is hereby lightened. Dr. Neale has, however, not overloaded his sections with references, ample as is their number. We have observed instances where, out of several communications on the subject occurring together in a journal, he has chosen but a few, and those the most important: here taking advantage of the plan frequently adopted in this JOURNAL—for instance, of grouping together similar papers for the convenience of reading and facility of reference.

The value of this work is less impaired than might be anticipated by the comparatively small number of periodicals on which it is based. The immediate area of material must of necessity have been limited, in order to insure the careful performance of the task undertaken by the author. It cannot be doubted that nearly every contribution of any importance to medicine, whether at home or abroad, finds its way before long into the leading medical periodicals, especially as one of them is now wholly devoted to abstracts of British and foreign periodicals, discharging in fact the function of a *Central-blatt*. Dr. Neale is greatly aided by this periodical. The usefulness of the *Digest* is by no means limited to the student or the writer, but will be acknowledged as well by the active practitioner of medicine; since every one who possesses a long series of a medical periodical, or who has access to a library, will be enabled by the use of the references in the *Digest* to seek and find valuable knowledge at its original or proximate sources, which he would otherwise be obliged to seek with at third or fourth hand, or altogether forego. It is almost useless to insist at greater length on the excellences of this already well-known work.

The Medical Man's Handybook. Edited by WILLIAM SHEPPERSON, London: J. and A. Churchill. 1882.—This work, we are told, has been compiled in the belief that it will be of great value as one of reference for students and practitioners. It consists of tables of doses, incompatibles, antidotes, excipients for pills, etc. Such a work might undoubtedly be made of the very greatest use, but it should be fairly complete and absolutely reliable. These points have been overlooked in the compilation before us, and it seems to have been written by one who has no knowledge of medicine. It is difficult to go far wrong in a table of doses, and yet many of the statements made in these tables are, to say the least of it, very misleading. The dose of tincture of digitalis is given as from ten to thirty minims, and there is not a word to show that very much larger doses are constantly given in the treatment of dropsy.

The dose of tincture of aconite is given as from one to five minims, and nothing is said about its use in acute tonsillitis and other febrile conditions. In atropia, we are told, is "rarely given", a statement which can hardly be regarded as strictly accurate. The head of atropia and atropin is not even mentioned, and the

administration of hot strong coffee is entirely ignored. The book may be made of use to medical men, but it will have to be entirely rewritten.

Nitro-Glycerine as a Remedy for Angina Pectoris. By WILLIAM MURRELL, M.D., etc. Pp. 78. London: Lewis. 1882.—Dr. Murrell has identified his name with this remedy, and here brings together his published papers concerning it, in a connected form. Comparative sphygmographic tracings show well the main difference in its action from that of amyl-nitrite, viz., that the characteristic effect on the circulation and tension is more slowly produced, but lasts longer. Several of the cases are very striking, and well illustrate the at least temporary advantage to be obtained from the drug. Dr. Murrell remarks upon the different susceptibility to its effects of different persons, which, together with the varying strength of specimens, accounts for discrepancies in the earlier accounts. He generally prescribes, of a one per cent. alcoholic solution, from one-sixth of a minim upwards, to even 100 minims, every three hours, with spirits of chloroform and peppermint water; the minute dose will give headache to some persons. He speaks well of Parke, Davis, and Co.'s pills, and of Martindale's tablets. The essay is an useful guide to its limited subject, but would have been more valuable had the author taken a somewhat wider range, and included details as to the use of the drug in such disorders as neuralgia, asthma, Bright's disease, sea-sickness, etc. In the latter, it has been much lauded; but, according to the writer's certainly small experience, it has caused much headache without preventing the malady.

Clinical Lectures on the Physiological Pathology and Treatment of Syphilis, etc. By F. N. OTIS, M.D., New York. 1881.—These lectures are devoted mainly to an amplification of the author's views on the physiology of syphilitic infection, which were published in some of the American journals about ten years ago. These views, Dr. Otis states, were at first based chiefly on the investigations respecting small-pox, cattle-plague, and relapsing fever, by Reale and others, who alleged that they had shown that a living germinal cell was the starting point of each of those diseases. Thus, the author begins by assuming that the active principle of syphilis is contained in a similar germinal cell, which possesses, besides the amoeboid property of the white blood-corpuscle, also a morbid activity and an increased capacity for proliferation. By proliferation and accumulation of such degraded germinal cells at the point of inoculation, it is alleged that the initial lesion is formed; and by an extension of the process and gradual conversion of the cells, by means of the lymphatic system, into the blood, all the various phenomena of syphilis may, in Dr. Otis's opinion, be legitimately explained. The latter portion of the book contains a reprint of six class-room lectures on syphilis, and here will be found some valuable hints on the diagnosis and treatment of the initial lesion, which, moreover, the author advises should be excised as soon as possible whenever practicable; not with the expectation of preventing constitutional infection, but with the object of removing a focus of dissemination of diseased elements, and lessening the danger of conveying the disease to others.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

BRAND'S ESSENCE OF MALT.

THE various preparations of extract of malt are of such inestimable value in the treatment of all wasting diseases, that their steady increase in popularity is hardly a surprise. The essence prepared by Messrs. Brand and Co., of Mayfair, is made by Dancer and Malt's process, and is a good sample of extract of malt. It is lighter in colour than many specimens we have seen, and care has evidently been taken in the regulation of the temperature.

LOEFLUND'S EXTRACT OF MALT PREPARATIONS.

PREPARATIONS of extract of malt are now so largely used in the treatment of phthisis and diseases of nutrition generally, that we can hardly be surprised that the number of preparations for public favour is steadily increasing. Mr. L. Loeblund of Stuttgart sends us five specimens of extract, each of which is warranted to be pure and highly concentrated. The first is a sample extract of malt, and is described as a new dietetic preparation for digesting farinaceous food.

It is a fair average specimen of extract of malt, differing in no way from those ordinarily met with in commerce. The next preparation is said to contain equal parts of extract of malt and cod-liver-oil, and is fairly palatable. The other preparations are made with hypophosphate of lime and pyrophosphate of iron, and would probably prove of value in the treatment of rickets, anæmia, and chlorosis.

EMBLIC MYRABOLANS, A NEW LAXATIVE.

We have received from Mr. Martindale specimens of emblic myrabolans, recently imported from India. It is the fruit preserved in sugar of emblica officinalis, or phyllanthus emblica. It is an euphorbiaceous tree; and the fruit, which is about the size of an olive, or perhaps somewhat larger, contains a hard angular seed. Several species of myrabolans were formerly used in medicine; and an old writer says "they restore youth, improve the complexion, the breath, and the perspiration, and impart joy and hilarity." It is not alleged that this particular species possesses these properties; but Dutt, in his *Hindu Materia Medica*, says that it is "cooling, refrigerant, diuretic, and laxative. It promotes the appetite, and acts as a tonic." We have tried it carefully in several cases of habitual constipation, and have no doubt that it is a valuable addition to our list of laxatives. It must be remembered that it is a natural fruit, and not an artificial preparation. It may be eaten at dinner or dessert, and it would be absurd to regard it as a medicine. It is most valuable for children.

CONROY'S MALT COFFEE.

THIS is a mixture of malt and coffee, and it is claimed for it that it can in many cases be readily taken when ordinary coffee disagees or causes unpleasant eructations. It is guaranteed to be entirely free from chicory or adulteration of any kind. It is made in the same way as ordinary coffee, and has a pleasant taste and fragrant aroma.

NICHOLLS'S CORALINE BOUGIES AND CATHETERS.

THESE instruments, submitted by Messrs. Nicholls, are of a very pleasing appearance and of two kinds—vermillion and transparent. They are made of a special flexible preparation of cellulura, and possess great advantages over india-rubber or elastic-gum. They are believed to possess the following properties, which are calculated to recommend them—they do not decompose, are not affected by urine or acids, will not become sticky, are unaffected by the heat of tropical climates, are exceedingly flexible, especially when slightly warmed; being of one material throughout they do not flake from the web, as is often the case with elastic gum. These goods are made in all English sizes, and in the "boule," or olivary, cylindrical, and coudé forms. This new material has been adopted by the same firm for covering flexible metal pessaries, which can readily be bent to any required shape without the application of heat. They are exceedingly cleanly and light.

Another novelty is Messrs. Nicholls's hypodermic syringe, with patent unbreakable cylinder. This instrument is made in all forms and sizes. The patent cylinder, whilst possessing the transparency of glass, cannot be broken. The material is totally unaffected by any of the injections in use, will withstand all climates, and offers the desirable advantage that the practitioner is not foiled by the too frequent accident of a broken cylinder. The inventions can be obtained, we are informed, from all instrument-makers in town or country.

BEQUESTS AND DONATIONS.—Mr. Arthur Wells, of Nottingham, bequeathed £2,000 to the Edinburgh Medical Missionary Society, £500 to the Nottingham General Hospital, £500 to the Nottingham Dispensary, £200 to the Earlwood Asylum for Idiots, and £100 to the Nottingham Lunatic Asylum, The Coppice. Mr. M. T. Bass, M.P., has given £1000, and Mr. Woodiwiss, the Mayor, £100, to the new Hospital for Sick Children at Derby. The Plymouth Public Dispensary has received £500 under the will of Mr. William Harvey. Lord Robartes has given £500 to the East Cornwall Hospital at Bodmin. The Home Hospital (for Paying Patients), Fitzroy Square, has received a second hundred guineas, each, from the Clothworkers', the Fishmongers', the Grocers', and the Mercers' Companies, a third £100 from the Goldsmiths' Company, a hundred guineas from the Merchant Taylors' Company, £73 10s. from the Skinners' Company, fifty guineas from the Salters' Company, twenty-five guineas from the Leathersellers' Company, and twenty-five guineas from the Vintners' Company. Lady Louisa Goldsmid has given £100, and the Earl of Zetland, £50 to Miss Mary Wardell's Convalescent Home for Scarlet Fever.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 29TH, 1882.

THE HOSPITAL ESTABLISHMENTS FOR THE EXPEDITIONARY FORCE TO EGYPT.

As the expeditionary force proceeding to Egypt is stated to be an Army Corps, it may be opportune to mention the medical establishments which are allotted by existing regulations to a force of this description. It must be premised, however, that the whole of the Army Corps is not formed of troops on the British establishment. The Prime Minister, in the statement which he made on Monday evening regarding the policy and purposes of the expedition, informed the House of Commons that the force despatched from England and the Mediterranean would consist of about 22,000 men of all arms, with about 3,000 reserves. The strength of an Army Corps on active service is 36,805 men of all ranks. Moreover, an Army Corps consists of three divisions and the corps troops; while the force which has been so far selected and organised from the troops stationed at home and in the Mediterranean garrisons consists of two divisions and the corps troops. It is obvious, therefore, that, in describing the expeditionary force about to be employed on active service in Egypt as an Army Corps, the addition of a force from India is kept in view; and in the discussion on the Vote of Credit for the expedition in the House of Commons, on the 24th instant, it was stated, on the part of the Government, that the consent of Parliament for the employment of Indian troops outside the Queen's dominions in the East would be shortly asked for. Although the exact composition of the Indian force was said not to be yet settled, the number of Indian troops proposed to be brought to Egypt was said to be from 7,000 to 10,000. If these be added to the 25,000 European men of various arms mentioned by the Prime Minister, the strength of the Army Corps, about 36,000 men, will be approximately complete.

The medical establishments laid down for an Army Corps of full strength constitute a large and important department. Allotted to each division of the Army Corps are two field hospitals and one bearer company. For the service of these three establishments there are twenty-three medical officers, six officers of orderlies, and one transport officer; while the subordinates, including men of the Army Hospital Corps, Army Service Corps, and bearers, are 335 in number. The vehicles, including ambulance-wagons, auxiliary ambulance-wagons, equipment-wagons, water and supply carts, surgery and pharmacy wagons, amount to 64 in number; while the horses, including draught and riding horses, have a total of 209. Thus the medical establishments for three divisions amount to a total of 1,098 officers and men for medical and transport duties, 192 vehicles, and 627 horses. The regulations lay down, further, as the establishments for the corps troops, one bearer-company and six field-hospitals. This bearer-company is divided into two half bearer-companies; one being attached to the cavalry brigade, the other being placed with the first line. Three of the field hospitals are held in reserve, and only have the necessary transport attached to them in case of special need. When the medical establishments for the corps details are added to the divisional establishments, it is seen that the military regulations provide, for the medical service of an army corps on active service in the field,

a grand total of 1,746 officers and men, 304 vehicles, and 940 horses. All officers of the medical department below the rank of major are supplied with public service horses. The establishments above-mentioned belong strictly to the Army Corps; they form an integral part of the force, and move with it. Other establishments are laid down in the regulations for the field hospitals which may be opened at the base of operations, and along the lines of communication between the base and the troops operating against the enemy.

It appears, from the arrangements which have been so far made public, that some portions of the medical establishments laid down in the regulations, and which have been just described, will not be despatched with the expeditionary force, at any rate at starting, in their full strength. Thus, it has been announced that a half bearer company will be sent with each division, instead of a bearer company; and four field hospitals, instead of the six named in the regulations, for the corps details. The description and strength of the medical establishments

which are to accompany the part of the army corps expected to arrive from India, have not yet been published. There can be no doubt, judging from previous experiences, that a large amount of sickness will occur among the troops, both European and Indian, especially if they should have to advance far into the country, and the military operations should assume a prolonged character. In anticipation of the serious necessities that may thus arise, hospitals, having more permanent qualities than the field hospitals, are to be formed at Cyprus and Gozo, each capable of accommodating from 500 to 600 patients. The system of hospital ships, which has proved of the greatest advantage in recent wars, especially in China and during the Ashantee campaign, will be largely developed; and these floating hospitals will be supplemented by suitable steamers, for conveying patients who are in a fit state for removal from them to the fixed hospitals at Malta, Cyprus, or home to England. The Admiralty have ordered the *Thalia*, a fighting troopship, to be fitted for service at Alexandria, as a hospital ship; and it is understood that the *Osprey*, a large vessel of 1,200 tons, belonging to the General Steam Navigation Company, which has been hired for the conveyance of part of the hospital establishments, will also be available for use as a hospital ship in case of need. Additional hospital ships have also been mentioned. The supplies of medical comforts and drugs, that have been ordered for conveyance to the Mediterranean for the use of the army, is said to be enormous. What

development this Egyptian expedition may assume, the successful issue of the undertaking must largely depend, from the peculiar nature of the country and climate in which the military operations have to be conducted, upon the manner in which the hygienic needs of the troops are provided for, and the hospital wants of those who may fall sick among them capable of being attended to; and we trust there will be no hesitation about complying with the requisitions of the medical department for meeting these needs in a wise and liberal spirit. We are well assured there will be no parsimony, as regards skill and devotion on the part of the medical officers themselves.

THE BACILLUS OF LEPROSY.

In 1874, Armauer Hansen, the physician in charge of the establishment for lepers at Bergen, communicated to the Medical Society of Christiania the result of his studies on the etiology of leprosy. In his report he announced briefly that in the leprosy tubercles he had often found small rod-shaped bodies, and that upon examining for them specially, their presence could always be detected. These rod-shaped bodies were the bacilli of leprosy; and their discovery by Hansen marks the beginning of a new epoch in the study of this distressing and wide-

spread of a chronic constitutional disease with the existence of an independent vegetable organism, living and multiplying in the tissues of the human body, is, further, of much importance at the present time, when taken in conjunction with the researches that are being made on the relations of bacteria to other forms of disease.

Many of the maladies which otherwise seem to be most mysterious in their nature, can easily be explained on the bacteria-hypothesis; and there is an evident temptation to adopt an explanation which would afford a satisfactory solution of problems that have hitherto appeared unsoluble.

It becomes all the more necessary for pathologists to be on their guard against a too ready acceptance of a specific bacillus for any special malady.

The evidence that we may safely speak of a bacillus lepræ, becomes, however, daily stronger. Neisser, Eklund, Gaucher, and Hillairet, confirmed the observations of Hansen; whilst quite recently, Cornil and Suchard in France, and Majocchi and Pellizzari in Italy, have given excellent descriptions and drawings of the parasite, which accord, in every essential particular, with those of Hansen. Professor Köbner of Berlin has still more recently published an account of attempts made to inoculate the disease on animals, and in his suggestive paper the existence of the bacillus in leprosy tissues receives still further confirmation. It would seem as if the time would soon come when the development of leprosy will be associated with the development of the bacillus lepræ in vascular organs, as intimately as the development of anthrax is with the growth in the blood of the bacillus anthracis, or even as tinea tonsurans and pityriasis versicolor are with the growth of trichophyton tonsurans and microsporon furfur in epidermic structures.

After the dependence of the leprosy degeneration on the multiplication of specific bacilli has been definitely established, a point to which we would almost seem to have already attained, there are other problems connected with the parasite which must engage the attention of observers. Notably, there is the question how the parasite obtains admission into the system, and, intimately associated with it, the debated subject of the contagion of leprosy.

Something has been gained in this part of the inquiry by recent proofs that the specific organisms are found in the blood. Majocchi and Pellizzari state that in the blood of lepers, as well as in the tissues, organisms are found, both in the granular (or round) forms, and in the elongated or bacillus forms. The presence of these organisms is detected in the eruptive period of leprosy, or rather at the period of each fresh eruption; whilst they would seem to be eliminated from the blood in certain stages of the disease, an occurrence which renders their detection more difficult at some stages of the affection than at others. They further remark that the micro-organisms are more apparent in tubercles which are in full development, than in those which are in the atrophic stage.

Köbner's observations on this point deserve special attention. Blood obtained by pricking both new and older tubercles, after the surface had been cleansed with soap and water and alcohol, when examined fresh, showed nothing unusual; but blood dried on a cover-glass and heated by Ehrlich's method, then stained and washed with alcohol, showed slender bacilli of the usual length. Very short bacilli, and occasionally two joined together, were also observed. The organisms were found in the protoplasm of the white corpuscles, and more rarely free in the serum. They were seen in the blood taken from apparently healthy parts, as well as in blood taken from tubercles. The existence of bacilli in the circulating fluid affords a satisfactory explanation of the outbreak of leprosy in different parts of the body of the same person. How the bacillus obtains admission to the circulating fluid of an individual, is a question that presses for an answer, as it is intimately associated with the great problem of the suppression and extinction of the scourge.

If we admit that leprosy spreads by contagion, the presence of the bacillus in the blood would be accounted for by direct inoculation. Popular instinct has always regarded the disease as contagious, but this view has not been fully accepted by the profession. The accumulated evidence in its support is, however, becoming continually stronger. In Dr. Hillis's *Leprosy in British Guiana*, much valuable matter bearing on this question, is gathered together in a chapter on the etiology

of the disease. Dr. Hillis found that the largest numbers of lepers he had under his care, came from Mahaica, one of the healthiest parts of the country, where a large leper asylum has been established since 1858, the inmates being permitted free ingress and egress. There were a total of sixty cases of leprosy contracted in the immediate vicinity of this institution. Out of 139 cases there were 92, or 67.17 per cent., in which contact, more or less prolonged, of the unhealthy with the healthy was given as the most probable factor in the propagation of the disease amongst them. The author gives details of thirty-eight cases, all of which bear out strongly the view that the disease is inoculable. As an example, we quote the following. "J.S., an Englishman, aged 50 years, European parents, healthy family, not slightest trace of taint. Came to Demerara twenty-four years ago. Has had non-tuberculated lepra for twenty years. Attributes a predisposition through eating salt provisions. In 1855, he lived for twelve months with a woman whom he subsequently found to be suffering from leprosy, in consequence of which he left her. This woman, her child, and her sister, died in the asylum." Other similar cases are given.

That leprosy is not more frequently spread by contagion, may be explained by the fact that the bacilli are not found in the epidermis; and, although they are present in the discharge from leprosy sores, patients who have arrived at that deplorable stage of disease are almost universally shunned.

The existence of leprosy in the territories of our Indian Empire, and in other dependencies, has long seriously engaged the attention of the Government, and numerous reports testify to the diligence with which the disease is watched. The report of the College of Physicians is evidence that the importance of the subject has not been overlooked. But with the proof that this pestilential affection is due to the growth of a parasitic organism, and the vista thus opened up in relation to more effectual measures for contending with the disease, the time would seem to have come when another inquiry of an authoritative kind would not be out of place, and when investigations on a scale which is only attainable by Government support and assistance cannot long be delayed.

THE INDIAN MEDICAL SERVICE.

SOME months ago, we intimated that the Indian Medical Defence Fund contemplated the institution of an actuarial investigation, with a view to ascertaining the amount of injury which had been inflicted, by the Lyttonian reorganisation of the Indian Medical Service, upon the superseded senior officers of the department. This inquiry, we understand, has now been completed; and the result has been to confirm our views, both as regards the true nature of the grievances complained of, and the justice, in equity, of the claims of the aggrieved officers for redress, in the shape of reasonable pecuniary compensation, for the serious losses sustained by them. After the transfer of India to the Crown, by the Royal Warrant of January 13th, 1860, a new rule was framed, rendering retirement compulsory, for administrative officers at the age of sixty-five, and for executive officers at the age of fifty-five. As long as the ratio between the administrative and executive appointments continued unchanged, this rule accelerated promotion, and did not prevent individuals from the chance of advancement to the highest grades, provided they elected to wait and work for them. But the subsequent alteration in the conditions of service, especially those most recently inaugurated, have very seriously diminished this ratio—notably in Madras and Bombay; so that the result now is, that from 60 to 70 per cent. of the late East India Company's officers, still in the service, are absolutely debarred from that promotion to which, when they entered the service, they were induced to look forward with perfect confidence. By the Royal Warrant of May 10th, 1873, the age of superannuation for those executive officers who entered the service before January 13th, 1860, was extended to fifty-eight, subject to the production of a medical certificate of fitness; and in the Royal Warrant of November 16th, 1880, now in force, this privilege has been continued; but the limit of age for administrative officers has been lowered

from sixty-five to sixty. From the wording of this Warrant, it seems that an officer promoted under the fifty-eight years' rule, will not be permitted to serve his full five years as a qualification for the increased pension of the grade: he would necessarily attain the age of sixty before the expiry of that period, and will be then compelled to retire. Thus, the three years' extension of the executive age limitation will, therefore, be practically worthless, except in enabling an officer, who has had an exceptional amount of leave, to complete the term of service for ordinary pensions.

It has been determined, from the "Indian List" for January 1882, published by permission of the Secretary of State for India in Council, after assuming that the average age of the officers on entering the service was twenty-three years, and after omitting from the calculation all those gentlemen who have declined promotion or been passed over, that 73 per cent. of the officers in Bengal, Madras, and Bombay, can never be promoted under the 56 years' rule; and that, under the 58 years' rule, the percentages of grievous disappointments—due to alterations made by the Government to suit its own convenience—will be 66, 68, and 65 in the three Presidencies respectively. The more fortunate individuals who obtain promotion will, however, only do so after a very protracted service of thirty-two years under the 55 years' rule, and thirty-five years under the 58 years' rule. The seriousness of this postponement of promotion to the few who can ever obtain it may be imagined when it is stated that, before the reorganisation, the rank of deputy surgeon-general was usually reached in twenty-five or twenty-six years. That a service of twenty-six years is a reasonable one for the attainment of administrative rank, the Government have themselves practically acknowledged by fixing that period for the exceptional promotion of sanitary officers. We would, therefore, strongly urge that, in all cases where promotion has been retarded beyond this limit, and in those where promotion has been altogether prevented or rendered useless as qualifying for the additional pension of the administrative grades, an equitable claim for adequate compensation has been established. Under somewhat similar circumstances, compensation has already been granted to military officers with respect to their right of succession to colonel's allowances; a scale of additional pensions, calculated upon the same principle as in their case, accorded to the aggrieved medical officers might possibly best meet the equity of the case.

In the fourth paragraph of their letter to Lord Hartington, dated the July 8th, 1881, the committee of the Indian Medical Service Defence Fund pointed out the serious injuries which had been inflicted by the exceptional promotion of sanitary commissioners; and at the same time earnestly appealed for such a modification of the wording of the original order, as would suffice to secure the senior members of the service from unmerited supercession in the future. We cordially join the committee in venturing once more to reiterate this appeal, and to urge most strongly the propriety of substituting, for the rule promoting to administrative rank and privileges certain sanitary commissioners after a fixed period of twenty-six years' service, a rule which would confer this boon upon them only synchronously with the attainment of similar rank by men of their own standing in the service. The extremely unjust supercession caused by the exceptional promotion of sanitary commissioners—an injustice which, under the wording of the existing orders, might be repeated at any moment—is well illustrated by the anomalous position of Dr. Coates of the Bengal Medical Service. Dr. Coates acted for some time as sanitary commissioner of Bengal, and might, if he wished, have been appointed permanently to the post. Prior to the recent changes, however, he elected, in preference, to accept the Principalship of the Medical College; he has now been superseded by two sanitary commissioners, his juniors, both of whom enjoy the rank and privileges of deputy surgeons-general; whilst, under the fifty-five years' superannuation rule, he can never obtain promotion, and, even supposing that officers promoted under the fifty-eight years' rule should in the future be exceptionally permitted to complete their five years' turn of duty, he can only then attain administrative rank after thirty-five years' service. Surely such treatment of a meritorious officer is

unjust, and the sufferer is deserving of compensation. No fewer than nineteen other officers besides Dr. Coates stand similarly superseded by their two juniors in the official Bengal Army List of January last, and a still greater number will occupy this invidious position when Dr. Lidderdale, Sanitary Commissioner of Bengal, is promoted under the Rule in January 1884.

THE library of the Royal Medical and Chirurgical Society will be closed on Monday, August 7th; and, on account of some extra-ordinary building repairs, etc., will not reopen till Monday, September 18th.

IN accordance with a wish which has been expressed in various quarters, arrangements have been made by which the meeting of the Public Medicine Section of the Association at Worcester, on Thursday, August 10th, will be devoted to the discussion of the subject of the Notification of Infectious Diseases.

WE are informed that H.R.H. the Princess Christian is translating into English Professor Esmarch's work, *Erste Hülfe bei plötzlichen Unglücksfällen* (First Help in Sudden Accidents), and that the work will shortly be published.

WE understand that an etching of the portrait of Mr. Luther Holden, by Mr. Millais, has been executed by Mr. Miller of Devonshire Street, Portland Place, and that a copy has been presented to each of the subscribers.

IN order to secure the greater purity of the atmosphere in the St. Gothard's Tunnel, an attempt is to be made to propel the locomotives by electricity. Experiments, for which the sum of 180,000 francs is set apart, are now being made at Berne with this object.

WE regret to hear of the death of Eliza Anne, Lady Cormack, widow of the late Sir John Rose Cormack. Lady Cormack died at her residence in Paris on the 19th instant, having survived her husband little more than two months. She had long been in impaired health, having suffered much during the siege of Paris in 1870, during which she remained in that city with Sir John Rose Cormack.

DR. DEWES of Coventry, the present President of the Birmingham and Midland Counties Branch, has generously invited the members of that Branch to lunch with him on August 1st, and to visit the objects of interest in the city and neighbourhood. A very pleasant day is anticipated. Special arrangements have been made with the London and North-Western Railway Company for the occasion.

THERE were 2,453 births and 1,321 deaths registered in London last week. Allowing for increase of population, the births were 115, and the deaths, 388, below the average numbers in the corresponding week of the last ten years. The annual death-rate from all causes, which had been equal to 17.3 and 18.1 per 1,000 in the two preceding weeks, declined again to 17.7.

FOUR deaths from zoster were registered in London last week, or 14 below the average number in the corresponding week of the last ten years. All four occurred in private dwelling-houses; one was of a woman in Redburn Street, Chelsea; one of a child, aged 13 years, in Myrtle Street, Islington; one of an infant, aged 4 months, in Naval Row South, Poplar; and one of an infant, aged 8 months, in Lemon Court, Lambeth.

WE have to announce that the *British Medical Journal* is about to be published by Messrs. Lippincott, and that it has been in preparation for several years in preparation, is now complete, and will appear early in October. It will form a volume of over 1,000 pages, and numbers more than 200 contributors,

selected from among the most eminent members of the profession. Though the work has been some years in preparation, arrangements have been made with the printer which have enabled the editor to revise and alter the earlier sheets, so as to bring the whole down to the latest date.

WE regret to hear that the contributions to the Albert Napper Fund have by no means reached the figure which might reasonably have been anticipated, or which is worthy of the object. We may remind the committees of cottage hospitals of the suggestion which was made, that each should endeavour to collect £6 for the purpose, among those who are interested in, and have in various ways benefited by, the cottage hospitals; and we may call to mind generally that the list must shortly be closed, and that any who feel interested may communicate with Dr. J. Herbert Stowers, 23, Finsbury Circus, E.C., one of the honorary secretaries.

WHILST the citizens of Alexandria are endangered by the prospect of a water famine, it must be remembered that no anxiety need be felt for our naval force now in occupation of the city. Its men are supplied with water from the condensing tanks on board the ships in the harbour, and the brackish water from some of the wells is being made fresh, in the boilers of a cotton-pressing mill, to aid some, at least, of the Alexandrians themselves, should the canal run dry. Many landsmen are not aware that the sweetest drinking-water is now made from sea-water, by condensation—so that, in some cases, very little fresh water is shipped before setting sail. Fresh water, thus made at sea, requires a little rest and oxygenation before it becomes thoroughly palatable.

THE Artisans' Dwellings Bill, which Mr. Lefevre, on behalf of the Government, has promised to endeavour to pass during the present session, reaffirms the principle of Mr. McCullagh Torrens's Acts of 1868 and 1879, which give power to local bodies either to pull down houses unfit for habitation, or to compel the owners to put them in proper repair. The Bill also reaffirms the principle of Sir Richard Cross's Acts of 1875 and 1879, which imposed upon the Metropolitan Board of Works the duty of taking down whole districts of good and bad houses, in order to open up great thoroughfares, and to rebuild to a certain extent. The latter conditions entailed such gigantic cost that, by advice of the committee, it is relaxed to the extent of one-half the amount of displacement. The line of demarcation between the two systems is provided for in the Bill by the number of houses which are to be dealt with at one time in a given locality. When the number is less than fifteen, it will always be the duty of the local bodies to act. Provision is also made for reducing the enormous amounts for costs and compensations under Sir Richard Cross's Acts.

SOCIAL SCIENCE ASSOCIATION.

AT the congress of this Association to be held in Nottingham during the week from September 20th to 27th, the following questions will be discussed in the Health Department. I. How does the employment of mothers in mills and manufactures influence infant mortality; and ought any, and if so what, restrictions to be placed on such employment? II. What reforms are desirable in the administration of hospitals? III. What are the advantages of a system of notification of infectious diseases, and what are the best means of carrying the same into execution?

THE LATE PROFESSOR F. M. BALFOUR.

RARELY has a deeper feeling of grief been caused than by the news of the sudden death of Mr. F. M. Balfour, from a fall in climbing a mountain in the Alps. On another page, Dr. Michael Foster, than whom none knew better his scientific genius and his manly worth, does justice to his life, his character, and his works. But, even among those who knew much less of the man, and could less thoroughly estimate his rare capacity and achievements, the suddenness with which a

life so valuable has been cut short in its early blossoming, has been deeply felt; and the gentle amiability and unassuming sympathy of character which made Mr. Balfour as popular in the world as he was beloved by his intimates, have sharpened the sense of irreparable loss.

DOUBLE UTERUS AND VAGINA.

DR. HEYWOOD SMITH exhibited on Thursday last, in the theatre of the Hospital for Women, a case of rare occurrence, with complete double uterus and vagina. The right vagina was rather the larger, the orifice of the left being rather hidden in the folds that the edge of the septum formed. Both vaginæ were perfect: the cervixes were distinct, with small ora. Both were shown simultaneously by two specula. The sound passed upwards and rather outwards on the right side, $2\frac{1}{2}$ inches, and on the left similarly to $2\frac{1}{4}$ inches. *Per rectum*, it was found that the double uterus was united and flattened as far as the body, and the two fundi were separate and diverged, so that the whole organ presented somewhat the shape of a Y. Menstruation was regular, somewhat scanty, with pain in both inguinal regions. Dr. Heywood Smith had seen a similar case in a young girl some years previously. Dr. Rogers, who was present, said he had seen five cases. It would be interesting if observers would send an account of all cases of complete double uterus and vagina. This patient has been married eight years, but has never been pregnant.

THE HEALTH OF MALTA.

THE rumours with regard to the prevalence of fever at Malta, published in several metropolitan and provincial journals, are based on a very slender foundation. A febrile affection of the remittent type, known as "Malta fever," or "Mediterranean fever," frequently attacks sailors in the Levant, especially when in dock at Malta. A few sailors, of the crews of the *Monarch* and the *Superb*, were attacked last month with the fever, when their ships were docked. It is not fair that irresponsible writers should taunt the naval authorities by informing them that a trip to sea would have stopped the outbreak, when we remember that the ships, being docked, were not ready for a voyage. One report speaks of 100 men being in hospital, stricken with fever; but the total number of men laid up from all causes, whether disease or injury, during the past month has not amounted to that number. As one of the sons of the Prince of Wales in the navy has already suffered from Mediterranean fever, it would not have been judicious, under any circumstances, to send their Royal Highnesses to Malta during the present spring.

THE REMOVAL OF THE DEAD TO MORTUARIES.

WE heartily sympathise with Mr. C. T. Harper, surgeon, in the annoyance to which he has been recently exposed. It appears that a little boy, named Hudson, had jumped up behind a cab in the Old Kent Road, and, on getting off, was knocked down by a tramcar, the wheels of which went over his chest. He was picked up, and taken to Mr. Harper's house, who, on examination, found the boy dead. On requesting the police to take the body away, they declined to do so; and the coroner's officer stated that, if Mr. Harper had not permitted the body to enter his house, the police would have been bound to remove it; to which that gentleman pertinently replied, "How is one to know that death has taken place? Am I bound to go into the street in every case to make an examination, so as to avoid having a dead body left in my house?" Ultimately, this gentleman had to apply to a neighbouring undertaker to remove the body to his establishment, for the mortuary keeper was from home, and the key could not be found. Surely they manage, or mismanage, matters oddly enough, in places where such a story as we have told is rendered possible.

CREMATION IN FRANCE.

THE present Minister of the Interior in Paris recently received MM. Roehlin-Swartz and Georges Salomon, President and General Secretary of the Society for the Propagation of Cremation. These gen-

tlemen, in the name of the promoters of cremation, asked that cremation might have the sanction of the French Government. M. Goblet, like his predecessors, believes that cremation can only be practised under the sanction of a special law. He has promised not to offer any opposition to the passing of such a law, and has suggested that the representatives of the Society for the Propagation of Cremation should add an amendment concerning cremation to the law on civil burials. Several members of the Chamber of Deputies, who are also connected with this society, were consulted; and it was decided that, although the course indicated by the Minister would save much time, a special law concerning cremation would be preferable. In a short time, a Bill on voluntary cremation ("crémation facultative") will be brought before the Chamber of Deputies.

THE EXPEDITION TO EGYPT: FLEET-SURGEON SEDGWICK.

FLEET-SURGEON Henry Nanton Murray Sedgwick, of H.M.S. *Inflexible*, who was one of the naval medical officers present at the bombardment of Alexandria, is a son of the late Honourable Samuel Sedgwick, M.A., M.D. This distinguished officer, who received his medical education at King's College Hospital, and is a brilliant operator, entered the royal navy as assistant-surgeon in 1862, and became surgeon in 1869, in which rank he served with distinction throughout the Abyssinian campaign under Lord Napier of Magdala and was several times mentioned in despatches. For his services he received the war medal and the promotion to staff-surgeon, as well as the personal thanks of the commander-in-chief of the expedition. In 1879 he was promoted to the rank of fleet-surgeon, and was then senior medical officer in charge of H.M. training-ship *St. Vincent*, stationed at Southsea. In the latter part of last year, Dr. Sedgwick was appointed to the magnificent ironclad *Inflexible*, whose eighty-one ton guns have done so much havoc in the recent bombardment, especially in attacking and silencing Fort Aida. This ship, although being hit five times, came out without a scratch, thus proving herself inflexible in reality as well as in name.

KILLED AND WOUNDED AT ALEXANDRIA.

FULL details of the condition of the British sailors wounded at the bombardment of Alexandria have been received at the Navy Medical Department, and will be officially reported within a short time. Mr. Shannon, carpenter to the *Inflexible*, was instantaneously killed by a spent Palliser shot, that, after striking him, drove up the deck. The shot, or a piece of timber from the deck, then rose and struck Lieutenant Jackson violently between the legs, and that unfortunate officer was thrown several feet into the air. He fell with great force, in a sitting posture, so that his spine was concussed, and he died in a few days, never thoroughly rallying from the shock. At the necropsy, extensive fracture of the pelvis was discovered, without any injury to the pelvic organs, or trace of internal hæmorrhage. A gunner of the Royal Marine Artillery, on board the *Superb*, had both his legs shattered by a shell. He underwent double amputation, but died of collapse. He was a man of remarkably fine physical development, and celebrated among his comrades for his athletic accomplishments. Before joining the service, he had been a miner in a Durham colliery.

CENTRAL VACCINATION STATION FOR BELGIUM.

THE kingdom of Belgium has for some time possessed an establishment for the renewal of vaccine by means of animal vaccination. But this institution, whilst being of great utility, could not fulfil all demands upon it, and besides only sent out vaccine lymph when payment was made in advance. A royal decree bearing date February 15th, 1882, has provided for the re-organisation of this station, ordering its installation in a local annex of the School of Veterinary Medicine. The new service is understood to be capable of forwarding gratuitously on demand animal vaccine to local and provincial medical committees, and generally to all administrative bodies, as well as to Belgian

practitioners and private individuals sending in a requisition for it. A veterinary surgeon will be commissioned to direct the inoculation of the heifers and the culture of the lymph. This official is prohibited from sending out vaccine lymph, unless he be certain that the animals from which he has collected it are free from any contagious disease.

ATROPINE AS A CAUSE OF GLAUCOMA.

ATROPINE has of late years been so widely used in ophthalmic practice, both in the treatment of various painful affections, and also merely for the purpose of paralysing the pupil to facilitate the estimation of errors of refraction, or an examination with the ophthalmoscope, that the warning afforded by Mr. Streatfeild's letter, in another column, and to be found also in a case read to the Ophthalmological Society by Mr. Snell, and reported in our number for July 15th, has not been sounded too soon. It thus appears, on the evidence of competent judges, that a strong solution of atropine, such as is the official solution of the *British Pharmacopœia*, is capable of producing glaucoma in some cases. A way out of the difficulty is afforded by Mr. Streatfeild, who points out that a solution very much weaker than that provided by the *Pharmacopœia* would suffice to produce sufficient mydriasis for all ordinary purposes. Dr. Ringer has, we believe, made some experiments on this subject, and has found that a dilatation of the pupil, lasting some hours, can be produced by a solution containing what a chemist would consider a mere trace of atropine. A solution formed by diluting the pharmacopœial "liquor" with two or three hundred times its bulk of water, would be sufficiently strong.

OVARIOTOMY IN SWITZERLAND.

IN a recent number of the *Revue Médicale de la Suisse Romande*, Professor Socin of Bâle makes some observations with regard to the statistics of his cases of ovariectomy, as recorded in a paper on the subject at page 114 of our last volume, and in the above mentioned Swiss journal, April 15th, where Professor Kocher reproduced the substance of our article. In both contributions, Professor Socin's operations were placed under "cases of ovariectomy by surgeons who have operated under carbolic spray in every case"; but, in the English article, 12 operations, with 4 deaths, were placed against the name of Professor Socin, whilst Professor Kocher gives 11 cases, with 4 deaths, in his tables. Professor Socin now states that there are two errors in the articles on ovariectomy in Switzerland, which he desires to rectify. "The first is through an omission on my own part, for I failed to record two successful cases; this raises my total to 13, out of which 4 were fatal. In the second place, it is not correct to include all my operations amongst those conducted with antiseptic precautions. My first ovariectomy was performed on February 21st, 1867; my second on July 20th, 1869, when antiseptics were not in vogue. The two next cases come under the same category. Consequently, my four first cases, which include two deaths, one from collapse on the day of the operation, the other from septic peritonitis on the seventh day, cannot be taken into account in the consideration of antiseptic surgery." One death from shock half an hour after operation, and one from suppurative peritonitis which had existed before the operation, occurred among Professor Socin's antiseptic cases. In the same series was a successful case of removal of a cystic ovary, in a patient who returned to hospital, two years later, with a large uterine fibro-myoma. He also successfully performed "supravaginal hysterotomy and the extirpation of the second ovary, which was healthy".

SANITARY SUPERVISION OF DAIRIES AND COWSHEDS.

THE local authorities for carrying out the inspection of these premises are the county magistrates, in extra metropolitan districts and parishes; but, in the metropolitan city, it is the Metropolitan Board of Works. In London, the supervision is fairly performed, but, in the rest of England and Wales, it is usually made by policemen or veterinary surgeons. The Privy Council, in reply to Lord G. Hamilton, on the 22nd of May last, that, as very few local authorities, even for the metropolis, have done more than

register the premises, the Privy Council have been in communication with the Local Government Board for the purpose of obtaining a short Act, authorising that Board to treat the subject as one affecting the public health. This will probably be an improvement, as, although the Local Government Board has not been by any means successful in carrying out or directing sanitary work, yet, as the inspection will doubtless be cast on inspectors of nuisances, and perhaps also be placed under the control of medical officers of health, there is good reason for expecting that the important regulations framed under the thirty-fourth section of the Contagious Diseases Act will no longer remain little better than a dead letter, as they are at the present time.

[PROSECUTION UNDER THE REGISTRATION OF DEATHS ACT, 1874.]

A NOVEL and important decision was given in a case tried on Tuesday, July 11th, at the Lambeth police-court, before Mr. Chance. Mr. C. F. Groom, M.R.C.S.Eng., was summoned at the instance of the Medical Alliance Association for wilfully making a false certificate, under or for the purposes of the Births and Deaths Registration Act, 1874, concerning the death of a child named Mary Louise Sparks, on the 28th June, 1882. Mr. C. J. C. Pridham, solicitor to the Association, appeared for the prosecution, Mr. Mayo defended. It was proved at the hearing that the defendant had seen the child once, and had made up a bottle of medicine for it. Mr. Chance, however, held that one solitary attendance did not amount to that degree of investigation and attendance of the patient's case which would justify the defendant in giving the usual form of death-certificate under or for the purposes of the Act, which he had done. He therefore convicted him of the offence charged, and fined him £2 and £2 2s. costs. This, we believe, the first judicial definition of what amounts to an "attendance" under or for the purposes of the Registration of Deaths Act sufficient to justify the medical practitioner in charge in giving the usual form of certificate of death; and it deserves serious consideration.

THE WAR IN EGYPT.

THE Household Cavalry Brigade, under orders for Egypt, will be under the medical charge of Surgeon-Major G. F. Hume-Spry, M.D. Surgeon-Major W. Alexander, M.D., of the Army Medical Department, has been ordered to proceed to Egypt with the 1st Royal West Kent Regiment. The *Osprey* (No. 2 transport) started on Wednesday for Alexandria, bearing the material of the first field hospital. She is a screw-steamer of 1,200 tons, belonging to the General Steam Navigation Company. All articles stowed on board this vessel bear the Geneva Cross, to indicate the strictly neutral character of her freight. A number of water-carts shipped on board her take up much room, but the general service carts for the hospital have been folded up into a small compass and stowed away amongst the stores, which include a large supply of special clothing. The field hospital which the *Osprey* bears will be established at Alexandria, and will be more extensive and permanent in its character than ordinary field hospitals. The *Emperor* (No. 5 transport) will shortly convey similar hospital equipments to Cyprus. A remarkably fine vessel, the *Carthage*, of 5,100 tons, has likewise been specially engaged for hospital purposes. Her decks are roomy, the hospital berths have ample space on the main deck, and there is a pleasant promenade, three hundred feet long, on the hurricane-deck. Her large port-holes, like those of an old wooden frigate, afford the best possible ventilation, especially in fine, hot weather. This splendid vessel has afforded great satisfaction to the authorities. All branches of the expeditionary force are provided with their own transport; the *Osprey*, for example, takes out four hundred tons of compressed hay for its mules and horses. The *Teviot* is also devoted to medical purposes. The troops will be all provided with cholera belts and other sanitary appliances.

POISONOUS COLOURS.

THE German Government has just laid before the Reichstag the following decree, bearing date May 1st, 1882, concerning the prohibition

of poisonous colours for the colouring of certain alimentary substances and articles food. 1. The use of poisonous colours for the manufacture of food-products or articles of food intended for sale is prohibited. Those which contain the following materials or compositions are considered as poisonous colours within the meaning of this enactment: antimony (oxide of antimony), arsenic, barium (except sulphate of baryta), lead, chromium (except pure chromic oxide), cadmium, copper, mercury (excepting annabar), zinc, tin, gamboge, picric acid. 2. The preserving and packing of food-stuffs or food-products intended for sale in wrappers coloured with the above cited poisonous colours, or in barrels in which the poisonous colour is so employed that the poisonous colouring matter can pass into the contents of the barrel, is prohibited. 3. The employment of the poisonous colours enumerated in Art. 1 is prohibited for the manufacture of playthings, with the exception of varnish and oil-paints made of zinc-white and chrome-yellow (chromate of lead). 4. The use of colours prepared with arsenic for the manufacture of paper-hangings, as well as that of pigments containing copper prepared with arsenic, and of matters containing similar colours for the manufacture of materials of dress, is prohibited. 5. The putting on sale, and the sale, wholesale or retail, of food-stuffs and food-products preserved or packed contrary to the regulations of Articles 1 and 2, as well as playthings, paper-hangings, and dress-materials manufactured in contravention of the directions in Articles 3 and 4, are prohibited. 6. This law will come into operation on April 1st, 1883.

THE ADMINISTRATIVE MEDICAL OFFICERS OF THE EXPEDITIONARY FORCE TO EGYPT.

DEPUTY SURGEON-GENERAL J. A. HANBURY, C.B., who has been selected for the post of Principal Medical Officer to the expeditionary force proceeding to Egypt, is one of the junior officers of his rank, having only been promoted to an administrative grade at the date of the last Afghan campaign. He accompanied Lieutenant-General Sir Frederick Roberts in the celebrated march from Kabul to Kandahar, and Sir Frederick, in his report on the march, alluded to the professional merits of Dr. Hanbury in terms of high appreciation. Dr. Hanbury was gazetted a companion of the Order of the Bath in recognition of his services during the Afghan campaign. Deputy Surgeon-General Dr. Ekin and Brigade-Surgeon William Manley, V.C., who have been nominated for the medical charge of the two divisions of the army corps about to operate in Egypt, were also actively employed in the campaign in Afghanistan. Brigade-Surgeon Jeffery Marston, M.D., who has been ordered from India to fill the post of sanitary officer to the expedition, was secretary to Surgeon-General Ker Innes, and subsequently to the present director-general, when those officers held the post of head of the British Medical Department in India. Dr. Marston was consequently intimately associated with all the sanitary arrangements that were made for the preservation of the health of the troops in India generally, and particularly with the measures adopted during the two campaigns in Afghanistan. He will thus carry with him to Egypt a large amount of recent practical experience in all matters that concern the hygienic necessities of an army on tropical service. Many of the executive medical officers who have been placed under orders to proceed to Egypt for service in the movable and stationary field hospitals have also seen recent service in India, and are familiar with the treatment of diseases incidental to hot climates.

AN OPHTHALMIC HOSPICE AND DISPENSARY AT JERUSALEM.

A MEETING, which was largely attended, was held on July 7th at the Jerusalem Chamber, Westminster, presided over by the Earl of Shaftesbury, with the object of promoting the establishment of a British hospice and ophthalmic dispensary in Jerusalem, under the management of the Order of St. John of Jerusalem (St. John's Gate, Clerkenwell). From a statement read, it appeared that Great Britain is the only European power which lacks a *pied a terre* in the form of a hospice or similar establishment in Jerusalem, and the Chapter of the Order of

St. John has for some years been endeavouring to obtain a site for the purpose. This having at length been conceded by the Sultan, it is proposed, as soon as the necessary funds can be obtained, to erect a building which may be used as a hospice and a dispensary for the treatment of ophthalmic diseases, which, as all Eastern travellers know, is terribly rife among the poorer classes in Jerusalem, and for which there is no special hospital at present. About £2,500 would be required for building purposes, and an income of £400 a year for the support of the institution, for which purpose it would be desirable that donations should be supplemented by annual subscriptions. A resolution approving of the proposal was put to the meeting and carried. It was decided at once to form a committee, and the following officers were elected: the Earl of Glasgow to be Chairman, Sir Edward Lechmere Vice-Chairman, and Major Wyndham Malet Honorary Secretary. The noble Chairman, in replying to a vote of thanks, said he took particular interest in the object of the meeting, both on account of the place wherein the hospice was to be established, and the object for which it was promoted. Ophthalmic disease in the East was little short of being a national calamity, and he was very strongly impressed with the necessity that something should be done by Englishmen towards ameliorating the infliction, especially in Jerusalem. He was glad the Order of St. John of Jerusalem was taking the matter up, because the work was peculiarly appropriate to the modern representatives of that ancient order.

THE WATER-SUPPLY OF ALEXANDRIA.

TOWARDS the end of last week, the telegrams from Alexandria conveyed to us the intelligence that the water-supply of that city was beginning to fail; the latest telegrams are, however, more reassuring. The Mahmudiyeh Canal, cut by Mehemet Ali, had fallen several inches; and on Sunday news was received in London that some attempts would be made to maintain a supply of water by means of the ancient reservoirs, which, as far as their extent and the appearance of their masonry is concerned, are said to be in as perfect a condition as when they were first built during the rule of the Ptolemies and the Romans, before the Arab invasion, when the forts, houses, and everything above ground in Alexandria, were destroyed by Amru, lest the Byzantine Government should once more attempt to seize and hold the city. Modern Alexandria is built, it must be remembered, on the soil and accumulated ruins that have filled up and dried the shallow tract of water which once separated the Isle of Pharos from the mainland. The site of the ancient city is behind the modern, close to the brackish Lake Mareotis, useless as a reservoir for water for drinking or culinary purposes. A system of modern waterworks, under the control of a public company, now exists in Alexandria, and serves to conduct water into the city from a point in the canal some distance from the suburbs, so that the water should be pure. The Mahmudiyeh Canal has evidently been tampered with, by Arabi Pacha's orders, or as a work of pure mischief by some band of Arabs, which was to be expected under the circumstances. The ancient cisterns were, when in working order, filled annually by means of the water which flowed into the canal during the inundations of the Nile. They have been examined we are informed, by a medical commission; and it has been found that the majority of these wells must be emptied before they can be refilled with water fit to drink. In the event of hostilities, it appears that the water-supply of Alexandria, not including what may possibly be derived from the wells, would not provide for more than eight days' consumption. As the telegrams speak of the "majority" of the ancient wells being void of drinking-water, we must conclude that the city may have to depend, in a short time, on water contained in a minority of those venerable cisterns; for, since the Roman wells and the modern waterworks must alike receive their water from the canal, when that canal is diverted in its course, or else blocked or cut, or in some other way rendered inefficient, it will be hopeless to look to any fresh supply from either. Possibly, however, the inefficient "majority" of the old reservoirs may be rapidly emptied of their foul contents, cleaned, and finally filled

with fresh water, before the canal has run dry. Mr. Cornish and the staff of the waterworks company are doing their utmost to effect this rapid cleansing of the old wells. This may save thousands of the townspeople of Alexandria, who cannot all enjoy the benefit of the water from improvised condensers, from the horrors of thirst and disease.

A NEW MEDICAL QUALIFICATION.

DR. DANFORD THOMAS has lately held an inquest on the body of a child named Alfred Askew, aged two years and two months, in the course of which the following facts were elicited. It appeared that the child had suffered from pain in the head, and that his mother had taken him to the dispensary of a Mr. Greatorex, in the Caledonian Road, fully believing Mr. Greatorex to be a duly qualified medical practitioner. This belief was shared by the father of the boy, otherwise he would not have allowed him to attend the child. Mr. Greatorex agreed to see and supply the deceased with medicine for 3s. 6d. per week. He did so, seeing him twice when alive and once after death, when he signed a certificate, affixing to his name the letters "L.A.M.D." This was handed to the registrar of the district, who, doubtful as to Greatorex being a duly qualified practitioner, saw him, when he admitted that he was not qualified, and explained that the affix to his name meant "late of the Army Medical Department." The district registrar reported the case to the Registrar-General, by whom a prosecution is to be instituted against Greatorex for a breach of the Registration Act. Dr. Pepper, in conjunction with Dr. Slater, having made a *post mortem* examination, said that death resulted from asphyxia from convulsions, due to eruption on the scalp, inflammation of the lungs, and irritation of the stomach consequent upon improper feeding, the child having been largely supplied with oranges. Acute hydrocephalus was mentioned in the certificate as one of the causes of death; but the *post mortem* examination revealed no signs of this disease. It was probable that no properly qualified medical man could have saved the child's life. Greatorex said he had been in the Army Hospital Corps; he described himself as a surgeon, in order to obtain a livelihood. The coroner remarked that the public, and especially the poor, were likely to be misled and to suffer by such conduct. The jury returned a verdict of "Death from natural causes." This class of offence seems very much on the increase; and one manifestation of it has provoked a question by Mr. Samuelson, M.P. for Frome, in the House of Commons, as to whether, in the event of any repetition of such practices, as signing certificates of death without having at any time seen the patient, the law would be put in force against the offenders by the Public Prosecutor.

BOVINE POST MORTEM EXAMINATIONS BY MEDICAL MEN.

WE are enabled to make known to-day a piece of news, not without interest to intending candidates for commissions in the service of the Government of India. In Bengal, it appears at the present time to be the custom to poison cows, by way of revenge for real or imaginary injuries. The authorities there are naturally anxious to bring the poisoners to justice, and have invoked the aid of the doctors in a way likely to awaken something like a "strike" or mutiny among them. A short time ago at Barrackpore, near Calcutta, a cow died under suspicious circumstances. Surgeon-Major Wilks, C.B., A.M.D., Acting Civil Surgeon of the Station, was astonished by the arrival of the carcass of the animal, with an order from the magistrate directing him to eviscerate it, and to forward the contents of what Mrs. Ramshotham calls the "abominable" region, to the chemical examiner to Government. It will not surprise our readers to hear that the surgeon-major declined to comply with the order. A correspondence ensued between the Cantonment magistrate and the Acting Civil Surgeon; and the question, whether or not it was competent for the magistrate to order a medical officer to play the part of the cantonment butcher, was referred to the Government of Bengal. The letters of the officiating Assistant-Secretary to the Government of Bengal, to the Surgeon-General, Bengal, is now before us, and a remarkable document it is. After stating the facts

as given above, the assistant-secretary goes on in the second paragraph of his letter to state—

2. You observe that, while considering that the magistrate acted under a misapprehension of the civil surgeon's duty, and of the orders of Government, which he quotes in defence of the course adopted by him, you do not support the civil surgeon's repudiation of all connection with such cases; and you suggest that instructions should be issued to the effect that, in future, magistrates will communicate with civil surgeons in cases of cattle-poisoning, and request them to superintend the removal and despatch of the viscera, a butcher being engaged to open the carcass.

3. In reply, I am to say that the Lieutenant-Governor approves your suggestion, and I am to forward for your information and for communication to all civil surgeons and civil medical officers, for their information and guidance, the accompanying copy of a circular, which has this day been issued on the subject.—I have, etc.,

W. DUNBAR BLYTH, Officiating Assistant-Secretary to the Government of Bengal.

Circular No. 4, dated Calcutta, the 6th February, 1882.

From W. DUNBAR BLYTH, Esq., Officiating Assistant-Secretary to the Government of Bengal, Medical and Municipal Department, to all Commissioners of Divisions.

In continuation of the instructions issued under Government orders No. 1289, dated the 1st October last, copy of which was forwarded to you with circular No. 23 of the same date, regarding the transmission of viscera and other substances to the Chemical Examiner for analysis, I am directed to request that, in future, in cases in which suspicion is entertained that cattle have been poisoned, the magistrate of the district, or the sub-divisional officer, as the case may be, will communicate with the civil surgeon or civil medical officer, and having informed him of the circumstances, which gave rise to the suspicion, request him to superintend the removal and despatch of the viscera to the chemical examiner. A butcher should invariably be engaged to open the carcass on such occasions, and he will perform the works under the directions of the medical officer.

2. I am to request that you will be good enough to communicate these instructions to all magistrates and sub-divisional officers in your division for information and guidance. The necessary instructions will be issued to civil surgeons and civil medical officers by the surgeon-general.

The surgeon-general who suggested, by way of compromise, the course indicated in the above order, is Dr. Payne. It is a distinction which few of his brethren will envy him. Writing with some knowledge of the medical service of India, past and present, we may doubt whether Dr. Payne is not the only medical officer in that service who would have appended his name to such a recommendation. Is it likely to be obeyed? We should hope not. Would men like Martin, or Goodeve, or Norman Chevers, or Raleigh, or Macrae, or the Macphersons, or Macnamara, or Ewart, or Fayrer, or Irving, or fifty others we could name, have degraded themselves and their profession by yielding obedience to such an order as this? We answer unhesitatingly, Not one of them. Conceive—if any of our readers who knew the man can conceive such a thing—as James Ranald Martin, on the order of a cantonment magistrate or "subdivisional officer", sitting under an umbrella in the dog-days in Lower Bengal, directing a butcher how to eviscerate the carcass of a half or wholly putrid cow! Conceive, if that be possible, any of Dr. Payne's predecessors in the honourable position he fills, being a party to such an order! The thing is impossible; there is not one of them who would not have refused with indignation to take the part of suggesting an order which will, we feel sure, be universally considered as insulting to his brother officers and the honourable profession to which they belong.

SCOTLAND.

CONVALESCENT HOSPITAL, NEWHILLS.

RECENTLY, there was opened at Newhills, near Aberdeen, a cottage home, which is to be used as a convalescent hospital, and six patients were installed in it. It is situated 500 feet above the level of the sea, and it owes its existence to the energy of the parish minister's wife. During winter, it will be kept open for patients suffering from spinal disease.

ROYAL MATERNITY AND SIMPSON MEMORIAL HOSPITAL.

THE arrangements at the Royal Maternity Hospital, Edinburgh, for the autumn are these. Dr. J. Halliday Croom will succeed Dr. Keiller, as medical officer; while Mr. C. Harper Bourne, M.B., and Mr. Herbert Randall, M.B., will succeed Messrs. Bernard L. Mills and G. M. Johnston, M.B., as resident house-surgeons.

CONVICTION OF AN ASSISTANT FOR HOMICIDE.

RECENTLY, a student of medicine, who had been assistant to a practitioner in Dumfries, was charged with culpable homicide, in so far as on Sunday, April 9th, when in attendance on a woman, he administered to her, by hypodermic injection, from twelve to fifteen minims of a solution of morphia, whereby she was immediately reduced to a state of insensibility, and died about four hours afterwards. At the first diet of the court, the accused pleaded not guilty, but subsequently he stated his intention of pleading guilty. The sheriff imposed a fine of £20, or alternatively a month's imprisonment.

EDINBURGH MEDICAL SCHOOL.

THE summer session terminated on Wednesday, July 26th, a few of the classes however having ceased work before then. In the University, the final examination and the second professional examination are over, and the graduation ceremonial takes place on Tuesday, August 1st, at ten o'clock, in the large and magnificent hall of the United Presbyterian Theological College. The address to the graduates will be delivered by Professor T. R. Fraser, Dean of the Faculty of Medicine, and the number of candidates graduating will exceed that on any previous occasion.

THE RECENT BODY-SNATCHING IN ABERDEENSHIRE.

THE mystery occasioned by the removal of the body of the Earl of Crawford from the family vault below the chapel at Dunecht has been at last partially cleared up by the recovery of the body itself. The corpse was discovered in a thicket not far from the crypt, being buried about a couple of feet below the surface of the ground. It was wrapped in blankets, and was in a good state of preservation. Some apprehensions have been made, and it is hoped that the perpetrators of the act of sacrilege will be discovered and eventually punished.

EDINBURGH DENTAL HOSPITAL AND SCHOOL.

THIS institution continues to grow in usefulness as a teaching medium, and as a public benefit. During the past six months 2,352 patients were treated at the hospital in Chambers Street. The number of teeth preserved by "stopping" has increased greatly, and of 253 teeth treated thus, 70 were done with gold, 143 with alloy, and 37 with plastic media. At a meeting of the directors held on Monday, the Dean of the Institution, Mr. McLeod, submitted a report on the school, and directed attention to the excellent appearance made by the dental students at the examinations on anatomy and physiology. Dr. Joseph Bell was appointed Consulting Surgeon to the Institution, in place of the late Professor Spence.

ROYAL INFIRMARY, EDINBURGH.

THE managers of the Royal Infirmary at a meeting on Monday, did not ratify the appointment for a further period of three years of Mr. Walker, Senior Ophthalmic Surgeon, as had been proposed. Mr. Walker therefore retires from infirmary duty after a long unbroken career in the ophthalmic wards, during which time his skill and kindly disposition have endeared him to many hundreds of patients. Dr. Argyll Robertson becomes Senior Ophthalmic Surgeon, should the managers appoint another surgeon; but there appears to be some doubt on this matter, it having been suggested that the appointment of an assistant-surgeon to the eye wards might be tried, and only one surgeon. During the autumn it is proposed to close one or more of the large wards in the medical hospital, as used to be done in the old house.

NEW CONVALESCENT HOME AT ABERDEEN.

THERE has just been formally opened at Newhills, near Aberdeen, a new cottage-home for convalescents, and which is intended to supersede the old and humble building which has done good duty there for the past seven years. The new building is situated at a considerable altitude above the sea-level, and in a very bracing atmosphere. It is in contemplation to keep it open during the winter season as well, for the benefit of persons suffering from spine-disease. As the cost of the home has not yet been quite met, and as it will depend for its support almost entirely on voluntary contributions, convalescents being admitted free, it is to be hoped it will meet with generous support from all classes of the community.

NEW HOSPITAL AT AYR.

THE new hospital at Ayr will soon be ready for occupation; the cost is estimated at £8,000, and most of this sum has already been collected. It comprises a general hospital and a fever hospital, detached from each other however. There are to be forty-four beds in the general hospital, while the accommodation of the fever ward will be for twenty patients. As to the building, it is in the Queen Anne style of architecture, having a frontage of 400 feet, and at the central part is three storeys in height. On the ground floor are the board-room, the dispensary, and the consulting-room; the matron's and nurses' rooms are upstairs. Every convenience has been provided to render the institution thoroughly well equipped.

THE PREVALENCE OF FEVER AT CHAPELHALL.

THE continued presence of fever at the above village for some time has led the Board of Supervision to have the matter reported on by Dr. Littlejohn of Edinburgh. His report has been made public, and reveals such complete neglect of all the ordinary sanitary arrangements, that the local authority have been very properly called upon to have the necessary improvements carried out at once. The report points out how this modern mining village presents, in a flagrant manner, all the sanitary deficiencies incident to rapid growth without the control of some central authority regulating the drainage and the water-supply. The water-supply consisted, it appears, of well-water of a most suspicious character; and anything more discreditable regarding drainage arrangements could not be imagined. In calling upon the local authority to take immediate steps for providing a proper drainage system and water-supply to the village, the Board of Supervision have only insisted on what is clearly essential; but they should also see that not a day's delay occurs in having their instructions carried out.

HEALTH OF GLASGOW.

FROM the Medical Officer's report for the fortnight ending July 8th, it appears there were 448 deaths registered, representing a death-rate of $2\frac{1}{2}$ per 1,000 living. The number of deaths from pulmonary diseases was 155, being a death-rate of 8 per 1,000 living, and constituting 35 per cent. of the total deaths. There were 6 deaths from fever, viz., 4 from enteric fever, and 2 from typhus. The number of deaths from infectious diseases of children was 35, viz., 23 from whooping-cough, 4 from scarlet fever, and 3 from measles. The only cases of disease among emigrants were 3 cases of measles in a Danish family. In reference to whooping-cough, Dr. Russell makes the following important remarks. "Whooping-cough continues to contribute more deaths week by week to the register than all the other infectious diseases taken together. In the first six months of this year they amount to 346, while during the whole of 1881 they were only 380. Whooping-cough is but slightly amenable to the preventive measures which are efficacious in limiting the spread of other infectious diseases. Its great fatality in Glasgow is but a feature of the high pulmonary fatality which prevails. The average age of those who die of whooping-cough is scarcely two years. Therefore those whom mothers ought most religiously to guard from exposure to infection are infants; yet there is no infectious disease regarding which mothers are in every respect more careless."

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending July 15th, it appears that the death-rate in the eight principal towns during the week was 21.3 per 1,000 of estimated population. This rate is 2.4 above that for the corresponding week of last year, but 0.8 above that for the previous week of the present year. The lowest mortality was recorded in Edinburgh, viz., 15.6 per 1,000; and the highest in Greenock, viz., 28.2 per 1,000. The mortality from the seven most familiar zymotic diseases was at the rate of 4.7 per 1,000, or 0.9 above the rate for the previous week. Bowel complaints, as usual at this season, were the most prevalent of the epidemic diseases, the mortality therefrom being most marked in Glasgow. Fourteen deaths from measles were registered during the week in Dundee. Acute diseases of the chest caused 95 deaths, or 3 more than the number registered during the previous week. The mean temperature was 58.9°, being 0.1° below that of the week immediately preceding, and 2.0° below that of the corresponding week of last year.

THE CHAIR OF SURGERY IN EDINBURGH.

ON Monday, July 17th, the Curators of the University of Edinburgh (in whom is vested the power of appointment to several of the chairs) met and proceeded to elect a successor to the late Professor Spence. The meeting lasted for nearly an hour, and, as the result, it was intimated that Mr. John Chiene had been unanimously elected to the position. It will be remembered that there were four candidates, any one of whom would have been worthy of the high office. Now that the appointment has been made, friends and opponents alike will unite in wishing Professor Chiene a distinguished and successful future in his new sphere. One of the results of Mr. Chiene's appointment will be a vacancy in the staff-surgeons of the Royal Infirmary; this will most likely be filled up by the advance of the senior assistant-surgeon, and will cause a vacancy among the assistant-surgeons; and rumour is already busy with the names of several gentlemen who will probably strive for this coveted position.

HEALTH OF THE PRINCIPAL SCOTCH TOWNS.

IN the eight principal towns in Scotland, there were registered, during the month of June, the deaths of 2230 individuals, of whom 1130 were males and 1100 were females. This is less by 186 than the average of the same month during the preceding ten years, due allowance having been made for increase of population. The death-rates in the different towns were (per 1000 of their population): in Edinburgh, Dundee, and Leith 19; in Aberdeen 21; in Glasgow and Paisley 24; in Greenock and Perth 25. Forty-one per cent. of the entire mortality was of children under five years of age; and the respective percentages were: in Perth 30; in Dundee 39; in Aberdeen 40; in Glasgow 41; in Edinburgh 42; in Paisley 43; and in Greenock and Leith 46. The zymotic diseases caused 350 deaths, or 15.7 per cent. of the entire mortality; in Edinburgh, Aberdeen, Greenock, and Perth, however, this rate was exceeded. Whooping-cough, as usual, headed the list, it having caused 3.9 per cent. of all the deaths; while in Glasgow it caused 4.7 and in Dundee 6.2 per cent. of the total mortality. Of 44 deaths due to fever, 33 were returned as enteric, 10 as typhus, and one as relapsing fever. Measles caused 44 deaths, diarrhoea 59, scarlet fever 23, diphtheria 23, croup 18, and metria 5; in Aberdeen, measles was very fatal, and to it was attributed 8.9 per cent. of the deaths there. As to general diseases, to apoplexy were ascribed 39 deaths, to paralysis 50, to hydrocephalus 135, to hydrocephalus 65, and to premature birth 135. The deaths due to violence caused 420 deaths, or 18.8 per cent. of the total mortality; and inflammatory affections of the respiratory tract, before referred to, caused 420 deaths, or 18.8 per cent. of the total mortality. Of 75 deaths due to violent causes, two were returned as due to homicide, and the eldest being a widow aged 98. In the same month, there were registered in these towns the births of 1930 males and 1884 females. As to the meteorological conditions

during June, the chief characteristics were the large rainfall and the low barometric pressure with great range, the low temperature, and the small humidity. The mean barometric pressure was less by 0.123 inch, and its range greater by 0.187 inch; the mean temperature less by 1.5°, and its mean daily range greater by 0.3°; the mean humidity less by 2; the rain in its number of days greater by 2, and in its depth greater by 0.68 inch; the wind-pressure greater by 0.09 lb. than the average of the same month during the preceding twenty-five years. The greatest rainfall at Greenock, 4.73 inches, was in 17 days—the least, at Edinburgh, 2.68 inches, was in 18 days. The lowest mean temperature, 53.2°, was at Aberdeen—the highest, 56.1°, was at Greenock.

IRELAND.

AT the recent examinations, at the Royal College of Surgeons, for the first half for Letters Testimonial of the College, out of seventy-one candidates who presented themselves, no fewer than forty-nine were unsuccessful.

THE Committee of the Newry Fever Hospital have lately advertised for a lady superintendent, who, among other qualifications, is expected to possess a knowledge of compounding medicines.

CORONER FOR QUEEN'S COUNTY.

A MOST determined and bitterly waged contest took place, last week, for the election of a coroner for the eastern portion of the county, comprising six baronies, the candidates being Dr. Thomas Francis Higgins of Cloneslee, and Mr. John Dunne, J.P. Mr. Dunne polled 482 votes and Dr. Higgins 526, the last-mentioned being returned by a majority of 44 votes. A protest was handed in against the election of Dr. Higgins, on the grounds of intimidation, undue influence, and illegality; but no importance is attached to it.

NORTH CHARITABLE INFIRMARY, CORK.

THE trustees of this institution have expressed their commendation of the valuable services rendered by the staff of the infirmary, on the occasion of the late accident on the Queenstown Railway, when over forty persons were treated at the hospital, twenty-four of whom were detained as intern patients. The exertions of Dr. John E. Lane, acting for Dr. Colter, house-surgeon, and Mr. Musgrave, A.M., resident pupil, were especially referred to; and the chairman has been deputed to prepare testimonials to those gentlemen, in recognition of their efforts on behalf of the injured on the night of the accident.

MEDICAL RELIEF TICKETS.

THE duties of a dispensary medical officer are sufficiently arduous without the addition of attending parties, on visiting tickets, who are in a position to pay. At a recent meeting of the Cork Dispensary Committee, Dr. Golding complained of this hardship; and his remarks were endorsed by Dr. O'Connor, who stated that he had frequently been summoned to attend persons, of whose ability to pay there was no doubt. The committee cancelled the ticket to which Dr. Golding objected; but it can again be issued by the party who gave it, should he so desire. There are two methods which would prevent this annoyance: one is that, in the case of a visiting ticket being given to a person not deserving of medical relief, the issuer should be compelled to pay the medical officer for all visits given; or, in case of refusal, that his privilege of issuing visiting tickets should be discontinued.

A MORGUE FOR QUEENSTOWN.

AT a recent meeting of the Queenstown and Great Island Ratepayers' Association, the following resolution was adopted in reference to this want: "That the Guardians of the Queenstown Division of the Cork Union be requested to give notice of motion, at the next meeting of the Poor-law Board, of the necessity of that board at once providing a

morgue at Queenstown for the reception of bodies brought in from the sea, for which the Cork Poor-law Board have been appointed the sanitary authority, and levy rates; and to request that such morgue be provided immediately, to put an end to the unchristian scenes that are occasioned by the negligence of the Poor-law Board and Harbour Board, which are the joint authority having control of the harbour."

LIGATURE OF THE INNOMINATE ARTERY.

MR. THOMSON'S patient died on Thursday, July 20th, the forty-second day after ligature of the innominate artery. There was no recurrence of bleeding after the thirty-ninth day. The sinus was found to terminate in an ulcer, which involved the anterior wall of the junction of the innominate, carotid, and subclavian arteries. The innominate and carotid were filled with clot; the subclavian contained a clot occluding it to the extent of half an inch. The position of the ulcer was on the distal side of the ligature, the constricted portion of the innominate not being involved. The hæmorrhage had apparently taken place from the innominate, as there was a recent blood-stain on the cardiac side of the clot. None of the vessels were pervious to water forced in with a syringe. The aorta was atheromatous. Consolidation was proceeding satisfactorily in the tumour. Excluding the successful case of Dr. Smith of New Orleans, this is the second longest survival on record; Graefe's case having reached the sixty-seventh day, and Cooper's the thirty-fourth.

THE DUBLIN PORT HOSPITAL SHIP.

WITH reference to the proposal before the sanitary authorities of Dublin to abolish this ship, the Executive Committee of the Dublin sanitary authority have very properly called their attention to the circumstances under which the ship in question was constructed and placed in Dublin Harbour in 1874. It will be remembered that, in 1866, cholera was brought into Dublin by the removal to Sir P. Dun's Hospital of a patient from the ship by which he arrived in port. Owing to a fear of a fresh invasion of cholera in 1874, this floating hospital was established with the view of intercepting infectious diseases coming from other parts. Under these circumstances, the Association points out that a means of intercepting diseases which past experience has shown are introduced from abroad should not, for the sake of a small annual outlay, be discontinued. The object of the hospital ship is not to treat cases once disease has broken out, but to anticipate outbreaks of disease by preventing their introduction on shore.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

THE election to the two vacant King's Professorships in the School of Physic, Ireland, took place at the last month's business meeting of this College, on the 7th instant. There were two candidates for the King's Professorship of the Practice of Medicine, and six for the King's Professorship of Midwifery. In the absence of the Provost of Trinity College, the Vice-Provost attended; and, as required by the Act of George IV, under which the Fellows of the College elect to the King's Professorships, administered the oath to the President and Fellows of the College. A ballot having then been taken, first for the Professorship of Medicine, Dr. J. Magee Finny, Physician to the City of Dublin Hospital, was declared duly elected thereto. A second ballot was then opened for the King's Professorship of Midwifery, which resulted in the election of Dr. J. Rutherford Kirkpatrick to the vacant chair. The new Professors are both Fellows of the King and Queen's College of Physicians, and Dr. Finny has been Registrar of the College for the last eleven years. Both of these appointments carry clinical appointments at Sir Patrick Dun's Hospital with them; the Professor of Midwifery having charge of the Maternity Department, and the Professor of Medicine being, *ex officio*, a Physician to the Hospital. The retiring King's Professor of Medicine (Dr. William Moore) received a warm vote of thanks from the College, in recognition of the admirable manner in which he had discharged his duties during the fourteen years he filled the chair.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following report from the Board and the Court of Examiners of the Royal College of Surgeons of the number of candidates who have presented themselves for the Primary and Pass Examinations for the diploma of Member of the College during the collegiate year 1881-2, showing the number who have passed and have been rejected from each medical school during that period, was laid before the Council at its meeting on the 6th instant.

PRIMARY EXAMINATIONS.—1881-82.

Medical School.	Totals.	Number Passed.	Number Rejected.	Rejections per Cent.
St. Bartholomew's	158.50	117.50	41	25.86
University College	111	69	42	37.83
Guy's	106.50	71.50	35	32.88
King's College	63.50	36	27.50	43.30
London	57	44.50	12.50	21.93
St. Thomas's	50.50	30	24.50	48.51
St. George's	43	38	10	20.83
Middlesex	40	2	14	35
Charing Cross	34.83	24.50	10.3	29.65
St. Mary's	24.3	14	8.3	36
Westminster	22	14	8	36.36
Manchester	67	47.50	19.50	29.1
Cambridge	32.3	24.50	7.83	24.25
Liverpool	50.50	19	11.50	37.7
Leeds	20.12	18	8.50	32
Birmingham	21	10	5	23.8
Newcastle-on-Tyne	19.50	15.50	4	20.51
Bristol	15.50	12.50	3	19.48
Sheffield	1.3	2.3	4	63.31
Dublin	2	0	12	60
Belfast	5.3	0	2.50	47.17
Galway	1	1	0	0
Cork	1	0	1	100
Edinburgh	76.50	55	21.50	28.1
Glasgow	13	0	7	53.84
Aberdeen	2.3	2.3	0	0
Toronto	2.50	0	2.50	45.45
McGill College, Montreal	2	0	0	0
Kingston	2	0	0	0
Halifax	1.50	0.50	0	0
New York	1	0	1	100
Yale	1.50	0.50	0	0
Harvard	1.50	1	1.50	100
Calcutta	5.50	4	1.50	27.27
Madras	4.50	3.50	1	22.22
Bombay	2	0	0	0
Melbourne	2	0	0	0
Paris	1.50	0.50	0	0
Madrid	1.50	0.50	0	0
Totals	1091	744	347	31.3

PASS EXAMINATIONS.—1881-82.

St. Bartholomew's	115.3	72.50	42.83	37
Guy's	83.50	52.50	30	35.92
University College	59	30.16	27.83	47.98
London	44	33.50	10.50	23.86
St. Thomas's	37	23.50	13.50	36.48
King's College	35.50	23.50	12	38
St. George's	33.50	23.50	10	29.85
St. Mary's	29	15.50	13.50	46.55
Charing Cross	27.50	16.50	11	40
Middlesex	23.3	17.3	6	25.74
Westminster	7.50	4.50	3	40
Leeds	28.50	13.50	15	52.63
Manchester	28	18	10	35.71
Liverpool	14.3	4	10.3	72.23
Cambridge	14	10.50	3.50	25
Birmingham	13.50	9	4.50	33.3
Newcastle-on-Tyne	6.50	2.50	4	58.81
Sheffield	3.50	4.50	1	47
Bristol	3.50	2.50	1	28.57
Dublin	7.50	4	3.50	46.6
Galway	1	1	0	0
Cork	1.50	0.50	0	0
Edinburgh	10	10	8	44.44
Glasgow	4.22	2.3	2.30	51.76
Aberdeen	3	2	1	33.3
Bombay	4	3.50	0.50	12.5
Calcutta	1.50	1.50	1	66.6
Toronto	2.50	1.50	1	40
McGill College, Montreal	2	1.50	0.50	25
Kingston	1.50	1.50	0	0
Melbourne	2.6	2.6	0	0
New York	1.50	1.50	0	0
Madrid	1.50	1.50	1	40
Paris	2.50	1.50	1	40
Malta	1.50	1.50	0	0
Totals	666	412	254	38.13

In each list, candidates who are indicated by a fraction have received their education at more than one school of medicine.

HISTORICAL SKETCH OF THE PROCEEDINGS OF THE BRITISH MEDICAL ASSOCIATION REGARDING MEDICAL REFORM.

PART II.

At the end of 1851, the Council of the Association appointed a Committee to propose a draft Medical Reform Bill, in accordance with the principles which the Association had long advocated. In this, the Committee had the valuable assistance of Mr. G. H. Hastings, barrister-at-law, the son of Sir Charles Hastings. The draft Bill, which had been published in the *Provincial Medical and Surgical Journal*, was brought before the annual meeting at Oxford, in 1852, and was adopted. A Committee, consisting of several members who had shown an active interest in the question, was appointed to take charge of it. On March 18th, 1853, a deputation, consisting of this Committee, with Sir Charles Hastings, the Presidents of the Royal Colleges of Physicians and Surgeons of Edinburgh, and many other members of the Association and of the profession, waited on Lord Palmerston, Secretary of State for the Home Department, to present to his lordship the Bill, and to request him to introduce it into Parliament as a Government measure. Sir Charles Hastings spoke on behalf of the deputation; and was followed by Dr. Renton, President of the Royal College of Physicians of Edinburgh; Dr. Combe, President of the Royal College of Surgeons of Edinburgh; Sir John Liddell, of the Medical Department of the Navy; Mr. Wakley, M.P.; Dr. George Webster; and Mr. Brady, M.P.; after which Lord Palmerston promised to give his best attention to the measure; and said that, if there were a good prospect of bringing the matter to a satisfactory settlement, he should feel it to be his duty to bring the Bill before Parliament as a Government measure. The Committee had also subsequently an interview with the Earl of Aberdeen, then Prime Minister, who expressed himself as deeply impressed with the importance of the subject. The Committee also, between the time of their appointment in 1852 and the following annual meeting, entered into negotiations, personally and by letter, with the universities and medical colleges of the United Kingdom, with the result, in most cases, of arriving at a satisfactory mutual understanding.

The Committee, having been reappointed in 1853, subjected the Bill to revision, and framed a new draft, which was published in the *Association Medical Journal* of January 6th, 1854. It provided that there should be three Medical Councils: one for England, one for Scotland, and one for Ireland; the Council for England to consist of twenty-one members—five representing the universities, four the Royal College of Physicians, and four the Royal College of Surgeons, together with six medical practitioners to be chosen by one of the Secretaries of State; that for Scotland to consist of thirteen members, and that for Ireland of twelve members—all representing the universities and medical corporations. Each Council was to appoint a president and other officers. Every three years a congress was to be held in London, consisting of three members from each Council, to fix a uniform curriculum of medical study to be gone through by all candidates. Provision was also made for the appointment, by each Council, of an examining board, from which members of the Council were to be excluded: the examining boards for England and Ireland to consist of twelve and eight persons respectively, appointed by the Medical Councils of the two countries; and that for Scotland of twenty-four members, chosen in equal shares by the Royal College of Physicians and Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow. All candidates for admission to the medical profession were to be examined by one of these boards, having attained the age of twenty-two years, and studied during four years in a medical school, or three years if also a pupil during two years of a registered medical practitioner. Holders of a diploma or licence to practise medicine from the Universities of Oxford and Cambridge, and of the diploma or licence of one of the Colleges of Physicians or Surgeons, together with a certificate of approval from the examining board, were to be admitted to registration. Each Medical Council was to keep and publish its own Register; but a registered practitioner might transfer his name from the register of one country to that of another. Registration was to be annual, and a fee of five shillings, or such other sum of registration was to be paid. The Bill also provided for the suspension of registered practitioners, and for revocation of their registration, in consequence of conviction of crime; and for the suspension of persons for the practice of medicine by persons not duly qualified persons. In a revised

edition of the Bill (JOURNAL, March 17th, 1854), a change was made in the proposed examining boards, which were to consist in each division of the kingdom of twelve persons, not members of the Council, to be chosen in each case by the Medical Council.

On March 23rd, 1854, a special meeting of the Association was held at the Freemasons' Tavern, London, to consider the Bill. A report having been presented from the Medical Reform Committee, a Bill, which had been introduced into Parliament by Mr. Brady, member for Leitrim, and of which registration was the only object, was taken into consideration; and a petition against it was unanimously adopted, on the ground that such imperfect legislation would be injurious to the medical profession, and detrimental to the interests of the public. This being disposed of, the Bill of the Association was discussed; and the following resolution, proposed by Sir John Forbes, was agreed to:

"That, in the opinion of this meeting, it is important that the Bill of the Provincial Medical and Surgical Association should be emphatically the Bill of the profession; and with this view, that the Reform Committee should be empowered to invite representatives from the medical corporations, and other members of the profession at large, to co-operate with them in further considering the details of the Bill, and in subsequently taking steps to urge Her Majesty's Government to pass such Bill during the present session of Parliament."

A few months subsequently to this, an unsuccessful attempt was made by Mr. Craufurd, M.P., to introduce a Medical Reform Bill into Parliament. The Medical Reform Committee, having examined this Bill, found that, with some alteration, it was apparently fitted to carry out the principles advocated by the Association, while it reduced the force of the objections that had been made against the Bill of the Association in some quarters. The new Bill provided for the appointment of a single Medical Council consisting of representatives of the medical corporations, to which the Reform Committee of the Association added representatives of the universities, and of eight representative members—four for England, two for Scotland, and two for Ireland—to be appointed at first by the Secretary of State for the Home Department from among persons qualified to be registered, and afterwards to be elected annually by the registered practitioners in each of the three divisions of the kingdom. Examiners in classics and general literature were to be appointed by the Medical Council in London, Edinburgh, and Dublin, and no person, unless a graduate of an university, was to be admitted to examination for "letters testimonial" unless he should have received a certificate from such examiners, the fee for which was to be two pounds. The Medical Registrar and necessary clerks and other officers were to be appointed, and their salaries fixed, by the Home Secretary. Separate registers of all physicians and surgeons in practice before November 1, 1854 were first to be made, the fee being one pound; and afterwards a register was to be kept for all practitioners applying for registration, for which the fee was to be ten pounds, physicians and surgeons being entered separately. Candidates for registration as physicians were to be twenty-six years of age, to be graduates of an university, and to have been examined by one of the Colleges of Physicians, or by the Faculty of Physicians and Surgeons of Glasgow. Candidates for registration as surgeons were to be twenty-two years of age, and to have been examined in England by the Royal College of Physicians, assisted by four surgeons in general practice, and by the Royal College of Surgeons; in Scotland by the Royal Colleges of Physicians and Surgeons, or by the Faculty of Physicians and Surgeons of Glasgow; and in Ireland by the Colleges of Physicians and Surgeons. In each case, the term of professional study was to be at least five years, and the fee for examination was to be fixed by the several colleges. Every registered practitioner was to become a member of the College of Physicians and Surgeons from which he received his letters testimonial, without further examination, and without other payment than an admission fee; and in case of removal was to affiliate himself in like manner to one of the Colleges of the division of the kingdom to which he removed. This was to be done within three months after registration or removal. The medical corporate bodies were from time to time to submit to the Medical Council a scheme of professional study and examination, and of the fees; and the Medical Council were to have power to make such changes therein as they might think expedient, and were to "endeavour to procure, as far as is practicable and convenient, that the qualifications and fees for the testimonials shall be uniform, according to the nature thereof, throughout the United Kingdom." Power was also to be given to the Medical Council to appoint visitors of examinations, and to suspend the registration of the testimonials of Colleges which did not comply with the regulations of the Council. Provision was made for the first time for the publication of a *British Pharmacopœia*, under the sanction of the Medical Council. The clauses relating to the privileges of registered practitioners, and the penalties for assumption

of medical titles, were much the same as in the Medical Act of 1858; but there was no provision for removal from the *Register* of the names of practitioners convicted of misconduct or crime.

The Medical Reform Committee, having presented at the annual meeting in 1854 a report of the proceedings during the year, was reappointed, with the additions of Sir John Forbes, Dr. Sibson, Dr. Lankester, and Mr. Henry Ancell. A memorial to Lord Palmerston, the Home Secretary, urging the necessity of immediate legislation was agreed to, and the Committee was empowered to petition both Houses of Parliament to the same effect.

In December 1854, the Committee decided to take steps for the introduction of the Bill of the Association into the House of Commons, and were successful in obtaining the valuable assistance of Mr. Headlam, M.P. for Newcastle-on-Tyne. Acting partly on Mr. Headlam's advice, and partly guided by their own convictions that the Bill ought to be made a Government measure, the Committee had, in May 1855, an interview with Sir George Grey, then Home Secretary, to whom they presented an address, setting forth the necessity for medical reform. Sir George Grey declined to make the Bill a Government measure, but said that he should make no opposition to its introduction into Parliament. It was accordingly introduced in June by Mr. Headlam, Mr. Brady, and Mr. Craufurd, and was read a first time; the order for the second reading, however, in accordance with the suggestion of Sir George Grey, was discharged.

On December 20th, 1855, a deputation of the Medical Reform Committee and several other members of the Association had an interview with Sir George Grey, in which they urged him to introduce as a Government measure Mr. Headlam's Bill, or one founded on the same principles. His reply was to the effect that he admitted the necessity of legislating for medical reform; that he himself should look to the interests of the public and the profession, and not to those of the corporate bodies; that Mr. Headlam's Bill was better calculated than any that he had before seen to settle the question in a satisfactory manner; and that he would consult with Mr. Headlam regarding his Bill, and do anything in his power to further its passing through Parliament.

On February 5th, 1856, the Bill was, on the proposal of Mr. Headlam, supported by Mr. Brady and Lord Palmerston, read a first time in the House of Commons; and it was read a second time on February 20th; and ordered in committee on April 2nd. The Bill made provision for a Council of twenty-four members, eight of whom were to be representatives of the profession, and sixteen of the existing universities and corporations, with the exception of the University of Durham, the Apothecaries' Society of London, and the Apothecaries' Hall of Ireland. In the first instance, however, until the *Medical Register* was completed, the representatives of the profession were to be nominated by the Privy Council. When the motion for going into Committee was made, it was proposed that its further consideration should be postponed, notice having been given of a large number of amendments. The motion for postponement was adopted by a majority of 116 against 81; and, on April 10th, on the proposal of Mr. Cowper, the Bill was referred to a Select Committee, consisting of Mr. Cowper, Mr. Headlam, Mr. Brady, Mr. Craufurd, Sir W. Heathcote, Mr. Napier, Lord R. Grosvenor, Mr. Black, Colonel Dunne, Mr. Bell, Mr. Strutt, Mr. A. Hastie, Mr. Howard, and Mr. Perry. In the interval between the introduction of the Bill and its reference to a Select Committee, the Reform Committee endeavoured to obtain signatures to petitions in its favour, and received in this labour most valuable assistance from the Branches. The Metropolitan Counties Branch especially, with the approval of Sir Charles Hastings, and with the aid of a moderate grant from the Association, undertook the task of spreading a knowledge of the principles of the Bill, and of the kind of aid which could be effectively given to it, throughout all parts of the kingdom. The result was, that 757 petitions, signed by 3,240 medical men, were presented in favour of Mr. Headlam's Bill. On the other hand, there had been but few petitions against it, or in favour of delay. Among the petitioners in this sense were the Presidents and Council of the Royal Colleges of Surgeons of England and of Edinburgh; while alterations were petitioned for by the University of Cambridge, the Royal College of Physicians in London, the Royal College of Surgeons in Ireland, the Manchester Medico-Ethical Association, and various members of the profession.

When the Bill was, after some weeks, reported to the House of Commons by the Select Committee, it was found to be greatly altered in some important respects. The representative principle was entirely set aside in the constitution of the Medical Council, which was to consist of the President for the time being of the General Board of Health, and such twelve persons as Her Majesty, with the advice of Her Privy

Council, might appoint, of whom not less than nine were to be appointed from among persons qualified to be registered under the Act, not less than two being resident in Scotland, and not less than two in Ireland. Other changes were, the addition to physicians and surgeons of a third class of practitioners, to be styled "licentiates in medicine and surgery"; and the omission of the rule formerly proposed, that every member of the profession should in future join one of the Colleges. The Reform Committee, however, decided on supporting the Bill, because it recognised the principles of uniformity of examination, reciprocity of practice, and registration. On July 7th, the order for going into Committee on the Bill was discharged.

The Medical Reform Committee, having presented to the annual meeting a report of their labours, were thanked and reappointed, with the addition of Dr. A. Henry, who became the colleague of Mr. Hastings in the office of Secretary to the Committee. In the discussion on the report, dissatisfaction was expressed by several members with the proposed constitution of the Medical Council; and it was proposed to instruct the Reform Committee to oppose any clause in a Medical Bill which should give the Government the whole power of nominating the Council. This was, however, successfully opposed by Sir Charles Hastings and other members, on the ground that it was wise to take an instalment of the reform required, and not to reject the support of the Government because all that was desired was not obtained.

Towards the end of 1856, a new Medical Reform Bill was proposed by the medical corporations of Great Britain and Ireland, which embodied many of the principles formerly brought forward by the Association and Mr. Headlam. The Medical Reform Committee had an interview with the Conference Committee of the English Medical Corporations. The result of the deliberations was, that the Conference Committee agreed to the proposal made by the Reform Committee, that a certain proportion of the members of the proposed Medical Council should be nominated by Government from among registered members of the profession, not officially connected with the corporations. On the assembling of Parliament in February 1857, the Bill was introduced into the House of Commons by Mr. Headlam; but, Parliament being soon afterwards dissolved, its progress was arrested. When the new Parliament met, Mr. Headlam, in conjunction with Sir W. Heathcote and Mr. Napier, again introduced the Bill; and at the same time, the Bill brought in by the Select Committee of the House of Commons in the previous session was introduced by Lord Elcho, Mr. Fitzroy, and Mr. Craufurd. The Reform Committee, having examined both Bills, decided on supporting that of Mr. Headlam, on the ground that it contained the principles which had been recognised as the necessary groundwork of an efficient measure of medical reform. They consented, however, to allow six Crown nominees to be substituted for elected representatives, with the understanding that direct representation should be granted when the *Medical Register* was completed. The Committee recommended certain alterations, among which were these: that the University of Durham and the Apothecaries' Hall of Ireland should not be entitled to send representatives to the Medical Council; that the age of admission for surgeons should be twenty-two in place of twenty-one years; that the examinations of surgeons should be conducted in part by University professors; that the examinations should be open to the public; and that the regulations of the General Council should be submitted and approved by Her Majesty's Secretary of State for the Home Department. At the same time, the Committee issued an address to the members of the Association, calling on them to support Mr. Headlam's Bill. The Bill was read a second time on July 1st, the motion being carried by a majority of 147 (225 against 78); and on the same day, Lord Elcho withdrew his Bill. On July 15th, Mr. Headlam withdrew his Bill, as there appeared to be little prospect of its passing during the session.

At the annual meeting of the Association in 1857, Sir Charles Hastings announced that the Right Hon. W. F. Cowper, the Home Secretary, had entered into communication with him respecting a Medical Reform Bill which he intended to introduce into Parliament. For the first time, the Government had not only recognised the subject as important, but were prepared to take it in hand; and the fact that Mr. Cowper desired to consult Sir Charles Hastings personally as to the details of the measure, was evidence that the opinion of the Association, as the exponent of professional views, was held in just appreciation by the legislature. In compliance with the invitation, and with the approval of the Association, Sir Charles Hastings had shortly afterwards an interview with Mr. Cowper, and explained to him the view of the Association, and its desire that the principles which it had long advocated should be recognised by the Government.

On March 10th, 1858, Lord Elcho introduced into the House of Commons the measure which he had brought forward in the previous

year, and which was the Bill agreed on by the Select Committee of the House of Commons in 1856. On March 23rd, Mr. Cowper, who, in consequence of a change in the Government, had become a private member of the House, brought in the Bill which he had prepared while a member of the Government. This contained, when first introduced, some important provisions which were withdrawn during its passage through Parliament. It contained a clause providing that the General Council should make orders or regulations, and might repeal or alter them, regarding certain specified matters; the said orders, or alterations or repeals thereof, to be subject to the approval of Her Majesty's Privy Council. The matters in relation to which the orders and regulations were to be made were: the establishing a register of medical practitioners qualified to practise under the Act; the defining of the qualifications and conditions in respect of general and professional knowledge and course of study, etc., which should entitle to registration, and of the degrees, diplomas, or other testimonials to be required or admitted as evidence of qualifications—power being given to require the co-operation, in the conduct of the examinations, of two or more bodies in any part of the United Kingdom; the permissive establishment, by the General Council, of examiners in any branch of knowledge where examinations was not otherwise satisfactorily provided for; and the fixing of a fee for registration, to be paid by the examining body furnishing the evidence entitling a person to registration. The permission to enforce combination among the licensing bodies was replaced by a clause allowing licensing bodies to combine, with the approval of the Medical Council; the proposal to give power to the Council to appoint examiners was altogether withdrawn; and the duty of paying the registration fee was transferred from the examining body to the person desiring to be registered.

During the passage of the Bill through Parliament, a clause was introduced providing that no person (not exempted from retrospective action) should be registered "unless he shall prove to the satisfaction of the Council that his qualifications extend both to medicine and surgery;" and also a clause providing for the appointment, by the Branch Council, of examiners in general and preliminary education, after a scheme to be approved by the General Council. Both these clauses were subsequently withdrawn; Mr. Walpole, the Home Secretary, having declared that, if they were pressed, he would withdraw his support.

The Bill was at the earliest opportunity taken into consideration by the Reform Committee, who suggested to Mr. Cowper certain amendments, to which he consented. The Committee thereon authorised their chairman to sign a petition in favour of the Bill, and called on the Branches of the Association to support it. They further sought and obtained an interview with Mr. Walpole, then Home Secretary, to whom they presented a statement of their views. When the Bill was committed, a number of alterations were made, several of them being those recommended by the Reform Committee. Having gone through its several stages, the Bill passed the third reading in the House of Lords a few days before the annual meeting of the Association in 1858, and shortly afterwards received the Royal assent.

Thus, after many years of labour, the efforts of the Association to obtain Medical Reform were successful; not, indeed, to the extent that was desired or anticipated, but sufficiently to encourage further endeavours. The report presented by the Reform Committee to the Association at the annual meeting in 1858 enumerated, as the merits of the Act, the provisions for the registration of all duly qualified medical practitioners; for reciprocity of practice; the publication of a national *Pharmacopæia* for the United Kingdom; and the establishment of a General Council, consisting of representatives from all the examining bodies, and (as members from it was hoped) the general body of the profession, not being office-bearers in the bodies otherwise represented. On the other hand, there were, the Committee pointed out, several serious defects in the Act, especially the absence of adequate provision for uniformity of professional education and qualification, and for evidence of a preliminary general education.

This settlement, for the time, of the vexed question of Medical Reform, must be mainly attributed to the energetic and indomitable action of the Reform Committee, acting on behalf of the Association and of the profession. For several years, it had been constantly energetic in its endeavours to place the organisation of the profession on a satisfactory basis: and the labours of Hastings, Cartwright, Nunneley, Southam, Sibson, Lankester, and their colleagues, deserve to be held in honourable remembrance. Especially are grateful thanks due to Mr. George W. Hastings, the son of the founder of the Association, who, acting in his father's spirit, and bringing the technical knowledge and the opportunities connected with his calling as a barrister to bear on the question, rendered eminent services, both as the framer of the Bill first brought forward by the Association in

1852, and afterwards as Secretary to the Committee. Nor must the cordiality with which Mr. Headlam, Mr. Cowper, and other members of Parliament, co-operated with the Committee, be passed over without acknowledgment.

THE ADVANCEMENT OF MEDICINE BY RESEARCH.

THE Association for the Advancement of Medicine by Research has issued a valuable memorandum of facts and considerations relating to the practice of scientific experiments on living animals, commonly called vivisection. It points out *in limine* that the art of medicine depends upon science; that medical, like other sciences, depends upon experiments; and that the scientific method is not fruitless in the study of living functions; this conclusion, it points out, is supported not only by argument, but by the testimony of experience. It discusses the justification of experiments which inflict pain or death on animals, and points out that the fact of death or pain being inflicted in the course of experiments cannot alter their scientific importance and necessity, but that happily the amount and degree of pain thus caused need only be small, since science has herself provided the means by which pain is reduced to a minimum. It relates the various painless experiments of a modern laboratory, and shows that the utmost possible limitation of the infliction of pain has always been the object and practice of scientific workers in England, as sufficiently proved by a report which was drawn up by a committee of the Physiological Section of the British Association for the Advancement of Science in 1871, several years before the appointment of the Royal Commission. It cites recent legislation on the subject, and points out that the Act passed in 1876 prevents any possible danger of abuse; and that what is now needed is such an expression of opinion in Parliament as will permit the Act to be worked in the spirit in which it was framed, and loyally accepted according to its strict provisions. It draws attention to the imaginary abuses of experiment by incompetent persons. The following are stated to be the real objects of scientific experiments on living animals:—for physiology, to extend, correct, and define our knowledge of the functions of the living body; for pathology, to obtain direct and exact knowledge of the processes of disease; for therapeutics, to test various remedial measures directly; for the prevention of disease, to ascertain the means of checking contagion and preventing epidemic disease both in man and in brutes. Some of the results of experiments are enumerated which have led to the checking of contagion in man and the lower animals. On the subject of instruction, it insists on the necessity for physiology, like chemistry, being taught practically, and that students of medicine should have a practical and thorough familiarity with the most important functions of the body; it points out that for this purpose no painful experiments are necessary, and none are performed in our medical schools and colleges. Another object of scientific experiment on living animals is stated to be the application of medicinal tests to the detection of poisons; and it draws attention to the fact that the physiological test or the effect of the poison upon the lower animals is the only means by which the guilt of murder can be brought home to a criminal, or the innocence of a wrongfully accused person established. It is well stated that experience fully bears out what reason demonstrates and authority confirms, that medicine rests chiefly upon physiology, and that physiology cannot advance without experiment. It concludes by expressing the hope that, should a fresh occasion arise, such a decided and influential expression of opinion will be made in Parliament, as will not only remove any ill-considered attempts to totally abolish one of the most important methods of natural knowledge, but will also strengthen the hands of the Government in administering the law so as not to interfere with the just claims of science, and with the paramount claims of human suffering.

PAYMENT FOR MEDICO-LEGAL SERVICES IN THE COLONIES.

THE Council of the Victorian Branch of the British Medical Association has presented the following report on the insufficient remuneration to practitioners for medico-legal services.

"It is the general principle that no medico-legal examination should be conducted without competent authority; if this rule be observed, the recognised fee for the professional services rendered will certainly be forthcoming. Except in cases of urgency not to be done at the mere request of a constable. In police cases a medical man should have distinct instructions from a competent authority, either a coroner or magistrate, who will then be bound to certify to the practitioner's claim for remuneration, even should no further legal proceeding be taken. No constable will ever

be empowered to pay a medical man; he can only certify to services rendered, and then the senior officer will sign the usual voucher.

"Similarly, a medical practitioner should not examine an alleged lunatic without a proper order from a magistrate or other competent authority; if he finds the patient sane he should still give a certificate to that effect; he should not simply refuse to sign at all. If these precautions be observed, the fee will certainly be forthcoming. A guinea is very inadequate remuneration for the certificate, considering the responsibility involved, but if more be demanded the Government would probably require the services of an expert. The amount of remuneration in this case therefore resolves itself into a small part of the question—should the ordinary practitioner certify to lunacy at all?

"The fee of one pound *per diem* for attendance in law courts is certainly no compensation for the loss of time and loss of money involved; but it is hopeless to expect any increase.

"A recent order in Council decided that in future the allowance for travelling expenses should be one shilling per mile one way, instead of one shilling and sixpence as heretofore.

"In civil law no difficulty ought to arise, for a medical man can protect himself abundantly. The amount of his fee is simply a matter of contract. The witness can refuse to be sworn until the usual fee be paid, and need not perform any examination or do more than answer questions unless there be a satisfactory arrangement. No Government would dream of interfering with the scale of fees in civil cases. The same arguments apply with added force to the cases in which a medical man is called in to assist the Crown Prosecutor. An expert's fee will in nearly all cases be paid without demur; and no difficulty will arise if the witness stipulate beforehand for adequate remuneration.

"It may thus be seen that, in the opinion of the committee, not much is likely to be gained by approaching the Government concerning an increase of pay for professional services in forensic cases. But medical men, by observing proper procedure and proper caution, can largely protect their own interests. But if influence were to be brought upon the Government to increase the rate of remuneration, it would be better to narrow the scope of their action; the most substantial grievance undoubtedly was that of country medical men, who were often called upon to travel long distances to inquests, etc., and received most inadequate allowance. Still the committee had little hope of securing any amendment of the present scale of fees."

It is evident from this report, that the remuneration of ordinary medical witnesses is not on a more satisfactory basis in the colony of Victoria than in the mother country.

CARRIAGE TAX.

WE are glad to be able to state that an intimation has been received by the Parliamentary Bills Committee of the British Medical Association, that Mr. Gladstone has abandoned the increase of the tax on carriages, to which the committee made energetic opposition on behalf of the Association, and against which it had drafted petitions, which were largely signed and forwarded to the House of Commons through their respective Parliamentary representatives by the various Branches of the Association.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL:

NOTICE OF QUARTERLY MEETINGS FOR 1882: ELECTION OF MEMBERS.

A MEETING of the Committee of Council will be held on Wednesday, October 18th. Gentlemen desirous of becoming members of the Association must send in their forms of application for election to the General Secretary not later than 21 days before the meeting—viz., September 27th, in accordance with the regulation for the election of members passed at the meeting of the Committee of Council of October 12th, 1881.

November 4th, 1881. FRANCIS FOWKE, *General Secretary*.

COMMITTEE OF COUNCIL.

NOTICE OF MEETING.

A MEETING of the Committee of Council will be held in the Committee Room off Assembly Room of the Guildhall, Worcester, on Tuesday, the 8th day of August next, at a quarter past two o'clock in the afternoon.

A meeting of the Committee of Council 1882-83 will be held on

Thursday, the 10th August, in the Committee Room off Assembly Room, Guildhall, Worcester, at half-past nine o'clock in the forenoon.

FRANCIS FOWKE, *General Secretary*.

161A, Strand, London, July 25th, 1882.

GRANTS FOR SCIENTIFIC RESEARCH.

THE Scientific Grants Committee of the British Medical Association desire to remind members of the profession engaged in the researches for the advancement of medicine and the allied sciences, that they are empowered to receive applications for grants in aid of such research. Applications should be made without delay to the General Secretary, at the office of the Association, 161A, Strand, W.C., and must include details of the precise character and objects of the research which is proposed.

BRITISH MEDICAL ASSOCIATION:

FIFTIETH ANNUAL MEETING.

THE Fiftieth Annual Meeting of the British Medical Association will be held at Worcester, on Tuesday, Wednesday, Thursday, and Friday, August 8th, 9th, 10th, and 11th, 1882.

President: BENJAMIN BARROW, F.R.C.S., Consulting-Surgeon to the Royal Isle of Wight Infirmary.

President-elect: WILLIAM STRANGE, M.D., Senior Physician to the General Infirmary, Worcester.

An Address in Medicine will be delivered by W. F. WADE, F.R.C.P., Physician to the Birmingham General Hospital.

An Address in Surgery will be delivered by WILLIAM STOKES, M.D., F.R.C.S.I., Professor of Surgery in the Royal College of Surgeons, Ireland.

The business of the Association will be transacted in Eight Sections, viz.:

SECTION A. MEDICINE. (Council Room, Guildhall.)—*President:* Thos. Clifford Allbutt, M.D., F.R.S. *Vice-Presidents:* George W. Balfour, M.D.; William Henry Broadbent, M.D.; G. H. Philipson, M.D.; *Secretaries:* Edwin Rickards, M.B., 14, Newhall Street, Birmingham; H. Ashby, M.D., 13, St. John Street, Manchester.

SECTION B. SURGERY. (Recorder's Court, Guildhall.)—*President:* Augustin Prichard, F.R.C.S. *Vice-Presidents:* T. W. Walsh, F.R.C.S.; Reginald Harrison, F.R.C.S.; T. H. Bartleet, M.B., F.R.C.S. *Secretaries:* F. E. Manby, F.R.C.S., 10, King Street, Wolverhampton; Richard Clement Lucas, M.B., F.R.C.S., 18, Finsbury Square, E.C.

SECTION C. OBSTETRIC MEDICINE. (Committee Room Assembly Room, Guildhall.)—*President:* William Leishman, M.D. *Vice-Presidents:* Henry Vevers, M.R.C.S.; J. G. Sinclair Coghill, M.D.; Arthur W. Edis, M.D. *Secretaries:* C. J. Cullingworth, M.D., 25, St. John Street, Manchester; Tom Bates, L.R.C.P., Worcester.

SECTION D. PUEBIC MEDICINE. (Civil Court, Shire Hall.)—*President:* Alfred Carpenter, M.D. *Vice-Presidents:* Alfred Hill, M.D.; Horace Swete, M.D.; E. T. Wilson, M.B. *Secretaries:* Geo. Haynes Fosbrooke, jun., M.R.C.S., Bidford, Redditch; Francis Edward Atkinson, L.R.C.P., Settle, Yorkshire.

SECTION E. ANATOMY AND PHYSIOLOGY. (North Wing Committee Room, Guildhall.)—*President:* George M. Humphry, M.D., F.R.S. *Vice-Presidents:* S. S. Roden, M.D.; Frank Payne, M.D.; Gerald Yeo, M.D. *Secretaries:* J. B. Haycraft, M.D., Mason's College, Birmingham; James Shuter, M.B., F.R.C.S., 58, New Broad Street, London.

SECTION F. PATHOLOGY. (South Wing Committee Room, Guildhall.)—*President:* J. Hughlings Jackson, M.D., F.R.S. *Vice-Presidents:* W. R. Gowers, M.D.; H. T. Butlin, F.R.C.S.; Wm. Smith Greenfield, M.D. *Secretaries:* Sidney Coupland, M.D., 14, Weymouth Street, London; F. Treves, F.R.C.S., 18, Gordon Square, London.

SECTION G. OPHTHALMOLOGY. (County Grand Jury Room, Shire Hall.)—*President:* James Vose Solomon, F.R.C.S. *Vice-Presidents:* David Everett, F.R.C.S.; Frederick Mason, M.R.C.S.; Edwyn Andrew, M.D. *Secretaries:* Geo. Edwin Hyde, L.R.C.P., Worcester; J. A. Nunneley, M.B., 22, Park Place, Leeds.

SECTION H. OTOLGY. (City Grand Jury Room, Shire Hall.)—*President:* W. Laidlaw Purves, M.D. *Vice-Presidents:* Geo. P. Field, M.R.C.S.; A. H. Jacob, M.D.; E. Cresswell Baber, M.B. *Secretaries:* J. J. Kirk Duncanson, M.D., 22, Drumsheugh Gardens, Edinburgh; Peter McBride, M.D., 20, Alva Street, Edinburgh.

Honorary Local Secretaries: George W. Crowe, M.D., Shaw Street, Worcester; H. C. Moore, M.R.C.S., 7, King Street, Hereford; Thelwell Pike, M.D., 2, Montpellier, Great Malvern.

Honorary Treasurer: G. A. Sheppard, M.R.C.S., Worcester.

TAIT, Lawson, Esq. Parallel Histories of two Cases of Bleeding Myoma.
 THORNTON, I. Knowles, M.B., C.M. On Hegar's Operation for Uterine Fibroids: with Remarks.
 WALLACE, John, M.D. Note on the existence of Temporary Albuminuria in the Acute Stages of Perimetritic and Parametritic Inflammations, as well as in the Chronic Suppurative Stage.
 WALTER, W., M.D. A Successful Case of Transfusion of Blood after severe *Post Partum* Hemorrhage.

SECTION D.—PUBLIC MEDICINE.

A discussion on the Public Medicine Aspects of the Alcohol Question will be opened by Dr. Norman Kerr (London).

A discussion on the Notification of Infectious Diseases will take place in this Section.

The following papers have been promised.

BOND, F. T., M.D. Scarlatinal Sore-throat, and its relations to other Throat affections.
 CARTER, W., M.D. Notification of Infectious Diseases by Medical Men.
 DE PIETRA SANTA, —, M.D. The Typhoid Fever in Paris, 1879-1882.
 DRYSDALE, C. R., M.D. The Death-rate as affected by Food-Supplies.
 DYKE, T. J., Esq. Closing of Schools in times of the Epidemic Prevalence of Contagious Fevers.
 GROVES, J., M.B. House-Sanitation in Rural Districts.
 IMLEACH, Francis, M.D. Quarantine in Theory and Practice.
 MOORE, Charles F., M.D. Short Notes on Vaccination.
 MILLICAN, K. W., Esq. Ten Years of Sanitary Progress.
 NEALE, R., M.D. A Ready Means of surrounding Patients with absolutely Pure Air.
 PAGE, Herbert M., Esq. Closure of Parochial Schools during the Prevalence of Zymotic Diseases.
 SLADE-KING, E. J., M.D. Mutual Relations of Medical Officers of Health and Private Medical Practitioners.
 SWETE, Horace, M.D. Sanitation in Hospitals: Drainage and Water-supply, past and present, of the Worcester Infirmary.
 VACHER, Francis, Esq. The Transmission of Disease by Food.
 WILSON, E. T., M.B. Some Peculiar Features of a Recent Epidemic of Measles at Cheltenham.

SECTION E.—ANATOMY AND PHYSIOLOGY.

The following papers have been promised.

BRAILEY, W. A., M.D. On some points in the Anatomy of the Ciliary Body.
 CATHCART, C. W., M.D. 1. Movements of the Upper Limb of the Trunk. 2. Movements of the Ulna in Pronation and Supination.
 CLARKE, W. Bruce, M.B. On cases of Arrested Development of the Diaphragm with specimens.
 COOK, T., Esq. On the Continuation of the Intrinsic Muscles of the Tongue in Man with the Extrinsic Muscles (accompanied with dissections).
 GARSON, J. G., M.D. On the Effects of Artificial Distension of the Rectum on the other Pelvic Viscera.
 GASKELL, W. H., M.D. Observations on the Innervation of the Heart.
 HAY, Matthew, M.D. 1. Cane-Sugar Ferment. 2. Absorption of Salts in the Alimentary Canal.
 HAVCRAFT, J. E., M.D. A New Process for the Estimation of Uric Acid in Urine.
 HOGGAN, George, M.D. 1. On the Functions of the Lymphatics as deduced from the Anatomy of their Radicles (with microscopical demonstrations). 2. On the Characters and Position of the Ultimate Nerve-Terminations in the Skin and Hairs as affected by causes extraneous to the Nervous System (with microscopical demonstrations).
 KEETLEY, C. B., Esq. On the Actual Use of the Crucial Ligament of the Knee-joint.
 LOCKWOOD, C. E., Esq. On Abnormalities of the Cæcum and Colon, with reference to Development.
 MORRIS, Henry, M.B. On the Ligamentum Teres, and its Uses in Man and other Animals.
 PARKER, W. K., Esq., F.R.S. On the Visceral Arches of the Mammalia.
 ROBSON, A. W., Mayo, Esq. 1. On the Position of the Abdominal Viscera. 2. Specimens of Brain hardened and prepared by Giacomini's process, with Explanation of the Method of Preparation.
 STRETTON, L., Esq. A Case of Bifid Dorsal Spines in the Human Subject.
 SMYTHINGTON, James, M.D. Some Peculiar Features in the Cranial Venous Circulation.
 WALSHAM, W. J., Esq. On the Anatomy of the Triangular Ligament and Pelvic Fascia.
 WILLIAMS, W. Roger, Esq. On Contraction of the Stomach.

Tables will be provided in this Section for the exhibition of microscopical objects.

SECTION F.—PATHOLOGY.

1. A Debate on the Morbid Anatomy and Pathology of Diabetes will be introduced by Dr. D. J. Hamilton, of Aberdeen. The following gentlemen are expected to take part in the discussion: Dr. Pavy, Dr. S. Mackenzie, Dr. Dreschfeld, Dr. Saundby, Dr. Shingleton Smith, and others.

2. Mr. Jonathan Hutchinson will open a debate on the Origin of Tumours. The following gentlemen have already intimated their intention to take part in the debate: Dr. Thin, Dr. Sangster.

The following papers are promised.

ABRAHAM, P. S., B.Sc. The Formation of Granulation-Tissue in a Sponge Framework.
 BARKING, Gilbert, M.B. Colloid Sarcoma of the Breast.
 HADEN, W. B., M.D. Specimens illustrating Degeneration in the Spinal Cord.
 NEVILLE, W. S., M.D.; and ABRAHAM, P. S., B.Sc. On some Abnormal Attachments of the Umbilical Cord and Fœtal Membranes.
 ROSEKEL, W. J., Esq. A Contribution to the Pathology of Vascular Growths of the Rectum.

SANGSTER, A., M.B. On Rodent Ulcer.
 SAUNDBY, R., M.D. Changes in the Sympathetic Nerve in Bright's Disease.
 WILLIAMS, W. Roger, Esq. Sarcoma of the Bladder.

The following demonstrations will be given in this Section.

BUTLIN, H. T., Esq. Microscopic Demonstration of the Chief Forms of Tumours.
 GOWERS, W. R., M.D. Microscopic Demonstration on Diseases of the Spinal Cord.
 MACKENZIE, Stephen, M.D. 1. The Bacillus of Tubercle. 2. A Specimen of Urine from a Case of Paroxysmal Hæmoglobinuria.
 SMITH, R. Shingleton, M.D. 1. Specimen from a Case of Tumour of the Cervical Part of the Spinal Cord, associated with Glycosuria. 2. The Bacillus Anthracis.
 THIN, George, M.D. 1. The Bacillus of Leprosy. 2. Hairs showing the Growth of Trichophyton Tonsurans, artificially cultivated.

There will be a table for the exhibition of wet specimens connected with this Section in the room provided for the meeting. There will also be an exhibition of microscopical objects connected with Pathology in the same room.

SECTION G.—OPHTHALMOLOGY.

1. Dr. Edwyn Andrew will open a discussion on Extraction of Senile Cataract in its Capsule: modes of procedure.

2. A discussion on the following subject will be opened by Mr. E. Nettleship: To what extent do the signs derived from the examination of the Eye and its Appendages, contribute to the localisation of Central Nervous Diseases?

The following gentlemen have expressed their intention of taking part in the discussions: Dr. Wolfe (Glasgow), Dr. O. Sturges, Mr. Haynes Walton, Mr. Juler, and Mr. H. R. Dew; also, if their other duties permit, Dr. W. R. Gowers, Dr. Laidlaw Purves, and Dr. Clifford Allbutt.

The following papers have been promised.

ANDREW, Edwyn, M.D. 1. Remarks on the Old Operation of Depression of Cataract. 2. Remarks on Two Cases of Dislocation of the Lens. 3. A New Mode of Treating Symblepharon.
 COWELL, George, Esq. On certain Modifications of von Græfe's Operation for Extraction of Cataract.
 CRITCHETT, Anderson, Esq. The Operative Treatment of Congenital Cataract.
 GROSSMAN, K., M.D. A New Operation for Glaucoma.
 JULER, Henry E., Esq. The Application of Retinoscopy to the Diagnosis and Treatment of Errors of Refraction.
 NETTLESHIP, E., Esq. A Case of Optic Neuritis, followed by a Persistent Flow of Fluid from the Nostrils.
 SMITH, Priestley, Esq. 1. Atrophy of the Optic Nerves, with Continuous Drooping of Fluid (cerebro-spinal?) from the Nostril—two cases. 2. A new Registering Perimeter.
 SNELL, S., Esq. Cataract-extraction by a Shallow Lower Flap, with particulars of 120 Operations.
 TAYLOR, C. B., M.D. 1. On the Employment of Sponge-grafts, in the Formation of a Stump after Extirpation of the Eyeball. 2. On the Division of the Optic and Ciliary Nerves as a substitute for Enucleation, with *præcis* of Twenty Cases. 3. On the Instillation of Eserine as a preliminary to Cataract-extraction, with an easy and safe Method of performing Iridectomy, and lacerating the Capsule in such cases. 4. On Temporary Ankyloblepharon and the Transplantation of the Skin *en masse* in cases of Injury and Disease of the Eyelids. 5. The Author's Experience of Motair's Eye-shades for the Diminution or Exaggeration of the Effects of Tenotomy in cases of Strabismus. 6. On the Cure of Severe Cases of External Strabismus without dividing the External Rectus.
 WOLFE, J. R., M.D. Sclerotomy in Glaucoma.

Mr. Juler will exhibit Microscopic Sections of Diseases of the Eye.

Mr. Juler and Mr. Anderson Critchett will exhibit the New Ophthalmometer of Javal and Schiotz for detecting Corneal Astigmatism, etc.

SECTION H.—OTOLOGY.

1. A discussion on the connection between Diseases of the Ear and General Medicine will be opened by Mr. George P. Field. The following gentlemen have promised to take part in this discussion: Dr. A. H. Jacob (Dublin), Mr. Thomas Webster (Redlands, near Bristol), Mr. Lennox Browne (London), Dr. Cresswell Baber (Brighton), Dr. Kirk Duncanson (Edinburgh).

2. A discussion on Auditory Vertigo, especially in regard to its Differential Diagnosis, will be opened by Dr. Woakes. The following gentlemen have promised to take part in this discussion: Dr. McBride (Edinburgh), Dr. Cresswell Baber (Brighton).

Drs. Hughlings Jackson, Clifford Allbutt, and Gowers, have promised to take part in the discussions, provided their other duties permit.

The following papers have been promised.

BARR, Thomas, M.D. Practical Observations on the use of the Galvanic Caustery in Disease of the Ear.
 BROWNE, Lennox, Esq. 1. On the Connection between Diseases of the Ear and General Medicine. 2. The Local Treatment of Discharges from the Ear.
 ELLIS, Richard, Esq. Notes on a case of Deafness following Concussion of the Brain.
 MCBRIDE, P., M.D. The Physiology of Auditory Vertigo and some other Neuroses produced by Ear-Disease.
 PRIERCE, F. M., M.D. Case of Extensive Disease of the Left Temporal Bone with Hernia Cerebri: with Specimens.

PRITCHARD, Urban, M.D. The Use of Mineral Acids in the Treatment of Caries,

TORRANCE, Robert, Esq. Remarks on Syphilitic Cochlitis.

Dr. Cresswell Baker will show an Aural Reflector and a set of Specula for the Waistcoat Pocket.

Dr. Urban Pritchard will show a Convenient Form of Audiphone.

No communication shall occupy more than fifteen minutes, and no person shall be permitted to speak more than once, or for more than ten minutes, during the discussion thereon.

N.B.—Members who desire to take part in the discussions, or to read papers, are earnestly requested to communicate without delay to the Secretaries of the respective Sections.

SPECIAL NOTICE.

Members intending to be present are requested to fill up the form published in the JOURNAL of last week, and to forward it without delay; stating, at the same time, if they intend to bring ladies with them.

RECEPTION ROOM.

. It is particularly requested that each member, on his arrival, will at once proceed to the Reception Room, which is at the Guildhall; 1. enter his name and address, and obtain his tickets and programme; 2. inquire for letters; 3. consult the list of lodgings and hotels, or see the agents appointed for the purpose of letting lodgings, Messrs. Griffith and Millington, 50, Foregate Street, Worcester. A list of hotels and lodgings was published in last week's JOURNAL.

EXCURSIONS.

The following excursions will take place on Saturday, August 12th.

1. Excursion to Malvern Hills. A train will leave Worcester, Foregate Street Station, at 9.39, arriving at Great Malvern at 10, where members lodging at Malvern can join the party. The geological structure of the hills and surrounding country will be explained by the Rev. W. S. Symonds, F.G.S., and G. H. Piper, Esq., on the spot. The return to Worcester can be made by any of the ordinary trains.

2. Excursion to the River Wye, Ross, Monmouth, Tintern Abbey, and Chepstow Castle. A train will leave the Foregate Street Station about 9 A.M., calling at Malvern Link, Great Malvern, Hereford, and Ross stations. At Ross boats can be hired for the river from Ross to Monmouth, passing through some of the most beautiful scenery of the Wye. The train will stop at Symonds Yat, Monmouth, Tintern, and Chepstow. Parties proceeding by boat from Ross to Monmouth can go on to Tintern and Chepstow by a later train to meet the party at Chepstow, where luncheon will be provided about 4 P.M.

3. Excursion to Stratford-on-Avon, Shakespeare's house, museum, church, etc.; Leamington, Kenilworth, and Warwick Castles. A train will leave Worcester, Shrub Hill station, at 9, arriving at Stratford at 10, where light refreshments will be provided by the medical men there. Thence, at about 12.30, to Leamington, where a luncheon, limited to 100 members, will be given by the members of the association residing in Warwick, Leamington, and Kenilworth. From Leamington by carriages to Kenilworth Castle, thence to Warwick, leaving the latter place at 7 o'clock.

4. Excursion on the River Severn. The steamer, *Lady Alwyne*, will leave Worcester Bridge, at 10 o'clock on Saturday morning, for a trip of about two hours to Tewkesbury. After allowing time for viewing the ancient abbey, it will return to the "Shrubbery" in the grounds of W. Dowdeswell, Esq., where, by permission, luncheon will be provided. This excursion will not take place unless there be twenty-five members going.

Further particulars may be obtained of Dr. PIKE, Great Malvern, for the Malvern excursion; of H. MOORE, Esq., King Street, Hereford, for the Wye; and Dr. CROWE, Worcester, for the Stratford and Tewkesbury excursions.

PLACES OF INTEREST IN AND AROUND WORCESTER WHICH MAY BE VISITED.

1. The Cathedral, completely restored by the late Sir G. Gilbert Scott; great organ; grand peal of twelve bells. Week-day service: Morning at 10.15; evening at 4.15.

2. The Infirmary, Castle Street, contains 100 beds; admirable outpatient department. Operations on Thursdays at 2 P.M.

3. Exhibition of fine arts, and of the manufactures and industries of the county: Shrub Hill, close to the Railway Station. Open daily,

15. A magnificent collection of works of art; Worcester china; car-pets, etc.

4. The following manufactories will be open each day to members and their ladies on showing their cards of membership, viz.:—(a) the Worcester Royal Porcelain Works, at the back of the Cathedral. Open from 9 till 1, and from 2 till 6; (b) The Semi-China Works of Messrs. Grainger; (c) the Glove Manufactory of Dent, Alcroft, and Co., Fish Street; (d) the Shoe Manufactory of Mr. Henry Willis, College Street; (e) the extensive Vinegar Works of Hill, Evans, and Co., Pheasant Street; (f) the Carriage Manufactory of Messrs. McNaught and Smith, Tything; (g) the Horsehair Weaving Factory of Edward Webb and Sons, Copenhagen Street; (h) the Brush Manufactory of Pemberton and Son, Broad Street; (i) the Railway Signal and Ironworks of Messrs. McKenzie and Holland, Canal Side, Lowesmoor; (k) The Tinplate Works of Messrs. Williamson and Sons, Providence Street; (l) Ornamental Tiles, H. C. Webb and Co., Tunnell Hill, near Railway Station; (m) the extensive Cellars of Wines and Spirits of Stallard and Sons, Copenhagen Street, next to Guildhall; (n) the Nurseries of R. Smith and Co., about the largest in the kingdom, St. John's; (o) the extensive Nurseries of W. B. Rowe and Co. (Limited), Barbourne, near Worcester. N.B.—It is desirable that parties of from six to twelve persons should be made up to visit the above named Works, especially the Porcelain Works.

5. The Droitwich Brine Baths and Swimming Baths, open daily: six miles from Worcester by rail.

6. Witley Court, the seat of the Earl of Dudley, ten miles from Worcester. Italian Villa, with grand fountains, etc. Tickets of admission to view may be had in the Reception-room.

7. The River Severn. There are boats and steamers on hire for parties on the Severn, which presents some beautiful scenery, both above and below bridge. For boats apply at the Bridge, or at the Grand Stand, Pitchcroft.

DINNER TICKETS.

Applications should be made as early as possible to the Honorary Treasurer, G. A. Sheppard, Esq., Foregate Street, Worcester; accompanied, in all cases, by a remittance of 21s. or 14s.

RAILWAY SERVICE.

The most convenient trains from Paddington are at 10 A.M., 2.15 and 4.45 P.M., arriving in Worcester 1.50, 6.0 and 7.45. Trains from Birmingham and the North arrive from 9.45 A.M. to 9.30 P.M. Trains from Bristol and the South arrive at 10.2, 12.20, 1.44, 3.22, 5.25, 8.9, 9.16.

Special trains have been engaged to leave Worcester for Birmingham at 11.0 P.M. on the nights of the 8th, 9th, 10th and 11th.

Special trains from Worcester to Malvern and Hereford at the same hour on each day.

Special train from Worcester to Gloucester on Wednesday evening at 11 o'clock.

For full particulars, see advertisement pages.

ANNUAL MUSEUM.

The sixteenth annual exhibition of objects of interest in connection with medicine, surgery, and their allied sciences will take place in the Museum Hall, Worcester, during the week of August, 1882. The floor-space of this building amounts to 4,000 square feet. The Committee appointed to take charge of the arrangements for this Museum will be glad to receive—1. Pathological specimens (wet or dry); 2. Drawings or diagrams illustrating disease; 3. Casts or models; 4. Surgical instruments and appliances; 5. Microscopic preparations; 6. Microscopes, thermometers, and other instruments of investigation; 7. Preparations, diagrams, etc., relating to investigations in anatomy and physiology; 8. New drugs, chemicals, pharmaceutical preparations, and dietetics; 9. Sanitary appliances, including drawings or models illustrating the ventilation of hospitals or private dwellings; 10. New medical books. It is intended that the surgical instruments, sanitary appliances, etc., shall be *bona fide* novelties, or improvements on those in common use. The pathological specimens will be arranged in display cases.

Exhibition of Instruments and Appliances. It is intended to arrange for the exhibition of instruments, electrical apparatus, and appliances relating to sanitary science and public health. Facilities will also be afforded, when requested, for the display of instruments in action, or for special experiments by the exhibitors, etc.

A list of the names of the exhibitors will be printed in a catalogue, which will be as complete as circumstances may permit.

Communications, objects intended for exhibition, etc., to be addressed to the Secretary of the Museum Committee, Mr. J. RANDLE BUCK, 29, Sidbury, Worcester. During the week preceding the meeting, all articles should be sent direct to the Music Hall, Worcester, and addressed to the care of the Curator of the Museum of the British Medical Association.

NOTICES OF MOTION.

Dr. MILNER FOTHERGILL hereby gives notice that, in accordance with By-law 43 of the Association, he will move, at the annual meeting of the Association, that an addition be made to By-law 12 in the following words, viz.:

"That the Editor shall be elected for a period of five years, but shall be eligible for re-election for a like period."

Dr. WARD COUSINS hereby gives notice that he will move, and that Dr. GRIGG will second:

"That the following alterations in By-law 35 are desirable: 1. The President of the Association to be an *ex officio* member of the Journal and Finance Committee. 2. The annual retirement of four of the elected members, who shall remain ineligible for re-election for two years."

FRANCIS FOWKE, *General Secretary*.

London, July 20th, 1882.

PROCEEDINGS OF COMMITTEE OF COUNCIL.

At a meeting of the Committee of Council, held at the Council Room of Exeter Hall, Strand, on Wednesday, July 12th, 1882—present, Mr. C. G. Wheelhouse, President of the Council, in the chair; Mr. B. Barrow, President; Dr. W. Strange, President-elect; Dr. W. F. Wade, Treasurer; Dr. B. Annington, Mr. Alfred Baker, Dr. M. M. de Bartolomé, Mr. T. H. Bartleet, Surgeon-Major Boileau, Dr. L. Borchardt, Dr. A. Carpenter, Dr. C. Chadwick, Dr. J. Ward Cousins, Dr. G. W. Crowe, Dr. C. Drage, Dr. G. F. Duffey, Dr. B. Foster, Mr. R. S. Fowler, Dr. E. L. Fox, Dr. J. H. Gibson, Dr. W. C. Grigg, Mr. A. J. Harrison, Dr. C. Holman, Professor G. M. Humphry, Mr. W. D. Husband, Mr. A. Jackson, Mr. T. V. Jackson, Dr. T. Eytton Jones, Dr. L. Jones, Dr. D. J. Leech, Mr. C. Macnamara, Mr. F. E. Manby, Mr. F. Mason, Mr. R. H. B. Nicholson, Dr. C. Parsons, Dr. E. Rickards, Mr. Septimus W. Sibley, Dr. E. M. Skerritt, Dr. A. P. Stewart, Dr. E. Waters;

Read letters of apology for non-attendance from Mr. Henry Stear and Dr. Clifford Allbutt.

The minutes of the last meeting were read and found correct.

The President of Council reported that he had caused to be forwarded the report of the Committee on Aural Surgery to all the examining bodies, in accordance with the Minute of last meeting.

The President of Council also reported that he had sent a letter to the South-Western, the Staffordshire, and the East York and North Lincoln Branches, on the subject of Homœopathy, embodying the views of the Committee of Council, in accordance with the Minute of last meeting.

Read letter from Professor Michael Foster, thanking the Committee of Council, on behalf of the Physiological Society, for defending a member of the Society in a recent prosecution under the Act 39 and 40 Vict., cap. 77.

Read communication, of which the following is a copy.

"Copy of a Resolution agreed upon at a Meeting of Medical Men, held at the Medical Institution, Liverpool, on July 7th, 1882; Dr. Carter in the chair.

"That the Committee of Council of the British Medical Association be requested to appoint a special time, at the annual meeting at Worcester, for a discussion of the question of the compulsory notification of infectious diseases by medical men. William Carter, M.D.; T. Shadford Walker (Liverpool); J. Birkbeck Nevins, M.D. (Liverpool); J. H. Wilson, M.K. & Q.C.P. (Liverpool); Ewing Whittle, M.D.; R. Caton, M.D. (Liverpool); R. A. Brannigan, M.D.; John Newton (Liverpool); Damer Harrison (Liverpool); Wm. Alexander (Liverpool); Arthur R. Hopper (Liverpool); L. Lambert (Birkenhead); E. Wallis Stevens (Liverpool); Robert Jones (Liverpool); Thos. D. Leigh (Liverpool); J. Holmes; J. T. W. Brass, M.D.; Wm. C. Cornwall, L.R.C.P. (Birkenhead); K. Grossmann, M.D.; L. H. O. Westby; D. Dunlop Costine, M.D.; John W. Ellis; J. McClelland (Liverpool); William Inman, M.D.; Arthur P. May (Crosby); Samuel Spratly, M.D. (Rockferry, Birkenhead); J. E. Burton (Liverpool); Daniel Hendry (Liverpool); John A. Howard (Liverpool); Richard Owen (Liverpool); Joseph Lamb (Birkenhead); J. Barclay Clark, M.D. (Waterloo); Kushton Parker (Liverpool); Robert Hamilton (Liverpool); R. Hibbert Taylor, M.D.; Jas. Pointon, L.R.C.P. Lond. (177, Upper Parliament Street); John S. Hicks, F.R.C.S. Ed.; E. W.

G. Walker, F.R.C.S.; A. Davidson; A. Cresswell Rich, M.B. (Lond.), etc.; Chauncy Puzey; W. Honner FitzPatrick, M.D.; A. Barron, M.B. Lond.; James Barr, M.D. (Liverpool); Richard Williams (82, Rodney Street); W. Williams (58, Rodney Street); Thos. J. Evans (Rose Vale); C. Swaby-Smith (Seaford); Geo. Chas. Walker, M.D. (Bootle); Edwin M. Sheldon; Samuel A. Lucas; James C. Baxter; Colles L. Anderson; D. M. Williams (63, Shaw Street); Benjamin Townson (55, Shaw Street); B. Blower (119, Shaw Street); Alexander Chain."

Resolved: That the communicants be informed that the Committee of Council will endeavour to make arrangements for a discussion of the subject during the annual meeting.

Read letter from Dr. Joseph Rogers, Chairman of Council, asking that a time may be fixed for a meeting of the Poor-law Medical Officers' Association, during the annual meeting, and that such arrangements be made that the time fixed may not unduly clash with luncheons or important meetings.

Resolved: That the time of the meeting of the Poor-law Medical Officers' Association be fixed in accordance with the Chairman's request, at five o'clock on Thursday, August 10th.

Read letter from Dr. James Thompson, asking that a notice of the Irish Graduates' Association meeting to be held during the annual meeting at Worcester, on Wednesday, August 9th, at five o'clock in the afternoon, may be inserted in the Daily Journal.

Resolved: That the request be granted, and a notice inserted accordingly.

Read communication from Dr. Ward Cousins, asking to be informed of the time and meeting at which the motion of which he had given notice would be brought forward for consideration.

Resolved: That Dr. Ward Cousins be informed that his motion will be placed on the agenda for Tuesday, during the general meeting of members to be held at eight o'clock in the evening.

Read communications from the Staffordshire, Bath and Bristol, and South-Western Branches, with resolutions, of which the following is a copy:

"Resolution of Staffordshire, and Bath and Bristol Branches.

"That in the opinion of this Branch, the JOURNAL of the Association should be more fully the medium of record of the transactions of the Branches of the Association than it is, and that the papers read and the records of clinical observation should have precedence of other contributions to the JOURNAL; moreover, that they should be more fully reported and be published at an earlier period after communication than has hitherto been done."

Read communication from Dr. Rees Philipps, Honorary Secretary to the South-Western Branch, of which the following is a copy:

"1. That this meeting heartily approves of the resolutions relative to homœopaths, passed at the Plymouth meeting (December 31st, 1881) of this Branch, that it regrets that the Committee of Council have not yet seen their way to expel an avowed homœopath when requested to do so by the unanimous vote of one of the oldest Branches of the Association.

"2. That this meeting requests members of the South-Western Branch to help on any movement for obtaining such remodelling of the constitution of the Committee of Council of the Association as shall ensure that the Committee of Council will carry out unhesitatingly resolutions that have been adopted by the Association at its annual meetings."

Resolved: That Dr. Rees Philipps be informed that his communication was placed before the Committee of Council.

Read communication from Dr. Vawdrey Lush, of which the following is a copy:

"To the Committee of Council of the British Medical Association.

"Weymouth, May 24th, 1882.

"GENTLEMEN,—I address you on behalf of the members of the Dorset District of the Association, which comprises Bournemouth and Christchurch as well as the county of Dorset, and numbers upwards of sixty members.

"We are desirous of being converted into a Branch, having our own Council, and sending our representatives to the General Council of the Association.

"At present, we are attached to the Southern Branch, which comprises Hants, the Isle of Wight, Dorset, and South Wilts; but the distance at which the majority of its meetings are held militates against the attendance of our members, and in fact very few of us do attend them.

"Due notice having been given, the subject was discussed at a meeting held at Bournemouth on April 5th last, and the following resolution was passed unanimously:

"That it is desirable to form a new Branch of the Association, to comprise the county of Dorset, part of Hampshire, and adjacent districts, to be called the Dorset and West Hants Branch."

"Provisional rules were agreed upon, and officers provisionally elected, and I was instructed to take the necessary steps for the formation of the Branch.

"I therefore beg to forward you a copy of the provisional rules adopted at that meeting, and to ask your recognition of the proposed new Branch.

"I am, Gentlemen, your obedient servant.

"W. VAWDREY LUSH.

"Hon. Sec. to the Dorset District."

Read communication from Southern Branch, of which the following is a copy:

"At a meeting of the Council of the Southern Branch, held at Southampton, on May 17th, 1882, the following resolution was adopted:

"That the Branch Council has received with great regret the resolution passed at

the recent meeting of the Dorset District, with reference to the formation of another Branch. The Committee desires to express the opinion that there is no sufficient reason for this.

"Proposed by Dr. French, seconded by Professor Maclean."

Resolved: That a committee be appointed to consider and report upon the advisability of agreeing to the formation of a Dorset Branch as requested by the communication to the President of Council from Bournemouth, signed by J. R. Thomson and W. Vawdrey Lush, and that the committee consist of the President of Council, Dr. Ward Cousins, Dr. Parsons, Mr. Husband, and Dr. Alfred Carpenter.

The sixty-seven applications for election as members of the Association having been considered, it was

Resolved: That the sixty-seven candidates for election as members whose names appear on the circular convening the meeting, be and they are hereby elected members of the Association.

Read minutes of the Journal and Finance Committee, together with the minutes of the Office and Printing Subcommittee.

Resolved: That the minutes of the Journal and Finance Committee and of the Office and Printing Subcommittee, both of to-day's date, be received and approved, and the recommendations carried into effect.

The minutes of the Journal and Finance Committee contain particulars of accounts considered and passed for the quarter amounting to £3,294 19s.; the recommendations of the Office and Printing Subcommittee are for the cleaning and painting the premises, and the contract for paper.

Read minutes of the Trust Funds Subcommittee.

Resolved: That the minutes of the Trust Funds Subcommittee of to-day's date be received and approved, and that the thanks of this meeting be given to the adjudicators on the Stewart Prize, and that the recommendation that the Stewart Prize be awarded to Dr. Vandyke Carter be carried into effect, and that it be presented to him by the President at the Worcester meeting.

Resolved: That Messrs. Bowman, F.R.S., and H. Power, F.R.C.S., be requested to adjudicate on the essay sent in for the Middlemore Competition, and, if possible, to return their report in time for the Worcester meeting.

Resolved: That the minutes of the Scientific Grants Committee of the 11th instant be approved, and the recommendations carried into effect.

The minutes of the Scientific Grants Committee contain the examination of the grants now closed, and applications for new and continued ones.

Resolved: That the Treasurer be requested to sign cheques for £75, being half the cost of the bust of Sir Charles Hastings, in accordance with the request of Mr. Brock, the sculptor, and £25 for a pedestal for the bust, to be drawn on the Hastings Memorial Fund.

Read Report of Collective Investigation Committee.

Resolved: That the Report of the Collective Investigation Committee of the 11th instant be approved, and adopted.

The attendances of the twenty elected members of the Committee of Council were then considered, and the following appeared to be the result, viz.:

Five Meetings of the Committee of Council, viz.: August 11th, October 12th, January 18th, April 12th, and July 12th.—Dr. L. Borchardt, Dr. B. Foster, Dr. E. Long Fox, Mr. A. J. Harrison, Mr. C. Macnamara, Mr. F. E. Manby, Mr. T. H. Bartleet, Surgeon-Major J. P. H. Boileau, Dr. C. Holman, Mr. F. Mason, Mr. R. H. B. Nicholson, Mr. S. W. Sibley, Dr. W. F. Wade—five meetings. Dr. C. Drage, Dr. Leslie H. Jones, Dr. D. J. Leech, and Dr. A. P. Stewart—four meetings. Dr. C. Allbutt, Mr. H. Stear—three meetings. Mr. Henry Power—two meetings. The names of Mr. Henry Power, Dr. C. Allbutt, and Mr. Henry Stear were taken off the list of members, they having attended the fewest meetings; that of Dr. Wade as being an *ex-officio* member, as treasurer; and those of Dr. Drage and Dr. Leech by lot.

Resolved: That the fourteen remaining gentlemen, together with six others, to be chosen by lot, be nominated as members of the Committee of Council for the ensuing twelve months, viz.: Dr. L. Borchardt, Dr. B. Foster, Dr. E. Long Fox, Mr. A. J. Harrison, Mr. C. Macnamara, Mr. F. E. Manby, Mr. T. H. Bartleet, Surgeon-Major J. P. H. Boileau, Dr. C. Holman, Mr. F. Mason, Mr. R. H. B. Nicholson, Mr. S. W. Sibley, Dr. Leslie H. Jones, and Dr. A. P. Stewart.

Eleven representatives on the General Council have been elected. Dr. Drage and Dr. Parsons were requested to nominate the remaining five gentlemen, whose names were taken off the list of members, and the names of Dr. Drage, Dr. Parsons, Mr. John Wood, F.R.S.; Dr. Sieveking; Dr. Langdon Parker; Mr. Symonds; and Mr. Allbutt were suggested by the Committee of Council for the ensuing twelve months.

The President then read the Seal of the Association, and affixed it to the minutes of the Association of £2,000 Great Western Rail-

way four per cent. Debenture Stock, and £1,000 London and South Western Railway four per cent. Debenture Stock, by the order of the Journal and Finance Committee of to-day's date.

The Draft Annual Report of Council, as drawn by the Subcommittee appointed at last meeting, having been issued to each member, was taken as read, and ordered to be sent to the members of the Council.

The Code of Medical Ethics and the addenda, offered by Dr. Styrap for the use of the Association for adoption, and to be sent to each member on his election, was then considered.

Resolved: That Dr. Styrap be respectfully informed that the Committee of Council, while thanking him very sincerely for his offer of his Code of Medical Ethics and Addenda, which has cost him so much time and money, regret that they do not see their way to accept his offer.

Resolved: That the resolution appointing a Commission to inquire and report upon the Transmissibility of the Diseases of Animals to Man by way of Flesh and Milk used as Food, be rescinded as far as the members of the Committee is concerned, and the subject of the investigation be referred to the Collective Investigation Committee.

The minutes of the Scientific Grants Committee, and the minutes of the Habitual Drunkards Committee, were considered and adopted.

MIDLAND BRANCH: ANNUAL MEETING.

THE annual meeting was held at the Guildhall, Lincoln, on Thursday, July 13th; the chair being taken by Dr. BUCK, the retiring President. Dr. HARRISON, of Lincoln, succeeded Dr. Buck.

A vote of thanks to Dr. Buck was proposed by Mr. WRIGHT BAKER, and seconded by Mr. PILCHER.

Officers and Council.—The following were elected: *President-elect*, William Webb, M.D. (Wirksworth). *Representatives in the General Council*.—Nottinghamshire, E. Seaton, M.D., Joseph White, Esq.; Derbyshire, W. Webb, M.D., J. Wright Baker, Esq.; Leicestershire, C. H. Marriott, M.D., F. W. Benfield, Esq.; Lincolnshire, E. Morris, M.D., T. Sympton, Esq. *Branch Council*.—Nottinghamshire, T. Wright, M.D., J. Thompson, Esq.; Derbyshire, L. Gaylor, Esq., A. H. Dolman, Esq.; Leicestershire, G. Pearce, M.D., R. H. Thomas, Esq.; Lincolnshire, A. M. Adam, M.D., T. M. Wilkinson, Esq. The honorary secretaries were re-elected.

New Members.—The following members of the Association were elected members of the Branch: Alexander Boswell, M.D., Ashbourne; Thomas Howard, Darley Dale; Edward Hoskyns, Belper; Oliver Withers, Walter Hunter, M.B., C.M., H. Handford, M.B., and Charles White Hayden, L.R.C.P., M.R.C.S., all of Nottingham; A. Wallace, Esq., and H. C. Howes, M.D., of Lincoln; Frank Pope, M.A., M.B., Leicester; F. Dixon, Esq., Eastwood.

President's Address.—The President read his address, which touched upon the chief work done by the Association, and referred more particularly to the question of notification of infectious diseases, which was warmly advocated. At the conclusion, Dr. WEBB proposed, and Mr. W. BAKER seconded, a vote of thanks to Dr. Harrison.

Medical Benevolent Fund.—A donation of 25 guineas was made from the funds of the Branch to the Medical Benevolent Fund, on the proposal of Dr. NEWMAN, of Stamford, who was supported by Dr. ELDER, Dr. WEBB, and others. A further proposition by the same gentleman, that an annual subscription of three guineas be paid to the same charity, was negatived after free discussion. Dr. Newman declared his intention to give notice of the same, in accordance with the rules of the Branch, for next meeting.

A resolution from the South Staffordshire Branch as to the editing of papers in the JOURNAL was read, and Bills in reference to militia surgeons and midwives were placed upon the table.

The following papers were read and discussed:

1. Collective Investigation. Dr. Buck made a communication on this subject, and proposed the following members as secretaries for the four counties, with instructions to call a meeting in each county: Lincolnshire, Dr. Harrison; Derbyshire, Dr. Stanley Taylor; Leicestershire, Mr. F. Hodges; Nottinghamshire, H. Handford, M.B.
2. Further Notes on Electrolysis of Nerve: W. Newman, M.D.
3. Remarks upon the Advantage of the Employment of Wire Ligatures for the Approximation of Divided Bones: T. Sympton, F.R.C.S.
4. Bacilli of Tubercle prepared by Mr. Alexander Barron, of Liverpool, were also shown by Mr. Sympton.
5. Notes on a Case of Nephrectomy: G. Elder, M.D.
6. Preliminary Iridectomy in Extraction of Cataract: F. H. Howes, F.R.C.S. Edin.
7. An Account of a Case of Floating Kidney: W. Benthall, M.B.

S. Dr. Ransome's Stethometer: W. Ogle, M.D.

Luncheon and Dinner.—Luncheon was provided by the President at his house; and, after the meeting, the members dined at the Great Northern Hotel.

CORRESPONDENCE.

THE FIRST YEAR'S EXAMINATION IN ANATOMY AND PHYSIOLOGY.

SIR,—Your excellent article in last week's issue treats this question in so impartial and moderate a spirit, that I am tempted to beg you to allow me to re-state some of the arguments which may be used against the College scheme. This scheme involves a new principle, and, I believe, its adoption will not effectually insure the object for which it has been proposed.

It has been said that the Royal College of Surgeons is not initiating a departure from its usual custom in this first year's examination, but is merely asking for one more certificate in addition to those it has during many years required. This is not quite a true statement of the case. The College has hitherto required certificates of attendance on lectures and classes as a guarantee that the student has at least availed himself of the opportunities afforded him of acquiring knowledge. But it has reserved to itself the exclusive right of testing the knowledge of every candidate for its diploma. Now, for the first time, it relegates a part of its examining functions to the schools—a circumstance the more extraordinary because it has been so long the custom of the College to insist, that, so far as possible, its examiners shall not examine the students from their own schools.

A moment's thought will suffice to show that, this principle once admitted, the schools may in future be required to undertake other, or all of the College examinations—not only those in anatomy and physiology, but those in surgery and pathology.

The object of the scheme, we are told, is to compel the idle and indifferent students to work during their first year; but these are precisely the men who may evade the new first year's examination. They need only declare that they do not intend to take the membership of the College of Surgeons, and they are forthwith excused attendance at the examination. Many students already prefer to take a Scotch degree, and the number of these men will certainly increase.

In many of the metropolitan schools the machinery at present employed for dealing with idle or refractory students is far more perfect than that proposed by the College. Every student is expected to attend a first year's examination, and rejection or refusal to attend is met by a communication from the dean or secretary of the school to the parents or guardians of the student, informing them that he is not pursuing his studies satisfactorily. The deans of Guy's and St. Thomas's tell me they find no difficulty in procuring the attendance of their students; and the senior demonstrator of anatomy at my own school stated at a recent meeting that only five of our first year's students were absent from the examination last March.

A general proposition that the schools should hold a first year's examination, which every student should be compelled to attend, is a remarkable proposition. But a proposition that the schools should hold a first year's examination for a particular licensing body, which every student shall be compelled to pass satisfactorily, is an unreasonable proposition, and I sincerely hope the schools will not consent to it.

It may not be amiss to state here that the feeling of the lecturers on anatomy and physiology at the metropolitan schools is by no means unanimous in favour of the scheme. I am informed, on good authority, that two able lecturers on physiology were not summoned to the meeting at the College; and several, if not many, of those who were present gave their assent to the scheme under the impression that there is no essential difference between the proposed examination and that now held at many of the schools.

It would occupy far too much space if I were to discuss all the arguments connected with this scheme. But I cannot help mentioning the question of remuneration, which has been so lightly treated in certain quarters. When it is remembered that one of the great obstacles which prevented the College from undertaking itself to conduct this examination was the difficulty of rendering it remunerative, it can only be a false delicacy which leaves this question now untouched. The trouble and responsibility are to be shifted on to the school-teachers, but no provision is made for suitable payment. If the lecturers on anatomy and physiology choose to undertake the task without remuneration, and the schools entrust it to them, well and good. But the demonstrators, who are hard worked and not too well paid, refuse to believe that they will not be required to conduct the chief part of the examina-

tions; and who can wonder that they do not regard the proposal with satisfaction? I venture to express the feeling on these points the more freely because I am not engaged in teaching anatomy and physiology, and am therefore only indirectly interested in the scheme as a member of the committee of a large metropolitan school.—I remain, sir, yours obediently,

HENRY T. BUTLIN.

47, Queen Anne Street, W., July 24th, 1882.

MYDRIATICS AND GLAUCOMA.

SIR,—In view of the now established fact that, sometimes at least, the use of atropine, and others of our known mydriatics, induce the state of the eye known as glaucoma, which is a very serious indictment, it would be well to promote their use in weaker solutions as a rule, and also perhaps less frequently. It is a happy thing that the elderly persons, most liable to glaucomatous complications, are so much the less liable to iritis, which is a common and urgent call for the use of mydriatics, than younger patients; and also that for these elderly persons we have no occasion to produce artificial paralysis of the accommodation by the instillation of the same agents. But I would propose, considering that an almost infinite dilution of our common sulphate of atropine is sufficiently mydriatic for ophthalmoscopic and other ordinary purposes, though not active enough for the treatment of iritis and its results, and for producing artificial paralysis of the accommodation, that the authorities in charge of the *British Pharmacopœia* would do well to reduce very much the strength of the common liquor atropiæ sulphatis. This weak solution would thus be suggested to prescribers for common use, and there might be another solution, of the strength of the present liquor, which, if it were called liquor atropiæ sulphatis fortior, would appear as an extraordinary prescription. But if there is to be but one pharmacopœial liquor, I think it should be a very dilute solution. I believe that the present scare about the artificial production of glaucoma by use of mydriatics is much exaggerated, but there are such cases now and then; and it should be better known than it is how extremely dilute a solution of the sulphate of atropine, dropped into the eye, is perfectly efficient for the production of mydriasis only, the purpose for which it is most frequently used.—I am, etc.,

J. F. STREATFIELD, F.R.C.S.

15, Upper Brook Street, W.; July 7th, 1882.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Monday, July 24th.

Atmosphere of the House of Commons.—Captain AYLMER complained of the unpleasant smell of drains not unfrequently discoverable in and around the House of Commons.—Mr. SHAW-LEFEVRE said he was making inquiries upon the subject, but did not think there was any real ground of complaint. Any unpleasant smells to be met with in the building entered it, he believed, from the outside. The state of the factories on the other side of the river was such that unpleasant smells came across the water, and thus a nuisance arose over which the officers of the House had no control.

Irish Lunatic Asylums.—Mr. CORBET asked the Chief Secretary for Ireland, when the report of the Inspectors of Lunatics on Irish Lunatic Asylums for the year ending the 31st of March last, would be presented to Parliament.—Mr. TREVELYAN: The Inspectors of Lunatics cannot fix any date for the presentation of their report. It is, however, in the hands of the printers, and the Inspectors hope to have it ready before the close of the session.

Tuesday, July 25th.

Ventilation of the House.—Mr. O'SHEA asked the First Commissioner of Works whether complaints had reached him of defective ventilation and noxious exhalations in and about the House; and, if so, whether he would have the nuisance abated.—Mr. SHAW-LEFEVRE read the following report from Dr. Percy, who has charge of the ventilation of the House:—

"During the seventeen years I have had charge of the ventilation of the Houses of Parliament, complaint has occasionally been made by members of the House of Commons of unpleasant smells within the House, and in every case it has been found that they were caused by contamination of the air outside, and sometimes at a considerable distance from the House. As the House is supplied with air from the Common Court, the Star Court, and the river front, it is not possible to prevent such smells when the air is impregnated with odorous matter. A short time ago, an unpleasant smell in the House was temporarily caused by an exceptionally high wind blowing down smoke into one of the courts above mentioned from a smoke-shaft. The smell of tarry matter, which has occasionally been perceived in the House, was

compulsion on medical men, it was decided unanimously to establish the society, of which the following are the rules.

1. That the name be "The association for opposing the compulsory notification of infectious diseases by medical men."
2. That all medical practitioners qualified to be enrolled on the *Medical Register* be eligible for membership.
3. That the subscription be 2s. 6d. yearly.
4. That the affairs of the association be managed by a president, vice-presidents, a treasurer, secretary, and committee.
5. That other towns be invited to unite themselves with this association, or to form independent ones in federation with it.
6. That the object of the association be, by petitioning Parliament, memorialising M.P.s, and all other legitimate means, to bring the opinions of its members on the subject of compulsory notification by medical men before the country and the Government.

The following gentlemen were elected as the first officers and Committee. *President and Honorary Secretary:* William Carter, M.D., B.Sc., LL.B. Univ. Lond., Physician to the Royal Southern Hospital, Liverpool. *Treasurer:* Robert Hamilton, F.R.C.S.Eng., Senior Surgeon to the Royal Southern Hospital, Liverpool. *Vice-Presidents* (to be appointed at a future meeting). *Committee:* E. Adam, M.K.Q.C.P., Liverpool; J. Barr, M.D., Physician to the Stanley Hospital, Liverpool; A. Bligh, M.D., Liverpool; W. E. Buck, M.A., M.D. Cantab., Physician to the Leicester Infirmary, Leicester; R. Caton, M.D., Physician to the Northern Hospital, Professor of Physiology, University College, Liverpool; W. Cooper, M.R.C.S., Medical Officer of Health, Widnes; D. D. Costine, M.D., Physician to the Stanley Hospital, Liverpool; W. H. FitzPatrick, M.D., Stoney-croft, Liverpool; J. S. Hicks, F.R.C.S.Eng., Liverpool; A. C. Hughes, M.D., Physician to the Stanley Hospital, Liverpool; R. Jones, M.R.C.S., Assistant-Surgeon to the Stanley Hospital, Liverpool; J. Lambert, M.D., Surgeon to the Borough Hospital, Birkenhead; J. Lamb, M.R.C.S., Birkenhead; W. McCheane, F.R.C.S.Eng., Consulting Surgeon to the Lock Hospital, Liverpool; W. Manifold, M.R.C.S., Consulting Surgeon to the Northern Hospital, Liverpool; H. C. March, M.D. Lond., Senior Surgeon to the Rochdale Infirmary, Rochdale; H. Miller, M.D., Hon. Surgeon to the Wirral Hospital for Children, Birkenhead; J. Carrick Murray, M.D., Medical Officer North Counties Hospital for Diseases of the Chest, Newcastle-on-Tyne; J. B. Nevins, M.D. Lond., Consulting Surgeon to the Eye and Ear Infirmary, Liverpool; R. Parker, F.R.C.S.Eng., Assistant-Surgeon to the Royal Infirmary, Liverpool, Professor of Surgery in University College; Prior Purvis, M.D. Lond., 5, Lansdowne Place, Blackheath, S.E.; S. Spratly, M.D., Surgeon to the Borough Hospital, Birkenhead; G. C. Walker, M.D., Physician to the Bootle Borough Hospital, Bootle; E. Whittle, M.D. Lond., M.R.I.A., Lecturer on Medical Jurisprudence, Medical Faculty of University College, Liverpool.

During the two weeks that have elapsed since the Society was originated, hundreds of medical men from various parts of the country have joined it as members.

DR. PULLIN AND THE GUARDIANS OF THE HONITON UNION.

It will be remembered that in our issue of the 4th of March, we called attention to the case of Dr. Pullin, of Sidmouth, one of the district medical officers of the Honiton Union, who was called on to resign his office by the Board of Guardians of the Honiton Union, for an alleged neglect of duty in not visiting one Harriet Williman, under circumstances which, on inquiry by a Coroner's Court, he was exonerated from blame. The guardians and Dr. Pullin having subsequently requested an official inquiry, the same took place on the 10th of May last.

The Central Board has just given its decision in a letter addressed to the guardians, inclosing that sent to Dr. Pullin. In their letter to the board, the department calls attention "to the levity of the proceedings of the Honiton Guardians, in permitting assistant-overseers to grant orders for medical attendance, they only being allowed by law to grant orders in cases of urgent necessity." The chairman said: "But they never do grant orders unless the case is an urgent one." The clerk said: "They ought not but they do." In their letters to Dr. Pullin, the department state "that the Board cannot but think that you failed to exercise a wise discretion when you omitted to make careful and searching inquiries as to the exact nature of Harriet Williman's ailment, and in prescribing for her without first seeing her. The Board also are of opinion that you should have visited the case, if possible, on the same day that you received the overseer's order, which it appears was brought to you by George Williman, the son of the deceased, on Tuesday the 24th January, at 10 A.M.

"The Board also consider it to be a matter of regret and surprise, that an officer of such long standing as yourself was not aware that a medical order granted by an overseer was in all cases to be treated as urgent, and could only be regarded as an ordinary matter on the direct personal responsibility of the medical officer to whom it was addressed." We learn that a section of the Board was very much put out that their intended vindictive procedure towards their Medical Officer, Dr. Pullin, had been thus set aside by the decision of the central department.

CLUB PATIENTS IN WORKHOUSES.

SIR,—I should be extremely obliged if you would give me your advice in the following case. I am medical officer to an union workhouse distant from my residence about three miles. I am summoned by the master to attend a young single man, whom I found to be suffering from acute pneumonia of the entire right lung. I had to visit him daily for a week, and shall have to attend him during a long convalescence, as he has been a man of dissolute habits. I now find out that he is a member of an Odd Fellows' club, and at the time of his admission into the workhouse was in the receipt of 12s. per week sick pay upon the certificate of the medical officer of the lodge, who had been attending him up to the date of his admission. It seems the man had no home, and no one would take him in as a lodger, seeing how ill he was. Upon his removal to the workhouse, the officials of the lodge promised the relieving officer that they would pay all the charges the guardians thought fit to make up to the amount of the 12s. per week. Can I recover any of my fee for attendance, either from the guardians (out of the charges they may think fit to make), the Odd Fellows' club, or the man himself?

On reading over the Poor-law orders in reference to the duties of medical officers of workhouses, I see that the words "sick poor or paupers" are always used to designate those to whom our services are to be rendered. I fail to see how a sick Odd Fellow (entitled to his own club doctor) in receipt of 12s. per week, can by stretching of the meaning of words come under either of those designations. Had the words inmates been used, I should have been obliged to attend such cases as the guardians might think fit to admit free of charge. But the term sick poor or paupers limits the issues in question.

If these club patients are to be admitted and the guardians appropriate all the charges, our labours will be materially increased, and those of the club doctor lessened (although he receives so much pay per head). I am sure the Manchester Unity of Odd Fellows never intended that any of its fully paid up members should fall within the operation of the Poor-law. An early reply in your JOURNAL will oblige, yours faithfully,

A WORKHOUSE MEDICAL OFFICER.

We sympathise with our correspondent in the complaint he has made, and we have no hesitation in expressing our conviction that the system under which such sacrifices are required of Poor-law medical officers is a most unfair one. Unfortunately, our correspondent does not stand alone, for it is the custom to exact these attendances from medical men without a thought as to the expense and trouble to which they may be subjected. In the metropolitan workhouse infirmaries, cases are continually admitted of persons of good means, who remain under treatment for days, and who leave, without even tendering thanks for the attention they may have received. It is true that the boards of guardians exact payment of these uninvited guests, but the medical officer is ignored. We consider that, if an united remonstrance were sent in to the Local Government Board, complaining of the evident unfairness, some form of compensation might be suggested. It is a subject well worthy the attention of the Poor-law Medical Officers' Association; for as the matter now stands, it is questionable whether it would be safe for the medical officer to accept a money payment in the very improbable contingency of such being offered.

OBITUARY.

FRANCIS MAITLAND BALFOUR.

AT the desire of the editor, I write these few lines about my dear friend who has just lost his life in the Alps, but I am too much torn with grief to say much.

Francis Maitland Balfour was born, I believe, in 1851, and, after being educated at Harrow school, came to Cambridge about the same time that I was called there. He attended my lectures, and I soon got to know his worth. Impressed with his great ability, I encouraged him to begin original work even before he had taken his degree, and he at once commenced an investigation on the germinal layers of the chick, on the primitive groove, and on the development of the blood-vessels in the chick, the results of which were afterwards published in the *Quarterly Journal of Microscopical Science*. In spite of his devoting to these labours time which, in the case of most men, must be given up to preparation for examinations, Balfour obtained a first class in the natural sciences examination; he had previously been elected a natural science scholar of Trinity College. About the same time, I invited him to assist me in a work on embryology, which I was then preparing. He threw himself heartily into the work; and, though the volume appeared in our joint names, the greater and the harder part of the labour fell to him.

After taking his degree, he went to study at the Stazione Zoologica at Naples under Dr. Dohrn, and there began those researches on the development of the elasmobranchs which have had such an influence on the progress of embryology, and which will make his name a notable one in science for all time. His memoir on the elasmobranchs is full of new facts and brilliant ideas; but I may perhaps especially

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 20th, 1882.

Black, William Jones, Shetford Road, Manchester.
Scanlan, Arthur de Courcy, Hayter Road, Brixton.
Slater, William, Poplar Hospital.
West, John Arthur, Bickley, Kent.

The following gentlemen also on the same day passed their Primary Professional Examination.

Burgess, Christopher Venning, London Hospital.
Humphrey, Charles Style, Westminster Hospital.
Larder, Herbert, Westminster Hospital.
Wilkey, Alexander Gascoigne, Guy's Hospital.

MEDICAL VACANCIES.

The following vacancies are announced:—

ARDWICK AND ANCOATS DISPENSARY AND ANCOATS HOSPITAL, Mill Street, Manchester—Resident Junior House Surgeon. Salary £100 per annum. Applications by August 1st.

BRADFORD FRIENDLY SOCIETY'S MEDICAL ASSOCIATION—Assistant Medical Officer and Dispenser. Salary £120 per annum. Applications by August 15th.

BIDEFORD UNION—Medical Officer and Public Vaccinator. Salary, £24 per annum. Applications by July 31st.

DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL, Leicester Square W.C.—Demonstrator of Contour and Cohesive Fillings. Salary, £50 per annum. Applications by September 29th.

DOWNPATRIK UNION—Medical Officer for Portaferry Dispensary District. Salary, £100 per annum, with £15 yearly as Medical Officer of Health, exclusive of registration and vaccination fees. Election on 8th August next.

DUDLEY DISPENSARY—Resident Medical Officer. Salary, £130 per annum. Applications by August 15th.

DUNMOW RURAL SANITARY AUTHORITY—Medical Officer of Health. Salary, £65 per annum. Applications by July 31st.

GENERAL HOSPITAL, Birmingham—Resident Medical Officer. Salary, £130 per annum. Applications by the 31st instant.

GENERAL HOSPITAL, Birmingham—Resident Surgical Officer. Salary, £130 per annum. Applications by the 31st instant.

HOSPITAL FOR SICK CHILDREN, 49, Gt. Ormond Street, Queen's Square, W.C. Clinical Assistant. Applications to Dr. Lee, 6, Savile Row, W.

LIVERPOOL INFIRMARY FOR CHILDREN—Assistant House-Surgeon. Applications to H. R. Robertson.

LONGFORD UNION—Medical Officer for Longford Dispensary District. Salary, £100 per annum, with £25 per annum as Medical Officer of Health, registration, and vaccination fees. Election on the 7th proximo.

NATIONAL DENTAL HOSPITAL, 149, Great Portland Street, W.—Assistant Dental Surgeon. Applications by August 22nd.

NATIONAL DENTAL HOSPITAL, 149, Great Portland Street, W.—House-Surgeon. Salary, £50 per annum. Applications by August 22nd.

RATHDRUM UNION—Medical Officer for Aughrim Dispensary District. Salary, £120 per annum, with registration and vaccination fees. Election on the 29th instant.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY AND SEAMEN'S INFIRMARY—Resident Medical Officer. Salary, £120 per annum. Applications by August 5th.

RICCARTSBAR ASYLUM, Paisley—Assistant Resident Medical Officer. Salary, £60 per annum. Applications to R. Rowand, Inspector of Poor, Paisley.

ROYAL ISLE OF WIGHT INFIRMARY, Ryde—House-Surgeon and Secretary. Salary, £50 per annum. Applications by August 8th.

ROYAL SEA-BATHING INFIRMARY at Margate, for the Scrofulous Poor of all England—Resident Surgeon. Applications by August 5th.

RUBERY HILL BOROUGH LUNATIC ASYLUM, Bromsgrove—Assistant Medical Officer as Locum Tenens for seven weeks. Applications to Dr. Lyle, Medical Superintendent.

SOCIETY OF APOTHECARIES, London—Examiners in Medicine. Applications for the above office to J. R. Upton, Clerk to the Society, Apothecaries' Hall, E.C.

TUNBRIDGE WELLS DISPENSARY AND INFIRMARY—House-Surgeon and Secretary. Salary £100 per annum. Applications by the 9th August.

WREXHAM INFIRMARY AND DISPENSARY—House-Surgeon. Salary, £100 per annum. Applications by August 8th.

MEDICAL APPOINTMENTS.

COOPER, G. F., M.R.C.S., L.R.C.P., appointed Resident Accoucheur to St. Thomas's Hospital.

CRALLAN, G. E. J., M.B., appointed Assistant Medical Officer to the Cambridge County Lunatic Asylum, *vice* T. R. H. Clunn, M.R.C.S., resigned.

DUNCAN, W. A., M.D., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital.

ERWIN, S. J., L.R.C.P., L.R.C.S.E., appointed District Medical Officer and Public Vaccinator for the Openshaw District, Chorlton Union, Manchester, *vice* G. R. Brebner, M.B., resigned.

EVANS, Frederick Wm., M.D., M.R.C.S., L.S.A., appointed Certifying Factory Surgeon for the Cardiff District, *vice* H. J. Paine, M.D., M.R.C.S., resigned.

ELL, W., M.A., M.B.Oxon., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

HAG-BROWN, C. W., M.R.C.S., L.S.A., appointed House-Surgeon to St. Thomas's Hospital.

HILLIARD, R. Harvey, M.D., appointed Medical Officer of Health for the Aylesbury Rural Sanitary Authority, also Certifying Surgeon under the Factory Act.

JONES, Wansbrough, M.A., M.B.Oxon., B.Sc.Lond., M.R.C.S., appointed House-Physician to St. Thomas's Hospital.

MACKEW, S., M.B., appointed Assistant Medical Officer to the Roxburgh, Berwick, and Selkirk District Asylum, Melrose, *vice* L. R. Huxtable, M.B., resigned.

MILTON, H. M., M.R.C.S., L.S.A., appointed Assistant House-Physician to St. Thomas's Hospital.

MORGAN, John H., M.A., F.R.C.S., appointed Consulting Surgeon to the St. George's Dispensary.

MOULLIN, C. W. M., M.D., appointed Junior Assistant-Surgeon to the London Hospital, Whitechapel, E., *vice* W. Tay, F.R.C.S.

OWEN, Isambard, M.D.Cantab., appointed Assistant-Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

RICH, A. Creswell, M.B.Lond., etc., appointed a Medical Officer to Her Majesty's Post Office, Liverpool.

SPACKMAN, H. R., L.R.C.P.Lond., M.R.C.S., L.S.A., appointed House-Physician to the Wolverhampton and Staffordshire General Hospital, *vice* J. Mortimer, M.B., resigned.

WELLS, A. E., L.R.C.P., M.R.C.S., appointed House-Physician to St. Thomas's Hospital.

WHITE, E. A., M.D., appointed Medical Officer for the Third District of the Malmesbury Union, *vice* J. C. S. Jennings, F.R.C.S., resigned.

WHITE, E. F., M.R.C.S., L.S.A., appointed House-Physician to St. Thomas's Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

DICKSON.—On the 19th instant, at South View, St. Heliers, Jersey, the wife of John Edward Dickson, M.B., C.M.(Edin.), of a son.

MACDONALD.—At 16, Bloomfield Place, Hillhead, Glasgow, on July 19th, the wife of Archibald Drummond Macdonald, M.B. and C.M. Edin., 3, Peel Street, Dingle, Liverpool, of a son.

WILKINSON.—On July 24th, at Holly House, Tynemouth, Northumberland, the wife of Auburn Wilkinson, M.R.C.S., of a son.

MARRIAGE.

WALKER—GARDE.—On the 24th inst., at St. Jude's, Southsea, by the Rev. D. Nickerson, M.A., Chaplain to the Forces, Surgeon-Major John Walker, B.A., M.B.T.C.D., Army Medical Department, only surviving son of Samuel Walker, Esq., Portstewart, Co. Londonderry, to Mirrie, eldest daughter of Henry Prendergast Garde, Esq., Barrister-at-law.

DEATH.

ATKINSON.—On the 18th inst., at Broadstairs, John Charles Atkinson, L.R.C.P., M.R.C.S., aged 32, son of J. C. Atkinson, M.D., Kew Green.

HEALTH OF FOREIGN CITIES.—The following statistics, derived from a table in the Registrar-General's last weekly return, afford trustworthy indications of the recent health and sanitary condition of various foreign and colonial cities. In the three principal Indian cities, the annual death-rate averaged 26.7 per 1000, and was equal to 21.3 in Bombay, 27.1 in Calcutta, and 36.5 in Madras; cholera caused 75 deaths in Calcutta, and small-pox 9 in Madras. The table, as might be expected, does not contain the usual return from Alexandria. According to the most recent weekly returns, the average annual death-rate in twenty-one European cities was equal to 27.8 per 1000 of their estimated aggregate population, against 19.0, the average rate last week in twenty-eight of the largest English towns. In St. Petersburg, the rate was equal to 48.3, which showed a slight decline from the still higher rate in the previous week; 34 deaths were referred to diphtheria and 20 to "fever". In three other Northern cities—Copenhagen, Stockholm, and Christiania—the average rate did not exceed 24.9, the highest rate being 27.7 in Stockholm; diarrhoeal diseases caused 17 deaths in Christiania, and diphtheria 5 in Stockholm. The death-rate in Paris did not exceed 22.9, although it showed an increase upon the rate in the previous week; typhoid fever, however, caused 37, and small-pox 15, deaths during the week. The 163 deaths in Brussels were equal to a rate of 20.8 per 1000, and included 2 fatal cases of small-pox. The death-rate in Geneva was again remarkably low, and did not exceed 12.8. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the death-rate averaged only 20.7, and ranged from 16.8 in Rotterdam to 23.7 in Amsterdam, where 2 deaths from "fever" were recorded. Small-pox caused 3 deaths in Rotterdam. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 29.4 per 1000, and ranged from 24.3 in Dresden, to 31.2 in Buda-Pesth and 37.8 in Breslau. Small-pox caused 20 deaths in Vienna and 8 in Buda-Pesth, while diarrhoeal fatality was excessive in Berlin and Trieste. In Rome the death-rate was equal to 26.8, and in Turin to 30.8; measles was somewhat fatally prevalent in both these Italian cities, and 6 deaths from typhoid fever occurred in Turin. In four of the principal American cities, the death-rate averaged 28.8, and was equal to 21.5 in Philadelphia, 25.7 in Brooklyn, and 33.5 in New York. Small-pox caused 4 deaths in Baltimore and 3 in Philadelphia; 13 more deaths were also referred to typhoid fever in the latter city.

CHOLERA AMONGST INDIAN EMIGRANTS.—The extraordinary decrease in the cholera death-rate of India during 1880-1 was conspicuously exhibited in the lessened mortality among the emigrant labourers proceeding to Assam. In 1878-9, the death-rate from cholera amongst these coolies was as high as 25.5, in 1879-80 it fell to 6.3, while for 1880-1 no deaths whatever were registered from the disease. These figures are of great importance as showing how necessary it is, in examining the facts connected with the history of cholera in any particular community, to take into account the facts which indicate its history among the people generally, and especially among the people of that part of the country which is mainly concerned. Emigrants proceeding to Assam have suffered much from cholera, especially on board steamers on the Brahmaputra. It has been supposed that the high cholera-mortality among these emigrants during the river-journey was due to the fact that they made use of water which might be, and probably often was, polluted with cholera-discharges. This water was not intended for drinking; but, as it was placed conveniently, it seemed not improbable that it might have been employed for drinking; and in this way it was believed that a specific contagium might have been imbibed into their system. Measures have accordingly been taken of late to prevent even the possibility of the emigrants using water which might have been so contaminated. With the introduction of these measures, cholera greatly diminished, and the deaths from this disease in 1880-1 present a very remarkable diminution to their proportion in former years. At first sight, the two facts—the introduction of these improvements, and the diminution of cholera—seem to stand in the relation of cause and effect; but an examination of the statistics of cholera among the general population of the country through which they travel, shows that this conclusion cannot be accepted, for there was an equally great or even greater diminution in the cholera death-rate amongst the inhabitants who dwelt on either side of the Brahmaputra, and in districts far beyond its banks.

PRESENTATION.—Dr. Piper, the retiring Medical Officer of Health for Darlington, has received a testimonial from the members and officers of the Darlington Corporation in acknowledgment of his valuable services as medical officer of health for a period of thirty-one years. The testimonial consisted of a tea-urn of solid silver of Queen Anne design. In the speech in which Dr. Piper acknowledged the receipt of this handsome gift, he gave a very interesting *résumé* of the progress of sanitary improvement in Darlington during the last thirty years, in which he noted that the death-rate, which was 28.94 per 1,000 in 1851, had fallen to 16.835 per 1,000 in 1881, although the population had more than trebled itself.

THE result of testings made during the past year, under the Sale of Food Act, at the laboratory established at the Custom House for the purpose of testing the quality of dutiable articles of import of a doubtful character, show that, out of 1,242 samples sent in to the Commissioners' analyst in the course of last year, 16 lots only were declared unfit for human food. The goods which were in consequence absolutely refused admittance into this country were varieties of tea, or pretended tea, numbering in all 1,153 packages, of which 500 consisted of "faced" green teas, and 500 of leaves other than tea, cunningly made up to imitate a green tea well known in our markets. The remainder were decaying congous and "fannings."

REQUESTS AND DONATIONS.—Mrs. Gladstone's Free Convalescent Home for the Poor has received £1,954 6s. 7d., under the will of Mr. John Le Cappelain. The East London Hospital for Children has received £1,000 consol. under the will of Mr. Torkington. The Worcester Infirmary has received £500, under the will of the Rev. J. Pearson of Suckley. The Goldsmiths' Company have given £100, additional, to the National Hospital for Consumption at Ventnor, and £50 to the General Lying-in Hospital. Miss Anne Arundell, of Southampton, bequeathed £100 each to the Royal South Hants Infirmary and the Southampton Dispensary. Sir Charles J. Frenke, Bart., has given £100, and the Hon. Algernon Grey Tolemache £50, to the Richmond Hospital. "A Lady" has given £100 to the London Fever Hospital.

THE DENTAL HOSPITAL OF LONDON may be congratulated on the success of its candidates at the College of Surgeons of England. All the candidates examined at the three last examinations obtained the diploma in dental surgery. This result was reported by the Dean at the recent distribution of prizes, and was pointed out as being highly creditable to the labours of the medical tutor, Mr. Morton Smale.

THE statute of George IV., which directed the burial in the highway, with a stake through the body, of persons on whose bodies a jury returned a verdict of *felon-de-se*, has been repealed. Such bodies are to be buried in any ordinary burial-ground, but without religious rites.

OPERATION DAYS AT THE HOSPITALS.

MONDAY..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopaedic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 2 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.

FRIDAY..... King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopaedic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopaedic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., Tu. F., 2; Eye, Tu. F., 9.15; Ear, M. Th., 2; Skin, Tu. Th., 1.30; Throat, M. Th., 1.45; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. T., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with Duplicate Copies.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to the Manager, at the Journal Office, 161A, Strand, London, and not to the Editor.

THE MEETING AT WORCESTER.

SIR,—With the invitation which has been sent to every member of the profession, soliciting their inspection of the Brine Baths on the Friday of the week of the meeting of the Association at Worcester, a clerical error has occurred in the postcard enclosed for an answer, which stated the 14th instead of the 11th August. The mistake would, of course, be obvious. The hotel in connection with the baths is now open, after a complete renovation.—Your most obedient servant.
Droitwich, July 26th, 1882. H. ROE, Secretary.

A CHELSEA PRACTITIONER'S indignation at Dr. John Pringle's advertisement is natural and just.

CORN MILLS AND THE FACTORY ACT.

SIR,—I should esteem it a favour if you would inform me if corn mills be under the supervision of the factory surgeon, and the number of hours in a week a man may work in a flour mill by law.—Yours truly,
M.R.C.S. 1867.

* Mr. Redgrave, Inspector of Factories, has obligingly informed us, in reference to this question, that corn mills, moved by steam or water power, are factories; if moved by wind, they are "workshops". The hours of work of male adults are not in any way regulated or limited.

NOTE ON AFTER-PAINS.

SIR,—The subject of after-pains is not perhaps a highly important one, except to those who experience them; yet, as I hold the prevention of suffering to be half the physician's office, and sometimes all he is capable of, I write in the hope that others, as well as myself, may test the facts. There are a number of cases which fall within the experience of every practitioner, where, directly after the expulsion of the placenta, violent after-pains set in, and continue for many hours, often for days, to the great annoyance and exhaustion of the patient; they have nothing to do with clots in the uterus, as none are ever expelled, and they occur mostly to women of a highly nervous temperament, who frequently suffer from neuralgia at other times. I have found opium useless in these cases, even in large doses; but salicine has the effect of rapidly and completely stopping them. I carry half a dozen powders, of fifteen grains each, in my bag, and give one, dissolved in water, directly the pains commence; to be repeated every two hours till the pain ceases. After two doses, that result is generally accomplished, and I have never had to give more than forty-five grains. I hope others will try this remedy, and record their experience.—I am, etc.,
JAMES LATTEY, L.R.C.P.
Kensington.

SIR,—I would be glad if any of your readers can kindly inform me whether stained or varnished wood is detrimentally affected by the fumes arising from sulphur undergoing combustion, during the process of fumigation in schools, etc.; and, if so, to what extent. I would also be pleased to ascertain which is the best method to adopt for disinfecting large buildings.—I am, sir, yours truly,
Carlton, July 19th, 1882. J. T. KNIGHT, M.R.C.S.

CLINICAL THERMOMETERS.

SIR,—In answer to your inquiry (in the BRITISH MEDICAL JOURNAL of July 15th) respecting clinical thermometers, Messrs. Hooper and Company, of 7, Pall Mall East, are now supplying the profession with an indestructible indico-prismatic thermometer, which cannot possibly get out of order. It forms its own needles, thereby preventing any possibility of the needle being lost in the bulb, which necessitates the thermometer being sent to an instrument-maker to be repaired. The prismatic lens makes it much easier to read than the old forms. They are kept for months before being marked off, to allow for the deviation in the mercury; and to make the reading more secure against error, each thermometer is supplied with a certificate from the Royal Observatory at Kew.—I remain, sir, yours respectfully,
F. J. HEDGCOCK.
24, Great Ormond Street, Queen Square, London.

SIR,—In answer to an "Old Member" regarding reliable pocket clinical thermometers, I write to state that I am highly satisfied with those made by Messrs. Harvey and Reynolds, 13, Briggate, Leeds. For six years, I have employed their thermometers, and still possess two of the set first sent to me; these two remain in perfect order.—I am, sir, faithfully yours,
C. RUATA, M.D.
Padua, July 21st, 1882.

POISONING BY MUSSELS.

SIR,—In connection with Mr. Farrar's case of mussel-poison, reported lately, the following extract is interesting. It is taken from the *Universal Magazine* for November 1789.

"Cautions respecting the Eating of Mussels. (From Barbut's *Genera Vermium* of Linnæus.) The pea-crab is at certain seasons a companion and inhabitant with the mussel called by Linnæus *Mytilus Edulis*, and commonly sold under the name of *lont-a-lee* mussel. Its abode is under the lip, and care should be taken to lift up the lip and take the crab out, if one should be there; it is deemed poisonous, and ill consequences have often ensued from this neglect; but in order to guard against the ill consequences of eating mussels, they should be well washed, and if laid a day or two in salt water, far the better. When they are required to be dressed for table, let them be put into an iron or tin saucepan (by no means into a copper one), throw in with them a silver spoon; when you apprehend they are sufficiently done, take out the spoon; if it is black, throw the mussels away, they then should not be eaten; if, on the contrary, it comes out white as when put in, the mussels may safely be eaten. It is a query with me, whether or not this obnoxious quality arises from the poisonous quality of the mud in which mussels are in general found bedded, or from the communication with the pea-crab. I rather am inclined to think it arises from the former."—I am, sir, yours obediently,
C. HAYDON WHITE.

H. H.—Our correspondent should apply to Mr. Miller, the Registrar of the General Medical Council, 299, Oxford Street, London, stating correctly all the circumstances of his case.

"THE MEDICAL DIGEST."

SIR,—A very annoying printer's error occurs in slip "How to use the *Digest*." Instead of 924 : 3, it ought to be 951 : 3. Will you kindly draw attention to this, as it is not corrected in all copies?—Yours truly,
RICHARD NEALE, M.D., etc.
60, Boundary Road, South Hampstead, N.W., July 7th, 1882.

THE SO-CALLED VARIOLA VACCINIA.

SIR,—I read in the issue of June 3rd a paper on Variola Vaccinia, giving analysis of thirty-three cases by Mr. Sweeting. As the subject is of vast importance, I may be permitted to make a few observations on the subject, so that the profession may not be misled in the question, and see behind the curtain into the mysticisms of the Tables A and B, which, to an unpractised eye, look formidable.

Dr. Seaton, in his excellent *Handbook on Vaccination*, states that cases of concurrent variola vaccinia are considered vaccinated where "the areola is fully formed round the cow-pox vesicles before the small-pox symptoms appear, the vaccination will, according to its date, either arrest the small-pox at its premonitory stage, or alter and modify the course of eruption." It is generally on the seventh day that the areola is considered to be fully formed, when the vaccinators collect lymph from the arms of the vaccinees. I read, in the twenty cases of primary vaccination given in Table A, that, in twelve, the operation was performed after the sixth day of the period of incubation; and, as it takes seven days for the areola to be developed and afford protection, I think it is wholly misleading to class these as cases of concurrent variola vaccinia. In nine of these, the operation was performed on and after the eighth day of the assumed period of incubation. Again, the assumption of the period of incubation in all cases of small-pox as twelve days for scientific investigation, is purely speculative. Nature, in life and matter, in the organic and inorganic kingdoms, forms a "harmonious whole", through all phases and through every conceivable variation; but we never see two faces or two things exactly alike; and yet some persist in defining the period of incubation in small-pox as exactly twelve days, from preconceived notions, and disregard all variations observed by men of scientific eminence and experience in all parts of the world as errors. In proof of my statement, I call the attention of the profession to the writings of Murchison, Otto Oberwier, Bärensprung, and others, and to my paper on the Observations on the Pre-eruptive Stage in Small-pox, read on the 5th April last at the Epidemiological Society, which contains the history of the pre-eruptive stage in small-pox in 117 cases, besides an analysis of observations on the initial stage in 626 cases (*vide Medical Times and Gazette*, May and June 1882).

In Table B, Mr. Sweeting gives thirteen cases of revaccination, in seven of whom the operation was performed on and after the sixth day of the assumed period of incubation, which must also show the utility of the operation at such an advanced period. I look upon most of these cases as those of inoculation, and not of concurrent variola vaccinia, as the operation is performed in an infected atmosphere, and the wound is exposed day and night to the infection, inasmuch as the patients live in the infected air and wear infected clothing. Under these circumstances, only those cases can be of concurrent variola vaccinia when the operation is performed early, and is successful; the period of incubation being shorter by nearly half in vaccinia, runs its course, and protects the individual, which, by the way, proves that these two febrile disorders are not the same, but members of a family.—Yours obediently,
MONTAGUE D. MAKUNA,
Late Medical Superintendent Fulham Small-Pox Hospital.

Office East India Association, 14, Bedford Row, W.C., June 8th, 1882.

WE have to acknowledge the receipt of two guineas from Dr. Morley Rooke of Cheltenham towards the fund being raised on behalf of the family of the late Sir John Rose Cormack.

THE SCIENTIFIC PRINCIPLES OF INHALATION.

SIR,—In my remarks on the scientific principles of inhalation, it was my desire to direct attention to the necessity of exactness and scientific method in the use of the therapeutic system, if any benefit were to be expected from it. The chief point of practical value deserving of notice is the fact that a solution of carbolic acid in water, containing ten per cent. of acid, may be volatilised in the steam-draft inhaler, or any similar apparatus, so that its vapour contains ten per cent. acid; and this is true, as far as I know, of no other disinfectant. This is not due to the slight increase of the boiling point, for that does not rise above 216° Fahr., but I conceive it to be explained by the molecular condition of the particles of vapour as they escape under slight pressure from the surface of the boiling fluid. However, this is not a matter of much importance to the medical practitioner. It is sufficient to know how we can obtain a vapour of definite strength of carbolic acid, from a solution of the same strength, and that we may use this vapour in pulmonary disorders very much as we use the solution in the treatment of surgical injuries.—Yours faithfully,
ROBERT LEE.

CONSULTANTS AND FEES.

SIR,—I would be glad to know that you could speak as positively as you appear to do in the JOURNAL of June 10th, as to the practice of not charging fees to medical men by London consultants. I have only thrice had occasion to consult any of them. In two instances, they were old personal friends, and the offering of a fee would have been an insult. In the third case, I consulted a leading aurist about my child, writing beforehand to fix a time the least inconvenient to himself. I received the most hurried and scant courtesy with which it is possible to dismiss a non-paying patient; and he took without hesitation the full consulting fee which I gave him. I find that more than one medical friend has had the same experience; and I have resolved that, should I again consult a London practitioner unknown to myself personally, I will conceal my professional identity.

In the particular instance referred to, I took my child to a gentleman of less celebrity, but, I think, equal skill, from whom I received much kindly sympathy and advice, though he could add nothing to what I already knew too well. I have had the malignant pleasure since of diverting from the one to the other at least fifty-fold the amount derived from this act of discourtesy.—Yours, etc.,
A PROVINCIAL.

HYDROCEPHALUS IMPEDING LABOUR.

SIR,—I had a puzzling case a few days ago, and, if you think it may be useful and instructive to others, perhaps you will publish it in the JOURNAL.

A well made and full sized woman, in her eighth labour, was unable to expel the child, although the occiput presented, and dilatation was perfect. Finding that no progress ensued, I examined more thoroughly, and was surprised to find a large, fluctuating, belly-like integument above the part presenting, which gave the feeling to the hand as if it were the abdomen of the child, and that turning would be necessary. On passing my hand well up, and examining the mass accurately, I found I had a hydrocephalic-headed child to deal with. Being out of the way of another opinion, I punctured the head on my own responsibility, giving exit to pints of water. After delivery, I filled the head with some dry grass, and measured it, and found the circumference twenty-one inches and a half, and I think it would have measured more when the water was in it.

I have never met with a case like it before during my long experience. The woman is well, and has done as well in this labour as in any other.—Truly yours,
Warrington, near Croydon, July 5th, 1882. H. H. DEARLEY.

THE MIDLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

SIR,—With your permission, I should like to say a few words to the members of the Midland Branch of the British Medical Association. It will be remembered by the gentlemen who were present on the 18th instant at the Branch meeting in Lincoln, that a sum of £25 (savings of the Branch) was voted, without much consideration, as a donation to the Medical Benevolent College, Epsom, and that over and above this sum an annual subscription of £3 3s. would also have been voted to the same institution were it not that previous notice of the proposed subscription had not been given, as the rules of the Branch demanded.

Now, the first thing that would strike a person is that, if the Branch subscription be larger than the expenses of the Branch required, the best thing to do would be to reduce the subscription. If it were not thought advisable to lessen the subscription, then I should say the next best thing would be to keep the savings for cases of Branch emergencies; such, for instance, as to assist in covering the expenses in case the annual meeting of the British Medical Association was held at any time in the Midland Branch. Or, lastly, if it were absolutely necessary to spend the money, and it were repugnant to the feelings of the members to retain a little money in hand for a rainy day, then I say it would have been a good way to spend the £25 in assisting to purchase an appropriate badge to be worn by each Branch President during his year of office. Investing money in a badge of honour might not be a foolish undertaking even in a pecuniary point of view. A few days ago, at Christie's, a silver-gilt cup, with cover, was sold for 3,000 guineas, or at the rate of 170 guineas an ounce. An upright secretaire which had belonged to Queen Marie Antoinette was sold for 4,400 guineas. A cup and saucer of Chelsea china, made about one hundred years ago, and probably originally bought for a few shillings, brought £245 10s.; and not long ago, also at Christie's, three pieces of old Sevres china—a *garçonne de cheminée*—which originally might have cost a few pounds, were sold for the large sum of 10,450 guineas. After such prices as these, who knows, in the future, what great sum might not a badge worn by a series of distinguished presidents of the Midland Branch of the British Medical Association command? Perhaps even enough to found a hospital. No doubt it is a good and laudable thing to give donations and subscriptions to such institutions as the Medical Benevolent College, especially when the money is given out of a man's own purse; but our private benevolent feelings should not altogether influence us when we are managing the financial business of a Branch. The future as well as the present interests of the Branch should be kept in view.

It is to be hoped, therefore, that it will not be considered that the Lincoln members who opposed the precipitate voting away of the savings of the Branch are wanting in charity. We have a Medical Benevolent Society in Lincolnshire which we support by subscriptions and benefactions, and which has been in operation for seventy-nine years. For myself, I must say that I am inclined to dislike compulsory benevolence. It is not everyone who looks upon paying four or five shillings in the pound as poor-rates as a pleasing occupation. I like the benevolence that proceeds from the heart, and which blesses the giver as well as the receiver.—I am, sir, very truly yours,
Wm. O'NEILL.
Lincoln, July 19th, 1882.

INFLUENCE OF CERTAIN MINERAL WATERS ON CANCEROUS DISEASE.

SIR,—The question raised by a correspondent in your issue of July 8th, as to whether the asserted beneficial effects in cases of cancer of certain mineral waters have any substantial basis, or are simply charylatany, is a most important and interesting one, and well worth investigation.

The number of reported instances in which cancerous disease of various kinds has either disappeared altogether or been much mitigated and become dormant for a time, under the use of certain mineral waters, are, I think, too numerous and independent to be set aside as the inventions of interested parties. Assuming, as I believe we may, that such beneficial results have actually occurred, the questions for determination, if possible, are: Is the improvement merely coincident with the use of the mineral waters, and in reality an instance of that ebb and flow which is so common in many cases of cancer, and probably connected with subjective functional conditions? or does the improvement actually depend upon general constitutional improvement resulting from the tonic (chalybeate) or alterative (saline) constituents of the water? or does it depend upon the specific action of some special ingredient in the water, such as silica, in natural combination, as has been asserted?

As a contribution to the literature of the subject, I enclose the following outline of a case in which it is asserted that a complete and permanent cure of an epithelioma of the lip attended the persistent use of a mineral water. In a secluded and sparsely populated locality in the district for which I act as medical officer of health, is a spring which forms the water-supply of an adjacent cottage. The water is quite clear, and beyond a decided mineral and apparently chalybeate flavour, is not at all unpleasant to the taste, and, as I have personally experienced, has no aperient or other immediately appreciable effect upon any one drinking it. Some years ago, an agricultural labourer went, in the ordinary course of things, to occupy the cottage above referred to, and the family used the spring water for potable purposes. At the time the man went to reside in this cottage, he was suffering from a well marked cancer of the lip; but, in the course of some months, it was noticed that the affection of the lip had entirely disappeared, and the cure remained permanent. The above particulars are matters of local report, but were vouched for to me by the gentleman in whose employ the man was, a most intelligent, competent, and entirely disinterested observer, who had carefully noted the facts. The medical man who was responsible for the diagnosis is now dead, but his reputation and position would certainly entitle his diagnosis to respect. The only point on which I can personally corroborate is that, before the patient's death, about sixteen years after the asserted cure, he was entirely free from the disease. The weak points in the above history, when put forward as scientific evidence, are obvious; and one single case is of little value. Assuming, however, the facts to be as represented (and I may say that, personally, after as full investigation as the case admits of, I most thoroughly believe the statements, both as to the nature of the disease and the fact of its disappearance), the case becomes one of the highest interest, because, as the experiment was unintentional, the conditions were certainly *bona fide*, and the result being unlooked for, attracted notice solely because of its prominence.

The new ordnance survey is just now being carried out in the locality in question; and I have thought it well to draw the attention of the surveyors to the spring in question, in the hope that, as I believe has been done in connection with some other mineral springs in various parts of England in the course of the present survey, a thorough and independent analysis of the water may be made in the laboratory of the Rivers Pollution Commission.—I am, sir, yours, etc.,
Shrewsbury, July 17th, 1882.
W. N. THURSFIELD, M.D.

THE DURATION OF HUMAN LIFE IN ENGLAND.

SIR,—The criticisms which have appeared from time to time in your columns on Dr. Rabagliati's letters show so much misapprehension of the principles on which the calculation of human life depends, that I have thought a brief exposition of these principles might not be out of place. The subject is treated of in every book on algebra, but I shall try to explain it without mathematics. Supposing that, on January 1st, 1780, the births of 10,000 persons were registered, that a record had been kept of the death of each, and the number of survivors tabulated each year, then a diminishing series would be formed which would end by the death of the centenarians in it at the present time. Such a table would give the following information. 1. The annual decrements, reduced to 1,000 persons living at each age, would give the death-rate for that age. 2. Selecting any age, say 35 years, it would be found, according to the Carlisle life-tables, that 5,362 persons would be alive at that age out of the 10,000 registered. How many years longer of life would these persons enjoy among them? Evidently the sum of the years of the lives of all the survivors in the remainder of the series. According to the table, this would be 166,222 years. If these years be divided by the number of persons living at the age of 35, the result is 31, which is the expectation of life of each of these persons; i.e., it is probable that the average age of these persons at death will be 66. 3. It is evident that the expectation of life at any age is determined by the duration of the lives of all the older persons in the table, and is not affected by any change that may take place in the death-rate at an earlier period. 4. The probable age at death is the sum of the age, and the expectation of life at that age. At the age of 20, the probable age at death is 61 years; at 35, the probable age at death is 66 years. After the age of 7 years, the older a person is, the greater age he will probably be at death. Hence this most important principle, that the average age at death in any community is determined by the average age of that community.

Let us see now what would be the effect of any alteration in the death-rate in this series. It is evident that an uniformly increased death-rate would shorten the series, and bring it to a close sooner than before. An uniformly lessened death-rate would do just the reverse. More people would remain alive each year, and the series would run farther into the next century. If the death-rate were diminished for the first five years of life, the expectation of life of the whole community would be increased, but not that of persons older than 5 years. The number of persons living at all ages subsequent to 5 years would be increased; the number of deaths in each of these years would be increased, but the death-rate would remain the same. The length of the series would remain the same. An increased death-rate at the lower end of the series might be more than compensated by a diminished death-rate at the beginning of it.

Let us now inquire how these principles can be applied to existing communities. It is evident that no such community exists in nature as we have supposed; but if the actual number of persons alive at every age in a community be known, and the death-rate at each age, then a table precisely such as we have indicated can be constructed for that community; and unless such a table be constructed, no trustworthy inferences can be drawn from records of mortality.

Let us now examine the various matters touched on in Dr. Rabagliati's letters. In letter 1 he quotes the statement that the death-rate in 1838-40 was 22.3, and in 1876-79 was 21; and he does not challenge the conclusion that therefore the duration of life was 44.8 years at the former period, and 47.6 years at the latter. Now this is utterly wrong, for the duration of life is not the ratio of the death-rate to 1,000, but is the average age of those living, plus the expectation of life for that age. The average age of the population of England at either of these periods is an unknown quantity, and therefore the average duration of life is an unknown quantity too, so that any discussion of the matter is impossible.

Dr. Rabagliati's main thesis is intelligible enough to anyone who takes the trouble to read his letters attentively. What he affirms is this: that, though the death-rate at early ages has been diminished, and so the expectation of life for these ages has been increased, yet the death-rate at later ages has been increased, and the expectation of life at these ages has been diminished. Further, although there has been a gain to the whole community in the expectation of life, that is at a period when life is of little value, and is more than compensated by a loss of more advanced years, no doubt fewer in number, but of far more value. Now we have shown that it is perfectly possible that this may have taken place, but it is quite another matter whether it has been proved. In the first place, the expectation of life at one year of age is already 44 years by the Carlisle tables, and therefore any improvement in the expectation of life for that period will fall fully into the working period of life. But the main objection is, that the probable limits of error in calculating the number of persons alive at each age far exceed the difference in the death-rates which the mortality tables show. These numbers must be calculated from the census previous to each period. In the census itself the errors of age are probably great, and the effect of immigration and emigration on the age of the population is quite uncertain. Besides, Dr. Rabagliati has only made his calculations for decennial periods instead of annual ones. Now this alone enormously enlarges the limit of probable error, as will be seen on examining the only case in which Dr. Rabagliati gives sufficient data to form a judgment. He says that, while 13.3 died out of every 1,000 living at the ages 45 to 55 years on the average of 1851-73, 13.5 died in 1879. Now, by the Carlisle tables, 10.26 is the death-rate for the age of 35 years, 13 for 40 years, and 14.9 for 45 years. It is, therefore, obvious that a moderate change in the distribution of the ages between 35 and 45 years would produce far greater alteration on the average death-rate than 2. The difference between the death-rates of the first and last years of each decennial period increases rapidly as age advances, so that the limits of probable error increase also, which takes away all weight from the larger percentages of deaths which Dr. Rabagliati brings forward for more advanced ages.

It must be distinctly understood that I am not giving an opinion as to the duration of life in England. I affirm that Dr. Rabagliati's arguments have no sufficient foundation; but if anyone else come forward and attempt to prove that the duration of human life has increased, and use similar arguments to Dr. Rabagliati, I should bring the same objections against them. I may say that the objections which have appeared in your correspondence columns to Dr. Rabagliati's reasonings have been made in complete ignorance of the whole subject. Dr. Rabagliati has made no such school-boy errors as his critics have supposed.—Yours, etc.,
ALEX. W. WALLACE, M.D.

AN ADVERTISEMENT.

SIR,—The subjoined slip has been cut from *The Western Daily Press*, and reads to my mind like a trade advertisement.

"Dr. Broom's Professional City Chambers, Corner of Clare and Baldwin Streets, Bristol. Attendance daily. Hours, 11 to 1."

I have no personal knowledge of Dr. Broom, only that he resides in the fashionable suburb of Clifton, and is a member of our local Branch of the Association.—Yours truly,
A MEMBER OF THE BRISTOL BRANCH.

AN ADDRESS

ON

SYPHILIS AND ITS EFFECTS UPON THE
(CIVIL POPULATION OF GT. YARMOUTH
AND OTHER MARITIME TOWNS.*By C. PALMER, M.R.C.S.E.,
Surgeon to the Yarmouth Hospital.

I HAVE decided to call your attention to the subject of syphilis, and its effects upon the civil population of Great Yarmouth and other maritime towns similarly situated, simply because I am deeply concerned at the number of such cases constantly coming under my observation, and its disastrous effects upon life and health; and am anxious that we should initiate a movement having as its object a full inquiry into the subject, and the means which should be adopted to mitigate its ill effects.

In illustration of the points to which I wish to call your attention, I have collected a number of cases, which I have divided into three series. The first consists of married couples with families; the second of cases of congenital syphilis; and the third a mixed group containing cases of primary, secondary, and tertiary syphilis. And before proceeding further, I must apologise for the very imperfect manner in which I have treated the subject, owing much more to the want of time than any lack of material.

SERIES I. Married, with Families.—The first series comprises 114 families, and 230 adults, assuming that, when a number of children are born syphilitic, both parents are, or soon become, affected.

GROUP 1. Infected Years after Marriage.—Of these, 25 families were infected some years after marriage, and in all these cases infection took place through the husband; they had 64 children before infection, of which number 57 are now living; three of those who died were over 10 years of age, and one 28; so that the actual infantile mortality was about 9 per cent.; 109 children were born after infection; of these, 75 died in infancy, or about 66 per cent.; and of the remaining 34, the majority were weakly, stunted, and suffered from infantile syphilis.

GROUP 2. Infected at Marriage, or soon after.—Eighty-four families were syphilitised at or about the time of marriage. In all these cases, where the disease could be traced to its source, the husband had suffered from syphilis before marriage, generally from six months to two years. In many instances, he had no symptoms of primary or secondary syphilis about him at the time of marriage; indeed, this was the rule. Sometimes the mother complained of sore-throat or other symptoms of secondary syphilis during her pregnancy, but very frequently the mischief was not suspected until the first child became syphilitic. These had 325 children born, of which number 155 are now living, and 175 died in infancy; the mortality being about 55 per cent. of the children born—a marked improvement upon the first group of this series, which is mainly due, no doubt, to two circumstances: 1st, that the parents are younger; and 2nd, that in some, perhaps many, instances marriage did not take place until some time after infection.

GROUP 3. Tertiary and Congenital Cases: Married.—Amongst the remaining cases are two, one male and one female, who at the time of marriage were suffering from tertiary symptoms. These have eleven children, all living and apparently healthy, and one miscarriage. Three had congenital syphilis, two females and one male; here the children were, with one exception, healthy.

With regard to treatment, I am convinced that a long course of small doses of mercury—say, a grain of blue pill once a day for six or twelve months—will generally so far modify the disease, that the children born after will be viable, if not to all appearance healthy; though the parents themselves will still be liable to relapses in a milder form. Treatment by iodide of potassium does not appear to effect any good in this way, though it cures the local disease.

In corroboration of this opinion, on referring to my two sets of private and hospital cases, I find that, in the private cases, most of which were treated sooner or later, the infant mortality was 50 per cent.; whilst in the hospital series, where there is at least no record of treatment, it is 66 per cent. And, if I select from my own list those cases which I know to have been treated with mercury, the difference is still

more marked, for the figures stand thus: 12 families, 62 children born, 40 living, 22 dead; but, to show clearly the effect of the treatment, I ought to subtract from this number 14 children who were born syphilitised before treatment was commenced, and who all died. The figures would then stand thus: 12 families, 48 children born, 40 living, 8 dead, or a mortality of 16½ per cent.; a very encouraging result if confirmed by other observers.

The disease, when not treated by mercury, dies out of itself, I am afraid, very slowly, and generally lasts through nearly the whole of the procreative period; and I incline to the belief that a man or woman once syphilitised, remains so to the end of the chapter; and that the power of procreating healthy children is not regained until very late in life, though there are cases which tend to prove that a woman suffering from secondary syphilis may give birth to healthy children, if the father be healthy; instance: one case in this series, where the woman was syphilitised by her first husband during pregnancy (about the fifth month), that child was syphilitic, but recovered; the next was syphilitic, and died; the husband then died; and, two years after, she married again, and a year after that had a child, apparently healthy, though she herself was suffering from secondary syphilis at the time, and has since become paraplegic. At all events, as it appears to me, the disability is of much longer continuance in the male than in the female.

Sometimes, no doubt, we find that, though before marriage a man may be so far recovered as to beget a fairly healthy viable child, yet, in consequence of the mother's liability to become affected by the fetus, the ordinary sequence is inverted, a gradual deterioration takes place in the offspring, and the later children are the most affected. On the other hand, actual sterility (I suppose from ovaritis or metritis) is a much more common result of primary syphilis in the female than the male; indeed, I suspect that by far the larger proportion of women who marry after leading irregular lives are thus rendered incapable of impregnation. Yet this condition may be removed by time, and perhaps by treatment, as we frequently find that women of this class, after being sterile for eight, ten, or even fifteen years, give birth to children viable, if not altogether free from disease.

SERIES II. Congenital Syphilis.—The next series consists of cases of congenital syphilis; a subject of such importance, that I am only sorry that want of time has prevented my collecting more cases, or making better use of those already at command. To have gone into the subject thoroughly, I should have traced out the histories of the two hundred children in the first series born of syphilitic parents and still living, but that I have not yet been able to do, and I have only the 146 cases in the series before us as ground for conjecture as to what will be their ultimate fate. I have divided this series into three groups: those who are married and have families; unmarried adults, or married without children; and thirdly, children.

GROUP 1. Married, with Families.—In the first group there are seven, six women and one man. They are all young, their ages averaging only twenty-six years, the youngest being twenty, and the oldest thirty-seven years. They have had in all fourteen children, of whom thirteen are living, and apparently healthy; the fourteenth died at three months, and had papular rash, snuffles, sore mouth, and excoriated nates; the father, aged 23, has notched teeth, has had keratitis, and has now psoriasis; he has had two children since, who are living and well. These cases are all well marked examples of congenital syphilis; all had notched teeth and scars about the angles of the mouth, and four had had keratitis.

GROUP 2. Married without Children, and Unmarried Adults.—The second group contains 21 cases, 19 females and 2 males; 17 had notched teeth, 14 had had or were suffering from keratitis, 7 were deaf, 1 had necrosis of the superior maxillary bones, 1 had psoriasis, 10 ulceration of skin, 5 had ulceration of the soft palate or pharynx, 1 had epilepsy, and 3 suffered from severe headache; none suffered from any disease of the heart, lungs, or genital organs but one, who had chancre, whether hard or soft was not noted.

GROUP 3. Children.—The third group contains short notes of 105 cases, with 29 deaths; of these, 59 suffered from skin-affections, viz.: 53 psoriasis, with 23 deaths; 2 purpura, 1 death; 2 pemphigus, 2 deaths; 2 eczema, no death. The eyes were affected in 18 cases, viz.: 9 had purulent ophthalmia, 5 had keratitis, 2 phlyctenular ophthalmia, 2 tinea tarsi. Deafness was noted in only 3 cases. The bones and periosteum were affected in 11 cases as follows: 7 had periostitis, 2 rickets, 1 caries, 1 necrosis; none of these terminated fatally. In 27 cases, the mucous membranes were affected; of these, 7 died, a mortality of about 25 per cent., which, compared with the skin-group, where the death-rate is 50 per cent., leads to the inference that affections of the mucous membrane are of less serious import than those of the skin. Of these, 10 had snuffles, with 7 deaths; 2 had lupus of the nose, which with one was associated with ulcerations of the tongue,

*Read before the East Anglian Branch.

palate, and pharynx; 7 had condylomata around the anus (all these recovered). The brain was affected in 20 cases: of these, 2 had chronic hydrocephalus, with 1 death; 7 convulsions or epilepsy, with 3 deaths; 13 laryngismus, all of which recovered with the exception of 2, which were complicated with convulsions; 2 cases of epilepsy were idiopathic, and 1 imbecile. In 6 cases, the liver was affected; 3 of these died dropsical.

From this imperfect series of cases (imperfect because they were not taken with any particular object in view at the time, but as cases are taken in everyday practice, with only what appears at the time to be the salient points briefly noted), I gather that pemphigus is generally fatal; that psoriasis is fatal in about 50 per cent. of the cases in which it is manifested in infants (but when mucous tubercles round the anus made their appearance during its progress the cases all recovered); and the same may be said of laryngismus, of which complication there are 7 instances.

Of the eye-affections, purulent ophthalmia stands first; and this affection was so common, that its appearance would always arouse in my mind a suspicion of a syphilitic taint. One case of keratitis is put down as occurring as early as fifteen months, but I cannot remember the particulars. As to the cases of phlyctenular ophthalmia and tinea tarsi, I should certainly have attributed them to other causes had not the family history been eminently syphilitic.

Periostitis made its appearance as a rule very early, in one instance only three weeks after birth. All the cases recovered; and I think that its appearance is an indication that the syphilitic virus is diminishing in intensity. These cases appear to me to be closely allied to rickets; indeed, I feel sure that many of them become so; but here my notes are deficient, as I find that I have only two cases marked rickets.

Of the affections of the mucous membranes, the cases of snuffles were probably all associated with psoriasis; and the fact of the mortality in these cases being reduced from one-half to one-third would lead to the conclusion that the complication was not unfavourable at least.

The two cases of lupus deserve attention, as they certainly occurred in eminently syphilitic families.

The large percentage of cases in which the brain was affected is, to my mind, a fact of the greatest importance, as indicating the direction the manifestations of disease will take later in life; for, as few of these cases were fatal, it follows that at least 25 per cent. of the survivors—and I myself think this is far below the true average—have, at some time or other, suffered from symptoms of brain-mischief; and accordingly I am afraid that, when the subject is fully inquired into, we shall find that more nearly seventy-five than twenty-five per cent. of these unfortunates, after attaining to puberty, suffer from infirmities, bodily or mental, due to imperfect or diseased conditions of the brain.

Of the liver, apart from the earlier manifestations of infantile syphilis, appear to occur in about the proportion of 6 per cent. of all cases, which would be nearly 12 per cent. of those surviving the period of first dentition, and of these cases about 50 per cent. prove fatal.

A few other questions occur to my mind in connection with the subject of congenital syphilis. The first is, at what age does it cease to be communicable? We know that infantile syphilis can be communicated to either children or adults, and that the disease so produced, in its appearance and effects, closely resembles the true Hunterian chancre; but can it be transmitted, like the acquired disease, by the father to the offspring, and to the mother by the foetus *in utero*? I suspect that this is possible, but takes place very rarely. Is the disease taken from a syphilitic infant of a milder type than that acquired in the usual way? Are congenital syphilis, and the disease it gives rise to, protective? and does soft chancre bear the same relation to hard chancre that modified small-pox after vaccination does to true small-pox? These queries, I am inclined to think, will be eventually, if they are not already, answered in the affirmative.

SERIES III. Mixed.—The third series, which is relatively unimportant on account of the small amount of information it contains, has records of 76 cases.

GROUP 1. "Primaries."—Of these, 20 are primary; and these may be useful in assisting us to arrive at a correct conclusion as to the probable sources of infection in the first series. Of these 20 cases, 16 are men, and only 4 women; the men are, with two exceptions, very young, and unmarried, their average ages being only 20½ years; whereas the women are all leading irregular lives, and are much older, their ages averaging 31 years; which facts point to the same conclusion that I have before arrived at, that the source of infection in that series is almost invariably male.

GROUP 2. "Secondaries."—The second group contains only 9 cases, 4 males and 5 females; and here again the relative difference

of age is maintained—the ages of the women averaging forty years, and of the men thirty-three years.

GROUP 3. "Tertiaries."—The third group contains 47 cases; and here the figures are reversed—the average age of the women being thirty-nine years, while that of the men is forty-four and a half. And, if we take into consideration the date of infection as well, we find the explanation of this; for the average lapse of time from the date of infection to the appearance of the disease is in men seventeen years, whilst in women it is only eleven years; from which I think we may infer that the disease runs its course more rapidly in women than in men, and sooner arrives at the tertiary stage, when the offspring are not visibly affected by it.

Numerically, this group is insufficient to give more than a very imperfect outline of the manner in which acquired syphilis is likely to manifest itself as the subjects of it advance in life; still I think it is sufficient to indicate the class of diseases to which they will be liable.

On analysing this table, I find that in about 35 per cent. of the cases the bones or periosteum are affected, the skin or subcutaneous tissue in 25 per cent., and the mucous membranes in about the same proportion; the brain is affected in about 14 per cent., the aorta in 4 per cent., the lungs in 4 per cent.; whilst cancer and albuminuria occur as sequelæ in the proportion of 2 per cent. of all cases. But nearly all these affections of different tissues bear a close resemblance to each other in one important particular; they all have a tendency to end in disintegration and death of the tissues affected; and this tendency, so strongly marked in the tertiary, and almost absent in the secondary group, is due, I think, to the fact that, in this stage of the disease, the arteries are first affected, and the parts which derive their blood-supply from them only secondarily; or, in other words, that in acquired syphilis, in its later stages, the force of the disease falls principally upon the circulatory system; whilst in the congenital disease the brain and nervous system are chiefly affected.

This finishes the consideration of the three series of cases upon which I have to base my calculations as to the prevalence of syphilis in this borough. I will now sum up, as briefly as I can, the conclusions at which I have arrived on this and other points of interest. The papers before you contain notes, though brief and imperfect, of 364 cases of syphilis in adults, and 484 in infants and children—in all, 848 cases; but I am sure that, if I had had time to record all the cases that have come under my notice during the last two years, I should have had at least one-fourth more—say 1,063 cases, all told. From this, I deduct 266 recorded as dead, with one-fourth added, equal to 232, which will leave 731 now living, as far as I know; and, if I take this number as representing one-tenth of the actual number of people tainted with syphilis in the borough, you will, I think, agree with me that this is rather an under than an over estimate (as it is not probable that nearly one-tenth of those affected have come under my notice at all: nearly all the cases of primary syphilis amongst the poorer classes being treated by the chemists, or not at all, except by recipes which they get from one another. For the most part, they have no idea that the affair is of any consequence, or requires further treatment than a bottle of black wash: and, when questioned, will tell you that they have never had the *hard* disorder, but only a chancre).

Indeed I may say that, practically, three large classes of syphilitics are unrepresented—the single men and women, the prostitutes, and the married couples who are sterile, in which class we frequently find that the women become syphilitic through the semen, without evidence of pregnancy having ever taken place. This estimate will give a total of 7,200 people, tainted with syphilis, in a population of 45,000—six-tenths of which will be cases of acquired and four-tenths of congenital syphilis, to which must be added 3,000 deaths amongst infants, which have taken place during the last twenty years (on an average of about 150 a year), of which number somewhere about 40 per cent. were either still-born, or have died a few hours, or it may be days, after birth, and 60 per cent. in infancy; and, how have they died? Nearly all of them we know most wretchedly; worn to skeletons, their skins thin as parchment, withered and wrinkled, and covered with sores and blotches; their mouths and lips disfigured by painful ulcers, which prevent their taking proper nourishment, or getting rest day or night. Such a picture, instead of being a source of misery, that they receive from more of the denizens of Dart's hell than anything human. In order to estimate, roughly and imperfectly I grant, the prevalence of this disease in other maritime towns constituted as ours is, with a large fishing population, I shall take, as a basis for calculation, the number of men and boys employed in the fishing-boats. Here they number about 6,400, or one-seventh of the whole population; whereas, the number employed in the same way in England, Wales, and Scotland is 105,000, multiplied by seven, will give a mixed population, constituted no doubt very much like our own, of 735,000, of which

number about 119,000 would be tainted with syphilis, with an annual death-rate amongst infants directly caused by syphilis of 21 per 1,000 of the infected part of the population, or 4 per 1,000 of the whole—a condition of things so disgraceful to humanity and civilisation, so utterly disastrous and intolerable, that, in my opinion, to be cognisant of, or even to suspect it, without taking steps to remove it, is little short of a crime: and we shall be ill performing our duties, as guardians of the public health, if we do not at once take active steps to mitigate, as far as possible, this monster evil, which is so fearfully undermining our strength, energy, and mental capacity as to endanger our position as a nation.

The British Medical Association, counting as it does about 9,000 members, with Branches in all the principal towns in the kingdom, appears to me to be admirably adapted for the work of thoroughly elucidating the subject; and demonstrating, in a manner that no number of individual members ever could, let them be ever so acute or untiring in their zeal, not only the actual prevalence of the disease, but its ultimate effects as well, in these two great classes—viz., acquired and congenital; and, by this, I mean not only its direct effects, but its influence upon the death-rate, etc., in other diseases, to which all classes are liable; its share in the causation of other diseases—as cancer, lupus, rickets, granular kidney, and perhaps many others; and, lastly, the effects of other diseases in modifying the progress of syphilis.

We have, thanks to the acumen and untiring industry of such men as Hutchinson in England, and many others abroad, charts laid down to guide us in our investigations; and I hope that, before we part to-day, we shall carry one or both of the following resolutions.

“1. That it is, in our opinion, imperative that steps should at once be taken to investigate the subject of syphilis in all its bearings, more particularly in the large mercantile and maritime towns.

“2. That, to accomplish this, the British Medical Association be requested to form a central committee, with powers to appoint local committees in such places as they think desirable; such local committees to consist, not only of the members of the Association, but of all medical men resident in the place or neighbourhood, who are willing to assist in the work; to lay down the lines upon which these committees are to work, and to receive and digest their reports.”

And I am sure that, if these propositions are carried and acted upon, we shall soon be in a position to arouse the earnest attention of the Government: and our Association will have commenced a work which must eventually be of inestimable service, not only to our own country, but to all civilised nations. But, for this inquiry to be full and complete, it will be necessary, as I have done throughout, to assume, until the contrary is proved, that a man or woman once syphilised is always syphilitic; and, secondly, that the children of syphilitic parents are also syphilitic; and their behaviour, under all the varying conditions of life, in health and disease, carefully noted and compared with that of the rest of the community who are presumed to be free from this taint: for I am sure that, by such means only, can we ever arrive at even an approximative estimate of the amount of mischief wrought by this disease.

Another question, full of interest and of the greatest importance, is, what are the main sources of infection and what the channels through which it is disseminated through our towns, and villages too, in maritime populations like ours, which draw a considerable proportion of their sailors and fishermen from the surrounding country? And this question is, I think, fairly answered by the first and third series of cases; for they appear to me to prove clearly that, practically, the prostitutes are the main sources of the mischief; and the sailors (young, and for the most part unmarried at the time of infection) the principal means by which it is disseminated throughout our civil population with such deadly effect. And this brings me to a consideration of the means at our disposal to diminish the evil, if not to eradicate it; and if, in doing so, we consider as proved the following points: that practically the prostitutes are the source of the mischief, and the young unmarried men the means by which it is disseminated, and that the fruitful causes of this dissemination are inefficient treatment before marriage, and marriage too soon after infection, it follows that it is of the first importance to reduce the amount of disease amongst prostitutes to a minimum; and, to fulfil this indication, the Contagious Diseases Prevention Act, without going into the question of its merits and demerits, appears to be well adapted; it works well in the towns where it has been applied, and has undoubtedly diminished the number of prostitutes as well as the number of infections; and no doubt its good effects would be still more marked were its application more general; whilst, if it is necessary for the protection of our army and navy, it is doubly so for that of our civil population, where the number affected is so much greater, and the consequences so much more terrible; but, at the same time that I

advocate the more extensive application of the Contagious Diseases Prevention Act as a means of mitigating the evil, I do not wish to lose sight of the fact that, promiscuous intercourse being the cause of the spread of syphilis, rationally the effectual way of preventing it is to, as far as possible, get rid of the cause.

Next to this in importance is provision for the early and effective treatment of all cases of infection, and the repression, as far as possible, of all irregular treatment by chemists or quacks; whilst, to fulfil the last indication, viz., the prevention of marriage too soon after infection, I think that a system of registration might be devised, and a certificate required from all infected persons before marriage, that they have been properly treated, and a fair time has elapsed since the disease was contracted. But I feel that this subject is beyond the scope of my paper, which is, I know, only a very imperfect outline of what it ought to be; but, if it have the effect of directing your attention to the subject, it will have answered the purpose for which it was written.

REMARKS

ON

ADENOID VEGETATIONS OF THE NASOPHARYNX.

By E. CRESSWELL BABER, M.B. Lond.,

Surgeon to the Brighton and Sussex Throat and Ear Dispensary.

I PROPOSE to make a few practical remarks on adenoid vegetations of the naso-pharynx, a subject which, although it has been carefully studied by specialists, both of the throat and of the ear, has, from its comparatively recent discovery, attracted very little attention amongst the profession at large—at least, in this country. The merit of first accurately describing this affection is due to my friend Dr. L. Meyer of Copenhagen, who, in his monograph published in the *Archiv für Ohrenheilkunde*, and in a paper in the fifty-third volume of the *Medico-Chirurgical Transactions* (1870), has given an exhaustive account of the pathology, diagnosis, and treatment of these growths. A copious literature, almost entirely from the pens of continental authors, has followed Meyer's original work, and has culminated in the elaborate discussion on the subject at the recent International Congress. My own interest in the matter dates from the year 1874, when, being on a visit to Copenhagen, Dr. Meyer kindly showed me the first case in which he had operated for the removal of these growths. During the last two and a half years my attention has been more particularly drawn to them, and I have found that they are by no means of rare occurrence in this country.

Pathology.—The pathology of the disease is simply a hypertrophy of the adenoid tissue, occupying the posterior wall and roof of the naso-pharynx (“pharyngeal tonsil”), giving rise to soft tumours of varying shape and size projecting into that cavity. Two chief forms are recognised by Meyer, viz., the *cristate* and the *cylindrical*. The former, which in my experience are the most common, occupy the posterior wall near the roof of the naso-pharynx. The latter are found on the sides of the cavity, and are probably unconnected with the pharyngeal tonsil. Hypertrophy of the pharyngeal tonsil also often assumes the character of a soft elastic cushion on the posterior wall, with a surface of more or less uneven character. The structure of the vegetations, as their name indicates, is that of adenoid or lymphatic tissue, containing a large number of blood-vessels.

Etiology.—With regard to the etiology of these growths, little definite is known. They may, according to Woakes, be congenital, and the influence of heredity as a cause is insisted on by Meyer. He also mentions as occasional causes colds, measles, and local irritation (such as occurs in cleft palate). In several of my own cases, the accompanying deafness was attributed to scarlatina; and it is quite possible that the hypertrophy of the adenoid tissue may have been due to the same cause. On the other hand, as Meyer suggests, the presence of adenoid vegetations may be an additional element of danger to the ears during an attack of measles or scarlatina.

Symptoms.—The symptoms of the disease are very characteristic, and, when once seen in a well marked case, can hardly fail to be recognised again. They are due chiefly to the mechanical obstruction of

the naso-pharynx. In severe cases in which the cavity is completely occluded (or almost so), nasal respiration being impossible, the mouth is kept constantly open, and the nose from disuse, except in scrofulous cases, assumes a pinched and wasted appearance. A most important symptom is what Meyer terms a "dead" pronunciation, *i.e.*, there is a want of resonance about the voice, which causes the patient in well marked cases to pronounce *m* and *n* as *b* and *d*, saying "cobbod" for "common", "rig" for "ring", "ted" for "ten", etc. The speech, in fact, resembles, at a superficial glance, that met with during a bad cold; and, unless the attention be alive to these cases, the symptoms are easily attributed to a chronic cold. In slighter cases, the defect of speech is, of course, less marked, and consists in a want of clearness about the voice, owing to a partial blocking up of the naso-pharyngeal cavity with growths. The patency of the mouth during the night gives rise to dryness of the throat on waking, and the patient often suffers from headache. He also has a thick tenacious discharge running down behind the soft palate, which is said to be occasionally tinged with blood. Epistaxis sometimes occurs from the soft character of the growths. A deformity of the chest-walls from the obstruction to respiration has been described by Læwenberg. The most important complication of this disease, which I have left until the last, is undoubtedly the affections of the organ of hearing, which are present in a large proportion of the cases. Deafness was present in the great majority of the cases which have been under my care. It can easily be imagined that the adenoid growths interfere with the patency of the Eustachian tubes, not only by the mechanical obstruction to nasal respiration, but also by the chronically inflamed condition of the surrounding mucous membrane which attends them. The affections of the ear vary from the most transitory form of middle ear catarrh, to acute or chronic suppurative inflammation of the tympanum, in which more or less extensive destruction of tissue takes place. It is universally agreed that adenoid growths are more common in childhood and adolescence than in adult life. In my own cases, the age ranged from six to nineteen or twenty years. The "dead" speech, the parted lips, and perhaps wasted nose, which together lend a characteristic vacant expression to the face, having thus led us to suspect the presence of these growths, the diagnosis has to be made certain by physical examination. For this purpose, two methods are available, *viz.*, palpation and posterior rhinoscopy.

Palpation, *i.e.*, the exploration of the naso-pharynx with the finger, is the method most universally applicable, and can be carried out without any special practice on the part either of the surgeon or of the patient. The patient being seated, the surgeon stands to one side of him, and, steadying the vertex of his head with one hand, passes the forefinger of the opposite hand (preferably the left, on account of its smaller size) rapidly to the posterior wall of the pharynx, and up behind the soft palate to the roof of the naso-pharynx. A few lateral movements will then give a very fair idea of the state of the walls of that cavity, and of the nature, size, and situation of any growths which may be present. The sensation to the finger in a marked case has been well described as that of a bunch of worms. The whole manoeuvre must be rapidly and gently executed, as it is disagreeable to the patient, and may easily produce vomiting. If any growths be present, the contact of the finger usually causes them to bleed. In children and refractory patients, it is well to guard the first phalanx of the forefinger with an India-rubber ring; and the finger may, I have found, with advantage be lubricated with a mixture of glycerine and water. After palpation has been repeatedly practised, the sensibility of the parts becomes blunted. The size of the naso-pharynx from before backwards, which can be ascertained by palpation, is, I consider, an important element in the case; for, if the antero-posterior diameter be small (*i.e.*, if the septum nasi extend far backwards), a smaller amount of growths will suffice to interfere with nasal respiration than would otherwise be the case.

Posterior Rhinoscopy, unlike the preceding, cannot always be practised, and necessitates some skill on the part of the surgeon, and tractability on that of the patient. It is useful for watching the clearance of the cavity in operative removal of the growths; but in severe cases, as in the one related below, the growths so entirely fill the cavity, that the posterior nares are at first quite invisible.

In these cases, examination of the fauces with a mirror, in the usual manner may show the tonsils enlarged, or the uvula inflamed in a state of granular pharyngitis, but often the lower pharynx appears merely congested, and perhaps slightly swollen.

From the very rare occurrence of these growths in adults, and the fact that they have a tendency to disappear in early life, and did they do so without having previously given rise to any serious mischief, there would be no object

in removing them. The serious affections, however, of the organ of hearing, not to mention the obstruction to nasal respiration predisposing the patients to lung-affections, pharyngitis, deformity of the chest-walls, etc., render it advisable that, when the growths impede free respiration through the nose, their removal should be accomplished before they have done any irreparable damage. Constitutional remedies directed against any existing diathesis may be employed; but they are not, as far as I am aware, of any avail in reducing the tumours. Local treatment is best commenced by the systematic syringing of the nasal passages from the front with a saline solution; and in mild cases, the growths waste by this treatment alone if perseveringly carried out. When the naso-pharynx is almost filled with growths, the fluid cannot of course return by the opposite nostril until they are cleared away. More marked cases require operative removal of the vegetations, which may be done either through the mouth or through the nostrils. The former is the method now almost universally employed, but removal by a ring-shaped knife introduced through the nostrils is the method originally recommended by Meyer, and the one which he still employs. Through the mouth the growths may be removed in slighter cases by scraping with the finger-nail, or with a suitably curved scraper, of which several forms have been invented.* In more marked instances removal may be effected by forceps introduced through the mouth, such as Catti's or Læwenberg's. Still another method remains to be mentioned, and that is the galvano-cautery, with which the growths may be burnt off. In my own practice I have hitherto employed either scraping with the finger-nail, or removal with Catti's forceps, or with the galvano-cautery. The latter has appeared to me more painful than the forceps, and without any corresponding advantage; it is useful, however, in certain cases. If the growths are to be removed without an anæsthetic with forceps, the patient must be prepared to give half-a-dozen sittings, more or less, according to the case. Removal under anæsthetic has the great advantage, that the naso-pharynx can be cleared out at one sitting. It has been practised to a considerable extent by Dr. Woakes in this country, and is to be recommended in nervous patients, and where, as sometimes happens, the parts are exceedingly sensitive, even to the introduction of the finger. A certain amount of care is required to prevent the blood from running into the larynx during the anæsthesia. Many surgeons follow up the operative removal of these growths by repeated cauterisations of the naso-pharynx with solid nitrate of silver, in order, by destroying all traces of the vegetations, to prevent any recurrence. For my own part, I am more inclined to follow Læwenberg's plan, *i.e.* to remove sufficient of the growths to allow unimpeded nasal respiration, and to free the Eustachian tubes, and not to employ the caustic. Before removing adenoid growths the tonsils, if much enlarged, should be excised, and the patency of the nasal cavities ascertained by anterior rhinoscopy.† After they are removed it is usually necessary, in order to overcome the habit of sleeping with the mouth open, to make the patient wear a bandage under his chin all night to keep his mouth closed, or else to let him use one of Guye's contra-respirators. The aural complications of course require suitable treatment, which need not be described here.

One of the most marked cases of the disease which I have met with in this country is very briefly as follows.

CASE. Polypus of Right Ear: Cicatrix of Left Tympanic Membrane: Adenoid Vegetations of Naso-pharynx occluding the Posterior Nares, successfully treated with Catti's Forceps and Galvano-cautery.—Alice B., aged 19, became a patient at the Throat and Ear Dispensary on January 30th, 1880. She was suffering from polypus of the right ear, in the anterior inferior segment of the membrane. In the left tympanic membrane, the malleus was retracted, and there was a cicatrix in the anterior segment. The right tonsil was enlarged. The fauces were congested. The polypus having been removed, attention was directed to the throat; and the following note was taken on February 11th. "She can scarcely breathe through her nostrils at all, and cannot keep her mouth shut without producing a feeling of suffocation. Her speech is 'dead', saying 'cobbod', 'kig', 'ted', etc.; and the nose is somewhat thinned and compressed. Anterior rhinoscopy shows no obstruction of the nasal cavities, but a slight swelling of the mucous membrane on the right side of the septum, and the movements of the palatal muscles during deglutition can be discerned on both sides. By posterior rhinoscopy, nothing distinct can be seen, owing to blocking of the cavity with the growths; and palpation, as was to be expected, reveals a large quantity of adenoid growths on the vault of the pharynx.

vide, February 1880, and

H. A. feeling the movements
light through through the

Syringing is unsuccessful in making the fluid return by the opposite nostril." On February 21st, a large mass of adenoid growths was removed with a single grasp of Catti's forceps; and on the 28th, part of the left posterior naris was visible by posterior rhinoscopy. Repeated applications of the forceps (altogether seven), and the use of the galvanocautery (five applications of Voltolini's galvanocauteric gauge), were so successful in clearing the cavity, that on April 9th it was noted that the patient could sit with her mouth shut; and finally, a few small vegetations on the posterior pharyngeal wall were all that could be detected with the finger.

If, in this condensed and fragmentary communication, I have not been able to bring forward anything novel, I trust that it will at least have served the purpose of drawing attention to this important and widespread disease.

THE LARYNGEAL COMPLICATIONS OF CONSUMPTION.

By JAMES M. WILLIAMSON, M.D., Ventnor.

ALTHOUGH the average case of phthisis cannot be said to run by any means a painful course, the disease is very far from being a painless one when particular complications arise. Perhaps the laryngeal complications are those which a patient has most reason to dread in this respect; for, the functions of the region being so important and so constantly in operation, the encroachment of destructive disease there nearly always entails a form of suffering which is not only painful, but harassing and exhaustive.

The existence of laryngeal complications in a case of phthisis indicates that the affection has become, even if it were not at first, a constitutional one; and the new malady, like the cerebral and intestinal complications which also occur, is one of its local expressions. Now, although the predisposing cause is the constitutional disease, we may look for many exciting causes to explain why the morbid action should localise itself in the larynx. First of all, sex has considerable influence. Although, on the whole, women are somewhat more prone to phthisis than men, men are much more subject to the laryngeal complications than women are. Out of fifty cases, thirty-nine were men and eleven women. Possibly the changes going on in the male larynx during and for some time after puberty have something to do with this. Then age might be expected to have some effect; but, phthisis being for the most part a disease of early life, it is difficult to estimate this. So far as I have seen, this complication more often occurs towards the later rather than the earlier limit of the average phthisical age. I have not been able to satisfy myself that occupation has much to do with it. In some cases, there has been a history of considerable vocal exertion; in others, there has not. Something probably depends on the abuse of alcohol and tobacco, especially the former, and particularly when the upper part of the tract is involved. Lastly, is the exposure to infection from the passage of sputa an exciting cause? If it be, it surprises us that its effects are not more common. It is worth noting, also, that a patient with an actively softening lung usually lies on the sound side. Hence sputa lying about the upper respiratory tract would gravitate to the side corresponding to the healthy lung; whereas we know that the disease attacks by preference the side of the larynx corresponding to the unsound lung.

There is good reason to believe that laryngeal complications are more prevalent in phthisis than we generally realise in practice. Out of 500 cases of consumption which came before me consecutively, no more than 34 complained of symptoms pointing to laryngeal mischief; in other words, 6.8 per cent. It must, however, be borne in mind that the complication is mostly found in the advanced stage of the disease. Taking none but fatal cases of consumption, therefore, I find that in 106 there were 25, equal to 23.6 per cent., who complained of throat-troubles. Even this would not appear to convey a full idea of the frequency; for Louis, in his *post mortem* examinations, found ulcerations in one or more portions of the tract in 33.2 per cent. of the subjects. Probably the discrepancy is due to the overlooking of tracheal and certain epiglottic ulcers during life. Some of these the laryngoscope would detect; and, in the interests of exact diagnosis, it is to be hoped that before long no investigation of chronic disease of the respiratory organs will be deemed complete unless both stethoscope and laryngoscope have been used with equal thoroughness.

It will be gathered, then, from what has been said, that symptoms are not by any means always present. At the same time, when we have them to guide us, it is generally possible to judge from them what part of the tract is involved. When there is heat and pricking low

down in the throat, with dryness and dysphagia, we suspect inflammation or superficial abrasions about the epiglottis, or in the folds of mucous membrane running between it and the tops of the arytenoid cartilages. Great suprathyroid pain, with burning and marked dysphagia, and with pain shooting up to one ear, will point to acute inflammation or deep ulceration of the same parts. I think the dysphagia is greatest when the angles of the epiglottis and the aryteno-epiglottidean folds are involved. Pricking in the box of the larynx, with hoarseness or intermittent aphonia and semilaryngeal cough, most often depend upon thickening or inflammation of one or both cords. Thyroid pain, with aphonia and more or less complete laryngeal cough, are caused by deep ulceration about the cords. Then suprasternal pain, constriction, or perhaps spasmodic dyspnoea, generally none of them very positive, will give a hint of inflamed spots, thickened patches or ulcers of the trachea. Of course, various combinations of lesions will occasion correspondingly combined symptoms. It is most usual to find tracheal and laryngeal ulcers combined, or else these with epiglottic ulcers superadded. It is rare for the disease to pass over the vocal cords. It is worth observing that the symptoms of pure laryngeal ulceration are the most constant, those of the trachea being vague and uncertain, and those of the epiglottis being often more or less latent, especially when the destruction of tissue is small and the damage is near the middle part of the border of the cartilage. The parts are not all equally liable to suffer. The nearer the lungs, the greater the danger. Fortunately, the urgency of the symptoms is the reverse of this; the nearer the lungs, the less the suffering.

In addition to these symptoms, some help will be obtained by observing the physical signs of the chest. The laryngeal affection is largely unilateral, corresponds to the side of the chest implicated, and goes with advanced mischief. So far as my experience has gone, ulceration never exists in the larynx unless the pulmonary phthisis has reached the stage of excavation. It is true that such symptoms as aphonic cough and diarrhoea are met with at a seemingly early stage of some primary tubercular cases; indeed, they may almost appear to be initial symptoms. But one characteristic of this variety of consumption is the want of definition about the physical signs over the chest; and this very indefiniteness is apt to mislead even a vigilant observer as to the condition of the lungs.

In considering the diagnosis, the first point to decide is that the symptoms do not arise from some morbid state of the fauces or pharynx, but that they are due to causes in the larynx. This question settled, the laryngoscope will eliminate hysteria and paralysis of the vocal cords. Dr. Walshe says that, as a rule, if a woman with hysteria become genuinely phthisical, the nervous affection falls into abeyance. If this be so, exceptions cannot be scarce. I have seen several cases of hysterical aphonia in phthisical women. As to chronic laryngitis, if it coexist with pulmonary phthisis, it is correct to connect the two pathologically. It must be remembered, too, that where there is no morbid constitutional tendency, such as phthisis or syphilis, ordinary inflammatory action about the larynx does not tend to run on to ulceration of tissue, nor does it resist treatment. Putting these foregoing conditions aside, only phthisis, syphilis, and cancer are left. Although so much has been written about the distinctions between the appearances in these diseases, I doubt very much whether anyone can form an absolutely reliable diagnosis from simply looking into the larynx. Such attempts are likely to trip up the specialist. Besides, other information is to be had for the seeking. The best plan, after examining the interior of the larynx, is to investigate thoroughly the general condition and history of the patient. My figures show that, at any rate, 23.6 per cent. of phthisical patients may be expected to have laryngeal complications. The syphilitic individual has a better chance of escape from them. Mr. E. C. Morgan, in a recent paper, says that 4.8 per cent. of the syphilitic have the larynx affected. On the other hand, instances of primary laryngeal cancer, which is generally of the epithelial variety, are very rare. I believe I am right in stating that, although there may be no constitutional antagonism between cancer and phthisis, yet clinically they are not often found in combination. We cannot say as much for phthisis and syphilis. It will be evident, however, that it will not do to neglect the valuable diagnostic information which is to be had for the trouble of examining the patient's chest, his lymphatic glands, and his history. It is not too much to say that, if the general and local signs are taken together, there should not be any insuperable difficulty in diagnosing between syphilitic, cancerous, and tubercular disease of the larynx.

It is impossible to touch upon the pathology in a paper confined to such brief limits as the present; but, before passing on to the subject of the treatment of this complication, a word should be said on the prognosis. Prognosis in phthisis, trustworthy prognosis that is worth the patient's having, and is at the same time quite satisfactory to our-

no *bruit*. The liver and spleen were normal. There was evidence of limited consolidation in the left lung, in the suprascapular region, which was put down to incipient phthisis. He rapidly lost ground—his weight, on the 13th, having been reduced to five stones eight pounds, and he was so weak he could hardly stand. On his readmission, I felt that nephrectomy was his only chance of life; but it was some time before his father would consent. But, he having consented, my colleague agreed with me that it was a most justifiable step. There was, however, such a remarkable change in his condition the day previous to that fixed for it, that the idea was abandoned. He complained of great pain in the joints; the tongue and lips became dry; the pulse rapid, and almost imperceptible; the expression anxious; he lay in a sort of inanimate state, and quietly died on the 16th.

Post mortem Examination.—There was extreme emaciation. The upper lobe of the left lung was consolidated, with yellow tubercle, and there were a few small cavities. There was a similar, but less extensive, affection of the right apex. The bladder was congested, the orifices of the ureters much dilated, as were both the ureters; but there was no evidence of any obstructive condition in the urethra or elsewhere. The right kidney weighed six ounces, and measured five inches in length and two and a half inches in breadth. There were numerous abscesses in its substance; but no inflammation in the pelvis. The left kidney consisted only of dilated calyces, and had almost disappeared—weighing only one ounce and a half, and measuring two and a half inches long and one inch in breadth. It was surrounded by an abscess, which extended down beneath the *psaos fascia* to Poupart's ligament. A few tubercles were found on the peritoneum.

REMARKS.—The rapid progress of medical surgery is as remarkable, as it is encouraging. There is scarcely an organ in the human body over which it has not extended its sway. With what wonder, with what dismay, would the great worthies who flourished in the first half of this century, now witness the operations which are constantly and successfully being performed? If they were invited to see a kidney removed, they would shrink with horror from such an unwarrantable and criminal proceeding; and yet nephrectomy has been performed a great many times, and often with signal success; so much so, that it is now looked upon as a step to be taken with but little hesitation in many renal diseases. Enthusiasm in the use of a new weapon is pardonable, especially when it is wielded skillfully against our common enemies. But it may be well sometimes to cool the ardour which triumph brings, and to consider dispassionately some of the dangers and disadvantages of new methods of attack. From this point of view, the case which I have related is worthy of some consideration. Medical treatment was certainly unavailing; and death stared the patient in the face. No evidence existed that the left kidney was diseased, although the fact, that rather more than half the cases of tuberculous pyelitis involve both kidneys, or the ureters and bladder, had to be taken into consideration. Nor could I overlook the fact that mischief was commencing in the chest. Still, the only way to arrest such trouble was to remove the main source of constitutional disturbance. I, therefore, urged the operation, as the last chance of life; but I have no doubt that, had the operation been performed, the patient would have immediately died—a circumstance which would have been very distressing. Instead of finding the left kidney normal, as we had hoped, it appears to have been the more diseased of the two; and it seems certain that the right organ, after all, was doing the excretory work until the extension of the disease compelled it to give up, and so uræmia ensued; and the patient, worn out and exhausted, died. Of course, it would be absolutely impossible, under such circumstances, to ascertain whether both organs were unsound by physical examination; but I think that, in similar cases, a somewhat reliable estimate might be formed by quantitative chemical examinations of the urine—at all events, the excretory power of the patient might be so determined; and thus valuable knowledge on this part in the prognosis might be obtained. And I think we shall all be agreed, that many such cases are unsuccessfully operated on, because we do not interfere early enough. I would recommend very early nephrectomy. When the boy left the hospital the first time, I kept him under observation for this very purpose; but his improved condition would have prevented our getting the father's consent, when the operation ought really to have been done—in fact, it was with the greatest difficulty it was obtained when it was. Mr. Monckton's recent success in bad cases is very encouraging; but there can be no doubt that, the shorter the delay, the greater will be the success. It is not my intention to now make any remarks respecting the best mode of operating; nor to discuss the difficulties and dangers which beset the surgeon in the lumbar or abdominal method; or the place which nephrotomy occupies with regard to the major operation. I have only introduced

my tragedy, which lacked the principal character, in the hope that others may be able to recite theirs, without this deficiency; but with, I trust—

"That bright and happy ending, which the man
Who fights for good, deemeth his best reward."

THERAPEUTIC MEMORANDA.

TINCTURE OF IODINE IN ERYSIPELAS.

ONE of the most remarkable and rapid cures I have ever seen, followed the application of the tincture of iodine to a case of idiopathic erysipelas of the head and face. The patient was a large robust man, of very plethoric habit, a free liver, and in every way the type of man one would expect to have a violent attack of an inflammatory disease like erysipelas. Iron and the usual internal remedies had been administered; and, when I first saw him, he was unconscious, rambling, and thought by all to be *in extremis*. As no local application had been thoroughly tried, I suggested cutting away the hair and painting the scalp with tincture of iodine. At the same time, I increased the dose of iron, and added forty minims of spirit of chloroform to each dose. The effect was magical. On meeting the next day for our consultation, we found every symptom improved; the redness had subsided, the stiffness was nearly gone, and consciousness was returning. The next day, he was out of all danger, and was soon convalescent. He never had any return of the disease.

I think the rapid cure in this case was entirely due to the iodine application, as from its very first application the local symptoms showed marked improvement. Certainly, in my experience, I have never seen so apparently desperate a case recover so soon. In the *JOURNAL* for July 22nd, I see a report of a case of traumatic erysipelas rapidly cured by this treatment. I therefore hope this report of an equally successful idiopathic case may help to complete the picture of the treatment of erysipelas by the application of tincture of iodine, and so bring it more prominently before the profession.

CHARLES F. HUTCHINSON, M.D., Scarborough.

SURGICAL MEMORANDA.

MAMMARY SINUS SUBSEQUENT TO ABSCESS: TREATMENT BY A LISTERIAN METHOD: CURE.

THE following case is interesting, because it shows the value of what may be justly termed a Listerian mode of cure, and the comparative uselessness—in this case the utter uselessness—of many previously (and usually) employed methods of treatment.

J. F., aged 14, first menstruated about three months ago—with no previous or subsequent distress. Pain in the breast began early in last December; not preceded, as far as the patient knows, by any injury. An abscess formed and was opened (without antiseptic precautions. She was not then, or not till some months afterwards, under my care). Healing of the abscess cavity went on favourably enough for some time but resulted in a narrow sinus—from about one-and-a-half to two inches in length, and with great surrounding hardness. Beyond this, no progress could be made; matters indeed, at the end of six months, being worse, for, in addition to an unhealthy sinus, a sloughy-surfaced sore of some extent existed in the surrounding superficial textures. This, too, was in spite of the most careful and almost continuous strapping, free enlargement of the opening, perfect drainage, use of various lotions and mixtures (sulphate of zinc, copper, and alum, carbolic lotion, carbolic oil, glycerine of carbolic acid, glycerine of borax). The patient was at the same time under good hygienic and dietetic conditions, and a constitutional medicinal treatment (iron, aloes, *nux vomica*, &c.).

All these local means of cure, looked back at through the clear light of the subsequent thorough antiseptic line of practice, dwindle into mere shadowy spectres of good treatment. After six weary months, the sore yielded in three weeks to a method first suggested by Mr. Lister, and by no means sufficiently widely known, except perhaps by his own pupils, for the treatment of callous ulcers. First, the ulcerated surface, or the surface of the sinus, is thoroughly cleansed with a solution of chloride of zinc (40 grains to an ounce of water). Secondly, the skin for some distance around must be thoroughly cleansed with a lotion of carbolic acid (1 in 20). This Mr. Lister prefers to use for the skin with its glands, folds, and recesses, because of its strong penetrative power. Thirdly, a saturated solution of boracic acid (the ordinary boric lotion) is employed as the permanent dressing; and it is best, I think, to use this for the first few days, or till the

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 5TH, 1882.

LEGAL OBLIGATIONS OF THE MEDICAL PROFESSION.

III.—ACTIONS FOR MALPRACTICE.

CIVIL or criminal actions against practitioners of medicine are, fortunately, not very common, but yet are sufficiently so to deserve attention—more especially as they frequently involve conditions of great hardship and personal injustice.

Much public interest, but no great professional importance, was attached to a recent conviction, in the Central Criminal Court, of Thomas Aikin Smyth, described as a medical student, for the manslaughter of the Reverend Mathew Campbell, occasioned by a want of skilful and careful treatment of him by the prisoner, for cancer in the tongue. The brief facts of the case are, that the wife of the patient, thinking this student was a legally qualified medical man, requested him to attend and treat her husband for this complaint. Smyth, however, although he attended and prescribed for him, omitted to duly attend the deceased, and treat him skilfully. Mrs. Campbell became so alarmed at the increased illness of her husband, that she sent for Dr. Channing-Pearce of Brixton Rise, who at once saw that the case was a very serious one; and the only chance of saving his life was to have an operation performed, which was accomplished, at St. Thomas's Hospital, by Mr. Sydney Jones, as it was thought to be the only means of relieving the patient from the dangerous condition in which he then was; but he died shortly afterwards, from extravasation of urine. Several medical men gave testimony that, up to a certain point, the prisoner's treatment of the deceased, whose malady was a complicated one, was scientific and reasonable. It also appears that this student had taken his degree of B.A. at Queen's University; and that he had afterwards devoted himself to the study of medicine by attending classes at the university. For some years, he had assisted his brother as surgeon in London, and had shown a fair knowledge of his profession; and had only been prevented from taking his diploma from not being able to bear the sights of the dissecting-room. The evidence in this case showed such gross negligent *malpraxis*, on the part of an unqualified practitioner, that there is no ground for either surprise or dissatisfaction with the verdict.

Neither from the reported arguments of counsel in this case, nor from the charge of Mr. Justice Manisty to the jury, do we gather any important or useful knowledge of the law of malpractice. This is, however, a subject of great concern, not only to the medical profession of this country, but to that of all other highly civilised nations, and particularly America; and we propose to point out the essential medico-legal bearings of this subject.

In the first place, it should be borne in mind, that every person who becomes a member of a learned profession undertakes, in the eye of the law, to bring to the exercise of such a fair and competent degree of skill, care, and diligence to accomplish the purpose for which he is employed; and, if he fail to do so in any of these respects, he is said to be guilty of *malpraxis*—inasmuch as he has led the public to believe that he is able to properly follow his calling, and consequently, that all who

engage him can rely upon his reasonably discharging the duties of the same. It has also been held, that he who offers his services for employment by the public in a special capacity, is bound to possess and exercise a reasonable degree of the skill usually possessed by those who follow such vocation in the same locality, and to use reasonable care and diligence in its application. This rule, which is established in all nations where the common law prevails, relates to all who profess any art requiring special training and skill. By the law of England, any person who deals with the life and health of another is liable for manslaughter, if the death of the patient result from his lack of skill, care, and diligence in his treatment; and also, it appears, for a misdemeanor, for any injury to the patient occasioned by such default, which may not cause loss of life. A person guilty of this offence is also liable to an action for damages for either of these ill-consequences. Before a person can be criminally responsible for malpractice, however, it must be shown that he wilfully and maliciously intended to commit the offence; but this intent, without proof of any deliberate purpose to do injury to his patient, may be inferred from the evidence in the case; and our courts will draw this inference, or permit it to be drawn by the jury, upon proof of reckless or grossly ignorant ill-treatment, endangering life or health.

According to a learned note, in Foster and Finlason's *Reports of Cases*, described at Nisi Prius and at the Crown Side on Circuit, referring to the case of "*Regina v. Noakes*," subsequently noticed, we are informed that it is impossible to define culpable or criminal negligence, or to make a distinction between actionable and criminal negligence intelligible, except by illustrations drawn from actual judicial opinions. It is also exceedingly difficult, if not impossible, to determine what amounts to a reasonable degree of skill, care, and diligence, which physicians and surgeons should exercise in the practice of their profession. As some important observations have been made on these points by experts in forensic medicine, we will mention a few leading representative cases, which have been brought before our law-courts, against licensed and unlicensed medical men, for malpractice, in illustration of what does and what does not amount to this offence.

In his excellent *Medico-Legal Treatise on Malpractice* (third edition, New York, 1871), Mr. Elwell says that, "in large cities and towns, are always found surgeons and physicians of the greatest degree of skill and knowledge. Their pretensions are properly large; they are to be held to a corresponding high degree of responsibility; they contract to do more than the ordinary physician; and they are paid a higher price for what they do—consequently, the contract is more difficult to fulfil. In the smaller towns and country, those who practise medicine and surgery, though often possessing a thorough theoretical knowledge of the highest elements of the profession, do not enjoy so great opportunities of daily observation, when the elementary studies are brought into every-day use, as those who reside in the metropolitan towns; and, though just as well informed in the elements and literature of their profession, they should not be expected to exercise that high degree of skill and practical knowledge possessed by those having greater facilities for performing and witnessing operations, and who are, or may be, constantly observing the various accidents and forms of disease. It will not therefore, as a general thing, require so high a degree of knowledge to bring this class up to the rule of ordinary knowledge and skill, as in places where greater facilities are afforded by which higher professional knowledge is attainable." He then rightly adds, that the operation of occult causes and influences, over which the practitioner has little or no influence, and which no human foresight is able to anticipate, relieves his responsibility to a certain extent. In support of this, he tells us, that, "when a surgeon undertakes to treat a fractured limb, he has not only to apply the known facts and theoretical knowledge of his science, but he must contend with very many powerful and hidden influences—such as want of vital force, habit of life, hereditary diathesis, climate, the mental state, local circumstances, and a thousand other agencies. These latent conditions often render the management of a surgical case difficult, doubtful, and dangerous;

they are all potent causes, frequently having greater influence in the result than all the surgeon may be able to accomplish."

Again, according to Casper and Becker, the physician, in the treatment of internal diseases, cannot be declared guilty of criminal carelessness for omitting to use any particular remedy, as there is never any upon which all authorities are agreed, and as it is always possible that the patient may recover without the use of such remedy. This uncertainty of remedies extends even to the antidotes recommended for different poisons; and where the antidote produces a favourable effect, it can never be determined with certainty how much of the effect is due to the action of the antidote. Besides, many antidotes have been recommended merely upon theoretical grounds, some of which are known to be actually injurious. But, when it can be proved that there is great probability that the injurious effects of a poison might have been prevented by the use of a particular antidote, the physician is guilty of criminal carelessness if he fail to use it. Casper himself asserts that a physician should be liable to punishment if he entirely depart in a given case from the treatment which the great majority of physicians adopt in his time in these cases, and which a great majority of medical men recommend for the same. Wharton and Stillé, however, state, in answer to this, in their standard treatise upon *Medical Jurisprudence*, 3rd edition, Philadelphia, 1873, that great difficulty might result from such a test. It would be impossible for a medical man to stop to inquire in any particular case what is the practice of the majority of his contemporaries; and, if he should, he has frequently no means of answering the question. These American writers also state that "this principle would also render all homœopaths liable to punishment. Besides, it would be impossible to collect the views of the great majority of authors upon the given case. Many may not have noticed the particular case in point; and much difference of opinion will be found among those who have. Hence, the position now generally accepted is that a physician is not responsible for damages if he act in accordance with the views of his particular school, his patient employing him as belonging to such school."

With regard to ordinary diligence and care which physicians and surgeons are to use in the practice of their profession, this has reference to the state of the patient; and what would be usual care and diligence under certain circumstances, would amount to negligence in others. As the distinction between the various degrees of negligence is far too artificial for any definite and practical application, the general rule is that medical men shall be responsible for such care and diligence in their practice as common sense men of ordinary care and prudence generally exert when they are equally interested in business of the same kind and importance; and physicians and surgeons are not liable for greater responsibility. A very good definition of what constitutes gross negligence, according to law, was mentioned by Mr. Justice Willes in the case of *Regina v. Markuss*, tried before him at the Durham Spring Assizes in 1864, when he said that "gross negligence might be of two kinds: in one sense, when a man, for instance, went hunting, and neglected his patient, who died in consequence. Another sort of gross negligence consisted in rashness when a person was not sufficiently skilled in dealing with dangerous medicines, which should be carefully used, and of the properties of which he was ignorant, or how to administer a proper dose. A person who, with ignorant rashness, and without skill in his profession, used such a dangerous medicine, acted with gross negligence. It was not, however, every slip that a man might make that rendered him liable to a criminal investigation. It must be a substantial thing. If a man knew that he was using medicine beyond his knowledge, and was meddling with things above his reach, that was culpable rashness. Negligence might consist in using medicines in the use of which care was required, and of the properties of which the person using them was ignorant. A person who so took a leap in the dark in the administration of medicines was guilty of gross negligence."

The earliest important decision recorded in favour of qualified and

unqualified medical men concerning malpractice, was given by Sir Matthew Hale, whose judgment has for many generations been quoted with authority in all the succeeding decisions upon the subject. This eminent judge stated that, "if a physician gives a person a potion without any intent of doing him any bodily harm, but with intent to cure or prevent a disease, but, contrary to the expectation of the physician, it kills him, this is no homicide, and the like of a surgeon; and I hold their opinion to be erroneous that think, if it be no licensed surgeon or physician that occasions this mischance, then it is a felony—for physics and salves were before licensed physicians; and, therefore, if they be not licensed according to the statutes, they are subject to the penalties in the statutes; but God forbid that any mischance of this kind should make any person not licensed guilty of murder or manslaughter." This decision, so far as it relates to charlatans, has been much shaken by two important decisions. In that of *Rex v. Simpson*, tried at the Lancaster Spring Assizes in 1829, in which the prisoner was indicted for manslaughter, it appeared that the deceased, who was a sailor, had been discharged as cured from the Liverpool Infirmary, after undergoing salivation; and that he was recommended by another patient to go to the prisoner for an emetic, "to get the mercury out of his bones." The prisoner was an old woman living in the place, and occasionally dealt in medicine. She gave the sailor a dose of the solution of corrosive sublimate, which caused his death. The woman said she had received the mixture from a person from Ireland, who had returned thither. Mr. Justice Bailey, who presided at her trial, said: "I take it to be quite clear that, if a person not of medical education in a case where medical aid could be obtained, undertakes to administer medicine which may have a dangerous effect, and thereby causes death, such person is guilty of manslaughter. He may have no evil intention, and may have a good one; but he has no right to hazard the consequence in a case where medical assistance may be obtained. If he does, it is at his peril. It is immaterial whether the person administering the medicine prepares it himself, or gets it of another." So, too, in the case of *Rex v. Webb*, tried before Lord Lyndhurst, Chief Baron of the Exchequer, at the York Summer Assizes in 1834, the prisoner was convicted of manslaughter in causing the death of a patient suffering from small-pox, by administering large doses of Morrison's pills; his lordship remarked that, "where proper medical assistance can be had, and a person totally ignorant of the science of medicine takes upon himself to administer a violent and dangerous remedy to one labouring under disease, and death ensues in consequence of that dangerous remedy having been so administered, then he is guilty of manslaughter. . . . I shall leave it to the jury to say, first, whether death was occasioned or accelerated by the medicines; and, if they think it was, then I shall tell them, secondly, that the prisoner is guilty of manslaughter if they think that, in so administering the medicine, he acted either with criminal intention or from very gross negligence."

It has been held that, in those instances in which medical and surgical practitioners, whether licensed or not, manifest ignorance, or criminal inattention, or culpable rashness, in the treatment of their patients, they are criminally responsible. Thus, in a case tried at the Lancaster Summer Assizes in 1830, a blacksmith was convicted of manslaughter, for attempting, in a state of intoxication, to deliver a woman, while he was so ignorant of the proper course to adopt, that he totally neglected what was absolutely necessary after the birth of the child, whereby the mother died. In the case also of *Spilling*, tried at the York Spring Assizes in 1838, the prisoner, who was an apothecary and accoucheur, was found guilty of manslaughter for causing the death of a woman by the improper use of the *vacuus* or lever during her pregnancy. Mr. Justice Coleridge told the jury that "no man was justified in making use of an instrument, in itself a dangerous one, unless he did so with a proper degree of skill and caution. If the jury thought that in this instance the prisoner had used the instrument with gross want of skill or gross want of caution, and that the deceased had thereby lost her life, it would be their duty to find the prisoner guilty."

In charges of manslaughter for want of care and diligence in medical and surgical practice, the accused persons appear to have been nearly always acquitted in our courts. Thus, in the case of *Regina v. Markuss*, before alluded to, the prisoner, a "herbalist", who was indicted at the Durham Spring Assizes in 1864 for administering an overdose of colchicum-seeds and brandy as a remedy for a cold, which caused gastritis and death, was acquitted. In the case of *Regina v. Noakes*, tried before Chief Justice Erle at the Sussex Spring Assizes in 1866, the prisoner, a chemist and druggist, was found not guilty of manslaughter for causing the death of a person by accidentally pouring aconite into a wrong bottle. It appears that the deceased had for years been in the habit of continually sending for aconite, and but seldom for henbane, to the prisoner, who supplied poisons in bottles of a particular make and colour. On this occasion, the deceased, requiring both aconite and henbane, sent two of his own bottles of ordinary make, one of which bore the label "Henbane, thirty drops at a time". The prisoner, by mistake, put the aconite into the henbane-bottle; and the deceased took a dose of thirty drops, which proved fatal. This learned Chief Justice told the jury that "they could not convict unless there was such a degree of complete negligence as the law meant by the word 'felonious'; and that the case was not sufficiently strong to warrant their finding the prisoner guilty on a charge of felony, but that there might be evidence of negligence in a civil action". A surgeon was also acquitted at a sessions of the Central Criminal Court in 1862, on a charge of manslaughter for occasioning the death of a female patient by negligence, whom he had attended in childbirth. In this case, the Recorder, in charging the grand jury, very aptly observed that "every medical man was of course liable to make a mistake; and he would not be criminally responsible for the consequences, if it should appear that he had exercised reasonable skill and caution; and it was only in the case where a medical man was guilty of gross negligence, or evinced a gross want of knowledge of his profession, that he could be held criminally responsible."

It will be perceived, from what we have stated, that the law of malapraxis is too favourable for quacks and very stringent against legally qualified physicians and surgeons; and therefore, while it tends to increase the number of charlatans, and to thereby further endanger the lives and health of the people of this country, it renders the difficulty of licensed medical men proving their inculpability for the offence, if accused of such before juries, greater than it reasonably should. It is to be hoped, therefore, that statute law will be provided to materially diminish, if not entirely repress, this evil.

ALCOHOL IN WORKHOUSES.

We refer again to the question of alcohol in workhouses, which is again exciting public interest. A guardian has drawn attention, in the *Times*, to the expenditure on alcohol in various metropolitan workhouses during 1881, and quotes figures of no ordinary significance. He states that, in the workhouses belonging respectively to the Unions of Greenwich, Shoreditch, Camberwell, Wandsworth and Clapham, Whitechapel, Lambeth, and St. George's (2), the alcoholic expenditure for the year was under £10. If we compare these figures with those given in Mr. W. M. Torrens's return for 1869, a marked and astonishing decrease is revealed. In 1869, the expenditure for beer, wine, and spirits was, in these Unions respectively, £951, £818, £909, £785, £603, £1,503, and £2,056. It might almost be doubted whether the statements are accurate, the decrease in the expenditure being so extraordinary as to be well nigh incredible.

An examination of the various Parliamentary and other returns, at different periods, discloses a diversity of practice, with reference to alcohol, for which it is difficult to find a satisfactory reason. In 1869, whisky was consumed in but one metropolitan workhouse, while there was only one in which there appears to have been no consumption of gin. Bermondsey spent £199 for 479 inmates, while Rotherhithe spent £385 for 219, or almost double the expense for less than half the num-

ber. In the provinces, matters were little better. From Lord Derwent's return for 1871, we learn that, while the average charge for alcohol for in-door paupers was in Berkshire £2 14s. per head, in Cornwall it was only 12s. 10d. In Wales, while the average was £4 6s. 5d. in Radnor, it was but 4s. in Carnarvon. There was a similar discrepancy among the out-door poor. In Berks, the average cost for liquor per pauper was £1 13s. 6d., and in Dorset only 10s. 0½d. In Wales, it ranged from 9s. 3½d. to 4d. per head. In Ireland, in 1871, four unions spent nothing at all for alcohol; while, in the remaining unions, the expenditure varied from three farthings per inmate to £1 5s. 10d. Scotland presented the same alcoholic eccentricity—the expenditure reaching from 1s. 2¼d. per case at the one extreme, to £2 8s. 7½d. per case at the other.

The figures given in the *Times*, as applicable to 1881, reveal the similar lack of a definite plan in the administration of alcohol. One union has two workhouses, each with an average of 379 inmates. In the one house, there was an alcoholic expenditure of £4; in the other, of £187. Again, for 1,055 persons at Fulham, £8 sufficed; while, in the City of London, less than half that number, or 437, consumed intoxicants to the value of £794. In St. Marylebone, in 1881, 2,085 inmates cost £1,613 for alcohol; while at St. George's-in-the-West £21 was held to be enough for 1,776. We have reason to believe that, since the opening of the new infirmary for Marylebone at Notting Hill, the charge for alcohol has greatly decreased; and that next year's report will tell a different tale.

What lessons are contradictory returns such as these capable of teaching? One which is often drawn is, that many Poor-law medical officers, and other practitioners, do not prescribe alcohol with that precision which they aim at in the prescription of other powerful medicinal remedies. But, on the other hand, is it not the case that materials do not at present exist on which a definite opinion can yet be formed as to the influence of the careful prescription of alcohol to the sick. One medical officer (Mr. Anderson of Walton) did indeed report that, on trying to do almost entirely without alcohol, he found the mortality of his patients greatly increased, and the period of their convalescence prolonged. But, recently, after an investigation on the spot, the Local Government Board reported that the data were, in their opinion, too incomplete to warrant any opinion whatever. On the other hand, several experienced medical officers have given the non-alcoholic system an extended trial, and have expressed their satisfaction with the result. At Wrexham, St. George's, Hanover Square, Chester, Helston, Barnsley, Longford, Falmouth, and other places, where little or no alcohol has been ordered, there has been observed, it is alleged, among the inmates greater rather than less physical energy, and a more vigorous appetite for food. Though the definition of the true place of alcohol in medicine is by no means so simple a problem as the writer in the *Times* supposes it to be, a great deal of experience has been accumulated in the direction of showing, that the lessening of the quantity of alcohol much below former standards of practice is, to say the least, not likely, under ordinary conditions, to increase the death-rate, or to retard recovery. To the medical officer alone rightly belongs the privilege of ordering alcohol as a medicine; and it behoves him to administer this potent agent with care, as he would other powerful medicines liable to dangerous abuses. The routine administration of stimulants is now fast dying out; and is likely, we think, to disappear the more rapidly, in proportion as the agent is more carefully considered. Alcohol should be prescribed medicinally, as most men are disposed to admit, with deliberation, judgment, and precision.

As to the allowance of beer or other intoxicating drink to healthy paupers, there is, we expect, likely to be a liberal consensus of opinion. A large proportion of the inmates of our workhouses owe their pauperism to drinking. Not a few of them are habitual drunkards, whose only hope of cure is in unconditional abstinence. We are entitled to assume a general opinion that men and women, in ordinary health, have no need of stimulants; and it seems not unreasonable to

suggest that, so long as beer is a part of the dietary of the healthy inmates of a workhouse, so long will their belief in the necessity and importance of alcohol, as a common article of food for healthy persons, be strengthened and confirmed.

DR. ROBERT BARNES has been elected Consulting-Physician to the Chelsea Hospital for Women.

THE library of the Obstetrical Society will be closed from August 14th to September 14th.

THE presidency of the Health Department of the forthcoming congress at Nottingham of the Social Science Association has been accepted by Sir Rutherford Alcock, K.C.B.

NO fewer than twenty grocers at Margate have been summoned during the past week before the magistrates for selling coffee adulterated with chicory. The authorities failed to prove that the adulteration was to the injury of the purchaser, and the prosecution fell through.

A NEW convalescent home for the West of England has been recently opened at Weston-super-Mare. The building will contain one hundred beds, and has cost over £11,000. A sum of £230 has been contributed towards furnishing the institution.

THE Directors of the Wolverhampton Hospital, by reason of a donation of £1,000, purpose increasing the accommodation for patients in the infectious diseases wards, by providing separate living quarters for the nurses engaged in the infectious departments.

THE office of coroner for South Essex has become vacant by the death of Mr. Charles Carne Lewis, at the advanced age of seventy-four years. The deceased gentleman had held the office of coroner for about fifty years.

AMONGST the ample stores to be sent to Egypt are four steam ice-machines, the use of which will be taught to members of the hospital corps. Every field-hospital will have its ice-box, which will be filled with fresh ice every day.

WE are informed that Surgeon-Major R. W. Jackson, C.B., leaves to-day (Friday) for Egypt, his services having been specially requested by Sir Garnet Wolseley, for the benefit of the commander and his head-quarter staff.

THE death-rate in twenty-eight of the largest English towns last week averaged 19.6 per thousand of their population. Whooping-cough was the most fatally prevalent in Liverpool and Sunderland, measles in Huddersfield, and scarlet fever in Hull. Only two fatal cases of small-pox were recorded in London.

IT is to be announced that a meeting of Fellows of the Royal College of Surgeons of England will be held in the Assembly Room, August 10th, to consider matters affecting the interests of the Fellows generally. The chair will be taken at 1 P.M. by Mr. C. G. Wheelhouse.

IT is to be noted that, in the NAT., we have referred to the decision of the War Office not to send out heavy service and ambulance companies. We learn that light-wheel carriages are to be sent out in small numbers only. The sick and wounded are to be carried in caçoles and litters of the French field-hospital.

DURING the last eight years as many as 78 children have died in Sunderland from syphilis. These deaths, however, can hardly represent the numbers who have died from the disease: since, as Mr. Harris

in his report on the borough observes, medical men are often placed in a serious difficulty when giving a death-certificate to parents whose child has died of syphilis, lest in ascribing the death to the proper cause they should be the means of causing a life-long feud, and of making the innocent suffer with the guilty.

THE marble bust of the late Mr. Frank Buckland, which was publicly subscribed for and formally presented to the authorities at South Kensington in May last by Prince Christian, on behalf of the subscribers to "the Buckland Memorial Fund", has now been placed in its permanent position at the entrance to the Fish Museum, South Kensington. The work has been executed by Mr. J. Warrington Wood, of the Villa Campagna, Rome, and forms an appropriate addition to the valuable collection of casts and specimens gathered together by Mr. Buckland, and by him bequeathed to the nation.

BOLTON has recently been visited with a remarkably virulent and fatal outbreak of typhoid fever; and in his last monthly report, Mr. Sergeant, the health-officer, gives a special account of the epidemic. It is probable that the disease was introduced from Galway, and its prevalence in Bolton was confined entirely to two streets. The symptoms were, as a rule, very marked and of the worst character, and the majority of cases terminated fatally with remarkable rapidity. The extreme fatality of the disease is shown by the fact that, out of eleven persons attacked, no fewer than eight succumbed. Mr. Sergeant thinks that the high rate of mortality may be partly attributed to typhoid being introduced amongst people of low vitality, owing to their overcrowded surroundings.

WE publish in another column a retrospective statement of the past action of the Association, of the Registration of Diseases Committee, and of the Parliamentary Bills Committee, on the subject of the registration of disease. We mentioned last week that, in accordance with a request subsequently forwarded from other quarters, arrangements have been made to afford facilities for a full discussion of this subject, which is at the present moment attracting so much interest and attention, at the forthcoming meeting. A sitting of the Public Medicine Section, on Thursday, August 10th, will be especially set aside for that purpose, and it may be expected that a full discussion will then take place; and any resolution which may then be arrived at will, we believe, be set down for discussion on the following day, at the general meeting, when the Association as a body will, in connection with any such resolutions, have an opportunity of expressing again its collective views and wishes on the subject.

SURGEON-MAJOR F. B. SCOTT, of the Army Medical Department, who last week had the honour of being presented to the Queen at Osborne, on his appointment to the staff of His Royal Highness the Duke of Connaught, and who took his departure for Egypt with the Duke and the First Battalion of the Brigade of Guards, in the steamship *Orient*, on the 30th ultimo, is the medical officer who formed one of the suite of the Empress Eugénie, on the occasion of her voyage to South Africa to visit the spot where her son, the Prince Imperial, fell in action with the Zulus.

IN addition to the administrative medical staff, 140 executive medical officers are under orders for Egypt, one for each regiment, battery, company of engineers, Army Service Corps, battalions, etc., in fact every military unit will have one of these executive officers associated with it, whilst seven will be attached to each field hospital. The general permanent hospitals will be supplied with medical officers according to the number of beds. The eight field and two general hospitals, as at present constituted, will afford accommodation for 2,300 sick and wounded. All the hospital appliances are to be sent to Malta, the Gozo Hospital being prepared for the sick and wounded. The hospital at Cyprus is to be reserved for the convalescents.

A CONGRESS OF CREMATION SOCIETIES.

A CONGRESS of the cremation societies of Italy will be held in Modena next September. The invitation has been issued by the Society of Milan, with the object of uniting the various Italian societies, and thereby forming, if possible, a "Cremation League".

CREMATION OF ANATOMICAL SUBJECTS.

THE Municipality of Paris has just decided, on the advice of Dr. Bourneville, to sanction the cremation of those bodies which have served the purposes of subjects at the School of Practical Anatomy and at Clamart. The total number of such subjects received during the three years ending 1880 at both the above institutions, amounted to 10,144.

M. PASTEUR.

At the last meeting of the Academy of Sciences of Paris, the President, M. Jamin, announced that a committee had been formed some time before to present the eminent chemist and biologist Pasteur with a medal commemorative of his great discoveries in those sciences. On the committee were the names of Dumas, Tisserand, Davaine, and many others well known in scientific and social circles. After an able and eloquent *résumé* of Pasteur's special labours, the medal was handed to that distinguished *savant* by his old friend and master, Professor Dumas.

THE ITALIAN MEDICAL CONGRESS.

THE tenth Italian Medical Congress will be held in Modena early next September. It is expected that His Excellence, Dr. Bacelli, Minister of Public Instruction, will be present. At the same time as the Congress, there will be held an Exhibition of Hygienic Appliances, and of objects generally connected with sanitary science. In view of the national character of the approaching Congress the railway and steamboat companies have consented to issue tickets to those who propose to attend at very much reduced rates. All communications should be addressed to the committee, Modena.

FEMALE NURSES FOR EGYPT.

ACCORDING to latest intelligence, the number of female nurses that are to be sent to Egypt is 24. They have been selected from army nurses and members of the National Aid Society, all previously trained at Netley, and from Miss Nightingale's training school, and will all be subjected to uniform discipline as regular army nurses. They will leave in the *Carthage*, and will be sent to Gozo, Cyprus, and Ismaila, some remaining for service in the hospital ship. The Army Medical Department speak, we are assured, in the highest terms of these ladies, who are nurses of great skill and experience in the care of medical and surgical cases.

LEAD POISONING.

At the last weekly meeting of the Clerkenwell Vestry, the Sanitary Committee reported that they had under consideration a letter from Mr. Clay, clerk to the Shoreditch Guardians, on the subject of lead poisoning. It was moved and carried, that the attention of the Secretary of State be called to the question, with the view to instructions being given to the inspectors of factories to give greater attention thereto. Mr. Ross said it was really surprising, from the report of the medical superintendent of the Highgate Infirmary, to see the amount of sickness and death directly attributable to that terrible trade. It was possible, however, to reduce the bad results if better regulations were enforced.

LEAD-POISONING IN HOLBORN.

DR. I. C. McLEARN has recently prepared a report on the occurrence of lead-poisoning amongst the patients of the Holborn Infirmary, of which he is medical superintendent. During the past twelve months,

as many as fifty-four patients have been admitted suffering from the effects of lead-poisoning. Six only of these cases were males, the remaining forty-eight being females. The occurrence of the greater number of cases amongst females is due to the fact, that more women than men are employed in the manufacture of white-lead. The patients exhibited the usual symptoms—viz. : acute griping pains, with constipation, and often severe and distressing vomiting, lasting for days. In some of the worst cases, moreover, the patients were at times quite delirious, with alternating periods of unconsciousness; and days elapsed before these conditions changed, and the patients showed any sign of improvement. Loss of strength was also complained of, especially weakness of the wrists and legs; but in a few cases only did the patients become paralysed in the muscles of the forearm. Epilepsy from lead occurred in two cases; and some of the patients have since suffered from attacks of gout. The time which the patients remained in the infirmary varied from three weeks to three months. One case terminated fatally, and this patient (a woman) died within a few hours after her admission.

OVERCROWDING AND INFECTIOUS DISEASE.

A DREADFUL case of overcrowding and concurrent disease is reported from Sunderland. It appears that no fewer than seventeen persons lived in one room, of whom eight had been suffering from typhus fever during the last few weeks, and had consecutively to be removed to the workhouse hospital. However, ignorance and want combined to still further spread this severe disease; for a woman, named Mary Martin, pawned several articles of clothing belonging to one of the sufferers, her son-in-law. This fact became known to the sanitary authorities, and she was summoned to the Sunderland Police Court, and fined five shillings. It is stated that a heavy penalty was not asked for, probably in consideration of the woman's poverty, though that reason is not given in the report we have before us.

MORTALITY AT MILE END.

MR. CORNER, the esteemed Medical Officer of Health for Mile End Old Town, points out that low death-rates in sea-side resorts and rural districts generally meet with prompt and favourable notice. He therefore thinks that it is only fair to note that the mortality in the hamlet of Mile End Old Town, comprising a population of 110,000, during the last eight weeks has been at the average weekly annual rate of 16.67 per 1,000 population, and that this is not an unusual circumstance. The birth-rate for some years has ranged between 37 and 40 per 1,000, which tends to prove the full extent of estimated population. We are quite of the same opinion as Mr. Corner, and are glad to give the publicity of our columns to this satisfactory state of things in our crowded East-end districts.

STATISTICS OF HOSPITAL SATURDAY.

IN the course of an address lately delivered in Birmingham by Mr. Sampson Gamgee, the founder of the Hospital Saturday movement, the lecturer stated that it was just ten years since the first Hospital Saturday collection; and that the gross proceeds of the ten collections in Birmingham amounted to £38,681 0s. 11d., while a grand total of £65,610 6s. 4d. had been reached in the district, if they included Dudley, £5,197 3s. 3d.; West Bromwich, £7,444 17s. 1d.; and Wolverhampton, £14,287 5s. 1d. In the metropolis, which, in the Hospital Saturday as in the Hospital Sunday movement, had honoured Birmingham by following in its steps, Hospital Saturday had produced, in eight collections, from 1874 to 1881 inclusive, £50,379, raising the total in London and the Midlands to £115,989 6s. 4d.

CHOLERA IN THE PHILIPPINE ISLANDS.

THIS important Spanish colony is at the present moment threatened with an outbreak of cholera. From an official dispatch of the Governor-General, it would appear that the disease has been imported by a

steamer arriving from China and Japan. The number of cases so far have not been great, nor of a severe type. The disease is confined to the ports of Zamboanga and Jolo, which are at some distance from Manila. This fact, together with the rigorous measures of isolation and disinfection which have been taken, will, it is believed, check the further progress of the disease. Should it, however, spread to Manila, which is in direct communication with Europe, *via* the Suez Canal, it might be a matter of the utmost gravity. The condition of things in Alexandria is just now eminently favourable to the outbreak of an epidemic. Large bodies of troops have been massed there at an unhealthy season of the year, with a water-supply notoriously deficient, and with all the sanitary economy of a great city completely disorganised. To this must be added the presence of the Indian troops, who are, if anything, less able to stand against the disease than Europeans, and who come from a country in which cholera is practically endemic all the year round.

SMALL-POX AT WEDNESBURY.

A SEVERE outbreak of small-pox is epidemic at Wednesbury, one of the largest towns in the "Black Country". On July 31st, the local medical officer of health reported a serious increase in the mortality from zymotic diseases, and announced that thirty new cases of variola had come under his notice during the previous fortnight. For several weeks past, new cases of small-pox have appeared; and the local authorities, namely, the board of guardians of the poor, and the Improvement Commissioners, seem unable either to realise the gravity of the position, or decide as to their relative or joint responsibilities in dealing with the epidemic. While general revaccination and other salutary measures should be pushed forward, no time ought to be lost in providing the most powerful means for stamping out the epidemic, namely, a public hospital for the efficient and early isolation of cases of small-pox as they arise.

TYPHOID FEVER AT CLAPHAM, DUE TO INFECTED MILK.

THE circumstances attending this outbreak (see *BRITISH MEDICAL JOURNAL*, June 22nd) are to be the subject of inquiry at the hands of Dr. Parsons, of the Medical Department of the Local Government Board. From the reports which have been prepared by the local health-officers, it appears that no fewer than fifteen cases of typhoid have occurred in twelve houses in various parts of Clapham, and that five additional cases have appeared in an adjoining parish. All the sufferers were attacked within twenty-four hours of each other, and, with one exception, were supplied with milk from the same dairy. The health-officers of the district are unanimous in their opinion, that the milk was in all probability the medium of the transmission of the disease; but they are unable to state positively the cause of the infection of the milk. The reports will be placed in the hands of Dr. Parsons; and the Wandsworth Board of Works have resolved to take no action in the matter until the conclusion of his inquiry.

NOTIFICATION OF INFECTIOUS DISEASES.

A MEETING of the medical profession of Sheffield and the neighbourhood was held at Sheffield, on August 1st, to consider Mr. Hastings's Bill relating to compulsory notification of infectious diseases. Dr. de Bartolomé was in the chair, and forty-one members of the profession were present. The following resolutions were passed, with only three dissentients: 1. "That this meeting views with entire disapprobation the proposal to compel medical men, without any discretionary power, to report cases of infectious disease to the sanitary authorities, feeling it to be an unwise interference with the relations in which medical men stand to their patients." 2. "That a petition, embodying the views of the previous resolution, be drawn up, signed, and presented through our members to the House of Commons, and to the forthcoming meeting of the British Medical Association at Worcester; and that a deputation, consisting of the Chairman, Mr. Favell, Dr. Keeling, Mr. Arthur Jackson, and Dr. Cleaver, wait upon the Mayor to explain the

views of the meeting." An amendment to the following effect was moved by Mr. Sykes, medical officer of health at Mexborough, but only found three supporters, including the mover and seconder: "That it is desirable, in the interests of sanitary science, that Mr. Hastings's Bill become law."

ROYAL COLLEGE OF PHYSICIANS.

At the ordinary meeting of the College, on July 27th, the minutes of the last meeting having been read, authority was given for the appointment of an assistant registrar. Dr. James Alexander Grant, Ottawa, and Dr. Henry Blanc, Bombay, were admitted to the Fellowship. The following were admitted members:—G. W. Grabham, M.D.; W. P. Herringham, M.B.; C. M. Jessop; A. H. Jones, M.D.; T. J. MacLagan, M.D.; G. Richardson, M.D.; A. J. McConnel Routh, M.B.; John Shaw, M.D. The following were elected censors of the College:—William Munk, M.D.; Andrew Clark, M.D.; Lionel Smith Beale, M.B.; Frederick William Pavy, M.D. The following resolution was agreed to: "That the system of extensively advertising medical works, and the custom of giving, whether for publication or not, laudatory certificates of medicinal or other preparations, or of medical or surgical appliances, is misleading to the public, derogatory to the dignity of the profession, and contrary to the traditions and resolutions of the Royal College of Physicians." The remaining business was postponed.

A MARVEL OF SURGERY.

DR. ROSWELL PARK writes from Prague:—I have had the pleasure of a rather extended interview with a patient whose larynx and epiglottis Professor Gussenbauer removed over a year ago. Six weeks after the operation, he began to wear part of the artificial larynx, and, after accustoming himself to this, he gradually learned how to introduce and use the reed which takes the place of the vocal cords. This apparatus was made for him by Rothe, who has also done some work for the Reese Hospital. The patient is a riding teacher, is reputed the best rider in Prague, is busy from morning to night, talking all day, and suffers not the slightest inconvenience or pain. His voice is, of course, very monotonous, but his enunciation is excellent, his speech perfectly intelligible, and he eats and drinks with perfect facility. Three intralaryngeal operations had been previously made, before Gussenbauer attempted his feat. This case is said to be the best living example of what the art of the surgeon and the mechanician can accomplish for such a terrible disease as cancer of the larynx.

STATISTICS OF SUNSTROKE.

DURING the summer of 1881 an enormous fatality occurred from sunstroke in Cincinnati, no fewer than 288 deaths being registered from this cause alone. In a paper read before the last meeting of the American Public Health Association, Dr. Miles gives some interesting particulars of this prevalence. The first death occurred on May 14th, and the last on September 8th. The severest phase of the epidemic commenced on July 7th, and continued until July 15th. The largest number of deaths from sunstroke on one day was 54, which occurred on July 12th; the total number from all causes on that day was 94. The maximum range of the thermometer was 102.5° Fahr., the minimum 82.2°, and the mean 91.4°. The relative humidity was 45.8, and the weather clear. Of the total deaths, 279 were whites, the remaining 9 being coloured. It is an interesting fact that, of the total mortality, 263, or 91.32 per cent. of the whole, occurred when the humidity of the atmosphere was below 60; and 129, or only 44.79 per cent., occurred on cloudy or partially cloudy days. The number of cases treated by the physicians to the outdoor poor was 308, of which 265 recovered, and 43, or 1 in 7, died. The number of cases treated at the City Hospital was 130. Of these, 107 recovered, and 23, or 1 in 6, died. This greater mortality at the hospital is accounted for by the fact that many were brought there in a dying condition, and some died on the way to the hospital. The following particulars give the result of treatment of

130 cases admitted into the Cincinnati Hospital. Of the total number, 107 recovered; in 6, insanity followed; in 42, the pulse exceeded 120, in 3, there were opisthotonic convulsions (two of which recovered). Thirty-one had dilated, and 14 contracted pupils.

EFFECTS OF IRRITATING THE ENCEPHALON.

At a recent meeting of the Paris Biological Society, M. Brown-Séquard communicated "some facts to show that the movements produced by irritating different parts of the encephalon are unlike those which ought to occur, in accordance with the accepted theories concerning the cerebro-spinal motor and sensitive apparatuses. In 1879, Dr. Brown-Séquard published, in the *Archives de Physiologie*, the results of experiments which demonstrated that irritating the base of the encephalon determined movements of the limbs on the side corresponding to that on which the encephalon was irritated. If the medulla oblongata be irritated, the above result is repeated nine times out of ten; but its frequency gradually lessens when the irritation is applied higher, that is to say, beginning at the medulla oblongata, and continued towards the corpus striatum. Dr. Brown-Séquard now adds further facts. Irritating the anterior pyramid determines movements of the limbs on the side of the body which corresponds to that irritated. Sometimes the movements are limited to one limb, the arm or the leg. He concludes that the nerve-elements, after passing to the opposite side of the spinal cord, return again, and thus produce the movements observed. Irritating the two surfaces presented by a transverse section of a lateral half of the base of the encephalon, results most generally in the occurrence of movements of one or both limbs on the corresponding side of the body.

DEATH FROM CHLOROFORM.

AN inquest has recently been held, at Bexley Heath, on the body of Grace Harriet Butcher, aged 20, the wife of a medical student, who is reported to have died through inhaling an overdose of chloroform. The facts of the case appear to have been, that the deceased retired to bed suffering from toothache, to relieve which her husband rubbed some chloroform on her gums with his finger, as he had done on a previous occasion, and returned the bottle to his dressing-case. Mr. Butcher was not disturbed during the night by his wife, and, on being awoke next morning, found her lying by his side, with her face on the pillow, his silk handkerchief in one hand, and the empty chloroform phial, which had been two-thirds full overnight, in the other hand. Mr. Butcher said he was a heavy sleeper, but a candle was left burning in the bedroom all night. The *post mortem* examination showed the body of the deceased to have been well nourished, and the organs generally healthy; but the heart was flabby, showing deceased was not a good subject for receiving chloroform. The medical man detected no trace of chloroform in the body, but the appearances were quite consistent with the history of the case as given in evidence. In all probability, the deceased got up in the night, and took the chloroform to alleviate the toothache, and death was due to an accidental overdose. The jury, after consulting for some time in private, returned a verdict in accordance with the medical evidence.

THE ALLEGED SPREAD OF INFECTION FROM SMALL-POX HOSPITALS.

SOME important facts bearing on the question of the possible spread of infection from small-pox hospitals to those living in their neighbourhood are given by Dr. Edward Seaton, in a recent report on a group of small-pox cases which have occurred at Nottingham. The first case of the group was notified on April 29th, and was that of a child six years of age. On the Tuesday previous the mother of this child was telegraphed to from Batley, near Leeds, to come at once and see her child, who was on a visit there and had been taken ill. On arriving at Batley she found the child with a rash all over it, and fearing it had small-pox, she travelled with it home to Nottingham in the railway train. The family consisted of five children, not one of whom had been vaccinated until this case occurred. One of these, the baby, was

vaccinated the next day, *i.e.*, within twenty-four hours of its having been exposed to infection, and soon enough to prevent the disease. The eldest boy was not vaccinated until Friday evening, about sixty-eight hours after the first exposure to infection. In this instance, the vaccination, though it took in two places, did not entirely prevent small-pox, as on the following Monday week (thirteen days after the first exposure to infection), there appeared a few characteristic spots of modified small-pox on his face and at the back of the wrists. The vaccination of the other two children was delayed much too late to prevent their developing the disease, or even to modify the course of their attacks. One of them, in fact, was not vaccinated until a day before the eruption came out, and she, as might be expected, had the disease in the severe form in which it usually attacks the unvaccinated. It is remarkable that these four children, all of whom were unvaccinated, and all of whom therefore were exceedingly prone to take small-pox, should have been living for months within a stone's throw of the Corporation Infectious Hospital, and should have escaped the disease; whereas, the moment they came into contact with the infection, which was brought from about 100 miles away, they were immediately attacked, the only one escaping being the child who was vaccinated at once. This group of cases constitute to Dr. Seaton's mind, and no doubt to that of many others, a crucial test of the theory which supposes the existence of some subtle influence, radiating from the small-pox hospital as a centre, which may be the means of communicating the disease to those living in the neighbourhood. For months these three unvaccinated children had been within range without any harm; and if any doubt whatever could possibly exist as to their susceptibility, it is dispelled by the fact that, as soon as they were actually exposed to the infection, they took the disease.

HOSPITAL SUNDAY FUND.

ON Wednesday, a meeting of the Council of the Hospital Sunday Fund was held at the Mansion House, the Lord Mayor presiding. The Committee of Distribution submitted their report of the several awards they recommended for payment this year to 145 institutions, showing an increase of five since last year, and of forty since the establishment of the fund in 1873. Four per cent. of the total amount of the collections (£1,380) was ordered to be set aside for the purchase of surgical appliances. The cash received to July 18th amounted to £34,424 12s. 2d. After payment of the sum of £1,380 for surgical appliances, and allowing sufficiently for liabilities and for the usual current expenses, the amount available for distribution was £32,415 13s. 9d. Of that, £28,446 15s. was recommended to 93 hospitals, including four institutions which may be classed as hospitals; and £2,588 18s. 9d. to 52 dispensaries. The Committee also recommended that all payments to the fund after that date be carried to the credit of next year's fund. In compliance with the order of the Council, and for the special use of its members, tables had been prepared, showing a statistical analysis of the number of beds in hospitals, the cost of patients both in hospitals and at dispensaries, the proportionate expenses of management, as well as other valuable information. Sir Sydney Waterlow, M.P., in moving that the report be approved, and the several awards recommended be paid as soon as possible, congratulated the public that the result of the collection this year had been the receipt of the largest aggregate sum ever yet sent in. The greatest possible care had been taken to distribute the fund according to the comparative needs and merits of the institutions; and he believed that not only the public, but even the managers of the hospitals themselves, had been satisfied with the awards. The whole sum was distributed among institutions which for the most part were entirely dependent on the voluntary contributions of the public. The fund, moreover, was collected and distributed at the very lowest percentage of cost. Sir E. H. Currie seconded, and Dr. Glover supported, the motion, and it was adopted unanimously. On the motion of the Rev. Dr. Kennedy, seconded by Mr. Coope, M.P., thanks were conveyed to the Committee of Distribution; and, at the instance of Sir Sydney Waterlow, M.P.,

the Council thanked the Lord Mayor (Sir John Ellis) for the great zeal and energy which he, as president and treasurer, had successfully exerted in securing to the fund the largest amount that had, as yet, been collected in any one year. The Lord Mayor acknowledged the compliment, and the meeting separated.

CHOLERA IN THE RANGOON LUNATIC ASYLUM.

A RECENTLY published report on the Rangoon Lunatic Asylum contains an interesting account of an outbreak of cholera, which occurred there during the past year. The first case in the asylum occurred on November 18th. A man was suddenly attacked with vomiting and diarrhoea. The symptoms being considered suspicious, he was kept in bed, isolated from the other patients, and carefully watched. All the wards were thoroughly cleansed, washed, and fumigated; and for five days it was hoped that there would be no other cases. The disease, however, appeared in a male patient, who could have had no direct communication with the first case. On the 23rd and 24th, four other men were admitted from entirely different cottages; and, on the 26th, the infection had spread over the asylum, and each day added to the number of the victims, and the intensity of its virulence. Not a single ward escaped; and there seemed no difference in any as to the nature of the poison, or the rapidity of its operation. A few of the fatal cases appeared suddenly death-struck, without premonitory symptoms of any observable kind, and sank in from eight to twelve hours; in others, the attack was more prolonged; and some survived two or three days. The majority of the cases were not preceded by premonitory symptoms. Out of thirty-one who suffered from cholera, in twenty-six it was the primary attack; either the patient was observed sinking into collapse before he began to vomit or was purged; or, as soon as attention was drawn to him by the advent of sickness or diarrhoea, he was found to be already in a state of collapse. Whether preceded or not by alvine disturbance, the attack of collapse was rapid. It did not appear a gradual result of disordered bowels, but, in many instances, a sudden and fatal accession of fresh illness. It came on at all hours, but more frequently during the night, or in the forenoon. The total number treated was thirty-one, with twelve deaths, or 38.71 per cent. on the admissions. Eleven of those attacked were in good health, having five deaths amongst them; nine were in "fair health", with three deaths; and eleven were in "bad health", with four deaths. The cause is attributed to a combination of circumstances, and especially to the very unusual weather experienced in November, which was damp, foggy, and sultry. The water-supply, it is thought, may have been polluted; while the sanitary arrangements of the cottages, which allowed the earth under them to become strongly impregnated with poisonous matter, are held to have been to some extent responsible.

THE CLIMATE OF RIO JANEIRO.

In the January number of the *Bulletin Astronomique et Météorologique* of the Imperial Observatory, there is a record of the meteorological observations made every three hours from 4 in the morning until 10 at night. From these, it appears that the mean temperature of the month was 77.1 Fahr. (25.06 Cent.). The mean of the 4 A.M. observations was 74.2° Fahr.; of the 7 A.M. observations, 74.7° Fahr.; of the 10 A.M. observations, 78.8° Fahr. The means of the afternoon observations were as follows: of those taken at 1 P.M., 78.5° Fahr.; of those at 4 P.M., 78.4° Fahr.; of those taken at 7 P.M., 76.4° Fahr.; and of the 10 o'clock observations, 75.8° Fahr. The highest temperature recorded during the month was 97.2° Fahr.; and the lowest in the screen, 68.0° Fahr.; whilst the lowest on the ground was 62.6° Fahr. The extreme monthly range of the air in the shade was, therefore, nearly 35° Fahr. The mean of the 10 A.M. observations was the highest for the month, yet the absolute highest temperature did not occur till later in the day, as the maximum at 10 A.M. was 89.2° Fahr.; at 1 P.M., 95.0° Fahr.; and at 4 P.M., 94.6° Fahr. The force of the wind was comparatively small, the maximum being represented on one occasion only by the figure 3, generally by 1, and frequently by 0. There was, there-

fore, but little wind to modify the great heat. The relative humidity of the air was also great, as the mean of all the observations was 83.7, saturation being represented by 100. In England, during the excessive heat of July in last year, the relative humidity was only 64. The greatest mean humidity occurred at Rio after sunset, as it was 90 at 10 P.M. and 87 at 4 A.M., against 77.6 at 1 P.M. and 79.2 at 4 P.M. The total rainfall for the month was 6.44 English inches, or 164 millimetres; and there were seventeen rainy days, the fall upon most of these being small. The amount of ozone registered is stated to have been 14 on one occasion, and 12 on another; whilst the mean during the day was 6.2, and during the night 3.9. The number selected as indicative of the greatest amount of ozone is not stated, and therefore no comparison can be made concerning ozone. These observations show great heat, much moisture, and little movement of the air, in the month of January.

THE LUNGS OF LONDON.

A VERY interesting portion of the last report of the Metropolitan Board of Works is that which deals with the area of the parks and recreation grounds under the control of the Board. The area over which the Board rules is 122 square miles, and within it dwells a population of close upon four million human beings. To this number, when discussing the question of aerial purification, we must not forget to add the vast numbers of domestic animals maintained within the same area; for each animal, human or domestic, must contribute to the contamination of our London atmosphere. The area of open land under the control of the Board is only two and a half square miles; to this, however, are to be added the royal parks, which, taken together, somewhat exceed the area in the Board's hands. The royal parks cover 1,742 acres; the Metropolitan Board's open spaces cover 1,676 acres. The largest open space in the metropolis is formed by Hyde Park and Kensington Gardens, which together contain 648 acres, or a little more than one square mile. St. James's and the Green Parks are continuous with Hyde Park; and Regent's Park, with its 400 acres, lies at no great distance on the north. It thus comes about that 1,200 acres, or more than a third of the total available "lung space", occupy one restricted region. The open spaces under the Board vary very greatly in size; the largest is Blackheath, with 276 acres; then comes Hampstead Heath, with 240; Clapham Common, with 220; Wormwood Scrubs, with 194; Tooting Beck Common, with 144; Finsbury Park, with 115; and Plumstead Common, with 110. Thirteen other smaller parks and gardens, varying in size from 63 acres, which is the size of Southwark Park, to 4 acres, which is all that remains of Shoulder of Mutton Green, are scattered over the metropolitan area. We thus arrive at the result that about five square miles, or nearly 4 per cent. of this area, are at present set apart for the purposes of recreation. It cannot be pretended that this is an excessive provision; but, when we look back a few years, and remember what might now be our condition if the policy of inaction before the encroachments and misappropriations of that time had not been altered by the action of a few public spirited individuals, we cannot but congratulate ourselves, not only upon what has already been accomplished, but also upon the fact that a healthy public opinion has been formed upon this great question. All honour is due to the Corporation of the City for their recent action in relation to Epping Forest and Barnham Beeches; it is gratifying to find that their public spirit has been recognised in high quarters, and that Her Majesty has shown her interest in the matter by attending herself in person at the ceremony commemorating the dedication of the Forest to the recreation "of the people for ever"; and has rewarded the Corporation by making the Lord Mayor a baronet, and by granting to both the sheriffs the honour of knighthood.

THE SALMON-DISEASE AND ITS LESSONS.

PROFESSOR HUXLEY has published some observations on the Epidemic known as the Salmon-Disease in the *Proceedings of the Royal Society*. The disease, as is well known, is produced by the growth of a parasitic

fungus, and Professor Huxley looks upon it as a disease of the same order as ringworm in the human subject, as the muscardine of silk-worms, and the potato-disease. This fungus, which belongs to the order *Saprolegnia*, finds a suitable nidus in the skin of that part of the body which is devoid of scales, and generally first attacks the top and sides of the head; thence it may extend widely over the scaly surface also, and deeply into the true skin, causing extensive ulceration and sloughing, so that "one vast open sore may cover the top of the head from the snout to the nape, and may extend over the gill-covers." Several points of general interest have come out in the course of the inquiry; one of these is, that the fungus does not attack the viscera, so that the flesh of the diseased fish is probably not injurious in any way; and it has been said, by those who have made the experiment, that the palate can detect no difference between it and the flesh of healthy fish. This applies probably only to the early stage; for when death—which is produced by exhaustion—is approaching, the flesh no doubt deteriorates in quality. Another interesting point is the manner in which the sloughing of the true skin is produced. The fungus at first attacks the cuticle, but, after it has taken root there, it sends processes (hyphæ) downwards into the true derma; these processes branch laterally in every direction, and gradually extend deeper and deeper. The tracks of these hyphæ are not accompanied by any obvious inflammation; but they are so closely set, that they mechanically interfere with the nutrition of the part, and so lead to sloughing. The third point to which we wish to draw attention is, that the fungus is essentially a saprophyte—*i.e.*, it ordinarily finds its nidus in dead animal or vegetable tissues, and is only occasionally a parasite upon living organisms. Every stream in the kingdom probably contains indefinite quantities of this and allied fungi, which grow readily on the bodies of dead flies and other insects. Professor Huxley thus arrives at a conclusion, with regard to this disease, analogous to that to which the student of human pathology is often brought in the case of many infectious diseases—namely, that, though the parasitic organism may be the determining cause of the train of symptoms which come under observation, there are other, and as yet unknown, circumstances, extrinsic or intrinsic to the infected animal, in the absence of which the parasite cannot develop.

EXPERIMENTAL BIOLOGICAL RESEARCH.

THE reports of Mr. Busk and Dr. Thornley Stoker, showing the number of experiments performed on living animals under the Act for Regulating Experiments on Animals during the year 1881 have been published as a Parliamentary paper. Mr. Busk reports that the total number of experiments performed during the year in England and Scotland by the thirty-eight licencees was about 270. Of these, 59 were performed under the restrictions of the licence alone; 90 under certificates permitting experiments (with anæsthetics) in illustration of lectures; 29 under special certificates for experiments without anæsthetics; 92 under certificates dispensing with the obligation to kill the animal before recovery from anæsthetics; and one under a certificate permitting experiments on "cats, dogs, horses, mules, or asses". The only experiments in which it is likely that any appreciable suffering would be caused, are amongst those performed under the certificates of the last three descriptions. In all the experiments under the first and third of these heads the only operation consisted either in simple inoculation with a morbid virus, or in its introduction by hypodermic injection; the proceeding in either case being no more painful than the prick of a lancet or needle. Of the experiments under the second head, 68 also consisted in simple inoculation with a morbid virus, or the introduction by hypodermic injection of various substances of a poisonous or medicinal character. In most of the inoculation experiments, no effect was apparently produced; whilst in those in which the inoculation took effect, either death speedily ensued or the animal was killed after a very brief interval. This was the result in about twenty or twenty-five cases, amongst which are included eight (seven mice and one frog) caused by poison in the prosecution of a recent criminal in-

vestigation (the Lamson case). In the other experiments of different kinds performed under the certificates dispensing with the obligation to kill before recovery from anæsthetics, the only pain caused would be that attending the healing of a wound and the necessary confinement, or in some cases produced by the action of drugs administered. The number of cases in which trifling suffering of this kind was caused might be ten or twelve. As in the experiments performed under the licence alone, or under certificates for lecture-illustrations, the animals are placed and kept in a state of anæsthesia, no pain need be inflicted; and Mr. Busk has every reason to be assured, as regards the due administration of anæsthetics, that the provisions of the Act are fully carried out. Of this he has on several occasions had an opportunity of satisfying himself from personal observation. He therefore states with confidence that, during the past year, no case has arisen in which it was found necessary to inflict pain, except of the most trivial nature, in the prosecution of scientific inquiry. Dr. Stoker's report for Ireland is of a similarly satisfactory character. He reports that under the licences twenty-seven experiments were performed, "all of a highly useful character, being designed to elucidate the actions of drugs, or to throw light on questions of surgical and medical pathology". Dr. Stoker is of opinion that in all cases those persons qualified to experiment under the Act have conformed to its directions, and have observed all possible humanity in their investigations, and that no appreciable suffering has been caused to the creatures experimented on.

ARMY MEDICAL SCHOOL.

THE summer session of the Army Medical School, at Netley, was brought to a conclusion on Monday, July 31st. Sir Ralph Thompson, K.C.B., Permanent Under Secretary of State in the War Department, had expressed his intention of handing the prizes to the successful competitors on the occasion; but, owing to the pressure on his time arising out of business connected with the expedition to Egypt, he was unable to leave London for the purpose. He therefore requested the Director-General of the Army Medical Department, Dr. Crawford, who was to have accompanied him to Netley, to act as his representative. The military and medical staffs of the Royal Victoria Hospital and the professors of the School, together with a few visitors, assembled in the lecture theatre shortly after noon. The business commenced, as usual, with the reading of a series of official letters, in which the results of the studies pursued during the session were summarised, and the names of the surgeons on probation who had won the several prizes were declared. As the names of the winners were successively announced, they were greeted with applause by their colleagues, especially Dr. Charles, of the Indian Medical Service, who carried off three of the prizes—*viz.*, the Herbert prize, the Parkes memorial medal, and the Montefiore second prize. We need not repeat the names of all the prize-winners here, as they are noted in the lists which we print elsewhere. After handing the prizes to the successful competitors, with a few appropriate remarks to each recipient, the Director-General addressed the body of probationers in a practical and very able speech, which was listened to with marked attention by every one present. After explaining the circumstances which had led to his acting as a substitute for Sir Ralph Thompson, and conveying a message from that gentleman, expressive of regret at his unavoidable absence, and of the interest he felt in the establishment, Dr. Crawford congratulated the probationers on all having qualified for commissions; but dwelt on the importance of their not regarding the need of professional study as having terminated, because the period of their army probation was finished. He illustrated, from various points of view, the necessity which was imposed on them, as medical officers and as members of a learned profession, for continuing to maintain in freshness the knowledge they had already gained, and to keep pace with the advances which were always in progress in the sciences of medicine and surgery. Among other points in his address, the Director-General mentioned that, when he was just starting, at the beginning of his career, for India, an old army medical officer (at parting with him) gave him one

piece of advice which he had never forgotten, and which had been of constant use to him: "If you are ordering anything, which you believe to be of importance for the benefit of a patient under your charge, carry out the order yourself, whenever practicable. Do not trust to others to do it." He urged the young surgeons, for their own sakes, as well as for the good of their patients and the public service, not to be satisfied with delegating duties to subordinates which it was their proper function to do themselves; and in no case, even if they were such matters as could be legitimately transferred to others, to be content without seeing that their directions were really and efficiently executed. His tours of inspection, in India and elsewhere, had led him to know the importance of this advice, and the urgent need of attention being given to it. After referring to the great advantages possessed by the medical officers of the present day, as compared with the opportunities of those who entered in his own day, and speaking of other allied topics, Dr. Crawford concluded by expressing to all the gentlemen of both services his best wishes for their future success; and he assured them that, so far as those of his own department were concerned, he would not fail to do all in his power to promote their interests so long as they proved themselves, by their conduct and professional merits, desirous of fulfilling their duties with credit to the service which they were about to join. Surgeon-General Sir J. Fayer, K.C.S.I., Physician to the Council of India, also addressed a few remarks to the class. After recalling the fact, that he himself, at different periods of his life, had served in both the British and the Indian branches of the medical service, he particularly directed the attention of the surgeons who had selected the Indian branch, to the unrivalled opportunities they had before them of acquiring professional distinction, as well as of exerting a highly beneficial influence on the native populations of our vast possessions in the East. The proceedings terminated at the conclusion of Sir J. Fayer's address; and the officers and visitors afterwards adjourned to luncheon, in the mess-room, at the officers' quarters.

SMOKE ABATEMENT.

At a public meeting, held at Grosvenor House on July 14th, at which there were present His Grace the Duke of Bedford, the Viscount Bridport, Lord Mount Temple, Sir D. Cooper, Bart., the Hon. W. Egerton, Captain Douglas Galton, F.R.S., C.B., Professor Chandler Roberts, F.R.S., Dr. Quain, Mr. Ernest Hart, Mr. W. R. E. Coles, Mr. P. Hinckes Bird, Lady Goldsmid, Miss Shaw Lefevre, etc., His Grace the Duke of Westminster, K.G., in the chair. The medals and awards made in connection with the Smoke Abatement Exhibitions at South Kensington and Manchester were presented to the successful competitors by Lady Grosvenor. The chairman expressed his deep interest in the work in hand, and his strong conviction of its great public usefulness. The results attained had been excellent, and would, he was convinced, effect a great and permanent growing good. The warmest thanks of the community were due to Mr. Ernest Hart, the founder of the work, and to Mr. W. R. E. Coles, the indefatigable honorary secretary. His Grace then called upon Mr. Hart to present the report of the Committee, and, at the same time, desired to express his strong satisfaction that the objects in view would be continuously inculcated, and that a smoke abatement institute was about to be founded for the purpose, in which he should have great pleasure in taking an active part. Mr. Ernest Hart, in presenting the report, as Chairman of Council, adverted to the fact that, as the result of this movement, a thorough, scientific, and industrial study had, for the first time, been made, on an extended scale, of the capabilities and merits, as well as of the defects of existing grates and fireplaces, and a great stimulus had been given to invention, which had led to satisfactory results, and of the usefulness of which yet greater hopes might be entertained. For the first time in the history of the country, thorough competitive tests had been made of all the existing types of fire-place, stove, and kitchener. The principles of the economical combustion of coal, and the abatement of smoke, had been scientifically, as well as practically studied, and chemical as well as physical testings

had been carried out. The chemical estimations of the gases extracted from chimnies while the grates were in operation, by Professor Chandler Roberts, and Professor Abel, were in the highest degree praiseworthy, and were unique of their kind. The physical testings of the apparatus had been carried out by Mr. D. Kinneir Clark, on a plan devised and approved by Dr. Siemens, Professor Frankland, Professor Abel, and others of like eminence. The gas testings had been carried out by Mr. Keats, Mr. Hersch, and Mr. Harris, three experts whose authority would be universally recognised. Upwards of £1,500 had been expended on these testings, which had been made not only in connection with the household grates and kitcheners exhibited, but with every description of smoke-abating appliance for industrial and manufacturing purposes. As the result, it was satisfactory to find that at least three of the kitcheners selected burnt ordinary coal with economy, and with excellent practical results, without producing smoke. So far as cooking purposes were concerned, therefore, one considerable part of the smoke problem was solved, and it rested only with those who chose, to employ Brown and Green's "Luton" kitchener, to which a gold medal and a half of Dr. Siemens's prize had been awarded, or Constantine's, or the Radiator ranges which came very near it in merit, or the Falkirk coke and gas kitchener, to which the other half of Dr. Siemens's prize had been awarded, to have the satisfaction of knowing that at least their kitchener chimney made no contribution to the smoke cloud under which London now suffers. In respect to open grates, results almost equally satisfactory were obtained by the "Luton" grate, by the Kyrle grate of the Coalbrook Dale Company, Ingram's Kaio-Kapnos grate, and Shorland's Manchester ventilating grate. The Siemens principle, in which coke and gaseous fuel were largely employed, gave most highly satisfactory results both for open fireplaces and kitcheners, and it was found that the products of combustion were completely carried off and the ventilation of the room as effectually carried out as by the ordinary coal fire. The Dowson Heating Gas opened a prospect of the economical use of heating gas, as distinguished from illuminating gas, from which large developments might be expected, and on which one great hope of an absolutely smokeless and economical combustion of fuel might be based. Generally, the results of the tests of gas-cooking apparatus had been extremely satisfactory, and to this report he wished to direct special attention. The prizes were then distributed by Lady Grosvenor, after which, statements were made by some of the jurors on the important features to be observed in connection with some of the exhibits. Professor Chandler Roberts, in the course of some remarks, said that, when they remembered that the cloud which hung over London certainly contained every day sixty tons of carbon, it was very important to know, as they most certainly could, that at least boiler-furnaces need smoke no longer. Professor Abel moved the first resolution: that it was desirable that the work thus far successfully carried on by the Smoke Abatement Committee should be continued, and that a Smoke Abatement Institute be formed. He said the recent exhibition had been a fertile source of instruction in directing the way in which they should set to work to accomplish that which was yet only foreshadowed. He alluded to the application of gaseous fuel to cooking and heating purposes, and expressed his opinion that gaseous fuel had a great future before it. He also directed attention to the present enormous waste of small coal, which did not at present pay the owners of pits to bring to the surface, but which, he believed, in the future might be made productive of gaseous fuel. Mr. Norman Lockyer, seconded the resolution, which was carried unanimously. Lord Mount-Temple said he was glad that science had condescended to come down to the chimney-corner, and the fireside or hearth; and immense would be the benefit of it, for proprietors of houses would be taking advantage of the elaborate scientific examinations, and their cooks and housemaids would be acquiring a little of this sanitary science. Mr. Ernest Hart proposed a vote of thanks to His Grace the Duke of Westminster for presiding, to which his lordship replied in terms expressive of his keen interest in the movement.

SCOTLAND.

UNIVERSITY OF GLASGOW.

THE graduation in medicine, and the distribution of medals and certificates in connection with the medical classes of this University, took place on July 27th. There were a large number of graduates in medicine and surgery, and several were named as entitled to commendation on account of distinguished merit at the various examinations; but the only one receiving first class honours was Mr. Robert Beith, who also gained the Brunton memorial prize, awarded to the most distinguished graduate in medicine of the year. At the close of the proceedings an address was delivered by Professor Charteris, in the course of which he gave some excellent practical advice to the new graduates on the course they were now to pursue. He placed fully before them the advantages of continental study in the chief schools of medicine, warning them at the same time not to follow too slavishly the doctrines of German thought and teaching, but to preserve their own native independence of mind, and keep up the national character for original work and research.

SCOTTISH METEOROLOGICAL SOCIETY.

AT the recent general meeting of this Society, the report dwelt very fully on the steps that are being taken for establishing an observatory on Ben Nevis. Arrangements have been made with the proprietrix of the land to grant a few for building purposes; and it is intended that the Royal Society of Edinburgh should hold the feudal title to the top of Ben Nevis; and that the feu for the observatory should be taken in their favour. It is proposed that the management of the observatory should be in the hands of the Scottish Meteorological Society, with members of the Royal Societies of London and of Edinburgh to co-operate in the management. Several papers were read at the meeting; and in one by Mr. Milne-Home, on the progress of the Society, it was stated that the weather in Scotland last winter was remarkable for the amount of violent winds which blew from the west, for a higher temperature than there had been for 118 years, and for the heavy atmospheric pressure.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending July 22nd, it appears that the death-rate in the eight principal towns of Scotland was 21.7 per 1,000 of estimated population. This rate is 2.9 above that for the corresponding week of last year, and 0.4 above that for the previous week of the present year. The lowest mortality was recorded in Perth, viz., 15.4 per 1,000; and the highest in Leith, viz., 27.9 per 1,000. The mortality from the seven most familiar zymotic diseases was at the rate of 4.9 per 1,000, or 0.2 above the rate for the previous week. Diarrhoea and other bowel complaints were more frequent than usual in Glasgow. Nine deaths from measles were registered in Dundee during the week. One death from small-pox occurred in Aberdeen. Acute diseases of the chest caused 80 deaths, or 15 less than the number registered during the previous week. The mean temperature was 58.4°, being 0.5° below that of the week immediately preceding, but 1.1° above that of the corresponding week of last year.

HEALTH OF GLASGOW.

THE report of the Medical Officer of Health for the fortnight ending July 22nd, shows there were 445 deaths registered, representing a death-rate of 22.3 precisely per 1,000 living. The most remarkable feature of the fortnight's returns is the change in the character of the fatal diseases from the winter to the summer type. The deaths from pulmonary diseases fell from 155 to 116, while those from diarrhoeal diseases rose from 12 to 46. The former means a lower adult, and the latter a higher infantile mortality. So many deaths from diarrhoea

have not been registered since September, 1880. Of the 46 deaths, there are 40 below five years of age, and six above 50, so that not one died of diarrhoea between 5 and 50, while the average age of 40 children who died was 8½ months. It follows that practically this fatal diarrhoea was confined to infancy, and that therefore the popular association of summer diarrhoea with summer fruits and vegetables is an erroneous one. The dangerous diarrhoea of summer is a disease of infancy, and is probably entirely due to the improper and careless way in which children are fed, especially among the working classes. Dr. Russell then very properly directs attention to this matter, and to the danger of using fermented or "turned" milk. He says, its effects are those of an irritant poison, and that milk is peculiarly liable to assume the fermented state during electrical disturbances, such as those by which the weather of the past few weeks has been characterised.

REVIVAL OF BABY-FARMING IN SCOTLAND.

IT is to be feared that, in spite of all that has been done to stamp out the horrible system of baby-farming which, ten years ago, was rampant in the industrial centres of Scotland, there has been going on for some time past a steady revival of that infamous traffic. That this is so, is clearly manifest from the numerous advertisements which are boldly flaunted in the columns of some of the less discriminating organs of the local press. During the past month, there have been, we understand, in one local paper in Scotland, no fewer than ninety "baby-farming" advertisements, and it is thought that a selection made at an earlier period of the year might even show a larger total. What the result would be if an examination were made of all the local papers, it is difficult to say; the *Glasgow Daily Mail*, which has repeatedly directed public attention to the nefarious trade of baby-farming, estimates that at least "about one thousand helpless infants become each year the subjects of this murderous practice in Glasgow and the West of Scotland." After the exposures made, and the subsequent Royal Commission on baby-farming, which resulted in the passing of the Act of 1872 for the better protection of infant life, there was a marked falling off in the number of these advertisements, which have, however, lately increased to an alarming extent; and there is great reason to fear that baby-farming in some parts of Scotland is flourishing with all its former vitality. The *Daily Mail* points out how largely it is within the power of the press, by insisting upon receiving, with advertisements of this class, name and address, as well as a medical reference, to check this growing evil; for, without the assistance of the press as a medium, baby-farmers would soon find it difficult to trade, and the scandalous business would scarcely be worth carrying on.

GRADUATION IN EDINBURGH.

ON Tuesday, August 1st, the degrees of M.B. and C.M. were conferred on the largest number of graduates the Edinburgh University has ever sent forth. The ceremony was in the commodious Presbyterian Hall, Castle Terrace; and the Lord Chancellor (Lord Glen-corse) presided, and conferred the degrees. Professor T. R. Fraser (Dean of the Faculty of Medicine) presented the medical graduates, of whom thirty-two received the degree of M.D., and 181 the degrees of M.B. and C.M.; while one, a former graduate, received that of C.M. For the first time since its institution the "Ettles Prize," the blue ribbon of the year, was divided equally between George Armstrong Atkinson, M.B., and Sidney Johnson Taylor, M.B., they being considered by the Medical Faculty the most distinguished graduates of the year, and equal in point of merit. The Beaney Prize, which is awarded to the graduate most highly distinguished in the examinations in anatomy, clinical surgery, and surgery, was gained by George Armstrong Atkinson, M.B. and C.M. The Syme Surgical Fellowship was awarded to Howard Bendall, M.D.; and the Buchanan Scholarship in gynaecology was awarded to David Smart, M.B. and C.M. The

Doctors of Medicine to whom, on account of the excellence of their graduation theses, gold medals were awarded, were Drs. Bendall, Halliday Croom, Anderson Stuart, and Albert Wilson. After the ceremony of "capping" had finished, the graduates were addressed by Professor T. R. Fraser, who, in the course of his remarks, referred to the deaths of Christison, Wyville Thomson, and Spence, and the loss thereby entailed on the University. He also directed attention specially to the importance of practical investigation in medical science, and to the means that now existed in the new University for such research.

IRELAND.

SMALL-POX IN BELFAST.

A CONSIDERABLE decrease has, within the last few weeks, taken place in the number of patients suffering from small-pox admitted into the Belfast Union Hospital. For the week ending July 22nd, the number in hospital was as low as fifteen, two fresh cases only having been admitted during the week, and no death recorded for some time past.

A MORTUARY FOR KINGSTOWN.

KINGSTOWN is a fashionable seaport town half-a-dozen miles from Dublin; but the absence of a mortuary causes considerable inconvenience, as the only receptacle for bodies found in the harbour is a stone shed on the jetty, where the police have to watch day and night to keep away the rats. The coroner has repeatedly brought this matter under public notice, but, up to the present, no steps have been taken to erect a structure of the kind, which, where a *post mortem* examination is required, is absolutely necessary.

APOTHECARIES' HALL OF IRELAND.

At the annual meeting of the General Council, convened by authority of the statute of incorporation on the 1st instant, the following members were elected office-bearers for the ensuing year: *Governor*, Thos. Collins; *Deputy Governor*, Robert Montgomery; *Court of Directors and Examiners*, Edward H. Bolland, John Evans, Arthur Harvey, Chas. Holmes, Chas. H. Leet, Charles F. Moore, Henry P. Nolan, Richard G. O'Flaherty, Edward J. O'Neill, Sir Geo. B. Owens, John Ryan, James Shaw, George Wyse; *Representative on the General Medical Council*, Thos. Collins.

PROSECUTION UNDER THE VACCINATION ACT.

A WELL known obstetric practitioner of Dublin was recently summoned before one of the city police magistrates by the guardians of the South Dublin Union, for failing to comply with the third clause of the Vaccination Amendment (Ireland) Act, in not transmitting to the Registrar of Births and Deaths a certificate of the successful vaccination by him of a certain child. The registrar of the district in which the parents of the child resided deposed, that he had not received from the practitioner in question a certificate of its successful vaccination. The registration of the child's birth was proved. A nurse in the house deposed that the defendant had vaccinated the child, but that he did not say the vaccination was successful. There was a slight blister on the arm, which was slightly inflamed on the seventh or eighth day. The blister remained on the arm for about twenty days. Counsel for the defence said the prosecution must fail unless they could prove that the vaccination proved successful, and this was necessary before they could compel defendant to report to the registrar. Defendant said that, with great respect, he would not allow himself to be examined, or make a statement, as the prosecution was spiteful and malicious. The magistrate said he was of opinion that the vaccination was successful; but, as this was the first case under the Act, he would only impose a nominal fine of one shilling.

THE EGYPTIAN EXPEDITION.

ARMY MEDICAL DEPARTMENT.

THERE has been great activity throughout the Army Medical Department during the past week. Several medical officers have already sailed with the troops which have been despatched to the Mediterranean garrisons, and many more are under orders to embark at an early date. The following is, we believe, a tolerably accurate account of the arrangements that have already been made. Surgeon-General Hanbury, the Principal Medical Officer of the Expedition, accompanied by Surgeon-Major Davie as Secretary, and Mr. Pringle, Captain of Orderlies, will sail from Liverpool with the head-quarters staff either to-day or to-morrow (the 5th or 6th instant). Brigade-Surgeon Manley, V.C., who has recently been gazetted to the local rank of deputy surgeon-general, will likewise embark to-day in the *Catalonia*, to take up his duties as Principal Medical Officer of the Second Division. Deputy Surgeon-General Lamprey goes to Cyprus as Principal Medical Officer at that station; and Brigade-Surgeon Tippetts will be sent to Gozo, for the charge of the base-hospital to be formed there.

The field-hospitals which were referred to in our last number are now nearly complete; and it is expected that those numbered 2 and 3 (movable), with No. 1 Bearer Company, will embark in the *Marathon* to-day. Those numbered 7 and 8 (stationary) will follow in the *Carthage* early next week; and those numbered 5 and 6 (movable), with No. 2 Bearer Company, will be sent in another ship at a later date. The equipment for these hospitals has been prepared at Woolwich, under the immediate superintendence of the medical officer in charge: a novel but excellent arrangement effected by the present authorities at Whitehall Yard. It is estimated that each field-hospital, whether stationary or movable, will have tentage accommodation for two hundred patients; the stationary hospitals being supplied with marquees, the movable hospitals with bell-tents, lined so as to be practically double, for greater protection from the sun.

In consequence of the difficulties anticipated in connection with the transport in Egypt, it has been wisely decided not to send out the heavy service and ambulance-wagons provided by the regulations, but to have the various articles packed in ordinary deal packing-cases, the heaviest of which will not weigh more than two or three hundredweight.

An ample provision of gauze has been made for protecting the face and other exposed parts of the body from the swarms of flies and mosquitoes which abound in Egypt; and we are informed that the tent-openings will be further guarded by light bamboo screens (*chicks*), such as are used in India. A large quantity of goggles and napkins for ophthalmic cases will also be provided. Indeed, we believe that everything which foresight could suggest has been secured for our sick and wounded in this expedition.

The medical officers appointed to the charge of the field-hospitals and bearer-companies are: Brigade-Surgeons O. Barnett, H. Veale, E. McDowell, E. O'Leary, and E. McGrath, to those numbered 2, 3, 4, 5, and 6; and Surgeons-Major Beath, Warren, and Tanner to Nos. 7 and 8; and Surgeons-Major Ray and O'Dwyer to Nos. 1 and 2 Bearer Companies. All of these medical officers have had long service in the tropics, as well as in campaigning, and they will each be assisted by a competent staff of two surgeons-major, four surgeons, a lieutenant of orderlies as quartermaster, etc., and a due proportion of non-commissioned officers and men of the Army Hospital Corps to act as compounders, cooks, and attendants on the sick.

A staff of female nurses from Netley and Woolwich will be sent out to the stationary and base hospitals, under Mrs. Deeble, the lady-superintendent at Netley, who rendered excellent service recently in South Africa.

On the whole, we consider that the authorities of the Army Medical Department may fairly be congratulated on the rapidity with which the foregoing arrangements have been made; and we do not doubt that their present completeness may be accepted as an earnest of their future efficiency.

NAVAL MEDICAL DEPARTMENT.

The health of the blue-jackets and marines on board the fleet and in the city of Alexandria continues to be most satisfactory. A few cases of diarrhoea have been reported, and the authorities find a little difficulty in checking the men on shore from purchasing alcoholic drinks, which imperil the life of the European in the East, even when not taken in sufficient amount to cause intoxication. The water with which the men are supplied is solely taken from the condensers on the ships; but those who have chosen to drink from the town-supply, which at one time appeared to be failing entirely, have in no way suffered, the Nile water being both sweet and free from deleterious organic matter. The naval authorities have not sent out any regular hospital

ship, but the *Tamar* will be devoted to the reception of sick sailors and their conveyance to Malta; Surgeon J. Jeffreys Dinnis has been sent to increase the staff of the naval hospital on that island; and a second extra medical officer will, if necessary, be shortly despatched to the same institution. All the men wounded at the bombardment are now in hospital at Malta, whither they were conveyed by the *Humber*. One alone out of these gallant sailors is in a desperate condition; two are seriously ill, but are expected to recover; whilst the remainder are convalescent. The worst case is that of Levi Holley, aged eighteen, who has sustained a compound comminuted fracture of the lower jaw, with great laceration of the integument, a compound comminuted fracture of the left clavicle, with two extensive wounds of the soft tissues, one being close to the subclavian artery, and a compound comminuted fracture of the first rib, which involves a penetrating wound of the thorax. Alfred Jackson, aged 18, is suffering from a comminuted fracture of the right leg; it is feared that the limb must be shortly amputated. Lastly, Redmond Maguire, aged 19, of the *Invincible*, the boy already celebrated in the despatches as having lost his foot in the action, underwent amputation of the leg at the junction of the middle and lower thirds, on board his ship. When he arrived at Malta, the bones were found protruding, and the Deputy Inspector was obliged to perform a secondary amputation below the knee: nine vessels required ligature. The patient is said to be progressing favourably.

THE AMERICAN MEDICAL ASSOCIATION AND ITS PROPOSED WEEKLY JOURNAL.

It will be remembered that Dr. Sayre, of New York, in his address as President of the American Medical Association—a sister Association of our own, of now thirty-three years' standing—took occasion, in his presidential address, to express a very high opinion of the *BRITISH MEDICAL JOURNAL*, and of the influence which the successful conduct of the Journal had, in his opinion, had on the fortunes of the British Medical Association, and the rapid increase which has taken place during the last fifteen years in its membership, prosperity, and influence. The American Medical Association has hitherto officially published its proceedings in the form of an annual volume of "Transactions." The American Medical Society has a very strong basis of membership, being formed by confederation of the State and county medical associations throughout the length and breadth of the United States, most of which have special chartered rights and State powers. Nevertheless, this Association, although exercising considerable influence and holding important annual meetings at the various great centres of the American Continent, has not permanently increased its membership to any great extent. It was proposed, therefore, by the American Medical Association to found a weekly journal, based on the model of the *BRITISH MEDICAL JOURNAL*, of which Dr. Sayre gave a detailed and flattering sketch. Last year, many of the leading members of the Association, including Dr. Billings, Dr. Tozer, Dr. Packard, Dr. Sayre, and others, visited Europe, on the occasion of the International Medical Congress, and many of them were also present at our last annual meeting. They appear to have utilised the occasion for further study of the subject, and a report has been presented to the American Medical Association at its recent meeting, signed by Dr. Beverley Cole and others, endorsing the plan for the establishment of a weekly journal by the Association, and recommending various changes in the constitution of the Association, for the purpose. Practically, the plan they recommend for adoption is that followed in our own Association. Instead of a Journal Committee, a Board of Trustees, nine in number, is to be appointed, in whose hands the appointment of the Editor is to be placed. They observe that "upon the selection of a suitable man will hinge, in a very great measure, the success of the whole enterprise"; and they are further of opinion that "the appointment of Editor would be best made for an indefinite term, the engagement to be dissolved by either party only upon three months' notice," giving the Editor a right to appeal in case he desires to exercise it. The appointment of Sub-editor is left with the Editor, who, it is proposed, should commence with a salary of £1,200 *per annum*, out of which he is to pay Sub-editors. The mode of publication is to be either that adopted by the British Medical Association, viz., that of printing it at its own office under its own manager, or by arrangements made with a publisher, whichever is found most feasible. This report was most favourably received, and a committee was appointed to ascertain, by circular, the extent of support which will be obtained throughout the profession, among the past members of the Association, and the members of the country Societies generally, to elaborate the details in accordance with the results of such circular, and to present a complete scheme for adoption at its next annual meeting. The medical editors of America have an Association of their own, called "The

Association of American Editors," which meets at the same time as the meeting of the American Medical Association. At this meeting the subject of the publication of the proposed Journal was introduced for discussion, and the following were the conclusions arrived at. "It was believed that the American Medical Association needed a journal of its own to defend its own interests, as opposed to the interests that were trying to disintegrate it. The great objection in the minds of most was the difficulty of obtaining a man to take charge of the work, who would be able to combine the elements of success. To be at once a scholar; a gentleman conversant with the needs of every portion of the Association, in all parts of the United States; unbiassed by any sectional influences; honest in thought and deed; of the highest executive ability; a fearless advocate of the interests of the entire profession, without doing harm to any local interests; a man capable of attracting to his side the best workers of the land—was thought to be a task calling for care, labour, and the highest discretion. That it is possible, all admitted and desired."

The conclusion thus arrived at, to start a journal of the kind, is a high testimony to the practical wisdom and success with which the managers of the Association have, at least in this matter—and, as we believe it will be admitted, in many others—successfully carried on the affairs of the Association; and we shall all wish our American brethren success in this important and interesting enterprise, as well as in the quest for the phoenix of editors whom they so eloquently picture.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Thursday, the 3rd instant. In the absence of the President, Mr. Spencer Wells, Mr. John Marshall, Senior Vice-President, occupied the chair.

The minutes of the Quarterly Council, held on the 13th ultimo, were read and confirmed.

Reports were received from the Court of Examiners, the Committee for General Purposes, the Committee on the Formula for Abrogating By-laws and Standing Rules relating to Preliminary Examination, the Nomination Committee, the Joint Committee on the proposed Examination in Elementary Anatomy and Physiology, and the President and Vice-President.

The Nomination Committee reported that, in pursuance of the resolution of the Council of the 13th instant, they had taken into further consideration the following proposal adopted by the Council on the 8th ultimo, viz.: "That, in future, all candidates for the Primary or Anatomical and Physiological Examination, whether for the diploma of Member or of Fellow of the College, be only required to attend one winter course of lectures on anatomy, instead of two courses of such lectures"; together with a memorial, dated the 5th instant, from the metropolitan and provincial lecturers of anatomy, stating their reasons for objecting to the proposed reduction of the lectures on anatomy from two courses to one course, in order that the Committee may advise the Council as to whether their resolution of the 13th instant, adopting the proposal, should be confirmed or not; and that, having considered the same, the Committee had agreed to the following recommendation to the Council, viz.:

"That the resolution of the Council of the 13th instant, approving and adopting the recommendation of the Committee, that the lectures on anatomy be reduced from two courses to one course, be not confirmed in the form in which it is entered on the minutes, but that the following resolution be substituted for it, viz.:-

"That in future it shall be at the option of candidates, whether for the diploma of Member or of Fellow of the College, either to attend two courses of lectures on anatomy, in accordance with the requirements of the existing regulations, or to attend, in lieu of the second course of such lectures, at any time during the curriculum of professional education, a course of lectures or demonstrations on surgical anatomy."

The consideration of the report was deferred until the ordinary meeting of the Council in March next.

The Joint Committee reported that, in pursuance of the following resolution of the Council of the 8th ultimo, viz.: "That the attention of the authorities of the several recognised medical schools in England be directed to the resolution adopted by the Council at the last meeting, viz.: that 'it is desirable that an examination in elementary anatomy and physiology should be instituted at the several recognised schools of medicine after the end of the first year of professional study', etc.; that the teachers of anatomy and physiology at those schools be invited to confer with the Joint Committee of the College—appointed to consider the question—on the mode of carrying out the proposed examination, and that the Joint Committee do report thereon to the Council", an invitation was sent to the teachers of anatomy and

physiology in the several recognised medical schools in England, to attend a meeting at the College on the 26th ultimo, to confer with the Committee on the advisability and practicability of carrying out the proposed examination in elementary anatomy and physiology, that twenty-nine of the teachers attended the meeting, and letters were read from several others unable to be present, that the subject was fully discussed, that resolutions were carried by a large majority of the teachers in favour of the institution of the examination in question, and that the Joint Committee, having met on the 22nd instant to consider the result of the Conference, recommended the following resolutions for adoption by the Council, viz. —

"That all candidates commencing their professional studies on or after October 1st, 1882, and pursuing those studies in recognised medical schools in England, be required, before presenting themselves for the primary or anatomical and physiological examination for the diploma of Member of the College, to produce certificates of having passed an examination in elementary anatomy and physiology, such examination to be conducted by their teachers at the medical schools.

"That the periods at which the examination shall be held be determined by the teachers, provided that an interval of not less than six months shall elapse between the date at which the candidates shall have passed the examination and the date of their presenting themselves for the primary examination at the College.

"And that it be left to the teachers at the several medical schools to determine the nature and extent of the examination in elementary anatomy and physiology."

The report was approved, adopted, and ordered to be entered on the minutes; notice respecting the examination was ordered to be sent to the schools, without waiting for the confirmation of the minutes.

The President and Vice-President's Committee recommended the Council to grant Mr. T. M. Stone a pension of £300 a-year. The report was approved and adopted, as were also the other reports.

Mr. William Joseph Lunn, of Kingston-on-Hull, was elected a Fellow.

Mr. Birkett resigned his seat in the Court of Examiners. The resignation was accepted, the vacancy caused thereby to be filled up in October.

ASSOCIATION INTELLIGENCE.

GRANTS FOR SCIENTIFIC RESEARCH.

THE Scientific Grants Committee of the British Medical Association desire to remind members of the profession engaged in the researches for the advancement of medicine and the allied sciences, that they are empowered to receive applications for grants in aid of such research. Applications should be made without delay to the General Secretary, at the office of the Association, 161A, Strand, W.C., and must include details of the precise character and objects of the research which is proposed.

BRITISH MEDICAL ASSOCIATION:

FIFTIETH ANNUAL MEETING.

THE Fiftieth Annual Meeting of the British Medical Association will be held at Worcester, on Tuesday, Wednesday, Thursday, and Friday, August 8th, 9th, 10th, and 11th, 1882.

President: BENJAMIN BARROW, F.R.C.S., Consulting-Surgeon to the Royal Isle of Wight Infirmary.

President-elect: WILLIAM STRANGE, M.D., Senior Physician to the General Infirmary, Worcester.

An Address in Medicine will be delivered by W. F. WADE, F.R.C.P., Physician to the Birmingham General Hospital.

An Address in Surgery will be delivered by WILLIAM STOKES, M.D., F.R.C.S.I., Professor of Surgery in the Royal College of Surgeons, Ireland.

The business of the Association will be transacted in Eight Sections, viz.:

SECTION A. MEDICINE. (Council Room, Guildhall.)—*President:* Thom. Clifford Allbutt, M.D., F.R.S. *Vice-Presidents:* George W. Balfour, M.D.; William Henry Broadbent, M.D.; G. H. Philipson, M.D.; *Secretaries:* Edwin Rickards, M.B., 14, Newhall Street, Birmingham; H. Ashby, M.D., 11, St. John Street, Manchester.

SECTION B. SURGERY. (Recorder's Court, Guildhall.)—*President:* Augustin Prichard, F.R.C.S. *Vice-Presidents:* T. W. Walsh, F.R.C.S.; Reginald Harrison, F.R.C.S.; T. H. Bartleet, M.B., F.R.C.S. *Secretaries:* F. E. Manby, F.R.C.S., 10, King Street, Wolverhampton; Richard Clement Lucas, M.B., F.R.C.S., 18, Fins-

bury Square, E.C.; Bennett May, M.B., 16, Temple Row, Birmingham. [In consequence of severe illness, Mr. Clement Lucas has been obliged to retire from the duties of one of the Secretaries to the Surgical Section. Mr. Bennett May has kindly consented to act.]

SECTION C. OBSTETRIC MEDICINE. (Committee Room Assembly Room, Guildhall.)—*President:* William Leishman, M.D. *Vice-Presidents:* Henry Vevers, M.R.C.S.; J. G. Sinclair Coghill, M.D.; Arthur W. Edis, M.D. *Secretaries:* C. J. Cullingworth, M.D., 25, St. John Street, Manchester; Tom Bates, L.R.C.P., Worcester.

SECTION D. PUBLIC MEDICINE. (Civil Court, Shire Hall.)—*President:* Alfred Carpenter, M.D. *Vice-Presidents:* Alfred Hill, M.D.; Horace Swete, M.D.; E. T. Wilson, M.B. *Secretaries:* Geo. Haynes Fosbroke, jun., M.R.C.S., Bidford, Redditch; Francis Edward Atkinson, L.R.C.P., Settle, Yorkshire.

SECTION E. ANATOMY AND PHYSIOLOGY. (North Wing Committee Room, Guildhall.)—*President:* George M. Humphry, M.D., F.R.S. *Vice-Presidents:* S. S. Roden, M.D.; Frank Payne, M.D.; Gerald Yeo, M.D. *Secretaries:* J. B. Haycraft, M.D., Mason's College, Birmingham; James Shuter, M.B., F.R.C.S., 58, New Broad Street, London.

SECTION F. PATHOLOGY. (South Wing Committee Room, Guildhall.)—*President:* J. Hughlings Jackson, M.D., F.R.S. *Vice-Presidents:* W. R. Gowers, M.D.; H. T. Butlin, F.R.C.S.; Wm. Smith Greenfield, M.D. *Secretaries:* Sidney Coupland, M.D., 14, Weymouth Street, London; F. Treves, F.R.C.S., 18, Gordon Square, London.

SECTION G. OPHTHALMOLOGY. (County Grand Jury Room, Shire Hall.)—*President:* James Vose Solomon, F.R.C.S. *Vice-Presidents:* David Everett, F.R.C.S.; Frederick Mason, M.R.C.S.; Edwyn Andrew, M.D. *Secretaries:* Geo. Edwin Hyde, L.R.C.P., Worcester; J. A. Nunneley, M.B., 22, Park Place, Leeds.

SECTION H. OTOLGY. (City Grand Jury Room, Shire Hall.)—*President:* W. Laidlaw Purves, M.D. *Vice-Presidents:* Geo. P. Field, M.R.C.S.; A. H. Jacob, M.D.; E. Cresswell Baber, M.B. *Secretaries:* J. J. Kirk Duncanson, M.D., 22, Drumshough Gardens, Edinburgh; Peter McBride, M.D., 20, Alva Street, Edinburgh.

Honorary Local Secretaries: George W. Crowe, M.D., Shaw Street, Worcester; H. C. Moore, M.R.C.S., 7, King Street, Hereford; Thelwell Pike, M.D., 2, Montpellier, Great Malvern.

Honorary Treasurer: G. A. Sheppard, M.R.C.S., Worcester.

TUESDAY, AUGUST 8TH.

1.45 P.M.—Meeting of Local Funds Subcommittee.

2.15 P.M.—Meeting of Committee of Council. (Committee Room off Assembly Room, Guildhall.)

3 P.M.—Meeting of the Council of 1881-82. (Council Room, Guildhall.)

4.15 P.M.—Service in the Cathedral, with sermon by the Dean of Worcester.

8 P.M.—General Meeting. *President's Address:* Annual Report of Council and other business. (Assembly Room, Guildhall.)

Tea and Coffee after the Meeting.

WEDNESDAY, AUGUST 9TH. (Jubilee day.)

9 A.M.—Meeting of Local Funds Subcommittee.

9.30 A.M.—Meeting of Council of 1882-83. (Council Room, Guildhall.)

11 A.M.—Second General Meeting. *Address in Medicine.*

12.15 P.M.—Meeting of Collective Investigation Committee.

1.30 P.M.—Luncheon given by the Worcester and Hereford Branch to Members of the Association, and afterwards presentation of bust of Sir Charles Hastings to the Mayor and Corporation of Worcester. (Great Hall, Shire Hall.)

3 to 5.30 P.M.—Sectional Meetings.

7.45 P.M.—Special Service in the Cathedral, at which, by permission of the Dean, Haydn's Sacred Oratorio, "The Creation," will be performed by the Philharmonic Society, assisted by members of the Worcester, Gloucester, and Hereford Choirs, and conducted by W. Done, Esq., Organist to the Cathedral. A collection will be made in aid of the British Medical Benevolent Fund.

THURSDAY, AUGUST 10TH.

9 A.M.—Meeting of the Committee of Council. (Committee Room off Assembly Room, Guildhall.)

10 A.M.—Third General Meeting. *Reports of Committees.* (Assembly Room, Guildhall.)

11 A.M.—Address in Surgery. (Assembly Room, Guildhall.)

12.30.—Presentation of the Stewart Prize to H. Vandyke Carter, M.D., for his paper on the Malaria Prize to W. Adams Frost, Esq.

9 to 5.30 P.M.—Sectional Meetings.

6.30 P.M.—Public Dinner. Tickets will not be issued later than twelve o'clock on the day of the dinner. (There will be two kinds of dinner ticket: one for those who take wine, and the other for abstainers; 25s. and 14s. each.) (Assembly Room, Guildhall.)

FRIDAY, AUGUST 11TH.

9.30 to 11.30 A.M.—Sectional Meetings.

11.30 P.M.—Concluding General Meeting. *Reports of Committees.* (Assembly Room, Guildhall.)

3 P.M.—Garden Party, at Madresfield Court, Great Malvern, given by the President and the Countess Beauchamp.

9 P.M.—Soirée of the President and G. W. Hastings, Esq., M.P.

SECTION A.—MEDICINE.

1. Dr. W. S. Playfair will open a discussion on the Systematic

Treatment of Aggravated Hysteria and allied forms of Neurasthenic Disease.

2. Dr. Balfour on Chlorotic Murmurs.

3. Dr. Leech on the Treatment of Cardiac, Hepatic, and Renal Dropsy.

The following gentlemen have promised to take part in the discussions: Dr. McCall Anderson (Glasgow), Dr. W. Carter (Liverpool), Dr. Austin Flint (New York), Dr. F. T. Roberts (London), Dr. W. R. Thomas (Sheffield), Dr. Ross (Manchester), Dr. Fletcher Little (Leeds), Mr. De Berdt Howell (London).

The following papers also have been promised.

- BYERS, J. W., M.D. The Previous Symptoms in cases of Perforation of the Bowel in Enteric Fever.
 CAUTY, H. E., Esq. The Internal Administration of Chrysophanic Acid in Psoriasis.
 DRUMMOND, D., M.D. Auscultation of the Trachea and Mouth in the Diagnosis of Thoracic Disease.
 DRYSDALE, C. R., M.D. Treatment of Phthisis by Alpine and Marine Climates.
 FLINT, Austin, M.D. The Self-limited Duration of Pulmonary Disease.
 HARRISON, A. J., M.B. Primary Endocarditis.
 HASSALL, A. H., M.D. The Climate of San Remo.
 HOWELL, D. De Berdt, Esq. The Latent Effects of Shock.
 KNOTT, J. F., L.K.Q.C.P. Charcot's Disease of Joints.
 LEDIARD, H. A., M.D. A Test for Iodine in the Body.
 LITTLE, J. Fletcher, Esq. 1. Neurotic Arthritis. 2. Medical Rubbing.
 McVAIL, D. C., M.B. The Interrupted or Wavy Breath-sound of Phthisis.
 MALET, Henry, M.D. The Physical Differences between Binaural and Uniaural Stethoscopy.
 MYRTLE, A. S., M.D. Acute Case of Ascending Paralysis: Chronic Alcoholism.
 RALFE, C. H., M.D. Solvent Treatment of Renal Calculi.
 RICKARDS, E., M.B. Chorea and its relation to Rheumatism.
 ROBERTSON, R., M.D. Family History in relation to Contagion in Phthisis.
 ROBINSON, Edmund, Esq. Cases of Telegraphist's Cramp.
 RODEN, S. S., M.D. The Brine-Springs of Droitwich.
 SAUNDY, R., M.D., and EALES, H., Esq. The Ophthalmoscopic Appearances in Anæmia.
 SEDGWICK, W., Esq. The Extended Influence of Atavism in Hereditary Disease.
 SMITH, R. Shingleton, M.D. Two Remarkable Cases of Locomotor Ataxy, with Anomalous Symptoms.
 STURGES, Octavius, M.D. The Province of Therapeutics outside the Pharmacopæia.
 THIN, George, M.D. A Further Contribution to the Treatment of Alopecia Areata.
 THOMAS, W. R., M.D. Jaundice.
 VESSEY, Agmond, M.D. Spinal Hemiplegia following Gangrene of the Right Great Toe.
 WARNER, Francis, M.D. The Study of the Face as an Index of the Brain.
 WILLIAMS, C. Theodore, M.D. The Contagion of Phthisis.

SECTION B.—SURGERY.

1. Mr. J. Greig Smith will open a discussion on Early Operative Treatment of joint-disease as a Preventive of Excision, in which it is hoped the influence of Antiseptics in Excisional Surgery will be discussed. Mr. Henry Morris (London), Mr. Pridgin Teale (Leeds), Mr. J. F. West (Birmingham), Mr. Eddowes (Shrewsbury), Mr. Lund (Manchester), and Mr. C. B. Keetley (London), will take part in the discussion.

2. Mr. Howard Marsh will open a discussion on Bone-setting. Mr. B. Roth and Mr. A. Pearce Gould (London) will take part in the discussion.

The following papers have been promised.

- ADAMS, W., Esq. On the Selection of Cases for Forcible Movement in the Treatment of Stiff Joints; and the method of procedure.
 BANKS, W. Mitchell, M.D. 1. The free removal of Cancerous Mammæ with thorough clearing out of the Axilla. 2. The Radical Cure of Hernia by Removal of the Sac and Stitching together the Pillars of the Ring.
 BARTLETT, T. H., M.B. On the Ligation of Large Arteries: with Cases.
 BARWELL, R., Esq. On Boro-glyceride in Surgical Practice.
 BROWNE, H. Langley, Esq. Statistics of Ten Years' Surgery at West Bromwich Hospital.
 BROWNE, Lennox, Esq. On the Eradication and After-treatment of Nasal Polypi: with Illustration of an Arrangement for Illuminating the Nostril.
 BRYANT, Thomas, Esq. Aneurysm of both Popliteal Arteries; one cured by Pressure, the other by means of Speir's Artery-Constrictor, the Operation being conducted under strict Antiseptic Precautions.
 COATES, W. Martin, Esq. On the treatment of Bronchocele, Enlarged Glands, Nævi, Cysts, Cold Abscess, and Housemaid's Knee, by the Subcutaneous Injection of Iodine.
 COUSINS, J. Ward, M.D. 1. A New Instrument for Hypodermic Injection. 2. A New Method of performing Incision of the Chest: a Trocar convertible into a Knife. 3. On the Safety of a Long-beaked Staff in Lithotomy.
 COWELL, George, Esq. Experiences of Resection of the Hip-joint.
 CULLINGWORTH, C. J., M.D. A Case of Nephrectomy by Abdominal Section.
 DOLMAN, A. H., Esq. A Case of Ligation of the Left Subclavian for Traumatic Aneurysm of the Axillary Artery.
 DRYSDALE, C. R., M.D. On the Treatment of Secondary and Tertiary Syphilis.
 ELDER, George, M.D. Notes on a Successful Case of Nephrotomy and Nephrectomy for Scrofulous Pyelitis.
 FRANKS, Kendal, M.D., and ABRAHAM, P. S., B.Sc. On so-called Sponge-Grafting.
 HARRISON, Reginald, Esq. Case of Litholapaxy, in which a Stone weighing 2½ ounces was removed at one sitting.
 LONGMORE, Surgeon-General Thomas, C.B. A Successful Case of Trephining for Gunshot Injury: with Remarks.
 LUND, Edward, Esq. 1. On Air-Inflation of the Bowel as the rule of practice in

Colotomy, and on the best method of applying it. 2. Exhibition of Model showing a Method of Treating Recent Simple Transverse Fracture of the Patella without Instruments.

McVAIL, D. C., M.B. The Treatment of Gonorrhœa by Open Wire Bougies.

MAY, Bennett, Esq. 1. A Case of Excision of the Tongue, with a large portion of the Lower Jaw and Floor of the Mouth, for Epithelioma. 2. Case of Excision of a large Bronchocele after preliminary Tracheotomy. 3. Case of Ligation of the External Iliac Artery: with Remarks on the Material for the Ligation of Large Arteries in their Continuity.

MOERIS, Henry, M.B. Remarks on a Series of Cases of Abscesses in Bones.

NICHOLSON, R. H. B., Esq. Cases of Gastrostomy.

PARKER, Rushton, Esq. A Case of Strangulated (?) Omental Hernia.

PUZEV, Chauncy, Esq. On Acute Traumatic Malignant Disease.

ROBSON, A. W. Mayo, Esq. On Antiseptic Atmosphere to replace the Carbolic Spray in Operations: with an Account of Experiments and Cases, and a Demonstration of the Apparatus.

ROTH, Bernard, Esq. 1. On Fifty Cases of Spinal Lateral Curvature treated without supports and without suspension. 2. The Early Treatment of Flat Foot.

SMITH, E. Noble, Esq. Demonstration of the Application of some new Mechanical Surgical Appliances.

STEELE, C., M.D. On Bent Tibiæ in Children: Causes and Treatment.

SYMPSON, T., Esq. A Singular Congenital Deformity.

TAIT, Lawson, Esq. 1. A Successful Case of Nephrectomy. 2. Summary of Conclusions derived from 500 Consecutive Cases of Abdominal Section. 3. A third Successful Case of Cholecystotomy. 4. A Series of 100 Consecutive Cases of Ovariectomy performed without any Listerian Details.

THOMSON, W., Esq. 1. Ligation of the Innominate Artery for Subclavian Aneurysm. 2. On Rupture of the Knee-joint and Compound Fracture of the Patella: After-Suture of that Bone; Incision; Recovery.

TREVES, Frederick, Esq. On the Treatment of certain Fractures of the Lower End of the Femur.

WEST, J. F., Esq. On Rapid Lithotomy: its Merits and Demerits.

WHERRY, George, M.B. On a Case of severe Head-Injury.

WHITEHEAD, Walter, Esq. On Amputation by a large External Flap.

SECTION C.—OBSTETRIC MEDICINE.

A discussion on Subinvolution of the Uterus, its Causes, its Relation to Uterine Disease, and its Preventive Treatment, will be opened by Dr. John Williams (London).

The following gentlemen have promised to take part in the discussion: Dr. W. S. Playfair, Dr. Robert Barnes, Dr. Henry Bennett, Dr. Granville Bantock, Mr. Knowsley Thornton, Dr. J. Wallace (Liverpool), Dr. A. W. Edis, Dr. Routh, Mr. Lawson Tait (Birmingham), Dr. J. M. Bennett (Liverpool).

The following papers have been promised.

- BANTOCK, George Granville, M.D. Hysterectomy.
 CULLINGWORTH, Charles J., M.D. Case of Double Uterus with complete Septum Vaginae.
 DEWAR, John, Esq. Dysmenorrhœa as a Cause of Hystero-epilepsy.
 EDIS, A. W., M.D. The Rational Treatment of Menorrhagia.
 ELDER, George, M.D. The Stomachic Disorders of Uterine Disease.
 GARSTANG, T. W. Harropp, Esq. Urethral Caruncle.
 HICKINBOTHAM, James, M.D. Urethrocele and Vaginal Cysts.
 MADDEN, T. More, M.D. Further Observations on Lacerations of the Cervix Uteri.
 RIDGEN, George, Esq. The Management of some Abnormal Head-presentations.
 ROUTH, C. H. F., M.D. The Etiology and Treatment of certain Varieties of Dysmenorrhœa.
 SQUIRE, W., M.D. Bromic Ether as an Anæsthetic in Obstetrics.
 TAIT, Lawson, Esq. Parallel Histories of two Cases of Bleeding Myoma.
 THORNTON, J. Knowsley, M.B., C.M. On Hegar's Operation for Uterine Fibroids: with Remarks.
 WALLACE, John, M.D. Note on the existence of Temporary Albuminuria in the Acute Stages of Perimetritic and Parametritic Inflammations, as well as in the Chronic Suppurative Stage.
 WALTER, W., M.D. A Successful Case of Transfusion of Blood after severe Post Partum Hæmorrhage.

SECTION D.—PUBLIC MEDICINE.

A discussion on the Public Medicine Aspects of the Alcohol Question will be opened by Dr. Norman Kerr (London).

A discussion on the Notification of Infectious Diseases will take place in this Section.

The following papers have been promised.

- BOND, F. T., M.D. Scarlatinal Sore-throat, and its relations to other Throat-affections.
 CARTER, W., M.D. Notification of Infectious Diseases by Medical Men.
 DE PIETRA SANTA, —, M.D. The Typhoid Fever in Paris, 1879-1882.
 DRYSDALE, C. R., M.D. The Death-rate as affected by Food-Supplies.
 DYKE, T. J., Esq. Closing of Schools in times of the Epidemic Prevalence of Contagious Fevers.
 GROVES, J., M.B. House-Sanitation in Rural Districts.
 HARDY, H. Nelson, Esq. Hospital Sunday and Hospital Reform.
 INLACH, Francis, M.D. Quarantine in Theory and Practice.
 MOORE, Charles F., M.D. Short Notes on Vaccination.
 MILLICAN, K. W., Esq. The Etiology of the Acute Specific Infectious Diseases.
 NEALE, R., M.D. A Ready Means of surrounding Patients with absolutely Pure Air.
 PAGE, Herbert M., Esq. Closure of Parochial Schools during the Prevalence of Zymotic Diseases.
 SLADE-KING, E. J., M.D. Mutual Relations of Medical Officers of Health and Private Medical Practitioners.
 SWETE, Horace, M.D. Sanitation in Hospitals: Drainage and Water-supply, past and present, of the Worcester Infirmary.
 VACHER, Francis, Esq. The Transmission of Disease by Food.

WILSON, E. T., M.B. Some Peculiar Features of a Recent Epidemic of Measles at Cheltenham.

SECTION E.—ANATOMY AND PHYSIOLOGY.

The following papers have been promised.

- ROWLEY, A. A., Esq. The Development of the Mammary Gland.
 BAILEY, W. A., M.D. On some points in the Anatomy of the Ciliary Body.
 CATHCART, C. W., M.D. 1. Movements of the Upper Limb of the Trunk. 2. Movements of the Ulna in Pronation and Supination.
 CLARKE, W. Bruce, M.B. On cases of Arrested Development of the Diaphragm, with specimens.
 COLE, T., Esq. On the Continuation of the Intrinsic Muscles of the Tongue into the Extrinsic Muscles (accompanied with dissections).
 GARRON, I. G., M.D. On the Effects of Artificial Distension of the Rectum on the Viscera.
 GASKELL, W. H., M.D. Observations on the Innervation of the Heart.
 HAY, Matthew, M.D. 1. Cane-Sugar Ferment. 2. Absorption of Salts in the Alimentary Canal.
 HAYCRAFT, J. B., M.D. A New Process for the Estimation of Uric Acid in Urine.
 HOGGAN, George, M.D. 1. On the Functions of the Lymphatics as deduced from the Anatomy of their Radicles (with microscopical demonstrations). 2. On the Functions and Position of the Ultimate Nerve-Terminations in the Skin and how they are affected by causes extraneous to the Nervous System (with microscopical demonstrations).
 KETLEY, C. B., Esq. On the Actual Use of the Crucial Ligament of the Knee-joint.
 LOCKWOOD, C. B., Esq. On Abnormalities of the Cæcum and Colon, with reference to its development.
 MORRIS, Henry, M.B. On the Ligamentum Teres, and its Uses in Man and other Animals.
 PARKER, W. K., Esq., F.R.S. On the Visceral Arches of the Mammalia.
 ROBSON, A. W., Mayo, Esq. 1. On the Position of the Abdominal Viscera. 2. Section of Brain hardened and prepared by Giacomini's process, with Explanation of the Microscopical Preparation.
 SAMPSON, F. A., F.R.S. On Digestion by the White Capsules of the Blood: a Contribution to the Physiology of Cell-Protoplasm.
 STREETON, L., Esq. A Case of Bifid Dorsal Spines in the Human Subject.
 SYMINGTON, James, M.D. Some Peculiar Features in the Cranial Venous Circulation.
 WALSHAM, W. J., Esq. On the Anatomy of the Triangular Ligament and Pelvic Fascia.
 WILLIAMS, W. Roger, Esq. On Contraction of the Stomach.

Tables will be provided in this Section for the exhibition of microscopic objects.

SECTION F.—PATHOLOGY.

1. A Debate on the Morbid Anatomy and Pathology of Diabetes will be introduced by Dr. D. J. Hamilton, of Aberdeen. The following gentlemen are expected to take part in the discussion: Dr. Pavy, Dr. S. Mackenzie, Dr. Dreschfeld, Dr. Saundby, Dr. Shingleton Smith, and others.

2. Mr. Jonathan Hutchinson will open a debate on the Origin of Tumours. The following gentlemen have already intimated their intention to take part in the debate: Dr. Thip, Dr. Sangster.

The following papers are promised.

- HADDON, W. B., M.D. Specimens illustrating Degeneration in the Spinal Cord.
 NICHOLSON, W. A., M.D. On some Abnormal Attachments of the Brain.
 ROSENEL, W. J., Esq. A Contribution to the Pathology of Vascular Growths of the Rectum.
 SANGSTER, A., M.B. On Rodent Ulcer.
 SAUNDY, R., M.D. Changes in the Sympathetic Nerve in Bright's Disease.
 WILLIAMS, W. Roger, Esq. On the Pathology of the Stomach.

The following demonstrations will be given in this Section.

1. On the Pathology of the Cervical Vertebrae.
 2. On the Pathology of the Cervical Vertebrae.
 3. On the Pathology of the Cervical Vertebrae.

- MACKENZIE, Stephen, M.D. 1. The Bacillus of Tubercle. 2. A Specimen of Tubercle.
 3. The Bacillus of Tubercle.
 4. The Bacillus of Tubercle.

There will be a table for the exhibition of wet specimens connected with this Section in the room provided for the meeting. There will also be an exhibition of microscopic objects connected with Pathology in the same room.

SECTION G.—OPHTHALMOLOGY.

1. Dr. Edwyn Andrew will open a discussion on Extraction of Senile Cataract in its Capsule: mode of procedure.
 2. A discussion on the following subject will be opened by Mr. E. Nettleship: To what extent do the signs derived from the examination of the fundus, and the Appendages, contribute to the localisation of Central Retinitis?

The following gentlemen have expressed their intention of taking part in the discussions: Dr. Wolfe (Glasgow), Dr. O. Sturges, Mr. Haynes Vane, Mr. Juler, and Mr. H. E. Dew; also, if their other duties permit, Dr. W. R. Gowers, Dr. Laidlaw Purves, and Dr. Clifford Allbutt.

The following papers have been promised.

- ANDREW, Edwyn, M.D. 1. Remarks on the Old Operation of Depression of Cataract. 2. Remarks on Two Cases of Dislocation of the Lens. 3. A New Mode of Treating Sympblepharon.
 COWELL, George, Esq. On certain Modifications of von Græfe's Operation for Extraction of Cataract.
 CRITCHETT, Anderson, Esq. The Operative Treatment of Congenital Cataract.
 GROSSMAN, K., M.D. A New Operation for Glaucoma.
 JULER, Henry E., Esq. The Application of Retinoscopy to the Diagnosis and Treatment of Errors of Refraction.
 NETTLESHIP, E., Esq. A Case of Optic Neuritis, followed by a Persistent Flow of Fluid from the Nostri.
 SMITH, Priestley, Esq. 1. Atrophy of the Optic Nerves, with Continuous Dropping of Fluid (cerebro-spinal?) from the Nostri—two cases. 2. A new Registering Perimeter.
 SNELL, S., Esq. Cataract-extraction by a Shallow Lower Flap, with particulars of 120 Operations.
 TAYLOR, C. B., M.D. 1. On the Employment of Sponge-grafts, in the Formation of a Stump after Extirpation of the Eyeball. 2. On the Division of the Optic and Ciliary Nerves as a substitute for Enucleation, with *preludes* of Twenty Cases. 3. On the Instillation of Esesine as a preliminary to Cataract-extraction, with an easy and safe Method of performing Iridectomy, and lacerating the Capsule in such cases. 4. On Temporary Ankyloblepharon and the Transplantation of the Skin *en masse* in cases of Injury and Disease of the Eyelids. 5. The Author's Experience of Motair's Eye-shades for the Diminution or Exaggeration of the Effects of Tenotomy in cases of Strabismus. 6. On the Cure of Severe Cases of External Strabismus without dividing the External Rectus.
 WOLFE, J. R., M.D. Sclerotomy in Glaucoma.

Mr. Juler will exhibit Microscopic Sections of Diseases of the Eye.

Mr. Juler and Mr. Anderson Critchett will exhibit the New Ophthalmometer of Javal and Schiotz for detecting Corneal Astigmatism, etc.

SECTION H.—OTOLOGY.

1. A discussion on the connection between Diseases of the Ear and General Medicine will be opened by Mr. George P. Field. The following gentlemen have promised to take part in this discussion: Dr. A. H. Jacob (Dublin), Mr. Thomas Webster (Redlands, near Bristol), Mr. Lennox Browne (London), Dr. Cresswell Baber (Brighton), Dr. Kirk Duncanson (Edinburgh).

2. A discussion on Auditory Vertigo, especially in regard to its Differential Diagnosis, will be opened by Dr. Woakes. The following gentlemen have promised to take part in this discussion: Dr. McBride (Edinburgh), Dr. Cresswell Baber (Brighton).

Drs. Hughlings Jackson, Clifford Allbutt, and Gowers, have promised to take part in the discussions, provided their other duties permit.

The following papers have been promised.

- BARR, Thomas, M.D. Practical Observations on the use of the Galvanic Cautery in Disease of the Ear.
 BROWNE, Lennox, Esq. 1. On the Connection between Diseases of the Ear and General Medicine. 2. The Local Treatment of Discharges from the Ear.
 ELLIS, Richard, Esq. Notes on a case of Deafness following Concussion of the Brain.
 MCBRIDE, P., M.D. The Physiology of Auditory Vertigo and some other Neuroses produced by Ear-Disease.
 PIERCE, F. M., M.D. Case of Extensive Disease of the Left Temporal Bone with Hernia Cerebri: with Specimens.

- PURVES, Laidlaw, M.D. The Use of Mineral Acids in the Treatment of Caries of the Teeth.
 TORRANCE, Robert, Esq. Remarks on Syphilitic Cochinitis.
 WARDEN, Charles, M.D. Polypus of the Ear.

Dr. Cresswell Baber will show an Aural Reflector and a set of Specula for the Waistcoat Pocket.

Dr. Urban Pritchard will show a Convenient Form of Audiphone.

No communication shall occupy more than fifteen minutes, and no person shall be permitted to speak more than once, or for more than ten minutes, during the discussion thereon.

N.B.—Members who desire to take part in the discussions, or to read papers, are earnestly requested to communicate without delay to the Secretaries of the respective Sections.

RECEPTION ROOM.

. It is particularly requested that each member, on his arrival, will at once proceed to the Reception Room, which is at the Guildhall; 1. enter his name and address, and obtain his tickets and programme; 2. inquire for letters; 3. consult the list of lodgings and hotels, or see the agents appointed for the purpose of letting lodgings, Messrs. Griffith and Milington, 50, Foregate Street, Worcester. A list of hotels and lodgings was published in last week's JOURNAL.

EXCURSIONS.

The following excursions will take place on Saturday, August 12th.

1. Excursion to Malvern Hills. A train will leave Worcester, Foregate Street Station, at 9.39, arriving at Great Malvern at 10, where members lodging at Malvern can join the party. The geological structure of the hills and surrounding country will be explained by the Rev. W. S. Symonds, F.G.S., and G. H. Piper, Esq., on the spot. The return to Worcester can be made by any of the ordinary trains.

2. Excursion to the River Wye, Ross, Monmouth, Tintern Abbey, and Chepstow Castle. A train will leave the Foregate Street Station about 9 A.M., calling at Malvern Link, Great Malvern, Hereford, and Ross stations. At Ross boats can be hired for the river from Ross to Monmouth, passing through some of the most beautiful scenery of the Wye. The train will stop at Symonds Yat, Monmouth, Tintern, and Chepstow. Parties proceeding by boat from Ross to Monmouth can go on to Tintern and Chepstow by a later train to meet the party at Chepstow, where luncheon will be provided about 4 P.M.

3. Excursion to Stratford-on-Avon, Shakespeare's house, museum, church, etc.; Leamington, Kenilworth, and Warwick Castles. A train will leave Worcester, Shrub Hill Station, at 9, arriving at Stratford at 10, where light refreshments will be provided by the medical men there. Thence, at about 12.30, to Leamington, where a luncheon, limited to 100 members, will be given by the members of the association residing in Warwick, Leamington, and Kenilworth. From Leamington by carriages to Kenilworth Castle, thence to Warwick, leaving the latter place at 7 o'clock.

4. Excursion on the River Severn. The steamer, *Lady Alwyne*, will leave Worcester Bridge, at 10 o'clock on Saturday morning, for a trip of about two hours to Tewkesbury. After allowing time for viewing the ancient abbey, it will return to the "Shrubbery" in the grounds of W. Dowdeswell, Esq., where, by permission, luncheon will be provided. This excursion will not take place unless there be twenty-five members going.

Further particulars may be obtained of Dr. PIKE, Great Malvern, for the Malvern excursion; of H. MOORE, Esq., King Street, Hereford, for the Wye; and Dr. CROWE, Worcester, for the Stratford and Tewkesbury excursions.

PLACES OF INTEREST IN AND AROUND WORCESTER WHICH MAY BE VISITED.

1. The Cathedral, completely restored by the late Sir G. Gilbert Scott; great organ; grand peal of twelve bells. Week-day service: Morning at 10.15; evening at 4.15.

2. The Infirmary, Castle Street, contains 100 beds; admirable outpatient department. Operations on Thursdays at 2 P.M.

3. Exhibition of fine arts, and of the manufactures and industries of the county; Shrub Hill, close to the Railway Station. Open daily, 1s. A magnificent collection of works of art; Worcester china; carpets, etc.

4. The following manufactories will be open each day to members and their ladies on showing their cards of membership, viz.:—(a) the Worcester Royal Porcelain Works, at the back of the Cathedral. Open from 9 till 1, and from 2 till 6; (b) The Semi-China Works of Messrs. Grainger; (c) the Glove Manufactory of Messrs. Dent, Allcroft, and Co., Fish Street; (d) the Shoe Manufactory of Mr. Henry Willis, College Street; (e) the extensive Vinegar Works of Messrs. Hill, Evans, and Co., Pheasant Street; (f) the Carriage Manufactory of Messrs. McNaught and Smith, Tything; (g) the Horsehair Weaving Factory of Messrs. Edward Webb and Sons, Copenhagen Street; (h) the Brush Manufactory of Messrs. Pemberton and Son, Broad Street; (i) the Railway Signal and Ironworks of Messrs. McKenzie and Holland, Canal Side, Lowesmoor; (k) The Tinsplate Works of Messrs. Williamson and Sons, Providence Street; (l) Ornamental Tiles, Messrs. H. C. Webb and Co., Tunnell Hill, near Railway Station; (m) the extensive Cellars of Wines and Spirits of Messrs. Stallard and Sons, Copenhagen Street, next to Guildhall; (n) the Nurseries of Messrs. R. Smith and Co., about the largest in the kingdom, St. John's; (o) the extensive Nurseries of Messrs. W. B. Rowe and Co. (Limited), Burbourne, near Worcester. N.B.—It is desirable that parties of from six to twelve persons should be made up to visit the above named Works, especially the Porcelain Works.

5. The Droitwich Brine Baths and Swimming Baths, open daily; six miles from Worcester by rail.

6. Witley Court, the seat of the Earl of Dudley, ten miles from Worcester. Italian Villa, with grand fountains, etc. Tickets of admission to view may be had in the Reception-room.

7. The River Severn. There are boats and steamers on hire for parties on the Severn, which presents some beautiful scenery, both

above and below bridge. For boats, apply at the Bridge, or at the Grand Stand, Pitchcroft.

DINNER TICKETS.

Applications should be made as early as possible to the Honorary Treasurer, G. A. Sheppard, Esq., Foregate Street, Worcester; accompanied, in all cases, by a remittance of 21s. or 14s.

RAILWAY SERVICE.

THE most convenient trains from Paddington are at 10 A.M., 2.15 and 4.45 P.M., arriving in Worcester 1.50, 6.0 and 7.45. Trains from Birmingham and the North arrive from 9.45 A.M. to 9.30 P.M. Trains from Bristol and the South arrive at 10.2, 12.20, 1.44, 3.22, 5.25, 8.9, 9.16.

Special trains have been engaged to leave Worcester for Birmingham at 11.0 P.M. on the nights of the 8th, 9th, 10th and 11th.

Special trains from Worcester to Malvern and Hereford at the same hour on each day.

Special train from Worcester to Gloucester on Wednesday evening at 11 o'clock.

ANNUAL MUSEUM.

The sixteenth annual exhibition of objects of interest in connection with medicine, surgery, and their allied sciences will take place in the Music Hall, Worcester, during the second week of August, 1882. The floor-space of this building amounts to 4,000 square feet. The Committee appointed to take charge of the arrangements for this Museum will be glad to receive—1. Pathological specimens (wet or dry); 2. Drawings or diagrams illustrating disease; 3. Casts or models; 4. Surgical instruments and appliances; 5. Microscopic preparations; 6. Microscopes, thermometers, and other instruments of investigation; 7. Preparations, diagrams, etc., relating to investigations in anatomy and physiology; 8. New drugs, chemicals, pharmaceutical preparations, and dietetics; 9. Sanitary appliances, including drawings or models illustrating the ventilation of hospitals or private dwellings; 10. New medical books. It is intended that the surgical instruments, sanitary appliances, etc., shall be *bona fide* novelties, or improvements on those in common use. The pathological specimens will be arranged in departments.

Exhibition of Instruments and Apparatus.—It is intended to arrange for the exhibition of complete series of instruments, electro-therapeutic apparatus, instruments for physical diagnosis, and appliances relating to sanitary science and public health. Facilities will also be afforded, when requested, for the display of instruments in action, or for special explanation by the exhibitors of apparatus, etc.

The Catalogue.—It is intended to print a catalogue, which will be as complete as circumstances may permit.

NOTICE OF MOTION.

Dr. Carter (Liverpool) hereby gives notice that he will move:

"That the Parliamentary Bills Committee is not properly representative of the Association, and requires to be remodelled."

Aug. 3rd, 1882

FRANCIS FOWKE, *General Secretary*.

BRANCH MEETINGS TO BE HELD.

NORTH WALES BRANCH.—The annual meeting will be held at the Westminster Hotel, Rhyl, on Tuesday, September 5th. Members desirous of reading papers or of proposing new members, are requested to communicate the titles of the papers and the names of candidates to the Honorary Secretary on or before Monday, the 14th instant, that they may be inserted in the circular convening the meeting.—J. LLOYD-ROBERTS, Honorary Secretary.—Denbigh, August 1st.

NORTH OF ENGLAND BRANCH: ANNUAL MEETING. THE eighteenth annual meeting of this Branch was held in the library of the Newcastle-on-Tyne Infirmary, on Thursday, July 13th. Thirty members were present.

Dr. EASTWOOD, the retiring President, before leaving the chair, called the attention of members to a petition to Parliament, respecting the regulations affecting militia surgeons, which lay on the table for signature. He then resigned the chair to Dr. EMBLETON, the president for the ensuing year.

President's Address.—Dr. EMBLETON thanked the Branch for the honour they conferred upon him in electing him as President for the second time. He then delivered an able address, commencing with a most appropriate allusion to the lamented demise of Dr. Robert Wilson of Alnwick, the President-elect. Dr. Embleton then made a detailed reference to the report of the Royal Commission on the Medical Acts, criticising its provisions in a masterly manner.

Vote of Thanks to the President.—It was moved by Mr. S. W. BROADBENT, seconded by Mr. G. B. MORGAN, and carried by acclamation: "That the warmest thanks of this meeting be accorded to the President for his able address, and that he be requested to allow it to be printed and circulated amongst the members."

Vote of Thanks to the retiring President.—It was proposed by Dr. W. H. DIXON, seconded by Mr. W. GOWANS, and carried by acclamation: "That the best thanks of the Branch be accorded to the retiring President, Dr. Eastwood, the council of management, and the other officers of the Branch, for their valuable services during the past year."

Report of the Council.—Dr. DRUMMOND (Honorary Secretary) read the following report of Council.

"The Council have much pleasure in meeting the members at this, the eighteenth annual meeting of the Branch, and are glad to be able to congratulate them on the fact that its numerical strength and usefulness are so well maintained."

"At the annual meeting in 1881 at Darlington, the list of members of the Branch contained 239 names. Of these, during the year, the Council regret to report that no fewer than twelve have died, eight have resigned, three have left the district, and five have been struck off for nonpayment of subscriptions. Thus twenty-eight names have been removed from the list. During the year, twenty-five new members were elected. Therefore, at the present time, the Branch consists of 236 members."

"The Council deeply regret to have to remind the members of the serious losses death has caused in their ranks during the past year. The death of the President-elect, Dr. Robert Wilson of Alnwick, is sincerely deplored by all, and the Council feel that in him they have lost a valuable colleague and a genial friend, and one who would worthily have filled the office of President."

"The Council regret also to notice, in the list of deaths, the names of: W. H. Arrowsmith, J. S. Denham, J. J. Howson, J. Longbotham, J. Mackie, H. MacLachlan, J. B. Peacock, J. C. Reid, James Wilson, and H. J. Yield."

"While regretting the loss of Dr. Wilson as President, the Council congratulate the members on having chosen, in his place, a gentleman so well-known and universally esteemed as Dr. Embleton, the first member of the Branch who has been elected for the second time to fill the office of President, he having occupied that position in the year 1869."

"The Council have pleasure in drawing attention to the Treasurer's account, which shows a balance in favour of the Branch of £57 11s. 2d."

"An interesting series of papers were read at the autumnal and spring meetings; and the Council beg to thank warmly those members who read papers, and showed cases and specimens during the past year."

"The Council deeply regret the resignation of Dr. J. W. Barron as Honorary Secretary, and they tender to him their sincerest thanks for the earnest attention he paid to the duties of his office."

Election of Officers for 1882-3.—It was moved by Dr. GIBSON, seconded by Dr. ANDERSON, and carried unanimously: "That the next annual meeting be held at Sunderland, the autumnal meeting at Durham, and the spring meeting at Bishop Auckland; that Dr. W. H. Dixon be President-elect, Dr. Drummond Honorary Secretary and Treasurer, and the following gentlemen the Council of Management, viz., Dr. J. W. Barron, Mr. S. W. Broadbent, Dr. J. W. Eastwood, Dr. R. W. Foss, Mr. George Middlemiss, Mr. G. B. Morgan, Dr. T. Oliver, Dr. G. H. Philipson, and Mr. G. E. Williamson."

On the motion of Dr. BARKUS, and seconded by Dr. STEINTHORP, the following gentlemen were unanimously elected to represent the Branch on the General Council of the Association, viz.: *For Northumberland:* Drs. Embleton, MacLagan, Oliver, and Philipson. *For North Durham:* Dr. T. W. Barron, Mr. S. W. Broadbent, Dr. W. H. Dixon, and Mr. G. B. Morgan. *For South Durham:* Drs. Eastwood, Fielden, Foss, and Fothergill.

Dr. Philipson was again selected to represent the Branch on the Parliamentary Bills Committee.

New Members.—The following gentlemen were unanimously elected members of the Association and Branch, viz.: Fred. Coley, M.D., Newcastle; John Fitzgerald, Gilsland Spa, Cumberland; Edward Lynn, L.R.C.S.I., Sunderland; and James Mackenzie, M.D., Crook.

On the motion of Dr. EASTWOOD, it was decided to have in future only one Secretary for the Branch, who shall also act as Treasurer.

The following resolution, proposed by Dr. EASTWOOD, and seconded by Dr. GIBSON, was carried unanimously: "That for the future the names of those members whose subscriptions are in arrears, for two years consecutively, shall be struck off the list of members of the

Branch; and that each member shall receive at least a month's notice before his name is struck off."

Dinner.—The dinner took place in the Douglas Hotel, Newcastle. The President was supported by Fleet-Surgeon Baird, of Her Majesty's ship *Castor*. About thirty members were present; the vice-chair was occupied by Dr. Drummond.

METROPOLITAN COUNTIES BRANCH: ANNUAL MEETING.

THE Thirtieth Annual Meeting of this Branch was held at the Crystal Palace, Sydenham, on Wednesday, July 19th, at 4 p.m. The Chair was first taken by the President for the past year, Mr. EDWIN SAUNDERS.

Report of Council.—Dr. HENRY, one of the Honorary Secretaries, read the following report.

"The Council of the Metropolitan Counties Branch have the pleasure of reporting that at this, its thirtieth annual meeting, the condition of the Branch as regards numbers is very satisfactory. At the last annual meeting, there were 846 members on the list. Since that time, 9 members have died, and 15 have been removed through resignation and other causes. On the other hand, 84 new members have joined the Branch—giving a net increase of 60 members, or a total of 906."

"The members who have died are: Mr. Henry Brown, Mr. T. Beard Burton, Dr. George Duplex, Mr. W. F. Fuller, Dr. C. Dudley Kingsford, Mr. A. W. Moore, Dr. T. B. Peacock, Dr. G. A. Malcolm Simpson, and Dr. Charles Wotton."

"One general meeting of the Branch has been held during the year. It took place at St. George's Hall on February 22nd, when Dr. Benjamin Howard exhibited and explained his ambulance carriage, and an interesting discussion took place."

"The district meetings, under the able guidance of the district honorary secretaries, continue to be valuable means of increasing the numerical strength of the Association and Branch, and of promoting their objects. Your Council recommend that steps should be taken for the formation of district societies in those parts of the Branch where they do not at present exist."

"With the sanction of your Council, the Secretaries, when applying for the subscriptions due to the Association and Branch at the beginning of the year, issued a circular to the members, directing their attention to the British Medical Benevolent Fund, and soliciting donations or subscriptions in aid of this most useful institution. Your Council are glad to learn that a considerable number of members have already made a favourable response to this appeal."

"The attention of your Council, at a meeting held on November 4th, 1881, having been directed to the fact that a misfortune, without precedent in the history of the Association, had befallen the Dublin Branch in the deaths of its President and President-elect, both well known and highly respected members of the medical profession in Ireland, your Council unanimously passed the following resolution:

"That this Council, having heard with much regret of the recent deaths of Dr. Thomas Hayden, the President of the Dublin Branch of the British Medical Association, and Dr. Alfred H. M'Clintock, the President-elect of the same Branch, desire to express to the Council and members of the Dublin Branch their fraternal sympathy with them in the loss which they have sustained by the removal of two such eminent and highly esteemed members of the Association."

A copy of this resolution was sent to Dr. Dufley, the Secretary of the Dublin Branch; and your Council have the satisfaction of knowing that it was most cordially received by the Dublin Branch as an expression of kind feeling."

"Your Council has received from the Parliamentary Bills Committee of the parent Association a copy of the Draft Bill for the Registration of Midwives. This is a subject of great importance; and your Council strongly recommend that it should be carefully considered by the new Council, and, if thought necessary, by the Branch assembled in general meeting."

"The result of the voting for the election of officers and members of Council for 1882-83 is as follows:

President, Thomas Bridgwater, M.B.; *President-Elect*, Charles J. Harc, M.D.; *Five Presidents*, S. O. Habershon, M.D., Timothy Holmes, Esq., Edwin Saunders, Esq., John M. Burton, Esq.; *Treasurer*, Walter Dickson, M.D.; *Secretaries*, Alexander Henry, M.D., Wm. Chapman Grigg, M.D. *Eighteen Ordinary Members of Council* W. F. Cleveland, M.D., Frederick H. Daly, M.D., Frederick H. Gervis, Esq., Alexander Grant, M.D., Sir William Mac Cormac, C. Macnamara, Esq., Robert Liveing, M.D., Stephen Mackenzie, M.D., F. A. Mahomed, M.D., Francis Mason, Esq., W. J. Mickle, M.D.,

W. M. Ord, M.D., W. S. Playfair, M.D., George H. Savage, M.D., Septimus W. Sibley, Esq., T. Gilbert Smith, M.D., A. P. Stewart, M.D., J. Burney Yeo, M.D. *Forty-five Representatives of the Branch in the General Council of the Association:* George F. Blandford, M.D., Thomas Bridgwater, M.B. (Harrow), W. H. Broadbent, M.D., George D. Brown, Esq. (Ealing), T. Lauder Brunton, M.D., F.R.S., Thomas Buzzard, M.D., Sidney Coupland, M.D., William B. Dalby, Esq., Charles Davidson, Esq., Walter Dickson, M.D., Charles Drage, M.D. (Hatfield), J. Matthews Duncan, M.D., Arthur W. Edis, M.D., Robert Farquharson, M.D., M.P., Stamford Felce, M.R.C.P. Ed., George P. Field, Esq., John Goodchild, Esq. (Ealing), W. R. Gowers, M.D., S. O. Habershon, M.D., H. Nelson Hardy, Esq., Ernest Hart, Esq., Alexander Henry, M.D., George Johnson, M.D., F.R.S., Robert Liveing, M.D., R. Clement Lucas, Esq., Sir William Mac Cormac, Charles Macnamara, Esq., F. A. Mahomed, M.D., J. Frank Payne, M.D., George W. Potter, M.D., Henry Power, Esq., R. Quain, M.D., F.R.S., Walter Rivington, Esq., Edwin Saunders, Esq., Richard Shillitoe, Esq. (Hitchin), Septimus W. Sibley, Esq., Edward H. Sieveking, M.D., Sir W. R. E. Smart, M.D., K.C.B., A. P. Stewart, M.D., Octavius Sturges, M.D., Henry Sutherland, M.D., Frederick Treves, Esq., E. H. Vinet, M.D., Frederick Wallace, Esq., John Wood, Esq., F.R.S.

"In conclusion, your Council are sure that the members of the Branch participate with them the satisfaction which they feel at the generally prosperous condition of the British Medical Association, the jubilee meeting of which is close at hand. The prosperity of any Branch is a part of the prosperity of the Association; and the work of the Branches is that for which the Association was established. It is for the Metropolitan Counties Branch, acting in concert with its sister Branches throughout the kingdom, to use its influence whenever called on to act for the benefit of the profession and of the public. What it has already done, has been shown in the historical sketch compiled by your senior secretary from the minutes, and published in the JOURNAL during the present month. That the Branch may have a long and prosperous career of honour and usefulness, is the earnest desire of your Council."

After some discussion, the report was ordered to be received, adopted, and entered on the minutes.

Treasurer's Report.—Dr. Dickson, Treasurer, presented the financial report. The receipts, including a balance of £4 6s. at the annual meeting in 1881, amounted to £112 16s., and the expenditure to £73 4s. 5d., leaving a balance in hand of £39 11s. 7d. On the proposal of Dr. VINET, it was resolved—

"That the Treasurer's report now read be received, adopted, and entered on the minutes."

The History of the Association and Branch.—The PRESIDENT moved, Dr. E. H. VINET seconded, and it was unanimously resolved—

"That the best thanks of the Metropolitan Counties Branch of the British Medical Association are due and are hereby presented to Dr. Henry for his very useful and valuable work on the history of the Association and Branch, which he has compiled, and which has recently appeared in the pages of the BRITISH MEDICAL JOURNAL."

Mr. SAUNDERS then addressed the meeting, thanking the officers and members for the support which he had received during his year of office, and resigned the chair to the newly elected president, THOMAS BRIDGWATER, M.B., of Harrow, who delivered an address on Provident Dispensaries from a country practitioner's point of view. At the conclusion of the address it was moved by Dr. GEORGE JOHNSON, seconded by Dr. VINET, and resolved—

"That the best thanks of the Branch be given to Dr. BRIDGWATER for his able address."

Vote of Thanks to the Retiring President.—Mr. JABEZ HOGG proposed, Dr. HARE seconded, and it was unanimously resolved—

"That the cordial thanks of the Branch be given to Edwin Saunders, Esq., for the able and courteous manner in which he has performed the duties of President during the past year; for his constant attention to the interests of the Branch and of the profession; and for his hospitable reception of the members at the South Kensington Museum."

Collective Investigation.—Dr. HENRY read a letter which he had received from Dr. Mahomed, the Secretary of the Collective Investigations Committee, who was unavoidably prevented from being present, and proposed the following resolution—

"That the Council of the Branch be instructed to adopt such measures as may be necessary for promoting the work of Collective Investigation of Disease; and that they be authorised to invite the co-operation in committee of such other members of the Branch as they may think advisable."

Mr. JABEZ HOGG seconded the motion, which was unanimously adopted.

Dinner.—The members afterwards dined together; THOMAS BRIDGWATER, M.B., President, in the chair.

YORKSHIRE BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at the Leeds School of Medicine, on July 26th, 1882; Mr. T. R. JESSOP, the President, in the chair.

President's Address.—The President read an address.

Report of Committee.—The following report of the Council was read by the Secretary; and was adopted unanimously on the motion of Messrs. WHEELHOUSE and NORTH.

"The Council of the Yorkshire Branch have not much to report to their members except ordinary information.

"The number of members, owing to resignations and deaths, has only reached 264; or four more than last year.

"The balance in the hands of the Treasurer is £44 7s. 6d., but the expenses of the present meeting have not yet been paid.

"During the year meetings have been held at York, and at Pontyfract; at which numerous papers were read, and some business transacted.

"Your Council have taken means to organise sub-committees for the furtherance of the scheme of Collective Investigation.

"This sub-committee will be elected to-day, and it is hoped that all members will do their best to render the scheme a success.

"The new rule with regard to the election of officers of the Branch comes into force to-day. To avoid confusion, and to save time, all the old members of Council have been nominated, with additional ones from Barnsley, Ripon, Pontefract, and Heckmondwike. Members of the Branch have also been asked to send in nominations; but no answers to the circular have been returned.

"A petition relative to the regulations affecting Militia Surgeons will be laid before you for signature.

"The Chairman of the Parliamentary Bills Committee requests the Branch to send one representative to serve on that Committee; and the Council hope that the gentleman elected will attend regularly, and by so doing render the Committee thoroughly representative of the feelings of the members of the Association.

"Your Council cannot conclude this report without referring to the death of Mr. Henry Thomas of Sheffield, who, though compelled by illness to withdraw from practice more than thirty years ago, and consequently unknown to many of the present members, was present at the first organisation of this Branch at York, and was, from 1842 to 1847, one of its active members.

"The Council recommend that, in the future, the annual meetings shall be held in large towns, other than York, Leeds, Bradford, and Sheffield, when such a desire is made known to the Council."

Officers of Council.—The following officers were elected for 1882-83. President: T. R. Jessop, Esq., Leeds. President-Elect: J. H. Keeling, M.D., Sheffield. Secretary and Treasurer: Arthur Jackson, Esq., Sheffield. Permanent Vice-Presidents: G. Shand, M.D.; W. Matterson, M.D.; S. W. North, Esq.; A. Ball, Esq.; R. H. Meade, Esq.; W. Burnie, M.D.; P. E. Miall, Esq.; S. Hey, Esq.; C. G. Wheelhouse, Esq.; T. Pridgin Teale, Esq.; T. C. Allbutt, M.D., F.R.S.; W. F. Favell, Esq.; M. M. de Bartolomé, M.D.; and Arthur Jackson, Esq. Council: York—W. Jalland, Esq. Bradford—D. Goyder, M.D.; A. Rabagliati, M.D. Halifax—T. M. Dolan, Esq.; J. H. Wright, Esq. Leeds—J. E. Eddison, M.D.; T. Scattergood, Esq. Harrogate—A. S. Myrtle. Rotherham—J. Hardwicke, M.D. Huddersfield—S. Knaggs, Esq. Sheffield—J. H. Keeling, M.D.; H. F. Banham, M.D. Scarborough—J. W. Teale, Esq. Wakefield—S. Holdsworth, M.D. Barnsley—M. T. Sadler, M.D. Ripon—R. M. Bowman, Esq. Pontefract—H. Muscroft, M.D. Heckmondwike—F. B. Lee, F.R.C.P. Ed. Representatives in the General Council: T. C. Allbutt, M.D.; W. Burnie, M.D.; J. E. Eddison, M.D.; W. F. Favell, Esq.; S. Holdsworth, M.D.; J. H. Keeling, M.D.; S. Knaggs, Esq.; W. Matterson, M.D.; R. H. Meade, Esq.; A. S. Myrtle, M.D.; G. Shann, M.D.; T. P. Teale, Esq.; J. H. Wright, Esq.

Collective Investigation Subcommittee.—It was proposed by Mr. MIALL, seconded by Mr. SMITH, and carried: "That this Council of the Branch be an Executive Committee to carry out the scheme of Collective Investigation, with power to appoint local secretaries in various parts of Yorkshire."

The Medical Benevolent Fund.—The report of the Subcommittee appointed to consider the relation of the West Riding Medical Charitable Society and the British Medical Benevolent Fund, and the application of the South Wales and Monmouthshire Branch concerning the latter, having been read, it was proposed by Mr. DOLAN, and seconded by Mr. WHEELHOUSE:

"That the report of the Committee respecting the British Medical Benevolent Fund, and West Riding Charitable Society, be approved, printed, and forwarded to all the members of the Branch; asking for

a reply, in a leaf annexed to the circular, as to whether they are willing to give five shillings annually to the British Medical Benevolent Fund."

THE BRITISH MEDICAL JOURNAL.—A communication from the Secretary of the Staffordshire Branch, relative to the management of the JOURNAL of the Association, having been read, it was unanimously resolved: "That we proceed to the next business."

Parliamentary Bills Committee.—Mr. Arthur Jackson was appointed to represent the Yorkshire Branch on the Parliamentary Bills Committee.

New Members.—The following gentlemen were elected members of the Association: Mr. J. N. Richardson, Infirmary, Huddersfield; Mr. Lovesidge, Infirmary, Huddersfield; Dr. J. Aitkin Myrtle, Harrogate.

Papers, etc.—The following papers were read: Dr. S. CHARLES SMITH: Modern Study of Micro-Organisms, and its Influence on Medical Thought. Mr. G. W. RHODES: Excision of the Pylorus for Cancer. Dr. FLETCHER LITTLE: Medical Rubbing.

Numerous interesting cases were shown by the surgeons of the infirmary; and microscopic specimens of sarcoma were exhibited by Dr. JACOB.

Dr. CROOKE exhibited microscopic slides, illustrating micro-organisms.

Dinner.—Between seventy and eighty members attended the meeting, and a few dined at the Great Northern Hotel afterwards.

WEST SOMERSET BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at the residence of the President, H. P. OLIVEY, Esq., at North Curry, on Thursday, July 20th. Twenty-one members were present.

Luncheon.—Mr. Olivey having kindly issued invitations to luncheon to every member of the Branch, a large number availed themselves of his generous hospitality.

Chairman and Vote of Thanks.—After luncheon, the retiring President, Mr. RIGDEN, took the chair, and, before resigning it to his successor, expressed his sense of the honour which had been conferred upon him, and the great pleasure he had felt in performing the duties of his office during the past year.—Mr. OLIVEY then took the chair, and proposed a vote of thanks to Mr. Rigden for his services as President, which was carried by acclamation.

Letters.—Letters accounting for the absence of several members were read; and, in one, Mr. Walter Edwards requested the honorary secretary to bid for him to all the members of the Branch "farewell," as he was leaving Wellington to live near the sea at Paignton.

Report of Council and Treasurer's Accounts.—The report of Council as follows, was read.

1. At the last annual meeting, it was resolved that Mr. Olivey should be President-elect, and that the next annual meeting should be held at Taunton, or such other place as should be deemed by the Council to be desirable. In having arranged, after much deliberation, that this thirty-ninth anniversary of the Branch should take place at North Curry, your Council hope that those who are now assembled under the hospitable roof of Mr. Olivey, will have good reason before the day is ended, not only to thank the Council for the decision which they arrived at, but still more to express their cordial thanks to Mr. and Mrs. Olivey for the reception which has been accorded to the Branch, and for the arrangements which have been made for the business and entertainment of the meeting.

2. In commenting upon the proceedings of the past year, your Council can but look back with pleasure to the last annual meeting, which was held at the Taunton and Somerset Hospital under the presidency of Mr. G. W. Rigden. That meeting was of interest, both in connecting the Association with the leading medical institution of the county, and also from the instructive character of the President's address having reference to the uses of country hospitals. It is to be hoped that the Branch may have the advantage of meeting in the kindred institution at Bridgwater at no distant date. The branch was indebted to the medical staff of the hospital for collecting some interesting cases for the consideration of the meeting. The members, at the conclusion of the morning's proceedings at the hospital, adjourned to the London Hotel, where a pleasant dinner, where the Mayor of Taunton and other gentlemen were present to meet them, terminated a most agreeable and profitable day.

The autumn and spring meetings were held as usual at the Railway Hotel, Taunton, and both were well attended. The questions for discussion, viz., "The Advantages, or otherwise of Vaginal Injection after Delivery," and "The Complications and Sequelæ of Scarlet Fever," were well considered by the members present; and your Council have reason to believe that the system of fixing a special sub-

ject for the evening, continues to work well in bringing about an interchange of views, which must be of advantage to all present even if they do not take part in the discussion. It should be mentioned that besides the above questions for special discussion, a number of papers were read, cases related, and preparations shown by different members, at these meetings.

4. The subject for Collective Investigation in reference to particular diseases or epidemics, which was brought forward at the spring meeting, has been followed up by the Committee of the Branch then appointed. Dr. Mahomed attended one of the meetings of that Committee, when the plan to be pursued for collecting information, and the form of the card to be used for the purpose, were discussed with him. The Committee lately distributed cards for recording cases of acute pneumonia, chorea, and acute rheumatism, together with appropriate information thereon, to every member of the Branch. Some few cards have been returned filled up to the honorary secretary, and your Council would venture to urge upon members to use their best endeavours—by co-operating with the Committee, and filling up and returning the cards sent them—to assist the useful work intended to be carried out.

5. Your Council are glad to report a slight increase in the number of members of the Branch; there are now 57 on the list, as against 53 last year. Five new members have been elected. Among the losses, your Council have to express their regret that two have arisen from the death of associates, one of whom, Mr. Bendall, was present at the last annual meeting in the enjoyment apparently of extraordinary health and strength. The district comprising the Branch is not a large one; but still there are many members of the profession outside the Branch who might, with advantage to themselves, join it, and would be sure of a hearty welcome if they would do so, and attend the meetings.

6. The Treasurer's accounts which are presented herewith as usual, show that he has a balance in hand of £5 9s. 6d. to the credit of the Branch.

7. Your Council cannot conclude their report, without alluding to the history of the Branch which has lately appeared in the JOURNAL, from which it will be seen that, although the Branch is small, it has from time to time taken a prominent and important part in the various questions that have agitated the medical world.

The Treasurer's accounts, audited by Dr. Prideaux, were laid before the meeting.

It was resolved, on the motion of Dr. CORDWENT, seconded by Dr. W. H. WALTER: "That the report of the Council and the Treasurer's accounts be received and adopted, and that the best thanks of this meeting be given to the Council for their report, and to the Treasurer for his statement of accounts."

History of the Branch: Reprint from the Journal.—The honorary secretary announced that he had a supply of this reprint, and should be happy to hand or send copies to any members who might wish them.

Place of Meeting and President-elect for 1883.—It was proposed by the PRESIDENT, seconded by Mr. WINTERBOTHAM, and carried unanimously: "That Joseph Dixon Adams, Esq., of Martock, be President-elect; and that it be left to the Council to settle as to the time and place for holding the next annual meeting."

Intermediate Meetings.—On the motion of Mr. ALFORD, seconded by Mr. PRANKERD, it was resolved: "That the Council be requested to arrange for holding the autumnal and spring meetings as usual."

Council of the Branch.—On the motion of Mr. CORNWALL, seconded by Dr. PRIDEAUX, it was resolved: "That the following, together with the *ex officio* members (the President, the past President, the President-elect, and the Secretary), be the Council of the Branch for the ensuing year: H. Alford, Esq.; H. J. Alford, M.D.; J. Prankerd, Esq.; H. W. Randolph, Esq.; J. B. Sincock, Esq.; and W. L. Winterbotham, Esq."

Secretary and Treasurer.—On the motion of the PRESIDENT, seconded by Mr. RIGDEN, it was resolved: "That Dr. Kelly be re-elected Honorary Secretary and Treasurer."

The JOURNAL of the Association.—A letter from the Secretary of the Staffordshire Branch, forwarding a copy of the resolution passed by that Branch on May 25th on this subject, was read. A discussion followed, but no motion was proposed.

Representative of the Branch on the Parliamentary Bills Committee.—Mr. Prankerd of Langport was elected.

President's Address.—The PRESIDENT, after welcoming the members of the Branch to North Curry, and thanking them for the honour of having elected him to the office, referred to some matters of local interest. He then considered the question, Is there anything in the locality giving rise to any particular form of disease? He considered

hat, surrounded as the village was by low lands, which were frequently flooded, the hygrometric state of the atmosphere would necessarily tend to the production of ailments which would not be produced by a drier air. The change of the character of disease was referred to, and the frequent bleedings, which were carried on to a great extent formerly in this neighbourhood. Ague was much less frequent than formerly: for several years it had been gradually diminishing, and for the last two or three a case of ague had been rare; and, when a case had occurred, it had not been of that pronounced type of former years. After some observations on the nature of the malarial poison, and on the late investigations of Koch, Lister, and Pasteur, and the probable production of ague by the introduction into the system of some micro-organism, the President went on to consider the cause of this diminution of ague and its modified character, and the reason why the poison seemed to be more diluted, and to produce a feeble state of health without the same intermittent symptoms. He did not think it due to the perfection of drainage on the moors, or to any influence of drier seasons making the land more healthy, or to agricultural improvements or improved cultivation. In consequence of the drainage, the moors were more frequently and more rapidly flooded; and, from impediments to its flow in the river, the water had remained on the lands for a longer period than formerly, and the last three or four years had been exceptionally wet. From the well known fact that the eucalyptus and other trees had been planted with the best effects in some districts in India, the Campagna, in Cyprus, etc., so the extensive and increasing growth of withies in the moors might modify the malarial influence. Where only about ten acres of these existed about thirty or forty years ago, over four hundred acres were now grown, besides the numerous plants which, under better highway management, were planted along the roads as guides. The local modes of curing ague had been curious: taking spiders, incantation, emetics, and throwing up the ague as a living mass, etc. The President then made reference to the resuscitation of the Branch twenty-one years ago, and to its successful progress since, and to the advantages which had arisen from it, both socially, scientifically, and politically; and concluded by saying: "The value of these Branch meetings cannot be overestimated. They give us opportunities of meeting together for scientific and other discussion; and not least are they valuable for the opportunity they afford of meeting together for social intercourse. Many of us here meet who never else have an opportunity of doing so; and friendships are cemented, and greater incentives given to honourable conduct, and to uphold the interest and dignity of the profession."

Vote of Thanks.—The address was much applauded; and, after a discussion on some points alluded to in it, on the motion of Dr. CORDWENT, seconded by Mr. SINCOCK, a very cordial vote of thanks to the President for his address was carried by acclamation.

Communications.—The following were made.

1. Dr. Cordwent: On an Outbreak of Typhoid Fever.
2. Mr. Hensman: On two cases of Bright's Disease. Preparations of the kidneys were shown.
3. Mr. Nash exhibited several Pebbles which a woman professed to have passed from her bladder.

Communications by Mr. W. Liddon and Dr. Prideaux were postponed for want of time.

Instruments, Drugs, etc.—A choice selection of the latest novelties in surgical instruments, stethoscopes, thermometers, drugs, etc., kindly sent by Messrs. Ferris and Co. of Bristol, were displayed, and inspected with much interest.

North Curry Church.—Before going to dinner, the President conducted the members to view the ancient and very interesting church of North Curry, which (greatly through his exertions) has just undergone a very complete and perfect restoration.

Dinner.—A party of twenty-four sat down to an excellent dinner at half-past five o'clock, which was served in the village assembly-rooms. The usual toasts were drunk, and the non-professional ones happily responded to by representatives of the Church, magistracy, army, navy, and law, who were present as guests of the president. Afterwards, the party joined the ladies at Mr. Olivey's, where, at a late hour, this very successful meeting was brought to a close.

NORTHERN COUNTIES ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—The annual meeting of the Association was held in the Library of the College of Medicine, Newcastle-upon-Tyne, on Friday, 7th July, 1882, Dr. Clarkson, President-elect, in the chair. Among other business transacted, it was resolved that twenty guineas be given to the funds of the Newcastle Infirmary, the donation to be in the name and at the disposal of Mr. Henry E. Armstrong in recognition of his services as secretary, and with the view of constituting him a Life Governor of the institution.

[The following reports of Committees will be presented at the Annual Meeting at Worcester on the 10th and 11th instant, and are published in accordance with the regulation for the conduct of Annual Meetings, which requires that all reports of Committees of the Association shall be printed in the Journal before the Annual Meeting.]

REPORT OF THE SCIENTIFIC GRANTS COMMITTEE.

To be presented at the Annual Meeting at Worcester.

THE Scientific Grants Committee report that, since the last annual meeting, they have voted £225 as follows.

Statement of Scientific Grants, 1881-2.

Dr. McKendrick, for the Committee on Anæsthetics	£15
Dr. D. Newman for Renewed Research on the Functions of the Kidneys	10
Mr. W. Watson Cheyne: Continued Investigations on the Relation of Organisms of Septic Disease	10
Mr. Stanley Boyd: Researches on Inflammation	10
Dr. C. S. Roy: Investigations on the Pathology of the Heart	50
Dr. Chapman, for illustrations of paper on "The Variations and Duration of the Cardiac Ventricular Systole in Man under Different Conditions of Rapidity, Temperature, etc."	15
Dr. Thin: Continued Investigations on Vegetable and Animal Parasites of the Human Skin ..	25
Dr. G. F. Dowdeswell: Researches into Septicæmia in Animals	10
Dr. Burdon Sanderson: Elimination of Nitrogen during Labour ..	25
Dr. Heneage Gibbs: To purchase Apparatus for Infection ..	25
Mr. A. de Wetteville: Researches into Electro-physiology of the Human Nerves	30
	£225

In the course of the last year, some interesting reports of researches, towards which grants have been made by the Association, have been published in the JOURNAL.

Dr. McKendrick is continuing his investigations on Anæsthetics, and will make his report at the annual meeting.

Dr. Newman has almost completed his renewed researches on the Functions of the Kidney, and hopes to furnish his report soon after the close of the summer season.

Mr. Watson Cheyne is continuing his continued researches on the relation of Organisms of Septic Disease, and hopes very soon to forward his report.

Mr. Stanley Boyd is still continuing his researches on Inflammation. The experiments he has made have been confirmatory of those of Cohnheim on inflammation in the rabbit's ear after ligature; and also of those made by Senftleben, to show the essential distinction between the processes of inflammation and regeneration in the rabbit's cornea. The results were embodied in Dr. Sanderson's Lumleian Lectures.

Dr. C. S. Roy, who is still engaged in prosecuting his investigations into the Pathology of the Heart, will not be prepared to make his report for two or three months.

Dr. Thin is still engaged in investigations on methods for showing the presence of Bacteria in Epidermic Structures. He has found confirmatory evidence of the existence of a bacterial organism in the hairs in alopecia areata. In his further series of experiments, he still finds that trichophyton tonsurans, whilst it grows freely on the surface of vitreous humor in an incubator, does not germinate when completely immersed in the fluid. He has presented a report on microsporion furfur, showing that it remains sterile when cultivations are tried in a variety of suitable media, in which common fungi grow freely. The parasite is therefore not one of the common fungi, but a special fungus, whose only soil yet known is the human skin. He is still investigating Chinese leprosy. He has found, in the skin of Chinese lepers, a bacillus of the same size and form, and with the same staining qualities, as the

bacillus lepræ described by Hansen, Neisser, Cornil and Suchard, and others, on the continent. Further reports will be published in the JOURNAL.

Dr. Chapman's paper on the Variations and Duration of the Cardiac Ventricular Systole in Man Under Different Conditions of Rapidity, Temperature, etc., will be presented at the annual meeting. The illustrations are ready for publication.

Dr. G. F. Dowdeswell reports of his investigations of the intimate nature of the Contagious and Acute Infective Diseases made during the past year, as follows.

Part I. Experimental investigation of the asserted progressive increase of infective virulence in the blood and other fluids in different forms of septicæmia. These researches, commenced at Cambridge in November, 1881, are not yet completed, owing to difficulties in connection with a license.

Part II. On the action of heat upon the contagion in the forms of septicæmia, known respectively as that of Davaine and that of Pasteur; with reference particularly to the recent assertion that, after complete sterilisation, the blood and exudative fluids retained their infectivity. These experiments, performed at University College in conjunction with Dr. Burdon Sanderson, are just completed. A detailed report will be furnished immediately. It has been found that both in the case of the so-called Pasteur's septicæmia in the guinea-pig and of Davaine's septicæmia in the rabbit, when the exudative fluid and the blood respectively, are effectually sterilised by heat, they are no longer toxic nor in any way infective, nor are the characteristic micro-parasitical organisms in either case reproduced.

Mr. North still continues his investigations on the Elimination of nitrogen, and reports the satisfactory progress of his investigations on the effect of severe bodily labour. The last experiment of the first series being at present in progress, he is unable at present to give more than a general sketch of the objects of the experiments and the methods used; but a detailed account of them will, he trusts, be ready for publication in October or November.

As the result of some observations on the elimination of nitrogen during inanition (*Journal of Physiology*, vol. i), Mr. North came to the conclusion that a certain amount of nitrogen can, as it were, be stored in the body; and that, under certain circumstances, this reserve fund can be drawn upon to supply its needs. He has endeavoured to discover to what extent this storage of nitrogenous material is possible, and the effect of severe bodily labour on its elimination from the body. The chief points of difference between Mr. North's observations and those of other observers are, the duration of each experiment, the diet, and the amount of exercise taken. The experiments are all made upon himself. The general method of experiment is as follows.

After carefully avoiding anything approaching an excess of food for a day or two, he puts himself upon a fixed diet for a period of at least nine days. For four days, he takes no more exercise than usual; on the fifth day, he walks a considerable distance, carrying a heavy load; and the remaining four days are made to resemble the first four as much as possible; the nitrogen, phosphates, sulphates, and chlorides being carefully estimated in the urine and feces for each period of twenty-four hours. The experiment occasionally requires to be prolonged a day or two, in order that the elimination of nitrogen, etc., may return to the normal.

The diet is, perhaps, the point of chief interest in these experiments. Ordinary food-stuffs are of variable composition, and not readily sampled or analysed; and he has found great difficulty in obtaining a perfectly uniform diet from day to day. Indeed, he believes this has never been accomplished on the human subject. He believes, however, that he has satisfactorily overcome this difficulty, and obtained a diet on which he can live comfortably for some time, and maintain himself in good health, and at the same time ensure that the quantity of each constituent taken shall be precisely the same from day to day. It also admits of accurate analysis. The meat is carefully dried, and reduced to an exceedingly fine powder. The bread is made from a known weight of the same sample of flour. For milk, he uses the condensed milk of commerce. He uses Edwards's patent preserved potato. Mixed dried vegetables (Julienne) are used. Dried apples (American sliced apple), salt, sugar, and cocoa with butter, make up the total of his articles of diet. All of these admit of being accurately weighed and measured; and the results will, he thinks, show that, in this respect, the diet is eminently satisfactory.

The only method of analysis of the excreta which requires special mention is the determination of the nitrogen of the urine. After a long trial of Liebig's and the hyponomitic methods, Mr. North has adopted the plan of burning the urine with soda-lime; and he feels sure from experience that, for investigations of this kind, this is the only method

which will give good results; and it has proved most satisfactory in this respect.

He purposes, when the present series of experiments is complete, giving a detailed account of the preparation of his food and of the methods of analysis.

Dr. Heneage Gibbes is proceeding with his inquiry into the Pathological Histology of the Blood-vessels, his report on which will be forthcoming at a later period.

Mr. A. De Watteville and Dr. Waller have been making some important researches into the Electro-physiology of the Human Nerves, with the object of determining whether the same alterations of excitability during and after the passage of a galvanic current which physiologists demonstrate in the excised frog's nerve, also occur in the living human nerve. For this purpose, they chose nerves which are placed superficially, such as the mitral, perineal, etc., and estimated their excitability under various condition of polar influence, by comparing the amplitude of the muscular contractions registered on the myographion. They showed that the effects produced were not due to any physical causes, such as alterations of current strength, mutual interference of polarising, and testing currents and the like, and found that these effects, interpreted in the light of Helmholtz's proposition—"that owing to rapid current diffusion in the embedded nerve, a pole of the opposite name to that applied to the surface exists in its immediate neighbourhood"—that these effects coincided in the main with those observed on the frog's nerve. Their conclusions are these. 1. There is increased excitability in the portion of the nerve submitted to cathodic influence, diminished excitability in that submitted to anodic influence. 2. With sufficient strength of polarising current, the catelectrotonic region appears to invade the anelectrotonic region. 3. On opening the polarising current, the diminished excitability of the anodic region passes at once into a state of augmented excitability. The augmented excitability in the cathodic region makes way to a well marked diminution, gradually followed by a protracted increase of excitability.

Dr. Ogston has completed his report on the Relation between Bacteria and Surgical Disease, which will shortly be published in abstract in the JOURNAL, and in its entirety in a separate form.

W. F. WADE, *Chairman*.

REPORT OF THE MEDICAL REFORM COMMITTEE.

To be presented at the Annual Meeting at Worcester, Aug. 10, 1882.

THE report of the Medical Reform Committee, submitted to the Association at the successful meeting at Ryde last August, contained full details of the work done in furtherance of medical reform during the preceding year, and related all the circumstances connected with the proposal from the Irish Medical Association for a conference of all parties interested in the Medical Bills introduced during the preceding Parliament on behalf of the profession, in order to frame a single Bill which would fairly satisfy the requirements of the whole profession. The history of the proceedings of this conference, which resulted in the introduction of a Bill on behalf of all the parties to the conference, by Mr. A. Hardcastle, Sir Trevor Lawrence, Bart., and Dr. J. A. Harrison, in January, 1881, was also fully given. Owing to the appointment, in May, 1881, of a Royal Commission on the Medical Acts, at the instance of the Government, this bill lapsed.

On July 11th, 1881, the Chairman of the Medical Reform Committee was examined by the Royal Commission, and was received and treated with great courtesy. He had previously had before the Commission a memorandum on "The Association: its Constitution; its Work; and its Objects." This examination, with his two days' evidence before the Select Committee of the late House of Commons, together with that of Mr. Ernest Hart before the same Committee, comprised all the evidence given by the Association. It was desired to supplement it before the Royal Commission by the examination of our treasurer, by the re-examination of our editor, and by the examination of Dr. Grimshaw as an independent witness, but they were not summoned.

Before the commencement of the present session of Parliament, the Chairman of the Medical Reform Committee consulted some of the members of the Conference inaugurated by the Irish Medical Association, as to the re-introduction of the Bill of the Conference, and found that Mr. R. H. S. Carpenter, of the Alliance Association, would on longer co-operate with our Association, but had determined on the introduction of an independent Bill; of this Bill nothing more has been heard. Mr. A. Hardcastle, M.P., was then consulted as to the introduction of our Bill. He mentioned the matter to the Vice-President of the Privy Council, who stated he would not object to the first reading,

but would oppose the second, on the ground that the Royal Commission was taking evidence on the Medical Acts.

Mr. Hardcastle and Dr. Farquharson, M.P., both disapproved of doing so, but offered to aid in inducing others to take charge of it. The only conceivable advantage to be derived from its introduction was to show the Government that the Association was still in earnest respecting Medical Reform; but, as the Vice-President of the Privy Council assured Mr. Hardcastle that the Government stood in no need of pressure to legislate, no further proceedings were taken. It was considered important not to place the Association in opposition to the Government and the Royal Commission.

The Royal Commission was directed to inquire into the granting of all diplomas into the courses of education and examination, preliminary and professional, and also into the skill and knowledge which all such different diplomas represent. Further, it was directed to inquire, in addition to other matters, into the constitution, functions, powers, and procedure, of the General Council of Medical Education and Registration, and the relation of the Council to the Universities, Colleges, and bodies aforesaid, and to the medical profession. The Royal Commission "examined books, documents, papers, and records, and more especially the Medical Act, 1858," and the Acts amending the same, and all matters dealt with by those Acts, and also the Bills relating to the above subjects which have been from time to time presented to Parliament by her Majesty's Ministers, and by other members of Parliament, with a view to legislation. The Commission held forty meetings, and examined thirty-three witnesses, of whom eighteen were English. One important measure adopted by the Commission was the examination of some private tutors, or so-called grinders, who are reported to have given important as well as interesting evidence.

The work of this Royal Commission and the exhaustive character of the investigations, together with the eminence of its members, must mark a distinctive era in the history of medical reform.

On June 28th, 1882, the Medical Reform Committee met in Chester to consider the report of the Royal Commission on the Medical Acts, when the following resolution was unanimously passed:

"The Committee finds with satisfaction that the report of the Medical Acts Commission includes recommendations: 1. For the formation of Divisional Boards for the conduct of compulsory uniform minimum examination in each division of the kingdom, which should confer the sole qualification for registration and licence to practice, and such examination to include medicine, surgery, and obstetrics; 2. For the direct representation of the profession on the General Medical Council, and for the diminution of the influence of the licensing corporations thereon; 3. For strengthening the powers of the General Medical Council thus amended in composition; 4. For making more effective the penal clauses of the Medical Acts against the false assumption of medical titles; and, 5. For the conduct of prosecutions for offending against the Act by the public prosecutor in each division of the kingdom."

"These are the essential points of reform for which the British Medical Association and the committee acting on its behalf have long contended. The Medical Reform Committee desire to recognise the ability, labour, and skill with which the Royal Commission have conducted their exhaustive inquiry, and while reserving the question of proposed amendments of details, they express their great satisfaction at the result of the inquiry, and they congratulate the Association on the important confirmation of its views on Medical Reform by this high authority."

This resolution was read and received with acclamation at the annual meeting of the Lancashire and Cheshire Branch of the British Medical Association held in Chester on the same day.

On July 11th, the Medical Reform Committee again met in London; and, in reference to a statement from the Glasgow and West of Scotland Branch, calling attention to the non-existence of any representation of the Branch at the General Meeting of the Association when the report of the Medical Reform Committee was read, passed the following resolution, moved by Dr. Alfred Carpenter, and seconded by Dr. De Bartolomé:

"That the Chairman's reply to the Secretary be approved, and he be requested to write and ask the Glasgow and West of Scotland Branch to nominate a representative on the Medical Reform Committee."

The following resolutions were also passed:

Moved by Dr. Chadwick, seconded by Mr. Husband, and

Resolved: "That, the Royal Commission having conceded all that the Association has contended for for years, this Committee confirms the resolution of the previous meeting, and that this resolution be the basis for the annual report."

Moved by Dr. Alfred Carpenter, seconded by Dr. Wade, and

Resolved: "That a recommendation be embodied in the annual report that the Branch Councils be requested to memorialise the Privy Council, and petition Parliament to bring in a Bill founded upon the report of the Royal Commission."

The Committee believe that the weight of the Association in furtherance of Medical Reform was never more urgently needed than at the present crisis, when the principles so long advocated by the Association are more than ever likely to be realised; and the Committee have therefore to recommend their reappointment, with power to add to their number.

EDWARD WATERS, M.D., Chairman and Convener.

REPORT OF THE PARLIAMENTARY BILLS COMMITTEE.

In the early part of the present year, the medical officers of the militia service sought the assistance of the Parliamentary Bills Committee, to procure a redress of the grievances which a recent regulation enforcing compulsory retirement at the age of sixty-five, without pension, inflicted upon them. This Committee felt that the militia surgeons had undoubtedly a very strong case; and, although they had previously made ineffectual representations to previous Ministers of War on this matter, they resolved to renew their efforts, and to make such further statement of the case to the Right Hon. Hugh Childers as would reopen the question. Accordingly, on February 15th, a memorial setting forth in detail the facts and arguments on behalf of the militia surgeons was forwarded to the War Office, and the attention of the department to the subject was solicited. A correspondence ensued, in the course of which an elaborate statement was drawn up by the Chairman of the claims of the militia surgeons, and a legal argument prepared in reference to the various Acts of Parliament and warrants upon which the War Office has hitherto relied and still bases its refusal to remedy the grievances complained of. Meantime, further parliamentary action was resolved on. A conference was arranged between some leading members of Parliament, who had kindly consented to interest themselves in the matter and some representatives of the militia surgeons; and communications took place between these members of Parliament and the War Office. Parts of the correspondence relating to this matter, including the letters addressed by the Secretary of War to the Chairman of the Committee, have been published in the *BRITISH MEDICAL JOURNAL*. As Mr. Childers continued to express objections to the arguments put forward, and declined to entertain the measures of relief proposed, a further series of petitions were drawn up and forwarded to the Branches, with the view of bringing the subject, in the interim under the notice of Parliament, and maintaining such public attention in the matter as may ultimately bring about a successful result. Meantime, communications are still in progress between the Committee and the War Office, and a proposal has been submitted to the Secretary of War on behalf of the militia surgeons, either that a departmental committee shall be appointed to re-investigate the subject, and to examine the grounds on which the case of the militia surgeons rests, and the legal aspects of the question, or that the department shall consent to a suit being instituted in which the question of law involved may be tried. The matter is still under the consideration of the department; and, in a communication received from the Under Secretary of War, dated July 24th, in reply to a letter addressed to the War Office asking for a reply which might have been included in this report, it is promised that "a further communication shall be sent to the Committee without any unnecessary delay".

The Committee trust that their continued efforts in this matter will be ultimately crowned with success. In the meantime, they feel assured that the subject is one of importance, not only with respect to the particular grievances complained of, but also in regard to the principle that all grievances affecting various classes of medical practitioners should be as far as possible so effectually followed up by this Committee in relation to the Legislature and the various departments of Government, as to show that the organisation of the Association may be depended upon to take up and effectively represent the interests involved, and to endeavour to remedy grievances, whether the individuals affected be many and powerful, or few and of smaller influence. Although, therefore, the particular grievances in question do not at present affect a large number of persons, nevertheless the Committee feel that the amount of trouble and effort expended upon this subject is by no means disproportionate to the object in view.

The question of the regulation of midwives by examination and registration, which has on previous occasions occupied the attention of the Committee, and has been the subject of reports already presented to the Association, has been again brought under the notice of the Com-

mittee by a deputation consisting of the Chairman, Dr. J. H. Aveling (Chairman of the Board of Examiners of Midwives to the Obstetrical Society), Dr. Galabin, and Dr. Godson, Secretaries of the Society. It was represented to the Committee that the necessity which had been recognised for many years by the General Medical Council, by the Obstetrical Society, and by the Committee itself, in various proceedings in past years, which have been laid before the Association and approved, was still as far as ever from being satisfied. This state of things is a consequence of the delay which has arisen from this subject having been unfortunately mixed up, in previous legislative measures, with the question of medical reform, with which it had no natural connection. It was accordingly resolved to deal with the subject on the bases which had already been accepted by the Obstetrical Society for the regulation of midwives, and to take such steps as might put the matter into form for being dealt with by legislation. After a due consideration by the profession, by the Government, and by the General Medical Council, a special committee was appointed, consisting of the Chairman, Dr. Robert Barnes, Dr. Grigg, Mr. Nelson Hardy, Dr. C. Holman, Mr. Sibley, Dr. Quain, Dr. Priestley, Dr. Playfair, and Dr. J. H. Aveling. Mr. J. Vesey Fitzgerald was instructed to draft a Bill on the lines of the previous resolutions and reports of this Committee, and on the bases of the regulations approved by the Obstetrical Society, and in accord with the spirit of the clauses of the Duke of Richmond's Bill. This was accordingly done; and the Subcommittee have met on several occasions to discuss the provisions of the Bill, and to subject them to very careful revision. Copies of the draft Bill thus prepared have been forwarded for consideration to all the Branches of the Association. Meantime, a copy was placed in the hands of the Lord President of the Privy Council; and copies were forwarded, for observation and comment, to the General Medical Council, who appointed a Subcommittee, consisting of Mr. Marshall (Chairman), Dr. Storrar, Dr. Chambers, Dr. Humphry, Dr. Pyle, Dr. Quain, Dr. Banks, Dr. Heron Watson, and the Rev. Dr. Haughton. The subsequent proceedings have been fully reported in the *BRITISH MEDICAL JOURNAL*. The Chairman, Dr. Aveling, Dr. Playfair, Mr. Sibley, and Dr. Holman of Reigate, attended the Council, and made a general statement on the subject; and in the end the General Medical Council, after carefully considering the report of their Committee, adopted a series of resolutions approving of the general objects of the Bill, as well as of its machinery; and have forwarded this report to the Government. It has already been published in the *JOURNAL*. This Bill contains no novel features, as distinguished from the recommendations of the Obstetrical Society of London, and of the Duke of Richmond's Bill, excepting that it materially simplifies the machinery, and defines the constitution of the local examining boards by requiring that general practitioners shall be fully represented at such boards. The duties of midwives under the Bill will be strictly regulated and limited. The Bill likewise aims at the regulation of their general conduct.

In respect to the notification of contagious diseases, the attention of the Committee was directed early in the year to private Bills brought forward by eight towns, in which clauses were introduced containing provisions as to infectious diseases, and, among other things, proposing to require medical men to report directly to the sanitary authority the occurrence of cases of certain scheduled infectious diseases.

The Committee had, in previous reports, and on the occasion of a previous deputation to the Local Government Board (in which the Committee of Council, represented by its Chairman, the Social Science Association, and other bodies, had taken part), represented to the Government the urgent need for the appointment of a more public parliamentary tribunal, to which the sanitary procedure of such local Acts might be referred. Mr. Honwood, M.P., in the House of Commons, enforced this view at the opening of the session; and a Special Committee of the House was appointed, to which all these Bills were referred. Its proceedings were specially reported for the *JOURNAL* of the Association; and it will be remembered that, in the end, these clauses were so far modified, that the duty of notification was made concurrent on the householder and on the medical attendant.

Three Bills were also introduced into the House of Commons by Mr. G. Hastings, M.P., Mr. Gray, M.P., and Mr. Meldon, M.P., respectively; the two former were before the House last year. The Bill introduced by Mr. George Hastings, M.P., Sir Trevor Lawrence, M.P., and Dr. Farquharson, M.P., proposes to impose the duty of notification to the sanitary authority on the medical attendant, or on the householder if no medical man be in attendance. Mr. Gray's Bill proposes to enforce the like obligations in respect to Ireland. Mr. Meldon's Bill throws the responsibility of notification on the householder, and make it permissive in respect to the medical man. None of these Bills were discussed in the House during the session; no action, therefore, became necessary. The Par-

liamentary Bills Committee have already expressed their objection to the provisions of the Bills of Mr. Hastings and Mr. Gray, and these objections were sustained by the vote of the Association last year, as on previous occasions.

On many previous occasions, the British Medical Association, adopting the views and conclusions of the Registration of Diseases Committee, has, at its annual meetings, affirmed the propriety of making it the duty of the medical man to convey to the householder that authoritative and certified information as to the nature of the infectious disease which it is the duty of the householder, under the system of compulsory registration of infectious disease, to notify to the sanitary authority. This goes somewhat further than the optional clause of Mr. Meldon. In this matter, the Parliamentary Bills Committee have acted ministerially only, and have adopted no new view of their own, but have carried out the repeated mandate of the Association, expressed at its general meetings.

During the last year, however, considerable and widespread objection has been expressed to this duty being made in any form compulsory upon the medical attendant; and the Parliamentary Bills Committee are particularly desirous that full and impartial consideration may be given to this subject at the approaching annual meeting, and have expressed their hope that time and opportunity may be reserved for adequate debate, and that fresh instructions may be given to them in the light of any conclusions which may be arrived at. They learn with satisfaction that this special opportunity for debate and for resolutions on the subject will be afforded.

Much feeling was caused in the medical profession by the proposal of the Chancellor of the Exchequer to impose an additional tax on carriages, and several letters pointing out the hardship that would be inflicted on medical men by the proposed tax were received by the chairman of the Parliamentary Bills Committee, and at the office of the *JOURNAL*. This Committee met on May 6th, and unanimously agreed:

"That a petition be prepared to present to the House of Commons, that the proposed increase in the tax on carriages should not apply to the carriages of medical men. That all the medical members of the House of Commons be requested to make formal representation to Mr. Gladstone on the subject. That representation be made by the Parliamentary Bills Committee to Mr. Gladstone to this effect, and that he be asked to receive a deputation on the subject."

In accordance with these resolutions, petitions were forwarded to the various Branches, with a request that, if they met with their approval, they should be signed, and submitted to Parliament through the parliamentary representatives of the various localities. A considerable number of such petitions were accordingly forwarded. This proposed increase in the tax has been abandoned, owing probably to these and other representations.

The Committee have throughout the year, as in former years, published their minutes, and a full notice of their proceedings from time to time, in order that the members of the Association generally should be acquainted with the course of action adopted; and have, as in previous years, thus invited the assistance which is to be derived from comment, criticism, or advice, from all members of the Association. The Committee are particularly desirous that they should be strengthened and assisted by the active co-operation of the members of the Association resident in the more distant parts of the kingdom. Each Branch is expected to appoint a representative on the Committee; and the subject-matter for discussion in the Committee is, as far as possible, made known to such representatives by printed papers forwarded in anticipation of the meetings, as well as by the immediate publication in the *BRITISH MEDICAL JOURNAL* of any reports or resolutions submitted or passed at the meetings.

The Committee regret that all the Branches have not uniformly elected representatives to sit on the Committee, as it desires to widen to the utmost practicable extent the representative character of its constitution.

REPORT OF THE COLLECTIVE INVESTIGATION COMMITTEE TO THE COMMITTEE OF COUNCIL.

THE COLLECTIVE INVESTIGATION COMMITTEE make the following Report to the Committee of Council, presented at the Annual Meeting of the Association at Worcester.

The first business of the Committee after their appointment in October last, was to nominate to the Committee of Council a Secretary, who should receive a salary of £200 a year, with an additional £100

for travelling and other expenses, in accordance with the resolution of the Association at the Annual Meeting at Ryde. This the Committee were prepared to do, at the meeting of the Committee of Council on January 16th. On that day, however, they received from the gentleman whom they had selected a letter, in which he withdrew from the nomination. At this time, as was reported to the Committee of Council on April 12th, Dr. Mahomed, who had from the first taken a deep interest in the work which it was proposed to carry out, and who indeed had been, with Dr. A. Ransome, of Manchester, the first to point out the importance of such a work being undertaken by the Association, offered to act as Honorary Secretary, to assist the Committee in initiating the work. This offer the Committee gladly accepted, though they felt that it still would not be the wish of the Association, that "such a labour" as must necessarily devolve upon the Secretary "should be undertaken gratuitously." At their desire, Dr. Mahomed has now assented to continue the work, and they therefore nominate him to the Committee of Council as Secretary to the Investigation Committee.

Dr. Mahomed has devoted himself zealously, and the Committee believe that results will prove successfully, to the difficult task of inaugurating such a system of Collective Investigation as may be likely to commend itself to the members of the Association and to other members of the profession, and may induce them to contribute from the vast stores of information that lie within their reach, and give them confidence that their contributions will really be turned to good account.

Thus far, the proposal for collective investigation has been received even more favourably, and accepted more generally, than might have been anticipated. Many members of the profession, in various parts of the country, have shown their desire to co-operate, and many have assisted with suggestions and advice. A large and influential General Committee has been formed, and several meetings have been held.

The following subjects are proposed for investigation at the present time, viz.—1. Acute Pneumonia; 2. Chorea; 3. Acute Rheumatism. Subcommittees have been engaged in discussing and determining the points most worthy of attention, the manner in which information respecting them might be best collected, and the questions which should be framed with that view. To minimise trouble, cards have been issued, which are so printed as to enable the records to be made with the least expenditure of time and labour; and they are accompanied by printed papers setting forth the more particular objects which are had in view in the inquiries made. That these are above criticism is too much to expect. Great pains, however, have been taken with them; and it is hoped that they will be found suitable for the purpose intended. The thanks of the Committee are especially due to Drs. Sturges, Coupland, Stephen Mackenzie, Barlow, and Goodhart, for the trouble they have taken in drawing up the Memoranda that accompany the cards and state the objects the Committee had in view in the several subjects proposed for investigation. Suggestions for the future, both as to the subjects and the methods of investigation, addressed to Dr. Mahomed, 12, St. Thomas Street, S.E., will be gladly received.

The Branch Committees have also been invited to take up any subject of local interest they may judge suitable for inquiry, as it is especially desirable that the large amount of experience obtained in the provinces should be gathered and stored. They will be assisted in so doing by the General Committee, to which any proposed scheme should be submitted for suggestion and criticism.

Two important subjects for investigation have already been proposed by the Branches.—1. The East Anglian Branch, acting on a suggestion made by Mr. Palmer, in his Presidential Address at Yarmouth, have asked that an inquiry should be instituted concerning "Syphilis, and its effects upon the civil population in various districts." Accordingly a Subcommittee, consisting of persons well informed upon this subject, are now preparing a scheme for the purpose. 2. The Thames Valley Branch has suggested that cards should be prepared relating to important points in cases of Diphtheria, and that these should be issued to the practitioners in any district in which the disease may become prevalent. A Subcommittee is considering the subject, and drawing up cards suitable for this and other infectious diseases.

When time has been allowed for sufficient returns to be made, the data will be analysed; and the results will be published in the JOURNAL of the Association with an acknowledgment of the sources from which the information has been derived.

Committees have been formed, and are now distributing the cards which have been sent to them, in the following Branches or districts. The name of the gentleman who has consented to act as secretary to each Committee is given (in many cases the Honorary Secretary to the Branch); and thanks are due to these gentlemen for the assistance they have rendered in promoting the objects of the Committee.

Bath and Bristol.—Secretary, Dr. Markham Skerritt, Bristol.
Birmingham and Midland Counties.—Dr. Saundby, Birmingham.
Cambridge and Huntingdon.—Dr. Anningson, Cambridge.
East Anglian.—Dr. Elliston, Ipswich.
Edinburgh.—Dr. Gibson.
Gloucestershire.—Dr. Bond, Gloucester; Dr. Wilson, Cheltenham.
Lancashire and Cheshire (not yet completed. Many subdivisions).
—Dr. Davidson, Liverpool; Dr. Ransome, Manchester.
North of England.—Dr. Drummond, Newcastle.
North of Ireland.—Dr. Dempsey.
South-Eastern (Four out of six districts at work).
East Sussex.—Dr. Uthoff, Brighton.
West Sussex.—Mr. G. B. Collett, Worthing.
East Kent.—Dr. A. Hallows, Maidstone.
West Kent.—Dr. Whitehead Reid, Canterbury.
South Midland.—Mr. Kirby Smith.
Southern.—Dr. Ward Cousins.
South Wales and Monmouth.—Dr. A. Sheen, Cardiff.
South Western.—Dr. Rees Phillips, Exeter.
Staffordshire.—Mr. Vincent Jackson.
Thames Valley.—Dr. Atkinson, Kingston-on-Thames.
West Somerset.—Dr. Kelly, Taunton.
Worcestershire and Herefordshire.—Dr. Crowe.
Yorkshire.—Many subdivisions. Have each decided to hold special meetings and appoint their own Secretaries and Committees.
Mr. Arthur Jackson, Sheffield, Secretary for united local Committees.

The remaining Branches are being communicated with as their meetings approach.

No branch yet appealed to has refused to take part in the work, and it is hoped that a Committee will have been organised in every Branch of the United Kingdom before the Annual Meeting in August.

The Committee are fully conscious that the work which has been thus commenced is "one which will require great and continuous effort to carry it on in an efficient and satisfactory manner," and that it will make demands upon the funds of the Association, but they also feel that it is "one which is worthy of the British Medical Association, and which ought to be undertaken by it"; and they are glad to find that this feeling is shared by so large a number of the members of the Association.

G. M. HUMPHRY, *Chairman*.

June 30th, 1882.

REPORT OF COMMITTEE APPOINTED TO OBTAIN RESTRICTIVE LEGISLATION FOR HABITUAL DRUNKARDS.

YOUR Committee have to report that, during the past year, they have used every effort to further the practical operation of the provisions of the Habitual Drunkards' Act, 1879. The independent committee, which sprung from the joint action of your Association, the Social Science Association, and the Society for the Promotion of Legislation for the Control and Cure of Habitual Drunkards, has merged into the Dalrymple Home Association, a society limited by guarantee, but with power to omit the word "limited" from its title, under a licence from the Board of Trade, as being a philanthropic association. The Dalrymple Home is under the patronage of the Archbishop of Canterbury, the Duke of Westminster, Earl Shaftesbury, Sir Thomas Watson, Sir Henry Thompson, Dr. Andrew Clark, Dr. B. W. Richardson, F.R.S., Dr. Cameron, M.P., Dr. Farquharson, M.P., and other representative men. A large number of sites have been examined, and negotiations are actively going on, so that it is hoped that the Dalrymple Home for Inebriates will shortly be opened in a healthy suburb of London. It is intended to apply for a licence for the compulsory detention of such inmates as may elect to come under the provisions of the Act, and it is proposed to receive habitual male drunkards at a considerably lower rate than they can now be admitted at in similar private institutions.

Feeling deeply the importance of this praiseworthy attempt to carry out the purpose of a beneficent though very imperfect Act, your Committee earnestly desire to impress on the members of your Association the urgent need for ample financial and other support. The Habitual Drunkards' Act will expire in seven years, but your Committee trust that, under the curative influences of the Dalrymple Home, the cure of a few typical cases of habitual drunkenness will secure from the legislature fuller and more satisfactory compulsory powers.

The Committee have issued a second circular to boards of guardians, asking for an expression of opinion on the propriety of guardians

having the power (if they choose to exercise it) of detaining habitual drunkards in workhouses, of which they are frequently inmates, for the purpose of recovering from the effects of their excesses. To the first circular, a number of favourable replies were received; and the responses already received to the last circular indicate a yet wider and fuller assent to the views of your Association. Your Committee would strongly urge members of the Association to bring all their influence to bear on the boards of guardians in their respective districts. The replies are daily coming in, and the very general approval of your Committee's views by parochial authorities affords good ground for encouragement.

For the completion of this important inquiry, your Committee ask for re-election.

(Signed) ALFRED CARPENTER, Chairman.
NORMAN KERR, / Honorary Secretaries.
E. HART VINEN, /

STATEMENT

AS TO

THE ACTION OF COMMITTEES OF THE BRITISH MEDICAL ASSOCIATION AS TO NOTIFICATION OF INFECTIOUS DISEASES BY MEDICAL MEN.

DURING the past year, the question of the compulsory notification of infectious diseases has reached a new stage; and inasmuch as the relation of the medical man to such notification has now come prominently forward, it may be convenient to give a brief retrospect of the action taken by the Association at its general meetings, and by the Committees of the Association, on this important point.

I.—ACTION OF THE REGISTRATION OF DISEASE COMMITTEE.

Early Action.—The Registration of Disease Committee of the Association, which was originally appointed at the Leamington meeting in 1865, early gave attention to the subject of the notification of infectious disease. In 1871, a memorial was addressed to Mr. Stansfeld, then President of the Local Government Board, praying for the establishment of a national system for the registration of disease, and pointing out the importance of this undertaking, both as a means of suppressing epidemic disorders and of dealing with other diseases arising from local causes. In 1873, another memorial and a petition to the House of Commons were presented, pointing out that no scheme had been even proposed in the legislature for carrying out this all important means of arresting the progress of epidemic and other disease.

Report for 1876.—It was not, however, until their report for 1876, that we find the Committee expressing an opinion as to the manner in which the needful notification should be made. In that report presented and unanimously adopted at the annual meeting of that year, the Committee observed as follows:

"It is evident that any measure for the registration of all cases of infectious disease, occurring in both public and private practice, must take the compulsory form in order to be effective. But of late some controversy has arisen as to the person from whom the needful information should be required; whether, in fact, the onus of reporting the case should rest upon the householder or on the medical attendant. *The authoritative declaration of the nature of the disease must necessarily come in the first instance from the medical attendant; and it would probably be unnecessary to make any enactment for the purpose of ensuring that this declaration should be made, since it is a part of the unwritten law that guides the profession in their dealings with their patients. Compulsion on this point might, however, in some cases, prove a help to the medical attendant.*

"*The authoritative declaration of the nature of the disease must necessarily come, in the first instance, from the medical attendant.* On the other hand, to be obliged to furnish information to a public authority with regard to sickness occurring in a family might reasonably be regarded by the medical profession. It would be regarded by many as an unnecessary addition to their work, but as an unjustifiable interference with the liberty of the patient, and as a breach of the confidence that might exist between the doctor and patient. No such objections apply to the proposal to make the householders responsible for the declaration of the presence in his house of diseases likely to be injurious to the community. It is for these reasons that your Committee, whilst they cordially support the movement to obtain a complete registration of these diseases, desire to express their opinion that the proper person to make the return should, in the first instance, be the person in charge of the case, or the house-

holder, and not the medical attendant upon the case" (BRITISH MEDICAL JOURNAL, vol. ii, 1876, pp. 211, 216).

Dr. Sibson, in moving the report of the Committee, said he admired the sagacity with which the Committee had considered this very serious and important question. They had taken wise counsel, and in the result had suggested a sound and practical method of carrying out the object which they had in view.

Reference to Parliamentary Bills Committee.—In their report presented and adopted at the annual meeting in 1877, (BRITISH MEDICAL JOURNAL, vol. ii, 1877, p. 245), the Committee repeated their recommendation, and suggested "that steps should be taken to frame a legislative enactment, that would enforce the registration of all cases of infectious disease on the method already approved by the Association; and to this end they propose that the subject be referred to the Parliamentary Bills Committee to consider in what form it can be best dealt with by the legislature." The subject was accordingly referred by the Association to the Parliamentary Bills Committee for deliberation.

Report for 1879.—No report was presented by the Registration of Disease Committee for 1878; but in their report for 1879, adopted *nem. diss.* at the annual meeting of the Committee, the Committee referred at some length to the attitude of the medical attendant with regard to this question of notification. The report remarks, that there are several grave objections to the proposal to make the medical attendant primarily responsible to the local authority for the notification of the presence of infectious disease in the households of their patients.

"1. Whatever may be said as to the abstract right of the State to require this service, it is most undesirable that the confidential relation of the medical attendant and patient should be disturbed, or that the former should be placed in the position of an 'informer' in reference to the affairs of the latter.

"2. It is not well that, in addition to the heavy responsibilities and risk to life attaching to attendance upon cases of infectious disease, medical men should be liable to vexatious actions at law, and to heavy penalties for alleged non-performance of a duty that lies outside of their ordinary practice, and that would be more justly and better performed by persons in charge of the cases.

"3. Such an enactment would also often tend to defeat its own ends, seeing that it would in many cases prevent resort to medical assistance, or lead to the employment of unqualified practitioners, and to more frequent application to druggists. Patients suffering from these complaints would thus not only run much greater danger to life, but the community would be more frequently exposed to danger of infection.

"4. Any injury to trade, or to the means of gaining a livelihood, in consequence of this notification, would probably be ascribed to the action of the medical attendant, and, in case of a disputed diagnosis, might lead to further evils than mere loss of practice.

"5. It is not desirable that the extent of a medical man's practice in these cases should be made known to, and commented upon by, members of the various local Government boards."

"None of these objections apply to the plan proposed by your Committee; and, if the returns of disease made by householders were sent direct to the medical officer of health, and were by him considered as confidential, the measures necessary for the protection of the neighbours could be carried out without unnecessary publicity, and much needless alarm on the part of the community would be avoided. It has been suggested that, in poor districts, it might be very difficult to obtain from ignorant and illiterate persons the necessary announcement of the nature of the case: but the authoritative declaration of the nature of the case must necessarily come, in the first instance, from the medical attendant."

"The Committee further observe, that the medical man for the time being, in the case of a family, is the person who would simply have done his duty towards his patient. Inasmuch as this service would be rendered also to the local authority, he might reasonably claim to be remunerated by them for the certificate."

Grounds for Recommendations of Committee.—The line of action which the Registration of Disease Committee took, with regard to this subject, was a direct result of a belief in the necessity, from a public health point of view, of making absolutely the householder responsible for the notification of the nature of the disease to the local authority of his own household. It was, therefore, arranged that an authenticated and correct statement of the nature of the disease should be left by the medical attendant with the householder, the householder being responsible for communicating

This report was the last

the facts to the local authority. This is, indeed, borne out by a letter, written by Dr. Ransome, in November of last year, in reply to certain strictures made at Liverpool on the action of the Committee. Dr. Ransome wrote that the Committee was well aware that, for the successful carrying out of a prompt notification of infectious diseases, the cordial co-operation of the medical profession is essential. Accordingly, in the plan of procedure drawn up by them and submitted to the Association, the greatest care was taken that the interests of medical men should be respected; and that their relation with their patients should be interfered with as little as possible. It was arranged, therefore, (1) that the nature of the disease should be formally declared by the medical attendant to the householder, or the person in charge of the case; (2) that the duty of sending on the notice to the medical officer of health should rest with the householder, or person in charge; and (3) that a fee should be paid for the certificate given by the medical attendant. (Vol. ii, 1881, page 882.)

II.—CONSEQUENT ACTION BY PARLIAMENTARY BILLS COMMITTEE.

Resolutions of 1879.—The Parliamentary Bills Committee, acting on the reference made to it by the Association in 1879, took up the question of the compulsory notification of infectious diseases in its parliamentary aspects as part of its programme for 1878-79. Accordingly, on March 19th, 1879, the Chairman drew attention to two local Bills of that year, which contained clauses making it compulsory upon medical men to send notice to the local authorities of all cases of infectious diseases which came under observation, and proposed a resolution framed to carry out the previous resolutions of the Association: "That, in accordance with repeated annual reports of the Registration of Disease Committee of the British Medical Association, and of resolutions confirming the same at successive annual meetings of the Association, this Committee recognises the necessity of early and compulsory notification of cases of certain infectious diseases; it is of opinion that such notification should be made compulsory and formal by the medical man to the family or guardian, or person in charge of the patient, and not to any other person, and that the duty of notifying such disease to the local authorities should be imposed upon such friends or guardians." This resolution was seconded by Dr. Ransome (Chairman of the Registration of Disease Committee), and carried. It was subsequently confirmed at a further meeting held on June 12th, 1879 (BRITISH MEDICAL JOURNAL, vol. i, 1879, p. 567; vol. ii, 1879, p. 27), when letter was read from Dr. Ransome, in which he expressed the opinion that "(1) the reports should be treated as confidential, the names of persons affected being made known only to the medical officers of health; and (2) that the form of certificate should be handed by the medical attendant to the occupier or other person in charge of the case, who alone should be compelled, under penalty, to countersign it or make his mark, and send it on to the medical officers of health. This would prevent the plea of ignorance, and would cause no breach of confidence on the part of the doctor, whose responsibility would now cease so soon as he had done what is now morally his duty, namely, make the nature of the case known to his patient's friends."

Report of Chairman on Subject, and Resolution of Approval at the Annual General Meeting.—In the autumn of 1879, the Chairman of the Parliamentary Bills Committee prepared a detailed memorandum, showing exactly what had been done by local authorities as to the compulsory notification of infectious disease. The chairman submitted a draft model clause designed to carry out the views of the Registration of Diseases Committee, as endorsed by the Association, this clause providing for the notification by the head of the family to the sanitary authority, and for the notification by the medical attendant to the householder (on a form to be provided) of the necessary particulars as to the case; the responsibility for acquainting the sanitary authority resting in any case on the householder. This report was presented to a Committee held on November 7th, 1879, at which letters approving of the model clause were read from Dr. Bristowe, President of the Society of Medical Officers of Health, and from Dr. Ransome, and ultimately the report was adopted, and was at the same time printed in the JOURNAL for general information of all the members and for critical discussion. The course which the Parliamentary Bills Committee had thus pursued in carrying out the mandate of the Association was recapitulated at the Cambridge meeting in 1880 to a very full meeting; and amongst those who expressed a warm approval of the action of the Committee were some of those who now energetically oppose it.

Necessity for due Publicity of Local Bills.—In this report, as in several others on the same subject which have been subsequently adopted by the Committee, the importance of due inquiry and adequate publicity being given to the provisions as to medico-sanitary matters proposed to be inserted in local Bills has been strongly

urged. The plan of notification approved by this Committee has unfortunately met with little favour at the hands of the local authorities; but the Committee have been none the less urgent in their claims of its superiority. In a report presented by the chairman in February 1881, it was urged that the ramifications of local legislation were rapidly becoming so extensive and confused, that the subject of some effective supervision of them needed to be earnestly pressed upon Parliament and the Local Government Board. The suggestion was made that the whole subject should be referred to a Select Committee of the House of Commons, so that the whole question could be thoroughly sifted, and the form settled which future legislation should take. The Committee had previously submitted the clause to Mr. Sclater-Booth, when he was head of the Local Government Board, and had received the usual promise of "consideration".

Deputation to Mr. Dodson.—In May of last year, a large and influential deputation, representing not only the Association, but the Society of Medical Officers of Health, the vestries of district boards of London, the Social Science Association, and the National Health Society, waited upon Mr. Dodson to urge upon the Government the necessity of introducing some general Bill which should extend to the whole country, and on a uniform system, what is now done in a multitude of diverse ways in various towns that have chosen to go to the expense of local Acts for this purpose (BRITISH MEDICAL JOURNAL, vol. i, 1881, p. 744). Mr. Dodson's reply was not of a satisfactory nature; and the question was performed dropped until this year.

Discussion at Ryde Meeting in 1881.—Meanwhile, however, an important discussion took place at the annual meeting at Ryde last August, with regard to the duty of the medical man to report. In opposition to the annual report of the Parliamentary Bills Committee, Mr. Michael, Q.C., proposed an amendment "That it be an instruction to the Parliamentary Bills Committee to support the Bill for the compulsory notification of infectious diseases introduced into the House of Commons by Mr. G. W. Hastings," (in which Bill it was proposed to impose a duty on the medical attendant of reporting *directly* to the sanitary authority), but in the result Mr. Michael's amendment was lost by a large majority, and the report of the Committee was adopted. (BRITISH MEDICAL JOURNAL, vol. ii, 1881, p. 332.)

Action taken in Parliament this Session.—In the course of this session renewed efforts (this time crowned with success) were made to get the clauses in the various local Bills properly discussed; and in the result a Special Committee of the House of Commons, with Mr. Sclater-Booth as Chairman, was appointed, with instructions to report to the House on the propriety of the deviations from general statute law proposed to be made in these Bills. The Parliamentary Bills Committee applied through their chairman to be heard in opposition to the clauses in the several Bills providing for the compulsory notification of infectious diseases by the medical men direct to the sanitary authority; but their *locus standi* was denied. In the end, the Select Committee recommended to the House for general adoption the plan of concurrent notification to the sanitary authority, both by the medical attendant and the householder, though they endorsed the contention of this Committee that steps should be taken to secure more uniform and stringent supervision over private Bills.

Three Bills are now before the House of Commons, dealing with the question of the Registration of Infectious Diseases in its general application. One of these Bills (introduced by Mr. Hastings) imposes throughout England and Scotland the duty of notification to the sanitary authority or the medical attendant, and on the householders only, if there be no medical attendant. A second Bill, introduced by Mr. Gray, imposes similar obligations for Ireland. Mr. Meldon's Bill (for Ireland only) throws the responsibility of notification on the householder, and makes it permissive in the case of the medical man. None of these Bills have yet been considered, and in all probability their consideration must now be deferred until next session.

SPECIAL CORRESPONDENCE. ABERDEEN.

University Examinations.—North of Scotland Medical Association.—Small-pox.

THE professional examinations for the degrees in medicine at this University took place during last week, when a large number of candidates presented themselves for examination, especially for the first professional under the improved new regulations, whereby botany and natural history can be taken at an early part of the course.

The North of Scotland Medical Association met in Aberdeen on Saturday the 29th ult., when Professor Pirrie, the President, gave an

able and exhaustive address on "The Infectiveness of Tubercle, with Special Reference to Tubercular Consumption". After referring to the views of the older physicians on the contagiousness of consumption, and to a similar belief prevailing in Italy, Spain, and other countries in the South of Europe at the present day, Professor Pirrie proceeded to discuss the experimental evidence on which the view as to the contagiousness of consumption is based. He referred to the views of Dr. William Budd, Buhl, and others; he contrasted the results obtained by inoculation by Villemin, Chauveau, and Drs. Burdon Sanderson and Wilson Fox. Martin's experiments were referred to; and the address closed with a succinct account of the recent researches of Koch, already fully referred to in this JOURNAL. The tubercle-bacilli, prepared after the method of Koch, were exhibited to the members of the Association. On the motion of Dr. Beveridge, the Society requested Dr. Pirrie to allow his address to be printed by the Association. Dr. Manson, Banfi, was nominated President for next year.

The local Branch of the British Medical Association also met on the same day; and, after transacting some formal business, the two societies dined together in the afternoon.

As usual, small-pox is prevalent amongst the French fishermen. A French lugger put into Aberdeen harbour with one of the crew dead from small-pox.

CORRESPONDENCE.

ON THE CONTAGIOUSNESS OF PULMONARY CONSUMPTION.

SIR,—The great importance of the possible communicability of phthisis from one individual to another, upon which Dr. Burney Yeo has ably treated in a late number of your JOURNAL, induces me to draw attention to a letter which was published in 1867 by Mr. Edwards, who had then been for seventeen years resident medical officer at the Brompton Hospital. Its contents have a bearing so important upon a subject of much interest to patients, patients' friends, doctors, and nurses, and tend so materially to allay the extravagant fears of individuals in daily communication with consumptive cases, that no apology, I believe, is necessary for reproducing the chief parts of the communication. The letter was sent to Dr. R. Payne Cotton, who was at the time senior physician to the Brompton Hospital, and a great authority on all subjects connected with pulmonary disease. "Upon this evidence," he says, "few, I think, will be disposed to include phthisis amongst infectious diseases".

The letter is as follows, somewhat abbreviated.

"I remember personally fifty-nine resident medical assistants, whose duration of office has averaged quite six months. To the best of my belief, all but two are living; and, of the two dead, one fell a victim to aneurysm, and the other to some cause unknown. Three now living are said to be consumptive. *Chaplains*.—The present chaplain has held office for more than seventeen years, and his two predecessors are living. *Matrons*.—The matron has been resident for more than sixteen years; the former two matrons are living. *Nurses*.—Very many nurses have been in residence for periods varying from months to several years. The head nurses sleep each in a room containing fifty patients. Two head nurses only are known to have died; one from apoplexy; the other head nurse was here seven months, and left to be married—an unhappy marriage—and some time afterwards died of phthisis. Of the nurses now in residence, one has been here 24 years; two 12 years; one 8 years; one 7 years; one 6½, and one 5 years. No under nurse, as far as I am aware, has died of phthisis. All the physicians who have attended the in- and out-patients during the past seventeen years, are living, except two. One died from causes unconnected with disease of the lungs, and the other from disease unknown, after an absence of twelve years from the hospital. I am thankful to say that, after a residence of ~~the last~~ years in this hospital, I am in good health.—(Signed) VIRTUE EDWARDS, Resident Medical Officer.

Without denying for a moment the possibility or probability of the bacilli, when admitted into the body while in active life, leading to the production—under certain conditions—of tubercle, I think that no great fear need be entertained of anyone "catching" the complaint of a consumptive patient.

The undoubted fact of the immunity from the disease of the nurses who have been in residence for years in rooms containing many patients, and in whom no tubercular lesions are found, affords powerful evidence of the slight communicability and contagiousness of pulmonary consumption.—I have the honour to remain, yours truly,

HERBERT DAVIES, M.D. Cantab., F.R.C.P.,
Consulting Physician to the London Hospital, and to the
Hospital for Diseases of the Chest.

23, Finsbury Square, June 17th, 1882.

DEFECTS IN MEDICAL EDUCATION.

SIR,—The manner in which medical education should be conducted is a matter of so much importance, that I venture to submit a few reflections with regard to the question of students passing their first year, or a part thereof, with a general practitioner. I have repeatedly heard men express satisfaction who had done so, and I have also heard others regret not doing so. It is a fact that men often get their diplomas who are unable to recognise the commonest diseases, as stated by your correspondent, "A Young Practitioner", in the JOURNAL of the 3rd June. With regard to this matter, it may be immaterial where the necessary knowledge is gained (measles and scarlatina, I presume, are not often seen in the out-patient room, and are not generally admitted into hospitals); but it would be desirable that no one should be granted a licence to practise who had not satisfied the examiners of his ability to diagnose, or rather I should say to recognise, such a disease as measles. The difference between school-life and that of a medical school is so great that, on this ground alone, it would, I think, always be well to have an intermediate stage of pupillage, wherein the student could gather some general ideas of life and professional work, become acquainted with medical and scientific terms, study pharmacy, osteology, and perhaps chemistry. He would not then, on entering a hospital, be learning in a language which was foreign to him, but would understand the terms used at lectures and demonstrations; and time would be gained, to his own and his teacher's advantage and credit. It is, I believe, the men who have had a start with a general practitioner, that generally gain the prizes at their respective hospitals; and, although it may not be possible to handicap knowledge, yet it would seem fairer in this respect if all began in the same way.—Yours faithfully,

WALTER LATTEY, M.D.

Southam, July 4th, 1882.

CERTIFICATES OF DEATH.

SIR,—The short article upon this subject which appeared in your JOURNAL for last Saturday, as the opinion of the Registrar-General, may be misleading to those whom it more immediately concerns. You are perfectly correct in stating the certificates of death issued by students at any of the metropolitan hospitals are valueless as legal documents, but it must not be supposed that they are of no use whatever. Their issue upon the death of an infant, whether from premature birth, low vitality, or any other natural cause, would always prevent the friends and relatives being put to that inconvenience and anxiety which you so justly deprecate. It is only when no certificate or documentary evidence is produced by the informant that a registrar is compelled to shift the responsibility to the shoulders of the coroner. The following extract from the Registrar-General's instructions upon the subject will show that this view is correct.

"On learning from an informant, who produces no certificate or written statement of the cause of death, that the deceased was medically attended by an unregistered practitioner, the registrar should represent the importance of written testimony as to the cause of death, and should encourage its production, notwithstanding he cannot enter in column 6 the name of the person who supplies the written statement."

I think that if this were generally known by students practising in connection with the lying in charities of the various hospitals, a great deal of unpleasantness might be avoided, and a vast amount of trouble saved to the recipients of their charity.—I am, sir, your obedient servant,

A METROPOLITAN REGISTRAR.

July 24th, 1882.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Friday, July 28th.

Army Hospital Corps.—General FIELDEN asked the Secretary of State for War whether he had any objection to state the result of the inquiry by the Committee presided over by Sir Evelyn Wood, into the charges of inefficiency and misconduct brought against the men of the Army Hospital Corps, and whether he intended to take any action in the matter.—Mr. CHILDERS: In reply to General Fielden, I think I had better read the two paragraphs in the report of the Committee which sum up their opinion: "The Committee think, as regards the general result of the inquiries, that the more serious allegations against the Army Hospital Corps have not been substantiated; they consider, however, that certain individuals of the corps have been unfit for their duties, but that the proofs have been against individuals who were punished at the time, and that the defects in the treatment of the patients arose principally

from the suddenness of the outbreak, which struck down the Army Hospital Corps as well as the other corps; and, from the dimensions it assumed, it could not have been foreseen." I have now, with the concurrence of the Duke of Cambridge, appointed a Committee to inquire into the whole organisation of the corps, and I hope to consider its report before preparing the estimates of next year.

Artificial Butters.—Mr. A. MOORE complained of the insufficiency of the information published by the Board of Trade as to the imports of substitutes for butter and similar articles which were swamping the agricultural produce of this country. What he complained of was, that no distinction was made in the returns of imports, so as to show the real quality of the oils and fats that were imported as butter.—Mr. CHAMBERLAIN said he had referred the matter to a departmental Committee, and was awaiting its report; but he believed it would be practicable to distinguish genuine butter from its substitutes in the returns of imports.—Lord ELCHO asked the President of the Board of Trade whether the Adulteration Acts covered the sale of spurious articles, such as butterine and other compounds, for genuine butter; and, if not, whether he would take measures to prevent such sale.—Mr. CHAMBERLAIN said that the Adulteration Acts, in his opinion, afforded sufficient protection to the consumer against the sale of adulterated articles. Under the eighth section of the Food and Drugs Act, any person selling oleomargarine as butter, without informing the purchaser of the nature of the article, rendered himself liable to a penalty of £20, recoverable on the prosecution of a private person or of the local authority.

Monday, July 31st.

The Sick-Berth Staff.—Mr. CAMPERL-BANNERMAN said, in answer to Mr. GORST, that, in the event of a hospital ship being sent out to Alexandria, the services of those at present employed in naval hospitals would be utilised as required.

Medical Relief in Scotland.—In reply to Mr. RAMSAY, Mr. COURTNEY said it was intended to lay on the table a Supplementary Vote of £10,000, in addition to the £10,000 already granted in aid of medical relief in Scotland.

Duty on Coffee or Chicory.—In relation to the duty on coffee or chicory, Mr. MAGNIAC moved the omission of the words "called by any name of coffee or chicory".—Mr. C. BENTINCK complained that this change would be in favour of adulteration.—Mr. COURTNEY explained that the change was made in order to reach several articles which were used as coffee, but which at present escaped duty.—The clause, as amended, was agreed to.—Mr. MAGNIAC, on Clause 6, moved an amendment providing that packets containing or purporting to contain coffee should have affixed a label denoting the proper names of the several articles or substances of which such mixture was composed, and, in the case of coffee, the percentage thereof which the mixture contained. It was not, he said, the duty of the Treasury to prevent people buying bad articles, but it was its duty to see that people should know what they were buying.—The amendment was agreed to.

MILITARY AND NAVAL MEDICAL SERVICES.

A GOOD EXAMPLE.

SIR,—In your number of July 15th, under head of "Good Example," it is stated, after alluding to the ambulance department of the 2nd Battalion North Yorkshire R.V., "that it would be well if the senior surgeon of each regiment would follow their example." Allow me to say that the 2nd Battalion Gloucestershire R.V., to which I have the honour to belong, has fifty to sixty men well trained in the duties of "first aid to the injured". At my suggestion, classes were formed in three or four districts two years since; and my colleague, Surgeon Waddy of Gloucester, devoted a great deal of time to teaching his classes; and two of my own, numbering about thirty men, entered with spirit into the work, and passed a very creditable examination under Surgeon-General Bowen, the appointed examiner, and received certificates of proficiency; for want of public spirit, the movement has not progressed.

At the annual inspection of the 2nd Gloucester, that took place recently, an ambulance detachment, in charge of Surgeon Garrett, marched past with their stretchers in rear of the battalion, and took up their proper positions during the sham fight that followed afterwards. I should add that the colonel of the regiment has encouraged the formation of ambulance corps; and if there was more interest taken in the movement by the surgeons themselves, and some system of organisation adopted to carry it out, all volunteer regiments might be efficient in these arrangements. I shall be glad to assist in promoting any feasible scheme that may be proposed.—I have the honour to remain, your obedient servant.

THOMAS PARTRIDGE, Regimental Surgeon 2nd Gloucester R.V.

THE DEFICIENCIES OF THE VOLUNTEER MEDICAL DEPARTMENT.

SIR,—It is surprising that the medical department of the popular volunteer service should remain in such an unsatisfactory condition as at present. It is exceptional to meet with volunteer surgeons who recognise their great responsibilities. Some able and painstaking men have, at their own expense, educated and equipped an ambulance corps in their regiments; but these are few and far between. The

majority are unprepared for anything beyond the weekly appearance on parade, or at the annual inspection, at which, by the way, they are not examined or even looked at by the inspecting officer. The duties of a volunteer surgeon are left much to himself; there is no one to spur him up. He can do just as much or as little as he likes. With a view to remedy this, I suggest the following points, which would increase the usefulness of the medical department and the efficiency of the whole force.

1. The establishment of a fully equipped volunteer medical department, with the various ranks and grades of administrative and executive officers and men.
2. A compulsory examination for all volunteer surgeons in the special knowledge required of military medical men.
3. A system of inspection of the medical equipment of each battalion every year by an officer of the regular Army Medical Department.
4. That every recruit be examined by the medical officer of the battalion; and, if passed, he should forthwith be revaccinated.

The last point is one which is of great importance. Recruits are drafted into the volunteer ranks without any medical supervision. Consequently, men with squints and cataract, men suffering from phthisis or heart-disease, men with deformities of the chest or limbs, are placed on the list of efficient expected to take the field in an emergency. With regard to the revaccination of recruits, apart from the fact that it would increase the number of the protected public, it is right to remember the danger which masses of men run, when crowded together without previous preparation. For example: if a battalion of volunteers were brigaded with militia regiments from the slums of a large city, and these shut up in a fortress much too small for them, it is not unlikely that, if any small-pox poison were accidentally introduced, the whole volunteer force might soon be laid low with this scourge. I mention this as an example of the reliance placed by the authorities in our volunteer surgeons, that they do not look to them to weed out unsuitable men from the fighting ranks, nor do they ask us to protect the men from this preventable plague of small-pox. The apathy of those in power with regard to the volunteer service can only be explained in one of two ways: (1) the volunteers are never expected to be called out to fight, and they are therefore only used as dummies, clothed in scarlet, to scare from our shores the invader; or (2) the authorities, if they believe it possible that the volunteers will be required to fight, are guilty of great cruelty, and deserve to be denounced for their selfish disregard of human suffering. For, if any fighting did take place, the volunteer, as well as every other soldier, has a right to expect trained, tender, and merciful help from his country when he falls fighting the foes of his fatherland. It is no time for details when a national emergency has arisen; the equipment of the medical department of the volunteer army should be begun at once. I trust my letter may rouse those who feel as strongly as myself the need of immediate action.—I am, yours, etc.,

FREIWILLIGER.

BRITISH MEDICAL SERVICE.—The following is a list of surgeons on probation in the Medical Department of the British Army who were successful at both the London and Netley examinations. The marks tabulated are those which were gained at the London examination; the order of position of these gentlemen is not affected by the marks they gain at the Netley examination.

Marks.		Marks.	
1. S. Westcott	2295	9. H. S. McGill	2065
12. H. R. Whitehead	2280	10. A. A. Pechell	2060
3. B. M. Skinner	2200	11. C. R. Tyrrell	2050
4. C. R. Bartlett	2195	12. J. Hickman	1980
5. J. D. T. Reekitt	2175	13. W. B. Thomson	1975
6. T. A. P. Marsh	2150	14. H. E. Deane	1945
7. R. Kirkpatrick	2140	15. S. O. Stuart	1940
8. A. C. A. Alexander	2095		

* Gained the Montefiore Medal.

† Gained the Martin Memorial Gold Medal.

INDIAN MEDICAL SERVICE.—The following is a list of surgeons on probation in Her Majesty's Indian Medical Service who were successful at both the London and Netley examinations. The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the list which follows.

Marks.		Marks.	
1. H. H. R. Charles	5455	5. J. P. Barry	4852
12. G. Duncan	5025	6. A. V. Anderson	4480
3. W. A. Sykes	4875	7. E. W. Reilly	4445
4. R. W. S. Lyons	4860	8. J. Scott	4150

* Gained the Herbert Prize, the Parkes Memorial Bronze Medal, and the Montefiore Second Prize.

† Gained the Prize in Pathology.

The Greenwich Hospital pension of £50 a year, vacant by the death of Retired Deputy Inspector-General of Hospitals James Taylor, on the 9th of July last, has been conferred upon Retired Deputy Inspector-General of Hospitals Charles D. Steel, from that date.

A MADRAS medical officer, Deputy Surgeon-General Colvin Smith, M.D., has been selected to act as principal medical officer of the Indian Contingent proceeding to Egypt. He is at present serving in medical charge of the Hyderabad Contingent.

The eight field hospitals attached to the Expeditionary Force to Egypt will be in charge of the following medical officers, severally: Brigade-Surgeons E. McGrath, O. Barrett, H. R. L. Veale, E. F. O'Leary, and E. G. McDowell; Surgeons-Major W. Tanner, J. Warren, and J. Beath. The two Bearer Companies will be in charge

mortality for the borough. A considerable diminution is shown in the fatality of zymotic diseases; only fourteen deaths, nine of which were from diarrhoea and dysentery, being registered from these causes. Two deaths were from fever, which the health-officer thinks is an answer to those persons who "erroneously state that low fever exists at Cheltenham, whereas it is proved that there is probably no town in the British Isles, with a population of 45,000 where so few cases of fever, or other zymotic disease occur, as in Cheltenham." Dr. Wright thinks that this evidence "ought to satisfy all reasonable people dwelling in our beautiful town that they live in one of the healthiest in the kingdom." It is satisfactory to note that the appeal made for assistance by the trustees of the Delancey Hospital to the Town Council and the rural sanitary authority has been liberally complied with, and that the hospital continues its useful career. Amongst the 54 patients that were admitted during the past year, only one death occurred. The sanitary work of the district appears to have been well supervised, and improvements are shown in many directions; but the health-officer directs attention to the great defect of having a water carriage system of drainage without a water-supply to closets in smaller houses of the town.

WALSALL.—Dr. MacLachlan, in his last report on this important borough, records the lowest death-rate for the last five years, viz., that of 16.547 per 1,000. By way of explanation the health-officer explains that "only one adequate cause can be assigned for this gradual progress, and that is the improved sanitary condition of the borough. In other words we have purer water, and more abundantly supplied than formerly; we have fewer polluted wells, and far more effective drainage." There are no details given of the mortality which happened during the year, but it is mentioned as a significant fact that only three deaths resulted from typhoid fever, and that the fatality from diarrhoea was much less than that recorded for the previous year, the total deaths being 44 as against 124 for 1880. In this brief manner the whole sanitary history of the year is dismissed.

ASHTON-IN-MAKERFIELD.—In his report on this district for 1881, Mr. Hannah states that scarlet fever and small-pox were prevalent during the greater part of the year, and at times assumed epidemic proportions. The prevalence of this last disease, which has been entirely absent from the district for nearly seven years, led to a house-to-house visitation, when vaccination and re-vaccination was impressed upon the inhabitants, though with very partial success. After some difficulty the health-officer succeeded in obtaining the erection of a temporary hospital for the isolation of small-pox cases, but not until the outbreak had reached its maximum. The authority seem, however, to have profited from the recent epidemic, for plans and estimates for an infectious hospital are under their consideration. Scarlet fever was fatal in five cases, whooping-cough in four, and diarrhoea in two. Mr. Hannah appears to have been very systematic in his inspection of the district under his charge, and he reports that there is now an unlimited supply of good water, and that all the houses have connections with the main sewers. Improvement has also been effected by the adoption of the pail system, in place of the old-fashioned middensteads and privies.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—Admitted Members, July 27th, 1882.

Grabham, George Wallington, M.D. London, Earlswood
Herringham, Wilmot Parker, M.B. Oxon., St. Bartholomew's Hospital
Jessop, Charles Moore, 17, Whitehall Place
Jones, Arthur Henry, M.D. London, Northampton
MacLagan, Thomas John, M.D. Edinburgh, 9, Cadogan Place
Richardson, Gilbert, M.D. Dublin, 10, Roland Gardens
Routh, Amand Jules McConnel, M.B. London, 6, Upper Montagu Street
Shaw, John, M.D. London, Willoughby Road

Admitted Fellows.

Blanc, Henry, M.D. Montpellier, Bombay
Grant, James Alexander, M.D. Montreal, Ottawa

Admitted Licentiates.

Alpin, William George Patrick, 81, Commercial Street
Bamford, Charles Robert, Uroxyeter
Banatvala, Hormasjee Edaljee, 20, Endsleigh Gardens
Bass, Frederick, 20, Union Road, N.
Bertram, Benjamin, 25, Montague Street
Blatherwick, Henry, Rochester
Buckell, William Robert, Romsey
Cameron, John, Bilston
Challinor, Cedric, 28, Reedworth Street
Chown, Henry Havelock, M.D. Kingston, 19, Great Coram Street
Collins, Robert John, Middle Mall
Cooper, Walter, South Hill, Park Road, Croydon
Cox, Roland Frederic, 21, Ryder Terrace, Twickenham

Day, John Roberson, 121, Camden Road
Dendy, Walter Chester, Guy's Hospital
Downing, Charles, Falmouth
Durant, Robert James Anderson, St. Thomas's Hospital
Evans, Thomas Jones, 18, Edward Street
Frost, George, 53, Bedford Square
Greaves, Thomas, M.D. New York, 21, Regent Square
Hoskyn, Donald Templeton, Isleworth
McMillan, John Furze, Middlesex Hospital
Marston, Francis Ernest, Ludlow
Pocock, Alfred George Clarke, 337, Brixton Road
Pritchard, Samuel Evan, Tower Hamlets Dispensary, Stepney
Reynolds, James Jones, Stoke by Clare
Robinson, Willford Vidal, Saffron Walden
Strachan, William Henry Williams, Guy's Hospital
Tait, Henry Brewer, 54, Highbury Park
Thornton, Haswell William, M.D. McGill, 4, Nicholas Street
Todd, Charles Edward, 8, Sussex Gardens
Toller, Charles William Edward, St. Bartholomew's Hospital
Viney, Josiah Ernest, M.B. Cambridge, Fernwood, Highgate
Wrightwick, Fallon Percy, Folkestone
Williams, Evan, 27, St. Paul's Crescent
Zimmermann, Benjamin Frazier, Ealing

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 27th ultimo.

Messrs. George E. Perez, L.S.A., Tenerife; John A. Williams, M.B. Aberd., Enfield; Charles F. Downman, Castle Hill, W.; Henry C. Dixon, Putney; Charles E. Faunce, L.S.A., Guernsey; Robert G. Lynam, L.S.A., Stoke-on-Trent; Henry Holcroft, Sevenoaks; Arthur Northcott, L.S.A., Fulham; Charles H. Wise, L.S.A., Launceston; George H. Dawson, Moor Allerton; and William H. Dutton, M.B. Edin., Edinburgh.

Three were approved in Surgery, and eleven rejected.

The following gentlemen passed on the 28th ultimo.

Messrs. Arthur G. Salmon, L.S.A., Truro; Thomas R. Morse, L.S.A., Cheltenham; Walter T. Harris, L.S.A., Ipplepen, Devon; Thomas E. Leadbeater, L.S.A., Bromley-by-Bow; John B. Berry, L.S.A., Barna, Galway; Robert Beattie, M.D. Queen's Univ. Ireland, Ballymena; Stanley S. Hoyland, L.S.A., Rotherham; Thomas E. Rogers, L.S.A., Bickerton, Devon; George S. Pollard, South Walsham; and John Bostock, L.S.A., Osgathorpe, Leicester.

Six gentlemen passed in Surgery, and eight candidates were rejected.

The following gentlemen passed on the 31st ultimo.

Messrs. R. Frederic Cox, L.R.C.P. Lond., Twickenham; Robert J. A. Durant, L.R.C.P. Lond., Bengal; Evan Williams, L.R.C.P. Lond., Bala; Joseph Eott, L.S.A., Dunmow, Essex; Robert J. B. Howard, M.D. McGill, Montreal; Ernest Hudson, L.S.A., Harleston, Norfolk; Hugh R. Beevor, L.S.A., Hingham, Norfolk; Alan E. Tate, L.S.A., Trent, Somerset; Arthur D. Roe, B.A. and M.B. Cantab., Eccles; Francis H. Voss, L.S.A., Clapton Square; and Thomas E. Lovegrove, L.S.A., Wollaton, near Nottingham.

Seven gentlemen passed in Surgery, and nine candidates were rejected.

The following gentlemen passed on the 1st instant.

Messrs. Owen C. Jones, L.S.A., Philpot Street, E., and John H. Thomas, L.S.A., Tenby, of the London Hospital; and Thomas Finch, B.A. Cantab., Torquay, of St. Bartholomew's Hospital.

Out of the 280 candidates examined, no fewer than 118 were rejected, and 38 passed in Surgery, and when qualified in Medicine will be admitted members of the College.

With this meeting, the examinations for the present session were brought to a close.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 27th, 1882.

Grigg, William Henry, Torrington, Devon.
Hulesberg, John Wild, Gipsy Hill, Upper Norwood.
Power, Charles Frederic, Bexhill, Hastings.
Roberts, Thomas Pritchard, Twyford, near Winchester.
Watson, Robert Walker, 22, Highbury New Church.
Watson, William, High Street, Rochester.

The following gentlemen also on the same day passed their Primary Professional Examination.

Carrington, William Henry, Guy's Hospital.
Maddison, Charles John, Middlesex Hospital.
Pauli, William Kirman, Charing Cross Hospital.

MEDICAL VACANCIES.

The following vacancies are announced:—

BLOCHAIRN STEEL WORKS, Glasgow.—Medical Officer. Applications addressed, "Committee Medical Officer," by August 7th.

BRADFORD FRIENDLY SOCIETIES MEDICAL ASSOCIATION.—Assistant Medical Officer and Dispenser. Salary £120 per annum. Applications by August 15th.

BRIGHTON AND HOVE DISPENSARY.—Resident Dispenser. Salary, £100 per annum. Applications by the 21st instant.

CANCER HOSPITAL, LONDON AND BROMPTON (FREE).—Resident House-Surgeon. Salary, seventy-five guineas per annum. Applications by September 2nd.

CAPE COPPER MINING COMPANY, South Africa.—Assistant-Surgeon. Salary, £300 per annum. Applications to the Secretary, 6, Queen Street Place, E.C.

CHELTEMHAM GENERAL HOSPITAL AND DISPENSARY.—Dispenser. Salary £20 per annum. Applications by September 1st.

COUNTY MONAGHAN INFIRMARY.—Apothecary and Registrar. Salary, £60 per annum, with apartments, light, coal, and rations. Election on the 9th instant.

DARLINGTON HOSPITAL.—Junior House-Surgeon. Salary, £100 per annum (out-door). Applications to C. T. Anson, Esq., Fairfield, Darlington.

DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL, Leicester Square, W.C.—Demonstrator of Contour and Cohesive Fillings. Salary, £50 per annum. Applications by September 29th.

DONCASTER INFIRMARY AND DISPENSARY.—Dispenser and Assistant to House-Surgeon. Applications to the House-Surgeon.

DOWNPATRICK UNION—Medical Officer for Portaferry Dispensary District. Salary, £100 per annum, with £15 yearly as Medical Officer of Health, exclusive of registration and vaccination fees. Election on 8th August next.

DUDLEY DISPENSARY—Resident Medical Officer. Salary, £130 per annum. Applications by August 15th.

EARLSWOOD ASYLUM FOR IDIOTS, Redhill, Surrey.—Medical Practitioner. Salary, £400 per annum. Applications endorsed "Medical Superintendent", the Board of Management, 36, King William Street, London Bridge, E.C., by August 21st.

GLOUCESTER COUNTY LUNATIC ASYLUM, near Gloucester.—Medical Superintendent. Applications addressed to the Committee of Visitors, Wotton, near Gloucester.

HARTLEPOOL'S HOSPITAL.—House-Surgeon. Salary, £100 per annum. Applications by August 10th.

LANCASTER INFIRMARY AND DISPENSARY.—House-Surgeon. Salary, £120 per annum. Applications by August 16th.

LONGFORD UNION—Medical Officer for Longford Dispensary District. Salary, £100 per annum, with £25 per annum as Medical Officer of Health, registration, and vaccination fees. Election on the 7th proximo.

NATIONAL DENTAL HOSPITAL, 149, Great Portland Street, W.—Assistant Dental Surgeon. Applications by August 22nd.

NATIONAL DENTAL HOSPITAL, 140, Great Portland Street, W.—House-Surgeon. Salary, £50 per annum. Applications by August 22nd.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney.—Resident Clinical Assistant and Registrar. Salary, £70 per annum. Applications by the 21st instant.

NORTH STAFFORDSHIRE INFIRMARY, Hartshill, Stoke upon-Trent.—House-Physician. Salary, £100 per annum. Applications by August 21st.

PORT ELIZABETH PROVINCIAL HOSPITAL.—Medical Practitioner. Salary, £350 per annum. Applications to Captain Mills, C.M.G., Albert Mansions, Victoria Street, S.W., by August 21st.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY AND SEA-BATHING INFIRMARY—Resident Medical Officer. Salary, £120 per annum. Applications by August 5th.

ROYAL BERKS HOSPITAL, Reading.—Assistant House-Surgeon. Board and Applications by August 8th.

ROYAL INFIRMARY OF EDINBURGH.—Pathologist. Applications to Mr. J. D. Wilson, 10, St. Andrew's Place, Edinburgh, by August 8th.

ROYAL ISLE OF WIGHT INFIRMARY, Ryde—House-Surgeon and Secretary. Salary £50 per annum. Applications by August 8th.

ROYAL SEA-BATHING INFIRMARY at Margate, for the Scrofulous Poor of all England—Resident Surgeon. Applications by August 5th.

SALISBURY INFIRMARY.—House-Surgeon. Salary, £100 per annum. Applications by August 8th.

TUNBRIDGE WELLS DISPENSARY AND INFIRMARY—House-Surgeon. Salary, £100 per annum. Applications by the 9th August.

WREXHAM INFIRMARY AND DISPENSARY.—House-Surgeon. Salary £100 per annum. Applications by August 8th.

MEDICAL APPOINTMENTS.

DOUGHERTY, A. H., M.D., appointed House-Surgeon to the East Suffolk Hospital, Ipswich.

DOUGHERTY, A. H., M.D., appointed Medical Officer for Aughrim Dispensary District, County Wick, Ireland.

DOUGHERTY, A. H., M.D., appointed Medical Officer for Leith Hospital, vice A. R. DOUGHERTY, M.D., resigned.

DOUGHERTY, A. H., M.D., appointed Senior Assistant Medical Officer to the County Asylum, Caterham, Surrey, vice G. S. Seecombe, M.D., resigned.

DOUGHERTY, A. H., M.D., appointed Assistant House-Surgeon to the Liverpool Hospital for Children, vice H. R. Osborne, M.R.C.S., resigned.

DOUGHERTY, A. H., M.D., appointed Resident Surgeon to the Richmond Hospital, Dublin.

DOUGHERTY, A. H., M.D., appointed Assistant Medical Officer to the Workhouse, Dublin.

DOUGHERTY, A. H., M.D., appointed Assistant Medical Officer to the Mid and South Yell Hospitals, Scotland.

DOUGHERTY, A. H., M.D., appointed House-Surgeon to the Wareham and Dorset General Hospital, Wareham, Dorset.

DOUGHERTY, A. H., M.D., appointed Assistant Medical Officer to the Officer to the Hillborough Lunatic Asylum, Bromsgrove.

MUNRO, A. Campbell, M.B., B.Sc., appointed Medical Officer of Health for South Shields, vice W. Dalziel, L.R.C.P. Ed., resigned.

PRATT, F., M.D., appointed Medical Officer and Public Vaccinator to the Bideford Union, vice C. Pratt, M.D., deceased.

REARDON, T., L.R.C.C.P.I., appointed Medical Officer to the Mallow Union, vice T. W. Harrison, L.R.C.P., deceased.

SAUNDERS, W. A., M.R.C.S., appointed Assistant Medical Officer to the Central London Sick Asylum District, Highgate Infirmary.

TAIT, E. S., M.B., appointed House-Physician to the General Lying-in Hospital, York Road, Lambeth.

WATERS, J. L., M.B., appointed House-Surgeon to the Cumberland Infirmary, W. Wilson, M.B., resigned.

WHITHAM, R. M., M.B., appointed House-Surgeon to the Flintshire Dispensary, vice E. O. Price, M.B., resigned.

WIGG, Alfred E., L.R.C.P., M.R.C.S., L.S.A., appointed Honorary Medical Officer to the Children's Hospital, Adelaide, South Australia.

WILSON, J. A., M.B., appointed Assistant Resident Medical Officer of Govan Parochial Asylum.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

LEWIS.—At Radnor Cottage, Houston, Renfrewshire, on 27th July, the wife of William Lewis, M.D. (Glasg.), L.R.C.P. and S. Edin., etc., of a daughter.

VIVIAN.—On the 25th July, at Chase Side, Southgate, N., the wife of R. T. Vivian, L.R.C.P. Ed., M.R.C.S. Eng., of a son.

MARRIAGE.

SANKEY—HALLER.—On the 27th ult., at Basel, Switzerland, by the Rev. Douglas P. Ware, Herbert R. Octavius Sankey, M.D., and Marie A. Haller, eldest daughter of the late Dr. Moritz Haller, M.D., of Vienna.

HEALTH OF FOREIGN CITIES.—The following statistics, derived from a table in the Registrar-General's last weekly return, afford trustworthy indications of the recent health and sanitary condition of various foreign and colonial cities. In the three principal Indian cities, the annual death-rate averaged 26.7 per 1000, and was equal to 20.7 in Bombay, 29.1 in Calcutta, and 35.5 in Madras. Cholera caused 55 deaths in Calcutta, and small-pox 5 in Madras. According to the most recent weekly returns, the average annual death-rate in twenty-three European cities was equal to 28.2 per 1000 of their estimated aggregate population, against 19.6, the average rate last week in twenty-eight of the largest English towns. The death-rate in St. Petersburg was 44.3, and showed a further decline from the rates in the two preceding weeks; 18 were referred to scarlet fever, and 24 to diphtheria. In three other Northern cities—Copenhagen, Stockholm, and Christiania—the average rate was but 22.3, the highest rate being 25.0 in Copenhagen, where 19 deaths were recorded from diarrhoea; 3 deaths were referred to diphtheria in Stockholm. The rate of mortality in Paris, which had been 20.5 and 22.9 in the two preceding weeks, declined again last week to 21.5; 38 deaths were, however, referred to diphtheria and croup, and 34 to typhoid fever, during the week. The 159 deaths in Brussels showed a slight decline from those returned in the previous week, and were equal to an annual rate of 20.3 per 1000; they included 5 fatal cases of small-pox. The death-rate in Geneva still continues exceptionally low, and did not exceed 14.3. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the death-rate averaged 20.7, and ranged from 19.4 in the Hague to 21.4 in Amsterdam, where 3 deaths from measles were returned. The Registrar-General's table includes nine German and Austrian cities, among which the death-rate averaged 31.9 per 1000, and ranged from 24.3 in Hamburg and 24.5 in Munich, to 35.7 in Buda-Pesth and 46.2 in Breslau. Diarrhoeal diseases caused 240 deaths in Berlin and 78 in Breslau; 16 were referred to small-pox in Vienna and 11 in Buda-Pesth. In four of the largest Italian cities, the death-rate averaged 20.0, and ranged from 25.3 in Rome to 35.7 in Naples; measles caused 5 deaths in Rome and 7 in Turin; scarlet fever 10 in Naples; and typhoid fever 4 in Venice. In four of the principal American cities, the death-rate averaged 25.9, and was equal to 16.7 in Philadelphia, 25.2 in Brooklyn, 31.3 in New York, and 38.3 in Baltimore. Small-pox caused 5 deaths in Baltimore, while diarrhoeal fatality was excessive in New York, Brooklyn, and Baltimore.

ROYAL COLLEGE OF SURGEONS.—At an ordinary meeting of the Council of the College on Thursday, the 3rd instant, Dr. Wm. Joseph Lunn, L.S.A., of Kingston-upon-Hull, Senior Surgeon to the Infirmary, was elected a fellow of the College, his diploma of membership bearing date May 14th, 1838.

DR. W. CAIRNS WICKS has been appointed acting surgeon of the 1st Newcastle Rifle Volunteer

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....	Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopaedic, 2 P.M.
TUESDAY.....	Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.
WEDNESDAY..	St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopaedic, 10 A.M.
THURSDAY....	St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.
FRIDAY.....	King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.
SATURDAY	St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.	Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin M. Th.; Dental, M. W. F., 9.30.
GUY'S.	Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. F., 12.
KING'S COLLEGE.	Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th., 2; Throat, Th., 3; Dental, Tu. F., 10.
LONDON.	Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.
MIDDLESEX.	Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.
ST. BARTHOLOMEW'S.	Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopaedic, F., 12.30; Dental, Tu. F., 9.
ST. GEORGE'S.	Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p. Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopaedic, W., 2; Dental, Tu. S., 9; Th., 1.
ST. MARY'S.	Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., Tu. F., 2; Eye, Tu. F., 9.15; Ear, M. Th., 2; Skin, Tu. Th., 1.30; Throat, M. Th., 1.45; Dental, W. S., 9.30.
ST. THOMAS'S.	Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.
UNIVERSITY COLLEGE.	Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. T. F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.3.
WESTMINSTER.	Medical and Surgical daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with Duplicate Copies.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

THE TITLE OF DOCTOR.

SIR,—Pray allow me to take exception to some remarks of "M.R.C.P." on the above question. In the first place, "that an M.D. has not studied more than the ordinary qualified practitioner; secondly, that the London man who passes the Colleges of Physicians and Surgeons, has to pass examinations equal to the University examinations in every respect, and has to spend the same length of time in studying for the same." I speak as a London man. When I had passed my College examination the ambition to obtain the degree of M.D. possessed some contemporaries from my own and other London hospitals—the advantage of holding which was forced upon us. So a party of us, some doubly qualified, went over to Ireland to put in an *annus medicus* for the Queen's University, where the fees were light, the teaching professorial, and the opportunities for learning unequalled. We found that we had to matriculate in Greek, Grecian, and Roman History, Ancient Geography, etc.; all subjects that had not been required in London. Two of our London batch funk'd this, and deferred the getting up of these subjects, with the consequence that they are in practice with their M.R.C.S. etc. Those of us who passed had to master for our next examination French, Physics, and Zoology, all new subjects, as well as to get up our Botany again. That passed, Anatomy, Physiology, Materia Medica, Chemistry—more especially Organic—the Anatomy examination, including three hours' dissecting, had to be gone through. Only two of us got as far as this without failing, and only one went up for his final M.D. M.Ch. the following year; when he had to pass, in addition to all the L.R.C.P. and M.R.C.S. subjects, in Advanced Anatomy and Physiology—another three hours' dissecting; use and application of Instruments; and Operations on the Cadaver, etc. This necessitated, in some, two years' additional study; in others, a year. A third winter's dissecting did for a few; whilst most of us had to dissect for a fourth winter, in order to be prepared for the very thorough examination in Anatomy and Physiology which every Queen's man expects, and certainly gets.

In conclusion, taking into consideration the extra time, money, study of extra subjects, additional lectures, and brain-work required to obtain the M.D. or M.Ch., our less ambitious, or less successful, may be less fortunate, London brethren, will not grudge to us the distinctive title of Doctor or Master.—Yours truly,

M.D., M.Ch.

SIR,—Your correspondent "Vexata Quæstio", in the JOURNAL, says, "those who take the M.B., and then the M.D., have certainly to pass a more difficult examination in arts, and therefore must be better educated men." This is altogether a *non sequitur*. A man who, after a good college or public school education, matriculates at the London University, and then takes the M.R.C.S. Eng. and L.R.C.P. Lond. after four years' study at a good English school, is, I contend, fully as well educated, generally and professionally, as the Scotch, Irish, or Durham M.D.'s. The great grievance in this matter is, that the English-educated medical man is placed, in the matter of a professional title, in a position of wholly undeserved inferiority to his Scotch or Irish professional brother.—I am, etc.,

J. J. BYRNE.

SIR,—The discussion as to the title of "Doctor" is very similar to the dispute between the Bishop of Lincoln and the "Reverend Henry Keet, Wesleyan Minister", who, it may be remembered, was desirous of so describing himself on a tombstone he was about to erect to a deceased daughter. The Court of Arches gave judgment in favour of the Bishop; but, on Mr. Keet appealing, this decision was overruled by the Judicial Committee of the Queen in Council, on the ground that a person prefixing the word to his name does not thereby claim to be a person in holy orders. Now let those holding the M.D. club together, and take their case into the courts of law—most assuredly they will not come off conquerors. It will be decided that the word "Dr." has no such exclusive meaning as that they desire to attach to it; that it is generally used as a prefix indicating a profession. Somehow, these gentlemen do not hesitate to call me "Esq.", apparently forgetful that I have no legal right to such a title, and indeed but few of us have. In any case of accident, does not everybody say, "Send for the doctor"?

Will you refuse to style the clergy of the dissenting churches by their proper titles, on the ground that they have no legal status in this country? The Archbishop of Canterbury, in writing to Mr. Keet, did so thus: "To the Reverend Henry Keet." The word "doctor" dates from an age long prior to university degrees; and I am afraid that those gentlemen who desire to monopolise its meaning to their own exclusive use are destined to fail. Following the ingenious idea of "Vexata Quæstio", I would advise men who have not only the M.B. and M.D., but also the M.R.C.S. and L.R.C.P., to put these titles on their plates, by way of further distinguishing themselves from those who have only the M.B. or M.D.

In conclusion, for my own part, I do not groan for the M.D., because I am fully conscious that the public judge of a man, not by his qualifications, but by his own intrinsic merit.—I remain, yours faithfully,

L.R.C.P. EDIN.

"F.A.D.", "M.R.C.P.", and other correspondents ask our opinion whether it is legal for a registered medical man, not holding the degree of M.D., to put Dr. on his doorplate; and one, who holds the L.R.C.P. diploma only, asks what title we would advise him to use. The only enactment bearing on this point is the fortieth, or penal clause of the Medical Act of 1858; and that this is not intended to be used against registered medical men is, we think, clearly shown by its purpose being declared in the margin to be to impose a "penalty for falsely pretending to be a registered person". The law, in fact, recognises only the difference between registered and unregistered persons; and as to disputes about titles, the maxim applies, *De minimis non curat lex*. As a question of good taste, opinion in the profession seems, as the letters published in our columns from time to time show, to be divided. We certainly cannot advise any L.R.C.P. who has not hitherto assumed the title of Doctor, to do so, neither do we think ourselves warranted in calling upon those who have done so to drop it.

CHARGES FOR MEDICINE.

SIR,—A question has arisen in my practice whether I can legally charge for medicine, or be allowed to do so in a law court, without possessing a L.S.A. degree. I am M.B., C.M. (Glasgow), 1869, and M.D. Glasgow 1875, registered. Is there any Act enabling me to do so, or precedents established that I can refer to and plead, or is the result depending upon the humour or caprice of the judge? An answer in your next issue will oblige

A MEMBER.

*. Medical men practising in England or Wales, who do not hold the licence of the Apothecaries' Company, cannot recover in a court of law ordinary charges for medicine supplied to their patients. They are only permitted under the thirty-first section of the Medical Act of 1858 to claim the cost (to themselves) of medicines or medical and surgical appliances supplied by them to their patients. The evident intention is, that they should found their claim for remuneration upon the professional aid, advice, and visits, for which, under the same section, they are authorised to make reasonable charges.

PRESIDENT'S ADDRESS,

DELIVERED AT

THE FIFTIETH ANNUAL MEETING OF THE
BRITISH MEDICAL ASSOCIATION.

Held in WORCESTER, August 8th, 9th, 10th, and 11th, 1882.

WILLIAM STRANGE, M.D.,

Senior Physician to the Worcester Infirmary.

GENTLEMEN, FELLOW MEMBERS OF THE BRITISH MEDICAL ASSOCIATION,—My first duty, on assuming the honourable and distinguished position to which the kind favour of my medical friends and neighbours, and the courteous custom of our Association, have called me, is to give you all, in the name and on behalf of every member of the profession in this city and of our local Branch, as well as of numerous other brethren residing in the West Midland district, the most hearty welcome that words can convey; a welcome to Worcester, which we are accustomed to call "*avitas in bello et in pace semper fidelis*!" And faithful too, I trust, she will always be found to the traditions and the welfare of that great Association which first saw the light within her walls.

Gentlemen, the city in which we are met is but a small one compared with many of those in which you have held meetings in former years. I trust that you will not assume that the welcome you will meet with in Worcester will be commensurate only with its circumscribed limits and somewhat scanty means of accommodation; rather consider it, I pray you, in the light of the relationship which subsists between it and you, which, with scarcely a metaphor, may be called that of parent and child.

The return, after many years, to the place of our birth, or to the scenes of our childhood, must always be a matter of interest; sometimes, indeed, of sad and sorrowful interest. Some of you may, perhaps, be experiencing something of this feeling now. You, the seniors of our Society, who, perhaps, in long past years, have sat in this very hall alongside the fathers of our Association, now gone to their rest, you cannot help but feel regret to see their places now filled by others; and especially must you regret that this chair cannot now be taken by him who not only filled the chair, but the whole meeting, with his spirit, three and thirty years ago.

But there is, surely, sometimes a pleasure in returning to our old home; as, when battered about by the world, and evil entreated of it, it may be, or evil spoken of, we return and find the paternal arms still open to receive us, the maternal board spread ready to welcome us, all our errors and wanderings condoned or forgiven. Something akin to this feeling also may be present to some of your minds to-night.

But whatever our feelings, be they sad at the loss, or joyful at the recovery, of old friends, or simply pleasurable at the prospect of making new acquaintances, let us rejoice in remembering that this is our Jubilee; the day when of old, you know, all estrangements and divisions were forgotten, the bond allowed to go free, and when fresh help and a fresh start in life were never denied to the unfortunate or the unsuccessful.

As for us, here in Worcester—to receive this great assemblage within our walls; to witness the full fruition of the efforts made here fifty years ago for the elevation of our profession and the perfecting of its power by the force of combination—this is our privilege and our glory to-day. May the spirit which animated our forefathers be with us now, and may we be found worthy to follow in their steps!

In the second place, I have to offer you my most heartfelt thanks for the honour you have conferred upon myself in placing me in this chair—a chair, on how many occasions like this occupied by men distinguished by their talents! by men who have left their names engraved on the page of the history of medicine; or, at least, by men who have rendered great and prolonged services to our Association. I do not pretend to match myself with either class of these my predecessors. You have taken me from my quiet occupation in this provincial city, healing the sick, and rendering, when called upon, what aid I may to my brethren, and solacing an anxious life with that which is so dear to me, as to many, literary relaxation. You have placed me in a position

of the utmost difficulty to fulfil with satisfaction. I must therefore bespeak your kind indulgence towards all my negligences and ignorances. In return, I can promise you one thing. I will endeavour to emulate my predecessors in this chair in zeal for your welfare by using my best endeavours to promote your comfort and happiness whilst you are under our roof. And allow me to add that in this endeavour I am cordially joined by every member of our Reception Committee, and by every member of the Worcestershire and Herefordshire Branch.

Gentlemen, we are met here to-day to celebrate the Fiftieth Anniversary of the birth of the British Medical Association. What thoughts are they which this event brings before our minds? Looking before and after, what retrospects, what anticipations? And first, how can we, here assembled, do honour to the august occasion? How ought we to acquit ourselves so as to be worthy to stand in the places, to sit in the seats vacated by the fathers, the *patres conscripti*, of our Association?

Our office, as physicians, you know, is to heal the sick, and to remove or assuage the thousand pains and miseries to which all flesh is heir. In doing this, the proper work of our calling at all times, we are to be honest, industrious, gentle, and true; acquitting ourselves, with due regard to the sacred character of our calling, with all honour and honesty before God and the world; whilst towards each other we must always be ready to tender the hand of loyal, helpful, friendship and sympathy; which, together, form the very motto and emblem of our Association. How far this ideal, in its double aspect, has marked the character of our profession since the foundation of this Society, might very well have engaged a portion of our thoughts to-night. But how we, here assembled, shall act, as we journey onwards in company with the second half of the century of our Association's existence, demands an immediate answer. For the eyes of our dead fathers may be said to be upon us; and be sure that those of posterity will look back upon our deeds. How we should comport ourselves, then, under these circumstances, let each one determine before he leaves this hall to-night.

In fixing upon a subject wherewith to occupy your attention for the hour which prescriptive custom allows to one who occupies this chair, greater difficulties than those which, I presume, have usually beset the orator of the evening were present to my mind. The occasion seemed to demand something out of the usual line. The Jubilee must have its *éloge*. Had it been otherwise, my task would have been easier. The simple description of the "faithful" city;—its history, its curiosities; its interesting manufactures; its grand old, and yet new Cathedral; the beauties of the surrounding country; the charm of its hills, and dales, and flowing waters;—might well have presented fitting matter for this address, such as would best have suited my moderate powers to portray.

Or with greater fitness to the occasion, perhaps, and instructed by the early records of our Association, I might have told you the story of its birth within this city, and have given you some account of what manner of men they were who laid the firm foundations of the British Medical Association. Or, again, taking my cue from the very initial objects of our existence as a Society, I might have endeavoured to trace the progress which its members have made in the knowledge of their art, and in the exercise of that good will and generous help towards each other, which are the two polestars of the Association itself. Or, lastly, I might have endeavoured to lay before you a kind of fifty years' book, directing your admiration to the great beacon lights of progress as they passed across the canvas of the panorama, and pointing out, step by step, the progress which has been achieved.

But, Gentlemen, there were objections to each of these courses. The story of our ancient city is well known to most of you. Its curiosities and manufactures, especially that beautiful one of China, will all be open to your inspection during your stay here, and I hope you will make good use of your opportunities of investigating them. Again, the history of our Association, does it not lie open to you, in its earlier records, in the pages of the *Provincial Medical Journal* and *Transactions*; and, in its later stages, in those of our present JOURNAL? Even but as yesterday the JOURNAL set forth this history in an admirable manner, and so cut that ground from under my feet. Moreover, to-morrow has been selected for the celebration of our Jubilee, and that day will be the most fitting on which to celebrate the fame of our founders (amongst whom stands *facile princeps* the name of Charles Hastings), and to take a review of the work which has followed their labours. To open up to you the fifty years' book, and to show you in a detailed manner the progress of medicine as a science and as an art during that time, would be too gigantic a task for me to attempt, even had it been practicable within the time at my command.

I therefore propose to ask your kind attention to some remarks, not

upon the progress of medical science strictly so called, and its relation to the advancement of science in general, a theme which I trust this jubilee has inspired some abler pen than mine to essay; but upon what I may call the revival and the survival of medicine in these kingdoms. I ask you to accompany me in an endeavour to trace the evolution of the medical mind during the past half-century; viewing that evolution or development in its tripartite aspect, viz., the intellectual, the moral, and the social aspects. After that, if time permit, we may try to make a forecast of what the future, the survival, is likely to be, taking our material from the history of the past, and the survey of the present.

PART I.—THE REVIVAL OF MEDICINE.

Turn back with me now, in memory, to the decennium which fell between the years 1830 and 1840. The times were pregnant with mighty changes—political, social, and scientific. To those whose memories are able to carry them still further back—viz., to the period immediately succeeding the close of the great Continental wars, the collapse which followed the exhaustion of the nations by those wars must appear a most noteworthy circumstance. This period lasted from 1815 to the financial crash of 1825. The political collapse appears to have been accompanied by a corresponding mental stagnation. Science, which loves to dwell with peace and gentle intercourse, had, indeed, been quietly working in their absence, unnoticed in the political turmoil, and had made frequent efforts to obtain a hearing, but no one listened. The pipers were, indeed, ready, but no one had the heart to dance.

But when the material armies had exhausted their gigantic efforts to destroy each other, and to reduce the human race to impotence, and when the calm of peace had at length settled down upon the nations, then the pent-up forces of intellect burst forth. The mind of a nation so elastic as that of these kingdoms soon recovers power, and thus the losses and wrecks which political confusion had occasioned were soon effaced, and more than compensated for by the resources which scientific discovery opened out anew to enterprise. For no sooner had a fresh decade (that of 1830-40) opened, than we find the repressed forces of thought and research bursting forth from all restraint in many directions. In our own country, perhaps, more quickly than on the Continent, the damage done by the political hurricane of a quarter of a century's duration soon began to be effaced. New enterprises were opening up to develop commerce, and new forces were sought for to accelerate their operation. Following in the earlier steps of Watt, of Boulton, and of Arkwright, Stephenson, and Brunel, Wheatstone and Rowland Hill were transforming at once our commercial and our social intercourse. Political enfranchisement was the necessary corollary of the desire for freedom to speak and freedom to act. And then came that new power, the power of combination and association, which, whilst even in its infancy it did more than anything else to reinstate the exhausted nations, appears to be destined, in the end, to obliterate all distinctions, political and civil, and, if anything can, to bring about the social millennium of the world.

Combination, applied to the exercise of thought and to the diffusion of knowledge, resulted in the formation of those great societies of which the "Provincial Medical and Surgical Association" was neither the meanest nor the least valuable. The year preceding the birth of our Society—viz., 1831, had seen the "British Association for the Advancement of Science" launched into existence, our Sir Charles Hastings having been one of the original members. A few years before, the Society of German Naturalists and Physicians had been instituted. And, in July, 1832, the foundation-stone of our own Society was laid in this city by its distinguished and ever-to-be-respected founder, Charles Hastings, and his small, but devoted, band of co-adjutors.

Gentlemen, time will not allow us to extend our review over any other field than that of medicine, and that in our own country. Let us survey, for a moment, in retrospect, its condition at the time of which we are now speaking.

Inasmuch as there were great men in Greece before Agamemnon, so also there were great men in medicine before 1832. But looking back upon that period, we find that at home and abroad, that at the close of the last, that decade was distinguished by a galaxy of names, the like of which, at one period of time, the world has rarely, if ever, seen. There were, indeed, giants in those days. Recall to your minds the names of Wilson Philip, who once lived here in Worcester; of Lawrence, of Abernethy, and of Cooper, all of whom, with the exception of the last, were in the prime of their powers; and then, if you will, recall to your minds the names of the great men of the Continent, of Latham, of Bell, of Gregory, of Alison, and of Christison; of Graves and Stokes, of Brown and of Wilson; of Marshall Hall, of Bichat, and of Barclay; of Prochaska and of Wilson Philip, who followed by Magendie and Fletcher by Milne-Edwards and Marshall Hall, by Charles Bell, Brodie, and Hope, and by a host of others second only in fame to those I have named.

Now, if you observe the characteristics of these men, whose honoured names have since become as household words amongst us of a later generation, you will find that they were chiefly distinguished by two qualities; those qualities, however, being the Alpha and Omega of all scientific progress. They are, firstly, patient research and observation of facts, and thorough conscientiousness in the use of them; and, secondly, unswerving courage and truthfulness in announcing those facts to the world. The days of unquestioned dogma were passing away. Authority was voted to be unauthorised; and antiquity was looked upon as antiquated. Some amongst you may have read, as I did, forty years ago, Lawrence's celebrated *Lectures on the Natural History of Man*, delivered before the College of Surgeons so long ago as 1817 and 1818. The sensation, as I, then a very young man, read them, almost took away one's breath whilst the bold, outspoken, fiery thoughts rolled forth in the most magnificent English, withering up as they went the antiquated and prejudiced carpings of Abernethy and others of his school.

And the works of these men, these classics of the early part of the century, what splendid works they were. Not only were they distinguished by a novel treatment of their various subjects; new, that is, in their entire freedom from ancient prejudices and servility to antiquated dogmas; and new, also, in the industry with which fresh facts were sought out;—but they were especially distinguished by the *method* of their research. No deductions drawn from a few meagre facts, warped and manipulated to fit them to a preconceived theory; but the true Baconian system honestly adopted, and no conclusions come to but such as were justified by the data at command.

Then, look at their style! Not only, as I have said, were these men intellectual giants, but they were scholars as well. No doubt their scholarship was owing to the greater attention then paid to training in classical literature in the education of the physician than is the case now. And if we now believe that Latin and Greek are of less use to a medical man than anatomy and chemistry, we must at least allow that the cultivation of the former is more likely to beget a pure style of writing than that of the latter only. Compare the diction of Lawrence, of Bell, of Latham, of Waton; of Gregory, Alison, and Christison; of Graves and of Stokes, with that of their contemporaries in any other field of literature, and you will not have to blush for the great physicians and surgeons of that day. Of our own Watson, you know, it has been said that he made the *Præcise of Physic* to read like a novel; and, in this respect, I think I may call him the Macaulay of medical literature; whilst the terse and transparent style of Latham and of Bell bears a close resemblance to that of Connop Thirlwall, who, it is said, made but an indifferent bishop, but would have made a first rate Lord Chancellor or a great physician. I do not like to say anything ill-natured of the style and diction of some of our modern medical authors; but, all the same, I think their time would not be altogether wasted, if, before putting pen to paper, they were carefully to peruse, and re-peruse, the works of the older writers to whom I have just referred.

Well then, gentlemen, these were the minds and these the works whose influence was beginning to pervade our profession, from one end of the land to the other, about the time of the birth of our Association. Two years before Andral had published his magnificent work, the *Clinique Médicale*, a work based upon nothing newer or better than the plan of Hippocrates himself;—viz., the minute observation of innumerable facts, and the simple, truthful narration of those facts; classified but not systematised; intended for the reader to digest and assimilate for himself in his own way: not prepared and "peptonised," as I may say, to suit the author's own taste and fancy. In all this, medical research was but following in the wake, or rather, shall I presume to say, keeping in the van, of the progress of the other natural sciences, especially the biological; assimilating and adapting to its own use all that was available or procurable from other fields of knowledge. But such men as these, brought to bear upon every branch of the human art, by the fanning power of the various debating societies, could not long refrain from gratifying the intellectual instinct to sys-

tematise the art and science of medicine; and thus it was that, just at this time, the *Cyclopaedia of Practical Medicine*, edited by Forbes, Tweedie, and Conolly, was undertaken. This work was a giant for the period at which it appeared. It was to carry on this record, in face of the progressive and continuous development of scientific medicine, that two of the editors of the *Cyclopaedia*, but chiefly Forbes, started the *British and Foreign Medical Review*; and well was their purpose fulfilled for a period of over forty years.

At this time Graves and Bell, and Latham, and Billing, and Williams, with their foreign allies, were revolutionising the theory as well as the practice of medicine. Nor must the names of their Scotch and Irish contemporaries be omitted. The Monroes, second and third, Alison, Thomson, Christison, and others in Scotland, and Graves, Stokes, and Corrigan, in Ireland, are too renowned to be forgotten. The medical societies in London were, as a consequence, enlivened and vivified by new facts and free discussions to a degree they had never known before. No wonder then, that, to a mind like that of Hastings, fresh from the warm atmosphere of the Medical Society of Edinburgh, the cold stagnation of a small provincial city was unbearable. He read papers, started journals and societies on a small scale; but it was not until 1832 that he received sufficient encouragement to venture upon that step which, he proposed, should result in placing the provincial practitioner in almost as good a position as his metropolitan brother.

And what was the condition of the provincial practitioner at this time? With the exception of a few local physicians of the older stamp, solemn, scholarly, and formal, and here and there an apothecary of more than ordinary acuteness of observation, there existed one dead level of mediocrity; men without the ambition to compete with their metropolitan brethren, because the means of doing so were denied them. No sparks of genius emanated from their brains, because there was no mental friction to produce them. No doubt, it was the inferior education of the general practitioner that made literature distasteful to him, and scientific attainments rare; whilst the desire for improvement, which might casually arise, found no field for action. So he settled down into the mere copier of other men's prescriptions, and the collector of current nostrums for certain symptoms. Bundles of prescriptions were handed down from one practitioner to another along with the practice. Having no other idea but that disease was an entity, he set to work to drive it out of the system by the popular means of bleeding, purging, and sweating.

If this were the intellectual status of the provincial practitioner half a century ago, were his morals and social status of a higher grade? I am not one of those *detractors temporis acti* who delight in recalling the caricatures, for they were caricatures, ever then, of Fielding and Smollett, and, afterwards, of Dickens. Whilst the squire and the parson of the parish did not disdain to take their recreation in the parlour of the village ale-house, what wonder that the village doctor made that same ale-house his club also? But this, and his over-addiction to field sports, sometimes in company with his betters, but more often with his inferiors, drove away all desire for study, even if the means had been at hand, which, generally, they were not. So the top-boots and the red coat did duty for the stethoscope and the test-tube; whilst the lancet was thrust into the arm of the too-willing patient, as recklessly and ruthlessly as the spur and the whip had been applied to the sides of the animal which brought doctor and patient together.

These were the palmy days of the provincial physician. Many times has he been figured, as, with solemn step and well-poised cane, he descended from his lumbering post-chaise at the door of some opulent patient. The arrival of this great man in some country town was quite an event, and the signal for all the blind and halt and lame to turn out literally for a touch of the great man's hand. Those who could pay pulled out their guineas; those who could not might, perhaps, count upon getting a glance and a word from the "Great Doctor", as he was called, as he passed through the admiring crowd to his carriage in the courtyard of the inn. His grand and pompous manner denoted that he felt himself a head and shoulders taller than the poor apothecary who stood by, meekly trying to catch at the incontrovertible dicta as they fell from the mouth of the medical oracle.

Well, both species are now extinct, or extant only as *fossils* in some remote locality. Let us now inquire by what agency they have become so.

Turning for a moment to the working of our own Association, it must, I think, be admitted that the aim of its founders was a true and noble one, fitted for all time. That aim was, that knowledge should be freely and generously communicated by the free and generous intercourse between hitherto separated and scattered individuals. That this aim has fructified so as to justify its conception is, I venture to think, proved by what we see here to-night; by the vast numbers who now call the British Medical Association their professional parent; by

our large and frequent gatherings for the promotion of social and scientific interests; by our current literature, and by the way in which it has forwarded those interests; and by the valuable and increasing efforts of research which the Association more and more supports and fosters.

Yet it must be confessed that, being what it was, the provincial profession in 1832 was scarcely ready for it. For some years, but little way was made. The meetings were small; and the communications, with some signal exceptions, were only second-rate; whilst the journal which contained them was as frequently uncut and unread as not. Like many other undertakings, it was a little before its time. That time, however, was soon to arrive; and we shall presently find that, like any venture founded upon truth and justice and the true wants of the community, it made way against all obstacles, and the result is what we see here to-day.

But another event, almost coeval with the founding of our Association, came to the rescue, and helped to make the decade 1830-40 for ever memorable in the annals of British medical literature. This event was the establishment of the *Lancet* as the leading medical journal. The *Lancet*, indeed, dates back some eight years before this time, but it was a puny thing in the first years of its life. It might have been compared at that time to a wasp, buzzing about the ears of the drones of the medical hive; but, when remodelled and enlarged in 1831, it began a fresh era. We may now liken it to a weasel, or to a still more unsavoury animal, the pole-cat, biting, scratching, driving out of their holes, with venomous scurrility, the "Bats", as it called the hospital surgeons and councillors of the Royal College, and hanging them up, like vermin on a barn-door, to general obloquy.

This was the function of the *Lancet*, varied only by the publication of a few lectures and hospital cases, obtained amidst all kinds of difficulty and opposition, for several years after its commencement. But the services which this remarkable journal, after it had conquered its own independence, rendered to free medicine in the earlier days of its existence, amidst all its faults, failings, and even vices, were simply incalculable. Monopolies destroyed; hole-and-corner meetings and doings of the corporations for the benefit of the few to the detriment and exclusion of the many, exposed; pompous ignorance and overbearing imbecility held up to scorn; the oppressed and obscure, but honest and industrious seeker after truth, brought to the front. After a time, feeling its growing strength, this brave journal attacked the legislature itself. And it was time. Its apathy towards all that concerned the interests of our profession, displayed in its tolerance of the most abominable abuses and monopolies in high places; its utter neglect of the public health; the farce of the coroners' courts; its winking at the atrocious adulterations of the people's food; its inhuman neglect of the sick poor; and its disregard of all decency in respect of the burial of the dead; these abuses were one by one attacked, and their authors and abettors lashed with a pitiless and unsparing hand, until redress and reform were grudgingly conceded. The man who, whatever his faults, and they were many, spent the best part of his life in compelling the legislature to listen to his exposure and his complaints of these gigantic evils, and to redress them, was at length listened to, admitted into the legislature itself, became a politician, and spoiled! None the less does the memory of Thomas Wakley deserve this testimony from us, who now possess an organ of our own quite capable of maintaining those rights and privileges for which, in the early days of our Association, we had no sufficient weapon wherewith to do battle.

The work of the celebrated *Review*, which was commenced soon after the establishment of the *Lancet*, was of a very different character from that of its weekly contemporary. The arms which it used were not those of the satirist. There was none of the withering mockery of the *Lancet*. It contained no offensive personalities, and made no capital out of mere personal failings or defects. Its characteristic excellence was fair play to all. To make a candid and intelligent analysis of the work under review, clearly setting forth what was new and interesting in the book, whilst errors or failings were pointed out with kindness and sincerity, this was its constant aim. At the same time, it industriously gathered together all that was of value in the current foreign literature, and laid it, almost for the first time, before English readers. It fostered the diffident efforts of youthful but original genius, and, by giving them an opening into the medical press, procured that attention to the works of little known authors, which we know, is so difficult to be obtained. I was pursuing my own studies in Edinburgh when the first number of this review was published. I was a constant reader of its varied and valued contents for upwards of the forty years of its existence; and, in common with all others who valued the best literature of our day, I grieved when, a few years ago, the neglect of a faster but, possibly, shallower age, caused it to die of inanition.

But everything is not due to the great names of 1830-40. T

musty old tomes, reposing so peacefully on the back shelves of our libraries, what testimony do they not bear to the self-denying spirit displayed by their authors in transcribing and compiling whole systems of medicine, gathered with a labour and amid difficulties unknown to us, from every accessible source, for the benefit of those who should come after them. Contrast their labours with those of our modern medical *dilettanti*, whose hasty and sometimes crude lucubrations are carried weekly by a free press into thousands of medical homes, and say if, in this imperfect sketch of the history of a half-century's literature, these older fathers of the *ars medicina* should have been altogether passed over and forgotten?

Gentlemen, I fear I have wearied you with these references to an almost forgotten past. But, if it is good for us to look to-day before and after, upon what we *were* and upon what we *are*, in the hope that we may find a true beacon-light to guide us in the course on which we are now entering, viz., our onward journey in company with the second half of the century of the existence of the British Medical Association, I think the reference will not have been altogether out of place; for, if our fathers did greatly with the limited means at their command, we, with our far vaster opportunities, shall be expected at least to equal their deeds. If they laid the foundation of all that is valuable in our modern medical literature; of all that is exact and trustworthy in our scientific precepts; of all that is honest, free, and catholic in our investigation of truth; of all that is liberal, sympathetic, humane, in our intercourse with each other, and with the world; I think that it is due to them that this jubilee—this commemoration of the past and inauguration of the future—should not be allowed to pass away without justice being done to the memory of those whose labours have so greatly contributed to make such a meeting as the present possible.

In this imperfect and necessarily hasty attempt to trace the history of the medical mind during the past half-century, I have made no mention of medical politics. Nor do I intend to do so now. A President's address, it is said, as it admits of no discussion, so it should contain no disputable matter. But I may briefly remind you that the great corporations which guard the entrance into our profession, and fix the initial requirements from each candidate, were at length roused from their long apathy, and their exclusiveness was finally broken down by the same active minds of whom I have spoken—those minds who determined that everything connected with medicine should be free. The College of Physicians, before so exclusive, somewhere about 1860 threw open its doors and its honours to all qualified applicants, come from what college or university they might. The College of Surgeons had somewhat earlier given an impetus to enlarged studies by the establishment of its present fellowship examination; and the sister establishments in Scotland and Ireland soon had to follow suit.

PART II.—THE SURVIVAL OF MEDICINE.

It has been often enough said, but never more to the point than by Dr. Acland in his Address to this Association at Oxford, in 1868, that "there are certain landing-places in a man's life where it is desirable that he should pause and think." Let us pause here, in this landing-place of our existence, this point between the fifty past and the fifty coming years, and look about us, and ask ourselves what manner of a profession ours *now* is? what is the condition and tendency of its mind? what are its aims? and what are the means by which it seeks to accomplish these aims? And here it is well to repeat once more, like the beautiful refrain which sometimes runs throughout an elaborate piece of music, the initial note, the *leit-motif*, the theme, or motto of our Association, which is this: the advancement and perfecting of medical science and practice, and the increase of helpful fellowship between all its members. Looking, then, upon the evolution of the medical mind as a continuous process, coming from whence we started, and going we know not whither, what are its characteristics at the present time? The first and noblest, of them, I opine, is the love of liberty! freedom to think; freedom to speak; freedom to write; freedom to teach! Fortunately for us, we have no thirty-nine articles to subscribe. We have no senate to revise and overrule the decisions of the commonality of medicine; no courts of appeal, like our courts of law, and the great corporations, so long as we are not guilty of felony, leave us pretty much to our own devices. Neither do they set up any standard of correctness, either of theory or of practice. There is no theory which we may not promulgate; no practice, short of manslaughter, which we may not pursue. An unfettered press and open criticism are the courts before which all our theories and practices are tried, and the verdict is pronounced by the great tribunal of the world. The works of a *Junon* or a *Phryne*, compared with those of *Phryne* or *Junon*, are as the verdict of an eighty-gun gunboat, and with that of a pocket-pistol. Now the great value of this liberty, and the free organs which it has set up, must be

evident to all. Its advantages in regard of freedom of debate, of teaching, and of writing, are too great ever to be allowed to be withdrawn from us under any circumstances whatever. For by it, original genius obtains an immediate and impartial hearing; by it the patient and self-denying labourers of industry and talent, who may have passed years in silent research, at length obtain their reward. Let us then never relinquish into the hands of the State the decision as to what shall be the kind and amount of our knowledge on entering our profession; or in what way, and under what restrictions, we shall conduct our experiments and inquiries into the laws of nature for the good of mankind; or in what manner, and for what reward, we shall carry our knowledge to the bedsides of our patients, be they the rich in their mansions or the poor in our hospitals; or, in what way we shall regulate our mutual intercourse. Over the church, and over the law, for obvious reasons, it may be desirable that the State should hold a check; but over the investigations of science, and over the application to practice of that science, we will have no master other than the moral conscience of our profession itself.

The profession itself, too, must be the judge of what constitutes real progression in the art of medicine, and of what are the best means of aiding and securing that progress; and the profession itself must confer the chief honours and rewards of well doing. Adventitious honours and state-conferred titles are all very well in their way; just as the riches and honours accumulated by the successful merchant or manufacturer are legitimate and of a certain value. But it must be the verdict of the profession itself which shall say, "Well done, thou good and faithful worker, be thou rewarded for thy faithfulness to truth, to nature, to humanity, by the acclamations from the thankful and reverent hearts of thy brethren." This is the true gold. This is the patent of nobility conferred on real merit.

There is, however, unhappily, a foil to all this. For there is no human good without its admixture of intrusive evil. It is a fact that liberty, unrestrained, may degenerate into licence, and freedom from all control generate confusion. I have already said that the spirit of free inquiry long ago voted antiquity to be antiquated, and authority unauthorised. It is this spirit, carried to excess, which forms one of the nuisances of modern medical literature; when many a fresh investigator will treat his subject as if no one had ever done anything in it before; when many a young observer must narrate what he sees as if it had never been seen before; parading as new what may perhaps be found in Hippocrates or Galen; or, at the least, repeating in book and lecture what has been better said a hundred times before. Our current literature swarms with instances of this nuisance; for a nuisance, and a real weariness of the flesh it is to all readers who know the literature of their profession.

If, in theory and in the abstract, licence, which is liberty run mad, tends to these results, what is the outcome when the same licence is applied to practice? Every man fighting for his own hand, and that hand against every man! Every one more or less unmindful of what is due to the rights and feelings of his neighbour. Self-assertion! Self-laudation! Self-sufficiency! and then the one step further —! Gentlemen, the quackery, the charlatanism, that exists outside the profession will never hurt us. It is the quackery, the charlatanism, the false pretence, the dishonest self-seeking to be found within the profession, which, if unchecked, will bring disgrace upon us. But without dwelling upon this unpleasant theme, and postponing for a time the question of a remedy for this licence, let us continue the contemplation of the better spirit of our profession at the present day.

A second grand characteristic of modern medicine, I take leave to say, is philanthropy. By this term, I do not mean to say merely that we are animated by the love of our species at large, by the common readiness to do good to our neighbour when opportunity presents itself; but that our profession is ever seeking out, by toil of body and study of mind, new modes of relieving human pain and misery; that it ignores its own material advantage whenever that is placed in opposition to the good of our patients, or of our neighbours; and that it ever seeks to promulgate, against its own material interests, the doctrine "that prevention is better than cure". I think many words are not needed to prove that this is so. Our sanitary amelioration, and the legislation which promotes it, are they not almost solely the work of our profession; aye, of this Association itself? And do we not almost invariably, when entering a house, inquire into its sanitary condition, and, when discharging a cured patient, endeavour to impart to him the knowledge how to keep out of our hands in future? And with educated and conscientious men it cannot be otherwise. Such men cannot see human pain and misery without an ardent and single-minded desire to relieve them; and they daily go out of their way and give themselves much trouble, which is not really demanded of them, to contribute to the comfort as well as to the cure of their patients. This

self-denial and this true philanthropy are, I am happy to think, daily becoming better recognised. The public are beginning to feel that ours is not a mere trade, so much attendance for so much money, which we practise. They are even inclined, some of them, to pat us on the back, and call us noble fellows, and other pleasing epithets of the same kind. But be on your guard! Much of this praise is false pretence, and given with the covert intention of trespassing upon your time and labour in an illegitimate manner. Medical men, they think, are animated by mixed motives. No doubt they are very kind and humane, but they are also ambitious and fond of success. Let us prey upon these feelings, say they; and put the care of all our sick, and poor, and miserable, upon their shoulders; and, to keep them well up to the collar, let us call them brutes, and unworthy of their noble calling, if they by any chance neglect a sick pauper, or grumble to turn out and ride miles on a cold night to minister to the results of our own excesses. Be on your guard, I repeat, against these illegitimate encroachments, and exactions of all sorts of kind offices which you are not called upon by duty or charity to render. Beware! Remember that fine saying of Tacitus, so terse, so true to human nature: "Nam beneficia eo usque læta sunt, dum videntur exsolvi posse; sed cum eo multum antevenire, pro gratia, odium redditur." Obligations may reach so great a height that no return is possible. When thanks avail not, there is no relief but through base ingratitude. Be not, therefore, the too trusted friend, carrying in your bosom the dread secrets of the family; or the performer, at a pinch, of some hateful service. The sight of you will continually touch the sore, and the first opportunity will be availed of to get rid of you, and so to gain relief, after the manner so well described by Tacitus, from an intolerable burden of gratitude. But this by way of parenthesis.

I think I have established our claim to two great Christian virtues, viz., true liberty, and charity, or love. I myself refuse to look upon our duties as medical men except by the light of Christianity. That, we know, gave us true liberty, setting us free from the bondage of pagan priestcraft and superstition. That, we know, first instilled into the heart of man true charity; the love of our neighbour as ourselves; "which does good by stealth, and blushes to find it fame."

What then remains to complete the Christian triad? Is it not Truth? Truth to nature; truth to ourselves; truth to our brethren; and to the world? Are our studies and researches carried on in the sincere desire to attain the truth, and the truth alone? Is our teaching animated by the same principle, and by nothing else? Are our practice and our intercourse with the world regulated by the all-sufficient motto, "Let truth prevail, though the heavens fall"? If we all could answer these questions by a bold and honest "Yes", I should have no fear but that our profession will, in time, arrive at that high pinnacle of usefulness and exalted public appreciation which two great men have foretold for it. It was no less a man than Descartes who foretold that a great future was in store for us. All science, and almost all knowledge, was to be drawn upon to furnish the physician's mind, and then, he said, "all things would be open to him". No less a man than Lord Beaconsfield uttered nearly the same idea. If, therefore, these far-seeing men presaged such things for us if the light of truth were consistently followed, what a failure must it be if truth be lost sight of! If this great light that is in us be turned to darkness, how great indeed must that darkness be!

If theories be pushed to an extravagant degree in order to bolster up some preconceived idea; if researches, which should be conducted only under the dry light of truth, be warped and strained to support a trembling reputation, truth must suffer.

The acquisition of knowledge, under any motive whatever, is undoubtedly a clear gain to the world. Nevertheless, it is the motive which actuates that acquisition which gives the entire value to it, so far as the individual is concerned. And unless knowledge be sought for, at least in the first instance, from the pure love of truth, its reflected advantages may indeed contribute to the material prosperity of its cultivator, but they will add nothing to his character, nor obtain for him the respect of his fellows.

Is it not from losing sight of this canon of intellectual morality, if I may use the term, that so-called discoveries and improvements in practice are so often given to the world in such haste, under the unworthy desire to be the first to promulgate something new, whether true or not, that no well balanced mind will venture to accept them until they have been examined again and again by trustworthy observers? And this mischief is increased tenfold, when the public lay press is made use of to propagate plausible theories, which, to say the least, want the support of long continued observation and experience. Until that has been gained, publication should be restricted to the professional press.

I have great hopes that this evil—an ever increasing one—will be

counteracted, and that the motives which prompt to too hasty publication of discoveries which are rather hoped for than believed in, will be corrected by that new element in the operations of our Association, the prosecution of knowledge by combined observation, the resuscitation of which we owe to our eminent and honoured ex-President, Professor Humphry. By the co-operation of a number of observers, errors which may have escaped the notice of one will be pointed out and corrected by another. Thus hasty conclusions—and worse, hasty publications—will be checked; and truth, when substantiated by the impartial judgment of many observers, will present itself to the world with an *imprimatur* which must carry conviction to every mind. Priority, instead of being selfishly sought after by each, will thus become the property of all in friendly brotherhood.

And now, coming to the practical application of our knowledge, if I mention one or two black spots, shall I require to apologise? I proposed, at the outset of this second head of my discourse, to inquire into the condition of the medical mind, and to mark its tendency and aims. Why not follow this out? This Association, at all events, should have clean hands. We are no longer young; we are grown men, and as such should not be afraid to look our affairs and our conduct in the face, nor ashamed, if we find ourselves going along the wrong road, or diverging into by-paths, to try to recover our way as speedily as possible.

No doubt, the spirit of our age tends towards a general *laissez faire*; allowing everyone to follow the direction of his own mental bias, or even whim, whether the project be theory or practice. But there must be a right and a wrong road, a right and a wrong method, in all intellectual and moral action. It is the province of sound and mature judgment to weigh all methods in the balance of right reason, and if any be found to sin against its canons, to reject them utterly. Truth, being many-sided, cannot be confined within fanciful bounds and narrow specialties. The scientific mind must be perfectly free and open, not enslaved by reverence for a name, or by predetermined dogmas.

Nor can there be any real fellowship between honest truth and consciously pursued error; for, independently of contradiction of belief, the lines they severally work upon diverge until they no longer touch at any point. To agree to differ, therefore, is not enough; there must be utter repudiation the one of the other.

And then, in regard to practice, are not the same faults to be discerned? Are there not in our ranks those who conduct their practice under what I may call an organised hypocrisy—men who assure one class of their patients or dupes of the hope of cure when cure is impossible, and given up by all honest men; who assure another class of the existence of serious maladies which no one else can see, and treat them for months or years for ailments which do not exist, or, existing, are of no importance; whilst guinea after guinea is extracted without mercy, or regard for the means of the patient, or to the real services rendered? By these vile arts the character of a noble profession is dragged in the dust, and fraud, detected in the guise of science, hangs her disgraced head.

So, then, we see that liberty, overstepping its legitimate bounds, degenerates into licence; so charity and philanthropy, put on to answer a selfish purpose, become that hateful thing hypocrisy; so truth, departed from or smothered in sophistry, becomes that still more hateful thing, a lie!

But these faults, which we all deplore, and which strict devotion to duty compels me to notice, are not all of home growth, generated within our profession. Some of them owe their origin and progress to the caprices, the follies, and the ignorance of our patients and of the laity in general. We are living in days when, if ever it were true, it is pre-eminently true now, that "a little knowledge is a dangerous thing". The general public have arrived at a little knowledge of things medical, and they like to take them very much into their own hands. They think that they know how to nurse and manage the sick quite as well as, if not better than, we do—a knowledge sometimes put in practice to their own cost. The public also think that they can manage our hospitals, asylums, etc., better than we can, as is frequently shown by the desire to have as little of the medical element as possible on their managing committees, and by the jealousy of even our legitimate and beneficial share in their counsels. Many of them also believe that they are better judges of the talents and capabilities of various medical men than we are ourselves, as witness their freaks and follies in the matter of consultations, and in the choice of consultants, in which they often prefer the guidance of popular rumour, or even that of the advertising columns of a newspaper, to the advice of their regular and trustworthy attendant. It would be laughable, were it not lamentable, when the issues of life and death are concerned, to hear the reasons which often guide our patients in seeking what they call "further advice". One

wretched form which this assumption of independence of judgment takes is the resort to advertising quacks, not only those without, but also those within the profession. Once in the hands of these men, he who has thus exercised his right of private judgment does not come forth thence until ruined health and an empty purse teach him, too late, the folly of judging where the materials for forming a judgment are altogether wanting. And then, as regards consultants, do we not recognise a solemn farce when Mr. A., or Mrs. B., returns from consulting, say, some metropolitan celebrity, and tells us that Dr. C. has laid down all the rules for his or her future life, and indicated this or that health-resort as essential to recovery; and all in ten minutes' time, and for a fee of one guinea? The issues of life and death, in the case of a stranger never seen before, solved in a ten or fifteen minutes' interview, and all for one guinea! Why, a lawyer would take six weeks to do the same amount of work, and charge a bill of fifty pounds. Such practices on the part of the public must needs tend to relax the morals, and to sap the strict integrity of professional men. The reasons for consulting this or that physician are often so grotesque, and the inability to discern between real merit and pretentious ignorance is so great, that the vices to which I have referred are petted and fostered until self-interest carries the day against professional honour and honesty. So true it is that *populus vult decipi, et decipiatur*, which may be translated, the public likes to be bequacked, and bequacked it will be.

If the foregoing observations be founded in truth, I think we may justly conclude that our profession, at the present moment, is still faithful in general to the great and true maxims upon which the British Medical Association was founded. The bounds of science are continually being enlarged; the search after truth never ceases; the application of fresh knowledge to the relief of human suffering is immediate. But there are blemishes—some of them, it must be confessed, of a serious character—which prevent the universal application of our fundamental maxims, and which, if they do not lower our profession in the esteem of the wise and judicious few, at all events prevent it from assuming that high position in public esteem which Descartes and Lord Beaconsfield pointed out as the goal to which we might attain. Therefore, this discourse would be wanting in finish, and my arguments in completeness, were I to conclude them without pointing out some remedy for the blemishes and defalcations to which truth, and not my choice, has compelled me to allude.

These defects appear to result from the fact that we are a republic: a bundle of units; *disjecta membra* of the body medical; without a head, without cohesion, members unattached to any central body. I have already said that the Royal Colleges, which watch over our admission to the profession, take little or no heed of our conduct afterwards. Our great societies also occupy themselves principally with the progress of the science and the details of the practice of our art. They take no notice, unless it be in the most glaring cases, of our moral and social conduct in the exercise of our intercourse with each other, or with the world. And our own Association appears to be drifting in the same direction. Scientific investigation and research are being daily more esteemed and fostered by us, to the exclusion of ethical principles. We have committees which watch over the proceedings in Parliament, in order to secure us against surprises of a dangerous or harassing character; we have an organisation for procuring such reforms as are needed, from time to time, in our polity; and, what is better than all, we have a Committee whose function it is to bring before Parliament and the public the result of our continuous and combined labours in the cause of the public health, and on behalf of the general public weal. In all this, our philanthropic spirit, and our hunger and thirst after truth, are the motor powers; our own individual interest and comfort being cast the while into the shade. If, then, we have the means within our Association itself of giving effect to those great aims, surely that other function, the securing united action and honourable fellowship amongst ourselves, and upright conduct towards the public in all cases, might equally be brought into play.

In these days of liberty of action, men are jealous of the control of individual authority. As I have already said, we are a republic; we have no king, either constitutional or despotic. The heads of our Colleges are that, and nothing else. But, although men will not yield to the dictation of individuals, however eminent or highly placed, will they not submit to the control of their fellows, jointly? Would not the great principle of association be found equal to the moral guidance of individual members, as it is to securing their political and professional rights? We know how great is the power of example, which induces the scoffer, who entered the church to sneer, to return to pray. In the way of moral suasion, the power of numbers is, I believe, even greater than in that of political bias. So, to the voice of the profession, adequately expressed, it is fitting, and, I think, feasible, that every member should ultimately bow.

It is not for the purpose of surprising you with a rhetorical climax that I now, at the end of my discourse, return on my steps to the beginning of it, and point once more to the motto and spirit of the British Medical Association as equal to any and all emergencies, if only its mighty energies be well directed. You know that our Association must have a future as well as a past history. And its achievements ought, in the future, so far to transcend those of the past, as the present number of its members exceeds that with which it started fifty years ago. Either our Association will become a body nearly co-extensive with the profession itself; a mere name, in other words, for medical men; with a journal, perhaps, as its organ of speech, and nothing else; or it must become a great, but select Society, every member of which must conform himself to its fundamental rules and motto. It is agreed that the Branches are the strength of the Association; but, unless they be well attached to the head, they will only be like a loose bundle of sticks when the hour of trouble comes. It is of the greatest consequence, in my opinion, to the stability of the great fabric we have raised, that more frequent and more direct intercommunication should take place between the Branches, by their secretaries and their councils, and the governing head, the Committee of Council in London. The representatives of the Branches in that Committee of Council have, by our rules, equal power and similar function with the elected members. It is their duty and their privilege to take a more active part in the proceedings of the governing body than they now do; by so doing, new blood will be continually infused into what I may call the Senate of the Association, without displacing its old and valued members.

When the consultative Council of our Association shall have thus become in fact, as it now is in theory, really and perfectly representative by the more intimate communion with the Branches, what is to prevent that Council from becoming a High Court of Equity and Ethics, before which all important questions affecting professional honour and conduct may be brought up for judgment? The knowledge that there was such a court, that *laches* of conduct would be investigated by a body, the adequacy and impartiality of which could not be called in question, would cause those who are tempted to be guilty of the *laches* I have described to shrink from incurring its censure.

But, some may think that this court should have a more popular constitution. Well, then be it so. Let it consist, say, of twelve members, six of whom should be selected by the Committee of Council from its own members, and six others to be chosen annually at the general meetings of the Association by the members assembled, or by the General Council first, and confirmed by the members at large. I am not very fond of universal suffrage; but I should not hesitate to submit myself to the arbitrament of a tribunal so constituted.

Gentlemen,—I have trespassed so long upon your patience and good nature, that I forbear to follow out the idea here thrown out. At a future meeting, should the suggestion meet with support, I will try to elaborate the plan and give it a more practical character. Let me now only record my own individual opinion, founded upon much reflection upon our past and present condition, that the power of combination, which the British Medical Association possesses within itself, has not hitherto been developed to anything like its full and beneficial extent. Its power to elevate the moral and social elements of our character, in the future, appears to me to be as great as that it has already exhibited in enhancing our intellectual status. In point of fact, the second fundamental *raison d'être* of our existence is now only surging below the surface. Great questions are coming on for solution. May they be solved in accordance with the motto of our Association laid down for all time by Charles Hastings and his associates. When that consummation shall have come to pass; when self-interest and self-assertion shall have given place to brotherly co-operation in well-doing, and to Christian charity and courteous deference to one another, then, and only then, will the British Medical Association have fulfilled its mission.

May I venture to conclude this discourse in words far more eloquent than any I have used, or can use. Words which I wish would sink this night deep into the hearts of us all—words of the late wise and good Bishop to whom I have already referred. "When such a spirit (as that I have endeavoured to depict) shall become the prevailing spirit amongst us, the sick-room will become holy ground—a temple ever ringing with the exhortation *Sursum, Corda!* Upward, hearts! Upward above all paltry, selfish, grovelling aims and desires. Upward to a level with the dignity of our calling; the privileges and duties of our station; the importance and arduousness of our work. Upward to a fellowship with the wise and good of all nations. Upward to the very Father of Lights; the Fountain of all Goodness! Lift up *your* hearts; and then, from the very depths of thousands of yearning, anxious souls, there will arise the clear response: Yea! we lift them up unto the Lord!"

ADDRESS IN MEDICINE.

BY

W. F. WADE, F.R.C.P.,

Physician to the General Hospital, Birmingham.

THE circumstances of the hour suggest, almost compel, retrospection. A first impulse might be to attempt a review of what has been done to advance the practice of medicine during the last half-century; but the labourers have been so numerous, and their work so wide-reaching, that a moment's consideration shows the impossibility of compressing such a task within the limits of time which custom allots to us on these occasions. Suppose, then, that we adopt a narrower scheme; that we recall to memory some of the actual facts of medicine as it existed when this Association was founded, and some others which have occurred since. It may be possible from a consideration of them to derive some hints, some lessons useful to ourselves, and perchance to "make the stumbling-block the stepping-stone" to a safer and sounder platform.

At the time from which we date our existence, the weekly medical press, established not many years before, was in full and earnest operation—labouring, as it has ever since laboured, for the enlightenment and protection no less of the general public than of our own profession. In lectures, papers, cases, and hospital reports, we can see our predecessors as they lived and worked—not dressed up for inspection, not posing for posterity, but saying what they thought and relating what they did. There is, indeed, often an old-fashioned and out-of-date colloquialism, that brings their personality so vividly before us, that at times, when absorbed in these records,

"It seems as though these were the living men,
And we the coloured shadows on the wall."

Some high authorities tell us that the science and theory of language are to be acquired by the study of dead rather than of living languages. In like manner, we may sometimes learn more from the study of dead than from that of living therapeutics. If we exhume and dissect some of the mistaken practices of fifty years ago, or of a later date, let us do so, not in a spirit of vainglory or disparagement, but with the strict purpose of amending ourselves. The sum total of knowledge increases fast, but the capability of individual intellects slowly, if at all. We are, therefore, each of us liable to fall into errors analogous to, if not identical with, those we reprehend in others. It was not then—it is not now—a question of who makes mistakes and who does not, but of who makes the most and who the fewest; who the most excusable or who the most inexcusable. Looking back at the records of the past, we see that current errors were shared oftentimes by men who were in the front rank of the profession, and who, did they flourish in these days, would be in the front rank now. We may find even yet much to learn from their precepts and their practice. Great as have been the additions to our knowledge, all the wisdom of that day has not been exploded or superseded. It is only a spirit of conceit and ignorance, not of philosophy and knowledge, that would dismiss the doctors and patients of half a century back with,

"... all our yesterdays
Have lighted fools the way to dusty death."

We may hope that fifty years hence our successors may be celebrating the Centenary of this Association as we are this day celebrating its Jubilee. It is not indeed unlikely that they may follow our example, and select for that celebration the city of our birth. May we not also venture to hope that not all our knowledge and not all our practice will by then have become obsolete, even though they may be able to see clearly many things which we discern only through a glass darkly or not at all.

No one of the present generation, reading for the first time the clinical memorabilia of 1832, can fail to be struck by one all-pervading method of treatment—viz., blood-letting. Indeed, at first sight, it almost obscures our perception of any other therapeutical means or agents. The difficulty is to name diseases in which it was not used,

not those in which it was. Its prevalence may be brought very vividly before us by a quotation from a contemporary author. He says: "Blood-letting is not only the most powerful and important, but the most generally used, of all our remedies. Scarcely a case of acute, or indeed of chronic disease, occurs, in which it does not become necessary to consider the propriety of having recourse to the lancet, or to estimate the effects of blood-letting already instituted." But, to get a full impression of this frequency, you must read, one after another, the records of cases in which—medical, surgical, traumatic, and obstetrical—bleeding from the arm was practised. Indeed, this does not exhaust the category. The chief resource of preventive medicine was to let blood from the arm every spring and fall.

Such was the practice of that day, and such, in large measure, the therapeutical science; for, be it observed, these things were done, not only by obscure apothecaries, but under the direction and auspices of those who constituted the highest court of scientific appeal.

Not many years before 1832, a weekly medical journal, which still maintains its high character, was instituted under the then appropriate name of "The Lancet". In a few years after this date, the title of this periodical had well-nigh become an anachronism.

Within those few years a revolution of opinion had taken place, the like of which the history of medicine wots not of. For, be it remembered, this was not the case of a transient phantasy—of a gourd which, having sprung up in a night, might well wither in a day—but the well established practice of centuries, which had withstood, not only the ravages of time, but repeated volleys from the batteries of wit and satire.

History tells us that, though she may lay her finger upon "ship-money", or "tea-tax", as having directly provoked a great political revolution, yet that there have been in each case many other circumstances which as surely, though less immediately, contributed to the result. The special grievance was but the fuse which fired the shell already charged with the explosives of discontent. Dispassionate survey can, I think, discover that our revolution in this respect resembled those political ones to which I have alluded.

To begin with the most remote predisposition: the medical profession cannot escape the influence of those phases of thought and waves of opinion which from time to time dominate other sections of the body politic. The intellect of that period was coming to distrust, and ultimately to banish, "violence, harshness—the darker shades of repression—from the education of the young, from the treatment of the insane, from the punishment of criminals, and to substitute for those time-honoured but most ineffectual processes a rational moderation". Well known political reforms were the work of that period, and the outcome of the spirit just mentioned. Reconsideration of ancient dogmas was the order of the day; and that reconsideration in many instances led to their effacement.

Another influence was coming into play. The *vis medicatrix nature* has been recognised in medicine from time immemorial; but its efficiency as an antagonist to disease has been at different times very differently estimated. The formula may be the same; but the conceptions it embodies may differ to an extent which is equivalent to a difference in kind. It would seem that formerly Nature was esteemed but a very feeble and humble assistant, whose influence was nothing unless rigidly controlled and directed by a more intelligent, or reinforced by a more potent, agent. This idea was all in favour of robust and strenuous therapeutics, and they were accordingly dominant. It was assumed then that Nature could do nothing without assistance. We do not assume, but know as a matter of fact, that in many instances Nature unassisted can do everything. "Expectant medicine" is the term used to designate the line of conduct, or perhaps rather the mental attitude, which this knowledge imposes upon us. This is sometimes derisively described as the art of laboriously doing nothing—of trusting to Providence; and it is supposed to be a lazy, shiftless mode of shirking responsibility. All sound principles are liable to corruption; and this particular principle may—indeed, in the hands of those who do not appreciate its essence, does—lead to a neglect of therapeutical means. But, rightly understood, it is anything but a lazy and shiftless method; it necessitates a constant, anxious, and laborious study and observance of the tricks and turnings and vagaries of disorder and disease. So far from this system, when intelligently followed, leading to a disbelief in the potentiality of drugs, it seems to me to do exactly the opposite. Having learnt with more accuracy and greater fulness the natural progress of disease, we are the better able to estimate the extent to which the direction of that progress is capable of deflection by the administration of remedies; and it passes my comprehension how any person who has intelligently and dispassionately watched the progress of disease, when subjected and when not subjected to drugs, can refuse to believe that we hold in our hands gigantic forces to oppose to those of an aberrant Nature. Extremes

meet; and it may be that, in this and many other cases, incredulity is a token of a credulous nature. I have avoided the term scepticism, which is familiarly used to signify an absence of confidence in drugs as remedies. Scepticism in circumstances where pitfalls abound, where just judgment is difficult from the complexity of the conditions, is not only tolerable, but commendable, and is of the essence of wise therapeutics. Disbelief and scepticism may appear to some minds to be the same in kind. The sun of another system may be the same in kind as our sun; but the difference in their respective distances is equivalent to differences in kind of the most essential character. Various causes, no doubt, co-operated in generating and maturing expectant medicine. One, which we know did at a later period markedly contribute to its development, was even at this period beginning to attract attention. Laymen for the most part do not pretend, and do not seek, to understand the merits of opposing medical theories or schools of thought. It is on this broad ground, and as an historical fact and not a critical opinion, that I say that Hahnemann was commencing to subject, not so much the public mind to his doctrines, as the bodies of the public in this country to his treatment. He had by this time evolved out of his inner consciousness the belief that infinitesimal particles might have what seem to us preternatural powers instilled into them by the divine agency of the pestle and mortar. If it was not the "little-dose" element which made this system attractive to the laity, certain it is that this chiefly fixed the attention of the profession. To say that the trituration doctrine is so absurd that no sane person can possibly believe it, is to ignore a great part of the history of speculative thought in all ages and countries; but it is just to say that the adoption of such a dogma requires an unusual share of that mystical element of which the mind of no one is entirely devoid. This view explains why, to the great bulk of the profession, the doctrine of infinitesimal doses dynamised by trituration was, and remains, incredible. Rightly or wrongly, cures apparently wrought by such medicaments were and are judged to be instances of spontaneous recovery. This interpretation necessarily facilitated the reception of that higher ideal of the powers of nature which was then arising; indeed, from that it is possible that the suggestion proceeded. Such a conception would undoubtedly make more easy the relinquishment of severe and violent modes of treatment, and amongst these bloodletting was conspicuous.

But systems are not swept away without some faults inherent either in themselves or in the individuals who administer them. Persons who, like myself, practise chiefly in consultation with others, have great advantages. We see much to admire and much, also, to learn, if we are not too conceited to accept the lesson, in the practice of those with whom we are associated. We ought, from observing the faults of others, to recognise and correct our own, though an opposite result too often arises from the frailty of human nature. Mistakes in practice originate mainly from one of two sources. The first is ignorance of the teachings of science, or inattention in the application of them to the case in hand. To treat this statement otherwise than as a truism would be disrespectful to your intelligence. But you will not think it disrespectful if I say that we are every one of us a little apt in our own cases to blur and smudge this truth in our minds. Without categorically saying so, we contrive to feel that, after all, the mistake is chargeable less to our own account than to that of an inexact science.

The second source of error is a too rigid adherence to the dictates of science. This cannot be treated so peremptorily. That medical science as a whole is imperfect; that the individual sciences of which it is composed are imperfect; that of these the science of therapeutics is the most imperfect; that, above all, we, the agents who have to apply these sciences in our daily life, are imperfect—all this is not only true, but is universally admitted to be so. The doctrine that we must incessantly compare that which does happen with that which we think ought to happen is therefore no new one. Yet those who venture to submit rules and methods which, it is hoped, may minimise these defects, are somehow supposed to disparage, if not to dethrone, science, and to be wishful to replace it by some fanciful hocus-pocus of their own. Nothing can be more unjust, nothing can be more injurious, not to those who use, but to those who reject, precautions and safeguards, and to the science which they honestly desire to exalt. To disguise or dislike it as we may, it is not the less certain that, in the treatment of disease, we have no firmer basis than the doctrine of probabilities. And he who manfully recognises this is the least likely to fall into error, and the earliest to find out when he has done so, and, therefore, the promptest to retract his steps. But why should we disguise or dislike this statement? We are not the only class who have to exercise their judgment as to such a law. Rules and maxims must have to deal with involved and complex problems which their sciences have elucidated, but have not solved. They have to base their

actions upon probabilities. They, therefore, though stimulated as we are by the combined forces of duty, benevolence, and self-interest; and, with means of information far in excess of ours, find too often that their best considered efforts fail. They find still, as Hippocrates taught us, that "the opportunity is fleeting, experience fallacious, and judgment difficult." Take another instance. The doctrine of probability is invoked by a large and influential section of the theologians as itself sufficient, without recourse to higher sanctions, to justify for mankind the hope of a future existence, and a belief in the Divine government of the world; but, in speaking of probability, the truth is that many fail to realise that the highest probability is divided by an imperceptible line from certainty; and we familiarly treat as certainties future occurrences, such as the rising of the sun to-morrow morning, which are but high probabilities. In medicine, we have, in an ordinary way, to deal with some things which are highly probable, some fairly probable, some slightly probable, and some improbable, some only just possible, but, with nothing absolutely certain and nothing absolutely impossible. This is not a reasonable cause for discouragement still less for despair, though it is a reasonable cause for reflection, care, and thoughtfulness.

It is scarcely necessary to detail examples of the certainty or uncertainty with which we may anticipate the effects of particular drugs. But I may suggest a consideration of the varying results of aperients in what are apparently similar circumstances in different persons, or in the same person at different times.

There are special occasions in which we are all prone to misuse drugs, sometimes straining sometimes neglecting the teachings of science. We have all seen the acute case going wrong, sliding, we know not exactly at what first moment, or how, out of our grasp. We see looming in the not remote distance the cliffs which overhang the valley of the shadow of death. We are beset by our professional solicitude, harassed possibly by undeserved reproaches, by passionate tears, or by the still more touching mute appeal of tearless eyes. We see no course which commends itself to our judgment, no clue to the enigma, no indication of what we ought to do.

Is it not true that, thus tried, our composure may become disturbed, our judgment clouded, that our conduct, instead of being controlled by calm consideration may be misguided by panic? Does it never happen that, not knowing what to do, we resolve to do something? Does this something never take the shape of a potent drug in what is mis-called a heroic dose, administered without a sufficient possibility of being able to predict its effects? No one dissents from the propositions, that meddling surgery is bad surgery, that meddling midwifery is bad midwifery. Do we at all times adequately realise that there may be a meddling medicine which is bad medicine? Standing in the dark on the brink of a precipice, may it not show more wisdom, and require more courage, so to stand, than to take a free step, not knowing whether it may land us in security or precipitate us into the abyss? If, then, at such an adverse moment, keeping our fortitude unimpaired, and our head cool, we restrain our hand—if we hold on, and wait and watch—that is true heroism, and may be rewarded by a clear, though likely enough a slender, indication of the course we should pursue, and that course may lead us to success. We shall, at any rate, have done that which is best calculated in desperate cases to secure a welcome result.

We have now seen that there is more than one way of misusing remedies. In all these ways, our predecessors from time to time, as we may see from the records, misused bloodletting. In this misuse we find the real origin of its abandonment. In 1820 a provincial practitioner, a physician at Nottingham, Marshall Hall, opened the first parallel of the siege which, in my opinion, eventuated in the razing of this stronghold.

In 1829 he brought to bear on the abuses of blood-letting in a more elaborate criticism, new facts, and a more matured opinion. Instances are given where the sagacity of experienced practitioners had intervened to shield patients from the fatal effects of a too servile submission to the accepted teachings of science. Other instances follow in which honest reliance upon these teachings resulted in the patients being bled to death. The cases are on record, and will convince the most unwilling reader that this is not a sensational or rhetorical statement, but the simple, unvarnished, if unpalatable truth. If all this be so, who can challenge our duty to exercise the right of private judgment? But this exercise, if it is to be salutary rather than misleading, must not be reserved for cases of exceptional complexity and difficulty; it must be habitual, daily, hourly. Trivial cases and familiar drugs should be to us what anatomy studies and jottings of nature are to the painter, review and drill to the soldier, scales to the vocalist—the means by which we perfect ourselves in the details which have to be happily combined to make the supreme effort successful.

We come now to an episode in the investigation which, beyond its historical interest, has an important bearing on a question which is just now subjected, not to philosophical criticism, but to a vehement, heedless, rhetorical guerilla. After ten years devoted to investigating the effects of loss of blood, having amassed cases and accumulated observations, not ignorant of the strictures of previous writers on the abuse of blood-letting, in possession of a real clue and well advanced on the right track, deeply penetrated with the importance of the inquiry, and profoundly anxious lest while purposing to benefit humanity by promulgating truth, he might inadvertently injure it by propagating error, in 1830 Marshall Hall undertook some experiments on living animals. But hear from himself his reasons. He says:—

"After paying considerable attention to the effects of loss of blood, as manifested by the human subject under the influence of blood-letting or hæmorrhagy, I still felt that there were so many questions left in obscurity, that the investigation of them in the way of experiment was one, the object of which was at once legitimate and most important.

(1) "It was highly important to ascertain the effects of loss of blood in circumstances entirely free from the complication of disease or other unusual condition of the system.

(2) "It was highly important to estimate the difference in the effects of loss of blood in the different ages.

(3) "It was also highly important to fill up a blank left in my former investigations by ascertaining more accurately and distinctly than before the various organic changes induced by loss of blood.

(4) "And as blood-letting constitutes the most powerful of our remedies, and hæmorrhagy one of the most formidable of diseases, it became of the utmost moment to fix the rules and limits of the employment of the former, and to ascertain the most efficacious mode of restoration in the latter."

These words may have been—and, according to some, I presume, were the specious covering which a cruel and bloodthirsty man, reckless of animal suffering and regardless of all moral duty, used to cloak his inherent savagery. May they not have been the truthful words of a just and righteous philosopher offering reasons for resorting to proceedings primarily repulsive to his feelings—proceedings which were nevertheless, in his pondered judgment, obligatory for the complete elucidation of an obscure subject of direct and paramount importance to the cure of his fellow-man? Sitting here, the inheritors of this knowledge, which has indirectly changed the whole face of our practice, it may seem to us that the case was overloaded with proof. But it is impossible to decide, after the event, what amount of evidence ought to have been sufficient to fashion and consolidate into a coherent and shapely form the flocculent masses of colloidal truth floating hither and thither in the mind of a discoverer. War against the cherished convictions of the age is not to be undertaken with a light heart, nor with an incomplete armament. At any rate, the other evidence did not seem to Marshall Hall sufficient to overcome the *vis inertia* of contemporary opinion. For in 1836, he deemed it necessary to publish, in a more extended and complete form, and reinforced by his vivisection experiences, the views which he had already on several occasions propounded. It is warrantable, in such cases, to consider not only what is needed to convince ourselves, but, further, what is needed to carry that conviction to others.

A notable example of this necessity is furnished by difficulties which Harvey had to encounter in procuring admission for his great discovery into the category of accepted truths. I am not unmindful of the opinion held by some few persons, that the true circulation of the blood had been discovered before Harvey appeared on the scene. My own view of the truth on this question can be conveyed in a homely illustration.

A troop of children might be in possession of the various parts of a dissected map of Europe. One might hold a little piece, another a large piece. The clever ones might have got a knowledge of the names and the relative position of those towns which each bit of territory held. But, none being skilful enough to put the map together, they have no idea of the relative situations of the various countries. They would be the less likely to succeed in putting the map together, if some portions were missing, and if some chanced to have bits of another map which they tried to incorporate. The master-hand of the teacher puts the bits in their right places, and immediately all places assume their true relations to each other. The pieces of the map of Europe are items of knowledge previously won, the bits of the other map are untruths—such as that the diastole of the heart was synchronous with that of the arteries—previously believed. The master-hand was Harvey's. The whole civilised world, with few exceptions, has long admitted that by Harvey the riddle was solved.

It would much strengthen my present argument, could it be proved that Harvey was a plagiarist and his disciples dupes. A truth

which is locked up in the bosom of its discoverer, or remains recognised only by a select few, is rather a dead than a living truth, and might almost as well have remained undiscovered. Up to the time of Harvey, the physiology of the circulation, if it had been discovered, had not been accepted. Having satisfied his own mind, he was desirous of enlightening others. For nine years, he expounded his doctrine to his Fellows of the College of Physicians, and illustrated his lectures by dissections of dead, and experiments on living, animals; especially exhibiting the action of the living heart, contemplation of which had mainly suggested to him the doctrine he was labouring to teach. Not till after this protracted education of his fellows did he deem it prudent to publish his essay. Further repetition of his experiments was necessary to convince the new audience thus obtained. It is, indeed, on record, that a Professor of the University of Louvain, then an eminent seat of learning, was only brought to accept Harvey's views by repeating his experiments, a business which he had undertaken in the expectation of thereby proving Harvey to be wrong. Looking back at the time and labour expended by Harvey on the propagation of his discovery, it seems not unlikely that, but for the educational employment of vivisection, the office of the heart, and therefore the circulation in its totality, might yet remain to be discovered.

This fragmentary reference to the great Harvey is no doubt a digression. But, being compelled by the exigency of my theme to mention some experiments on living animals, it appeared both timely and fitting to say these few words. Vivisection is a method of questioning nature which has its supporters and its opponents. Behind them and behind us is a jury of our educated countrymen—yes, and of our educated countrywomen. Tenderness is not always irrational. Of the ultimate verdict of that jury, I, for one, am not afraid.

To return now to our proper subject. In the year 1836, Marshall Hall's last word on bloodletting was published. But a very few years elapsed before it had ceased to be practised. It is most curious that the intention and object of his publication was to regulate, not to abolish, bleeding. It is true that he clearly demonstrated that it might be, and had been, so employed as to produce not only injurious, but distinctly fatal, effects; but he also taught its utility, authorised and, indeed, recommended its employment, though with limitations not previously laid down. How, then, it may be fairly asked, could such teaching result in its abandonment? The printed records show distinctly that this remedy had come to be used in all sorts of cases, at all sorts of times, as a matter of course; as one that could do no harm at the beginning of an illness to cut it short, in the middle as routine treatment, and when things became desperate as a forlorn hope—as the last, the only, chance. The plain blunt statement that persons had been bled to death *secundum artem*, the simple detail of the facts of individual cases, proving to the most unwilling reader that this statement was true, must have pricked the conscience of many an honest practitioner. Men came to look at bleeding from an exactly opposite point of view to that which they had previously occupied, and began to see that it was not absolutely necessary at the onset of disease, was of doubtful safety as a routine treatment during its height, and at a grand crisis might even be fatal. Can we wonder that, in a few short years, the practice had ceased to exist?

It would be improper, and indeed might be misleading, to leave this subject, without adverting to another explanation of this astonishing change in practice. It has been attributed to a change of type in disease. A chief supporter of this view is one of the ablest and worthiest representatives of medicine in our time—worthy, indeed, of any age—Sir Thomas Watson. What has not been shown, he says, writing in 1857, "is that the human constitution is incapable, from influences to us unknown, of undergoing alterations, in respect to the manner in which it is affected by inflammation, and by the reputed remedies of inflammation. For my own part, I am firmly persuaded, by my own observation, and by the records of medicine, that there are waves of time through which the sthenic and asthenic characters of disease prevail in succession; and that we are at present living amid one of its adynamic phases."

It is not necessary to discuss the soundness of the view so succinctly stated. For the purpose of my argument, I could have wished to be able to give it an unequivocal assent. It enforces, with the most eloquent brevity, the supreme and paramount necessity of a constant, even suspicious watchfulness, of our own operations and of the workings of nature. Let us now turn to some further considerations, which especially enforce this obligation.

Whilst unreservedly admitting that medicine is imperfect, we all believe that it is not stationary, but progressive. Each year furnishes more exact knowledge as to the structure of the body; the uses of various organs; their *modus operandi* in health; the manner in which their operations are disturbed by disease; the effect of such disturbance upon

other organs; the causes of these disturbances; and the extent to which they may be controlled or interrupted by diet, drugs, or other agents.

We are from time to time presented with new instruments, or new means of exact research, with new drugs, and with new facts or theories respecting old ones. But this is by no means all. We are furthermore being, not infrequently, urged to apply this new knowledge, or these new views, to the treatment of disease; to employ a new drug, to discard an old one, or to use it in conditions to which it has heretofore been considered inapplicable, or to use it in doses of much less or of much greater magnitude than we have been wont to administer. Examples will at once occur to your minds of beneficial changes, which have of late years been in this way introduced. It is possible that we may have to go much further in some of these directions. As regards the dosage of drugs, I am strongly inclined to think that, both as regards *maxima* and *minima*, we are too closely bound by the fetters of posological tables, or of our habitual prescriptions.

But let us look at the other side of the shield. It is not many years since a provincial surgeon of ability and of local repute began to employ and recommend a new plan of treating delirium tremens. He gave tincture of digitalis in doses which, compared with ordinary ones, were simply enormous. In support of his views, he cited cases in which these huge doses appeared to have produced the most beneficial results. One thing appeared certain, that, contrary to anyone's anticipation, these doses had not proved fatal. The facts were puzzling to most. There is always a class of minds who have no difficulty in dealing with such a case; if the inferences appear unavoidable, but inconvenient, they disbelieve the facts. Nothing can be more simple. Some supposed that the drug employed was of inferior quality, and therefore comparatively inert. To others who looked a little deeper, it seemed probable that there were conditions of the body which might bear and even profit by doses which, under other circumstances, would be poisonous; that these conditions were present in some, but not necessarily in all, cases of delirium tremens; that before long, cases of this disease might present themselves in which these particular conditions were not present, and that, if so, we should hear of fatal results from this plan of treatment. This is exactly what happened; and on this the practice, so far as published data show, passed away. It is too probable that the reaction went to the extent of unduly limiting the use of the drug in those cases of delirium tremens where, in moderate quantities, it is most advantageous. It is not in the case of blood-letting only that we see that a remedy, while it has a good name, is used in season and out of season, but, if its name become tarnished, not at all.

Let me quote one other example of the pitfalls being daily dug in our path if, by constant search after improved methods, we justify our claim to the honourable title of practitioners.

It is not so many years ago that there flourished a great clinical teacher, famous alike in the wards of an important metropolitan hospital and by the bedside of the wealthy. Is it a truism that to be sound, medicine must be based on physiology? He was an assiduous cultivator and eminent teacher of this science. In the zenith of his fame he sought, as you all know, to establish the plan of treating acute diseases by alcohol in almost unlimited quantity. Is it surprising that his views—earnestly enforced by word of mouth and in fascinating essays, propagated by an enthusiastic and numerous band of disciples, and not without an important substratum of truth—is it surprising, I say, that his precepts became popular, and that his example was for a time largely followed? What is our position now with regard to alcohol and its administration as a drug in acute diseases? Exactly what it was before this mischievous delusion arose. There is no acute disease in which alcohol is necessarily required. On the other hand, there is no acute disease in which special circumstances may not arise which necessitate its use in small, or in large, and even in very large doses.

The error of Todd mainly arose from that fertile source of medical—we might truly say of human—error, hasty generalisation. He had no doubt seen, as who amongst us has not seen, the revivifying effects of a dose of brandy opportunely administered. He had, no doubt, as we all have, seen the patient rescued by a few repetitions of this dose from the door of death to which he had been brought by an internal inflammation. The change is nothing less than the transformation of a scene where hope seemed ridiculous into one where anxiety seems absurd. The thought naturally arises, why not prevent the advent of such an alarming condition by beginning a little sooner to administer so sure an antidote? To the soundness of this suggestion no just exception can be taken, for undoubtedly the experienced eye can discern the storm coming, without waiting till its bursting has announced its existence and destructiveness. So far then, so good. But having got so far safely, it is easy to go still further, and to get on to dangerous ground. Why not begin at the beginning? Why not give the alcohol as soon as you know, and this is not difficult, that you have

to do with an inflammation? The acceptance of this reasoning involves perilous consequences. Few minds are so delicately balanced as to be able to distinguish between such a position, and the adoption of alcohol as an anti-inflammatory specific. You will not ask me for a metaphysical analysis or definition of the term "specific." But you will permit a few remarks upon the practical dangers arising from the conception which it embodies.

The medical mind never has ceased, and probably never will, to hanker after specifics. From time to time some drug is elevated by its undeniably remedial effects into this position, and our hopes are flattered that we possess one. The idea is most grateful. In the first place, what a saving of labour, thought, and trouble; nor is there anything in that feeling of which we need to be ashamed; for with many specifics to lean on, our lives would be sufficiently arduous. Then again, we all feel, though perhaps we may try to hide it from ourselves, the uncertainty of medicine. How delightful to know, that, to the credit of our own reputation, and to the advantage of our patient, we have, for at least one disease, a remedy that cannot fail.

We see the chemist with his glass vessel full of carbonic acid in one hand, and in the other a lighted taper. He dips the wick in the carbonic acid, and the flame is extinguished. The result is immediate, decisive, and unailing. Can we be reproached for wishing that we might in like manner take a pneumonia in one hand and a vessel full of alcohol in the other, and by a similar immersion procure a similarly decisive and unailing result. We might perhaps with equanimity submit to its being less immediate. Depend upon it, that to those who harbour such a wish, and indulge in contemplating the possibility of its fulfilment, the danger is great of erroneously believing that they have achieved the result. The danger is still greater that they will come to look at many drugs in the light of quasi-specifics, and so relax watchfulness over their effects.

It is true, probably, that no one of us believes in the existence of an absolute specific which can never fail; but, on the other hand, we must remember that the conception of a specific and the conception of failure are reciprocally exclusive. A vivid mental picture of the one necessarily implies a very shadowy perception of the other. One reason why this yearning for specifics is so likely to mislead us is that it almost inevitably involves a conception of disease as an unity, instead of a complexity, of processes.

Perhaps I shall be able more readily to explain myself if, leaving abstract propositions, we revert to the specific treatment of pneumonia by alcohol.

A "case" of pneumonia is compounded of two parts. The first of these consists of those local changes which are summed up in the phrase "the inflammatory process". It is true, though we do not need to dwell upon it, that even this phrase suggests multiplicity rather than unity. But there are also, as in all cases of inflammation, not only the local focus, but the influences radiating therefrom, and affecting all the organs and constituents of the body. In no disease is this duality better exemplified than in pneumonia, and hence this disease has been so often in times past a battlefield for therapeutists. In no disease does this duality require to be more explicitly recognised, because in none is death more often distinctly due to these secondary disturbances, as of the kidneys, the liver, the heart, or (in a single pneumonia) of the other lung. If we cannot unload the camel, we may nevertheless succeed in a timely removal of the last straw. It is true of all acute diseases that a proportion will under the most unfavourable circumstances recover, that another proportion will, under the most favourable circumstances and the most sagacious treatment, die. But there is a residue in which the issue is in our hands to make or mar. Which we do, depends, in the main, on the soundness or unsoundness of the abstract principles which underlie our actions. And here let me beseech you in your mind to keep every case in this third category till all danger is gone, or till, on the other hand, death, not in your judgment is impending, but has actually commenced. The desire for a specific is an instinct, and will, therefore, be ever lurking in our minds; and it is because I believe it to be a dangerous conception when translated into practice, that I have dwelt on this question with sincere, if tedious, earnestness.

Let me now direct your attention to another idea which has influenced, and does influence, therapeutists. It is a truth which has been long recognised, that enfeeblement of the general powers of the system lowers our corporeal capacity to resist the invasion of disease. Debility is, to use the old phrase, now, it is to be regretted, lapsing into obsolescence, "a predisposing cause of disease". The histories of desolations and

famines have, more than once within our own times, exemplified this on a large scale. Individual instances are continually presenting themselves amongst the recipients of medical relief in the club, the parish, and the hospital, where disease has followed close upon an insufficiency of fuel, food, and clothing. In the better classes, we see something similar amongst those who are worn out, or battered, or wounded in the battle of life. All this I say is as true as it is old, and as old as it is true. But, for some years past, this idea has been very largely developed. The connection between debility and disease has been advanced by degrees till, in many minds, they appear to have become convertible terms; not perhaps avowedly, not even consciously, but so effectively, as often to dominate all other therapeutical conceptions. This position is scarcely tenable, either theoretically or practically. It rests on confusion of two very different conditions. The body enfeebled by insufficient food may yet have its component parts and organs sound, and their functions maintaining their due balance and complementary proportion. It is, on the other hand, of the essence of disease, that one of these parts or organs should be so altered as to interfere with its functions, and so to disturb this balance. But disease also arises in those whose vital antecedents have been quite different; and anatomical examination, however searching, fails to find that the local changes in the one case differ from those in the other.

Practically, taking the case of acute disease, we do not find that the difference in the previous vital status necessarily indicates a decisive difference in the treatment. Take, for example, two cases of typhus, the one occurring in a subject previously in full health, the other in a person previously reduced by want; it does not follow that in the latter alcohol will be requisite in larger doses than in the former. As a matter of fact, we know that the very reverse may happen. It seems to me difficult to get away from the theoretical proposition, that the best way to relieve the debility arising from disease is to remove or mitigate the disease. Probably, what seems to me a practical slighting of this proposition, arose at a time when confidence in the resources of art to combat acute disease had fallen to a low, perhaps its lowest, ebb. Bloodletting had dropped into disrepute. Calomel and opium, a combination both safe and effective for certain purposes when discreetly employed, had also become discredited, mainly in consequence of its administration having been pushed under these circumstances to a pernicious extreme. We cannot wonder that the idea of driving the patient through difficulties, as an engine may be driven through a snow-drift, assumed in some minds an undue magnitude. But the influence of this notion was not limited to the case of acute disease. The progress of medical science has for some time been most marked in the elucidation of the nature and results of organic disease. The hopelessly irremediable character of the changes here found has certainly tended to enforce the idea of "nourishing, supporting, and building up". From this point, the same idea has spread to an earlier stage in such cases, the stage of incipient disease, or to an even earlier stage, that of threatening or impending organic changes—a pre-organic stage. May it not happen, has it not happened, does it not happen, that sometimes this truly important consideration is suffered to overshadow other considerations also truly important? Is there not danger that what we will, merely for convenience and brevity, call the physiological basis of treatment, may be insufficiently resorted to; that the diseased organ itself may not be adequately helped, and coaxed, and assisted to do yet a little more work; that its oppressed and labouring neighbours may in like manner be left without due succour? If it be important that we should get a complete mental grasp of the whole of a case, it is mainly so that we may be the better able to disintegrate it into its constituent elements; that, having so resolved it, we may the better see what we can and what we cannot cope with. How it might have altered the past, had the custom been universal for each one to ask himself, before deciding on a plan of treatment, these questions: What do I propose to aim at? Why do I do so? How best may I effect my object? Might not such a method also alter the future?

In planning this address, it seemed to me that it might hold out better prospect of profit to deal with the impersonal past, and not at all with the personal present; but I should feel myself unfaithful to a great trust on a serious occasion, did I not infringe this resolution to the extent of one sentence. Dispassionate survey of present medical practice forces me to the conclusion that, on a very large scale, and in both chronic disorder and organic disease, the physiological basis of treatment is too often unduly subordinated to the restorative basis of treatment.

We have now recalled to our recollection leading examples of various kinds of past error. My desire has been to enforce lessons which are worth the learning, since they are of perpetual applicability. I could well have wished to do so with more power, with more perspicuity, with more persuasiveness. But, I beseech you, let not any clumsiness

of method, any dulness of manner, any inaptness of illustration, repel you from the subject. Analyse, each one for yourself, and in your own way, the conceptions and the practices of those who have gone before. Above all, analyse each one for yourself your own conceptions and your own practices. All true wisdom must be endogenous. You may plant cuttings or sow seeds of the tree of knowledge in the brain of another; but, unless they there grow and germinate, he will have no true tree of knowledge of his own. Principles, to be effective, must be bone of our bone and flesh of our flesh—not foreign bodies, how much soever embedded or encapsulated.

The lessons I have been trying to enforce are no new ones; we can see, by looking back, that the doctrines they embody have underlain the actions of all the great practitioners of the past. I venture to think that they ought to be assimilated by all practitioners in the future. We are told, and it is true, that a stage of observation is but the infancy of any science, from which, in its adolescence, it must be emancipated. We are told that observation has done all it can; that medicine has been too long dawdling in this infancy, and that all our efforts should be directed to elevating it from a stage of observation to the higher level of exactness. What if of late years great advances have been made good in this direction? What if the knowledge procured by more precise methods of investigation, by a more refined organic chemistry, by more penetrating microscopy, by a more diversified experimentation, promises in the future to assume proportions undreamt of in the past? Can we suppose, has anything yet been done to justify the hope, that in any near future we shall be able at once to repeat the experiment of the laboratory in the sick room, and certainly obtain the same result in the confused and complex conditions under which it has there to be performed? Such hope is idle, and worse, it is hostile to philosophy and fatal to progress. The greater our advances in the sciences of anatomy, physiology, and pathology, the more need that our powers of observation should be sharpened, refined, and sensitised; for, in the same proportion will new suggestions arise of modes in which this knowledge may be transmuted into means of influencing the processes of disease. In short, we shall be told more frequently in the future, that we are to modify our old usages, or to discard them altogether, and employ new methods. Is the history of medicine from this day to be reversed? Are we in future to be confident that no false prophets will arise; that we shall be safe in believing that all we are told is true? If not, how are we to refuse all the evil and to choose all the good? The authority of the teacher, as we have seen, is no infallible test, for the evil may come from an oracle well calculated to command our assent. We must, to a large extent, depend each one upon himself, his own observation and his own private judgment; employing the best means and devices of science to ensure accuracy of observation, and exercising our judgment with caution and modesty. To the few only is it given to extend the landmarks of science, or to reclaim the waste lands of ignorance. But to each one is given the power to cultivate and utilise those which have been reclaimed. To each one it is given to make the practice of medicine more rational, more common sense, and therefore more truly scientific; to render more rare in the future such dark blots as we have regretfully recognised in the past.

BEQUESTS AND DONATIONS.—Miss Elizabeth Baxter of Oxford Street, has bequeathed £1,000 to St. Bartholomew's Hospital, £500 to the Brompton Hospital for Consumption, and £500 to the St. Mary's Hospital.—The Grocers' Company have given a sixth £100 to the National Hospital for Consumption at Ventnor.—Mr. George Cheesman of Dorking has bequeathed £50 to the Royal Sea Bathing Infirmary at Margate, and £50 to the National Hospital for the Paralysed and Epileptic.—Her Majesty the Queen has given £30 to the British Home for Incurables.—The Goldsmiths' Company have given £50, additional, to the Victoria Hospital for Children at Chelsea.—The Directors of the Great Northern Railway have given £50 to the Royal Free Hospital, in recognition of the kindness and attention shown to the sufferers in the accident at Hornsey on the 25th of January.—Mr. Frederick Youle has given £50 to the North Eastern Hospital for Children.

A MEDICAL MISSIONARY FOR CENTRAL AFRICA.—A farewell service was held at St. Thomas's, Regent Street, on Tuesday last, to bid God speed to Dr. James Petrie, who is about to proceed to Central Africa, as a medical missionary, to work with Archdeacon Farler under Bishop Steere. Dr. Petrie is the son of a clergyman of the Scotch Episcopal Church, and received his medical education at Aberdeen University, where he graduated M.B., M.Ch., in July last. The salary of this medical missionary is provided by the Guild of St. Luke—viz., £200 a year for three years. To meet this expenditure, a lady has paid to the account of the guild £300, the remaining £300 to be collected from the members of the guild.

ADDRESS IN SURGERY.

BY

WILLIAM STOKES, F.R.C.S.I.,

Professor of Surgery, Royal College of Surgeons, Ireland; President of the Pathological Society of Ireland.

My first duty and real pleasure is to offer an expression of gratitude for the honour—the great honour—that has been conferred on me and on Irish Surgery in being asked by your Council to address you on an occasion so memorable as the present. Were I called on to address an audience previously unknown to me, though not insensible of its sympathy, my diffidence would be great. How much greater must it be when I know I am speaking to so many fellow-labourers whose work, life-object, and ambition are the same as mine, and many of whom have acquired and deserved far-reaching fame. However, if my diffidence is great, so is also the pleasure, as the honour of being invited to address you comes from the noblest brotherhood in a profession that has yet existed; for such—now celebrating its jubilee—is this Association, the interests and prosperity of which we all have so much at heart.

It must be a source of genuine satisfaction to those who for many years past have taken an active interest in the work of the Association to observe how, first taking root here in the heart of England, its branches now extend not only over the three divisions of the kingdom, but also stretch out widely and luxuriantly to our great colonies, east and far west—wherever, in truth, the flag of England is looked upon with affection and pride. Well has our great brotherhood fulfilled the and expectations of its distinguished founder, Sir Charles Hastings; for, as it had its birth in the "faithful city", so it has proved faithful in many good and noble ways—faithful in removing professional jealousies, and softening asperities—faithful in protecting with its broad and strong shield those among us who may have been cruelly and unjustly attacked—faithful in its efforts to raise the social status of our profession—faithful in its attempts to extricate public opinion from the quagmires of sentimentalism and folly—faithful in aiding and encouraging the scientific vanguard of our profession.

But, great as have been the results of these efforts of the Association, much yet remains to be achieved. I should like to see loyal and hearty co-operation with the universities, the medical and surgical corporations of the United Kingdom, and the General Medical Council, to raise the standard of Arts education for all joining our profession, by establishing conjointly an examination in Arts which every one, except those with university degrees, should pass previous to commencing the study of medicine. I should also like to see a consolidation of the great medical and surgical teaching power that exists in our metropolitan centres, but which, owing to the multiplicity of small schools in them, is, to a great extent, lost to the profession and to the public. Instead of urging the establishment of additional schools, it would be far better to endeavour to bring about such an amalgamation as I have indicated, and co-operate with those who wisely think that among the chief desiderata in our profession is a larger amount of training in an university where the first phases in the life of a medical student can best be spent, viz.—first, the preliminary general, and second, the preliminary scientific education. I am strengthened in this conviction by the fact that during the Visitation of Examinations recently conducted for the General Medical Council, in which I had the honour of being present, the Victoria University candidates for the diplomas of our corporations whose general and scientific culture was far below what anyone joining our profession ought to have.

The portals of many of the universities have recently been widened, enabling those to avail themselves of the advantages, social as well as intellectual, which an university affords, who a few years since would have been entirely precluded from doing so. In giving these facilities, Ourselves, where the natural sciences have long been prescribed and disseminated, is greatly deserving of praise. Away from the turmoil and distractions of a great metropolis, the sciences auxiliary to, as well as those which are the basis of the study of medicine, such as human anatomy, physiology, natural history, and zoology, can best be studied, aided by all the advantages and noble traditions of an historic university. The training would certainly give

a healthy impulse and scientific direction to the practical work of a student when he leaves the university to complete his professional studies at a metropolitan school. The universities, especially those in or near the smaller provincial towns, are quite unsuitable for complete practical schools of medicine and surgery, the available material being—having regard to existing modern requirements, and especially as regards pathology—necessarily inadequate.

Having for several years been a surgical examiner in the Queen's University in Ireland, I was forcibly impressed with the truth of the view that, for the practical teaching of surgery and pathology, universities in the smaller provincial centres are hardly able to afford adequate material for the student to acquire a sufficient knowledge of these subjects. The function of universities, at least those so situated, in relation to medical education especially, should be that of great scientific schools, and not centres for practical clinical study. I feel confident the day will come, when the wise and far-reaching policy of those who have held and maintained such views will be recognised, and acknowledged to be correct.

I am strengthened in these views from the knowledge that they largely coincide with those of one long and intimately associated with the cause of medical education in this country—I allude to the distinguished Regius Professor of Medicine at Oxford and President of the General Medical Council, whose great and unselfish devotion to the best and highest interests of our profession must ever command our unqualified admiration and respect.

It has hitherto been customary for my predecessors at the annual meetings of the Association, either to give a *résumé* of the most recent advances in surgery, and discuss some particular theory or mode of practice on which surgical opinion is more or less unsettled, or dwell on those topics that have proved of special interest to himself. On the present occasion, one which should be marked *melioris lapillo*, to give a detailed retrospect of surgical advancement during the past half century would be a task not alone difficult, but, in truth, impossible in the time at my disposal. I purpose, therefore, to dwell on some few topics of great general interest, involving questions still unsettled, and which have more particularly engaged my attention.

However, though a detailed retrospect of the surgery of the past half century is here impossible, let us, like travellers who enjoy the happy toil of climbing an Alpine steep, and who at times pause to look back and take a panoramic survey of the country traversed, see the giddy heights that have been scaled and the difficulties overcome, contemplate the chief advances in our art, the obstacles and opposition that have been swept away, and the breaking of the fetters that so long bound it to a blind empiricism. What have been these advances? The list is a goodly one, and the mere enumeration of them would alone occupy the hour at my disposal; but I may mention a few of those that stand out most boldly in relief: The abandonment of an indiscriminate blood-letting in almost every form of acute surgical disease, of a reckless use of mercury in the treatment of syphilis, and of setons and moxæ in hopelessly irremediable articular and other diseases; the introduction of the pressure treatment of aneurysm by Bellingham, Todd, and Hutton; of drainage in the treatment of wounds and abscesses by Chassaignac; of metallic sutures and the perfecting of the operations of vesico-vaginal fistula by Marion Sims; of lithotomy by Civiale, Thompson, and Bigelow; and of stricture by Syme, Wheelhouse, Maisonneuve, Perré, and Holt; the *renaissance* of joint-resection by Crampton, Syme, and Ferguson; the introduction and establishment on a firm basis of ovariotomy by McDowell, Clay, Spencer Wells, and Keith; of bloodless surgery by Esmarch; of skin-grafting and sponge-grafting by Reverdin and Hamilton; and of osteotomy in genu valgum by Ogston; improvements in methods of amputation by Bell, Teale, Carden, Syme, and many others; also the operations of gastrotomy, excision of the pylorus, of the spleen, the kidney, supra-pubic excision of the uterus, laparotomy, and cholecystotomy. In connection with abdominal surgery, I would also allude to the recently published able essays by Sir William Mac Cormac and Dr. Marion Sims, the latter paper dealing mainly with antiseptics and drainage in gunshot wounds—these being, in Sir James Paget's opinion, "the most important perhaps of all the provisions to be made in healing wounds." Again, we have torsion in the treatment of hæmorrhage—a method to which such an impulse has been given by Mr. Bryant; and the treatment of aneurysm by arterial ligation, without injury to the deeper structures of the vessels, by the methods of Porter and Barwell. In two cases I adopted Porter's method, using a wire, deligating the femoral artery in one, and in the other the abdominal aorta, Barwell's ligature—made from the aorta of an ox—a method recently tested in the Richmond Hospital by my colleague, Dr. Thomson, who deligated the arteria innominata for subclavian aneurysm. Again, we have, in the treatment of fractures, immovable splints, and

improved methods of extension by weights, or more perfectly by screw action; of manipulation in the treatment of luxation; and, in spinal disease, the use of the plaster-jacket of Sayre.

I need not dwell on the complete revolution in ophthalmic and aural surgery that has occurred, and of the light that the ophthalmoscope of Helmholtz has shed, not alone on ophthalmology, but on pathology in its widest sense; or on the other instruments of precision constantly made use of. Memorable as these advances would make any era in the history of surgery, they all pale before three I have yet to mention—advances which the surgical historian will doubtless point to and emphasise as the three giant strides that the past half century has witnessed. I allude, first, to the discovery of the means of banishing pain during the performance of surgical operations; secondly, to the restoration of diseased or injured bones and joints necessitating resection; and, thirdly, the enunciation of the principle and establishment of the practice by Pasteur and Lister of antisepticism in the treatment of wounds. When we reflect that so large a part of these changes in surgical principles and practice has been due to the genius and honest labour of so many workers in the United Kingdom, we may well feel a pardonable pride in British Surgery, and confidence in the coming triumphs of our art.

To anesthetics, antiseptics, and osteogenesis, together with a few cognate topics, I would therefore now invite attention.

Whatever anæsthetic the surgeon selects—whether it be chloroform, ether, or both combined, bichloride of methylene, or nitrous oxide gas—we must admit that, even with the most careful precautions as regards the condition of the patient generally, the anæsthetic selected, the amount of it used, and the mode of its administration, the gauntlet of peril has still to be run. In truth, it is hardly to be expected than an agent which can so rapidly and completely paralyse our senses should not be attended with peril. Of the two anæsthetics, however, that surgeons as a rule mainly rely on—ether and chloroform—much has of late been done to diminish risk by limitation of the amount of the anæsthetic used; by the gradual introduction of it into the system; by the avoidance of ether in infancy and extreme age, in the puerperal state, in hysteria, and also when there is reason to suspect the existence of any acute or chronic form of renal or pulmonary disease. In the use of chloroform the ever-present risk of cardiac paralysis appears to be increased when any functional or organic disease of the heart is present, and is, therefore, in such cases, distinctly contraindicated.

Although the number of accidents connected with the use of anæsthetics is fortunately very limited, still I feel sure that by more accurate knowledge of the facts I have mentioned, by entrusting the duty of administering anæsthetics solely to persons of experience and judgment, and by a stricter adoption of the rule so happily formulated by Mr. Jonathan Hutchinson in reference to the desirability of using chloroform in cases below six and above sixty years of age, the number of these regrettable accidents would be still further largely diminished. In the majority of cases, however, I would unhesitatingly prefer ether. In using it, there is greater economy of time; it is, with the necessary precautions taken, safer; there is, as a rule, less sickness, and return to sensibility is slower. To obtain these advantages—which, with others, have been so well and systematically formulated by Mr. Teale (BRITISH MEDICAL JOURNAL, March 11th, 1882)—regard must be largely had to the method employed of administering it; and I am of opinion that one in which the air is rebreathed by the patient, as in the inhalers of Morgan, Ormsby, and Clover, should be preferred, as so great an economy is effected thereby, not alone of ether, but of what is of far greater importance, of heat in the air-passages, the inspiration of a large quantity of cold ether vapour tending to induce respiratory syncope.

In these instruments, the inhalation of a combination of ether-vapour and carbonic acid gas occurs. It does not, however, appear to be clearly ascertained whether in this fact there is the introduction of an additional element of danger or not. Opinion on this point is still greatly divided. One would say, *à priori*, that there was; but experience has not established the fact.

Of the countless benefits conferred on man by anæsthetics, of the suffering prevented, of the absence of all anticipatory fear of suffering, of the happy subsequent oblivion of all the horrors and details of the operation, and of the diminution of shock, it is unnecessary to speak. To these must be added the advantages which enable the operator to act with a deliberation and calmness, enjoying freedom from anxiety and care he could not otherwise have. Advantages such as these cannot be overestimated, being as signal to the patient and the operator as they are to surgery.

Although there is traditional evidence that the anæsthetic properties of certain plants—notably the mandragora—were known to the physicians of ancient Greece and Rome, and that in 1800 our distinguished

countryman, Sir Humphrey Davy, mentioned that nitrous oxide was "capable of destroying physical pain, and may be used with advantage during surgical operations", still it was not until 1846 that anæsthetics came properly within the domain of practical surgery, when Morton, in the Massachusetts General Hospital, first demonstrated the possibility of inducing anæsthesia by the inhalation of ether.

To Simpson is undoubtedly due the credit of discovering, in 1848, the anæsthetic properties of chloroform, and in giving an impulse to its adoption, such as his brilliant intellect alone could give; but still we must cordially, willingly, and gratefully endorse the opinion of Professor Gross, that, "if America had contributed nothing more to the stock of human happiness than anæsthetics, the world would owe her an everlasting debt of gratitude".

Considering that the treatment of wounds is, in Professor Humphry's words, not merely "the first stone, but also the corner-stone of surgery", antiseptic practice should rank, in my opinion, as the greatest of the surgical advances that the past half-century has witnessed. It deserves a special attention, not merely on account of the results of its adoption, but also because surgical opinion is still so divided about it: an unsettlement to which an impulse has been given by Mr. Savory's remarkable address at Cork, and by the observations on the value of carbolic spray made by Mr. Lister himself at the International Medical Congress last year. As regards Mr. Savory's denunciation of Listerism, I would say that, after reading it, and also the able reply to it by my colleague, Dr. Thomson, one cannot but come to the conclusion that, when the address is stripped of all its brilliant eloquence and rhetorical decoration, two facts are, to our surprise, brought clearly to light. One is the admission of the germ-theory of putrefaction; and the other, that the method of dressing employed by Mr. Savory is essentially antiseptic, consisting as it does of many of the features that characterise Listerian dressings; for example, carbolised catgut ligatures, carbolised oil, drainage, and washing the wound with a weak permanganate of potash lotion or "some other potent antiseptic". Now, as the author of the reply to which I have referred properly asks, "Is this method fittingly characterised by its simplicity and the entire absence of all novelty?"

In reference to Mr. Lister's statement on the value of carbolic spray, about which there has been so much unfortunate misconstruction and misunderstanding, I would certainly say he did not surrender his position in any way. He did not, as was said to me, in terms more picturesque than accurate, by an eminent surgical friend on that occasion, "inter antiseptic surgery and then sing a dirge over it". On the contrary, he stated that he looked forward to obtaining a more perfect and convenient mode of asepticism than that afforded by carbolic spray.

Considering the subject from a purely practical point of view, it appears of little consequence whether we accept the views recently discussed by Dr. Burdon Sanderson, or those of Ogston and Hueter, the former maintaining that the inflammatory exudates of a wound do not depend primarily on the contact with them of atmospheric organisms, but that their secondarily infective character does; in other words, that atmospheric organisms *per se* are not necessarily a source of danger, nor do they predispose to the formation of inflammatory exudates, but that they do exercise a baneful influence on the latter by rendering them infective. To quote his words, "they are not so much mischief-makers as mischief-spreaders". Two distinct functions are attributed by Burdon Sanderson to these organisms; one "of developing what may be called the phlogogenic infection, and that of conveying it to all parts of the body." Ogston and Hueter, on the other hand, maintain, and furnish strong arguments for their views, that septic organisms are primarily the sources of all the inflammatory and other troubles to which wounds are liable, and that, under aseptic conditions, these dangers can be avoided. It is not my purpose to discuss which of these theories is likely to be correct; for, whichever view we adopt, the necessity for thorough antiseptic precautions remains the same. Assuming that Burdon Sanderson's theory be correct, and that inflammatory exudation is the physiological and harmless outcome of a traumatism, can we say how long it will remain so? How long or how short a time it may take to become infective, whether days, hours, minutes, or seconds? Is it not in accordance with all reasonable probability that the time must be ever-varying; and, assured of this, should we not take every precaution to prevent the entrance, neutralise or destroy the *noxa* or septic agency? Have we any means of estimating the power of resistance to the action of septic agencies, or of telling when will commence those chemical putrefactive changes, the sources of the disasters of surgery which antiseptics so powerfully strike at, prevent, and destroy?

The essentially weak point in the persistent and obstinate opposition to Listerism is the almost universal admission of the truth of the germ-theory of putrefaction. If the fantastic theory of heterogenesis

had not long since been swept into the deserved limbo of other exploded doctrines, there would be some scientific standpoint for those opposed to Lister's theory and practice. But not having this, and admitting the truth of the germ-theory of putrefaction, they surrender their position. An attempt has been made by Mr. Lawson Tait to draw a distinction between the effects of germs on dead and living tissues, the only serious consequences being, it is alleged, those which result from their introduction into the system through the medium of dead tissue. Such is the contention. In a word, it comes simply to this: that, if the dead tissue-factor were non-existent, the organisms would remain harmless; if, on the other hand, it be present, they become harmful. But those who hold this view, ignore the elementary fact that there never was a wound, and especially one in which vessels are tied or twisted, in which dead and living tissues were not at once brought into contact. Assuming, however, that this was not the case, has it not been shown on clear evidence by Dr. Burdon Sanderson that septic agencies generated in the organism may induce idiopathic inflammation without the medium of dead tissue? Also that, in acute peritonitis, septic organisms can, through the medium of the lymphatic vessels, be conveyed into the blood-streams, and, to use his words, "carry with them a phlogogenic virus, by virtue of which, wherever they lodge, they become the starting points of infective abscesses." Again, that similar phenomena are observed in connection with ulcerative endocarditis, confirming the observations of Weigert that, in variola, they find their way "in myriads" into the circulation, and eventually find a resting place in the capillaries of the internal organs, where they become nuclei of infective abscesses (BRITISH MEDICAL JOURNAL, April 15th, 1882).

If such phenomena are capable of being produced in the organism without the intervention of dead tissue, which appears to stimulate septic agencies to such pernicious activity, there is certainly all the more reason for using means to neutralise or destroy them, when, as in all wounds, dead and living tissues are brought into contact.

Those who advocate and practise what they are pleased to term a "modified" antiseptic system, attempt, in fact, in a roundabout, clumsy, inefficient way, to do precisely what those who practise Listerism achieve by means which are the outcome of accurate scientific research.

The aim in both cases is to neutralise or destroy the agencies which predispose to, and produce the *materies septicæ*—in the one instance by numerous uncertain and often inefficient methods; and in the other, by the unerring artillery of chemical agency.

Among many depreciatory remarks that have been made in reference to Listerism, is one based on its alleged want of originality. It has been stated that both antiseptic principles and practice were understood, recognised, and appreciated by many of Mr. Lister's predecessors and contemporaries. Foremost among the latter, M. Maisonneuve has been mentioned. Having attended the *clinique* of that eminent surgeon for two sessions, in 1864-5, I am in a position to mention the nature of the wound-dressings then employed by him. With a large syringe, a quantity of a weak solution of "*acide phenique*" was applied to the wound; then a piece of linen or cloth, perforated with numerous openings and covered with a yellow-coloured grease, was placed on the wound, secured by a dry compress and bandage. Such were the antiseptic dressings of which Lister's, it is alleged, are only a somewhat complicated, expensive, and, in many cases, dangerous reproduction.

It has been stated that ovariectomy should be considered the touchstone of the efficacy of the antiseptic treatment of wounds. I do not think so (although my successes in ovariectomy date from the time I adopted the system), and for the reasons given by Professor Lister. First, the disposition of a large serous membrane to absorb rapidly the plasma from the cut surface, the absence of tension, the high vital power of the peritoneum in uniting after being wounded; and, lastly, that "bloody serum is an unfavourable medium for the growth of micro-organisms," a fact actually ascertained with the aid of Keith, that it is the "*serum of the extravasation*." One of the best tests, if not the best, for the value of antiseptic treatment, is the retention of the wound, as there are so many circumstances that militate against immediate union being obtained after it. In the first place, the cases requiring a formal ovariectomy are, as a rule, in a condition of great physical exhaustion, and consequently a long convalescence, and thereby protracted suffering of mind and body. The wound is of necessity a large one; the operation occupies a considerable time; two large healthy cut bone surfaces are made, between which union is to take place; and, lastly, there is the great danger, at present, no matter what prophylaxis be adopted, the limb becoming at risk during the process of union. Before the adoption of Lister's practice, it was not unusual that four, six, or eight months, or longer, would elapse before union took place, and it

was always a subject discussed at consultations on these cases, previously to operation, whether the patient would have strength to endure so protracted a suppuration. As an illustration of how changed matters are now, in a series of fourteen of my cases of excision of the knee-joint, the wounds in nine of them united without a trace of pus production; and in the last of them only two dressings were required subsequent to the one applied at the time of the operation, and in seven weeks after the patient was up and going about. Another antiseptic triumph was the case of a boy with extensive necrosis of the fibula, sinuses, and suppuration existing at the time of the operation. I excised subperiosteally the diaphysis of the fibula, and the case pursued a perfectly aseptic course, the evidence of new bone-formation being also incontrovertible. From the fact of there being no pus production subsequent to the operation, notwithstanding the pre-existence of suppurating sinuses, a special interest attaches itself to this case. I can only account for this exceptional circumstance as a result of the careful washing of the sinuses by carbolic acid and zinc chloride solutions. A still more remarkable case was that of a youth who was under my care last November. He trod on a triangular piece of glass which, having passed deeply into the sole of his foot, was with difficulty extracted. An acute suppurative inflammation, involving the ankle-joint and extending as far as the knee was the outcome of the injury. There was indicated by both pulse and temperature very high fever, and the condition of the patient was most critical. I made free incisions under the spray on both sides of the ankle-joint, and gave exit to pus and synovia in large quantity. Into these openings I injected a weak solution of eucalyptol and inserted Neuber's drainage tubes. Next day I found pulse and temperature normal, and from this the case pursued an aseptic course, and in less than a month after, the patient left the hospital, the foot being in a perfectly normal condition, all motions of its joints being free and unattended with the slightest stiffness or pain. In another case, I cut down on an ankylosed hip (the limb being so flexed as to be perfectly useless to the patient), and divided the neck of the femur with an osteotome, and straightened the limb. The wound healed without pus production, and a freely movable false joint was formed, and the patient is able to walk several miles without inconvenience.

Another antiseptic triumph was obtained in two cases of amputation at the hip-joint. In one of these there were pre-existing sinuses and profuse suppuration, and, notwithstanding, I succeeded for eight days, during the most critical period of the patient's convalescence, in keeping the wound aseptic, and preventing the occurrence of surgical fever. The result in the second case was more remarkable; not only during the healing of the wound was there no pus production, but pulse and temperature hardly ever rose beyond the normal standard. The skin was unbroken, and on the evening previous to, and also on the morning of the operation the patient had a eucalyptol bath. Looking at these few cases—few, not because I could not largely supplement them, but because they are sufficient for my present purpose—I would ask could such results have been obtained previous to the Listerian teachings of the principles and practice of antiseptic surgery? There can be but one reply—impossible.

In giving the details of these antiseptic triumphs I may be considered dogmatic and egotistical. If so, I regret it, for nothing could be further from my desire; still less would I seem captious or actuated by any partisan spirit. I have mentioned them solely through a desire of having the truth recognised and established, and because personal experience is the soundest basis of honest conviction.

As regards the hygienic effects of the practice, I may mention some facts of interest noticed by me and my colleagues in the hospital to which I am attached. The building is a very old one, and was not constructed originally for a hospital. None of the more modern arrangements, now considered so essential, as regards heating, light, ventilation, etc., exist. It is situated in a poor, very densely populated part of the city, with tenement houses, dairy yards, cattle sheds, and stables in its neighbourhood; and some of the houses in its immediate vicinity have been designated by the Medical Officers of Health as "fever nests." When I was a student there, erysipelas and puerperal fever were not unfrequently observed after operations even of no great magnitude; hospital gangrene too, I have seen several instances of. In fact, these three diseases constituted a grim trio, of which the surgeons had not unnaturally a dread. Let it not be thought that the occurrence of these was in any way to be attributed to want of care and attention to cleanliness. No cases could in this respect be more conscientiously or carefully managed. What now exists? Hospital gangrene is an extinct disease, nor have we observed, during a period extending over six years, a single case of erysipelas, or puerperal fever, or any other flowing operation in which the practice of Lister was accurately carried out; *accurately*, for everything depends on that. The practice has been well compared to a coat of mail, which secures the wearer so

long as it is perfect, but any missing link in which may admit the *lethalis arundo*.

Similar testimony to what I and my colleagues can state has been given by many foreign surgeons of eminence, among whom I may mention Von Nussbaum, Bardeleben, Thiersch, Von Langenbeck, Volkmann, Esmarch, Saxtorpf, Championnière, and many others.

Much blame has been cast on Professor Lister and his followers for not having had recourse more largely than they have done to statistics, to prove the superiority of antiseptic practice over the older and alleged simpler methods of wound-dressing, and to show that, by the use of the former, we are more independent of those epidemic influences that have hitherto been so pregnant with disaster in operative surgery. It is not my purpose here to discuss the value of the surgical statistics that have been adduced to prove that the alleged simpler methods of wound-dressing are of equal efficacy to those of Lister, especially as most of them have a strange family resemblance to the latter; but this I will say, that whatever value is to be ascribed to accumulated figures—often sadly fallacious—that value is not to my mind greater, or at all so great, as the often repeated occurrence of test-cases, recorded daily, not alone in a particular hospital, town, or country, but in hospitals in all climates and conditions, where the hygienic surroundings are brought to the highest known degree of perfection, as well as where they are in a condition the most deplorable. Such records carry more weight with me than the inflated statistics from any particular hospital, or the alleged results obtained without antiseptics after any special operation or group of similar operations.

Mr. Savory dwelt at great length on the statistics of operations at St. Bartholomew's Hospital. These were, no doubt, very important, and probably carried conviction as to the soundness of the conclusions drawn from them to the minds of most of his hearers. In various points, however, they were unsatisfactory to me. For example, among others, no mention whatever was made of the operation of ovariectomy, in which procedure, although some regard Listerism as positively injurious, still many others take an opposite view, and think with myself that it has probably done more than anything else to diminish the mortality of the operation. It was unfortunate, in my opinion, that the facts in respect of this particular operation at St. Bartholomew's Hospital, before and after the introduction of Listerian antiseptic practice, were not stated.

Although I do not regard surgical statistics with the reverential awe that some do, who look upon them, in fact, as a sort of tribunal beyond which there can be no appeal, I observe that in a record of upwards of six hundred operations performed by myself and my colleagues at the Richmond Surgical Hospital, during the past three years—in an institution which I have already spoken of as being hygienically in so unsatisfactory a condition—the mortality was 3.6 per cent.; and there was not a single case in which Listerism was accurately employed that was followed by any infective disease.

The discovery of anaesthetics, and the means of inducing osteogenesis, have largely widened the field of practical surgery. When we consider the revolution that has taken place, since the introduction of antiseptics, in the treatment of compound fracture, of abscesses—especially those symptomatic of bone-disease—of bursal tumours, of congenital as well as acquired osseous deformity, of ununited fractures, including those of the patella and olecranon, of foreign bodies in joints, of hæmorrhage and aneurysm by antiseptic ligature, and of various diseases and injuries of the abdominal organs indicating the operations already mentioned, this may, I think, be said with even greater truth. To these may also be added certain thoracic affections, such as empyema, pericardial effusion, and pulmonary abscess, by which the wide gulf that so long existed between medicine and surgery has been to a great extent bridged over—uniting them together firmly, strongly, and for ever.

It is a subject of regret to me that so many surgeons of long experience, and of great and deserved eminence, have been found who have either been disposed to discredit a thorough antiseptic practice altogether, or to have given but a very lukewarm adherence to it. Much allowance, however, must be made for the well-known and not unnatural dislike to change on the part of those, many perhaps advanced in life, whose early training has been so different to that now available. With their successors, more fortunately circumstanced in this respect, the case is different. Their condemnation has, I fear, been the result of apathy, indifference, and, in some instances, indolence, preventing them taking the trouble to learn either the principles or the details of the practice.

Representatives of what may be termed a Rip Van Winkle school of surgery, they differ in one respect from the mythical personage just alluded to. His ignorance of what was going on about him was the result of involuntary unconsciousness. But his surgical analogues, I fear, wilfully refuse to see, wilfully refuse to acknowledge, and wilfully

refuse to recognise what has been and is being done. Strangely unmindful of the fact, that honest scientific toil has never yet proved other than fruitful of good, they promulgate views ever acceptable to ignorance and indolence; and make the land ring with the false and cruel tale that the value of Listerism is a delusion, a bubble, a shadow, and a myth—at once expensive, complicated, and poisonous. If, on this latter account, it is to be rejected, then may we, with equal justice, say: "Away with anaesthetics; away with opium, mercury, belladonna, with half, or more than half, the means at our disposal for alleviating human suffering and prolonging life."

In the interests and for the credit of British surgery, it is time so unrighteous a warfare should cease. It is time that the irritating dust of an unreasoning prejudice should be swept away. It is time that one of the greatest discoveries and boons to surgery this century has produced should be universally recognised as such. It is time that its discoverer and exponent should be acknowledged as one of whom it may well be said—

"With Genius Nature joins in everlasting covenant still,
The promises of one, the other fails not to fulfil."

The methods adopted for bringing about a regeneration of bones and joints necessitating resection on account of injury or disease, constitute an advance in surgery of such interest and practical importance as to distinctly merit special consideration. To adopt a measure by which the main support of a limb, when diseased, and not only rendering that limb useless, but also perhaps imperilling life by pain and exhaustive suppuration can be removed, with not a mere probability, but, in many instances, almost a certain confidence that it will be restored to the patient, is a triumph than which it is hard to conceive one of greater importance among the developments of modern surgery. The subject has been of keen interest to me for many years, since the time when, in 1865, I witnessed in Lyons many of M. Ollier's experiments, and subsequently repeated them. Strongly impressed by what I then learned, I have since in practice, as suitable cases presented themselves, adopted periosteal preservation in various operations on bones and joints, a procedure with which the names of the eminent surgical trio, Syme, Langenbeck, and Ollier, must for ever be associated. The operative measures on which my experience is based are resections of the elbow, shoulder, and ankle-joints; resection of the diaphysis of the fibula in its entirety; resection of the greater portion of the ulna; of metatarsal and metacarpal bones; and, lastly, of transplantation of periosteum, as a part of the so-called Indian rhinoplastic operation. Still, though the good results obtained by this practice are, in properly selected cases, not open to question, there can be no doubt as to the existing unsettled condition of surgical opinion in reference to the value of the procedure. This, I believe, arises from a twofold cause, one being traumatic, from insufficient care being taken during the detachment of the membrane, and the second, the non-differentiation on the part of surgeons of the cases likely to be benefited, and those in which the adoption of the practice is, as a rule, attended with disappointing results. As to its value, when the membrane is comparatively healthy, and the patient young, there can be no question. The activity of bone production and other signally gratifying results of the practice must be acknowledged when performed under these circumstances. These results, however, are not so striking when the patient is an adult. In some cases, no bone production whatever is observed, and in others the osteogenic process is slow, the product weak and liable to become absorbed. It should also be borne in mind that, in early life, the membrane has a dual function; one, that of increasing the thickness of bone, and the other the repair of waste. In adult life, it is mainly confined to the latter. This rule, however, is not without exception. One instance I can recall of a man, aged 42, on whom I performed a resection of the upper end of the humerus on account of carious disease. The result was eminently satisfactory; not only was there a reformation of the bone removed, as evidenced by comparative measurement, but also a pseudo-arthritis so perfect as to enable him now, as I have recently learned, to use his spade, to plough, and perform with efficiency all the ordinary duties of an agricultural labourer.

Another point worthy of consideration is the value of the practice in adults and children when the membrane is found to be thickened and pulpy. Among the former, as mentioned by M'Ewen, the osteogenic layer is, as a rule, found to be destroyed, the outer layer thickened, vascular, and lined with granulation-tissue, which soon undergoes fatty degeneration. From such a condition, no bone production could possibly be anticipated. On the other hand, a thickened, vascular, cell infiltrated, softened condition is not incompatible with its osteogenic layer being intact, and its activity in bone production unimpaired; in truth, not unimpaired, but exalted, as we observe in acute necrosis, and also in the development of syphilitic nodes. The condition of fatty degeneration of the osteogenic layer is found among both adults and

children, but more frequently among the former. When found among the latter, the cases are, as a rule, badly nourished, anæmic, weakly, and scrofulous. The thickened, vascular, but intact condition of the membrane is what is observed among young persons, and its preservation, therefore, is obviously indicated. In adults, it is rarely observed.

The efforts to produce bone in experiments on the lower animals by periosteal transplantation have not been attended with any very marked success, nor have similar attempts in man been specially encouraging. In only one instance did Ollier obtain distinct evidence of bone formation from grafted periosteum. In the Indian rhinoplastic operation, I have undoubtedly succeeded, after transplanting the membrane from the frontal bone, in satisfying myself of the existence of bone reproduction. When left attached to bone, as in Von Langenbeck's modification of this operation, the result has not been so good, owing to the liability to necrosis of the transplanted or detached portions of bone.

As regards bone transplantation I cannot speak from any personal experience; but, in connection with this all-important subject, I must allude to the great stride made in this direction by Dr. M'Ewen of Glasgow. The case of inter-human osseous transplantation in which over two-thirds of the shaft of a humerus was restored, and an account of which was communicated to the Royal Society last year, is one which must stand out in bold relief in the history of this new departure in operative surgery—one which is with many others an outcome indirectly perhaps, but not the less a result, of antiseptic surgery. For the experience derived from observing the progress towards good union and without pus production of bad compound comminuted fractures when pieces of bone completely separated, and even detached from periosteum, have, after being antiseptically, been replaced, lived, and eventually united to the neighbouring osseous structures, tends, as M'Ewen has pointed out, to show the probability of transplanted bone living. The practice of interhuman osseous transplantation is one which of necessity is applicable to only a very limited number of cases, and the means of carrying it out must rarely be available, as fresh, human, healthy osseous transplants cannot often be obtained. The case, however, which I am glad to say I had an opportunity of examining, is so pregnant of interest, and so suggestive, that it must serve as an incentive to further effort to guide and encourage those working in this direction.

The subject of periosteal preservation naturally leads to that of joint resection, in which it has played so important a rôle. The resection, however, I wish more particularly to allude to, namely, that of the knee, is less associated with periosteal preservation than the other excisions. The surgical merits of this operation being so important and so vexed a question make it worthy of special notice. I will not, however, dwell at any length on the subject, having regard to the fact of its having been recently so ably handled by Mr. Holmes at the meeting of the Association, at Cambridge.

It is not surprising that its position as one of the resources of surgery is not yet generally appreciated, and that controversy should still so hotly rage about it, when we reflect that the majority of surgeons have hitherto regarded it in the light of a substitute for amputation. In doing so, a grave error has been committed, for the indications for one of these operations should never be those for the other. If we accept the view that tuberculosis, more particularly as regards its articular manifestations, is primarily local, but, as shown by Klebs, like cancer or syphilis, transmissible and capable of producing a general infection, a view that mainly from a clinical standpoint I accept, then the question of the importance of early resection at once comes to the front. But it may be and has been said, notably by Mr. Macnamara of London, that in the early stages of strumous articular disease, affecting mainly the synovial membrane, that rest, good diet, and "convalescent homes" will suffice to cure the disease at this period of its development. I admit they may, but in a very small proportion of cases. I would be equally ready to admit that in a small proportion of cases intermittent fever may get well without quinine, syphilis without mercury, iritis without belladonna, and primary union without antiseptics. Who, however, would maintain that, because in a small minority of cases the desired results are obtained without such aids, that therefore it was open to discussion whether they should not be abandoned altogether? In dealing with a broad question, such as the surgical merits of knee-resection, the question as to a treatment that is only applicable to a small fortunately circumstanced minority, and the advantages of which are very problematical, should scarcely be mentioned when a practice is under discussion applicable to the masses of mankind in all countries, climates, and conditions, without convalescent homes at their disposal, or ways of getting constant skilled aid in carrying out an "expectant" treatment for two or three years—a treatment from which a better result than ankylosis can be expected. In patients, too, with a

predisposition to secondary tuberculous deposits, the probability of the recurrence of the disease after "expectant" treatment must be borne in mind.

From my experience, I believe that excision of the knee should not be looked on as a last resource, but that the operation should be performed before any profound organic changes take place, and that when the following conditions are fulfilled: An unbroken skin, an all-important factor; the disease limited, and to the soft structures, an efficient method of fixation applied, and a rigid system of antiseptic dressing of the wound adopted, primary union may in the great majority of cases confidently be anticipated. The alleged unfavourable results of the operation, especially in early life, are distinctly opposed to my clinical experience.

In another group of operations—namely, in amputations—the preservation of periosteum is, according to Von Langenbeck, Trélat, and others, attended with advantage. The formation of a periosteal curtain to cover the cut surface of the bone and its medullary canal is believed to act as a shield or barrier against septic agencies, and diminish the chance of the occurrence of some of the secondary calamities, notably osteomyelitis, following amputations. The method I have in some instances adopted, and with success, is, making a somewhat quadrilateral-shaped flap at the membrane and letting it fall over the cut surface of the bone. Another method, that of M. Trélat, is to detach the membrane all round the bone for fully an inch below the point where the bone had to be divided, making, in fact, a sleeve-shaped flap. This plan must, however, materially protract the operation.

This leads me to consider some other comparatively recent improvements in the operation of amputation, and to bear my testimony to the great advantages to be derived from the adoption of the principle of long anterior flaps, the chief credit for establishing which belongs to the late Mr. Teale of Leeds; and it is a source of pleasure to me that the advantages from his method of amputation were so soon, and continue to be so fully recognised and appreciated in Dublin. In reference more particularly to thigh-amputation, I cannot refrain from noticing the procedure in which the principle of the long anterior flap is embodied—namely, the "single flap" or "single-skin flap" operation of the late Mr. Carden of this city. In introducing this operation, he won for himself a lasting repute for originality, ingenuity, and skill; and I am sure that, in expressing a deep regret at the absence from among us this day of so accomplished and able a surgeon, so wise in council and full of resource, in whom, in truth, were to be found all the qualities of a great surgeon, I only feebly, perhaps, give utterance to the thoughts of all those who knew him, appreciated him, and had the privilege of his friendship.

Gritti's operation undoubtedly owes its parentage to that of Carden; but, although the retaining of the patella and consequent preservation of the normal attachments of the extensors of the leg is a plan as good as it was original with Gritti, still the details of this method prevented the realisation of those advantages which in principle it embodied. Hence the modification which I have ventured to term "supracondyloid amputation"—an operation which, retaining the advantages of Gritti's method, eliminates its defects by lengthening the anterior flap, forming a posterior flap one-third in length of the anterior one, suturing the patella and femur together; and, lastly, and most important of all, by making a high femoral section, but one not involving the medullary canal.

The special advantages that may be claimed for supracondyloid amputation are:

1. That the posterior surface of the anterior flap being covered with a natural synovial membrane, the chances of suppuration and purulent absorption are diminished.
2. Any possibility of the split patella shifting from its place on the cut surface of the femur is prevented by the high femoral section, and by suturing the two bones together.
3. The vessels are divided at right angles to their continuity, and not obliquely, as in other flap operations.
4. The existence of a posterior flap diminishes the chances of any wide gaping of the wound; while the anterior flap, being oval, increases the chances of the stump tapering gradually towards its extremity and assuming the form of a rounded cone.
5. The preservation of the normal attachments of the extensors of the leg.

These advantages embody those of both flap and circular amputation of the thigh, and, at the same time, eliminate their defects.

Although there are many other surgical topics of interest and importance I should wish to discuss, did time permit, there is one bearing directly on surgical progress which, though it must be but briefly alluded to, I wish particularly to mention. Recently, all who have at heart

the progress of scientific medicine and surgery must have rejoiced at the formation of the Association for the Advancement of Medicine by Research. This step augurs well for the future of physiology—the science which is not alone the foundation, but also the framework of surgery, as it is also of medicine and pathology.

At the opening meeting of the Association, Sir George Jessell (the Master of the Rolls) well remarked that there are two things the public require to be instructed in—one, that the future progress of medicine must rest on science; and the other, the necessity for experiments on animals. The great practical difficulty, however—one which, I hope, in time will be overcome—is that the Association will have to deal with a section of the public who refuse to be instructed; refuse to recognise established facts; refuse to weigh evidence; substitute groundless assertion for argument; and wilfully and deliberately accuse the scientific physiologist of a selfishness and cruelty as heartless as it is cowardly. In creating so unjust a prejudice, there is in some instances, doubtless, an unconscious, but in many others, I fear, a wilful attempt to pervert the moral sense of the public. It will be no light task for the Association to instruct such persons, whose wrath is reserved—not for the sportsman, gourmet, or military tyrant, but for the physiologist, who is outlawed if he does not fulfil all the vexatious conditions of an extraordinary Act, the passing of which was simply an insult to our profession, whose aim is ever, not to cause suffering, but to relieve it—not to destroy life, but to save it; and who are ever ready willingly to imperil, and often, with true heroism, do lay down their own lives to save one that is, perhaps, worthless to all but the possessor of it. If in this contention a heartless cruelty is found, on which side is it? Is it with those whose objects I have indicated, or with those who hinder and thwart the realisation of them?

It has been stated with the inaccuracy that, as a rule, characterises the utterances of, in many instances, perhaps, well-meaning, but not the less essentially mischievous section of the community, that takes so keen a pleasure in discrediting experimental physiology, that no practical benefit has accrued to medicine or surgery from it. I would, leaving what has been done in this direction in medicine to other and abler hands, suggest to their consideration a study of Mr. Gamgee's recently published and able work on *The Influence of Vivisection on Human Surgery*. In this, it will be seen that many of the most important developments of surgery are the direct outcome of physiological experiment—as, for example, subcutaneous surgery, arterial ligation, torsion, transfusion, the introduction of the *écraseur*, periosteal preservation, artificial respiration; and, among others, such operations as nephrectomy, ovariectomy, excision of pylorus, and amputation at the hip-joint; and last, but not least, the introduction of the hypodermic injection of various medicinal agents.

It seems, however, and with shame we must confess it, that we are living in an epoch in which the labours and achievements of the greatest physiologists and surgeons, both living and dead, were forgotten and ignored; and for those who endeavour, even at a long interval, to follow in their steps, the statute, which is a blot in the history of scientific progress in England, has been enacted, and enacted by those who are every day only too willing to avail themselves of the great advantages resulting from labours which now cannot be continued, save under restrictions which are well-nigh intolerable. Professor Tyndall has well said that, "however noisy the fanaticism of the moment may be, the common sense of Englishmen will not, in the long run, permit it to enact cruelty in the name of tenderness, or to debar us from the light and leading of such investigations." The great fact to be taught, the great fact to be learned, is, that to experimental physiology must we chiefly look for the means of lighting the paths traversed by those who work in the van of medical and surgical progress; who work conscious that, compared to what may be hoped for in the future, the advances already made are only—as Newton said of his greatest achievements—like those of a child playing with the waves as they break upon the sand. But,

... "Strong in will,
To strive, to seek, to find, and not to yield."

they still labour to realise the fair aspiration that the book of Life may yet be read, not by the dim and flickering rays of opinion, but by the clear and steady light of ascertained fact. Seeking for means to baffle those diseases, fruitful sources of so much sin and sorrow, that up to this have defied our best directed efforts to destroy. Earnestly striving to rescue medicine and surgery from the mists and shifting quicksands of mere clinical observation, and fix them on the foundation of science, and who, ever yearning, like Goethe, for "Light—more light", patiently seek in the exhaustless world of Nature for the golden grains of truth.

Are these efforts to be thwarted and hindered in the country of Harvey and Jenner? It has been well said by Jellett, that "the place

which our country holds among nations must be fixed by the labours of her children; that their success is her glory; that their defeat or dishonour must fall darkly upon her." On us it devolves to see that nothing is done that may render such defeat possible; nothing done that will allow the laurels of scientific medicine to be cruelly snatched from us and transferred to other countries and other peoples. This may, perhaps, be called a selfish form of patriotism. Perhaps it is; but, if so, I would ask, need we be ashamed of it?

I have mentioned many achievements in surgery the past half century has witnessed. Fifty years hence, this great Association will, I hope, meet here again to celebrate its centenary; and my successor will, I trust, with greater ability and eloquence than I can command, tell of as great or greater triumphs than I have done. To enable him to do so we can all aid, some powerfully, others feebly; but still every unit in this great brotherhood can assist; and it should be our ambition as well as our prayer that, when the hour arrives for us to cease from our work, we may all feel, on looking back on our lives, that we have done something to that end. Something—be it great or small—in the interests of our common humanity, in the interests of our loved country, and of a pure devotion to truth, to render the science to which we have devoted our lives, nobler and fairer than before.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF MEDICINE.

At the Annual Meeting of the British Medical Association,
in Worcester, August 1882.

By T. CLIFFORD ALLBUTT, M.A., M.D., F.R.S.,

Senior Physician to the General Infirmary, Leeds, etc.; President of the Section

MODERN FREEDOM OF THOUGHT, AND ITS INFLUENCE ON THE PROGRESS OF MEDICINE.

GENTLEMEN,—Fifty years of patient and self-forgetful toil have passed over the field of medicine since the foundation of this Society. Now, as then, we stand looking upon a boundless and unvintaged land, yet our fifty years of husbandry have not been unkindly nor our hands unfilled with plenty.

We may say, indeed, in this later time that the gleanings of Ephraim are more than the vintage of Abiezer; for, as Hastings, kindling with the new spirit of his time, was both its child and its leader, so this society which he founded has been both the product and the organ of a wondrous increase in scientific medicine. What is that spirit—that *afflatus aliquis divinus*—which in this century has expanded and transfigured our art? It is not the new power of unity alone—that strange new function which is bred in gatherings of men, a thing higher and other than the mere addition of individual faculties; this union the press and the railway have made possible; but there is that something more which has made these means—some masterful expansion which has widened the life and nerved the arm of modern science; which has given breadth to our thought, stuff to our logic, reality and endurance to our doctrines—whence comes this? This comes, gentlemen, of the gift, without which all other gifts are but as apples of the Dead Sea—the gift of freedom. The withes whereby for a thousand years men were bound in body and soul are broken; the dissolution of that tyranny which stalked, haltered, and baited the man who dared to think for himself is fulfilled in our own time, and no longer is it declared to men, "Thus, and thus only, shalt thou think of God and Nature!"

Man has won three victories: he has vanquished the terrors of the old world, brought forth food, warmth, and light upon the face of it, and thus ceased to be Caliban, the earth slave. Then man became a nation; nations strove for the mastery and political freedom; his second victory was won.

Lastly, with the earth his servant and his civil rights secured, the final and crowning work remained, to win the freedom of his mind. Modern civilisation has much to answer for, but it is a glorious thing to live in the first years of perfect freedom; nay, even to live in perhaps the first generation since Pericles, which has dared wholly to cast off the dominion of external authority and to think for itself. Upon a narrow foundation and under transient conditions in Hellas, this com-

plete freedom of man was attained for a brief period. Brief indeed as was the moment, yet even then was revealed to him, as for an instant, the same day-spring as that which is now risen into fuller light. And we find that the new principle of modern life is the same as that which was then—that men released from authority fell under the true inspiration of nature, and therein found an abiding and inexhaustible revelation. As men more and more deeply studied the life around them, they found themselves led into new realms of experience, and to conceptions far wider than they had dreamed of. At last the old and blinding idea of force and matter, as dual, was seen to be factitious, and most mischievous in this, that it divided the faculty of thought into two worlds—into the several worlds of philosophy and of natural history. The former was to be regarded as the higher and chosen sphere of noble contemplation, though, uncoupled with nature, it brought forth nothing; and the latter had the sterility of neglect. We now see once more that this dualism is a phantom, and that force and matter are but one subject under two names. Natural processes are no longer to be regarded as the work of inert atoms, whipped by tangential agents: nature herself is no longer to be studied as a mere framework, pumped by a vital principle, which is itself the nobler object of pursuit, but which submits not to a like study, eluding inquiry or subject to a special and alien kind of illumination. Were science but a closer examination of a dead framework of things, and were minuter investigations but a curious counting of the lesser pins of it, then, indeed, "microscopische spielerien" might be left to the play of the ingenious, and science herself be regarded as but a department of human life. But when we have learned that matter and force are one, that atoms are force-dust, and that we are in the presence of infinity in either sense, inwards or outwards, then we know that the soul may be kindled and the mind fed by depth of penetration as richly as by the loftiest aspirations. As Browning tells us in *Paracelsus*, "to know, rather consists in opening out a way whence the imprisoned splendour may escape, than in effecting entry for a light supposed to be without." The very terms materialism and idealism thus cease to signify an opposition, and fall meaningless to the ground, and the microscope is seen to be as true a source of inspiration as the *Paradise Lost*. No longer, then, thrust back from scientific progress by the reverence of antiquity and the authority of those of high repute in philosophy, which have held generations of men as by an enchantment, we have now in the last fifty years, seized upon the real stronghold of truth, and have added to the riches of the knowledge both of universe and mind, in a measure unexampled in the former history of man. We have won that freedom for our great workers and thinkers, which gives them power to speak and spread forth their doctrines openly. No longer are they compelled to veil their thoughts in the elaborate disguise, which shackled and darkened the words of teachers even so modern and so great as Descartes.

Time forbids, were it otherwise needful, that I should do more than indicate to you the great ingatherings of the last half century. Diseases have been separated and described anew; physiology and pathology—one science in two aspects—have revealed to us the seat and form of injury, inflammation, abnormal growth and decay; the very nature of morbid processes has come to light side by side with the growth of our knowledge of the normal; chemistry has armed us with improved medicines, and experiment is testing their powers and affinities.

But now, gentlemen, what are the fruits of this new harvest? I stand second to none in my belief that all the revelations of pathology and clinics are vain, unless they help to better man's estate. We are wrong by the keen taunt of the "practical" man who cries out, "Where is your science, where is your learning, when the sick man calls to you for help, and you stand the more impotent at his bedside the more heavily you are armed?" Is the ancient saw still true, that "Medicine is a meditation upon death"? It may be true, indeed, that much of our modern insight teaches us only that we can do nothing. But, gentlemen, are we to please ourselves with the pretence of an unreal knowledge? Are we, on the one hand, to play with traditional therapeutics which we have found to be hollow and out of relation with the facts of physiology, or, on the other, to elaborate a fanciful scheme of novelties, and, unmindful of the natural history of disease, to toy with new alkaloids, and to fret the vitals of the sick by telling pills and drops as one tells beads, by the long day? Shall we assume a power which we have not, and wear the mask of the priest or the charlatan? Let us rather tear it away boldly, abiding by the broad truth that, whatever be the fate of to-day, ultimately *scientia et potentia morum in eum convertuntur*. We foresee doctrines which shall no longer fluctuate and vary with schools and disciples, but which, growing from the very womb of nature, and nurtured by her, shall flourish as life itself. In one of those sentences which are so happy by virtue of their

profundity, Bacon tells us, "*Lucifera experientia non fructifera querenda sunt*." Know first what life and disease are, and you will learn why they are, and how things shall be otherwise. Let me illustrate this from the third subject for discussion in this Section. Doubtless, our recent discoveries in the pathology of Bright's disease, of emphysema, of hepatic and cardiac degenerations, and the like, have at first beaten down our crests, and forbidden us to rely upon the old infallible cures for dropsy; and we naturally fell, in our despair, to the belief that therapeutics are vain and disease incurable. Thence there arose indeed, in many of our most learned medical naturalists, a noble scorn of shallow doctorings and druggists' formulæ, and too sweeping a condemnation of all medicine. But do we not now see whence the light is coming? Are not many of our young physicians tracking, like sleuth-hounds, the causes of these effects, and surely learning why a kidney shrivels, and why a heart or lung decays? Our children, then, having forgotten that diseases were ever regarded as separate entities to be ejected from the body, and learning to discover and to deflect morbid currents at their springs, will not await the appearance of these irreparable mischiefs, but will prevent their beginnings, and esteem him disgraceful as a physician who allows such states to become prematurely established.

It is herein, gentlemen, that our new arms against disease will find their potency; and to this end we must have a truer conception than we mostly have of the genesis of disease. No mere *enumeratio simplex* of symptoms or of pathological detail will suffice for this, nor even a full description of species. We have to work out the genetic affinities of diseases themselves—their origins, parent stems and alliances, as well as their issues. We must seek out and define the laws or powers inherent in matter, by which diseases appear, develop, vary, vanish or prevail: and this not in the limited field of man alone, but far beyond it. The medical Darwin has yet to arise who will map out the evolution of disease, reducing the complex to the simple, and unfolding the modes of its development. We can have no complete therapeutics until the science of comparative nosology is in great measure constructed.—a science as yet scarcely begun—nay, not yet adequately recognised.

In this field, so far as man is concerned, must lie much of the work of the Collective Investigation Committee, and I venture to think, its chief part and most important work. Let me, for instance, call to your mind the now well known genetic affinities of asthma, gastralgia and eczema, and, as a parallel phenomenon, the power of arsenic in all these affections. This family is again subordinate to the greater order of primary neurotic diseases, which are found in persons marked, not only by common abnormal, but also by common normal or sub-normal characters—characters of aspect, fashion, manner and disposition. Take, again, the long series of affections which belong to the equivalent order of lithiasis, with its families and genera. Patients show a true instinct in clinging to the doctor who "knows their constitutions"—that is, who has witnessed their history and the conditions of their lives; and who, in default of a scientific knowledge of their evolution, nevertheless has watched their own family and personal growths, outgrowths and weaknesses, and the external circumstances under which these have had their being. We note, indeed, how, in spite of the infinite multiplication of marriages, certain broad types of constitution still subsist; and in time we may learn to reduce the infinite variety of maladies to a few chief constitutions, and these in their turn may be allied to each other as the gouty is to the neurotic, and so forth. Now, can it be doubted that these several constitutions have their own issues in grosser pathology, and that thus the drift of families, and even of individuals, to specific organic disease may be learned, predicted and deflected? I have said that the day is perhaps not far off when premature organic disease will be looked upon as the outcome of a long series of foregoing deviations from the normal, and as the consequence of previous blindness or blundering. The great future of therapeutics, then, gentlemen, lies, not in diseases and formulæ, nor in the discovery of great remedies for great maladies, but in the counteraction of earlier and simpler morbid phenomena; remembering that the magnitude of issues has no relation to the magnitude of things. Professor Geikie tells us that the modern geologist has to see that even Europe and Asia were not created, but *grew*; and when the whole phenomena of life, animal and vegetal, are comprehended as one, and this one is understood to have grown from the simplest beginnings, its diseases being but the reverse of this growth, then certain broad and simple laws of deterioration will be discovered, and from these the more complex as we rise in the scale of physiological complexity. With the attainment of the higher forms of life the most complex diatheses will be co-ordinate, and present more and more heterogeneous phenomena, until, with the full diversity of human life, we shall understand the correlative display of its manifold modes of

undoing. Yet farther: our comparison cannot be bounded by the study of our own nearer brethren—of the men of our time and country.

Clinical phenomena are not as the chemical or physical, which can be reproduced at will, and are calculable for any latitude. We have to learn how diseases vary with the conditions of place and time, of season and soil, and even of race and temperament. For it may turn out that the races which enter even into the composition of our own nation bring each their own tincture of decay. I remember that, when I left Sir William Jenner's class in Great Ormond Street to practice in Leeds, I was struck by the singular fitness of his description of the "tubercular" subject to the slightly built oval-faced dark-eyed prehistoric race which has survived so many subsequent incursions and defeats, and still makes so large a part of the population of a district, such as West Yorkshire, which lies under the hills of Strathclyde.

Till these studies are more complete—and as yet they are scarcely begun—we cannot hope for a system of medicine, but must content ourselves with a mere *corpus prescriptionum*; and the skill of the physician must still lie rather in a "kind of felicity" than in a measured and orderly power. Towards this higher phase of our own art let us strive. Our knowledge of the physical conditions of life is increasing daily, and not only so, but within the life of this Association marvellous discoveries have been made in one vast field of inquiry by the labours of Pasteur and Lister, and their brilliant disciples. I refer to the inquiry into those vital influences which disturb the body from without. Until we can eliminate the chief morbid factors which affect us from without we cannot understand our failures from within. In his treatise on *Airs, Waters, and Places*, Hippocrates laid the foundations of the study of the external factors of life: it has been left to our own day and to the great teachers I have named to advance this research from the study of the inorganic factors to that of the organic.

Again, the natural history of acute disease has been mapped out with a degree of completeness which enables us in the continued fevers, in acute pneumonia, in local inflammations, in pulmonary and encephalic hæmorrhages, in chorea, delirium tremens, mental diseases, and so on, to approach somewhat nearer to positive prediction, or at any rate to make some distinction between the course of nature and the effects of our own interference.

Another great and curious department of knowledge has been opened out to us during the life of this Association, one which affords yet a much wider scope for discovery and application. I refer to the embryological interpretations of the phenomena of disease; these being traced either in arrested development, as in many defects and deformities of body and mind, or in retrogressions, such as leucocythæmia. The comparison of embryonic periods in the same and in different animals may be a master-key even to the diatheses themselves, as may be suggested, for instance, in the chief functional disorder of lithiasis, wherein the formation of urates in place of urea is the resumption of a state normal to inferior types. The strumous diathesis again is, it would seem, a permanent arrest of development at a stage short of the highest, and may indeed be, and commonly is, artificially attained by exposure to conditions such as deprivation of light, etc., acting in arrest of the completion of growth, as we know that they do in case of lower forms of life. The later work of our histologists is full of suggestions of this kind drawn from the study of heterogenous growths. Finally, I may refer briefly to a very different method of research—to the numerical—which, although by no means a new principle, may be called nevertheless a product of our own half century, as beforetimes the means of collecting statistics on scales large enough to eliminate minor variations did not exist.

Many great lines of thought and observation are thus convergent upon the study of medicine, and are enlarging the foundations of the science upon which alone the successful art can be reared. What we have then to-day to proclaim is that, during the last half century we have ceased to build castles in the air, have turned more frankly and loyally to nature, and have sought our inspiration and found our reward in the study of phenomena which our forefathers despised as gross and material.

Those outer and commoner things which they regarded as finite and mortal, and at most but baser instruments to support conceptions issuing from the mind of the philosopher himself—these we find infinite and immortal—not governed by spirit, but themselves inspired—themselves the ministers of perfect law—themselves potent with all life and all thought—themselves not the counters, but the very words of the Creator. To take once more the phrase of the father of modern thought, "*Itaque hominum intellectui non plumæ addendæ sunt, sed pæmbum potius et pondera*." We have learned no more to soar aloft into emptiness, but, Antæus-like, to seek fresh life in the renewed embrace of our mother earth. This is not only a new heaven in our

thought, it is a reformation of it; it is no more a commerce of mind and things, but an identity.

As did anatomy two hundred years ago, so in our time has medicine conquered her independence; for this other men have laboured, and we are entering into their labours. And although our ways be still dark and slippery, I trust that those who shall be gathered together in our hundredth *Comitia Tributa* may rejoice in a yet more glorious light, and may think gratefully of us of to-day, for in the words of a modern poet—

"The first still follows one that goes before;
The last still hears a toiling foot behind."

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF SURGERY,

At the Annual Meeting of the British Medical Association,
held in Worcester, 1882.

By AUGUSTIN PRICHARD, F.R.C.S.,

Consulting Surgeon to the Bristol Royal Infirmary; President of the Section.

A RETROSPECTIVE VIEW.

My principal duty, whilst occupying this chair, will be to listen to the papers which, I am very glad to see, have been promised in good numbers, and to learn from them, and from the discussions which we are to hold upon one or two very important subjects, all the newest and best development of our art.

But I must, first of all, record my thanks to the Council of our Society for selecting me, on this interesting occasion of our jubilee meeting, to the important post which I now hold, of President of the Surgical Section, a selection no doubt suggested by the number of years I have been a member of the surgical branch of our profession, and, I may add, of this Association; for in the year in which it attained its majority, viz., 1853, I had the honour of reading the Address in Surgery.

Now, in those old times the various addresses were called, and were supposed to be, retrospective, giving accounts of the scientific progress in the previous year of the several branches of professional work; but, in consequence of the periodical publication of "half-yearly abstracts" and "retrospects," the custom was changed, and the orators chose their own subjects, upon which they could have the rare comfort of speaking in an authoritative tone and *ex cathedra*.

And on an occasion like the present, the fiftieth birthday of our old Provincial Medical Association (to call it by its original title), to resist the temptation of looking back towards our far past is quite impossible; and, if we can rescue some material of value which is in danger of premature burial, the retrospect will be profitable also. It is not my intention to give an account of surgical changes and progress in the last fifty years; such an attempt would occupy all our time to little advantage, and I am not the surgical orator of the year; but I am bound to say a few words at the beginning of our sectional work, so as practically to introduce myself in my new position to my surgical colleagues; and as at this meeting many besides myself will find themselves turning round and taking a view of our past surgical life, I shall venture to touch on one or two objects in the far distant landscape.

In the period to which I am alluding, when I began my professional work by the usual five years' apprenticeship, there were no æsthetics, no antiseptics, no clinical thermometer, no ophthalmoscope, none of the marvellous and invaluable revelations of the microscope; even the stethoscope itself was young, for Louis was at work in Paris at his investigations into the diseases of the chest in those early days of auscultation. It was but a very few years after the passing of the Anatomy Act, and, although I never took any personal part in the proceedings, yet exciting stories in abundance were rife with reference to the adequate supply for the dissecting-room. An uncle of mine, a very promising young man, died of disease of the chest, the effects of cold caught by being locked up with a fellow-student half the night in a damp cell, in his wet clothes, having been caught whilst out on an expedition such as I refer to. These events were long ago, it is true; but we can hardly sufficiently admire the zeal, born of necessity, which took these young fellows out, after the work and amusements of the day were over, at the smallest hours of the morning, dressed as labourers, and armed with a lantern and shovel and pickaxe, to some dark church-

yard, then dig open the newly filled grave, get out the body, and drive it home in their gig before the town was astir. A late colleague of mine, who taught anatomy in Bristol under these difficulties, in what some of you may consider prehistoric times, has, before now, shown me a heavy bunch of huge keys, all ticketed, which were duplicates that unlocked all the churchyards of Bristol and its neighbourhood. Some few of the stories connected with these events have been published from time to time, in Sir Astley Cooper's life, for example; but there are members of our profession still living who shared in these dangers and difficulties, and it would be well worth while if someone would collect some authentic accounts of these doings before the whole generation passes away, and before they come to be considered an incredible and impossible part of our professional history; and to make this suggestion is one of my reasons for touching on the subject.

In those old days we had to bleed, cup, and draw teeth, and to make setons and issues as part of our daily work. It is possible that some of my hearers may never have bled a patient, and scarcely know the look of a lancet-case; and to them, as to me, the wonderful change in practice between now and then must be striking, when I state that I have bled more than forty hospital patients in one day. We are too much afraid of the loss of blood now; and I still think that a man in robust health who meets with a crushed limb requiring primary amputation has a better recovery, if he have lost a moderate quantity of blood at the time of his accident. Those old vigorous bleeding customs have been rightly doomed, and can never return; but I am sure that surgeons are too quickly getting out of sight of one very valuable remedy in the treatment of such cases as injuries to the head and chest in certain stages.

I fear that fashion, and the opinion of an outside public uneducated and ignorant as to medical matters, have had an undue share in effecting this change; and why, except for this fashion, have we neglected another old and important aid in the treatment of disease of more chronic kind? I mean counter-irritation of various forms, which is sound in principle and most useful in practice. We are now taught to look with suspicion if not with dread on a drop of pus; our predecessors called it laudable; and in my time numerous and ingenious were the devices to produce a suppurating surface. I have no wish to defend the treatment such as I saw formerly, when Dieffenbach and Jüngken at Berlin, and Velpeau and Roux at Paris, after an amputation, would fill the stump between the flaps of skin with dry charpie, before bringing them together with bandages, to ensure a good suppurating surface. The mortality after these amputations was a sufficient warning against the plan; but for chronic joint-disease, for chronic eye-disease of various forms, especially the chronic inflammations of the cornea, for chronic inflammation of the middle ear, and, I believe, for a very much larger number of chronic internal maladies in the domain of the physician, a seton or issue, or some other discreet mode of counter-irritation, is of the greatest service, and not nearly often enough used.

And as time goes on, new operations and new remedies are brought forward and established for a while, and old ones that have fallen into disuse are resuscitated and started afresh, and rightly there ought always to be the survival of the fittest; but this is not by any means strictly the case. Certain operations, such as amputations and herniotomy, and also other remedies which we use as the acknowledged means of saving life, are established and survive; but among those not quite so urgent, fashion, or some other equally irrational cause, not unfrequently steps in to interfere with our progress. Some such inadequate cause no doubt first started the growth of the great medical imposture, homœopathy, which has attained such a development amongst us; and although it has invaded the territory of the physician much more than ours, I nevertheless think that it has had the effect in some degree of discouraging, or diverting into a wrong channel, the search for pathological truth.

In the days before the use of anesthetics, we were without the powerful argument we now use in advising a patient to submit to an operation, viz., that it would be painless; but the difference in this respect, in the majority of cases, was not very great, and patients made up their minds to what was inevitable almost as well as they do now. Nothing, however, could be done to prevent the effects of anesthetics to the patient more forcibly, than the remembrance of the signs of terror or almost despair in the case of *anæsthetic* amputation for crushed limbs, when the patient saw the surgeon taking up the knife to remove the second limb; and this I have seen on more than one occasion. Under such circumstances, a very important element for the patient was the speed with which the operation was completed; I consider that rapidity in operating is almost as essential now as it was then, and that it is not sufficiently attended to. The late Mr. Liston and many others would complete an amputation in three quarters of a minute, and this with the greatest accuracy and neatness. I think that I have noticed, as far as my experience goes, a tendency to greater deliberation and slowness of

procedure in operating; and this I hold to be a mistake, for I am convinced that the shorter the time that the patient is under the influence of an *anæsthetic* and in the hands of the operator, the better.

Of the operations that have been revived, one of the groups is the excision of joints; the excision of the knee-joint having been performed, as is well known, with remarkable success, by Mr. Park of Liverpool in 1803, and the discussion upon the subject as part of our programme renders my saying anything about it at present superfluous; but there is an operation which, after resuscitation, is in great danger of being buried again, and I should like to say a word against its re-interment. I allude to median lithotomy. There will always be difficult cases of stone in the bladder, which lithotripsy with all its improvements will not be able to touch, and which must be cut. The advocates of the median section, and I confess myself to be a warm one, contend for it that, whilst it is equally efficacious, it is in the adult a less dangerous proceeding than the lateral operation. I have not such frequent opportunities, as I had formerly, as one of the acting surgeons of the Bristol Royal Infirmary, of performing lithotomy; but I have done no other kind of cutting operation for stone for many years, and in any future case should certainly have recourse to it again. In the young boy, the operation is more difficult; and although the usual lateral section is very little fatal in young subjects, I think that the median has two definite advantages. There is less risk of hæmorrhage from a cut in the middle line wherever it is, and the little patient is able to hold his urine sometimes from the actual date of the operation, or the next day, but always much sooner than when the neck of the bladder has been divided laterally. In many cases they have been known to get up and run about the room in two days. In the case of the adult, the wound would not be so deep, there is little or no fear of bleeding, and the power of retaining the water in the bladder is not so completely lost. I have removed stones weighing upwards of three ounces by this method without any difficulty.

The following curious case was under my care some time ago. A very tall and powerful young man, aged 23, with a large development of the external genitals, but doomed to a life of celibacy, contrived to let a cylindrical stick of red sealing-wax slip down his urethra into the bladder; and after bearing it as long as he could, he had to seek advice. His medical friend, with much ingenuity, proposed and tried the injection of a solution of borax, with the idea of dissolving the foreign substance, but without much effect; and he came under my care. I performed the median section, but, from the depth of the perinæum, my finger could only just reach within the prostate. I removed with a forceps a rounded mass of sealing-wax, having little or no trace of its original shape, covered thickly with phosphates; and several small pieces were washed out. He had no trained or other nurse to whom I could give precise directions; and, consequently, when visited in the evening, it was found that his bladder was full, for he had with much pain retained his urine all the day, having mistaken what I told him on his recovery from the *anæsthetic*. During his convalescence, which was complete, he passed a piece of sealing-wax through the urethra, and had an attack of orchitis. The bladder kept considerable power of retention throughout. Perhaps some of my hearers may be as ignorant as I was, before the medical man whom I met told me, that borax is a solvent of sealing-wax; and I find on experiment that it is really so.

Gentlemen, I feel that I ought not to be detaining you with my desultory remarks, put together in the short intervals of a busy time, while we have before us such an interesting programme of scientific work to get through.

Surgery claims for herself her full share of the wonderful inventions and improvements of this energetic age; and no one may foresee what wonders the next twenty years may bring forth. She is going on in nearly parallel lines with her sister, Medicine, having the same terminus to reach, viz., the relief of human suffering; and at the many points when the lines closely approximate we get the benefit of the recent therapeutical discoveries which she has made, whilst we, on the other hand, more than repay the debt by the help we are frequently called upon to give.

My old master at St. Bartholomew's, the late Sir W. Lawrence, after his first trial of Eschsch's tourniquet, said that he had certainly never expected to see the day when he could remove a patient's limb without his feeling any pain whatever, or losing a single drop of blood; but in the more immediate present, in addition to these and other wonders, we have to chronicle the bold achievements and marvellous triumphs of abdominal surgery, from which it appears that but few organs of the body are out of the reach of the surgeon's help, and that operations for the cure of maladies within the abdomen, a few years ago considered so perilous as to be unjustifiable, are now daily

done with a degree of safety and a rate of mortality more favourable than that of the ordinary capital operations not very long ago.

Wounds of the intestine, except a few rarer cases where the damage was superficial and easily reached, have hitherto been left to the tender mercies of the *vis medicatrix nature*, and a little opium. Now they are sought for and stitched up, and surgically treated like any other wound, and the responsibility of the case is transferred from nature to the surgeon. We have to record the series of operations which come under the general head of osteotomy, by which bent limbs are made symmetrical, and knock-knees straightened, and other osseous deformities of the body corrected; and we have besides ingenious improvements of all kinds in our appliances; new instruments, new ligatures, bandages, and whatever other things the surgeon requires in his daily work, far too numerous to mention.

Undoubtedly, a large share of these successful results is due to the introduction of the antiseptic treatment of wounds, which gives the operator more confidence that the wound which he makes will not, of itself, prove a source of danger to his patient; and we necessarily come to the conclusion that anaesthetics and antiseptics combined have been the chief steps by which we have reached this high point on the road to success.

During the year that now expires, since our last annual meeting, among those who have gone to their last home are one or two whose names, well known in years gone by, which I should like to mention before I sit down.

James Luke, formerly of the London Hospital, a man of high surgical note in my earlier days, twice President of the Royal College of Surgeons, of which he became a member sixty years ago, member of the Council and examiner, died at the good old age of 82. He had, of course, retired from work for a considerable time: so much so, that, probably, the younger generation of you scarcely knew his name. He was distinguished for hard and steady work as an anatomist and surgeon, and for his practical knowledge of our branch of the profession. I believe that he was the first to insist upon a small incision in the operation for strangulated hernia, instead of the older plan, which I have seen adopted, of laying open the skin, and coverings, and sac, from top to bottom, whatever the size of the rupture.

John Flint South, of St. Thomas's Hospital, another patriarch, formerly president, councillor, and examiner of the College, whose membership dated from the year 1819, had reached his eighty-fifth year. He was an accomplished surgeon of the old school, highly educated beyond the usual limits of a professional education, with strong classical and literary tastes; and he also did some good work for the advancement of the surgery of his time.

Then James Spence, the well-known distinguished surgeon, and professor of surgery in Edinburgh University, our orator when we met at Edinburgh in 1875, died at work this year, at an advanced age.

And Pirogoff of St. Petersburg, whom we all know by name, and who is recognised as one of the surgical authorities of our time, died also at an advanced age, but still at work.

Professor Busch, of the University of Bonn, who was in London last year at the meeting of the International Congress, died at the earlier age of fifty-five. He is stated to have been a favourite pupil of the famous Johann Müller, the physiologist, and the cause of his death was perforation of the appendix vermiformis.*

Nearer home, Mr. Gore of Bath died almost at work, in his eighty-third year—a skilful provincial surgeon, of great note in our neighbourhood; and Dr. Greenhow of Newcastle, once an active member of our Association, reached the great age of ninety years. He became a member of the College of Surgeons in 1814, and was made Fellow in the first batch of Fellows created in 1843. He was a first-rate surgeon and operator.

I have not chosen these names because of the great ages they attained, but because they are some of the most distinguished of the surgeons who have been taken away during this past year; and they afford another interesting proof, were any required, that the work of the brain does not necessarily wear out the individual; and, as is the case with the learned judges and the bar, some that work the hardest live the longest.

May the time never come when we cease to hold in respect the memories of those who have passed away, after a life of hard and useful work and good service.

* Müller was transferred to Berlin University, where I had the privilege of attending his lectures on pathological anatomy. It was then currently reported among students that, while professor at Bonn, he began to practise as a physician, his first patient being a dear friend of his own, who died in spite of his efforts to save him; and the necropsy revealed, what he had not suspected—viz., perforation of the appendix vermiformis by a cherry-stone, which so disheartened Müller that, from that time, he devoted himself entirely to the scientific part of our work.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PUBLIC MEDICINE,

At the Annual Meeting of the British Medical Association,
held in Worcester, August 1882.

By ALFRED CARPENTER, M.D.,

President of the Section.

THE EARLY WORK OF THE ASSOCIATION IN PREVENTIVE MEDICINE.

GENTLEMEN,—It is a great privilege to be the President of a Section of our Association on this, the fiftieth anniversary of its foundation. On this occasion, some might think it would have been more in character, if the Public Health Section had been presided over by some distinguished *savant* who had himself advanced the study of preventive medicine by his own immediate work in the line of original research. There is, however, a fitness of things in the fact which is probably at this moment in your minds, that one who is neither metropolitan or provincial, and whose sanitary work has been mainly observational and executive, should occupy the position of President in this Section on this anniversary. The Provincial Medical Association of 1832 has now become cosmopolitan as well as British; its ramifications are co-extensive with the empire; and its members are found in all parts of the world. A large portion of this rapid growth has come to pass because its foundation was intimately associated with inquiry into the causation and prevention of disease, and the application of the principles which regulate the health of the general public. When our founder put forth his programme, there was no general Association for the furtherance of those objects, which to my mind have revolutionised the system of medicine. The prospectus which he published in 1832 put forth as a *raison d'être* "The investigation of the modifications of endemic and epidemic diseases in different situations, so as to trace their connection with peculiarities of soil and climate or with localities, habits, and occupations of the people."

I claim the object which is stated in this paragraph in his prospectus as the principal lever by which the success of his movement has been achieved. The whole of the five points contained in his syllabus could only be obtained by a combination of persons, and the mutual support which observers over large areas could afford; but not one equalled in importance that which is now known as the science of preventive medicine, and which is contained in two of the five points advocated by Sir Charles Hastings.

The establishment of this Association at Worcester in the year 1832 may, then, be fairly looked upon as the starting-point in a new campaign, which involved the prevention of all kinds of disease, and made that object of higher significance than the cure. True it is, that many pioneers had surveyed the confines of this comparatively unknown country, and had penetrated sufficiently deep into its recesses to be able to make partially known the wonders which a study of its natural history revealed; but, being a study that required combination and intercommunication at numerous places, and with many persons upon corresponding lines, to bring observation so made at many points to one focus, it required something more than the work which single individuals, however gifted, could effect. The Provincial Medical Association was just the organisation which was required for that purpose, and which, though faulty in many things, did very much to effect the object sought for.

Let us look for a moment at the substance of our founder's syllabus, and the five points upon which it is based. In the first place, it is obvious that the best means to be used for the cure of disease will be the outcome of individual experience, and that object stands first in the programme. But it is properly and immediately followed by the second and third, which together make up a large part of the questions involved in a consideration of "Public Health", and which are collective rather than individual.

As regards the remaining points, it is true that the trying circumstances which often arise in courts of justice are better borne, when we are sure of the support of our professional brethren; whilst the maintenance of the honour of the profession, and harmony amongst its members, are noble objects to be attained; but these points are much more of a personal and individual character than those which

belong to "Public Health". They are limited in their results to the units of society, and seldom extend beyond the personal influence of those units; whilst the objects which follow from the study of preventive medicine produce effects which, in the end, not only react upon the nation, but upon the whole kingdom of animated nature. We may, therefore, fairly assume that the benefits which the British Medical Association has been instrumental in producing have been enormously enhanced by this part of our founder's programme; and that, of the five points of his syllabus, those connected with preventive medicine held, and will continue to hold, the most important place, because they are bonds which are most capable of uniting us together in a general brotherhood for one common beneficial and unselfish object, whilst they unite us most directly with the public at large, for it is the only Section at its meeting to which the outside public are admitted.

I propose, with your permission, to review very shortly the sanitary work which has been directly performed by the Association, and which is embodied in some of the early volumes of its published *Transactions*. These appeared before we had any weekly journal to amalgamate us more thoroughly together. Some of that work has been undeservedly forgotten. I do not think I can do greater honour to our founder than to recall to your memory some of the prominent points which are a part of its history, especially those which are more directly connected as sanitary work with him and his colleagues in Worcester and its neighbourhood.

The address of the founder occupies the first place in the first volume, and it is comprehensive and general. There are, in the same volume, some valuable observations upon the objects and modes of medical investigation by Dr. Barlow of Bath, and with it is a proposal by Dr. J. Conolly of Warwick to establish County Natural History Societies, for ascertaining in all localities what states are productive of disease or conducive to health; thus connecting our own particular work with the objects and transactions of the Association. There is also a valuable report upon the state of disease in the city of Worcester during the year 1832, by Dr. R. N. Streeten of this city, which will probably be referred to by others at this meeting in more detail than I need give to it, they having more direct and personal knowledge of the points to which it refers.

The second volume is highly topographical, as are large portions of the first series. There is also a paper by Dr. J. Brown of Sunderland, upon the variations in the production of certain diseases not usually supposed subject to epidemic influence, which takes us into the region of general illness, showing that our work is not to be confined to epidemic or infectious conditions. There are also observations upon the cholera which appeared in Wolverhampton in the autumn of 1832, by Dr. T. Ogier Ward; followed, in the third volume, by remarks by Dr. Symonds on cholera as it occurred in Bristol.

There is also an account of scarlatina as it appeared in Beaconsfield, in the autumn of 1832, by Mr. N. Rumsey. Time would fail me to do more than quote these papers, as clearly indicating one of the directions in which the Association proposed to work.

A series of questions upon vaccination was formulated by Dr. Baron of Cheltenham for distribution among the members. The Council appointed a Committee at the Bristol meeting to take up the whole subject, and to report upon it; but it was a wide and an important matter. Much deliberation was, therefore, devoted to it, and the *personnel* of the Committee was enlarged at a subsequent meeting, and before the report was presented. The third volume takes up cholera and scarlatina, by the same authors as before.

There are in the fourth volume some capital topographical reports upon the district around Malvern, by Mr. Addison. These reports are very excellent, and appear to have done much to call attention to local conditions; but they were not continued regularly. Attention was drawn to them in the year 1850, in the hope that they might be continued.

The proceedings in the general meeting which was held at Bristol directly connected the Association with the agitation which was then springing up throughout the country upon the subject of the registration of disease; and a resolution was passed, calling upon the Legislature to make arrangements for recording the causes of death in the registers of mortality. The Secretaries were directed to place themselves in communication with the Committee of the House of Commons then considering the state of the parish registers, and to urge this point upon the attention of that Committee. Their representations were of some effect, for the Registration Act was passed shortly afterwards; and the "indefatigable Mr. Farr", as he is termed in the report, comes on the scene, supported by the whole influence of the Association; and Dr. Farr's work has been in the past a foundation for observation and correlation as regards Public Health, and will continue to be so for all future time. The presentation of the Hastings Medal to him at Cam-

bridge in 1880, being at the close of his public life, was a lasting memorial of his services to sanitary work.

The fourth anniversary, held at Manchester, was distinguished by evoking a power very marked in its character, and evidencing the determination of the Council to consider the subject of "preventive medicine" as of paramount importance. The Council in its report says: "If medical observers had been content to mark with simplicity the series of events belonging to epidemics, like as did Hippocrates and Sydenham, we should not have been so much in the dark as we are at the present day. . . . Convinced that an extensive accumulation of facts is above all things essential, the Council earnestly requested each member of the Association to keep a register of the rise, progress, and decline of epidemics in his own district, being very particular as to dates and localities, and of the object desired; so as to discover, if possible, the effects of external influence in the production and propagation of those diseases. The condition of the atmosphere should also be registered, particularly its barometric, thermometric, and hygrometric states. The object is not to build a theory, but to record facts, from which useful deductions may eventually be drawn; and, having stated this, the Council are satisfied that each member will feel it his duty to contribute his quota to so desirable an end. The register, completed on the last day of May in each year, should then be forwarded to the Council." The report then goes on to say that, on a subject where the want of extensive and careful observation is felt, "the Council feel warranted in asserting that they expect the most satisfactory results from the combined observations of the Medical Association, forming a phalanx of observers never before known in the annals of British medicine."

I quote this paragraph in its entirety from the report presented at the Manchester meeting in 1836, for it shows that the clear-headed founders of the Association had in view the very arrangement which has been only recently effected by the energy of the President for 1880-81. The combined observation Committee which Professor Humphry has so ably founded, and Dr. Mahomed has organised, and which has already put out ramifications in all directions, is a part of the mission which the Association was bound to perform; and I congratulate the Association upon its completion, though it has taken forty-five years to bring it to a culminating point which involves success, and which could only arise after our financial condition was secure.

The fifth volume of *Transactions* contains some excellent papers, topographical, geological, and statistical, referring particularly to Bolton, by Dr. Black. There is also an article on "Glanders in the Human Subject," which is marked by a careful notation of facts by Dr. James Johnston. He sums up his observations by stating that, "Disorders may be communicable from one species to another, and that glanders, supposed to be peculiar to the horse, has lately been observed in man." The writer does not allege that he was the first to draw attention to the subject, for he refers to cases published by Mr. Travers, Dr. Elliotson, Mr. Massey of Nottingham, and others on the continent, but he says that the materials at hand were scanty. He connects the cases with farcy, and points out its likeness to gonorrhoea and syphilis, and draws attention to the effect upon human beings of matter from animals, which at that time was supposed to be unlikely to happen, the opinion of most physiologists being that there was an absolute barrier between the two classes of creatures, notwithstanding the evidence afforded by Ceely's observations. It was a good work, associating disease in man with its factor in the animal kingdom, so as to bring that connection forcibly to our notice, and to popularise the idea in the minds of the profession. It has helped to bring forth important fruit. The same volume contains a masterly report upon the then condition of medical relief for sick paupers by the Messrs. Rumsey and Robert Ceely, which, with a paper by Dr. J. Yellowley, addressed to Lord John Russell, was greatly instrumental in drawing attention to the terrible evils under which at that time the poor of the land were placed by the local authorities, and to the serfdom under which medical men laboured, who were appointed to attend upon the poor. This serfdom could not, but for our Association, have been fully exposed to public view. In those days, there were no local newspapers to ventilate the grievances of the oppressed local doctor. The medical press had a very limited influence, and was seldom read by others than a small body of medical men, who were without any kind of political power; for which reason, time-serving politicians scarcely cared to trouble themselves with us and our complaints. They could not have been successfully ventilated, but for the services of a few men who, like the founder of the *Lancet*, were able to wield the cudgels with intrepidity and vigour on behalf of their oppressed brethren, the parish doctors. The welfare of our profession demanded the presence of some of our brethren upon the benches of the House of Commons, and it is an absolute necessity for our tem-

poral welfare now as then. It is only by that means that the ministry of the day can be brought to consider complaints connected with payment for services rendered or official arrogance, be they ever so well founded. At the same time, it unfortunately happens that we are not likely to have any immediate representatives of the profession in either Houses of Legislature.

In the sixth volume we find a report upon "Influenza, or Epidemic Catarrh," which appeared so mysteriously in the winter of 1836-37, and, but for the Association, would have left very little record of its infection beyond a few local monographs. The Council did that, however, which we trust will in future be done by the Collective Investigation Committee, now acting under the instructions of Dr. Mahomed. They issued a circular to the members, requesting information as to the origin, progress, and duration of the epidemic; the atmospheric phenomena attending and preceding it; together with such other particulars as might be necessary for the elucidation of many questions of interest immediately connected with the epidemic and its surroundings. A series of eighteen questions was issued, and a Committee was appointed at the Cheltenham meeting to examine the replies which had been sent to the Council, and to draw up a report upon the answers. An elaborate report was accordingly edited by Dr. R. J. N. Streeten of Worcester, and Mr. Addison of Malvern. It occupies sixty-seven pages of the sixth volume; and, upon page 558 of the volume, we find a chart with dotted and shaded lines, showing the apparent alliance between the fall of temperature and the rise of influenza. But the supposed influences are shown to be checked, by evidence obtained from many parts of the country; they did not stand in the relation of cause and effect, for the conditions were present in some places, but were not accompanied by the influenza. This chart is an evidence of the commencement of the use of a means which is now very generally adopted, and which has become an absolute necessity in determining the rise and fall of influences which may or may not affect each other, and which similar charts are able to depict in the most immediate and satisfactory manner. They are often used to show the non-influence of supposed causes, as well as the direct sequence of antagonistic or allied forces in the prevention or in the production of disease. The first use made of the chart by the Council of the Association was, to dissipate the error which was then generally accepted as true, viz., that the influenza was the result of a sudden extensive snowstorm, and had simply to do with rise and fall of temperature. The report for the year 1837-38, which was doubtless drawn up by our founder, refers in congratulatory terms to the result of the inquiry regarding influenza, and states that, in all future epidemics, a similar plan may with propriety be adopted; and it encouraged the Council to issue queries of a similar nature respecting small-pox and the protecting influence of vaccination.

The Association was, at that time, able to give a specimen of its usefulness in another direction. Dr. Thackeray of Chester offered £50 as a prize for the best essay upon a medical subject; and the committee appointed to advise upon its proper appropriation determined "that the investigation of the sources of the common and continued fevers of Great Britain and Ireland, and ascertaining the circumstances which may have a tendency to render them communicable from one person to another" should be the subject of competition, giving another proof of the direction in which the Association proposed to work.

This prize was not awarded until 1840. Eight essays were sent in, and the successful paper was by Dr. Davidson of Glasgow. It is published in vol. xi of the *British and Foreign Medical Review*. I have not had an opportunity of consulting this paper, but it and its competitive essays doubtless did something to draw attention, in Glasgow and elsewhere, to the causation and means which ought to be taken for the prevention of that class of disease.

The consideration of the condition of the Public Health occupied an important position in the proceedings, for the following resolutions were adopted at the annual meeting which was held at Cheltenham in 1837.

1. That it appears desirable to this meeting that the members of the Association, in their several localities, should urge upon the members of legislature the importance of an enlightened consideration of the question touching public health now pending in Parliament.
2. That the meeting suggests to the members generally the propriety of lending their aid to carry into effect the Act which has recently passed the legislature, to produce an improved registration of births, deaths, and fatal diseases.
3. That, as the Association feels persuaded that an extensive series of observations, made in the various sanitary institutions of the kingdom, would contribute especially to the progress of medical science, a committee be appointed to draw up tabular forms for statistical records of disease.

At the annual meeting which was held at Bath in the following year, that is, 1838, a considerable number of honorary corresponding members of the Association were appointed, many of them being noted for their labours in connection with the study of epidemic disease, and its relation to the topography of the districts with which they were directly connected.

The meeting was also signalled by the appointment of a new and enlarged committee to consider the question of small-pox and vaccination, to whom the replies to the queries of the Council were to be referred; and they were instructed to take the whole subject into consideration.

The Address on Medicine was read by Dr. Jonas Malden of Worcester; the earlier portion of it belongs to the region of causation and prevention. The beneficial influence of vaccination is strenuously urged upon the attention of the members, and the orator concluded his exhaustive review, which is well worthy of study, by urging upon the Association to observe nature with accuracy, and to interrogate her with the most scrupulous caution. A large portion of the volume of *Transactions* for this year is devoted to Medical Topography.

The meeting held in Liverpool in 1839 was noted for the time which is bestowed upon Hygiene; the volume of *Transactions* is one of the most valuable of the whole series. The President dwelt very forcibly upon Public Health, after eliciting loud applause by giving utterance to a belief that the annual meeting was "the Parliament of the profession". He proceeded to remark that: "We have to consider various and important subjects: one of them is that of Hygiene, a study in this country comparatively speaking overlooked...and this may be said without detracting from the just merits of those authors who have afforded effectual aid to the student by their writings." And, after noting a considerable number of kindred publications, he goes on to say: "Surely, it must be considered no small part of the duty of the medical man to preserve health as well as to combat disease, and this can only be done by vigilantly observing and making known local circumstances which lead to it"; and then he urges upon the Association to do their duty in promoting the beneficial effect of vaccination.

The Report of the Committee upon Small-pox was presented at this meeting, and occupied nearly three hours in its delivery. It fills ninety-eight pages of the eighth volume of the *Transactions*. Sufficient justice has never been done to this report; it is seldom referred to by recent authors, but it deserves to be reprinted and again distributed throughout the land, for it utterly demolishes all the arguments which are still brought against vaccination by those mischievous individuals who prey upon the weak minds of those who find the funds for the antivaccination craze, and who provide the funds to pay the salaries of those whose interest it is to keep that wicked agitation alive. The report deals with the affinities between the so-called human small-pox and cow small-pox, and conclusively establishes their identity. The volume is illustrated by some of the best representations of the disease which have ever been printed, and which were produced by the late Mr. Ceely of Aylesbury. He exhibited his original drawings at Cambridge in 1880, and showed some of that vigour which animated him in 1838, and which even at eighty-three years of age called forth loud applause at the University meeting. In any other country than our own, Robert Ceely, as well as his great prototype Jenner, would have been decorated with a string of honours of the highest order of merit; but in our own country those rewards are reserved for men who kill their fellow-creatures, or who play into the hands of the political leaders of the land, and not for those who are unselfish public benefactors.

The report dealt with the impediments to correct vaccination, and laid down directions which have been curiously disregarded. It clearly proves that the protecting power of vaccination is almost, if not quite, equal to that which is afforded by small-pox itself, and that recurring cases after perfect vaccination are not more numerous than after small-pox. It proves this statement by satisfactory statistics. It brings out facts which were well known to Jenner, that there were conditions which were gradations of protection, from those which are complete to those which are none at all. Dr. Jenner's last publication upon the subject shows that this knowledge caused him much disquiet, because his admonitions were so little heeded. The report deals with revaccination, and recommends it to be carried out under certain conditions. It points out the evils which arose from the practice of inoculation; it protests against the continuance of that practice, and suggests lines of conduct for promoting genuine effectual vaccination.

The Report, which was signed by Dr. Baron of Cheltenham, was received and adopted, with cordial votes of thanks to its authors; and a petition to Parliament was agreed upon, calling upon the Legislature to prohibit inoculation, and to take measures to render vaccination

more effectual. Mr. Ceely's observations upon the variolæ vaccinæ as they occasionally appeared in the Vale of Aylesbury, with an account of some recent experiments in the vaccination, revaccination, and variolation of cows, illustrated by a most valuable series of plates, thirty-five in number, occupy nearly 150 pages of this volume. Mr. Ceely took for his motto Montaigne's dictum, viz., *Que chacun dise ce qu'il sait, tout ce qu'il sait, et rien que ce qu'il sait*. And well he carries out the precept; it is a model for our young men, and it is still worthy of study by our older heads. There is an addition to the Report in the next volume, which is quite equal in interest to the first part of the work, and it has some excellent plates, which show infection from cow to man.

The eighth anniversary meeting was held at Southampton. The Report of the Council informs us that the result of the petition to Parliament, and the information which had been distributed by the agency of the Association, was instrumental in gaining a legislative enactment, by means of which inoculation was prohibited, and the regular practice of vaccination promoted by new machinery. The Report, however, regrets that the clause enforcing this Act throws the duty upon the Poor-law Boards. The Council endeavoured to obviate this unfortunate arrangement, but were unable to do so; and that which was believed to be a misfortune by the Council, at that day, has been shown to be so by its results, and has continued to be an impediment up to the present time. Nothing has interfered with the thorough performance of vaccination so much as placing its machinery in the hands of a body whose great object has been, by means of the agents employed, to get the action carried out in a cheap manner, rather than in an effectual one—a body which has been in the past more intent upon reducing the charge upon the current poor-rate than to protect the public from the evils of small-pox. The Royal Commission, upon which I have had the privilege of acting, has unanimously recommended that this anomaly should be removed, and that the machinery for efficient vaccination should be altogether separated from the management of the paupers of the country, and placed in the hands of the sanitary authorities. The Association was instrumental in abolishing the practice of inoculation. They could obtain prohibition, but the payment for a new duty was altogether another thing. In all matters in which an expense has to be met, it has always found us unable, in a great measure, to do justice to the requirements of our profession, because of our limited political power. A special vote of thanks was passed to the late Mr. Wakley for his exertions in the House of Commons in support of the Vaccination Act, as well as for other points upon which he had been instrumental in forwarding the interests of his professional brethren; and it was also directly owing to him, as much as to anybody, that the practice of inoculation was put a stop to by legislative enactment.

We are informed by Dr. Jeffreys, at Southampton, in his retiring address, that the report which was presented by Dr. Baron at the Liverpool meeting was quickly translated into the German language, and probably has had much to do with correct knowledge upon this subject on the Continent.

The Report of the Council at that meeting concluded by congratulating the members assembled that "their endeavours to alleviate the sickness and sufferings of the human race had been crowned with a success as great as the most ardent mind could have anticipated."

It was also pointed out at the meeting, and a resolution was passed, that the interests of the public would be more satisfactorily protected if the children attending public elementary schools should be required to produce a certificate, stating that the child had been efficiently vaccinated. It would be an advantage if the duty of inspection on this point could be made a part of the duty of medical officers of health, and that he could be the advising officer for all school-boards upon public hygiene. The Association, at this meeting, was stated to consist of upwards of 1,000 members. It was suggested that the time had arrived for it to possess a journal devoted to the interests of the Association itself. Soon afterwards an arrangement was effected, by which the *Provincial Medical and Surgical Journal*, then being published at Manchester, became affiliated with the Association, and reported its proceedings.

Next year, Dr. Hastings resigned his position as General Secretary, and was succeeded by one of the Council, in whose work he had until then been so busily engaged. It is not for me to say how much part he has taken in the Association's work; but I feel sure that he has been made in the study of preventive medicine. His knowledge of men and things enabled him to single out those pioneers—was it the case?—who were the first to take up the work of the Association, and more than any other to give it its present effect. I feel sure that it will be with your approval that I record my

opinion upon this anniversary in this section, and state that sanitary science owes much to this city.

Dr. Streeten, his able colleague, supported his chief with loyal consistency; actively engaged in the work of the Association, he delivered the Address in Medicine, at York, in 1841. In that address, made forty-one years ago, I find a reference to the work of our distinguished colleague, Dr. A. P. Stewart, which clearly establishes his claim to having first pointed out the distinction between typhus and typhoid fevers; he helped us to solve some difficult points in causation, and connected, as far as the Association is concerned, the distant past with time present, for the same A. P. Stewart is still among us, giving us the benefit of his wisdom and consummate knowledge upon the principles of hygiene and the laws requisite for the promotion of public health. Dr. Davidson's paper, which had gained the Thackeray prize, is, in the succeeding sentences, spoken of in terms of eulogy; and it is a curious point that a Stewart prize has been awarded at this meeting to those who have advanced the cause of preventive medicine by original research, and that we owe our power to award that prize to the same Dr. A. P. Stewart who was so highly spoken of by Dr. Streeten. The Worcester physician succeeded his chief in the office of general secretary, and continued to direct the work of the Association until the time of his death, which took place shortly before the annual meeting, which was held at Worcester in the year 1849.

Dr. Streeten showed by his work that a consideration of public health, in his view, was the noblest part of a doctor's vocation. The foundations for a great result were laid by those eminent members of our profession in this ancient city, and to them, with their gifted chief, Sir Charles Hastings, we owe some of our power to distribute knowledge upon these principles, which are important to every living person.

A Public Medicine Section was first organised at the Oxford meeting in 1868, and has been regularly instituted since that date. In 1875 I had the distinguished honour of reading an Address upon Public Medicine, a position which that subject occupied for the first time at the Sheffield meeting.

The impetus given to original research by the Scientific Grants Committee, the foundation of the Hastings medal, the registration of disease, as suggested by my distinguished predecessor in this chair, Dr. Ransome, and especially the establishment of examinations in subjects relating to public health at our Universities, have tended to help forward the good work. The latter is especially due to the enlightened men who have acted as your guides upon the Committee of Council, assisted by those who have been placed at the head of the staff of the *BRITISH MEDICAL JOURNAL*. The position that sanitary science and preventive medicine now occupies in the estimation of the public is due, in a great measure, to the steps which Sir Charles Hastings took when he founded the Association fifty years ago; and in his honour, as well as for the public good, I ask you to assist to render it all that can be desired that it should become. Time would fail me to refer to all the works connected with our subject; but with an able editor of our Journal, especially devoted to hygiene, and who lets no opportunity slip of promoting those objects which especially belong to our branch of the Association work, there must be a great future in store for us; and the revolution in medicine, which a study of prevention is likely to effect, may be nearer than most of us suppose to be the case. Our successors in this work who will occupy our places fifty years hence will then, perhaps, be able to give a tribute to our memory, not on a par with that which we wish to bestow upon our founders, but one which will tell to future generations that we have not been false to the trust which we have undertaken to perform.

THE GROSS PROFESSORSHIP OF ANATOMY AND SURGERY.—At a recent meeting of the Medical Association of London, Mr. Gross, a committee was appointed to raise a fund for the establishment of a Chair in honour of Professor Samuel Gross. The Association has endorsed by contributions from the Association, and from all over the world, and already a number have been offered, showing that a general and hearty response will be received from the old graduates of the school. Professor Gross enjoys at the present time the full vigour of his sturdy constitution, and will, no doubt, live to see the valuable results of the fund which has been raised in his honour. His great name, his long and useful life, his great and varied achievements, his position as one of the greatest living authorities upon the subject of anatomy and surgery, and his position as one of the greatest living authorities upon the subject of anatomy and surgery, will be a great and valuable addition to the list of names which will be scattered over all the six continents of the world, as a teacher, as a surgeon, and as a man of letters.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF ANATOMY
AND PHYSIOLOGY,*At the Annual Meeting of the British Medical Association in Worcester,
August 1882.]*

BY GEORGE M. HUMPHRY, M.D., F.R.S.,

Professor of Anatomy in the University of Cambridge; Surgeon to Addenbrooke's
Hospital; President of the Section.

IT is no small pleasure, as well as honour, to me, at this our Jubilee meeting, to occupy the chair in a Section where the twin sisters, Anatomy and Physiology, which have been diverging more and more during the fifty years of the existence of the Association, are once again yoked together at the suggestion of our President. This is the first occasion on which anatomy has thus been recognised by the Association. We may congratulate ourselves on the appreciation of it, thus shown by a body the chief object of which is to promote the practical interests of the profession, and not less at the manner in which the call has been responded to by labourers in various parts of the kingdom. Our programme gives reason to hope that the time of the Section will be fully and profitably employed.

The divergence of anatomy and physiology from one another, to which I have referred, may seem to be unnatural, and in some respects to be regretted; and there may be a feeling, though it is not a well grounded one, that it implies a disjunction of the investigation of structure from that of function, whereas we know that these two should ever proceed together, and be supplementary to one another. But the separation of anatomy and physiology, in the way in which it is taking place, if an evil, is a necessary evil shared by them in common with other branches of science which have a similar relationship. As the several members of the great family of science grow older they grow larger, fall away from one another, occupy independent ground and independent labourers, and form centres from which new individualities will, in their turn, bud off. In the present instance the separation is, in the main, due to, and is the necessary and natural result of, the development as well as growth of the younger of the two sisters which, during the last half-century, has been not only unceasingly, but in geometrical ratio, expanding. It deals with, and is felt by some rather greedily to absorb, minute structure and the associated delicate processes. It leaves to anatomy the investigation of the coarser structures of the body—the investigation, that is, which can be carried out by the unaided eye. It is clear that such investigation, so far at least as the human body is concerned, must, after so many centuries of labour first it, chiefly in Italy and subsequently in France, Germany, and England, be nearly complete, and can therefore scarcely admit of much further extension. Viewed, indeed, in this way, it has almost ceased to be a progressive science, and must lack the interest which attaches to advance and new discovery. True, it remains, and always must do so, an important, an essential, a fundamental feature of medical knowledge and of medical education. Upon the good, clear, ready knowledge of it, more than upon that of any other branch of his science, depends the power of the medical man, more particularly of the surgeon, to do definite positive good: to form, that is, distinct diagnosis and to adopt decided treatment; and the want of interest which anatomy suffers from not being a progressive science is more than compensated for by its practical importance. Here I would remark that I think this, its paramount and unassailable *locus standi*, has of late been somewhat lost sight of in its teaching. The books on anatomy, whether manuals or more formal treatises, commonly contain little or no allusion to the practical import of the several structures and their disposition, and the methods of description have usually no relation to this point. All the features are placed too much on the same level, without light and shade, and the whole landscape proves to be proportionately dull and uninviting. This is also a result—I fear an inevitable result—of that increasing subdivision of labour which causes the investigation and the teaching of anatomy to devolve more and more upon the pure anatomist.

Moreover, the anatomist does not seem sufficiently alive to the value of that kind of physiological knowledge—the knowledge of mechanical adaptation, of morphological relation and of developmental phenomena—which is the proper associate of anatomy, which appertains to it in

the same way and in the same right as the study of process appertains to the study of minute structure, which gives to it the claim to a scientific position, upon which its quality for mental training not a little depends, and which throws a halo of colour and freshness and cheerful glow over it. Too often the bare naked facts are marshalled in solemn dullness one after another, and are crammed down the reluctant throat of the student, without spice or flavour of any kind, not be digested, but to be gulped again, much as they went down, under the examination squeeze.

Doubtless, the careful study of anatomy, regarded merely as entailing the acquisition of a certain number of facts, as acquiring a cognisance of the structure and relations of the several parts of the body, is a good mental exercise, inasmuch as it cultivates, among other qualities, those of attention, accuracy, and painstaking, which are the very foundation stones of the educational building. I question indeed whether any other of our studies does this quite so well. Longer experience impresses me more with this; and I regard anatomy not only as the veritable basis of medical knowledge, but as the veritable basis also of medical education; and this apart from the manipulating skill engendered in the work of dissecting, which is a matter of some importance. I by no means, therefore, wish it to be thought that I depreciate the pure simple study of anatomy, especially if it be pure in the higher sense of that word; and no small interest attaches to the mere unveiling of the mechanism of the human body. We remember the pleasure we all had in displaying for ourselves, and seeing exposed to view, the several parts which make up a limb or an organ; and the teacher has the opportunity of living that pleasurable time over again in witnessing it as vivid as ever among the present race of students. The higher their education and the better their previous mental training, the more cordially and systematically will they pursue the study; and it is no small satisfaction to me to have the opportunity of seeing the senior wrangler and the senior classic humbly and cheerfully bending in the dissecting room, and applying the earnestness and ability which has gained them their high positions to the elucidation and appreciation of the disclosures which their own scalpels and forceps can make.

Thus, as I grow older, I grow stronger in my respect for anatomy *per se*; but I grow stronger still in my estimation of its capabilities to excite interest, to nurture inquiry, and to strengthen the mental faculties, by virtue of the practical and physiological expositions which are its legitimate accompaniments. I feel that its educational as well as its practical value would be vastly increased, and its interest heightened, if the relations of form and structure to disease and accident and treatment were more fully pointed out, if the purposes served by the conformation and disposition of the several parts were more thoroughly worked at and detailed, and if the various morphological bearings were more carefully elucidated. In these directions, there is ample scope for investigation; and deep mines are to be found of interesting material for study and teaching, which will well repay the thoughtful and earnest labourer. A careful and accurate description of the form of the tibia, for instance, may be, and is, good in itself, and in its way satisfactory and improving; but an account which associated that form with the liabilities to accident and disease, with the various distinctive peculiarities of the human form and gait, with the laws of growth and development, would be far more improving and impressive, because more instructive and suggestive. The features in the anatomy of the aorta which render it liable to disease and to aneurysm, those of the knee-joint which induce knock-knee, of the fingers which cause them to slant outwards in rheumatism, of the ball of the great toe which predispose to gout, of the wrist which prevent dislocation, and of the shoulder which entail liability to dislocation—and many other instances of a similar kind will suggest themselves—would, if properly dwelt on, shed the interest, the surpassing interest, of practical value over the anatomy of the several parts, and would impart a healthy reflective tone to the learner's, I might add also to the teacher's, mind.

It must be fully admitted that many questions bearing upon development, morphology, and anthropology, which appertain to, and grow out of, the subject of human anatomy, which add much to its scientific interest and its educational value, and which fitly form part of a course of instruction at an university, can scarcely be comprised within the range of the teaching of the ordinary medical student, in whose case much, too much, has now to be compressed within a given short time. Still the intelligent curiosity of such a student will sometimes require to be satisfied, and his interest may be roused by reference to these questions. He looks at the *plantaris* muscle in the leg. He wonders what need there is for it, and how it comes to be there. He sees that any slight assistance it may render to the great calf-muscle is scarcely a sufficient pretext for its existence in a separate form; and he finds relief and pleasure in learning that this little muscle is an *attaché* to the short flexor of the toes; that its severance has been caused by

that projection of the heel-bone, which is one of the attributes of the erect posture; and that, when it is continuous with the foot-muscle, as is the case in most of the lower animals, it is clearly seen to be the homologue of the *flexor digitorum manus*. Possibly, he may still indulge in the luxury of speculating as to the law of evolution, by virtue of which it has maintained its individuality through so many ages of comparative uselessness. He looks with vastly increased interest upon the construction of the great toe, when he learns by what slight modifications from the lower animal form that solidarity has been given to the human foot, upon which, more than upon any other single speciality in his anatomy, the pre-eminence of man is due; and he views with respect the flexor and the middle extensor of the thumb, upon finding that the complete segmentation or separation of these muscles from their surroundings is to assist in correlating the free mobility of the human pollex with the fixity of the human hallux. He is agreeably surprised to find that the dry bones in the open valley of the class-room are made to live and stand upon their feet, an exceeding great army of instruction and interest when breathed upon by the teacher, and clothed by him with the warm flesh and blood of development, morphology, mechanical purpose, and practical bearing.

The high-and-dry style of anatomy—and the remark applies no less to other educational subjects, general as well as special—has grown partly, perhaps chiefly, as a corollary to the higher and drier character of the examinations, and to the difficulty which is experienced in carrying the examination test beyond the range of simple facts: a difficulty which all who have been engaged in this work must admit, and which can be overcome only by a considerable extension of the time occupied in the examinations. Seeing how important, as directors of education, examinations have become, and must be, I make no doubt that some different system of conducting them, which will give greater stimulus to the intelligent appreciation of facts, and will cultivate the reasoning as well as the acquiring faculties, must, ere long, be attempted. I look upon the attainment of that end as one of the great educational desiderata of our time—so great and so important, that it can be worked out only by slow degrees, and as the result of much deliberation and much effort.

I have said enough to show my hope and my confidence that the anatomy of the coarser structures, with its attendant physiology, will not be allowed to pass into the category of subjects dead and barren as regards scientific character; but that it will be more and more cultivated, not merely for its practical value, but as a repertorium of scientific interest.

With regard to the special subject of physiology, which has relation to minute structure, and more particularly to composition and processes—that is, the *changes*, chemical and physical—of structure, we may be sure that it will never cease to command interest and to engross a large share of attention. It will always be able well to take care of itself. It is essentially and rapidly progressive, and it is illimitable. Its investigations lead in those directions in which there must ever be a near borderland of the seemingly mysterious and inscrutable to fascinate and tempt the inquirer on. It dives into the deepest recesses of nature's works. It brings to its aid, and gives the greatest range to, chemistry, physics, and mechanics, and advances with them, its progress being checked mainly by their imperfections. It profits by the newest refinements of optical and other instrumental apparatus. Its searchings cannot be confined to dead matter. The very essence of the science demands that the processes, "living as they rise," should be submitted to its scrutiny. It is quite certain that this must be done, and will be done, largely, whether in England or abroad, whether in this generation or the next, whether under Parliamentary control or under trust in the good feeling and conscience of educated men.

In this point we are all deeply interested, not merely as physiologists, but as members of a practical profession, and as members of the human family—I might say, as members of the animal kingdom: for the highest and most important flights of physiology are those which carry us into the region of pathology, and which demonstrate the continuity between the healthy and the morbid processes which indicate the transition of the one into the other.

In illustration of this, I will refer only to a few points.

The greatest accession to knowledge in medical science, which has been made during the era of this Association—one, indeed, of the greatest ever made—is that included under the term "cell-development," which was worked out, in the first instance, by Schleiden and Schwann. It has opened a recasting of all our ideas of nutrition, nutrition being not mere growth; and has, at the same time, given an entirely new ground to the science of pathology: for it has shown that the agents which are the media of nutrition are the media also of those modifications of nutrition which we call disease. It has taught

us that a malignant cancer-growth is probably the result of a perversion of, perhaps intrinsically only a slight departure from, the ordinary and normal processes of cell-growth in the natural tissues; and the suggestion brings with it a ray of hope, that these deviations may one day be checked or prevented, and that this most terrible scourge of humanity may be amenable to treatment. Associated with this great theory are the investigations respecting the movements, the migration, and the absorbing properties of leucocytes, which, as well as the investigations respecting the influence of the medulla oblongata and other ganglionic centres, great and small, upon the action of the heart and blood-vessels, and the investigations respecting the formation of sugar and albumen and their modifications, have a very direct bearing upon various pathological processes, and upon some of the most common and important diseases, and must lead to the better treatment as well as the clearer knowledge of those diseases.

The consciousness of the close bonds which unite physiology, practical physiology more especially, with medicine, and of the benefits which the whole history of medicine shows to have accrued to it from the cultivation of physiology, as well as the prospect of far greater benefits which are certain to result from it, if it be allowed free scope—the gratitude, in short, for favours to come, no less than for those already received—has induced many of the eminent men of our profession to form an Association for the Advancement of Medicine by Research. It is conceived in no hostile spirit to this Association. I am glad to see that it includes many of our members; and I trust that the two associations will work on together, and benefit each other in their co-operation for the great purpose of advancing the science and practice of medicine.

I cannot conclude without adverting to the loss, the terrible loss, which biological science, the world at large, and the University of Cambridge in particular, have sustained by the recent untimely death of my colleague, the Professor of Morphology. I doubt, indeed, whether we could have sustained any other loss of this kind so severe and so irreparable. If at the early age of thirty his high intellectual gifts, his great powers of observation, of consecutive inquiry, and of philosophical deduction, as evinced by his researches in embryology and morphology, had gained him a reputation second to none in Europe, what could we not have hoped from the future that might have been expected to be before him, devoting himself as he was in an earnest and honest spirit, in simple unabating love to the unfolding and the teaching of the laws of animal life? But, further, the name of Frank Maitland Balfour stirs the warmest feelings in those who lived and worked with him and knew him best. By all of them he will be remembered as representing, in birth, in education, and in character, a noble example of the best chivalry of Britain. They will recall his fine, upright, elastic youthful frame, with open face and beaming eye, as typifying the keenness and strength of his intelligence, his high-mindedness, and the geniality and sincerity of his nature. They will feel that the words of the beautiful anthem sung in the chapel of Trinity College on Saturday last, in the presence of all the resident members of the University, while his body was being committed to the ground at his family home in Scotland, were singularly applicable to him.

"When the ear heard him, then it blessed him:

And when the eye saw him, it gave witness to him."

Pure in thought and pure in work, he laboured simply to know and teach the truth. Dignified, yet simple and utterly unassuming in manner, liberal in purse, wise in counsel, and firm in opinion, but gentle and full of kindness, he had the respect and admiration of pupils and colleagues. The true gentleman, he was a power for good among us all. With the tempting offers of Professorships at Edinburgh and at Oxford dangled before his eyes, he proved his good feeling by a faithful adherence to his *Alma Mater*, bound to it by the associations of early training, by affection to Trinity College, which showed a prophetic appreciation of him by electing him a Fellow, the first elected for Natural Science, and held by strong attachment to the circle of friends and pupils who loved and were proud of him, and who deeply lament his loss. The Royal Society had awarded him its medal, and placed him upon its Council. Glasgow had given him its honorary degree. Cambridge had instituted a new Professorial chair and seated him in it, and is even now completing the laboratory which was destined for him, and in which it was anticipated that a long career of sound research and teaching would bring fresh reputation to him, and shed fresh lustre on the University. Alas! the golden bowl is broken, and with it many hearts and many hopes are shattered.

A LOCAL newspaper reports the death of Miss Sarah Hadley, of Stafford Street, Walsall, at the age of 106 years.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF OPHTHALMOLOGY,

At the Annual Meeting of the British Medical Association, held in Worcester, August, 1882.

By JAMES VOSE SOLOMON, F.R.C.S.,

Surgeon to the Birmingham Eye Hospital; President of the Section.

ON SOME ADVANCES IN MODERN OPHTHALMIC SURGERY.

GENTLEMEN,—Such is the distinguished position attained by the British Medical Association, that all who are called to fill its chief offices at the annual meetings cannot fail to appreciate the honour and responsibility of their status. Peculiarly so must this be the case when—commemorating, as we do to-day, the fiftieth year of our foundation—we are anxious to stand before the world worthy descendants of our worthier sires. It is to their foresight and public spirit that we owe our corporate existence; and we may be pardoned expressing a doubt, if any other profession can boast a voluntary association as widespread, disciplined, and influential as the British Medical.

My only present regret is, that the office to which I have been chosen has not been filled by one more able than myself to do it justice. I would yield to no one for good will, but I frankly confess that the limited powers at my command are cramped by a sense of responsibility which would weigh me down, but for implicit trust on the generosity of those I have the honour and happiness of addressing.

Contributions on ophthalmology have for many years constituted a part of the proceedings of the Surgical Section; and although so far back as the year 1865, when the Association met at Cambridge, a proposal was made, unhappily without effect, that an address should be given on ophthalmology, it was not until fifteen years later, when we met again in the same university town—a red-letter year in the annals of our Society—that, of eight sections, ophthalmology attained the distinction of forming one. For this, I believe, we were very much indebted, in the first instance, to the zealous efforts of Dr. Macnaughton Jones, the clever indefatigable secretary, the embodied administrative spirit, of the annual meeting held at Cork, who arranged in that year for ophthalmology and otology to form a Subsection of surgery. At Cambridge, the Section derived distinction and prestige from being presided over by a scientist of European renown, Mr. William Bowman; and the occasion was also marked by the presence of Professor Donders, who made an important communication on the Colour-sense.

Proverbially slow as the English are said to enter upon new paths, events do nevertheless with us sometimes march apace; and so, in June 1880, was founded the Ophthalmological Society of the United Kingdom, the most important public movement in relation to our speciality that has taken place in this country in the last half century. The need of such a society, and the appropriateness of its title, have been shown by the numbers who have sought admission to its membership and attended the meetings from every part of the three kingdoms. Its communications have been enriched by papers from physicians, who avail themselves of the ophthalmoscope in their investigations of morbid conditions of the nervous centres and other organs. So long as this happy combination continues in our society, all danger of the prevalence of the narrowness of specialism will be avoided; indeed, it is difficult to estimate the advantages that must accrue from an association of workers in a special department like our own, with scientific physicians versed in all the methods of physical investigations, and trained to the higher problems of physiology and pathology. The large attendance at the meetings, the thoroughness, and often originality, of the work brought forward, and the animated discussions, all augur favourably for the creation of a British School of Ophthalmology, and warrant us in looking hopefully to the time as near at hand when we shall be no longer living, as it were, in a borrowed light, but in one generated by the national genius and enterprise of the most practical people in the world.

While profiting largely by the more exact methods employed by our continental brethren, have we not too readily accepted, and closely imitated in every detail, certain of their operative procedures, dazzled as it would seem by the refined ingenuity of their originators? We shall all be agreed that the occurrence of sympathetic ophthalmia as a sequence of cataract-extraction was so exceedingly rare as to be an almost incomputable quantity, before the adoption in this country of

the linear method of Von Gräfe. How significant has been the recent discussion at the Ophthalmological Society on sclerotomy, of the need amongst us of a court wherein may be sifted the evidence of a large number of surgeons—quite independently of the domination of schools—upon a point in surgical practice, the merits of which are evidently, as judged by that discussion, on their trial, although pronounced, by an eminent Parisian surgeon, the remedy *par excellence* for almost every phase of glaucomatous tension of the eyeball.

The past year has been notable as the one in which the International Medical Congress met in London, and attracted an immense gathering of the *savans* of Europe, and wherein the section representative of our speciality maintained a position of importance equal to that of any other; in proof of which, I refer you to the *Transactions* which have now been for some weeks in your hands, a monument of work accomplished of high character, and pregnant of promise of yet greater benefits to be conferred by medical science upon the human race. If you will call to mind the ample reports, that have appeared, of the proceedings of the Congress, and also of the Ophthalmological Society, in the medical journals of Europe, embracing, as those papers and discussions do, a wide field in our art, and a great variety of subjects, I shall hope to enlist your sympathy in my embarrassment to discover matter for an opening address, which some may think should be garnished by the freshness of attractive novelty, but which others may accept not less willingly, because of its more modest pretensions. Novelty is doubtless one of the glories of our time, but is it not also one of its banes? Might not the thirst for something new be advantageously moderated in favour of a calm and judicious appreciation, not aspiring to dazzle by its brilliancy, but to be useful for its soundness? We need not trouble ourselves to seek an answer to the question, for a mere glance at the list of subjects to be brought before us, the reputation of the authors and debaters, are an ample guarantee that our proceedings will neither lack novelty nor soundness.

Precedent has established that the proceedings of each section should be introduced by remarks from the chair, it shall be my endeavour only to detain you briefly, so that we may engage in the business to which you cannot look forward with greater hopes of interest and instruction than I do.

Cataract and its treatment is a theme that never fails to command interest. Papers in relation to its cure are promised to the Section by Dr. Edwyn Andrew, Mr. Cowell, Mr. Anderson Critchett, and Dr. Taylor. At the recently held International Congress, it was stated by Dr. Horner that he had reduced, by the employment of antiseptics, his cases of suppurative to a fraction over 1 per cent. as compared with 6 per cent. I assume that, in order to compass results so highly favourable, special care must have been taken to exclude patients suffering from diabetes, renal degenerative changes, or advanced atheroma. When we have doubts of the sufficiency of the patient's reparative powers to heal the incision by primary union, Desmarres' operation of subconjunctival extraction, with the modern improvements as to length of corneal incision and treatment of the iris, is well worthy of adoption. In a case of diabetical cataract, I have recently had recourse to reclinication, and obtained a good result as to vision. This procedure is, in my opinion, too much neglected in cases where a cutting operation presents unusual risks. The steps of the operation, as I have pointed out elsewhere, are facilitated, and obtain greater precision by the employment of two needles; one being passed through the cornea in order to press the lens back to a sufficient distance from the iris to allow of the scleral instrument being brought in front of the lens without entanglement in its capsule, or the iritic structure.

At the Birmingham Eye Hospital the extractions are dressed with pads of absorbent cotton-wool medicated with boric acid. I believe the opinion is very general among British surgeons, that the value of antisepticism in operations upon the eye has yet to be determined. Of this I am confident, that, since in the last few years the labouring poor have been, as a consequence of the receipt of higher wages, better fed, the results of our hospital operations have improved, and inflammatory diseases have been less frequently followed by destructive changes.

Suppuration of the flap after a cataract operation is sometimes found, unhappily when too late, to be traceable to dietetic poverty. My earliest experience of this condition was in a middle-aged woman, upon whom I had performed a very satisfactory double extraction; not the slightest pain followed, but both corneæ, in the course of forty-eight hours, became infiltrated with pus. We found that she had been living exclusively upon tea and bread; neither meat nor bacon had formed a part of her diet, yet she looked well. In large hospitals, and in others during the prevalence of erysipelas epidemically, if we operate, antisepticism, in some form, is obviously a precaution which should not be neglected.

There is an exceedingly rare complication of hard cataract which deserves notice, and in which extraction affords success. We have no indication of its presence until we are in the act of making our flap, when we are surprised to find that the aqueous humour continues to flow in freedom and quantity quite unusual, and also that the sclera presents wrinkles before the section is finished, and when completed we have before us a collapsed bag, the cataract lying far back. I have operated in two cases, one of whom was a female dwarf, the other a male fifty-four years of age; recovery took place without a bad symptom, and the vision was good for the reading and correspondence required in a large business.

Of late, the subjects of intra-ocular tension and glaucoma have excited renewed attention in respect to the changes of position and structure of some of the parts that are concerned in effecting the normal filtration of the intra-ocular fluids, and especially to the surgical methods best adapted for relief of the various phases of the glaucomatous process. A new operation will be described to us by Dr. Grossman.

It is just twenty years ago since I combated the then prevalent dictum that all cases of excess of tension necessitated an iridectomy, and declared that my experience justified me in asserting that the recurrence of tension after an iridectomy performed for the relief of chronic or subacute glaucoma, "may generally be completely overcome without resorting to a second or third iridectomy as advised by Von Gräfe." (*Tension of the Eyeball; Glaucoma*. London, 1865, p. 78.) And in speaking of the statistics of iridectomy, after referring to their being chiefly favourable as to cases of acute primary glaucoma, I proceeded to say that a recourse to Von Gräfe's operation in all instances of excess of tension would be unjustifiable, because there were other surgical measures unattended by danger to the eye, and which do not entail a permanent deformity, that are fully competent to insure all the advantages which proceed from the restoration of the intra-ocular tension to its healthy standard. I may be permitted to note the fact that this teaching is now admitted to be correct.

In some cases where exalted tension has continued, or recurred after an iridectomy, an incision made through the base of the coloboma backwards, dividing the ciliary region at a right angle with the corneo-scleral union, I have seen to restore elasticity to the eyeball. Mr. Hancock, when he operated for glaucoma, used a Wenzel's cataract-knife, and as it appeared to me, took care to secure, if possible, a loss of the vitreous humour through the wound, by giving it the end shape of the italic letter *f*. The incision also was not executed by a slow passage of the knife, but chiefly by a stab. I mention these particulars, because there is a disposition on the part of some surgeons to try the method, and because, in cases where a slow and careful "division" has been practised by myself and others, the tension has not been permanently reduced.

The earliest notice of section of the ciliary region as a surgical measure is to be found in the *London Medical and Physical Journal*, 1802 (Vol. vii, p. 209). Dr Whyte there states that, in cases of enlargement of the anterior hemispheres of the eye, occurring in Europeans, in consequence of incautious exposure to a tropical sun, he had derived great advantage by puncturing the sclerotic "behind and parallel to the iris; the outlet was proportioned to the existent expansion, and in this way he had successfully extracted cataracts." Here, then, we have anticipated, by upwards of fourscore years, the application of sclerotomy to cases of hydrophthalmia. Verily, we may say, with the King of Israel, there is "no new thing under the sun."

In the operation known as intra-ocular myotomy, a Sichel's cataract-knife is passed on the flat through the corneo-scleral union, the pillars of the iris, and through the ciliary muscle, penetrating sometimes the vitreous body; the internal incision is one-sixth of an inch long, and parallel to an equator of the eyeball. In glaucoma this operation opens up a communication between the two chambers, thereby restoring or enlarging the iritic angle; it also, in some way, alters the position, or the convexity of the lens, in evidence of which we have had, in our experience, a diminution of myopia where the operation has been applied for the relief of that defect. In glaucoma, one of its effects may be to increase the width of the circumferential space. Be this as it may, a reduction of tension followed the procedure, even where the escape of aqueous humour was so slight as to occasion doubt whether any had been lost. On looking over my published cases, they appear to me to compare favourably with those of sclerotomy, as reported by English writers. My experience of sclerotomy has not been large. In a woman of 38 years, suffering from chronic glaucoma simplex, T + 3, it raised the vision from the mere perception of the shadows of fingers to reading quarter-inch type. In each eye there was a large protrusion of iris, covered by the conjunctival flap, apparently forming a supple-

mental chamber. Dr. Wolfe has promised a paper on sclerotomy. Of the value of eserine in acute glaucoma we have testimony of the highest character. Ophthalmic therapeutics have not received so important an addition in the present decade.

But while we may justly congratulate ourselves upon the advance that has been made in our knowledge of the pathological changes found in glaucomatous eyes, and in the possession of eserine, and of other operations besides iridectomy, we are still in doubt as to what is the *primum mobile*—the first departure from the normal physiological state that initiates acute glaucoma in the apparently healthy eye of a healthy individual.

Another question also confronts us—viz., why is it that, when glaucoma establishes itself in the eye of a girl under twenty years of age, it can be perfectly and permanently cured by medical treatment? At this early period of life I have treated only two instances, which were of the ages of 20 and 17 years, respectively. The younger lady was a patient of Dr. Hugh Kerr, of Cradley Heath, in this county. The attack was sudden, unattended by pain or external redness; the vision was abolished, T + 3. The patient took iodide of potassium in full dose, and recovered normal vision and tension, which has continued until now, a period of five years. There is another peculiarity in these cases, which I state on the authority of an eminent ophthalmic surgeon. They afford "very bad results if submitted to iridectomy." Again, what is the explanation of the high tension which is alleged to have occurred after the lens had been removed? I have seen it present where a blow had detached the whole of the iris, so that there could not possibly be an obliteration or narrowing of the iritic angle.

There are some other subjects to be brought before us, which, were it not that the present epoch has been endowed with the immortal discovery of the ophthalmoscope by Helmholtz, would have been impossible of elucidation. Mr. Nettleship will open a discussion on the question: To what extent do the signs derived from the examination of the eye and its appendages contribute to the localisation of central nervous diseases? Dr. Gowers, and other eminent brethren, are expected to take part in the discussion. The application of the ophthalmoscope to the diagnosis and treatment of errors of refraction will be treated in a paper by Mr. Juler. Mr. Priestley Smith has a new perimetre to show, and, for discussion, a curiously interesting medical case.

Gentlemen, I have detained you too long, and wearied you, I fear. Let me assure you that I would gladly have spared you these pains had not that obdurate and cruel tyrant, Precedent, dominated and enslaved me. I have, I confess, not altogether unwittingly followed it; for the position I now occupy, by the favour of my brethren, only falls once in a lifetime to the lot of any of us. I am old enough, as many of us are—so rapid has been the advance—to remember ophthalmic surgery as taught by Lawrence, Tyrrel, Mackenzie, and Guthrie. How obscure did they leave much of the *rationale* of many eye-diseases; how helpless and imperfect much of their treatment! Minute anatomy, physics, and applied mathematics have changed all that. We can now retort to those who sneer at the varieties of medicine by pointing to our little domain, the privileged home of an almost exact science. That it is so, the labours of this Section will, I feel certain, help to prove; and to that demonstration, gentlemen, I cordially invite you.

ASSOCIATION OF AMERICAN MEDICAL EDITORS.—At the annual meeting, held at St. Paul, June 5th, the following officers were elected: *President*, Dr. N. S. Davis, Chicago; *Vice-President*, W. M. Carpenter, New York; *Secretary*, John V. Shoemaker, Philadelphia. On motion, the Secretary was instructed and authorised to make such arrangements regarding the time and place of holding the next annual meeting as he should consider to be the best to promote the interests of the Association. On the evening preceding the next annual meeting of the American Medical Association, voluntary papers will be read and discussed. The following evening, President Dr. N. S. Davis will deliver the annual address. The members of the profession are especially invited to be present at both meetings.

THE Medical Institute of Valencia, in Spain, offers a series of prizes for 1883, consisting of gold medals and the honorary fellowship of the Society, on the following subjects: In medicine, "Are heart disease, phthisis and insanity more frequent in the present day than in times past? If so, state the causes". In surgery, "On the treatment of varicose veins". In pharmacy, "On a practical method of estimating the percentage of active principles, present in medicinal extracts". In science, "On the application to medicine of the doctrine of the unity of force. A special prize will also be offered for the best essay "On the indications for tracheotomy". Intending competitors should address the Secretary of the Institute at Valencia.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF OTOTOLOGY,

*At the Annual Meeting of the British Medical Association,
in Worcester, August 1882.*

By W. LAIDLAW PURVES, M.D.,

Aural Surgeon to Guy's Hospital; President of the Section.

PHYSICAL DIAGNOSIS AND THERAPEUTICS IN AURAL SURGERY.

GENTLEMEN,—To the meetings of this Section, I, in the name of the Council, bid you welcome. We have this day to congratulate ourselves on the elevation to which the subject we have met to discuss has arrived. This speciality, with that of its greater sister, ophthalmology, had a place assigned to it in 1879 among the divisions of medicine which were thought worthy of discussion, apart from what is usually termed general surgery. They were then promoted to the honourable position of Subsections. When we consider that it is only lately that the great subject of eye-diseases, with its marvellous exactitude, its brilliant results, and the long roll of distinguished names which it has allured to its captivating study, has obtained the dignity of a Section, I think we should felicitate ourselves, as students and practitioners of otology, that the subject to which we intend to direct our attention has at this, the jubilee meeting of the Association, and in the honoured birthplace of that Association, taken its position with the other great branches of medicine. Let it be our endeavour that, having attained this dignity, it shall not lose its position, nor have its lustre tarnished, but shall pass on to greater development and more useful ends than hitherto. Of some means to attain these it will be my endeavour to speak to you in the few minutes allowed to an introductory address.

Our pleasures are, however, tempered by the loss of colleagues who would have joined with us in our joy. It is with a sorrow which must be felt by all who have had the pleasure of reading their instructive contributions to medicine, or of their personal friendship, that we miss from this meeting two well-known members, the late Mr. Gardiner Brown and Mr. Douglas Hemming. Ardent and zealous in the prosecution of their subject, ready in the distribution of their conclusions, we grieve their early deaths. Let us remember that the most signal mark we can offer of our regard is our endeavour to forward the questions they had most at heart.

"He mourns the dead who lives as they desire."

When we recall the darkness which has enveloped the science and art of medicine till within the last fifty years, or dreamily range over the wonders of the wilderness of therapeutics for which we have not yet found a safe clue, it forces itself upon us that the more we employ, for diagnosis and treatment, the means of physical research which the labourers in exact fields are daily producing to our hands, the more satisfactory will be the results for our clients and ourselves. The time may come when the master-key, in the hand of the Newton of medicine, may open the door and flood the dim mysterious with light; but we yet wait his approach and his labour. Till then, we should make for the light which seemeth most likely to illuminate our way; and this is doubtless to be reached by more exact physical diagnosis and treatment.

How do we, in this speciality, stand as regards our physical diagnosis? As far as known methods of examination go, we have, I believe, embraced every one which can assist us in the determination of structural change. The auricle, the meatus, the membrana tympani, the tympanic cavity to a certain extent, with the naso-pharyngeal cavity and the Eustachian tube, are all under observation as exact as any part of the body. By the use of mirrors, of microscopes, and of specula, we have within the last few years been able to determine changes of the structure, of the position, and of the mobility of those organs which were before a sealed book. By the use of auscultation, bougies, and currents, we determine the existence of extravasations, the patency of tubes, the alterations in equilibrium. But, beyond these, the actual demonstration of the integrity or impairment of structure has not arrived. Dealing with opaque media, constructed to conduct in the most advantageous way the motion which is perceptible to the acoustic nerve, we have not, nor can I hope that we ever shall have, an otoscope to rival the ophthalmoscope of Helmholtz, adapted, as it is, to

examine both the structures conveying and the structures receiving the motion perceptible to the optic nerve.

But, when we turn from these to the exact examination of functional changes, my hopes of advance are much increased.

For the purpose of exactly determining abnormal changes of function, it is necessary that we should have some standards of the normal power. In this respect, we are, as far as I know, sadly deficient.

What are the determinations at which we should strive to arrive? They may be classed as those which ascertain:

The acuteness of hearing. This we do, in a rough and ready way, by the watch and the fork. We require, however, tables giving us the result of determinations at certain ages, for fluctuating conditions of atmosphere, for different dimensions of rooms in which the observations are made, for conditions of the body at the time as to general muscular, nervous, or circulatory states, apart from localised aural conditions. We have not any satisfactory instrument for judging the power of the voice, which would give us the best and most useful of all tests. Nor have we a ready plan of ascertaining the exact amplitude of fork-vibrations to which the nerve does not respond.

The determination of the field of audition. This subject has not engaged the attention which it deserves. Its further prosecution would, I think, repay the labourer.

The range of audition. By this, I mean the range of vibrating pitch determinable by the patient under the same conditions. This sense corresponds to the colour-perception in the eye, which, in some cases that have been described lately, bears a remarkable affinity to it. If this examination gave us, as I anticipate it will, results corresponding to those obtained by the abnormalities of colour-perception in various general nervous affections, it would add to the exactitude of the diagnosis of those obscure diseases. The determination of the range of audition in relation to the former standard, the field of audition, also requires observation.

The power of judging the direction of sounds is perhaps not of much importance in a civilised state, but is a subject of interest and worthy of research.

For practical purposes, the recognition of timbre, and the duration of impressions, do not call so much on our attention as the accommodation of the ear. This has as yet, as far as I know, baffled determination, and yet it is one of the most common complaints of weakness and age. When arising from a general condition, such as anæmia or diphtheria, we have a clue as to its extent by determining the loss of accommodation from which the sister organ suffers; but, in cases of local change apart from general loss, I know of no standard.

These embrace the principal tests which should be made in the healthy, from which we could make deductions as to functional changes. We have a mass of information upon some of these points, while on others our knowledge is meagre. Some of these examinations may seem superfluous, and lead us at present to no apparent practical profit to those claiming our aid. Let us remember how seemingly disjointed fragments of physical science, collected by workers with different aims, every now and again receive, by one fresh ray of light being thrown on the whole, a new and general connection and bearing to each other, verifying the belief that all observations of an exact kind will certainly be turned to account some day, and often when least expected.

Are our therapeutical means in a more satisfactory state than our methods of diagnosis? As far as operative interference goes, they will, I believe, compare favourably with any branch of surgery. The results of manipulative interference on the membranes, the throat, the tubes, the cavities, are often marvellous. When we call to mind the benefits derived from restoring tension, removing obstructions, dilating tubes, renewing equilibrium, altering the position of pressure, or varying the calibre of the resonator, we may rest assured that the knowledge and proper application of these operations will give succour to those in need, and satisfaction to ourselves.

There is one agency which ought, I think, to be more carefully cultivated than it is at present, and that is electricity. Seemingly of no benefit in the majority of cases in which it has been used by me as a therapeutical power, cases now and again arise in which the benefit rendered has been great. With such cases before us we should not despair of being able shortly to diagnose the cases in which it is of service, and prescribe it with gratifying effect.

Failing in curative means, we turn to artificial aids, to the conduction, collection, or magnifying of the motions perceptible by the ear. The name and form of these is legion, and yet they come. The utility of what we have hitherto employed has been great, but I have no hesitation in saying that the application of the discoveries of the last few years will shortly develop aids to the deaf which will far outshine the

advantages hitherto afforded by those in common use. Remembering that, even with the absolute destruction of the external and middle ears as a functional apparatus, we have other highways by which we can arouse the acoustic nerve to sonorous vibrations, and recollecting that we have now methods of magnifying these, of collecting them, of producing different tensions, and of vibrating membranes, as shown by microphones, resonators, and telephones, I trust the day is not far distant in which a healthy acoustic, and even a somewhat degenerated one, can be supplied with apparatus which will make it almost independent of the natural conducting apparatus of the ear.

Nor do my hopes flag here. To that being who claims our pity beyond even those who seek our aid, who has but one avenue to the soul unclosed, the loss of which would cause a moral death, to the deaf-mute, I believe there is hope. Seeing the strides which our knowledge of vibrations is making daily, and the astounding results obtained thereby, I see every reason to hope that some method of amplifying and rendering such vibrations visible to the eye may be devised, which may render his intercourse with his fellow-beings easy and profitable.

Looking, then, around at what has been achieved in our speciality, and taking that as an earnest of the advantages which we are able to dispense to suffering humanity, I invite you to the discussion of the subjects prescribed by the Executive Committee; trusting, by the collection and comparison of the experiences of members, to forward each other in assisting to place the distressed, not only in a condition free from physical torment, but in a position by which intellectual culture and recreation can only be attained.

CLINICAL MEMORANDA.

TETANUS NEONATORUM.

THE following short account of a case of tetanus in an infant may be interesting to some of your readers, as fortunately, the disease is of very rare occurrence in this country.

I attended the mother in her confinement on Tuesday July 4th. The labour was somewhat protracted, but otherwise normal. The child was a girl, large and well-nourished, to all appearance more than usually strong and healthy. The following Tuesday, July 11th (8th day), I was sent for and informed that the baby would not take the breast and had been crying almost incessantly; examination revealed nothing abnormal. The following morning (Wednesday), I was told the child had had a restless night; crying at intervals, and refusing all food. Whilst looking at the child, I was surprised to see it suddenly throw back its head and tightly close the jaws, respiration becoming so difficult as to cause the face and head to become absolutely purple. The arms and legs at the same time being extended and rigid, and the hands firmly clenched. The spasm passed away almost immediately. I at once examined the umbilicus and found it somewhat swollen, red and prominent, with a small amount of pus exuding from the centre. The cord had separated on the fifth day, and nothing wrong had then been noticed. The child was at once placed in a warm bath for a quarter of an hour. On being taken out, a warm poultice was applied to the umbilicus, and supported by a binder, and an enema of warm water and soap was administered. Every attempt at swallowing causing a spasm, an enema of milk containing a drop of tincture of opium, was subsequently given and repeated. The spasm continued to recur with increased severity and frequency, the slightest movement of the child or noise in the room being sufficient to excite it. Tincture of opium was substituted for the opium and the child was bathed for an hour at a time. The bath seemed to relieve the attacks at first, but they soon afterwards became more severe, and the child was removed from the interference with respiration. Inhalation of chloroform was tried with no good result. The spasms now followed each other closely, the tetanic condition becoming almost constant. The temperature which was 103° Fahr. on Wednesday, had risen to 105° Fahr. on Thursday night. The child died early on Friday morning, July 14th.

The points of interest in the case are, I think: 1. the strong attack of tetanus in the child when it was born. This has been noticed in other similar cases. 2. The comparatively small amount of irritation about the umbilicus. 3. The chronic nature of the disease—the child was taken ill on Tuesday night, and died on Friday morning.

The warm bath was the only remedy which was even of temporary benefit. Though I had never before met with a case of tetanus in so young a subject, the diagnosis was simple enough to anyone who had, like myself, seen the disease in the adult.

ROWLAND WRIGHT, M.B. Edin., Melrose, N.H.

FIFTIETH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in WORCESTER, August 8th, 9th, 10th, and 11th, 1882.

FIRST GENERAL MEETING: TUESDAY, AUGUST 8TH.

THE first general meeting was held in the Guildhall, on Tuesday, August 8th, at 8 A.M. The chair was taken by the retiring President, BENJAMIN BARROW, Esq.

The Minutes of the previous meeting were taken as read (having been published in the JOURNAL), and were confirmed.

Mr. BARROW, in retiring from the chair, said: Gentlemen,—I have had the honour of filling the office of President of the Association during the last twelve months; I have done so with great pleasure; and, with equal pleasure, I now resign my seat to one so worthy to fill it as Dr. Strange, of the faithful city of Worcester, whom, I am sure, you will accord the same favour, courtesy, and kindness as you have shown to myself during the time I have held office. [Cheers.]

Dr. STRANGE then took the chair.

Vote of Thanks to Mr. Barrow.—Mr. WHEELHOUSE, in proposing a vote of thanks to the retiring President, Mr. Barrow, said it was well known to all who attended the Ryde meeting, that Mr. Barrow was the life and soul of that gathering, and had done his utmost to make it a social and medical success. He proposed that the hearty thanks of the Association be given to Mr. Barrow for the manner in which he had filled the office of President, and that he be elected Vice-President for life.

Dr. JOSEPH ROGERS (London) seconded the motion.

Dr. STRANGE, in putting the motion, said that for urbanity, kindly help, and good advice, Mr. Barrow had proved a model President, and would retire with the hearty good wishes and acclamations of the members of the Association.

The motion was unanimously adopted.

Mr. BARROW, in acknowledging the vote of thanks, said: Gentlemen, a few days ago I was turning over the pages of George Herbert, and I came across the following lines—

"Who is an honest man?
He who doth still and most strictly his good pursue,
For God, his neighbour, and himself most true,
Whom neither flattery nor flattery's
Unpinne, or swerve from giving all their due."

You, gentlemen, have given to me more than I feel is my due by the kind expression of your feelings; but I believe that, as honest men, you have said no more than you believed to be true, and I thank you heartily for it. I can conscientiously say that I have endeavoured, during the last twelve months, to do my duty to my God and to my neighbour, and with due respect to myself. I believe that, by such a course of proceeding, we do the best we can for this great Association. Let me say, that this being the jubilee meeting of the Association, I do hope that it may be jubilant from beginning to end. I could almost wish that all matters of controversy should be postponed to more opportune occasion; and that we might be all united in one desire to do honour to the gentleman who presides over us, and to make this meeting jubilant in every sense of the word. In retiring from the presidency, permit me to say that my heart is still with the Association, and that I earnestly trust it may have a long and healthy reign. [Cheers.]

President's Address.—The PRESIDENT, before delivering his address, expressed his regret that so few foreigners had been able to attend the meeting. About fifty distinguished men in America and on the Continent had been invited, but only two or three had been able to accept the invitation. Many, having attended the Medical Congress last year, did not feel at liberty to come to England on the present occasion; while some of the German professors were prevented from attending by the fact that their University lectures were not completed. It was a matter of great regret that such men as Charcot, Esmerich, Pasteur, and others were not present among them. He could only hope that at Liverpool, when the Congress would have receded another year into the distance, the Association would be more fortunate in the presence of distinguished foreigners. The President then read his address, which is published on page 245.

Report of Council.—Mr. FOWKE, the general secretary, read the annual report of the Council, which was as follows:

"In meeting you on this the Fiftieth Anniversary of the British Medical Association, in the faithful city of Worcester, the birthplace of the Association and the home of its founder, your Council desires to

congratulate you upon the duration and numerical strength of the Association, the good work it has done, and the high position which the Association holds. Through its means, medical science and literature have been greatly promoted, medical politics have been influenced, and the social character of the profession has been improved. At the present time, the financial prosperity of the Association, and the growing estimation in which it is held, give good promise for the future, and portend a lasting influence on the welfare of the profession. This position, the outcome of fifty years, is the result of the unselfish voluntary labour of a large number of Associates. Of these, many have gone from among us, who still live in our recollection; and we can least of all be unmindful of the founder, Sir Charles Hastings, whose untiring zeal and calm judgment, during the infancy of the Association, carried it through many difficulties. Happily there remain among us many who are able and willing wisely and energetically to carry on the work. Hence, though difficulties have arisen from time to time, which appeared to threaten the very existence of the Association, they have been met with calm deliberation; and, when surmounted, have tended to bind the members of the Association more closely together. With the earnest hope and good assurance that this great Association will long continue its prosperous career, your Council have the pleasure to submit to you the Fiftieth Annual Report.

"In medical science, many admirable scientific and political papers and addresses have been presented to you from year to year. The precedent set at the annual meeting held in Chester in the year 1866, by making a grant to Professor Hughes Bennett and his distinguished coadjutors, for the investigation of the physiological and pathological effects of mercury, led to the appointment, on the motion of Dr. Sibson, of the Scientific Grants Committee, established for the purpose of aiding original scientific researches. The Committee, has been of infinite value; has not only encouraged such labours, by its judicious and liberal grants, but has promoted inquiries, the interesting and important results of which have been published in the *JOURNAL* of the Association, in other scientific journals, and in the *Transactions* of the Royal Society. Last year, 'The Collective Investigation Committee' was instituted, in accordance with a resolution passed at the annual meeting. This Committee was originally suggested by Drs. Ransome and Mahomed, and strongly and eloquently advocated by Professor Humphry, in his Address as President of the Annual Meeting at Cambridge. An influential General Committee, of which Dr. Humphry is Chairman, and Dr. Mahomed Secretary, is energetically labouring to forward systematic collective work. It is too early yet to report results, as much machinery is required to organise work extending over so large a field; but your Council trust that, by the next meeting, important results will have been obtained and published. The Committee will present a report to you this year of the steps which have been taken to obtain and record medical knowledge.

"In literature, the Association, by its *Transactions* in the first instance, and latterly by the *JOURNAL*, has done much to promote the advance of medical and surgical science. The *JOURNAL* ranks as one of the most important scientific periodicals of the day. Amongst many valuable reports and papers in the volumes of the *Transactions* of the Association may be especially mentioned, those on the Medical Topography in various districts, by Sir John Forbes, Dr. J. A. Symonds, Dr. W. Addison, Mr. J. G. Gutch, Dr. Shapter, Dr. C. Otto, Mr. J. D. Jeffery, Dr. T. Ogier Ward, Mr. D. W. Nash, and Dr. James Black; the report on the then state of knowledge of Anatomy, by Mr. Turner of Manchester; the Researches on Structure of Blood-Corpuscles, by Dr. W. Addison; Papers on Vaccine, by Mr. R. Ceely (with coloured drawings); the Process of Nutrition demonstrated by the Microscope, by Dr. W. Addison; Changes in the Situation and Structure of Internal Organs, by Dr. Francis Sibson; and the Essay on Inversion of the Uterus, by Mr. J. G. Grosse; whilst in the pages of the *JOURNAL* the interests of the profession have been carefully advocated, its dignity upheld, and advances in medical and surgical science and practice recorded and circulated.

"In medical politics the Association for many years, through your Medical Reform Committee, has contended for the direct representation of the profession on the Medical Council; and this, after the report of the Royal Commission, seems now likely to be conceded, with the long advocated addition of the one portal system of examination. To the untiring energy of the Chairman of this Committee, Dr. Edward Waters, the credit of this great result is mainly due. Your Council feel that you owe him a deep debt of gratitude, and that you will join most heartily in congratulating him upon his success, and accord a warm vote of thanks to him for his self-denying efforts to attain it. Your Council have also the pleasure to note the efforts of the Parliamentary Bills Committee in directing public opinion on many political

questions; and to this Committee and its Chairman, Mr. Ernest Hart, the thanks of the Association are eminently due.

"Socially, your Association has brought together year after year members of the profession from all countries, but more especially those in the United Kingdom. An incalculable amount of good has resulted from this personal intercourse. Professional interests have been advanced, and friendly feeling cultivated.

"Financially, your Council, upon the Fiftieth Anniversary, have good reason to offer you their congratulations. The Association has advanced much in the last ten years. The receipts for the past year have been £16,525, being an increase over 1880 of £896. The income from interest is now sufficiently large to form a recognisable item: the amount last year was £263. Since 1879, the year in which the production of the *JOURNAL* was undertaken by the Association, the investments have increased from £3,000 to £12,000. The expenditure is £1,639 more than that of 1880, of which £1,048 is an increase in law charges. This includes the costs of the late action at Cork for libel. The increase in what may be considered ordinary expenditure is only £591.

An Act having been passed in October, last year, allowing newspapers to be stitched, your Journal and Finance Committee decided in January last to have the *JOURNAL* wire-stitched in future, at an additional cost of about £100 per annum. The convenience and comfort of the arrangement have met with many expressions of approval, and your Committee have no doubt that it will be appreciated by those who advertise in its pages. This completes the series of improvements in the production of your *JOURNAL*, which your Journal and Finance Committee have carried out since the printing was undertaken by the Association. The weekly issue of the *JOURNAL* now numbers 11,000 copies.

"During the past year, the Association has continued to increase. It is, however, with much pain your Council have to report that the number of deaths has been 76. The new members elected for the year number 715, of which 250 paid 10s. 6d., and joined at the half-year. The Association now numbers 9,563.

"Amongst those who have passed away during the past year, and whom you have to mourn, are—Sir Robert Christison, who was President of the Association at the last meeting at Edinburgh in 1875, and whose contributions to medical science are so well known that it is unnecessary to mention them; Dr. Jenks, who was President when the Association met at Brighton in 1851, and who continued to be senior Vice-President for many years; Dr. McClintock, who gave the Address in Obstetric Medicine at Cork in 1879; Dr. Hayden, President of the Dublin Branch; Dr. T. M. Greenhow; Dr. McCarogher, Chichester; Professor Spence, of Edinburgh, who gave the Address in Surgery, on the occasion of the meeting there in 1875; Sir John Rose Cormack, who for several years filled the office of editor; Sir Edward Sinclair, appointed to the Presidency of the Obstetric Section last year, but unable to perform the duties from ill-health; Mr. Douglas Hemming, the Honorary Secretary to the Otological Section last year; Dr. Peacock; and Mr. Jeston, of Henley-on-Thames.

"The mode of election of members was taken into consideration by your Committee of Council in October last; and, as it appeared that it was the custom of many Branches to admit members to the Association, on the approval of the President and Honorary Secretary of the Branch, while, on the other hand, the Branches complained that they had not sufficient opportunity for considering the qualifications of the members in their district who offered themselves through the Committee of Council for election, the following regulations were adopted, and, so far as they have been tried, they have been found to work satisfactorily.

'1. There shall be a standing notice in the *JOURNAL* every week, of the meetings of the Committee of Council throughout the year; and stating that gentlemen wishing to be elected members of the Association must send in their names twenty-one days before the meeting of the Committee of Council at which they wish to be elected.

'2. That a list of applicants be in the hands of the Committee of Council fourteen days before such meeting of the Committee of Council, and that the Branch Secretaries be supplied with several copies of the list.

'3. That no member be elected by a Branch unless his name has been inserted in the circular summoning the meeting at which he seeks election.'

"The question of Homœopathy, recently discussed in some Branches of the Association, and unfortunately mooted in the Addresses in Medicine and in Surgery at the annual meeting at Ryde, has occupied much time and thought on the part of the Committee of Council.

"Immediately on the delivery of those addresses, the idea arose in many minds that the views enunciated by the readers of the addresses had, in some way, been put forward (through them) by the Committee of Council itself; and it was not until the President of the Council, Dr. Bristowe, and Mr. Hutchinson, had severally, and in the most

public manner, shown that this was not so, that the feeling was allayed.

"Following upon this, a memorial was presented to the Committee of Council from one Branch, demanding the expulsion from the Association of a member on the ground of his public profession of homœopathy.

"To this extreme measure, the Committee of Council could not accede.

"As far as is possible, they have rigidly closed the door of entrance, and have made it impossible for a professing homœopath to enter the Association through election by the Committee of Council; and they have called upon the Branches to aid them, by demanding that every name proposed for election shall be inserted in the circular summoning the meeting at which election is sought.

"They conceive that, by these means, such effectual supervision will be exercised by the Branch Councils that no homœopath will be able to gain admission, either through the Committee of Council or through the Branches, and that thus both doors of entrance are effectually closed.

"Against perversion to homœopathy after admission, they are, at present, powerless, except by the expulsion of the offender; and this, under present circumstances, they consider unadvisable: first, because they hold that such a course would be beneath the dignity of the members of a great liberal profession; and, secondly, because it would confer an amount of notoriety which is very undesirable upon those who were expelled.

"At the same time, the Committee of Council courts a full expression of opinion on the part of the whole Association as to whether it will tolerate homœopathy in its ranks or not; and, if it should determine that the profession or practice of homœopathy shall—*ipso facto*—disqualify from membership, then they conceive that the course will be clear, since the unwitting election of a homœopath would thereby be rendered null, and perversion after election would imply the voluntary cessation of membership.

"The admirable speech in reference to vivisection, delivered by Professor Humphry at Ryde last year, having met with your strong approval, was ordered to be reprinted for the use of the members of the Association; it was decided to send four copies to each member of the Association, and 40,000 were therefore printed, and, with the exception of about 1,000, distributed.

"A member having been summoned to the Row Street Police Court by the Society formed for the Suppression of Vivisection, on a charge of cruelty to animals, founded upon statements made by him at the meeting of the International Medical Congress last year, your President of Council and Professor Humphry, taking counsel with your Editor, decided to defend the case on behalf of the Association. The charge was dismissed. The expense of defending the action was £75. Your Council trust that the action taken will meet with your warm approval.

"The following resolution has been received from the Physiological Society:

"The British Medical Association, for their very valuable assistance on

"At the annual meeting at Ryde, the Section of Otology appointed a Committee to consider the study of aural surgery, who made a report to the Committee of Council, which your Committee of Council ordered to be sent to the various examining bodies for their information.

"Dr. J. Milner Fothergill has given notice that he will move, at this annual meeting, the following addition to By-law 12:

"A period of five years, but shall be

"Your Council have therefore placed this motion on the agenda for this evening's business. They are, however, unable to understand the necessity for such an alteration of the by-law, and believe that there would be a difficulty in carrying out an arrangement for which there is no known necessity.

"Dr. Ward Cousins has given notice that he will move, and that Dr. Grigg will second, the following alterations in the by-laws:

"1. The President of the Association to be an *ex officio* member of the Journal of the selected members, who shall remain

"The Stewart and Middlemore Prizes have been fixed under the trust deeds to be awarded every three years, and, this being the third year of their institution, your Committee of Council, through the Trust

Funds Subcommittee, considered the awards. Professor Burdon Sanderson, F.R.S., Professor de Chaumont, and Dr. Thorne Thorne, have kindly acted as adjudicators of the Stewart Prize. They have, after mentioning much admirable work by other investigators, recommended to the Committee of Council to award the prize of £52 10s. to Henry Vandyke Carter, M.D., Surgeon-Major I.M.D., for his 'Researches on Spirillum Fever in India, and its Communicability by Inoculation.' A similar course has been taken with the Middlemore Fund, for the best essay on the Scientific and Practical Value of Improvements in Ophthalmic Medicine and Surgery, made or published during the previous three years; but, although the invitation to send in essays was well advertised in the United Kingdom and abroad, only one essay has been received. Mr. Bowman, F.R.S., and Mr. Henry Power, have kindly consented to act as adjudicators, and they report that the essay sent in is worthy of the Middlemore Prize of £63. The author is Mr. W. Adams Frost, F.R.C.S.

"The presentation of the prizes will be made after the Address in Surgery, during the general meeting of members on Thursday next.

"The Committee of Council have decided, upon the suggestion of the Worcester Branch, that a bust of the founder of the Association, Sir Charles Hastings, should be placed in some prominent public building in Worcester. A marble bust has accordingly been ordered from the well-known sculptor, Mr. Brock, at a cost of 150 guineas, which will be paid out of the Hastings Memorial Fund subscribed by the members some years ago; and you will be invited to take part in the ceremony of presenting the bust to the city of Worcester, to-morrow, August 9th.

"Your warm thanks are due to the honorary secretaries of the Branches, including the four colonial Branches, for the valuable work and time that they have given to the Association. Your Council regret the resignations of Mr. R. S. Fowler, who has served the Association as honorary secretary of the Bath and Bristol Branch for twenty-three years; of Dr. Edward Malins, Birmingham and Midland Branch; of Dr. John Moore, who assisted in the foundation of the Belfast and North of Ireland Branch; of Mr. Williams, treasurer of the North Wales Branch; of Dr. Barron, honorary secretary of the North of England Branch; and of Dr. Lyon, Glasgow and West of Scotland Branch.

"Lastly, your Council recommend that the name of Dr. Acland of Oxford, who has again become a member of the Association, be restored to the list of Vice-Presidents.

"In considering the various questions which will be brought forward during the present meeting, your Council trusts that wise and calm deliberation will distinguish the fiftieth annual meeting."

The Financial Statement for the year ending December 31st, 1881, was taken as read. It was published in the JOURNAL of April 30th.

Mr. NELSON HARDY (London), in moving the adoption of the report, said it contained a tale of almost unbroken success, socially, scientifically, and financially. Its financial success was greater than ever, and at no time had the Association been so strong a political power in regard to medical questions which were agitating the profession and attracting the attention of Parliament. These were abundant grounds for congratulation. He would refer especially to the efforts of Dr. Waters and the Medical Reform Committee, who, after a long series of arduous exertions, had now a prospect of success in the direct representation of the profession on the Medical Council, and the improvement in the examinations for the entrance to the profession, for which the Association had so long striven. He thought that the prosperity of the Association was attributable mainly to two things: first, that there was originally at the head of affairs a wise master builder, who laid the foundations so strong and deep that they had never required to be changed, and that he had had successors who had acted in the same spirit; and, secondly, that the individual members of the Association had acted upon the principle—

"This above all: to thine own self be true,
And it must follow, as the night the day,
Thou canst not then be false to any man."

In moving the adoption of the report, he desired to propose an addendum on the question of homœopathy, as to which there had been a difference of opinion in the Council. He would propose: "That the report of the Council, together with the financial statement for the year ending December 31st, 1881, be read and entered on the minutes; and that it be a recommendation of the Committee of Council that the avowal of the profession of homœopathy, or any other designation implying a special mode of treatment, shall, *ipso facto*, disqualify from membership of the British Medical Association."

Dr. JOHN MOORE (Belfast), in seconding the motion, said that the Association might well be proud of the work it had accomplished in fifty years. Ten thousand members were now placed, as it were, in

telephonic communication with each other by the means of the admirably conducted JOURNAL. While the Branches were the threshing-floors for beating out thought and gathering seed, the power must be retained of separating the chaff; and the winnowing process must, of course, always rest with the authorities.

Mr. HUSBAND (Bournemouth) protested against the addendum proposed in connection with the motion for the adoption of the report. He was strongly opposed to homœopathy, theoretically and practically; but such a crusade against it as was proposed would only give the men expelled the very notoriety which they desired. They would go to a court of law with their grievances; and it should be remembered that the Lord Chief Justice was at the head of the antivivisectionists, and, for aught he knew, was a homœopath. Every effort should be made to keep out homœopaths, but, if they accidentally became members, or turned homœopaths after admission, no good would come of appearing to persecute them. He begged to move the adoption of the report, without the addendum.

Dr. JOSEPH ROGERS (London) seconded the proposal, and expressed his regret that Mr. Nelson Hardy should have taken advantage of his position to introduce the addition which he had made to his motion.

The PRESIDENT said that Mr. Nelson Hardy was not in order. If the addendum were proposed, it should be brought forward as an amendment to the motion for the adoption of the report.

Mr. NELSON HARDY declined to move the resolution without the proposed addition, and said he would press his motion as an amendment. He had stated to the Secretary, when requested to move the report, that he should propose the addendum, and asked him to communicate his decision to the President of the Council. He understood that, if that course was objected to, the proposal for the adoption of the report would be taken out of his hand.

Dr. FITZPATRICK (Liverpool) seconded the amendment. He was not afraid of the notoriety that homœopathy would acquire by the course proposed. The more firmly it was put down, the less it would show its face. The question was not a new one; it arose in the early days of the Provincial Medical Association in 1851-52. In 1859, at Liverpool, they were unanimous in denouncing homœopathy; and, in 1861, at Oxford, the resolution was confirmed. The Committee had the necessary powers and ample funds, and he called upon them, in the name of the Association, to use them, so that, when a homœopathist was brought before them by any Branch, however humble, they would expel him at once, fearless of the consequences.

Dr. SEATON (Sunbury) said that the first duty lay with the college under whose qualification the member was admitted. So long as he was a member of that body, the Association would do well to leave him alone.

The PRESIDENT said there was some obscurity in the amendment, and asked whether the disqualification referred to in it had reference to admission, or to a person remaining a member after admission.

Dr. FITZPATRICK said he seconded the amendment with the understanding that, if, after admission, it was ascertained that a member was a homœopath or any other "path," he should be expelled.

Mr. DIX (Hull), maintained that the Committee of Council had no power by the present by-laws to refuse admission to a homœopath if only he was "a male person." All that was wanted was the passing of a law that would give them the needful power. In 1852 there was a law requiring every candidate for admission to declare that he was not a homœopath, and did not intend to become one; and another law provided a mode of expulsion if the member became a homœopath after admission. He did not know why those laws were no longer in force. They ought to be re-enacted, so that when a member became a homœopath, he would *ipso facto* be disqualified, just as he was by ceasing to pay his subscription.

Dr. ROBERT BARNES (London) thought that the question could not then be settled, and should be referred to the Committee for a legal opinion to be taken. His own impression was that the Council could refuse to admit any one. The Association was a voluntary one, and no man's right to practice depended on his membership of it.

A MEMBER asked what was the opinion of the Council on the subject.

Dr. WADE said that the Council had the power by a two-thirds vote to expel a member for any cause, subject to confirmation at the next annual meeting.

The amendment was then put, and rejected by a large majority; and the motion for the adoption of the report was carried.

Dr. Fothergill's Notice of Motion.—With reference to a notice of motion by Dr. Fothergill respecting the election of the editor of the JOURNAL,

Mr. WHEELHOUSE said that the Committee of Council had received a letter from Dr. Fothergill, who, after having pressed the matter upon

them most insistently, now asked that the time which had been fixed, and of which he had had full notice, should be changed to suit his alleged convenience. Several members had attended expressly to take part in the discussion; but as Dr. Fothergill was not present to make his proposal, there could be no discussion upon it, it would therefore fall to the ground.

The Journal and Finance Committee.—Dr. WARD COUSINS (South-sea) proposed the following alterations in By-law No. 35: 1. The President of the Association to be an *ex officio* member of the Journal and Finance Committee. 2. The annual retirement of four of the elected members, who shall remain ineligible for re-election for two years. The founders of the Association, he said, had no idea of the magnitude which it would assume in fifty years. As it developed, it was only right that its foundations should be strengthened and its constitution reformed; and it was with that view that he brought forward his proposal. Every association should have a centre of vitality and energy; but the real centre was not always the theoretical one. If they would read the rules of the Association, they would see that the actual centre was a concrete nucleus of true conservative manufacture, which resisted the introduction of a drop of new blood. Theoretically, of course, the centre was the Council, but actually it was the Journal and Finance Committee, which had at its command the mouth-piece of the Association and the funds. He was no revolutionist. He believed in an actual living centre, without which the Association would soon disintegrate; but they wanted a certain balance of power, which did not at present exist. The annual election of the Committee was in the hands of the Committee of Council. It ought to be a free and open one. The law said that it should take place at the next meeting after the annual meeting, but it actually took place in the middle of the annual meeting. The Committee of Council met at half-past nine in the morning; and, when twelve gentlemen were proposed, they were carried by acclamation. All the members could be reappointed year after year. It was a matter of astonishment that the president himself was excluded from the executive body. He was the first member of the Association for the year, and a great deal depended upon his wisdom and energy; no one, therefore, would desire that he should be without a voice in the Executive Council. With regard to the proposed retirement annually of four members, that was merely to provide for a little gentle revolution, which was the basis of all stability. The Association was in its nature a revolving organisation, and he did not know why the vital centre should be excluded from that law. He was only dealing with the structure of the organisation. He desired to express his sense of the great obligation they were all under to those who in the past had laboured in the cause of the Association; but individual energy and perfection were qualities that passed away; and what they ought to aim at was organic perfection.

Dr. GRIGG (London), in seconding the motion, said it was not brought forward out of any feeling of animosity, but only with a desire to promote the welfare of the Association. There was, he believed, a general feeling that some change should take place in reference to the Journal and Finance Committee, but not perhaps exactly in the lines suggested in the resolution, which might possibly be amended in such a way as to meet the general view in favour of an influx of new blood.

Mr. WHEELHOUSE said that no one would object to the President being an *ex officio* member of the Journal and Finance Committee except the President himself. The President was chosen, not because he had taken generally an active interest in the Association, but as the head of the Association in the district where it met. They delighted to honour the district by honouring the man who held there the highest position in the estimation of the people; but to ask him to work on every committee would be to impose upon him an amount of labour which very few Presidents would be willing to accept. The President of the Council was *ex officio* a member of the Committee, and thus the Association was permanently represented. With regard to the proposal that four members should retire annually, the result of such a method would be that at the end of three years there would be an entirely new committee, and members would be elected on it who knew little or nothing of the finances of the Association. Who were the gentlemen who were asked to retire? They were those who brought the Association out of debt to the amount of £7,000, and raised the invested funds to £12,000. Under those circumstances, would they, as sensible men, desire to change the committee every three years, and entrust the work to those who perhaps had not given it a thought?

Dr. FITZPATRICK (Liverpool) said it was not desired to change the committee entirely, but only to have a little new blood. He believed there was no President who would not be willing to accept the responsibility. There were seven *ex officio* members of the Committee, and five were practically self-elected. There were plenty of other men

besides those constituting the Committee who were well able to look after the finances. He would suggest that, in order to make the change more gradually, three members, instead of four, should retire annually, and be ineligible for re-election for two years.

Mr. HUSBAND said he thought the matter required consideration, but it could not then be settled off hand. He would propose as an amendment, "That Dr. Ward Cousins's resolution be referred to the Committee of Council to consider whether any or what alteration should be made in the constitution of the Journal and Finance Committee."

Mr. BARROW, in seconding the amendment, said that when he became President of the Association, he was extremely surprised to find that he was not a member of a single committee. He thought the President should be *ex-officio* a member of all committees, but of course he need not attend all. With regard to the other proposed change, he thought it would be extremely detrimental to the interests of the Association. The matter, however, was well worthy of consideration, and he therefore seconded the amendment.

Mr. JACKSON (Sheffield) said it was invidious to talk of the Committee being self-elected. There was a large number of *ex-officio* members, and they attended better than any others.

The PRESIDENT, in putting the amendment, said he was of opinion that the President of the Association should be a member of all Committees.

The amendment was carried by a large majority, and was also carried as a substantive motion.

The meeting then adjourned.

SECOND GENERAL MEETING, WEDNESDAY, AUGUST 9TH.

The second general meeting was held on Wednesday, August 9th, in the Guildhall, the President, Dr. Strange, in the chair.

Dr. Fothergill and the JOURNAL.—Dr. FOTHERGILL asked permission to call attention to the subject of the resolution of which he had given notice, and which had been set down on the agenda of Tuesday.

Mr. WHEELHOUSE said the subject was duly set down for consideration; but Dr. Fothergill was not present, and he had therefore only himself to blame for its not being discussed.

The PRESIDENT said Dr. Fothergill could be heard, if he had any explanation to offer in regard to his absence on Tuesday, but he could not now bring forward his motion.

Address in Medicine.—Dr. WADE then delivered the Address in Medicine. It is published at page 251.

Dr. CUMING (Belfast) said he had great satisfaction in moving the best thanks of the Association to Dr. Wade for his very able, thoughtful, and carefully reasoned address. They could have no better introduction to the work of the sections than listening to the observations of one so competent to make them—observations which embraced a comprehensive view of their present position, and which analysed so clearly, and appreciated so fully, some of the most important movements and currents of opinion that had been prevalent in medicine for some years past. Everyone who, like himself, had been familiar for many years with Dr. Wade's important contributions to medical science, would have expected him to deal with the subject in a careful and interesting way, and to present the results of the ripe experience of a thoughtful physician and an acute observer. [Applause.]

Dr. LITTLE, in seconding the motion, said he had seldom listened to so interesting and instructive an address. The Address in Medicine was sometimes so dry that members scarcely waited to hear it out; but Dr. Wade had treated in an interesting way questions with which they were all intimately concerned. The question of blood-letting was one that must come to the front. They had, no doubt, all met with cases in which they were convinced that the custom of the present day was a false one. There were cases in which bleeding would be of infinite use, while it others it would be just as hurtful. The physician of the future would be bold and brave as well as skilful, disregarding the pains and pleasures of the public mind, and doing the best for his patients. The Address in Medicine was also an important one, and Dr. Wade would help them to come to a wise resolution respecting it.

The PRESIDENT (who expressed his personal thanks to Dr. Wade for his valuable and suggestive address) then put the motion, which was unanimously carried.

Committee of Council.—Mr. WHEELHOUSE reported that the Council had elected the following twenty members of their body to serve on the Committee of Council for the ensuing year, viz.: J. T. Arlidge, M.D.; T. H. Bartleet, M.B.; J. P. H. Boileau, M.D.; L. Borchardt, M.D.; B. Foster, M.B.; E. Long Fox, M.D.; A. J. Harri-

son, M.B.; C. Holman, M.D.; Leslie H. Jones, M.D.; H. Lancaster, M.D.; C. Macnamara, Esq.; F. E. Manby, Esq.; Frederick Mason, Esq.; R. H. B. Nicholson, Esq.; Rushton Parker, Esq.; S. W. Sibley, Esq.; E. H. Sieveking, M.D.; A. P. Stewart, M.D.; T. Symson, Esq.; and John Wood, Esq.

Annual Meeting of 1883.—Mr. WHEELHOUSE reported that a cordial invitation had been received by the Association from Liverpool, to hold its next annual meeting in that city.

Dr. DAVIDSON (Liverpool), in presenting the invitation, said it was very largely signed by the medical practitioners of the city and neighbourhood; and that they had unanimously agreed to recommend Dr. A. T. H. Waters as President. [Applause.]

On the motion of Mr. WHEELHOUSE, seconded by Mr. WATKIN WILLIAMS (Birmingham), the invitation was unanimously accepted.

Dr. WATERS said he highly appreciated the honour of being appointed President-elect for 1883; and assured the members that they would receive a hearty welcome in Liverpool. It was twenty-three years since the Association met in that city. It then numbered about 2,000 members, of whom 200 attended. The members were now five times as numerous; and it might be reasonably hoped that the proportion of those attending the meeting next year would be the same. However numerous they might be, they would find ample accommodation, and every effort would be made to render the meeting satisfactory and agreeable.

Invitation for 1884.—Mr. WHEELHOUSE further reported that the Association had received an invitation to hold its meeting in Belfast in 1884.

Dr. JOHN MOORE, in presenting the invitation, said that it was signed by 170 practitioners in the province of Ulster, comprising all the leading members of the profession. It was their unanimous desire that the Association should hold its meeting of 1884 in Belfast, and no effort would be wanting to make it in every way successful.

The PRESIDENT said that the invitation from Belfast, which could not then be accepted, would come before the meeting at Liverpool.

The proceedings then terminated.

THIRD GENERAL MEETING, THURSDAY, AUGUST 10TH.

This meeting was held in the Assembly Room, Guildhall, at 10 A.M., Dr. STRANGE, the President, in the chair.

The reports of the Medical Reform Committee and of the Committee on Habitual Drunkards were read and adopted.

The Address in Surgery.—Mr. W. STOKES, of Dublin, delivered the Address in Surgery. It is published at page 256.

A vote of thanks to Mr. Stokes was proposed by Mr. T. PRIDGIN TEALE, of Leeds, and seconded by Sir WILLIAM MAC CORMAC. It was carried unanimously.

STEWART PRIZE.—The Stewart Prize, value fifty guineas, was presented to Dr. Vandyke Carter. In the absence, in India, of Dr. Carter, it was received by Surgeon-General Walker.

LUNCHEON.

MEMORIAL OF SIR CHARLES HASTINGS, FOUNDER OF THE BRITISH MEDICAL ASSOCIATION.

The luncheon given by the Worcester and Hereford Branch to members of the Association took place on Wednesday, August 9th, in the Great Hall, Shire Hall. About 500 members were present. The chair was taken by Dr. STRANGE, the President of the Association. The Very Reverend the Dean, the Mayor of Worcester, and Mr. G. W. Hastings, M.P., were present.

After luncheon, the health of the Queen was drunk; and also, in solemn silence, "The memory of Sir Charles Hastings".

After a few words from the PRESIDENT, a speech was delivered by Mr. GEORGE HASTINGS, who gave a most interesting account of the life and the professional and scientific labours of his father, Sir Charles Hastings, founder of the British Medical Association.

Mr. HUSBAND, in a short address, then spoke in the highest eulogy of the invaluable services which Sir Charles Hastings rendered to the profession.

Presentation of Bust.—The marble bust of Sir Charles Hastings was then presented to the Mayor and Corporation by the PRESIDENT, who observed that it would look down from the public library on many generations of the youth of Worcester, who might imitate the energy of the founder of the Association, the memory of whose good deeds would remain as imperishable as marble itself.

The MAYOR OF WORCESTER, in reply, expressed, in the name of the Corporation, its grateful acceptance of the bust. The citizens of Worcester heartily welcomed the Association, which was to be congratulated on having at its jubilee meeting so able and courteous a President.

The company then separated.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 12TH, 1882.

THE JUBILEE MEETING.

THE jubilee meeting of the British Medical Association is, while we write, being celebrated in Worcester, the city in which, fifty years ago, it was founded through the prudent foresight and energetic zeal of Sir Charles Hastings and his fellows, Kidd, John and William Conolly, Barlow, Soden, Hodgson, and the others of the noble band who combined with him to unite the medical profession into an active body, co-operating for the common good. Beginning with a small band of about fifty provincial practitioners, the Association, as has been repeatedly narrated, has grown until it now includes nearly ten thousand members of the profession, resident not only in the United Kingdom, but also in the dependencies and colonies.

Such is the body which, having once before since its establishment visited Worcester, under the presidency of its founder (thirty-three years ago), now returns to "the faithful city." That the occasion has been felt to be one of the deepest interest has been amply manifest. Not only have the members of the Association in Worcester—it should rather be said of the Worcestershire and Herefordshire Branch—done their best to make the meeting worthy of the occasion, and with marked success, but the cathedral clergy, the municipal authorities, and the inhabitants of the city generally have heartily co-operated in the desire to receive the Association with cordiality, and therewith to do honour to the memory of one of Worcester's noblest citizens.

In other columns we give an account of the proceedings, as far as it has been possible to prepare it for this week. The address of the President, those in Medicine, in Surgery, and most of those of the Presidents of Sections, are given in this week's JOURNAL, and are, in part, commented on in other pages.

The first meeting—that held on Tuesday evening—was largely attended, and was prolonged to a late hour. That the proceedings would not throughout be of the quiet and harmonious character which has long characterised the meetings of the Association, will doubtless have been anticipated by those who have observed the notices which have for some weeks appeared in the JOURNAL. Yet, though a little warmth was manifested by some of the speakers in expressing their views, there was, throughout the whole, a happy undercurrent of harmony on one point—how to best ensure and promote the prosperity and efficiency of this great Association. One grave question—that of the conditions under which the JOURNAL of the Association should be conducted, and which had long been held before the members as one likely to cause the breezes of discussion to blow with perhaps more than gentle vigour, fell through, in consequence of the absence of the member who was to bring it forward. The advocates of a more vigorous mode of dealing with homeopathic practitioners than that recommended in the report of Council, and those who considered that a change in the organisation of that Committee which, next to the Committee of Council itself, is the most important organ in the Association, had an opportunity of expressing their opinions; and though in the end they did not succeed in obtaining their wishes, they gave sufficient evidence of the purity and high character of their motives. It is indeed, unavoidable that in large institutions like the British

Medical Association, there should occasionally be differences of opinion as to the best course of action; and such differences, provided they do not degenerate into discord, must be regarded as having in the end a salutary effect. "Concordiâ," says the old Roman writer, "parvæ res crescunt, discordiâ maximæ dilabuntur." Concord has been the ruling spirit in our Association, and it has grown and prospered. Differences we have had, and will have, but they have never degenerated—and we trust never will degenerate—into that discord which overthrows the greatest institutions.

On Wednesday, the Association accepted an invitation to meet next year in Liverpool, under the presidency of Dr. A. T. H. WATERS, for many years a devoted and energetic friend of the Association. The Council also received, through a deputation from Belfast, a most cordial invitation to meet in 1884 in that interesting locality. It is scarcely necessary to say that, though no formal decision could be arrived at, the invitation was received in as cordial a spirit as that in which it was offered.

After the reading of Dr. Wade's Address in Medicine, which was listened to by a large and attentive audience, the members, to the number of more than 500, adjourned to the Shire Hall, where a sumptuous luncheon had been provided by the members of the Worcestershire and Herefordshire Branch. After the luncheon, at which the Right Reverend the Dean of the Cathedral (Lord Alwyne Compton) and the Mayor of Worcester, were present, the President, Dr. Strange, proposed the toasts of "The Queen", and "The memory of Sir Charles Hastings"—the latter being appropriately drank in solemn silence. After this, Mr. George Hastings, M.P., gave a highly interesting account of some facts in relation to his father's life, hitherto for the greatest part unknown to members of the Association; and was followed by Mr. W. D. Husband, who, as an old colleague, gave a sketch of the work of Sir Charles Hastings in relation to the Association. Finally, the President, speaking in the name of the Association, formally presented the marble bust of Sir Charles Hastings to the mayor; who, in appropriate words, thanked the Association, in the name of the corporation and citizens, for the valuable gift in memory of one whom the city of his adoption, as well as the Association which he founded, held in honour.

The proceedings of the day were brought to a close in the Cathedral, where the members listened to a special service, at which Haydn's sacred oratorio "the Creation" was performed by the Philharmonic Society, assisted by members of the celebrated choirs of Gloucester, Hereford, and Worcester. A collection was made on the occasion, in aid of the British Medical Benevolent Fund.

Taken altogether, the jubilee meeting at Worcester may fairly be regarded as one of the most successful, and most pleasant, which the Association has ever held; and the pleasantness of the gathering has happily been enhanced by the weather, which has up to the present been all that we could desire, and promises, as far as appearances go, to remain so until the close of the meeting.

THE PRESIDENT'S ADDRESS.

THE position of President of the Association at its fiftieth annual meeting, though one of peculiar honour, was also one attended by more than usual responsibility and difficulty. This remark applies with greater force to the duty Dr. Strange had to perform, in giving the address. Each succeeding president has to confess his hesitations and embarrassments in the choice of a subject to place before the meeting worthy its attention. Dr. Strange could do no less; nevertheless, the fact that the meeting was the jubilee of the Association was happily suggestive to him of making his address both retrospective and prospective of the scientific and social position of the profession; and he is to be congratulated on the manner in which he carried out the task he took in hand.

His address was essentially a survey—partly scientific, partly historical, and partly ethical—of the past and present state of medicine, from about ten years antecedent to the institution of the "Provincial

Medical Association" at Worcester in 1832. To use his own words, his subject matter was "the revival and the survival of medicine in these kingdoms", or an attempt "to trace the evolution of the medical mind during the past half-century, viewing that evolution or development in its tripartite aspect, viz., the intellectual, the moral, and the social aspects"; and, as a supplement, to "try to make a forecast of what the future, the survival, is likely to be, taking our material from the history of the past and the survey of the present."

The plan which the President pursued was, therefore, one of vast, and, we may add, of elastic dimensions; and he is to be congratulated on the amount of interesting and suggestive matter he contrived to bring within the compass of his address.

Where so much might be profitably brought under the notice of our readers, it is difficult to make such selection as is compatible with the limits of space. Dr. Strange's first point was, the notice of the revival of medicine subsequent to the year 1825, associated with the names of British physicians and surgeons who have passed away within the memory of the older members of the Association, but whose fame will survive for many future generations. They were pre-eminently men who unhesitatingly cast aside the dogmas of former ages when, in the search after truth, their inquiries and observations demonstrated their fallacy. The speaker particularly singled out the late Sir W. Lawrence as affording a bright example of the boldness of the early promoters of the revival, when truth led the way to the demolition of the idols of a past age, in the delivery of his celebrated "Lectures on the Natural History of Man". As another illustration of the spirit of the new school, he quoted the publication of the *Clinique Médicale*, by Andral, "a work based upon nothing newer or better than the plan of Hippocrates himself, viz., the minute observation of innumerable facts, and the simple truthful narration of those facts; classified, but not systematised; intended for the reader to digest and assimilate for himself in his own way, not prepared and 'peptonised', as I may say, to suit the author's own taste and fancy."

This critical and satirical by-play respecting the writings and writers of the present day is, it must be admitted, very justifiable on the part of Dr. Strange, who, standing somewhat aside from the feverish activity of the larger centres of assumed medical progress, and basing his opinion upon a wide knowledge of the past of medicine, and of considerable personal experience of many years, can form a fair estimate of the matter he has ventured to criticise.

For his criticisms on the current medical literature of the day did not end in the observations quoted. He recurred to the theme again and again. He contrasted the tomes of the worthy old physicians of past ages, the results of years and years of plodding observations and work, rich in observation but poor in theories, with the many flimsy ephemeral papers and treatises of our time, rich in theory, poor in observation and research, abounding in fancied new wisdom as old as Hippocrates, and repeating "what has been better said a hundred times before".

Another important factor in advancing the new movement, very properly made prominent by Dr. Strange, was the part played by the *Lancet* in destroying monopolies, in exposing the abuses of the medical corporations, and in arousing the Legislature to understand the just requirements of the profession and the demands of the public for sanitary measures in their most comprehensive form. Following upon our contemporary, but moving in a line parallel to it, was the *British and Foreign Medical Review*, started by Sir John Forbes. Not neglecting the movement inaugurated by the former journal for the general improvement of the profession in its relations to the State and to the public, the *Review* sought further to promote its scientific status, by placing before its readers the most recent advances made in medical science, both at home and abroad, and thus bringing the profession in England into relation with that of the Continent and America. Our readers, we feel sure, will allow that the JOURNAL, the organ of the Association, quite capable, as Dr. Strange observed, of maintaining the highest rights and privileges of the profession, is at the present day second to none in the discharge of the highest duties of medical journalism.

Dr. Strange next turned to the second portion of his address, "The Survival of Medicine"; or, in other words, to an examination of the present condition and the prospects of medicine. He most rightly and vigorously insisted upon our perfect freedom as a body to think, to speak, to write, and to teach, contrasting our position with that of the Church and Law, in which the yoke of articles and precedents has to be humbly borne. Let us, he added, never hand over the advantages accruing from this liberty to the State—"never relinquish into the hands of the State the decision as to what shall be the kind and amount of our knowledge on entering our profession; or in what way, and under what restrictions, we shall conduct our experiments and inquiries into the laws of nature....; or in what manner, and for what reward, we shall carry our knowledge to the bedsides of our patients, be they the rich in their mansions, or the poor in our hospitals; or in what way we shall regulate our mutual intercourse." As might be anticipated, this happy vindication of our freedom, particularly in the matter of experimentation, was warmly greeted by those present. Nor was the speaker's reference to mistaken philanthropy in the exercise of our calling less so. After portraying the real philanthropy exhibited by the profession as a body, he warned us against the praise of the public as full of danger; as a too frequent step towards "encroachments and exactions of all kinds of offices which you are not called upon by duty or charity to render".

But the orator entered upon a less gracious task in pointing out some of the blots to be found in our modes and forms of practice, and administered well deserved castigation on those "who conduct their practice under what I may call an organised hypocrisy," who make professions to cure where their knowledge disowns them; and likewise in those guilty of self-laudation and bold self assertion. He however, somewhat mitigated the effect of his censures on medical men by pointing out that the abuses condemned have largely their origin with the public themselves, who dearly love quackery, and are always delighted in affecting to do the work of professional men as well in private as in public undertakings. With one more reference to the subjects of this able address we must content ourselves. Dr. Strange lamented that a *laissez faire* principle pervades the profession both in relation to theory and practice. Every sort of aberration from received truths is sanctioned as though truth could not be found, or were not worth seeking after. Flowing from this is an absence of cohesion, and therewith the want of some organisation, not supplied by the Royal Colleges, to preside and watch over our interests at all points, whether as among ourselves or where they touch upon our relations to the public or to the State. To this end, Dr. Strange would create a consultative Council of the Association to become "a High Court of Equity and Ethics, before which all important questions affecting professional honour and conduct may be brought up for judgment." This expansion of the Association would be, he regarded, but a carrying out towards their legitimate issue the true end and aim of the Association. The elaboration of his scheme, Dr. Strange promised for some future occasion, and concluded, by an eloquent peroration, borrowed from the writings of Bishop Thirlwall, a painstaking effective address which was listened to with great attention by an unusually large number of members.

THE ADDRESS IN MEDICINE.

THE annually-recurring delivery of addresses in medicine and allied subjects to the members of the British Medical Association—or Medical Parliament, as it might be called—must prove a rather formidable undertaking to those gentlemen whose duty it is to perform it. With abundance of material ready to hand in a perusal of the speeches of his predecessors in the same position, a lecturer must not repeat remarks already made, or at least must enforce them in original ways. Too vast to be treated as a whole within the limits of an address, yet too detailed in the successive steps of its progress to allow of its being treated minutely without weariness, the advance of medicine has to be considered either so generally as to run the risk of leaving on the minds

of the audience an impression of vagueness, or, on the other hand, so particularly as to incur the danger of leading the speaker into the discussion of some specialism, whose treatment is incompatible with the general scope of the subject. And particularly in the present case must the difficulty of avoiding both of these extremes have been felt by the reader of the Address in Medicine. After fifty years of existence, during which time the British Medical Association has grown from small beginnings to the dimensions of a most powerful and influential body, it seems natural to ask, What is the present state of medical science as compared with its position half a century ago? While the attempt to answer the question at once brings us face to face with the difficulty of escaping from vagueness by too much generalisation, or narrowing the scope of the inquiry by entering into too much detail, we think Dr. Wade may be congratulated on having avoided all of these difficulties. No one can say he has not travelled far enough afield. His address has included a comparison of the methods of treatment in vogue fifty years ago with those which obtain now; has glanced at the question whether there are laws of therapeutics; has referred to the controversies concerning the alleged change of type in disease; and the necessity to the advance of medicine of some amount of vivisection; not omitting some discussion of the place of alcohol as a therapeutic agent, or of the question why the suggestion for the new use of such a well known drug as digitalis sometimes falls to the ground, unnoticed by the profession.

The remarks on these questions receive, nevertheless, point and force from their being brought to bear on the special consideration of the successive steps which led to the dethronement of the remedy of blood-letting from its high place in therapeutics. In seizing on this subject, Dr. Wade has gone without circumlocution to the very heart of the difference between past and present modes of treating disease. Not, of course, that blood-letting was either an invention of half a century ago, or that it held a higher place then than at former times in the history of medicine. Everyone knows that it is recommended as a remedy in the earliest known medical writings, and that its usefulness has been accepted and assumed by every medical writer of eminence, from the origin of our art till the time of Marshall Hall. But this is indeed the very question. For centuries the practice had survived: it had withstood not only the grave criticism of isolated members of the faculty, but also the artillery of wit and satire levelled at it by the laity. Yet not even Molière's procession across the stage of the grotesquely dressed fathers of the profession, nor the chorus of the candidates for medical degrees, calling out that venesection, purgation, and clysters were the appropriate means of treating serious disease; that, if they failed to benefit, the same venesection, purgation, and clysters were to be employed again; and that, if they still failed to give relief, they must have yet another trial to see what they were able to effect—not even could these satirical representations suffice to shake the public confidence in the efficacy of the remedies, or sway the profession in the least from the employment of them, albeit they did suffice to convulse the audiences with contemptuous laughter at the whole treatment of the schools. How was this? How came it that a mode of practice which had endured for centuries was upset by the writings of Marshall Hall between 1820 and 1830? The causes were multiple. Perhaps the most acute remarks made by Dr. Wade in his treatment of this subject, are to the effect that great discoveries, while they may be (and no doubt justly in the main) referred to certain particular causes, are always the effects in addition of other causes, indirect or more remote, which have prepared the way for them, and made public opinion ready to accept them when announced. Great discoveries are, as it were, in the air; and more than once it has happened, and will no doubt happen again, that they have been announced simultaneously by different men. Instances will readily occur to our readers. The wonder of Descartes when he saw Galileo's book, and the difficulty he felt in restraining the idea that Galileo had copied from him, is a good example; while the simultaneous discoveries of the uses of the tele-

phone by Bell, Eddison, and others, is another. Among the causes leading up to a readier acceptance of Marshall Hall's views on blood-letting, there is mentioned by Dr. Wade the fact that "the intellect of the period was coming to distrust, and ultimately to banish, violence, harshness—the darker shades of repression—from the education of the young, from the treatment of the insane, from the punishment of criminals, and to substitute for those time-honoured, but most ineffectual, processes a rational moderation." Other causes leading up to the abolition of blood-letting were a greater degree of faith in the benign powers of Nature, and also, perhaps, the successful results of the treatment of disease by small doses of remedies which, about this time, was establishing itself in some quarters. It might, indeed, be urged that the last was itself a result of the prevailing spirit of the time, as much as it was a cause leading to a more favourable acceptance of the views and reasonings of Marshall Hall; but whichever of these two views we take, the connection of the one with the other cannot be overlooked by the scientific inquirer into the history of medicine. The steps of the process which have led to the issue referred to have been mentioned in the address, and need not, therefore, be repeated here. But there is one part of the proof to which particular attention should be directed, viz., "the importance of ascertaining the effects of loss of blood in circumstances entirely free from the complication of disease or other unusual condition of the system." It were much to be desired that the suggestors of new remedies always followed the plan of one of the greatest of those who helped to displace old methods, and that they faithfully inquired into the effects on the healthy body of remedies proposed to be used in disease. The science of therapeutics is, in fact, in course of being revolutionised by this means; and it is quite certain that no positive science of therapeutics, capable of withstanding the shocks of mere changes in opinion and alterations of fashion, can possibly be created in any other way. We have no hesitation in saying that a thorough study of the effects of heat and cold on the animal body, coupled with an investigation of the effects of, say, a dozen drugs on the healthy economy, and of the differences in these effects caused by alterations of the quantities of the drugs employed, compared with some scientific standard of resistance yet to be determined, would, we are convinced, suffice to raise the domain of therapeutics from an empirical to a scientific status.

In one direction, that of the knowledge of the natural history of disease, it is not too much to say that medicine is practically perfect. We know the cause of fever, of inflammation, of gout, of cancer, of rheumatism. The slow causation of some of these conditions, commonly called the chronic diseases, makes it certain that they are to be efficiently combated only by commencing treatment many years before we in general are asked to do so, if, indeed, we ought not to begin in the generation previous to that in which we expect a development of the disease. Even then, however, a knowledge is presupposed on the part of the medical man of the laws underlying the effects of the agents he employs, and of the reaction of the animal economy thereto. The problem given is an economy obeying certain known laws, and tending to develop in a certain known direction. If it reaches the condition, treatment is hopeless. Can we prevent its doing so, or retard the time at which the state in question is reached? If by expectant medicine, we mean that the doctor is to wait till then, the worst criticisms of the laity will be justified, and the uselessness of our art demonstrated. But if by the expression we mean that, knowing what is to be expected, we are to combat it continually and energetically, if slowly, and over a long period of time, the case is quite different, and the expression may be a justifiable one. It is plain in this case, however, that a blind belief in the *vis medicatrix nature* will not be of much advantage either to us or to our patients. It is because the *vis natura* is *destructrix* rather than *medicatrix* in many cases, that we are consulted at all; and if in this case the only advice we have to offer to our patients is that they should wait till the destruction has overwhelmed them, the justification before lay eyes of our labour, of our study, and of our status, will be but lame and im-

potent. Such is not the tendency of medical science, so far as we can see. The period of scepticism that has succeeded the long revolution in which established opinions have been so rudely shaken shows signs of coming to an end. Doubt is being displaced by settled opinion, founded on a scientific basis, which, being fact and not opinion, promises to endure. A question of the change of type in disease, though highly important, affects, after all, the details rather than the principles of treatment. Our study of disease may be leading us to ask for longer time during which our remedies, as they act slowly, must be brought to bear, in order to perform certain results. But in this we see the best justification for the scientific foundation for an act which, if it imitates the slow and laborious performances of Nature, like her is tending to a more harmonious development, induced by a loyal obedience to laws whose sway is seen to be the more extensive the more closely they are studied and their results observed.

THE ADDRESSES IN SURGERY.

MR. STOKES, in his Address in Surgery, and Mr. Prichard, in a similar discourse delivered at the opening of the Section devoted to that subject, have both discussed the relations of the surgical science and practice of fifty years ago to that of the present day. In the sectional address, we find all due justice allowed to modern improvements, whilst some apology is made for opinions long held to be exploded, and for practices out of fashion; but, in Mr. Prichard's opinion, justifiable and worthy of revival. Mr. Stokes dwells on what has been done during the past half-century, and on what may yet be done. For sins of omission in contemporary medical science, we are referred by the lecturer to questions relating to education. Mr. Stokes urgently desires an improvement upon the present standard of general education among young men about to enter into their hospital studies, and especially recommends a conjoint examination in Arts which all students not holding university degrees should pass before commencing the study of medicine. Mr. Stokes is strongly in favour of high scientific teaching for medical students in universities. He believes, from personal experience as a surgical examiner in the Queen's University in Ireland, that, for practical clinical study, universities in the smaller provincial centres are hardly able to afford adequate material for the student to acquire a sufficient knowledge of these subjects. This must not be taken to imply any encouragement for teachers to neglect clinical material that may be utilised in infirmaries adjacent to universities.

Of the advances which surgery has made since the establishment of the Association, three are chosen by Mr. Stokes for special comment, namely, the discovery of anaesthetics, the restoration of diseased or injured bones and joints necessitating resection, and the introduction of antisepticism in the treatment of wounds. Mr. Stokes observes that it was not until 1846 that anaesthetics came properly within the domain of practical surgery, when Morton administered ether, at the Massachusetts General Hospital, to a patient from whom a surgeon removed a tumour. We must bear in mind, since Mr. Stokes does not support this perfectly correct statement by any details, that Morton acted thus on the strength of several previous, almost experimental, administrations of the same anaesthetic in dental cases. It is known that Dr. Long of Georgia had operated on anaesthetised patients in 1842 and 1843. He published, however, no statement of his experience, so that, as Dr. Lyman of Chicago has recently pointed out, his discovery remained unknown to science till long after others had employed anaesthetics. Mr. Stokes believes that, with the most careful precautions, the gauntlet of peril must still be run whenever any known anaesthetics are administered. He prefers ether; and, when speaking of inhalers, he recommends those in which the patient inhales, to a certain extent, his own breath, as happens during the employment of the contrivances to which the names of Morgan, Ormsby, and Clover are attached.

Mr. Stokes is an unflinching advocate of antiseptic surgery, which he considers as the greatest of the surgical advances that the past half century has witnessed. As might be expected, he dwells particularly

on the reaction against strict Listerian precautions, which for the last two or three years has been so extensively manifested in the course of discussions on antiseptic surgery in general, and on special operations in which the new system has been introduced. A great impulse to this reaction was given by a well known address delivered three years ago, at an annual meeting of the Association, by a distinguished London surgeon. The Listerians, including Mr. Stokes, continue to this day to insist on attributing Mr. Savory's successful treatment of operation-wounds to his adoption in practice of matters of detail based, whatever he may assert, on their great fundamental principles. Mr. Savory believed, in 1879, "that results equal to the best hitherto obtained may be reached" by great care in operating, by insuring coaptation of the edges of the wound, and by skillful after-treatment, the wound being washed when it is dressed "with tepid water, perhaps containing some permanganate of potash in the form of Condy's fluid, or other potent antiseptic of the least irritating kind". This method of dressing, Mr. Stokes observes, "is essentially antiseptic, consisting as it does of many of the features that characterise Listerian dressings". The charge of want of originality in antiseptic surgery is confuted at length, and the system of carbolic acid lotions with cerate dressings, as introduced by Maisonrouve, is described to show how far it fell short of Mr. Lister's principles and practice. Mr. Stokes might have added that want of originality is no objection whatever to a system. All similar great principles that have benefited humanity have been based more or less on valuable suggestions from empiric practice, or from the adoption of an idea that has been already carried into practice by some one not possessed with sufficient scientific capabilities or not enjoying a fair opportunity necessary to establish what he may have almost originated. Dr. Long, quoted above in our remarks on Mr. Stokes's observations on the introduction of anaesthetics, stands, to a certain extent, in the same relation to Morton as certain careful surgeons of the last generation do to Mr. Lister, only the first comparison regards a mere matter of practice, invaluable as that practice has proved, Morton, the successful establisher of anaesthesia, being no more a chemist or scientist than Dr. Long; whilst Mr. Lister excels his opponents in having the support of a vast amount of scientific evidence.

Is this evidence reliable? So asks the sceptic, and forthwith the germ-theory must be drawn into the vortex of discussion, whatever clinical results may prove. Burdon Sanderson attributes the secondary infective character only of the inflammatory exudates of a wound to atmospheric organisms; Ogston and Huxter believe that these germs are primarily the sources of all the inflammatory and other troubles to which wounds are liable. Whichever view be adopted, Mr. Stokes believes the necessity for thorough antiseptic precautions remains the same. If the earliest inflammatory exudation be harmless, no one can calculate at what moment it may become infective, and the agents of infection must be as carefully kept away from the wound, as though they caused the primary infection itself. Mr. Stokes does not dwell upon the observations on the value of carbolic spray made by Mr. Lister himself at the International Medical Congress in 1881. He simply refers to those observations, as giving a second impulse to reaction, the first having been set in motion by Mr. Savory. Mr. Lister's expressions, misquoted and misunderstood by many who will not take the trouble to refer to the *Transactions* of the Congress, are as follows:—

"I am aware that, concomitantly with the perfecting of the spray there has been an improvement in other parts of our antiseptic arrangements; and I am not prepared to say that our success in a minority of good results may not be due to the latter rather than to the former. And it may be, for aught I know, that, when the International Medical Congress next meets, I shall be able to speak of results of a still higher order obtained without using the spray at all. For if further investigation should confirm the conclusion to which our recent facts seem to point, and if it would indeed be proved that all risk of atmospheric contamination of our wounds during operations may be thrown to the wind, then no one will say with more joy than myself, '*Hort mit dem Spray*.'"

From this passage, it has hastily been concluded that the spray is already discredited by its inventor. We must remember that this error is not so much due to ignorance of the germ-theory or to disbelief in its alleged influence over the union of wounds, as to a very natural dislike to the spray itself, which is noisy, and disagreeable in odour, besides possessing several more serious disadvantages. Mr. Stokes agrees with Mr. Lister in not regarding ovariectomy as the touchstone of the efficacy of the antiseptic treatment of wounds. He describes his great success in certain cases of excision of joints, and in hip-joint amputations, all conducted with Listerian precautions, and all performed in a hospital where the hygienic surroundings are in the highest degree unfavourable.

The third great surgical discovery since the foundation of the Association is the method adopted, with certain variations, for insuring a regeneration of bones and joints necessitating resection. Mr. Stokes discusses this practice at some length. He compares the rapid reproduction of bone when the periosteum is preserved in young subjects to the less satisfactory results in adult life. A distinction, most important in prognosis, is drawn between the thickened vascular condition of periosteum, where the osteogenic layer remains intact, as in young subjects constitutionally healthy, with the advanced form of that condition where the bone-producing tissue is more or less destroyed; this is seen in sickly children, and in most adults. Mr. Stokes speaks very strongly in favour of timely excision of the knee, an operation which should never be considered as a last resource. The practical part of the address ends with some remarks on supra-condyloid amputation of the thigh, which the lecturer considers as best performed by a modification of Carden and Gritti's operations.

The Association will heartily endorse the lecturer's sentiments in his concluding remarks on the Association for the Advancement of Medicine by Research, and on the reactionary spirit of a section of the public, which has been the cause of its establishment. We agree with him in believing that the great practical difficulty is that the Association will have to deal with "a section of the public who refuse to be instructed; refuse to recognise established facts; refuse to weigh evidence; substitute groundless assertion for argument; and wilfully and deliberately accuse the scientific physiologist of a selfishness and cruelty as heartless as it is cowardly."

In the sectional address, Mr. Prichard draws an amusing and instructive sketch of the difficulties which obstructed the study of practical anatomy in the days when the Association was founded. The most interesting and important part of his discourse is the defence of certain practices and opinions generally believed to be out of date. He considers that bleeding, valuable in the treatment of certain head and chest affections, and counterirritation, have been unjustly neglected or discarded by contemporary surgeons. Mr. Prichard dwells more particularly on rapid and dexterous operating, an accomplishment not sufficiently cultivated in these days. "The shorter the time that the patient is under the influence of an anæsthetic and in the hands of the operator the better." It cannot be doubted that there are not enough of the old-fashioned brilliant operators in our present medical schools. Such surgeons never fail to inspire a vast amount of confidence among their pupils, who listen all the more to their teaching, and emulate their dexterity. Their rapid manipulations are perfectly compatible with gentleness and with careful after-treatment; moreover, nausea and shock resulting from prolonged anæsthesia and exposure of deep structures, are minimised by the skill of a quick operator.

Mr. Stokes and Mr. Prichard have deserved well of the Association for the manner in which they have demonstrated the progress of surgery, defended new discoveries against undue conservatism or ignorant reaction, and advocated the retention of old methods that deserve to be retained in surgical practice. We may indeed feel proud when we remember that the pioneers or the establishers of some of the most beneficial of modern innovations are members of our body, and have promulgated their doctrines and explained their methods in ad-

resses delivered at our meetings, where the metropolitan teachers have so often had the opportunity of discussion with their brethren from great provincial centres.

THE Artisans' Dwellings Bill has been read a third time in the House of Commons.

THEIR Royal Highnesses the Prince and Princess Christian of Schleswig-Holstein have been pleased to appoint Thomas John Mac-lagan, Esq., M.D., Physician in Ordinary to their Royal Highnesses.

THE presidency of the Health Department of the forthcoming Congress of the Social Science Association at Nottingham has been accepted by Sir Rutherford Alcock, K.C.B.

MR. TORRENS intends to move an amendment to Mr. Fawcett's Government Annuities and Insurance Bill, requiring a careful medical examination of all applicants who may desire to take benefit from the measure.

TYPHOID fever is still on the increase at Bangor, and the Dean is suffering from a severe attack. Dr. Barry, who was sent down by the Local Government Board to investigate the cause of this outbreak, has condemned both the water-supply and the drainage.

MR. WILLIAM PENHALL, late of Trinity College, Cambridge, who was killed on August 3rd, while attempting to ascend the Wetterhorn, was the son of Dr. Penhall of St. Leonard's, and was himself studying medicine at St. Bartholomew's Hospital.

AT the tercentenary anniversary of the foundation of the University of Würzburg, held on August 1st, a number of honorary diplomas were conferred: among others, on Sir James Paget, Professor Huxley, and Sir John Lubbock.

HIS Royal Highness the Prince of Wales has, we understand, given Mr. Jerrard a sitting, at Claudet's Studio, 107, Regent Street, for a portrait which will form the commencement of the Album of the late International Medical Congress, which we lately had occasion to review favourably.

THE Professorship of Surgery in the University of Berlin, vacant by the resignation of Baron von Langenbeck, has been offered to and accepted by Dr. von Bergmann, Professor of Surgery in Würzburg. The recently appointed professor will enter on his duties at the commencement of the winter session.

NOTWITHSTANDING the great exertions that have been made and the precautions taken by the authorities, small-pox is spreading in Cape Town and its environs, five fresh cases having been reported on the 10th inst.; much alarm is felt in consequence. The disease has been clearly traced to the docks.

WITH reference to the recent accident on the Eastern Counties Railway, a letter has appeared in a contemporary, suggesting that every train should carry a chest of bandages, surgical appliances, and restoratives. This plan has been adopted, with useful development, in America; every train which passes over the Rio Grande Railway Company's line is provided with a medicine-chest, containing drugs, instruments, bandages, etc. Printed instructions accompany it. The company also has a staff of surgeons organised to render assistance in case of accident. The surgeons are located at different points along the line, and *employés* on trains are enjoined to notify them by telegraph, that preparations may be made in time for the reception of the injured.

MALE and female classes of the St. John's Ambulance Association were opened in the Royal Engineer Institute, Chatham, by Lieutenant-Colonel F. Duncan, R.A., on Friday and Saturday last. Surgeon-Major Muir, of the Army Medical Department, has consented to give the lectures. At the opening of the male class on Friday, a number of men under orders for Egypt were present, and received useful hints as to the first treatment of the wounded.

THE Peninsular and Oriental steamship *Carthage* which has been prepared as a hospital ship for the troops on service in Egypt, has been fitted with a Bell-Coleman cold air refrigerator for the purpose of preserving provisions, cooling water and making ice. This the first time that one of these machines has been used for hospital purposes, and it will no doubt prove a source of great luxury to the invalids on board.

HER Majesty the Queen visited the transport *Catalonia*, having on board General Hamley and staff, Sir Evelyn Wood and staff, and the first battalion West Kent Regiment (the Queen's Own). Her Majesty visited every part of the ship, including the hospital, under the medical charge of Surgeon-Major W. Alexander, A.M.D., who is going out in medical charge of the regiment. Her Majesty expressed her approval of the arrangements for the sick on board.

Dr. DUTRIEUX, the Belgian explorer, writes, under date Alexandria, July 20th:—"I have escaped the massacres perpetrated by the criminals and Bedouins let loose by Arabi Pasha against a defenceless population. My house has been burnt and pillaged. As medical officer of the Government Hospital and of the European Hospital, my professional duties detained me in Alexandria, which I have not quitted for a single minute." Dr. Dutrieux's devotion to his duties has been fully rewarded by the Khedive, who has conferred upon him *proprio motu* the title of Bey, and the appointment of Physician-in-Chief to the Egyptian Government Hospital.

THE pleasant town of Tunbridge Wells seems to have attained a very satisfactory sanitary standard. Mr. Stamford, the medical officer of health, reports the number of deaths for the last quarter, ending June 30th, to be 88, the annual rate per 1,000 being 14.28. There was not a single death during the quarter, and only one the previous quarter, caused by any of the zymotic diseases attributable to defective drainage or water-supply. This is worth knowing at the present holiday season, when so many persons are in search of a locality to which they can take their families, without any misgivings on these important points.

HIP-JOINT AMPUTATIONS.

DURING the past month, three cases of amputation at the right hip-joint were performed in England, with the aid of Mr. Davy's lever for controlling hæmorrhage. A case where Mr. McLaren, of Carlisle, operated, lost two ounces of blood; a second patient, under Mr. Cowell's care, at the Westminster Hospital, lost three ounces; and the third case, where Mr. Paul Swain, of Plymouth, performed amputation with the assistance of Dr. Bampton, lost but one ounce and a half. All these patients are progressing favourably.

POISONOUS HOT-CROSS BUNS.

OUR readers may remember that, on Good Friday last, several persons were poisoned at Inverness by eating hot-cross buns. From the report of the Crown analyst, it appears that no arsenic, nor, indeed, any metallic poison, was detected either in the buns themselves or in any of the ingredients used in their manufacture. There was found, however, an irritant alkaloid, of undetermined nature. Since, from the evidence, it appears that loaves and buns were made from one batch of dough, spice being added to the buns, and that the loaves were not poisonous, it appears pretty clear that the poison, whatever its nature, was contained in the spice.

OUTBREAK OF SCARLATINA AT ACCRINGTON.

WITH respect to the recently reported outbreak of scarlatina at Accrington, we learn that there is a great deal of scarlatina in this town, but that it is mostly of a mild type. Inhabited as it is chiefly by artisans, the difficulty of isolating cases of infectious disease is found to be very great, partly owing to the indifference of the people, and partly to the limited accommodation in their houses. Unfortunately, Accrington does not possess a hospital for infectious diseases, but it is satisfactory to note that all is being done that can be done to check the spread of the disease. Great suspicion attaches to the water supply of certain parts of the town; but of this more positive information will be obtained when the analysis has been made.

GREENWICH HOSPITAL SCHOOLS.

THE results of the work of the Committee of Inquiry into the management of the above schools are clearly shown from the estimates for the year 1882 to 1883, which have just been issued as a Parliamentary paper. The Committee declared their opinion that the food was insufficient and of the wrong kind; that the clothing was thin and inadequate; that the dormitories and class-rooms required rearrangement and much alteration; and that provision should be made for a mortuary and other sanitary arrangements. It struck us at the time the report was issued that it was a reflection upon those responsible for the medical arrangements that this state of affairs has so long been allowed to exist. The serious extent to which underfeeding of the boys in these schools existed, owing to well intentioned but false motives of economy, will be evident when it is stated that the estimates provide for an increased vote for provisions in excess of the £7,500 for the previous financial year of no less than £3,500—an increase equal to nearly 50 per cent. in this one item alone. The outlay on clothing and bedding is increased from £3,000 to £4,450; £3,000 is specially voted for alteration of dormitories and class-rooms; £250 for a *post-mortem* room and dead-house; and £333 for the purchase of a kneading machine, probably to save the boys much damaging labour. The fact that so large and unusual an increase in the estimates has been sanctioned, proves beyond question that the old system was a mistaken one, and that it was calculated to injure the boys and destroy the utility of the school.

THE NAVAL FORCE AT ALEXANDRIA.

THE sick and wounded at the Naval Hospital, Malta, are progressing very favourably. Levi Holley (an account of whose severe injuries will be found at page 223 of our last number) appears to be in a hopeful condition, in spite of his three comminuted fractures, and a bad penetrating wound of the thorax. Maguire is recovering rapidly, after his secondary amputation. A blue-jacket from the *Superb*, walking in Alexandria, omitted to answer the challenge of a British sentinel, who, quite rightly, fired. The bullet entered the right forearm of the sailor, anterior to the head of the radius—emerging, two inches lower, on the ulnar side of the forearm. No bones nor joints were injured, and the patient is recovering. In the Crimean war, a promising young British army surgeon was mortally wounded, by a French sentinel, under precisely similar circumstances. Two naval medical officers—Staff-Surgeon J. Hamilton Martin and Surgeon J. O'Callaghan—have sailed in the *Carthage*, their services being required for the crews of the transports. A correspondent writes from Alexandria: "July 31st. I have been round the hospitals here, but scarcely any of the wounded were allowed to remain in the town. The medical officer in charge of the large Arab Hospital is a partisan of the rebels—so he and his staff went with Arabi, and about 600 were sent by train to Cairo."

THE CONTAGIOUS DISEASES ACTS.

THE annual report of the Assistant Commissioner of Police for the Metropolis on the operation of these Acts in 1881 has been published as a Parliamentary paper. Lieutenant-Colonel Pearson states that the police specially employed under these Acts have discharged their duties

his entire satisfaction, and, with one exception, no charge of excess or violation of duty has been brought to his notice. The case alluded to was fully investigated at the time, and the constables concerned were removed from the district. Whenever a chance exists of reclaiming a woman, every effort is made before she is brought under the Acts; and after she has signed the voluntary submission form the opportunity is still given her of returning to her friends if she is desirous of doing so. Seventy-four young girls between the ages of 12 and under 18, 86 women between the ages of 18 and under 30, and four above that age, who have been found in bad company and improper places, have been rescued. In addition to the above, 32 young persons between the ages of 12 and under 18, 84 women between the ages of 18 and under 30, and 13 above that age, who had commenced an immoral life, abandoned it on being cautioned by the police; their names were therefore not placed on the register. During the year, 863 have left the districts under the protection of the Acts; 51 have married, 234 have entered homes, 659 have been restored to friends, and 20 have died, making a total of 1,827 who have been removed from the register. An account of the report of the Select Committee of the House of Commons on these Acts is published elsewhere in the present number of the JOURNAL.

THE FIELD-HOSPITALS AND BEARER COMPANIES FOR EGYPT.

ON Thursday, August 9th, at 6 A.M., Nos. 4, 5, 6, 7, and 8 Field-Hospitals paraded in the South Camp, and took the train at the Aldershot town station for Woolwich, where they embarked on board the hospital ship *Carthage*, for Egypt, which was inspected on Tuesday by the Duke of Cambridge and his staff, to their entire satisfaction. One hundred and eighty-five men, of which two-thirds were non-commissioned officers, have been drawn from all parts of England for these field-hospitals. Fortunately, they all belonged to the Army Hospital Corps, and were all trained men, which is more than can be said for the bearer company now forming at this station. Punctually at 6 A.M., Surgeon-Major Gastern, commanding the depot, rode up and inspected the lines, after which he addressed them as follows: "Non-commissioned officers and men of the Army Hospital Corps,—Before bidding you farewell, I wish to give you a few words of advice—firstly, as to how you may best preserve your health in the hot climate in which you are going to serve; and, secondly, as to your duties. With regard to your health, above all things be temperate, and, at the same time, be careful of the water you drink; and whenever you are exposed to the heat of the sun, do not forget to wear your helmet. And now a few words as to your duties. Never forget that your duty—namely, that of attending and nursing your sick and wounded comrades, is of a most important and responsible nature, possibly that of life and death, and will demand all your untiring care, zeal, and attention. I fully expect, and feel confident, that all of you will, by your steadiness, sobriety, and good conduct, maintain the reputation of the corps to which you belong. Perform your duties faithfully and well, and you will do all that is expected of you. I wish you all God speed, and a safe return." Three cheers were then given for their commanding officer, and the men commenced their march in the highest spirits. Few who are unacquainted with military duties know, or can realise, what a tremendous strain has been put on the department to keep pace with the requirements of the authorities. This has been particularly felt in all grades of non-commissioned officers. A field hospital consists of one surgeon-major in charge, two surgeons-major and four surgeons to assist, one officer of orderlies, and thirty-four non-commissioned officers and men, of whom one-half are non-commissioned officers. The reason of this preponderance of non-commissioned officers is the numerous posts of trust which have to be filled in a field hospital, e.g., storekeepers, stewards, pack-store men, cooks, ward-masters, etc. All these require a "stripe", as it is commonly called, to give them the necessary authority in the berths they are called upon to fill. England has been almost completely drained of these men to complete the *cadre* of field hospitals embarking for

Egypt, or, as the authorities judiciously say, "for service in the Mediterranean". The demand, however, has been greater than the supply; and the result is that No. 2 bearer company, which is at present being formed here, is composed almost entirely of Army Reserve men—not men late of the Army Hospital Corps, that have been transferred to the Reserve, but men of other corps totally ignorant of the use of a stretcher, other than to carry an intoxicated comrade to the guard-room after a street row. These are the men that are being sent out to remove the wounded from the field of battle. True the commanding officer of the depot, assisted by his instructors, is doing all that can be done to knock the mere rudiments of the stretcher drill into these men, but what can be done in forty-eight hours? How much can be readily understood when it is known that the usual course of instruction lasts two months. Such a contingency as the present was long ago foreseen, both at Whitehall Yard and Aldershot, and an adequate number of men applied for. It was, however, refused by Government, and the result will be, it is feared, a risk of success to a new scheme, and damage to a reputation that has yet to be made. Take, for example, the placing of a patient on a stretcher—a simple thing enough, but, like most simple things, can be done in two ways. The common course would be to take the patient by the head and heels and swing him on to a stretcher. Not so, however, should the bearers act. They are taught to place the stretcher alongside the wounded man; three of the orderlies then lift him from off the ground, by simple elevation, and the fourth meanwhile places the stretcher under the patient instead of the patient being brought to the stretcher—a much safer, easier, and more expeditious method. This is one of a series of duties the bearer company is drilled in, and, with advantage to the service and use to themselves. All this takes time, time that is not at the disposal of the instructors. The result is a raw body of men are brought together, and sent abroad to do duties of which they are profoundly ignorant. This Bearer Company idea is a new institution, and consequently requires all the precautions possible, and every element of success present to make it the useful body it is supposed to be. Success can hardly be expected to follow the present arrangements, and non-success means a lasting slur on a body of men who are as anxious to do their duty as the Guards, or any other corps taking part in this campaign. The 1st Field Hospital have already safely reached Malta in the *Dacca*. No sickness is reported amongst the troops in any of the transports that have sailed.

SCOTLAND.

MRS. THOMSON of Rosalee, Hawick, has intimated to the Senatus of the University of Edinburgh the foundation by her of a scholarship in midwifery, to be called the James Scott Scholarship, in memory of her father, the late James Scott of Allanshaws. This is the second scholarship in the same department for students of this University, Mrs. Buchanan, of 49, Moray Place, Edinburgh, having two years ago provided funds for a scholarship in gynaecology. In both cases the scholars receive the yearly interest of £1,000.

ROYAL INFIRMARY, EDINBURGH.

THE new arrangement in the ophthalmic department of the Edinburgh Royal Infirmary has now taken place, Mr. Walker ceases to be Surgeon, Dr. Argyll Robertson is now sole Surgeon to the Eye Wards, and Mr. George A. Berry, M.B., F.R.S.E., has been appointed Assistant Ophthalmic Surgeon.

GLASGOW MEDICO-PSYCHOLOGICAL ASSOCIATION.

AT the annual meeting of the Medico-Psychological Association, Glasgow, held last week, Professor Gairdner was elected President, in room of Dr. Hack Tuke. After transacting other business, the members of the Association enjoyed an excursion to Loch Lomond.

IRELAND.

PROFESSOR LEITH ADAMS, F.R.S., F.G.S., who held the chair of Natural History in the Queen's College, Cork, died at Queenstown on the 29th ult.

HEALTH OF BELFAST.

DURING the four weeks ending July 22nd, six cases of small-pox were removed to the hospital for contagious diseases. Four hundred and ninety-four births were registered, and 336 deaths. The average death-rate from all diseases was 21 per 1,000. As in the preceding month, the number of cases of zymotic diseases reported by the medical officers of the several dispensary districts have been few, and shows a diminution of these diseases, small-pox and typhus fever more especially. The only disease that has shown an increase is diarrhoea.

NORTH DUBLIN UNION.

DR. MACCABE, Local Government Board Inspector, in his recent half-yearly report on the condition of this workhouse, again alludes to the insufficient accommodation afforded for the number of its inmates. Considering the crowded state of the house, its sanitary condition has been good; and of the 311 deaths recorded during the half-year, 81 occurred in persons who were moribund on admission, and 25 died within a month of being admitted. An outbreak of ophthalmia took place among the schoolboys at the end of February, and in all 46 cases occurred, 19 remaining under treatment on the 30th of last June.

HEALTH OF CORK.

DURING the four weeks ending July 15th, the total number of deaths amounted to 124 (including 28 dying in the workhouse, and therefore outside the borough, who formerly had resided in the city); a number equal to a total ratio of mortality of 20.50. Deducting the deaths occurring in the workhouse, the urban death-rate will then amount to only 15.09; from infectious diseases 0.8, and an infant mortality of 3.0. The births during the same period numbered 143, or at the rate of 23.07 per 1,000. It is satisfactory to observe that a decided diminution has since last report taken place in the amount of fever of every description, especially typhus, in the city, both as compared with the four weeks immediately preceding, and also for the corresponding period last year.

OVERCROWDING OF LODGING-HOUSES, QUEENSTOWN.

The condition of the lodging-houses in Queenstown for the reception of emigrants has of late attracted considerable attention, and the reports of Mr. Gray, assistant-secretary to the Board of Trade, and Dr. Brodie, Local Government Board Inspector, in reference to this subject, have recently been published. It appears that there is no system of licensing the lodging-houses in Queenstown, no organised inspection or registration, and no arrangement for taking returns of the numbers they are fit to accommodate, nor of the numbers actually on the premises. As regards overcrowding, it has been shown that four or five men are sometimes put into one bed, while others lie about the floor, and that twenty-six people have been known to lie in a room of about 17 feet by 10 feet. On the 6th May last, the subject was brought under the notice of the Town Commissioners, and one of the members proposed that the lodging-house clauses of the Public Health (Ireland) Act, 1878, should be put into force. This proposal met with active opposition, and was not even seconded; a result which is explained by the fact that no fewer than eight of these lodging-houses belonged to individual members of the Town Commissioners. There is no doubt that the sanitary authority have been unmindful of their duty in not having acted on the repeated reports of their medical officers, and as oft repeated remonstrances of the Local Government Board.

HISTORICAL SKETCH OF THE PROCEEDINGS OF THE BRITISH MEDICAL ASSOCIATION REGARDING MEDICAL REFORM.

PART III.

FOR several years, the question of Medical Reform remained in a quiescent state, as far as the Association was concerned. The defects in the Act, however, having become apparent, the Medical Council and the Government, within a few years, entered into negotiations regarding an Amendment Bill. In 1867, the Committee of Council of the Association, at a meeting held on May 28th, expressed the opinion that it was of the greatest importance that the Association should support the Medical Council in their endeavours to amend the Medical Act and improve medical education; and that, for this purpose, petitions to the legislature and representatives of Her Majesty's Government should be adopted. They also passed the following important resolution:

"That, in any alteration of the Medical Act, the constitution of the Medical Council ought to be reconsidered, so that the great body of the profession should be fairly represented."

Thus was reopened the question of the direct representation of the medical profession in the Medical Council—an object which had occupied a prominent place in the early endeavours of the Association to obtain medical reform, but which had been for a time abandoned, chiefly for the reason that, until a Medical Act had been passed, and a Register of medical practitioners formed, there was no constituency which could elect members of the Medical Council.

The resolutions passed by the Committee of Council were transmitted by Dr. Sibson, the President of Council, to the Right Honourable Gathorne Hardy, M.P., the Home Secretary, together with a letter offering comments on the amendment of the penal section of the Act, and the registration of foreign and colonial diplomas and degrees.

On July 5th, the Committee of Council appointed a subcommittee, consisting of Dr. Edward Waters, Mr. Husband, Dr. Simpson, Mr. Southam, and Mr. Nunneley, "to consider what alteration shall be recommended in the mode of electing the Council of Medical Education, so that the great body of the profession shall be more fairly represented." The subcommittee met at Chester on July 17th; and, having carefully considered the matter, agreed that the following changes in the constitution of the Medical Council were necessary:

"1. That eight members, to be elected by the registered members of the profession, should be added to the Council; 2. That four should be elected for England, two for Scotland, and two for Ireland; 3. That the election should be by voting-papers, to be distributed and collected by the registrars of the Medical Council in the respective countries; 4. That the tenure of office should be the same as that of the members of the Council appointed by the Crown; 5. That every candidate should be nominated by at least twelve registered members of the profession resident in the division of the kingdom for which he is to be elected; and that he should signify to the Registrar, in writing, fourteen days before the day of distributing the voting-papers, his willingness to serve if elected."

The report of the Committee was brought before the annual meeting of the Association, and, after some opposition, chiefly on the ground of the inconvenience of adding to the number of members already constituting the General Council, it was adopted by a large majority. At a subsequent meeting of the Committee of Council, on October 25th, the Committee for considering the representation of the profession in the Medical Council was reappointed. A deputation of the subcommittee, consisting of Dr. Sibson, Dr. E. Waters, Mr. Southam, Dr. Simpson, Mr. Nunneley, and Mr. Watkin Williams (General Secretary), had, on June 30th, 1868, an interview with the General Medical Council, and presented a memorial in favour of direct representation of the profession in the Council, supporting the same by strong arguments. The Medical Council, however, decided that, "under present circumstances, it would not be expedient for the Council to consider the propriety of attempting to obtain a change of constitution." At the annual meeting of the Association in 1868, an addition of five members was made to the Committee, which, as appointed, consisted of Dr. E. Waters (Chester); Mr. Husband (York); Mr. Southam (Manchester); Mr. Nunneley (Leeds); Dr. Heslop (Birmingham); Dr. Russell (Birmingham); Mr. Cordy Burrows (Brighton); Dr. Davey (Bristol); and Mr. J. S. Gamgee (Birmingham).

In the following November, the Committee of Council published an address to the members of the Association, stating the claims of the medical profession to be represented on the Medical Council, and urging the members of the Association "to impress on the candidates for Parliament and the members of the Legislature and the Government that, in order to secure the interests of the public and the welfare of the medical profession, any future Bill for the amendment of the Medical Act ought to include a clause for the direct representation of the profession in the Medical Council."

On March 25th, 1869, the Direct Representation Committee decided to reprint the address to the members of the British Medical Association, and to the profession generally, which had been agreed to at the previous meeting of the Committee, sanctioned by the Committee of Council of the Association, and published in the medical journals; and to publish it again, with an explanatory preface, in the medical journals, and to have copies struck off for general distribution; also to take steps for petitioning the Legislature. They also recommended that a subscription, to defray the expenses incidental to the movement, should be sanctioned by the Committee of Council of the Association.

On July 12th, 1869, a large deputation of the Committee of Council of the Association, the Committee on the Direct Representation of the Medical Profession, and other members of the medical profession, had an interview with Earl de Grey and Ripon, Lord President of the Privy Council. The deputation explained to his lordship (with whom were Mr. Forster, the Vice-President of Council, and Mr. Simon, the Medical Officer of the Privy Council) the views of the Association, with special reference to the formation of conjoint examining boards, and the introduction into the Medical Council of members elected by the votes of the medical profession, in the proportion of one-fourth.

In the Parliamentary session of 1870, a Bill to amend the Medical Act of 1858 was introduced into the House of Lords by Earl de Grey and Ripon. It provided for the formation of an examining board for each of the three divisions of the kingdom, but made no provision for the direct representation of the profession in the Medical Council. A special meeting of the Association, to consider the Bill, was held in London on May 15th; Dr. Chadwick, President, being in the chair. The following resolutions were adopted:

"That the members of the British Medical Association have viewed with satisfaction the adoption, in the proposed Medical Bill, of one portal to the profession; and tender their thanks to Her Majesty's Government for the recognition of so important a step for raising the standard of the profession." "That this meeting is of opinion that there should be a single examining board for the entire kingdom, instead of three different boards for the three parts of the kingdom." "That this meeting views, with regret and disappointment, the entire absence of any provision in the Bill for the direct representation of the profession in the Medical Council; and pledges itself to exercise every constitutional means to secure this vital and all-important principle in any measure of medical reform that may become law." "That this meeting of the British Medical Association offers its determined opposition to any Bill which gives to the Privy Council more extended or other control over the medical profession than was given to it by the Medical Act of 1858."

On the following day, a deputation of a large number of members of the Association waited on the President of the Privy Council, and placed in his hands a clause providing for the admission of eight representatives, four for England, two for Scotland, and two for Ireland. A petition, praying for the introduction of a clause to this effect into the Bill, was also presented to the House of Lords. On July 20th, a deputation waited on the Vice-President of Council, Mr. Forster, to again urge the importance of direct representation, and offering to withdraw opposition to the second reading if the Government would accept the proposals of the Association. Mr. Forster declined the proposals of the deputation, but stated that, if the second reading of the Bill were allowed to pass, he would not oppose the appointment of a Special Committee in the next session to inquire into the subject with a view to legislation thereon. The Direct Representation Committee declined to accede to this arrangement, and the Bill was withdrawn. At the annual meeting, held at Newcastle in April, 1870, the action of the Committee received the approval of a vast majority of the meeting, notwithstanding the opposition of several eminent and much respected members of the Association, including three vice-presidents, who were also members of the Medical Council.

The Committee, which had been appointed at the annual meeting as the Medical Reform Committee, with enlarged powers, met in Birmingham on December 27th. Dr. Edward Waters was appointed chairman. It was resolved to draft a Bill based on the Government Bill of last session, but embodying the principles contended for by the Association. The Committee sought an interview with the Lord President of

the Privy Council, as the author of the Bill of the previous session. In consequence of the unavoidable absence of his lordship in the United States, the Committee were on February 14th, 1871, received by the Right Hon. W. E. Forster, Vice-President of the Privy Council, who was accompanied by Mr. Simon, the Medical Officer of the Privy Council. The Committee submitted to the Vice-President the continued existence in the profession of a determination to accept no measure of medical reform which did not concede direct representation, compulsory registration, improved examinations, and the annulling of honorary degrees in medicine. The fact that the medical authorities in Ireland had recently decided in favour of direct representation in the Medical Council was also laid before him. The Vice-President stated, in reply, that the Government could not undertake the question of medical reform that year, owing to the great pressure of public business; but would give its careful consideration to such a measure as the Committee had indicated, when brought forward.

On February 28th, 1871, the Reform Committee held a meeting in London. It was unanimously agreed to ask the Right Hon. Mr. Headlam, M.P., who had in previous years rendered valuable service to the cause of Medical Reform, to take charge, in conjunction with Mr. Dalrymple, of the Bill of the Association. A meeting, attended by several members of Parliament, was held in the House of Commons the same evening. Mr. Headlam consented to take charge of the Bill, and gave notice in the House of his intention to bring it in.

After all the details of the Bill had been settled, Dr. Lush and Mr. Brady gave notice of two other and separate Bills, differing widely from each other. Under these circumstances, Mr. Headlam and Mr. Dalrymple deemed it unwise to proceed with the Bill of the Association. The Reform Committee accordingly deferred pressing the Bill of the Association; they did not, however, attempt any opposition to the other Bills, which were soon afterwards withdrawn. The Bill prepared by the Committee contained provisions for: 1. Direct representation of the profession in the Medical Council, by the admission of elected members in the proportion of one-fourth; 2. Control, on the part of the Council thus modified, over professional education and examination; 3. The formation of a conjoint examining board for each division of the kingdom, either voluntarily on the part of the universities and corporations (with the approval of the Council), or, this failing, by compulsion on the part of the Council; 4. Equality of fees and examinations. The Committee also recommended the registration of a special qualification in State Medicine.

In 1872, the Committee suspended their exertions, in order not to impede the attempts which were being made on the part of the universities and corporations in England to form a conjoint board.

In the Parliamentary session of 1873, a Medical Act Amendment Bill, prepared by the Committee, was introduced into the House of Commons by the Right Hon. Mr. Headlam and Sir H. Selwin-Ibbetson. It provided for the introduction into the General Medical Council of representatives elected by the direct votes of the registered medical practitioners, and for the establishment in each division of the kingdom of a conjoint board of examiners for the licensing of all candidates for the future practice of the profession. A deputation of the Association waited, on May 15th, on the Marquis of Ripon, Lord President of the Privy Council, and explained the objects of the Bill. The press of business before the House of Commons rendered it impossible to pass the Bill during the session, and Mr. Headlam consequently withdrew it.

In 1874, the Committee refrained from pressing for the introduction of the Bill of the Association, partly in consequence of the sudden and unexpected resignation of the Ministry, and the consequent unpreparedness for action on the part of the new Government; and also because the General Medical Council was urging the formation of conjoint schemes of examination. In 1875, also, they abstained from action, in order not to impede the formation of conjoint boards.

At the annual meeting of the Association in 1877, the Committee were instructed to prepare a short Bill for the amendment of the penal sections of the Medical Act. Several members of the Legislature, however, whom the Committee consulted, stated that any attempt at partial legislation would be fatal to the influence of the Association, and advised that the Association should ask for a Committee of the House of Commons on the subject of Medical Reform. In 1878, a Bill was introduced into the House of Lords by the Government. It contained no provision for either direct representation or a compulsory conjoint scheme. A deputation of the Committee, therefore, had an interview with the General Medical Council, and two interviews with the Duke of Richmond, Lord President of the Privy Council, who had charge of the Bill. They were, however, unsuccessful in their endeavours to obtain the amendments for which they asked. The Bill, being thus objectionable in respect of the absence of provisions for direct representation or conjoint examining boards, and also because it placed the Medical

Council, even in strictly professional matters, under the control of the Privy Council, the Committee determined that the Bill of the Association should be introduced into the House of Commons. This was, accordingly, done, on May 20th, by Mr. A. Mills, the Right Hon. H. C. F. Childers, and Mr. Goldney. Subsequently, the Government adopted in their Bill the conjoint scheme; but, much opposition having been excited against the Bill, it was withdrawn.

Meetings of the Reform Committee were held in October, and also on December 10th, and January 8th and 29th, 1871. At the last of these meetings the Medical Acts Amendment Bill of the Association was revised, and on February 26th it was introduced into Parliament by Mr. A. Mills.

On March 3d, the Medical Reform Committee again met, and resolved: "That, in the case of failure to induce the Government to accept the principle of direct representation, it would be advisable to obtain the appointment of a Select Committee, to consider the subject of the constitution of the Medical Council."

Shortly after this a Select Committee was appointed. Its inquiry was at first intended, by the Government and the Medical Reform Committee, to be limited to the constitution of the Medical Council, but it was subsequently extended to all the points involved in medical reform. Dr. Waters, the Chairman of the Committee, and Mr. Ernest Hart, the Editor of the *BRITISH MEDICAL JOURNAL*, gave evidence before the Committee.

In the Parliamentary session of 1880, the Medical Bills of the preceding session passed the second reading, and were again referred to a Select Committee. Soon afterwards, however, the Parliament was dissolved; and of the members whose names were on the back of the Medical Act Amendment Bill of the Association, the Right Hon. Mr. Childers became a Cabinet minister, and Mr. A. Mills, who had ably and warmly supported the proposals of the Reform Committee, was thrown out of Parliament.

After the meeting of the new Parliament, the Medical Reform Committee decided in first place to ascertain whether the Medical Council would take action in the matter. All hope of assistance from the action of the General Medical Council, however, being dissipated, the Medical Reform Committee obtained an interview, on July 30th, with the Right Hon. Earl Spencer, Lord President of the Privy Council, who was accompanied by the Right Hon. Mr. Mundella, the Vice-President. The Lord President admitted that the subject was an important one, and that the Government were bound to deal with it, if only they could see their way through it; and his lordship also stated that, if they did enter on the subject, he undertook to enter into communication with the Committee, and hear all the views that the Association might wish to lay before him.

Towards the end of 1880, the Chairman of the Committee was asked whether he would, on behalf of the Medical Reform Committee, entertain favourably a proposal from the Irish Medical Association for a conference of all parties interested in the Medical Bills, in order, if possible, to frame a single Bill, which would fairly satisfy the requirements of the whole profession. The conference was to comprise delegates from the Medical Reform Committee of the British Medical Association, the Medical Alliance Association, the proprietors of the *Lancet*, and the Irish Medical Association. This proposition was accepted; and Dr. Alfred Carpenter, President of the Council of the Association, and Dr. Edward Waters, the Chairman of Committee, were appointed to attend the conference.

The Conference first met at the Euston Hotel on December 9th, 1880, last, when the following resolutions were adopted:—"That the preliminary education of the student is at present defective, and that it should be determined and regulated by the General Medical Council, as is proposed with regard to the professional education." "That this Conference is of opinion that, in the formation of a scheme of conjoint examination, it is essential that the system shall be uniform throughout the kingdom, in respect of curriculum, examination, and examination fees." "That this Conference approves of the proposal that the examining boards for the three divisions of the kingdom should be constructed by the co-operation of the medical authorities in those divisions under the control of the General Medical Council: and that the lower diplomas of these authorities should be granted only to persons who had passed the conjoint examination; that, in default of the medical authorities in either division of the kingdom forming a conjoint board, the General Medical Council should do so." "That, in the opinion of this Conference, the time has come for discontinuing the representation of the Apothecaries' Society of London, the Apothecaries Hall of Ireland, and the Faculty of Physicians and Surgeons of Glasgow in the General Medical Council." "That it is the opinion of this Conference that these bodies should cease to exist as medical authorities." "That no scheme of medical reform can be ac-

cepted by the profession which does not provide for its direct representation in the General Medical Council."

The history of subsequent proceedings in regard to medical reform are contained in the report of the Medical Reform Committee, which has been presented at the annual meeting.

The Committee, as appointed at the last annual meeting, consists of the following members: Dr. E. Waters (Chairman), Mr. W. D. Hubbard, Dr. Alfred Carpenter, Dr. M. M. De Bartolomé, Dr. C. Chadwick, Dr. J. G. Davey, Dr. Balthazar Foster, Mr. Ernest Hart, Rev. S. Haughton, Mr. H. Nelson Hardy, Dr. D. J. Leech, Mr. F. E. Manby, Mr. W. H. Michael, Q.C., Mr. R. H. B. Nicholson, Dr. A. P. Stewart, Dr. W. F. Wade, Mr. C. G. Wheelhouse.

SANITARY ARRANGEMENTS ON BOARD THE REFUGEE TRANSPORTS AT ALEXANDRIA.

We are indebted to Staff-Surgeon W. H. Putsey, of H.M.S. *Condor*, for the following interesting account of the sanitary arrangements on board the refugee transports employed during the Egyptian crisis, after the massacre which occurred in the streets of Alexandria on June 11th. We have further received official information that this account is published under the authorisation of the Lords Commissioners of the Admiralty.

"The ships selected for this service were the *Maulkins Tower*, *Rhosina*, *Nerissa* and *North Britain*, all of them cargo vessels, having a carrying capacity of from 3,000 to 4,000 tons, and having, when relieved of their freights, sufficient accommodation for between 600 and 800 passengers. As they were all engaged in the coal trade, they were not, as may be readily imagined, remarkable for a smart appearance, but thanks to the exertions of the Superintendent of Transports, Commander the Right Hon. Lord Charles Beresford, R.N., aided by his hard-working lieutenant, Mr. F. Sambell-Wheeler, and party of blue jackets, they were well cleansed and kept in good order. The refugees were berthed in the following manner, viz.:—The English portion, those who could afford to, and were willing to pay, lived and messed with the captain and officers in the saloon; those who could not, or would not, occupied the part before the saloon, while the Maltese, Jews, and others whose nationality it was a difficult matter to determine, lived in the fore part of the ship. It is necessary to state that the English contingent was composed nearly entirely of people of the well-to-do operative class, chiefly marine and cotton factory engineers with their wives and families; the foreign British subjects on the other hand were dirty, ill fed looking people evidently the dregs of the foreign population of Egypt.

"The *Maulkins Tower* and *Nerissa* were filled and despatched to Malta within a few days of their being chartered, but the *Rhosina* and *North Britain* remained as stationary ships, in the harbour, to receive refugees from the interior who arrived in small batches daily.

"Hygienic Regulations.—1. The ships were moored in such a position as to ensure a good supply of fresh air. The wind blew steadily from N.W., therefore the broadsides of the vessels were made to face N.W. and S.E.

"2. Large awnings were spread to afford protection from the hot sun by day, and the heavy dews by night.

"3. All hatchway covers were removed, and windsails were lowered into those compartments, in which the ventilation was deemed faulty.

"4. The cooking was done on the upper deck in portable galleys, and the culinary utensils were ordered to be well scoured each time after use.

"5. Latrines were erected on the upper deck, and a party of refugees was told off to keep them clean and in good working order. Disinfectants were supplied, and were in constant use. These proved to be of great service in dissipating offensive odours.

"6. Fresh provisions of good quality were supplied by the naval contractors, Messrs. John Ross & Co. Two-thirds of the ordinary allowance of a seaman were considered sufficient for people confined on board ship with no occupation, so on that scale they were rationed, and on it were kept in good health. I doubt whether half of them had ever been so well fed before; a great improvement in their condition being apparent after a few days of ship life. Good water was obtained from a reliable source.

"7. The refugees as they arrived, were received at the gangway by the quartermaster on duty, who fell them in on deck, and then reported their arrival to the transport officer. A careful inspection was made by that official, and if any signs of disease were noticed, the subject of them was at once segregated, and the medical officer sent for.

"8. An inspection by the medical officer was made every morning

after the sick had been attended to. I regret to say a great disregard of personal cleanliness was observable, although there was an unlimited supply of fresh water.

"9. The decks were flushed and scrubbed daily, and were afterwards sprinkled with a weak solution of carbolic acid.

"From these brief remarks it will be seen that the hygiene of these transports was, attention to cleanliness, ventilation, diet, and strict supervision; at the same time, the part taken by the "clerk of the weather" must not be forgotten. Such genial weather in the months of June and July had not been known for many years, the temperature rarely exceeding 76° Fahr.; while the gentle north-westerly winds and cool nights were also valuable adjuncts to the sanitary officer.

"The state of health on board was excellent: nearly the whole of the ailments which I was called upon to treat the patients brought with them. They were in the ratio of 17 per 1,000, a very large majority of them being diseases of the eye. Purulent ophthalmia, keratitis, corneal ulcer, staphyloma, leucoma, and blepharitis, were very common. I found the dark holds of the ships very good places for treating these cases. The remedial ones all did well; they occurred in the persons of the most indigent class, and doubtless the generous diet they were allowed did much towards their cure.

"Diseases of the digestive system (diarrhoea, constipation, colic, etc.), and rheumatism, come next in the order of frequency. The former gave little trouble, the subjects of them being speedily relieved by the simple drugs found in the ships' medicine-chests, supplemented by a light dietary. The latter, however, were not so amenable to treatment, most of them being chronic, and complicated with arthritic joints.

"Pulmonary diseases were remarkable for their absence. During the whole of the time I was doing duty as transport medical officer, I never used the stethoscope. If my short experience may be taken as a criterion, I should say that, for immunity from chest affections, the climate of Egypt is without a rival.

"In the carrying out of my directions, especially with regard to the ophthalmic cases, I received valuable assistance from the lady-superintendent of the Greek Hospital at Alexandria, Mrs. Nicholas (a refugee), to whose energy and watchful care my patients and I are alike much indebted."

THE SELECT COMMITTEE ON THE CONTAGIOUS DISEASES ACTS.

THIS Committee met on Friday, August 4th, to consider their report. All the members were present, with the exception of the Honourable Hanbury Tracy, who had been prevented by ill-health from taking any active part in the proceedings, and who therefore thought it better not to attempt to come to any decision on evidence which he had not heard.

The present inquiry has been one of unprecedented length: for, since the appointment of the Committee in 1879, they have been reappointed four times, have examined seventy-one witnesses, and have sat sixty-eight times; and considerable changes have occurred in its composition. Owing to the lamented death of the Right Honourable W. N. Massey, who occupied the chair during the sessions 1879-1881, and who also presided over the previous deliberations of the Royal Commission, the Committee were deprived of the advantage which they would have derived from his knowledge, experience, and judicial tact in the preparation of their report. But they were fortunately enabled to obtain a fitting successor in Mr. O'Shaughnessy, whose firmness, sagacity, and ability rendered him specially fitted for the post.

Time did not allow the Committee to extend their inquiry with reference to the systems prevailing in British colonies or foreign countries; and the evidence respecting the operation of the Acts in England and Ireland was divided into the two following branches.

1. The hygienic effect of the Acts, especially on the health of the army and navy; and 2. The constitutional, moral, and social aspect of their principles and administration.

The first business before the Committee was to consider whether the report of the Chairman should be adopted; or whether a rival report, prepared by Mr. Stansfeld, as representing the opponents of the Acts, should receive the assent of the Committee. On a division being taken, the report of the Chairman was carried by a majority of 10 to 6; and divisions, with slightly varying majorities, were subsequently taken on all the eighty-six clauses of the report.

The report begins with a summary of the Acts of 1866 and 1869; continues with an abstract of the conclusions of the Royal Commission of 1871; and then proceeds to the consideration of the first, or hygienic, part of the inquiry: as to whether the two objects of the Acts—the diminution of venereal disease, and the increased efficiency of the military and naval services—have been carried out.

Although some evidence has been adduced to show that syphilis has lost some of its virulence in later years, the Committee consider the testimonies of its severity as a local disorder, and as a formidable constitutional malady, to be irresistible; and also recognise the seriously disabling local effects of gonorrhoea, as well as its frequently serious sequelæ.

For the purposes of the inquiry, comparisons were instituted between fourteen subjected districts and all unsubjected districts, and between the same fourteen subjected and fourteen unsubjected districts, with the result of proving that, in spite of the disturbing effects of Lord Cardwell's Order, and making full allowance for the fluctuations in the intensity of the disease, established by Lawson, a clear reduction of 34 per cent. in the number of primary sores is due to the operation of the Acts.

Coming to secondary syphilis, a serious difficulty is met with in the fact that these constitutional sequelæ frequently appear at a considerable interval from the date of the primary lesion, and that the amount of secondary disease necessarily therefore does not represent that caused by intercourse at the spot.

But we must remember that the proportion of primary to secondary cases bears a proportion of three to one, and that, as the subjected districts disclose a lower rate of primary syphilis than the latter, it will appear that while, of course, the unsubjected districts import a certain proportion of secondary disease from the subjected, the latter impart a larger proportion from the former, and that the statistics attribute to places under the Acts an amount of syphilis exceeding what was contracted in these places. The fewer the primary sores contracted in a given district, the less secondary disease it will export, and the more of the secondary disease appearing against it in the tables it will have imported.

The actual statistics show that the reduction in secondary syphilis, due to the operation of the Contagious Diseases Acts, has been 29 per cent. The reduction in gonorrhoea, due to the Acts, may be put down at 7 per cent.

The comparison was next made between the subjected and unsubjected districts from 1873 to 1878.

The ratio per 1,000 of admissions to hospital for primary syphilis in subjected districts was 39.3; in the unsubjected, 71.2. The corresponding ratios of secondary syphilis were 22.0 and 30.2.

For gonorrhoea the ratios of admission per 1,000 for 1873 to 1878, were in the subjected districts 69.5, in the unsubjected 73.3. Objection has been taken to the classification of venereal diseases adopted by the Army Medical Department, and it has even been held that the enumeration under one head of sores, which do, and sores which do not produce secondary syphilis, deprives their statistics of all value. But the difference of opinion between the rival schools of the "unicists" and the "dualists," and the impossibility of the army weekly returns accurately diagnosing the precise nature of a sore which may not display its infecting powers for long after its first appearance, has seemed to the Committee effectually to meet this objection.

Some of the medical opponents of the Acts have attempted to show the difficulty of detecting syphilis in the female, Dr. Routh even going so far as to say, that out of a given number of diseased women, a competent medical man would only be able to ascertain the traces of disease in one half. Most of the other medical witnesses, however, stopped far short of this opinion, and the Committee have come to the conclusion that an experienced surgeon will rarely fail to detect venereal disease. Regarding the influence of the Acts on the efficiency of the army, the Committee are satisfied that during the period between 1870 and 1873, when the Acts were in full operation, unaffected by Lord Cardwell's order, they saved 5.38 men per 1,000 daily to the army.

The Committee have also had evidence to show a marked diminution in venereal disease in the civil population in those parts of the country where they have been in operation, and a careful consideration of the facts brought under their notice, has led them to the conclusion, that the Acts have successfully served the two objects to which they have been directed—the diminution of venereal disease, and the increased efficiency of the army.

The Committee next proceeded to consider the operation of the Acts as regarded in their constitutional, moral, and social aspects.

The main objections to the Acts, from these points of view, were first discussed. The alleged recognition and toleration of vice by the State implied, it is believed, by this kind of legislation, was shown to be a fallacy. The law has never prohibited prostitution, and a fallen woman is only interfered with, by the police, when she behaves in a disorderly or indecent manner in public. It is not the Acts, but the administration of the ordinary law that tolerates prostitution. The Acts only attempt to ensure that less detriment to the public health

been already returned and forwarded to Dr. Mahomed, the Honorary Secretary.

"Homeopaths and the Membership of the Association.—Another subject which has engaged your attention is the question of excluding homeopaths from the Association—a question again brought to the front by the South-Western Branch. The matter was discussed at the Tredegar meeting; and it was unanimously agreed that, in the interests of the Association, it was undesirable to take action against any present member who might be a homeopath; but that some effective means should be submitted to the annual meeting at Worcester to prevent the election of homeopaths in future, and for the disqualification of a member in the event of his practising as a homeopath subsequent to his election. We feel that to expel a homeopath would only make a 'martyr' of him, and possibly a troublesome one, and would, moreover, be bad policy. Homeopathy is dying: do not let us stimulate it to a renewal of life.

"The JOURNAL of the Association.—A resolution, passed by the Staffordshire Branch, has been placed before you, and it will be for you to determine whether a similar or any other resolution should be passed by this Branch.

"Militia Surgeons.—By an order issued in January 1881, militia surgeons, on attaining the age of 65, are compelled to retire without any pension or retiring allowance. This is an order which bears very harshly on many militia surgeons, and is felt to be a grievance which we ought to make strenuous efforts to get rid of. A petition to the House of Commons, with this object in view, is to-day placed before you for your approval and signature.

"A Statement of Accounts is appended herewith, by which it will be seen that we have a balance in hand of £19 4s. 4d., as compared with £8 15s. 5d. last year. (The receipts amounted to £51 19s. 5d.; and the expenditure to £32 15s. 1d.)"

The report and statement of accounts were unanimously received and adopted.

President-Elect.—It was moved by Dr. TAYLOR, seconded by Mr. HALL, and carried unanimously: "That Mr. Ebenezer Davies, of Swansea, be the President-elect for 1882-83."

Honorary Secretaries.—It was moved by Mr. WARD, seconded by Dr. T. D. GRIFFITHS, and carried unanimously: "That Dr. Sheen and Dr. Arthur Davies be reappointed Honorary Secretaries." A vote of thanks were accorded to them for their past services, on the motion, of Dr. TAYLOR, seconded by Dr. A. DAVIES.

Members of Branch Council.—Drs. W. T. Edwards, Talfourd Jones Milward (re-elected), and T. D. Griffiths, were elected.

New Members.—Dr. O'Connel, the Mumbles; John Mason, M.B., Dowlais; and Mr. W. C. Humphreys, Swansea Hospital, were elected members of the Association and Branch.

President's Address.—The President, Mr. EVAN JONES, delivered an interesting address "On the importance of devoting more attention to Diseases of the Uterus, Eye, and Ear," illustrated by demonstrations, diagrams, and a large number of instruments. A hearty vote of thanks was accorded to the President for his address, on the motion of Dr. EDWARDS, seconded by Mr. G. A. BROWN.

Militia Surgeons.—A petition to the House of Commons was signed by all present.

Papers.—The following were read.

1. Mr. CRESSWELL read short notes of a case for Mr. V. L. Jones of St. Clear's, which reflected considerably on the conduct of the coroner. It was resolved unanimously: "That Mr. Jones be advised to bring the case under the notice of the proper authorities."

2. Dr. ARTHUR DAVIES, M.B., read notes of a case of Ulcerative Endocarditis, and showed pathological specimens.

3. Dr. T. D. GRIFFITHS read a paper on Iodoform in Eye-Diseases. He also showed an instrument for applying iodoform in gonorrhœa, and a porte-cautère for the throat.

4. Mr. J. FARRANT FRY showed a Fibroid Tumour removed from the Uterus by Enucleation immediately after Childbirth, and read notes of the case.

5. Mr. EVAN JONES showed a patient suffering from Pseudo-hypertrophic Muscular Paralysis; and specimens of the Bilharzia Hæmatobia.

Places of Meeting.—The following places were fixed upon for subsequent meetings: Autumn, 1882, Aberdare; spring, 1883, Bridgend; annual, 1883, Swansea.

Committee of Council.—The following members were duly nominated, according to by-law, for election on the Committee of Council, viz.: Mr. Evan Jones and Dr. Taylor.

The JOURNAL.—It was moved by Dr. TAYLOR, seconded by Mr. MILWARD, and carried unanimously: "That, in the opinion of this

meeting, the JOURNAL of the Association should be made more fully the medium of record of the transactions of the Branches of the Association than it is; and that the papers read, and the record of clinical observations, should have precedence of other contributions to the JOURNAL, and should be published at an earlier period after communication than has hitherto been done."

Compulsory Notification of Infectious Diseases.—It was moved by Mr. MILWARD, seconded by Dr. EDWARDS, and carried unanimously: "That this meeting strenuously objects to medical men being compelled to notify infectious diseases, and authorises its representatives on the General Council to express its views at the meeting at Worcester, and wherever else they can wisely be expressed."

Dinner.—At half-past four, nearly forty members and visitors partook of an excellent dinner at the Royal Hotel; Mr. Evan Jones, President, in the chair.

CORRESPONDENCE.

THE NOTIFICATION OF INFECTIOUS DISEASES.

SIR,—The great majority of the medical profession, in seeking to obtain measures to extend their powers over infectious diseases, are simply following the lines that have been traced for a great many years by all sanitarians. The Lancashire and Cheshire Branch of the British Medical Association, containing seven hundred members, has advocated the notification of infectious diseases for these last twenty years. Indeed, the profession are, I believe, all but unanimous that some further action shall be taken with a view of preventing the spread of these disorders. It is gratifying to perceive the gradual change that has taken place in the public mind in regard to these diseases. Instead of having a dread of interference by the sanitary authority, it is now constantly appealed to for assistance and advice.

From these and other facts that have recently come under my observation, I believe that public opinion is therefore ripe for legislation in this direction. When about 500 deaths and 30 times that number of cases of sickness occur annually in this borough alone from preventable diseases, and the same proportion holds good in towns generally throughout the country, no further justification for legislative interference is required.

In this and other towns, where notification of infectious diseases has been in operation, it has been attended, as it must necessarily be, with favourable results. But notification of infectious diseases is not sufficient, without the power of separating infected persons from the healthy.

Infected ships have for centuries had to undergo quarantine, I cannot see any reason why infected houses should not be submitted to the same salutary treatment. When 125,000 persons are annually cut off by these diseases in this country, and 20,000 of these from scarlet fever, and 51,000 in ten years (from 1856 to 1865) from small-pox alone, it seems high time that some further effort was made towards their prevention. There cannot be any vested interest either in ignorance or in the maintenance of disease.

The powers required are neither more nor less than a sanitary cordon, without which the authorities cannot hope to cope with these maladies. Private medical practitioners have no power of controlling these disorders. They are strictly limited to giving advice, which may or may not be taken. It cannot be disputed that hitherto there has been no control, and that further powers are absolutely necessary if these diseases are to be checked or even mitigated. As a result of sanitary legislation, and the increased knowledge among the public that follows in its train, the mortality from infectious diseases has since 1872 diminished from .9 to .5 per 1,000, and to .3 during these last two years.

It is when the first case occurs, that the powers wished for are most valuable, before fresh centres of infection have been established. In this matter time is everything. If one link in the chain is defective, its utility is lost, as no chain is stronger than its weakest link.

Prevention cannot be thoroughly accomplished in any other way than by thorough and complete isolation. In respect to the notification of infectious diseases, I consider the medical attendant in such cases to be the most fit and proper person, as the occupier may not be able to recognise the disease in its early stages, when time is of so much importance.

In order to protect the public, and to prevent infected persons from being secreted in shops and dairies, the occupier ought to be compelled to notify, as well as the medical attendant. The double obligation is, therefore, preferable.

The State has conferred certain privileges on the medical profession,

such as titles, the right to practise, and to recover payment for their services, and in return has a claim to require them to render assistance for payment, in the promotion of the public health.

There is a general obligation on the part of every full grown person to assist in the preservation of the peace when that is endangered, as well as in the prevention of crime or accident. But I hold that there is a particular obligation on the part of medical men to render special assistance when required and paid for in matters affecting the public health. They are the only persons qualified for the task.

These seven diseases, viz., cholera, small-pox, typhus and typhoid fevers, scarlet fever, measles, and whooping-cough, have caused more havoc, destroyed more lives, and have produced more misery and wretchedness, more physical and mental degradation, than all the wars that have ever taken place in the world's history.

The same objections were made in 1837 to the registration of deaths as are now made to the notification of diseases. I would ask, Who questions their great utility now?

I am not Utopian enough to believe that these disorders can at once be stamped out by any legislation, but I have no doubt that they will be very considerably abated. But we are told that the powers asked for are "arbitrary and meddlesome, and not to be trusted to an oligarchy of lawyers, medical men, and policemen, any more than to despotic sovereigns. That they are too absolute, and are to be enforced under pains and penalties, and imprisonment. That they make the medical officer of health, or some registered practitioner, sole judge of how a poor man's house is to be administered, and whether his wife or child shall be nursed as he wishes, or torn violently from his care, and committed into the hands of strangers. That this is grandmotherly legislation. That it is enough to make one's hair stand on end, etc." To this I would reply: "That law is the sovereign of the world and the perfection of reason and justice. So long as societies require Governments, power must be placed somewhere, either in the hands of sovereigns, judges, lawyers, magistrates, or even policemen, due care being taken that it is exercised as publicly as possible, to prevent abuse."

I have never heard that any Act of Parliament, of a preventive character, could be administered without penalties. The punishment is for the breach of the law, and not for its observance.

To take precautions against the spread of small-pox or cholera is surely as legitimate and justifiable as against felony. There is not much individual liberty left to a man laid prostrate from typhus; his most anxious wish is for assistance. To restore him to health is to restore his lapsed liberty.

As these disorders will pass from house to house without any personal communication, I fail to see why a man can have any right to infect his neighbour.

The horizon of personal liberty is distinctly bounded by the sphere of injury. The necessities of life and the unrelenting laws of health and disease demand limitations upon our individual freedom. Although personal liberty is the chief source and the constant incentive to almost all human progress, it must not be confounded with personal license. I never heard the good Samaritan condemned for his active interference, and I think that our legislation ought to have at least some tincture of beneficence. Prevention is better than cure. It is admitted that the preventive functions of Government are more liable to abuse than the penal, but this is no argument against their legitimate use.

There is among most people a feeling opposed to legal restraints over the individual, whether it be legitimate or otherwise. But this feeling is as often misplaced as not, simply because they have not been accustomed to it.

It is the despotism of habit combined with a dogged obstinacy that is the greatest hindrance to sanitary legislation. Self-protection is the sole aim for which the law is warranted in interfering with the liberty of action of others, as the security of others is the only justifiable ground of interference with the individual.

The interest and welfare of the community are the sole considerations desired. No one can have a right to propagate small-pox, and it is no more an interference with the real liberty of the subject to take precautions to avoid such a dire disease, than to use the powers granted by the Contagious Diseases Act, or those of The Compulsory Vaccination Act, The Fever Act, The Sale of Food Act, etc. All these are familiar and successful illustrations of legitimate control over the liberty, or rather licence, of the individual. People's ideas of personal freedom have been largely misled. A Dutch Boer in the Transvaal considers his liberty invaded if he can perceive the smoke issuing from his neighbour's chimney. And when any to one hundred persons come to live in an area of ground—as actually taken place in Liverpool, Glas-

gow, and other large towns—there must be a mutual giving and taking, some compromise of each other's freedom.

Abstract or doctrinaire rights, if they have any real existence, are very untrustworthy guides to legislation. Society has to deal with the concrete, and in its legislation must look rather at the utility of the measures it adopts than to exaggerated and visionary notions of personal liberty. The rights of the individual cannot extend so as to allow him to injure his neighbour. *Salus populi suprema lex.* The liberty of the subject cannot be invoked in favour of spreading disease. The sooner we lose the liberty of spreading small-pox and other infectious diseases, the better for ourselves as well as our neighbours.

Notification of infectious diseases has been cheerfully accepted by the medical practitioners of Edinburgh, Warrington, and also in Chicago, Wisconsin, in New Zealand, and in Sydney. At the last mentioned place small-pox has been completely stamped out by the combined action of the medical profession, though at considerable expense and some interference with individual liberty. But the result is there considered worth the sacrifice.

Although it is desirable to obtain legal powers to isolate the sick from the healthy, they are not, therefore, to be necessarily enforced or exercised oppressively.

The great mass of every community cheerfully complies with the law, but there is always a residue of recalcitrants, who, although well enough informed, are too reckless of consequences to themselves and others for whom legal restraints are required. Cattle are most carefully protected from infection, to the great advantage of the country. Why not human beings? The word liberty is perhaps the most abused term in our language. It is the very alphabet of liberty to prevent one person injuring another. I regard it almost as culpable to poison your neighbour's blood by wilful negligence, as to administer a poisonous dose of aconite to him. To be permitted to spread disease is, in my opinion, a too sentimental notion of liberty; we must not permit free trade in disease.

But it is to the working man, whose labour is not only his capital, but also the first and most sacred of properties, that sanitary regulations are most urgently required. Health to him is all-important. The rich can well look after themselves. In the opinion of most sanitarians, the present laws in reference thereto are inadequate to check infectious disease at its onset.

In order to safeguard the liberty of the subject, let it be understood that before any person can be removed from his home to a hospital for the treatment of infectious diseases, as in the 124th clause of the Public Health Act, that they are protected by the order of a magistrate, made upon a sworn information by the sanitary authority of the town or district in which the person resides.

According to a statement made in the House of Commons by a prominent defender of personal liberty, in the debate on the Factory Act (February 1878), such an order gave complete protection to the liberty of the subject.

There have been numerous petitions in favour of the sanitary clauses of Bills presented to Parliament, but very few against them. The working classes are, on adequate grounds, as much alive to their own interests and are as open to conviction as their social superiors.

I hold that, for a medical man to divulge the secrets of his patients, to be an unpardonable offence; but few persons in any walk of life would care to make a secret of scarlet fever, measles, etc., unless impelled by a money interest opposed to that of the public. In giving the sanitary authority private notice, with the consent of the patient and the occupier, he is simply discharging a public duty, justified both by the written and the unwritten law.

I consider that the double obligation removes any objection which the medical attendant in an infectious case may have to reporting it to the sanitary authority. In removing a case of typhus to a hospital for infectious diseases by a magistrate's order, on sworn information, without the consent of the patient, seems a somewhat high-handed proceeding; but surely it is worth while to suspend the all but lapsed liberty of the sick man temporarily when he is in an unsuitable place, and at the same time dangerous to others, in order to restore him to health as well as liberty.

The law justly resents the slightest attack upon property. If a person is found stealing a pocket-handkerchief of the value of twopenny, his liberty is taken from him, and he is thrown into gaol. I cannot see why a person labouring under an infectious disease should be allowed to endanger the health and lives of his neighbours by either wilfully poisoning himself, or even remaining in a house where he is not sufficiently isolated.—I am, etc.,

JOHN LIPP, M.D., Bolton.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Thursday, August 3rd.

Butter and Butter Substitutes.—VISCOUNT FOLKESTONE asked the President of the Board of Trade when the Statistical Inquiry Committee that was examining into the subject of the better classification of butter, oleomargarine, and other butter substitutes, was likely to issue its report; and whether he would communicate the result of that inquiry to the House.—Mr. CHAMBERLAIN said he was informed that the Committee was now considering its report, which would probably be ready in a few days. The Committee had been appointed by the Treasury, which would have to decide whether the report was of sufficient public interest to have it presented to the House.

Vaccination in Norwich.—Mr. P. TAYLOR asked the President of the Local Government Board whether he had yet received the report of the Medical Inspector of the Board in regard to the vaccination fatality at Norwich; whether he was aware that other similar cases had since occurred there; and whether he would issue immediate instructions forbidding the use of the lymph which had produced such results.—Mr. DODSON: I have not yet received the report of the Medical Inspector of the Board, as the investigation has not yet been completed. I have heard that one case of erysipelas has since occurred at Norwich in a recently vaccinated child, since the group of cases to which my attention was first directed, but at present I have no information showing that the erysipelas was due to the lymph employed.

Alkali Works.—Mr. A. ARNOLD asked whether, under the provisions of the Act of 1881 relating to alkali and other works, the inspector at Manchester and Salford (with one assistant) had charge of a district which extended to and included the Isle of Wight; whether there were in that district 250 works to be inspected; whether, under the Acts of 1863-74, the number of works allotted to each inspector was about 40; and, what measures Her Majesty's Government proposed to take in order to secure that the Act of 1881 shall be effective in its operation.—Mr. DODSON said the facts were correctly stated. The measures which the chief inspector was taking for the organisation of the system of inspection would, he hoped, secure an effectual execution of the Act.

Friday, August 4th.

Irish Lunatic Asylums.—Mr. BLAKE asked the Chief Secretary for Ireland whether he would direct his attention to the remodelling of the administration of Irish lunatic asylums.—Mr. TREVELYAN said that, in the course of the next four or five months, he hoped to inquire into the administration of the lunatic asylums of Ireland.

Emigrant Ships.—Mr. MOORE asked the President of the Board of Trade whether it was a fact that there were a number of emigrant ships which, on their homeward voyages, come to this country laden with cattle, returning to America with large numbers of steerage passengers; and whether he could state what, if any, special precautions were enforced for the disinfecting and cleansing of those ships after each voyage with cattle.—Mr. CHAMBERLAIN said it was a fact that a large number of emigrant ships did come to this country laden with cattle. He was informed that these ships were disinfected and cleaned after each voyage. They were subsequently examined by an inspector from the Board of Trade, and no vessel carrying emigrants would be allowed to proceed to sea in a condition dangerous to health.

Lunacy Regulation Amendment Bill.—On the motion that the House do resolve itself into Committee on this Bill, Mr. WARTON moved, as an amendment, that the House should upon that day three months resolve itself into the said Committee. The object of the Bill was, in the selfish interests of the Visitors, to reduce the number of visits annually to lunatics from four to two.—Mr. HIBBERT said that the fourth clause of the Bill to which the hon. member objected, sought to reduce the number of compulsory visits to lunatics confined in private houses; it did not apply to others. In special cases, where found necessary, the number of visits could be increased. He was prepared to make this concession when they came to the fourth clause—namely, to reduce the number of visits from four to three. Sir H. HOLLAND thought that no case had been made out for reducing the number of visits. The way to meet the difficulties that existed would be to increase the number of Visitors.—Dr. FARQUHARSON said he believed that the visits in the cases referred to by the hon. member for Oldham might well be reduced to two. He believed that the Bill would prove very beneficial.—Mr. WHITLEY entertained a considerable objection to a reduction in the number of visits. He believed, on the contrary, that in many cases the number should be increased.—Mr. S. LEIGHTON agreed with the view that the number of Visitors should be increased.—Mr. M. SCOTT said that the Government refused to

increase the number of Visitors on the ground of economy in the face of the fact that the State now made a profit of £6,000 a year out of lunacy, which he scarcely thought was a creditable source of revenue.—The House divided, when the numbers were: For going into Committee, 53; Against, 3; Majority, 50. The House then went into Committee upon the Bill.

Vaccination in Ireland.—Mr. WARTON called attention in Committee of Supply to the diminution of the vote for consulting sanitary officers in Ireland, and the reduction of the number from 192 to 165. He also wished to know whether the same means had been afforded in Ireland as in England for vaccination from the calf. Many persons had a prejudice against vaccination, which might perhaps be removed if a supply of pure lymph from the calf were provided.

Tuesday, August 8th.

Criminal Lunatics.—Mr. R. PAGET asked the Secretary of State for the Home Department whether he would lay upon the table of the House the report of the Departmental Commission appointed in 1881 to consider questions relating to criminal lunatics.—Sir W. HARCOURT said that he had not yet had time to read the report on the question, but he would lay it on the table of the House when it had been duly considered.

Wednesday, August 9th.

Lunacy Regulation Amendment Bill.—The Lords' amendments to this Bill were considered. Mr. WARTON moved an addition to Clause 4, providing that lunatics should be visited twice every year. Mr. HIBBERT said it was unnecessary to make this addition, as the Lord Chancellor would, immediately after the passing of the Bill, issue a regulation to carry out the object which the hon. member had in view. The House divided; the numbers were—For the amendment, 9; against it, 53; majority, 44. The amendments were then agreed to, and the Bill was read a third time, and passed.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—The following gentlemen passed their first professional examination during the July sittings of the examiners.

William Guy, Kent; Percy Meredith Earle, Brentwood; Robert Francis Martin Quinn, Belfast.

The following gentlemen passed their final examination, and were admitted Licentiates of the College.

David Donald, Glasgow; Frederick Albert Heslop, Manchester; David Hugo Daniell, Monmouthshire; Edward Cooper Fenoulhet, Dorsetshire; John George Duncan, Waterford; Frederic George Haworth, Lancashire; Elmes Steel, Monmouthshire; John Carruthers, Kilwinning.

The following gentlemen passed their first professional examination for the Licence in Dental Surgery of the College.

Francis Bromley, Hampstead; William J. Mason, Chard, Somerset; Frank H. Briggs, Leeds.

The following gentlemen passed their final examination, and were admitted L.D.S.

David Monroe, Edinburgh; George John Lucas, Blackheath.

MEDICAL VACANCIES.

The following vacancies are announced:—

BELMULLET UNION.—Medical Officer for Knocknallower Dispensary District. Salary, £100 per annum, with £10 per annum as Medical Officer of Health, registration and vaccination fees. Election on the 14th instant.

BRADFORD FRIENDLY SOCIETIES MEDICAL ASSOCIATION.—Assistant Medical Officer and Dispenser. Salary £120 per annum. Applications by August 18th.

BRIGHTON AND HOVE DISPENSARY.—Resident Dispenser. Salary, £100 per annum. Applications by the 21st instant.

CANCER HOSPITAL, LONDON AND BROMPTON (FREE).—Resident House-Surgeon. Salary, seventy-five guineas per annum. Applications by September 2nd.

CAPE COPPER MINING COMPANY, South Africa.—Assistant-Surgeon. Salary, £300 per annum. Applications to the Secretary, 6, Queen Street Place, E.C.

CHELTEMHAM GENERAL HOSPITAL AND DISPENSARY.—Dispenser. Salary £80 per annum. Applications by September 1st.

DARLINGTON HOSPITAL.—Junior House-Surgeon. Salary, £100 per annum (out-door). Applications to C. T. Anson, Esq., Fairfield, Darlington.

DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL, Leicester Square, W.C.—Demonstrator of Contour and Cohesive Fillings. Salary, £50 per annum. Applications by September 29th.

DONCASTER INFIRMARY AND DISPENSARY.—Dispenser and Assistant to House-Surgeon. Applications to the House-Surgeon.

DUDLEY DISPENSARY.—Resident Medical Officer. Salary, £130 per annum. Applications by August 15th.

EARLSWOOD ASYLUM FOR IDIOTS, Redhill, Surrey.—Medical Practitioner. Salary, £400 per annum. Applications endorsed "Medical Superintendent", the Board of Management, 56, King William Street, London Bridge, E.C., by August 21st.

GLOUCESTER COUNTY LUNATIC ASYLUM, near Gloucester.—Medical Superintendent. Applications addressed to the Committee of Visitors, Wotton, near Gloucester.

LANCASTER INFIRMARY AND DISPENSARY.—House-Surgeon. Salary, £120 per annum. Applications by August 16th.

LONGFORD UNION.—Medical Officer for Longford Dispensary District. Salary, £100 per annum, with £25 per annum as Medical Officer of Health, registration, and vaccination fees. Election on the 7th proximo.

NATIONAL DENTAL HOSPITAL, 149, Great Portland Street, W.—Assistant Dental Surgeon. Applications by August 22nd.

NATIONAL DENTAL HOSPITAL, 149, Great Portland Street, W.—House-Surgeon. Salary, £50 per annum. Applications by August 22nd.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney.—Resident Clinical Assistant and Registrar. Salary, £70 per annum. Applications by the 21st instant.

NORTH STAFFORDSHIRE INFIRMARY, Hartshill, Stoke-upon-Trent.—House-Physician. Salary, £100 per annum. Applications by August 23rd.

PICKERING UNION.—Medical Officer. Salary, £20 for the Workhouse, and £40 for the District, with the usual medical fees. Applications to R. Kitching by August 26th.

PORT ELIZABETH PROVINCIAL HOSPITAL, Cape Colony.—Medical Practitioner. Salary, £350 per annum. Applications to Captain Mills, C.M.G., 9, Albert Mansions, Victoria Street, S.W., by August 21st.

ROYAL INFIRMARY OF EDINBURGH.—Pathologist. Applications to Mr. Peter Bell by September 10th.

SALISBURY INFIRMARY.—House-Surgeon. Salary, £100 per annum. Applications by the 20th instant.

WINCHCOMB UNION.—Medical Officer. Salary, £65 per annum, in addition to midwifery, surgical, and vaccination fees. Applications by August 25th to J. H. Stephens.

MEDICAL APPOINTMENTS.

BERNARD, Alfred Farquhar, M.R.C.S., L.S.A., appointed Medical Officer to the Troops at the Seaforth Battery, *vice* Dr. C. Swaby Smith, resigned.

BOUCHER, A. H., M.D., appointed House-Surgeon to the East Suffolk Hospital, Ipswich, *vice* Elphinstone Hollis, M.D.

ELSNER, F. W., L.R.C.A., L.K.Q.C.P.L., appointed Surgeon to the P. and O. S. Company's steamship *Verona*.

LILLEY, G. Herbert, M.D., M.R.C.P.E. (late Assistant Surgeon), appointed Medical Officer to H.M. Convict Prison, Portland, *vice* H. F. Ashham, resigned.

PATTEN, Charles Arthur, L.R.C.P.Lond., appointed Medical Officer to the Princess Helena College, at Ealing.

ROCKEL, Waldemar, L.R.C.P.Lond., F.R.C.S.Eng., appointed Surgical Registrar to the Charing Cross Hospital, *vice* Albert Leahy, F.R.C.S., resigned.

SKETZKE, F. de Courcy, appointed House-Surgeon to the Kent and Canterbury Hospital, *vice* Charles Crane, resigned.

STOKER, George, L.K.Q.C.P.I., appointed Physician to the Actors' Benevolent Fund.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

JONES.—On the 10th inst., at 248, Clairville, Oxford Street, Manchester, the wife of Thomas Jones, of a son.

MARTIN.—On the 10th inst., at 10, Worthen, the wife of Thomas Lamont Macartney, L.R.C.P., L.R.C.S. Edin., of a son.

MARRIAGE.

Noble.—On the 10th inst., at 10, Trinity Square, S.E., the Rev. Robert Noble, M.A., of Trinity Square, S.E., second son of the late John Noble, F.R.S., of Newcastle, to Jennie, second daughter of the late Joseph Thompson, of Walker, Northumberland.

DEATH.

McEWEN.—On the 1st August, at 25, Nicholas Street, Chester, William McEwen, M.D., M.R.C.P.London, F.R.C.S. Edin., J.P. for Chester city and county of Denbigh. Friends please to accept this, the only intimation.

MALVERN COLLEGE.—We understand that Tuesday, August 1st, is fixed as "Speech Day" at this college.

TESTIMONIAL TO PROFESSOR LEIDY.—A number of prominent and influential gentlemen and members of the profession propose to commemorate Dr. Leidy's sixtieth year of his age by raising the sum of 100,000 dollars, the interest of which shall be paid annually to Professor Leidy during his lifetime; and after his death, the said income shall be applied to perpetuate the maintenance of the Joseph Leidy Chair of Anatomy in the University of Pennsylvania. All subscriptions should be sent to Dr. William Pepper, 1811, Spruce Street, Philadelphia.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting of the Court of Examiners, held on Monday, July 24th, and following days, the undermentioned gentlemen, having passed their final examinations for the letters testimonial, and having made the declaration and signed the roll, were admitted licentiates, viz.: James Tandy Bolger, Robert Henry Coall, Austin Nathaniel Cooper, Percy Herbert Delamere, Bernard Joseph Dillon, Myer Akiba Dutch, John Peter Garland, Arthur Joseph Greene, Alfred Adolphus Hayes, John Colclough Hoey, Timothy Howard, James Lane, Joseph Lalor, John Michael M'Donagh, William M'Gee, James M'Guire, Frederick Joseph M'Naught, Edward Duddy Mullen, Percy Newell, Michael Joseph Nolan, Thomas O'Connell, William Edmond O'Connor, Rowland Pollock, John Turner Power, Francis Christian Roe, Robert Corles Sanders, Michael Patrick Sweeney, William Christopher Thompson, John Joseph Todd, and Edward Wynne, Esquires.

HEALTH OF FOREIGN CITIES.—The following statistics, derived from a table in the Registrar-General's last weekly return, afford trustworthy indications of the recent health and sanitary condition of various foreign and colonial cities. In the three principal Indian cities—Calcutta, Bombay, and Madras—the death-rate averaged 25.7, and ranged from 21.9 in Bombay, to 31.6 in Madras; cholera caused 58 deaths in Calcutta, and small-pox 9 deaths in Madras. According to the most recent weekly returns, the average annual death-rate per 1000 persons, estimated to be living in twenty-two European cities, was equal to 28.5 per 1000; this showed more than the usual marked excess upon the average rate in twenty-eight of the largest English towns, which last week did not exceed 20.1 per 1000. The rate in St. Petersburg was 51.7, and exceeded that returned in any of the three previous weeks; 27 deaths were referred to diphtheria, and 10 to scarlet fever. In three other Northern cities—Copenhagen, Stockholm, and Christiania—the death-rate did not average more than 25.8, the highest rate being 26.8 in Stockholm, where 3 of the 90 deaths resulted from diphtheria; 31 deaths were referred to diarrhoeal diseases in Copenhagen. The Paris death-rate was equal to 21.6, against 22.9 and 21.5 in the two preceding weeks; typhoid fever caused 31, and diphtheria and croup 38 deaths, during the week. The 177 deaths in Brussels were equal to an annual rate of 22.6 per 1000, and included 4 fatal cases of small-pox—making 62 that have occurred in this city since the beginning of May. The death-rate in Geneva did not exceed 17.5. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the death-rate averaged only 17.9; it was 15.9 in Rotterdam, 16.9 in the Hague, and 18.9 in Amsterdam, where 2 deaths from typhoid fever occurred. The Registrar-General's table includes eight German and Austrian cities, in which the death-rate averaged 31.7, and ranged from 25.0 and 26.4 in Vienna and Hamburg, to 35.7 in Berlin and 43.4 in Breslau. The high death-rates in the two last-mentioned cities were caused by excessive fatality of diarrhoeal diseases, resulting in no fewer than 283 deaths in Berlin and 80 in Breslau. Eight deaths were referred to small-pox in Vienna and 34 to diphtheria in Berlin. In the four principal Italian cities, the death-rate averaged 28.3 per 1000, and ranged from 24.7 in Turin to 34.3 in Venice; diphtheria caused 11 deaths in Rome, scarlet fever 14 in Naples, and 3 fatal cases of typhoid fever were recorded in Venice. In Philadelphia, the death-rate was equal to 24.4 per 1000; in Baltimore, it was so high as 32.4, owing to the fatality of infantile cholera.

At the last meeting of the Court of Common Council for the present session, the Right Hon. the Lord Mayor presiding, the Court, on the recommendation of the Finance Committee, voted £105 to the British Home for Incurables, £52 10s. to the Tower Hamlets Dispensary, and £105 to Miss Mary Wardell's Scarlet Fever Convalescent Home.

The Danish Society for the prevention of cruelty to animals, offers two prizes of the value respectively of £50 and £40 for the best and second-best essays on "The possibility of substituting in physiological researches, animals recently dead for living ones". The Society bases its belief that this might be frequently possible on an observation of Schiff's, that certain vital functions can be studied to advantage, in animals recently dead. The essays, which may be written in Danish, Swedish, English, German, or French, should be forwarded to the President of the Society not later than September 1st, 1882.

VACCINATION.—Mr. Edward East, of 8, Clifton Gardens W., has for the second time, received from the Local Government Board, the extra grant for efficient vaccination in the Swinfleet District of the Goole Union.

DR. HABERSHON's well-known work, on *Diseases of the Stomach*, has been translated into Spanish, by Dr. Jeinenes Verdijo of Madrid.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....	Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopaedic, 2 P.M.
TUESDAY.....	Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.
WEDNESDAY..	St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopaedic, 10 A.M.
THURSDAY....	St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.
FRIDAY.....	King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.
SATURDAY....	St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS. —Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin M. Th.; Dental, M. W. F., 9.30.
GUY'S. —Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.
KING'S COLLEGE. —Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.
LONDON. —Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.
MIDDLESEX. —Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.
ST. BARTHOLOMEW'S. —Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopaedic, F., 12.30; Dental, Tu. F., 9.
ST. GEORGE'S. —Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopaedic, W., 2; Dental, Tu. S., 9; Th., 1.
ST. MARY'S. —Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., Tu. F., 2; Eye, Tu. F., 9.15; Ear, M. Th., 2; Skin, Tu. Th., 1.30; Throat, M. Th., 1.45; Dental, W. S., 9.30.
ST. THOMAS'S. —Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.
UNIVERSITY COLLEGE. —Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. T., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.3.
WESTMINSTER. —Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with Duplicate Copies.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

SIR,—I think it would be a great boon if the above Society were to extend their usefulness, say, to the whole of England. Could not this be done if the annual subscriptions were increased to those new members residing without the present radius of the now existing rules; and if, in addition, such outsiders were also called upon to pay in addition a certain entrance fee? Should the Society see their way to do this, I have no doubt that many of the new members might, in addition, also feel disposed to give voluntary donations from time to time; and further, I think that if the Society would bring their affairs more prominently before the benevolent and well disposed, no doubt its income might become very materially increased, and so more fully answer the purpose for which it is intended.—I inclose my card, and remain, sir, your obedient servant,
ONE INTERESTED.

GALLWEY FUND.

WANT of space prevents us from giving full details this week of the case of Dr. J. H. M. Gallwey of Newcastle, who died in November 1881, leaving his widow, (now near her confinement), and four young children, totally unprovided for. The subscription list amounts to over £150. Subscriptions in aid of this case will be thankfully received by Robert Allan Campbell, M.B., Honorary Secretary, Westgate Road House, Newcastle-on-Tyne.

CONSULTANTS AND FEES.

SIR,—In 1868, I took my wife to London to a very distinguished physician, who devoted nearly an hour to her case. At the end of the visit, I placed my hand in my pocket to get the fee; he stopped me in the act, and told me I must get fresh air for her and many other luxuries, before seeing him again, but he never preyed on a brother practitioner.

Now for a contrast. Not very long since, I consulted a distinguished London surgeon about myself; the fee was not only taken at the first visit, but also at the second, which was necessary. An offer was made to perform an operation on me; but the fee to be charged was quite out of reach of my slender means. Which of the two was the good Samaritan?—I am, sir, yours faithfully,

ANOTHER PROVINCIAL.

ERRATUM.—In the list of gentlemen who were admitted Members of the Royal College of Surgeons of England on the 1st instant, published in our last number, the degree "M.B. Cantab.", which should have been appended to the name of Mr. T. Finch, B.A., M.B., was inadvertently omitted.

THE MEDICAL DIGEST.

SIR,—Will you kindly allow me to mention another point in the *Medical Digest*, and one to which your reviewer does not appear to have given attention? I refer to the use of the work quite apart from its value as an index to the medical journals. To give an instance of the manner in which it may be of service to the practitioner, let us take the case of typhoid mentioned by your reviewer. Now, on looking up this question, and turning to section 1502, we find a sort of synopsis of every kind of treatment that has been suggested, viz., chloral, ol. terebinth (in tympanitis or nervous symptoms), transfusion, chloric ether and ammonia, diaphoretics, cold bath, tepid bath, cold wrap, emetics, quinine, conchinin, eucalyptus, coffee, digitalis, aconite, belladonna (15 minims every fourth or sixth hour), cuca, jaborandi, scale, veratria, creasote, tar, carbolic acid, charcoal (ditto with magnesia), and to prevent absorption from Peyer's patches, calx sacchar., potass iodid., salicin, salicylic acid, sulphites, sulphurous acid, sulpho-carbolates, iodine (if much purging), salines, nitrous oxide, nitric acid, hydrochloric acid, tinct. ferri, hydrarg. subchlor., arsenic, nitrate of silver. If we turn, under treatment, to section 1495:5, we find no fewer than fourteen remedies referred to as against the diarrhoea; while 1498:6 *et seq.* enumerate thirty-one sequelae. Of course, these are mere enumerations; and to find full details reference must be made to the journals in which they are reported.

It may be said: "This much and more information could be gained from any good text-book." This, however, is distinctly not the case. Against the forty-one remedies (or fifty-five with complications) enumerated here, Roberts (1st edit. 1873) gives twenty-four; Aitken (7th ed., vol. i) about twenty-five; Niemeyer (1870, vol. ii) about eighteen. Add to these the ease with which the eye can scan the suggestions of the *Digest*, compared with the attention required to read through and pick out the salient points from a text-book, and I think a clear case can be made out in favour of the great practical utility of this work by itself to the intelligent practitioner—I say to the intelligent practitioner because *verbum sapienti salis*.

I mention these because I understand that an impression widely prevails that the principal use of this work is only to the literary medical man; and that to those who are not fortunate enough to possess a good series of medical periodicals, or who have no means of access to them, it is practically useless. I can only say that such is not the case; but that, in the mere reading over of the headings, the busy practitioner will find a wealth of useful suggestions and information.—I am, yours faithfully,
KENNETH W. MILLICAN.

North Lodge, Kington, Warwick, July 29th, 1882.

MEDICINE A GUIDE TO THE HISTORIAN.

SIR,—I forward you a copy of an interesting letter I have received from Mr. Wharton Jones, which confirms a note of mine on the cause of Henry VIII's illnesses and loss of progeny, which you were good enough to publish on July 29th.—I am, sir, yours, etc.,
W. SYKES.

Mexborough, July 31st, 1882.

[Copy.]

"Ventnor, Isle of Wight, July 29th, 1882.

"Sir,—I have just read with great interest and perfect assent your very suggestive note in the BRITISH MEDICAL JOURNAL of this day's date, entitled 'Medicine A Guide to the Historian'. I have always entertained the same opinion with you as to Henry VIII and his failure of issue. It appears to have been a fact, that the king was affected with syphilis; but the odd thing was the mode in which he alleged his complaint was contracted. It was in those days supposed that syphilis was infectious through emanations in the air from a diseased person; and King Henry alleged that Wolsey, while labouring under the disease, had so infected his Majesty; and this was one of the accusations against the cardinal. This story I mentioned in general remarks on syphilis with which I introduced some clinical lectures upon syphilitic diseases of the eye, which I gave at University College Hospital a good many years ago.—Yours faithfully, P. WHARTON JONES.—W. Sykes, Esq."

H. C. J. asks for information as to the medical service of British Guiana, and as to the mode of applying for the same.

. Our correspondent will find some remarks on the subject in the first volume of the JOURNAL for the present year.

REPORTS

TO THE

SCIENTIFIC GRANTS COMMITTEE OF THE
BRITISH MEDICAL ASSOCIATION.ON THE DURATION OF THE VENTRICULAR
SYSTOLE IN MAN.

BY PAUL M. CHAPMAN, M.D. Lond.

Up to the present date, no trustworthy experiments have been made by which the duration of the ventricular systole has been established for different pulse-frequencies. It is obvious that, in order that measurements of the duration of the ventricular systole in any particular case of disease may be of value, an approximately accurate measurement of the duration of ventricular systole in health must be established for the pulse-rate in question.

In the following paper, the word "systole" will be used to denote the "cardiac" or ventricular systole, unless otherwise qualified.

Previous Experiments.—1. Experiments have been made to determine the duration of the various parts of the heart-revolution by Dr. L. Landois (*Graphische Untersuchungen über den Herzschlag*, Berlin, 1876), who has prepared, with a close approach to accuracy, an elaborate table of measurements for a single heart-revolution at a pulse-frequency of 55 per minute. In my opinion, he makes the duration of auricular contraction too long when he states it to be 0.17"; it should be 0.10" to 0.12". Some of the divisions of the revolution as set forth by him are, moreover, difficult of apprehension, if not quite obscure to the reader. The duration of ventricular contraction is, however, capable of very accurate measurement, as will be apparent from the tracings exhibited in the present article. Dr. Landois divides this period under three headings: (c) duration of ventricular contraction; (d) persistence of ventricles in contraction; and (e) from the beginning of diastole until the closure of the semilunar valves (?), and gives their united duration in time, for the above pulse-rate, as 0.309" to 0.346" (1000ths of sec.); or as about one-third of the whole heart-revolution. He does not attempt to determine, in any systematic way, the duration of systole at different pulse-frequencies.

2. The experiments made in the year 1871 by A. H. Garrod, by means of Marey's instrument (*Journal of Anatomy and Physiology*, vol. v, second series vol. iv, pp. 17-27), are of no value in this relation; his published tracings are very unconvincing, and the mathematical formula given by him for determining the duration of systole at any given pulse-frequency is not only troublesome, but is based on incorrect observations, and furnishes incorrect results.

Dr. Garrod says (*loc. cit.*): "On comparing traces of different rapidities, it was found that the length of the first part varied very definitely, inversely as the rate; not so quickly, but as its square root: and the number of measurements made seems to justify the law that, in health, the length of the first part of the heart's beat varies, for a given position of the subject, inversely as the square root of the rapidity."

Further, in a paper published in the *Proceedings of the Royal Society*, February 23rd, 1871, on the Mutual Relations of the Apex Cardiograph and the Radial Sphygmographic Trace, Dr. Garrod makes the following statement: "Law as to length of first cardiac interval (that period which occurs between the commencement of the systolic rise and the point of closure of the aortic valve, in cardiograph traces). The number of times that this interval is contained in its component beat is represented by y . The law as to its length is $xy = 20\sqrt{x}$ " where x = frequency of beat per minute.

The calculation of the length of the systole for any given pulse-frequency by means of this very cumbersome formula could only be tolerated were the formula correct, as it involves several separate calculations. I am able to demonstrate that the results obtained by me by means of this formula, and those results which Dr. Garrod publishes as measurements, are not the same as those actually obtained by correct experiment. I should state, in addition, that Dr. Garrod, in his experiments with the Turkish bath, omitted to notice the temperature of the body, which appears to have the effect of shortening the systole; a fact which should still further have reduced his measurements of duration, already far too high. He appears to have been led away by the fascination of constructing a mathematical formula; and his so-called

"law" of the variation in the duration of systole being inversely as the square root of the rapidity, can be shown to be independent of the facts observed.

The following calculations are published in Dr. Garrod's paper (*Proceedings of the Royal Society*):

Rapidity of Pulse.	Length of 1st Cardiac Interval: (of minute)	(of second).
36 .....	.0083033 .....	.49819
49 .....	.00714286 .....	.4285716
64 .....	.00625 .....	.375
81 .....	.005 .....	.333
100 .....	.005 .....	.300
121 .....	.0045 .....	.2727

I give the length of systole, in parts of a second, for every 10 beats from 50 to 130 per minute, as calculated by means of his formula.

50 .....	.424"	100 .....	.300"
60 .....	.384"	110 .....	.287"
70 .....	.357"	120 .....	.273"
80 .....	.333"	130 .....	.263"
90 .....	.317"		

Method Employed in Obtaining the Results Given in the Present Article.—The instrument used was the cardiograph of Dr. Burdon Sanderson. It consists of an air-tight tympanum, shaped like a miniature kettle-drum; the movable surface being of India-rubber, the convex of metal. From the moveable surface projects a button, which is adjusted to the point of maximum impulse of the heart. The interior of the tympanum is continuous, at one side, with an elastic tube, which, at its remote end, is connected with a second air-tight tympanum, the movable surface of which forms, by means of an ingenious mechanism, the motive-point to a lever of the second kind; this lever is as light as possible, about six inches long, and bears at the end a bent piece of tinfoil, which, at each movement of the lever, marks on the blackened surface of a revolving drum tracings of the impulses transmitted from the apex of the heart by means of the air contained within the apparatus. The tracings thus obtained were measured with extreme care, ordinates being drawn, through the points corresponding to the beginning and end of the ventricular systole, on the same curve with that described by the lever, by means of a sewing-needle.

The abscissæ thus marked off by the curved ordinates were measured by the application of tracings of the vibrations of a tuning-fork taken against the same drum revolving at the same rate of speed, the tuning-fork vibrating 100 times a second. They were thus easily capable of being measured to the 200th of a second of time. With practice, tracings were obtained in which the angles needed as points of measurement were very sharply defined, and which, for purposes of measurement of duration of ventricular systole, admitted no possibility of error. The lengths of measurement on the same series of tracings proving extraordinarily constant when accurately examined on a tracing made with thorough care; the variations in systole for the different pulse-rates not being due to any want of constancy in the persistence of any particular heart's contraction for that rate, but being variations in the different cases experimented upon. The tracings were all taken when the patient was in the recumbent position. Fig. 1 is inserted as a descriptive illustration of a tracing obtained in this manner; it is to be read from left to right, as are all the tracings represented in this article. The space between the ordinates marked 1 corresponds to the duration of the auricular systole; 2, to the duration of the ventricular systole from the exact beginning to the end of contraction; 3, to the fall of the lever ensuing on the cessation of contraction, the notch below being due to the mechanical effect of the fall; 4 shows a gradual rise, probably due to the filling of the ventricle previous to the auricular contraction. Dr. Roy has shown, by an ingenious apparatus, that the commencement of the sudden fall at the end of 2 corresponds, with certainty, to the cessation of contraction of the muscular substance of the ventricle.

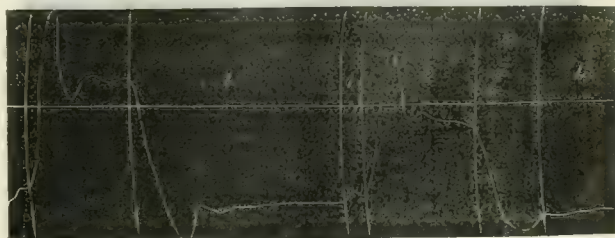


Fig. 1.

In the experiments which follow, I have not been satisfied unless the duration of systole has been constant in the continuous series immediately under investigation. It is not, otherwise, satisfactory to calculate the pulse-rate per minute by estimating the time occupied in a single heart-revolution. In a case presenting in series variations in the duration of systole, I have observed that any systole which comes between exceptionally prolonged lengths of diastole is not necessarily lengthened. Such tracings have been dismissed as irregular, and those cases only which show great constancy in respect of systole and regularity in diastole have been considered reliable for purposes of calculation. Occasionally, it has been necessary to take a mean of ten or more diastolic intervals, so as to determine the pulse-rate per minute in the most accurate manner available.

I have obtained measurements of the duration of systole for the different pulse-frequencies from separate cases at rest, and from the same case when the pulse-frequency varies from excitement, from exertion, and from immersion in the hot-air chamber of a Turkish bath. Of these, I proceed to give some examples.

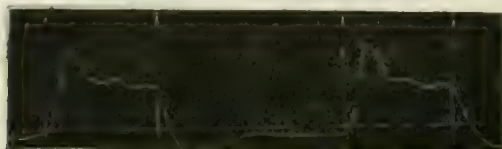


Fig. 2.—Mr. T., at rest. Pulse-rate, 68 per minute; Systole, .330"; Diastole, .340".



Fig. 3.—Mr. T., immediately after great exertion. Pulse-rate, 115; Systole, .220"; Diastole, .320".

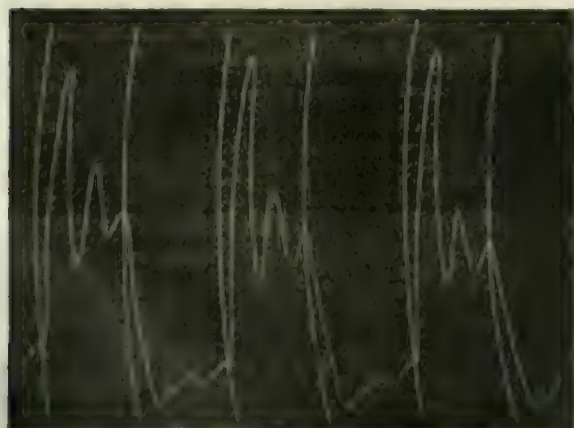


Fig. 4.—Mr. T., a few minutes later. Pulse-rate, 107; Systole, .260"; Diastole, .300".



Fig. 5.—Mr. T., later. Pulse-rate, 100; Systole, .290"; Diastole, .315".

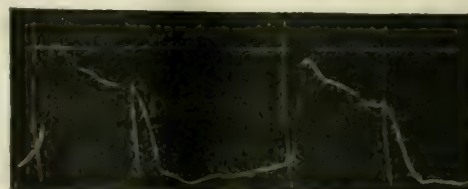


Fig. 5a. Mr. C., at rest. Pulse-rate, 80; Systole, .300"; Diastole, .450".



Fig. 5b.—Immediately after great exertion. Pulse-rate, 130; Systole, .210"; Diastole, .250".

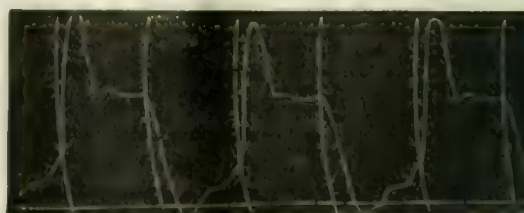


Fig. 5c.—Later: feeling of relief. Pulse-rate, 111; Systole, .270"; Diastole, .270".

On another occasion, tracings were taken from Mr. T. in the Turkish bath.



Fig. 6.—Before Bath. Pulse-rate, 57.5; Systole, .350"; Diastole, .690".

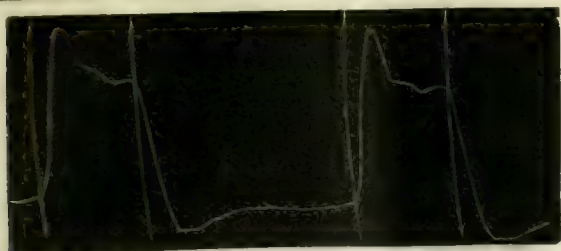


Fig. 7.—After short immersion in hot chamber: temperature, 140° Fahr.; Pulse-rate, 62; Systole, .330"; Diastole, .640".



Fig. 8.—Later. Pulse-rate, 70; Systole .300"; Diastole, .550".

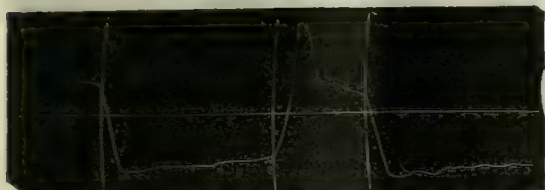


Fig. 9.—Later. Pulse-rate, 75; Systole, .290"; Diastole, .540".

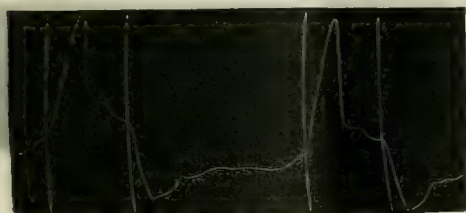


Fig. 10.—Later. Pulse-rate, 80; Temperature of Body, 100.7° Fahr.; Systole, .260"; Diastole, .500".



Fig. 11.—Mr. T. was then taken out of the bath and subjected to a cold douche. Pulse-rate, 57; Systole, .350"; Diastole, .700".

It was noticed that later, as the effect of the douche passed away, and the skin became warm, the duration of systole again diminished.

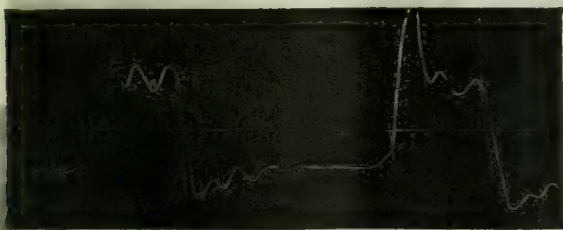


Fig. 12.—Pulse-rate, 60; Systole, .310"; Diastole, .700".

It is interesting to note in the above tracings the very rapid diminution in the duration of systole: In all the experiments I have made in

the Turkish bath, I have endeavoured to keep the temperature of the room at 140° Fahr. Most frequently the temperature of the body, taken in the axilla, mouth, or ear, rose to between 101° and 102° Fahr., but never exceeded 102° . After the cold douche, it is remarkable that the heart's rapidity returns to the same number of beats as before the bath; and that, as reaction sets in, there is again a diminution in the duration of systole. These tracings should be compared with the following, also taken in a bath at 140° Fahr.

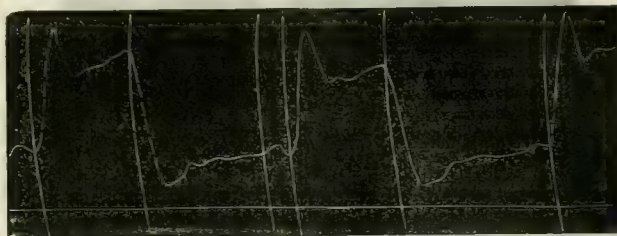


Fig. 13.—Mr. M., before bath. Pulse-rate, 80 per minute; Systole, .300"; Diastole, .470".

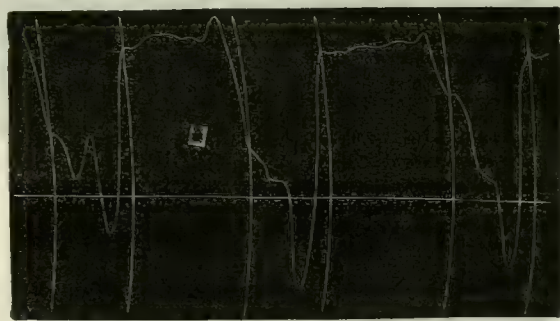


Fig. 14.—During Bath. Pulse-rate, 100; Systole, .245"; Diastole, .360".

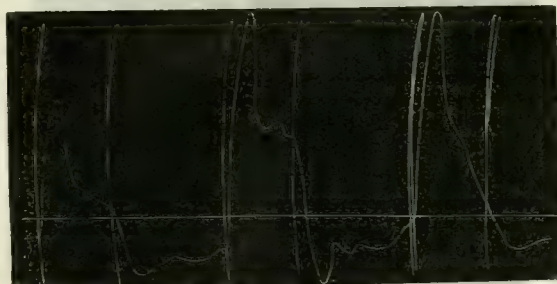


Fig. 15.—Later. Pulse rate, 105; Body Temperature, 102° Fahr Systole, .230"; Diastole, .340".

Mr. M. was now taken out of the bath, and tracings were taken while he was cooling down.

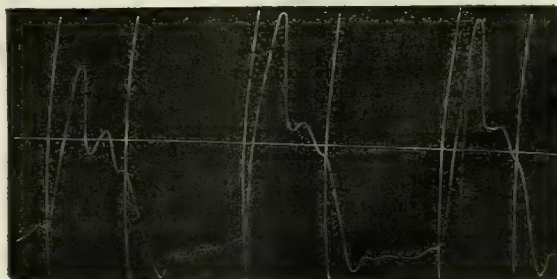


Fig. 16.—Pulse-rate, 100; Systole, .240"; Diastole .360".

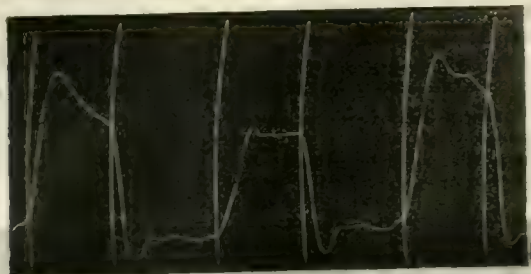


Fig. 17.—Later. Pulse-rate, 105; Systole, .250"; Diastole, .330".

The three tracings immediately above show the interesting fact that, although the pulse-frequency may actually increase, the systole lengthens as the patient cools. Fifteen minutes later, the following tracing was obtained.



Fig. 18.—Pulse-rate, 87; Systole, .290"; Diastole, .400".

A cold douche was then given.

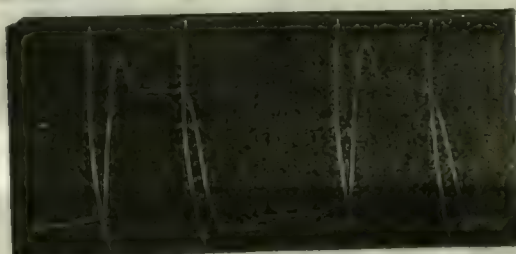


Fig. 19.—Pulse-rate, 75; Systole, .300"; Diastole, .400".

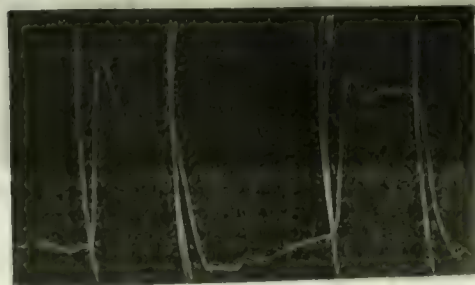


Fig. 20.—Later after Douche, skin growing warm. Pulse-rate, 74; Systole, .290"; Diastole, .400".

For purposes of comparison, I add tracings from a case of rapid pulse-frequency due to anxiety alone.



Fig. 21.—Pulse-rate, 100; Systole, .250"; Diastole, .330".

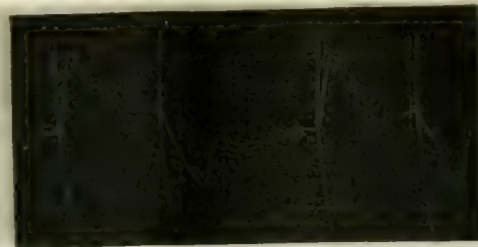


Fig. 22.—Same Patient. Pulse-rate, 74 in Bath; Systole, .315"; Diastole, .490".

From fig. 21, it will be noticed that the duration of systole for a pulse-rate of 100 is longer than when tracings are taken in the Turkish bath from a patient with a pulse-rate of 100 induced by a temperature of 140° Fahr.

Examples are next given of a systole of short duration, occurring with a slow pulse-frequency, after immersion in the bath.



Fig. 23.—After half an hour immersion. Pulse-rate, 61.5; Systole, .385"; Diastole, .660".



Fig. 24.—After one hour's immersion, Temperature of Body, 100.8° F. Pulse-rate, 80; Systole, .270"; Diastole, .450".

It seems clear that the temperature of the blood has a distinct influence in shortening the duration of ventricular systole.

This shortening was unaccompanied with any feeling of faintness whatever in the patients experimented on. The next example is taken from a patient who was brought out of the bath in a fainting state, and was laid on a couch wholly or partially insensible, the tracing being taken within a minute of the time in which he was laid prostrate on the couch.

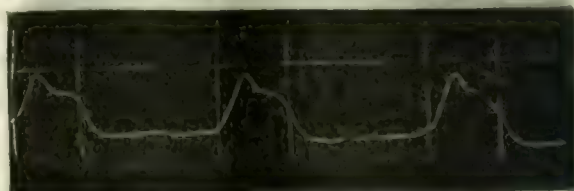


Fig. 25.—Mr. M. G. Pulse-rate, 90; Systole, .210"-.220"; Diastole, .470".



Fig. 26.—Same, gradually recovering. Pulse-rate, 80; Systole, .220"; Diastole, .490".

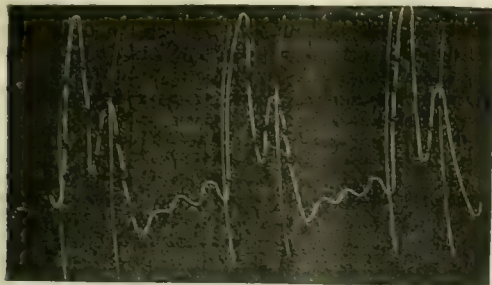


Fig. 27.—Case 11, Mr. E., complaining of Faintness. Body-temperature, 100.4°; Pulse-rate, 111; Systole, .220; Diastole, .330'.

In the final calculations, I have omitted all such cases; and also those which, at first presenting no abnormality, subsequently developed such in the bath.

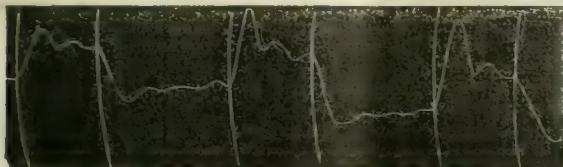


Fig. 28.—Mr. L., before Bath. Pulse-rate 91; Systole, .260'; Diastole, .385'.

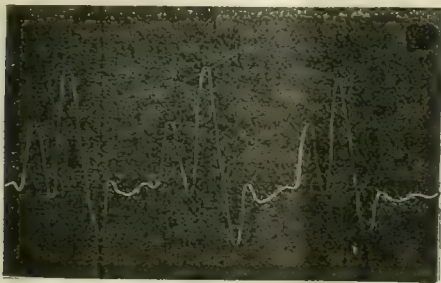


Fig. 29.—Same, during Bath. Temperature of Body, 101° F.

On auscultation, a loud systolic and a loud diastolic murmur were heard at the base of the heart, and at the apex a systolic murmur conducted into the axilla. The basic murmur disappeared, but the mitral systolic persisted after the douche. The duration of .260' for systole at a pulse-frequency of 93 is not exceptional, but it, with certain others, was also omitted from the final calculation, the result of which is given below.

Table calculated from 90 cases. Showing, in parts of a second, the average duration of systole for every increase of 5 beats in frequency per minute, from 46 to 130.

Frequency per Minute.	Duration of Systole.
130 ...	.2100" (exertion).
116 to 120 ...	.2350" (mixed cases, approximate).
111 to 115 ...	.2475" (mixed cases, approximate).
106 to 110 ...	.2675" (nearly all cases of exertion only).
101 to 105 ...	.2543" (all taken in bath).
{ 96 to 100 ...	.2540" (bath).
{ 96 to 100 ...	.2730" (normal).
91 to 95 ...	.2690" (mixed cases, approximate).
{ 86 to 90 ...	.2800" (bath).
{ 86 to 90 ...	.3200" (exertion and normal).
81 to 85 ...	.3030" (bath).
{ 81 to 85 ...	.3250" (exertion and normal).
{ 76 to 80 ...	.3032" (bath).
{ 76 to 80 ...	.3300" (exertion and normal).
71 to 75 ...	.3033" (bath).
66 to 70 ...	.3200" (mixed cases).
61 to 65 ...	.3200" (mixed cases).
{ 56 to 60 ...	.3460" (normal).
{ 56 to 60 ...	.3200" (bath).
51 to 55 ...	.3425" (normal).
46 to 50 ...	.3600" (normal).

Under the different conditions, the variations were usually within small limits, and the above durations of systole may be accepted as very fairly accurate for their respective pulse-frequencies. Occasionally, however, a variation in the duration of systole of .04" to .06" may be met with for the same pulse-frequency, without any assignable cause. Perhaps future and more comprehensive observations may, in a measure, explain these discrepancies. I have indicated what variation may be due to body-temperature, and given a table of movements for the different pulse-frequencies. Experiments of this nature entail much expenditure of labour and time; I have endeavoured to establish a basis of facts for future use in the present paper, during the preparation of which I have become much indebted to Dr. Burdon Sanderson for his very kind and generous assistance.

CONTRIBUTIONS TO THE PATHOLOGY OF PARASITIC DISEASES OF THE SKIN.

By GEORGE THIN, M.D.

I. ON TRICHOPHYTON TONSURANS (THE FUNGUS OF RING-WORM).—

The results of the investigations on *Trichophyton tonsurans*, carried on by the aid of a grant from the Scientific Grants Committee of the British Medical Association, were communicated to the Royal Society at the meeting, March 3rd, 1881, and were published in abstract in the *Proceedings*, No. 211; and again in full in No. 217 of that year.

The present paper chiefly consists of abstracts and quotations from the memoir published in the *Proceedings of the Royal Society*, my intention in compiling it being to give a brief account of the experiments, more especially in so far as they bear on the management of the disease which is produced by the parasite.

I have described in the paper to which I have referred how attempts at artificial cultivation of the fungus have hitherto led to contradictory conclusions. Lowe, in 1850,* was induced to believe that *Trichophyton tonsurans* is a spore-formation of the fungus of favus—a specifically distinct parasitic disease of the skin—and that both are forms of *aspergillus*. Neumann,† on the other hand, whilst believing that his cultivation experiments showed that herpes tonsurans and favus are produced by the same fungus, traced it in both diseases to *Penicillium glaucum*. Dr. Atkinson,‡ again, was led by his cultivations to believe that the fungus belongs to the Mucors, and is probably *Mucor mucedo*.

The reason why the botanical relations of the parasite to the common fungi have been so difficult to determine has been stated by De Bary. "If," he remarks,§ speaking of the vegetable parasites of the skin, "the parasites, when removed from the bodies of their hosts, are cultivated in water, sugar solution, etc., the vegetation of their spores is then observed, and after a short time there appears in the fluids the universally widespread fungi, e.g., *Penicillium glaucum*, *Aspergillus glaucus*, or *Torula*. The latter and the mycelium of *Penicillium* resemble more or less the spores and mycelium of the parasites in question, and, being found in immediate contact with them, it seems as if they had been developed from them in the artificial medium."

Köbner,|| who endeavoured to solve some of the problems connected with the development of the parasite by clinical experiments, found that *Trichophyton tonsurans*, when inoculated on the skin, produced only herpes tonsurans, and that he could not produce this disease by inoculation with *Penicillium glaucum*.

A strong reason exists, independently of experimental results, for believing that trichophyton is not a form of the common fungi. The facility with which ringworm is communicated from one child to another by contact, or by interchange of caps, shows that the fungus takes root easily on the scalp; whilst, as many a country medical practitioner can

* *Botanical Transactions*. Edinburgh. 1850.

† *Lehrbuch der Hautkrankheiten*. Second Edition.

‡ "On the Botanical Relations of the *Trichophyton tonsurans*," *New York Medical Journal*, December 1878.

§ Hofmeister's *Handbuch Physiologischen Botanik*, Band ii, Abth. i. p. 224.

|| *Klinische und Experimentelle Mittheilungen*. Erlangen. 1864.

testify, bareheaded children may be exposed indefinitely to contact with all the spores with which the atmosphere is pregnant, without a single instance of the disease being produced.

In cultivating ringworm hairs, it is a matter of the greatest nicety and difficulty to distinguish between the growth of the parasite and the luxuriant development of fungi, the spores of which, being in great numbers in the atmosphere, find a suitable soil in any hair-root moistened with cultivation fluids. Those authors who have spoken of the cultivation of trichophyton as an easy matter, have, I am compelled to believe, never got so far as sufficiently to realise the difficult nature of the problem which they were endeavouring to solve. Some of the adventitious fungi that develop round the hairs cannot be distinguished, either by size or form, from trichophyton, for which the observer, unless he be exceedingly careful, is apt to mistake them.

The best method of avoiding this source of fallacy is to place a freshly extracted ringworm hair on a cover-glass, moistened with a drop of the fluid which is being tried, and to apply the glass to a cell prepared in the usual way. The cell is kept at a temperature approaching that of the human body, and examined frequently under the microscope. It is thus possible to keep under observation spores which were seen on the edge of the hair as soon as it was mounted; and if they grow, the progress of growth can be watched. It is also possible to manipulate hairs that have been allowed to float on the surface of a fluid, or to lie in contact with moist substances, so that the fungi surrounding the root can be sufficiently removed to enable the observer to examine the condition of the trichophyton spores which are lying in the hair, and which, from their characteristic position, can be recognised. It frequently happens that, after the adventitious fungi have been removed, the spores in the hair are found in the condition in which they are seen in an ordinary hair affected with ringworm. If, however, the ringworm fungus have grown under cultivation, many of the trichophyton spores will be seen to have sent out mycelial formations beyond the edge of the hair.

My earlier experiments were a long unbroken series of failures. I was for a few days under the delusion that seems inseparable from first attempts to cultivate trichophyton, and I imagined that nothing was easier than to produce a luxuriant growth. I was soon convinced that this was an error. I had mistaken a fungus, whose spores seemed to be omnipresent, for trichophyton, it being impossible to distinguish the one from the other by simple inspection of the mycelium. This fungus closely entwined itself around the root of the hairs. By careful manipulation, however, it could be ascertained that it did not penetrate the hair-shaft; and, after it was removed, the trichophyton spores could be seen unaltered.

The experiments with negative results have established that trichophyton and the common fungi are essentially distinct.

The list of fluids with which cultivation experiments failed, is a somewhat long one. No results were obtained with two that are well-known and frequently employed—viz.:

1. A solution consisting of sodium phosphate, 1 gramme; ammonium tartrate, 10 grammes; distilled water, 1,000 cubic centigrammes; formerly used by Dr. Sanderson, I am informed, at the Brown Institution, where I got the formula; and

2. Magnesium sulphate, 1 gramme; potassium nitrate, 1 gramme; calcium phosphate, 0.2 gramme; distilled water, 500 cubic centigrammes (Cohn's fluid).

Nor, finally, with milk, tap-water, carrot infusion, salt solution (0.75 per cent.), turnip infusion, egg-albumen, egg-albumen and potash, and vitreous humour and potash.

Ringworm hairs were placed on bread, soaked in the two first-mentioned fluids. Common fungi grew around the roots, but the trichophyton spores did not germinate. A similar result occurred with turnip infusion. To take an example: bread soaked in this fluid was placed in a box, and ringworm hairs placed on the bread at different points. The box was laid on an incubator. After four days, the bread was found covered with fungi. The ringworm hairs were picked out, macerated in potash solution, and examined. All the spores were round, and there was no appearance on the sides of the hairs of germinative or early mycelium formation.

The only fluids with which I succeeded in cultivating trichophyton are aqueous and vitreous humour; and vitreous humour was chiefly used on account of the facilities for getting it in large quantities from human eyes. I found, however, that the hairs should be only moistened, but not immersed, in the vitreous humour.

Successful observations were made by examining ringworm hairs in cells, the hairs being moistened but not covered. When the hairs were covered with the drop, trichophyton did not grow. With cells kept in an incubator, at a temperature of 96° to 98° Fahr., the sprouting of the

spores on the sides of the hairs can be easily observed. But the small quantity of vitreous humour which is available for the growth of the fungus, in these conditions, is soon used up; and I found it convenient to employ another method.

The engravings illustrate the different stages of the growth of trichophyton under cultivation.



Fig. 1. Spores germinating. Drawn from a preparation in a cell the same day in which it had been placed in the incubator.



Fig. 2. Two days' growth in a cell. (In the cell-cultivations, the mycelium did not grow long, and the formation of spores usually took place whilst the mycelial tube was short.) Magnified 750 diameters.

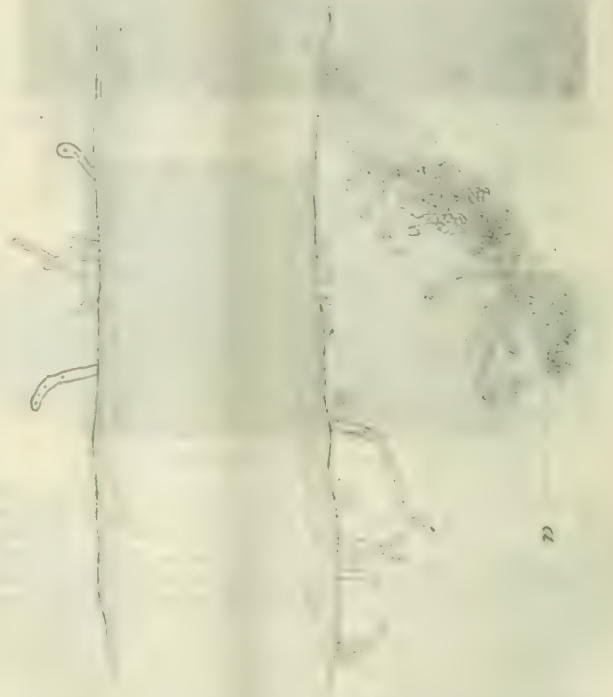


Fig. 3. A hair from a cultivation on the surface of vitreous humour in a test-glass. A mass of granular material, a portion of the mycelial root-sheath, which was attached to the spore, is observed at the base of the spore. The spore is from the side of the hair, the centre of the hair-shaft has been left out. Magnified 450 diameters.

Pure test glasses were charged with pure vitreous humour,* and the hairs were floated on the surface of the fluid. The glasses were then placed in the incubator. By observing hairs treated in this manner, it is seen that trichophyton lanuginosa grows freely when moistened with vitreous humour, and kept at a temperature of 96° to 98° Fahr. But, although the method may be relied on for the cultivation of ringworm fungus, it cannot be considered certain; and, in my experiments, I was not able to exclude the possibility of failure. To any one familiar with work of this kind, occasional failures will not be a matter of surprise.

Simultaneously with the experiments on trichophyton, I had made a number of cultivations of the common fungi found in our houses, and

* For the methods by which purity was secured, and for other technical details see the paper in the Proceedings of the Royal Society.

had learned how delicate are the conditions of growth to which they are all subject. One of the most important of these conditions is the requisite degree of moisture, which must be neither in deficiency nor in excess. The failures may possibly have been due to the hairs having become too much immersed, or the spores themselves may have been incapable of germination from changes effected in them by inflammatory exudation around the hair-follicles before they were extracted.

The fact that I had been unable to produce growth of trichophyton in cells, so long as the spores were completely immersed in vitreous humour, led me to make the following experiments. Ringworm hairs were extracted from a patch of untreated ringworm. Some of them were inserted into a small glass tube, which was placed at the bottom of the test-glass, and others were floated on the surface of the fluid in the usual way. After two days, the hairs were examined. There was an abundant growth of mycelium around the roots of those hairs which were on the surface. The mycelium was of the size of that of ringworm, and in some of it black pigment had been deposited. No spores had formed. I satisfied myself at the time that it had developed from the ringworm spores. On macerating the hairs, the mycelial growth of trichophyton inside the hair-shafts were also found pigmented.

In the hairs deposited in the tube at the bottom of the test-glass no growth had taken place, although, on maceration, they were found to contain mycelium and spores of trichophyton, both containing black pigment.*

In another instance, in which the experiment was conducted in precisely the same conditions, an examination was made after the test-glass had been six days in the incubator. There was free growth of trichophyton in the hairs which had been floating on the surface of the fluid, whilst there was no growth in the hairs which were in the tube at the bottom of the glass.

In these two experiments, all the hairs, both those on the surface and those at the bottom, contained trichophyton; and, in each experiment, both the surface and the sunk hairs were taken at the same time from the same patient, every condition being alike, except that in the one case the hairs were on the surface of the fluid, and in the other they were completely immersed in it.

These experiments further suggest the view that inflammation cures ringworm by drowning the fungus. The data supplied by recent pathological researches show that serous effusion from the blood-vessels is the invariable concomitant of inflammatory action, however it is produced. When a persistent inflammatory congestion is kept up by irritants around the hair-follicles, it of necessity follows that the serous effusion should make its way through the root-sheaths; whilst the inner root-sheath and the cuticle of the hair are more or less broken up by the growth of the fungus. It is a fair inference from the experiments described in this paper, that the capacity for growth in trichophyton is destroyed by the resulting immersion in serum. Clinically, and as a matter of fact, we know that this is just what takes place; and the only reason why ringworm is such a tedious disease under treatment is, that the same amount of irritation by external agents does not produce the same amount of congestion in any two patients, and that a careful practitioner will always hesitate to induce such an intensity of inflammation as might injure the health of the patient or produce partial baldness by destruction of the hair-follicles.

Trichophyton tonsurans, although it grows in the epidermis of children and adults alike, and thrives in the hairs of the scalp in children, cannot, as a rule to which there is hardly any exception, live in the hairs and follicles of the scalp of adults. The explanation of this peculiarity will probably be found in the anatomical relations of the inner root-sheath and the hair; and I suggest, as an hypothesis, that the fungus does not penetrate between these structures in the adult because it does not find there sufficient moisture for its development.

The conclusions regarding *Trichophyton tonsurans* which are warranted by the experiments recorded in the paper read before the Royal Society are, that it is not one of the common fungi, and that it can be cultivated artificially when moistened by vitreous humour. When it was completely immersed in vitreous humour, I found no evidence of growth.

So far as we know, this fungus only grows in the epidermic elements of a limited number of mammals. A careful consideration of the views of previous observers, who have described it as being simply one of the common fungi, accidentally growing on the skin, has led me to the conclusion that these opinions are based on erroneous observations.

* This patient is not the only one in whose diseased hairs the ringworm fungus was pigmented. I have found the same peculiarity in other cases, and in the affected hairs from a patch of this disease, in a black horse, I found pigmented mycelium and spores very common.

In their cultivation-experiments, they had not succeeded in excluding growths of the spores of the common fungi present in the atmosphere.

The experiments which I have described are pregnant with instruction regarding the management of ringworm. Cases of this disease are divisible into two categories. In the first, owing to the superficial position of the spores, the fungus can be destroyed by the application of parasiticide lotions and ointments. In the second, owing to the depth of the hair-follicle, the spores are beyond the reach of these applications. In this latter class of cases, we have recourse to applications which provoke inflammation; that is to say, to an effusion of serum around the follicles. With the thorough penetration of serum or pus through the internal root-sheath and into the fungus-logged hair-root, the parasite dies: a clinical fact established and understood by all competent observers. The limits of this paper do not permit me to enter fully into the best means of provoking this curative inflammation; but I desire to warn practitioners against placing too much confidence in any one kind or form of application. The age of the child, the probable depth of the hair-follicle, and, above all, the degree of susceptibility of the superficial blood-vessels to irritation, must determine the substance used, and especially the strength in which it is to be employed. In all chronic cases of ringworm, the practitioner must, in the first instance, proceed cautiously and experimentally, in order to test this susceptibility of the skin, increasing the strength of his remedies and the frequency of application until he has obtained a moderate but persistent congestion of the skin of the affected patch. With young children, this experimental process must be carried on with a certain amount of caution; with older children, and more especially with boys over ten years of age, much time need not be lost in making a very decided impression. In ringworm of the scalp, it is not so much the remedy that is of importance, as the judicious use of the remedy.

In ringworm of the body, the parasite is so well within reach, that its destruction presents no difficulty. I find one application of tincture of iodine, and subsequent scrubbing with soap and water, sufficient to effect a cure.

II. MICROSPORON FURFUR.

The microscopic appearance of *Microsporon furfur*, the parasite which produces the disease of the skin known as tinea (or pityriasis) versicolor, is favourable to a study of the life-history of the fungus by attempts at cultivation. The isolated clusters of round spores connected by mycelial threads are distinctive; and, when the epidermic scales in which they lie are permeated by the adventitious fungi which grow in our cells or cultivation-glasses, there is not much difficulty in determining which is microsporon and which is common fungus.

The results of my investigations regarding the nature of this fungus have been entirely negative. I have not succeeded in getting it to grow; and, so far as our present experience goes, nothing is known concerning it except that it is found on the human skin, and that when found on this soil it is fairly uniform in size and form.

The mechanism of the attempted cultivations was the same as that employed in the trichophyton experiments, and need not be again described; the incubator temperature being mostly about 96° to 98° Fahr. The media in which I failed to get microsporon furfur to grow, are:

1. *Lard*.—Three cells were prepared, and scales were also placed at several points on a slide smeared with lard. The cells and slide were three days in the incubator.

2. *Acid Albumen*.—The cell was four days in the incubator.

3. *Milk*.—The scales were floated on a glass which was placed in the incubator.

4. *Water with Urea and Lactic Acid (three days in the incubator)*.—The experiment was repeated again for three days.

5. *Vitreous Humour with Urea and Lactic Acid (three days in the incubator)*.—The experiment was repeated.

6. *Vitreous Humour and Urea (three days in the incubator)*.—The experiment was repeated.

7. *Vitreous Humour and Lactic Acid (three days in the incubator)*.

8. *Salt Solution (0.75 per cent.), pure and combined severally with Lactic Acid, Urea, and Urea and Lactic Acid (three days in the incubator)*.

9. *Solution of Phosphate of Soda, 1 gramme; Tartrate of Ammonia, 10 grammes; and Distilled Water, 1,000 cubic centimetres*.—The subjoined table shows briefly the nature of the experiments made with this fluid.

No. of Experiment.	No. of Cells used.	Time in Incubator.
1	1	3 days
2	2	" "
3	1	6 "
4	2	12 "

Bread was soaked in the same fluid, and inoculated at several points with epidermic scales containing the fungus. The bread was shut in a tight box to prevent evaporation. There was soon an abundant crop of adventitious fungi on the bread; but when the epidermic scales were picked out, macerated, and examined, there was no appearance observed which led me to suppose that *Microsporon furfur* had grown.

10. *Cohn's Fluid*.—A cell, with scales containing microsporon, was in the incubator two days. Scales were placed on bread soaked in the fluid, as in the experiment with the fluid previously mentioned (No. 9). There was a crop of aspergillus, but microsporon did not grow.

11. *Turnip Infusion*.—A cell was seven days in the incubator, and scales floated on the fluid in a test-glass nine days. Microsporon, in scales placed on bread soaked in the infusion as in previous experiment (No. 9), did not grow after four days; but there was a plentiful crop of other fungi. The experiment was repeated. The bread was covered with aspergillus, but microsporon did not germinate.

12. *Vitreous Humour*.—My success in growing trichophyton on this fluid led me to persevere with it longer than I did with the others; but the results were again negative. Vitreous humour of ordinary consistency was used in some experiments; in others it was thickened by evaporation, in the vain hope that the parasite might find the soil more congenial in this condition. For the sake of brevity, I have tabulated the experiments.

No. of Ex- periment.	No. of Cells.	No. of Days in Incubator.	No. of Ex- periment.	No. of Cells.	No. of Days in Incubator.
1	2	3	6	2	7
2	1	5	7	2	5
3	1	14	8	2	7
4	1	18	9	1	7
5	4	6			

In Experiments 1 to 6, the vitreous humour was concentrated by evaporation. Scales were floated on vitreous humour in a test-glass, which was placed in the incubator for three days. There was no growth of microsporon, but other adventitious fungi grew.

The scales containing microsporon, which were used for these experiments, were in every case transferred with little delay to the cells and cultivation glasses. They were usually removed from the skin of patients in my consulting-room, and were, within a few minutes (probably in most cases within a quarter of an hour), transferred to the cells and glasses in my workroom, in which an assistant had everything prepared, with the view of saving time. The experiments being made in summer, the temperature was high.

The fluids selected were, in some instances, intended to approach what I conceived might be the possible composition of the moisture on the skin of those patients on whom microsporon finds its soil.

The conditions were thus so far favourable, and the continued series of negative results warrants the belief that microsporon is a fungus that requires very special conditions for its development. Whence it comes we are in absolute ignorance. The great majority of persons afford no soil for its growth. The most intimate personal contact does not lead to its being communicated from one individual to another, unless the susceptibility exists. Whether, in such persons as do afford the soil for this dainty plant, the spores have always come from the skin of some other person on whom it has grown, or whether there is another soil in nature from which it is transferred to the human skin, is a problem which has not yet been solved.

The required soil for the development of microsporon is not only the human skin of certain individuals, but of certain individuals within certain limits of age. *Moist parts of the skin of certain individuals during the period of sexual activity* would seem to be a definition of this soil. Tinea versicolor develops after puberty, and disappears spontaneously on the approach of age.

While this parasitic disease may coincide with a condition of perfect health, it is well known that it is frequently found associated with certain cachectic states of the system, and notably with phthisis. This frequency has, perhaps, been overrated. Through the kindness of Dr. Douglas Powell, I was able to examine the skin of a number of patients in the Brompton Consumption Hospital, and I found that only six men out of eighty-three had tinea versicolor: a proportion, however, undoubtedly much above the average of an equal number of persons taken irrespectively of their condition of health.

The main and most important result of the experiments which I have thus briefly reported is the evidence they afford that microsporon furfur, like trichophyton tonsurans, is a specific parasitic fungus, and is not one of the ordinary fungi whose omnipresent spores, chance to find a suitable soil on the skin of a small proportion of individuals.

Addendum.—THE ACHORION SCHÖNLEINII—THE FUNGUS OF FAVUS.

Attempts were also made to cultivate *Achorion Schönleinii*, with negative results. The value of the experiments is, however, much weakened by the fact that the available material was not recently taken from a patient. The favus-crusts which were used had been removed from the head of a boy, and kept for upwards of a year before the attempts at cultivation were made. The same apparatus and methods were used as in the experiments with trichophyton and microsporon furfur. Eight attempted cultivations with vitreous humour and five with Cohn's fluid failed. Small portions of the crusts were placed on bread soaked in the cultivation-fluid No. 9 of the paper on microsporon furfur, under the usual conditions. The bread was soon covered with aspergillus, but the *Achorion Schönleinii* did not grow.

III. BACTERIUM DECALVANS: AN ORGANISM ASSOCIATED WITH THE DESTRUCTION OF THE HAIR IN ALOPECIA AREATA.

One part of the work undertaken with the assistance of the Grants Committee of the British Medical Association, consisted in investigating the condition of the hairs on the border of patches of alopecia areata, and a paper giving the results of my observations was read before the Royal Society on February 19th, 1881. This paper was published in abstract in the *Proceedings*, No. 211, and in full in No. 217, of that year. References to the literature of the subject, and an account of the methods employed in the investigation, will be found in that paper.

Previously to beginning the investigation, when searching in vain for the fungus which some authors have described as being present in this disease, I had observed, in connection with the root-sheaths of affected hairs, objects which in form resembled micrococci, and also occasionally undoubted spheroidal-shaped micro-organisms.

In the year 1880, I made, in six cases, a special examination, in order to detect, if possible, the existence of organisms in the roots of the diseased hairs, and I believed that I found evidence of their presence in five of them. I had, at the same time, obtained evidence in seven cases—evidence supported by subsequent experience—that a treatment designed to arrest the development of organisms, and mechanically to prevent their transportation from one hair to another, sufficed to arrest the disease. The treatment consisted simply in the free use of sulphur-ointment, and proofs of its efficacy are given in a paper contributed to the Section of Medicine at the meeting of the British Medical Association in 1881.

The demonstration of organisms in a hair is attended with great difficulty. In a comparatively sound hair it is very difficult to bring minute objects like bacteria under observation; and in hairs which are considerably affected, the shaft is found, when prepared for examination, to be so full of pigment and other granules, that it becomes very difficult to distinguish organisms amongst them, presuming these to be present.

The processes to which the hairs were subjected were devised so as to get rid of oily particles, and in some instances to break down, by solutions of potash, the cells of the hair-shaft, whilst the cuticle of the hair was left entire.

The bodies which I believe to be minute organisms were uniform in size and in their refractive qualities. They were frequently in pairs, the long axis of each member of the pair forming a continuous line. Sometimes three of them were found end to end, with an appearance of one continuous sheath for the three. I have attempted to show the form and size of these objects by means of camera drawings; but it is somewhat difficult to get the exact size of such small bodies. In order further to ensure accuracy in this respect, I obtained the kind assistance of Mr. Noble Smith, whose capacity as an accurate draughtsman in all that relates to microscopic objects is recognised and appreciated. Fig. 1 has been engraved from a drawing by Mr. Smith. He determined the outlines of the hair, and drew a number of the objects (or organisms) to the size in which he saw them. The others were filled in to the scale determined by Mr. Smith. The magnifying power represented in the drawing was estimated by measuring the hair.

From the appearances observed, I have inferred that the bacterium enters the hair-follicle between the internal root-sheath and the shaft. Towards the root of the hair, it penetrates the hair-substance, and, as it multiplies, ascends upwards in the substance of the hair. The breaking up, loosening, and disappearance of the hair are to be attributed to the disorganisation of the hair-substance by the growing organisms.

In extracting hairs for examination, I took them from a considerable breadth of margin: and, as the proportion of the hairs examined which showed any change or evidence of organisms was small, it is probable that they are present only in a narrow zone; and that, after a hair is once attacked, development takes place rapidly, and the hair soon falls.

The following sentences form the concluding paragraphs in the paper published in the *Proceedings of the Royal Society*.

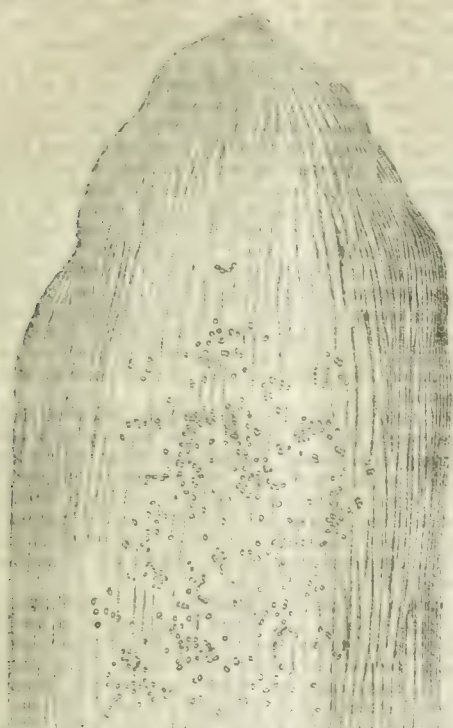


Fig. 1. Case of J. F. Organisms between the root-sheath and the shaft of the hair near the root. (Drawn by Mr. Noble Smith.) Magnified about 470 diameters.

Fig. 2. Organisms from the group shown in Fig. 1, more highly magnified. (Camera drawing.) Magnified 560 diameters.

"It may be well to divide the statements made in this paper into two heads: those which relate to ascertained facts, and those which relate to a theory of the causation of alopecia areata, which I believe is sustained by these facts.

"1. The facts are, that minute bodies of definite and fixed shape and size are found in and on the hairs in alopecia areata. These bodies are distinct from the granular elements present in hairs, and are neither oily particles nor crystals. They are of the size and shape, and have the refractive qualities, of bacteria. When present in small numbers on the shaft, the hair is entire; whilst within some hairs much affected by the disease they were found in great numbers.

"2. The theory is, that these bodies are bacteria, and that the disappearance of the hair is due to a breaking up of the hair-shaft by the multiplication in it of the organisms.

"As I believe it is desirable to give to definite objects like those which I have described a name which will mark their association with the theory I have founded on them, and as I am myself satisfied as to their nature, I suggest the term *Bacterium decalvans* as a convenient designation."

* Subsequent recent investigations have confirmed the author's views regarding the existence of this bacterium. He has now observed it in all the phases through which a bacterial organism may be traced, and will shortly be able to publish an account of methods by which it can be more readily observed.—August, 1882.

THE DEATH-RATE OF BILSTON last year was the most satisfactory on record. The average death-rate of the place thirty years ago was from 31 to 32 per 1000; last year, thanks to sanitary improvement and the efforts of the medical officer of health, it was reduced to 16.1 per 1000, which must be regarded as very satisfactory for a Black County town. Only 31 deaths, moreover, out of the 381 recorded were due to infectious disease, a result which may, or may not, be due to Bilston being "one of the best drained towns in the country."

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PATHOLOGY.

At the Annual Meeting of the British Medical Association,
in Worcester, August 1882.

By J. HUGHLINGS JACKSON, M.D., F.R.S.,

Physician to the National Hospital for the Epileptic and Paralyse, and to the London Hospital; President of the Section.

PATHOLOGY is the basis of every rational system of therapeutics. That, possibly, the greater part of our most effectual treatment is at present empirical I would not deny, but that therapeutics will become rational is what we all hope. To those who are quietly and laboriously working at what may, superficially looked on, seem to be obscure pathological problems, steady advances in diagnosis and rational therapeutics will be chiefly owing. It is evident that, for rational therapeutics, we must know what there is to be treated. No man in our profession deserves greater credit than the pathologist—including, of course, the clinical pathologist, and never forgetting the medical officer of health. The medical officer of health is the Pathologist of the Social Organism, and deserves the highest social recognition. Speaking more narrowly, tacitly assuming the obvious qualifications, the best practitioner, perhaps not the most confident one, is he who has carefully made most *post mortem* examinations. I do not mean him who stops here, who stops in a stage which is rather to be called one of morbid anatomy than of pathology. But a man must begin here—must begin here to learn for himself, at any rate. The best knowledge for practice is what a man gets for himself. The only way of being thoroughly practical is to face the facts, to get verification or disproof of our opinions. A *post mortem* examination never flatters us. If, for an example, we diagnose tumour of the cerebellum during the life of a patient, we may, *post mortem*, find one in the anterior cerebral lobe. Such a rap on the knuckles is good for us. It makes us less confident, and teaches us to be more careful. A *post mortem* examination may tell us that we have been treating a patient with useless, perhaps with injurious, drugs.

Every medical man has some system of pathology. But there are systems and systems. Besides scientific pathology there is a crude pathology, and there is, unfortunately, a metaphysical pathology. We have long heard that old maids' husbands are always well behaved, and on the same principle the pathology of those who do not make *post mortem* examinations is often confident and definite. But the really important thing is to be accurate and precise, otherwise we confidently organise error in definite formulæ. A man's pathology may be too definite in the wrong way, because he has not worked for himself at pathology. It may be only superficially and verbally definite and really crude. He who has made many *post mortem* examinations is not so metaphysical in his explanations of the pathology of some of those cases of disease of which there is no known morbid anatomy. In looking carefully for himself into the coarsely concrete, a realistic habit of mind is produced in a person, and thus he avoids verbal explanations of those most difficult cases which are without known morbid anatomy—of those, for example, commonly called the Neuroses. To my young hearers I say, always endeavour to obtain *post mortem* examinations. Unless you are in the habit of facing the facts, your diagnoses will be untrustworthy, and much of your therapeutics indefinite. If a man do not learn pathology when he is young, he is not likely to learn it properly later. Unless he have seen much for himself, he will not practically realise the researches of others, nor be able to judge them. I would urge on young medical men the formation of clubs for making *post mortem* examinations. Let me mention a slender personal experience. Many years ago, at York, a club of this sort was formed. It had no other organisation than the agreement that each member should obtain an examination whenever possible, and ask the other members to attend. The history was stated by the person who, so to speak, owned the case, and then each of us saw what there was to be seen, and notes were taken. In this way it is not difficult to get a large experience of direct value for practice. This very simple method has, I suggest, some advantages over reading papers and more elaborate demonstrations, although these are necessary for organisation of know-

physiology—also is a knowledge by itself, of no avail for therapeutical purposes in such a case. But, lastly, by examining our patient all over—for now we have done for the time with his paralysis—and from certain empirical evidence, not needing to be stated now, we conclude that loss of function of the organ is caused by cerebral hæmorrhage, that a clot has smashed up part of the corpus striatum. This is not enough. There is yet the wider pathology. A patient looks on this illness as an accident; the pathologist never takes that view of it. We often get to know with certainty that the local pathological change is but a local manifestation of a slowly progressing wide state of degeneration; that the man is rotten all over, and that he has one day broken down suddenly in a certain place; that he has chronic Bright's disease, atheromatous arteries, and an hypertrophied left ventricle. By considering these things and their interaction, we see that he has long been preparing for what seems to him to be only an accident. I submit that the process by which, in such a pathological state, he comes to have the local lesion—why an artery bursts—is in chief part a physiological problem; there is a physiology of the organism made up of bad materials as well as of the healthy organism. Further widening our pathological investigation, we may find that the patient is a twig of a gouty family tree.

Now the pathology of lesions is the basis for treatment. It may be said that we can do nothing for the lesion in the case instanced. I grant that. The more we face the facts, that nerve-fibres are smashed up, and that a mass of blood is lying abroad in the *débris*, the less hopeful we feel. But the knowledge of what we cannot do is a gain for therapeutics. We do not try to do the impossible. We have much to do if we consider the patient's wider pathology. We take care of what is left of him, and do not treat what is lost of him. We must be realistic. A part of the patient is annihilated, and to treat the local lesion is to treat a hole in the nervous system. If the clot be a very small one, the patient rapidly gets well, and then, obviously, the thing of real importance is to take stock of his general condition. In a case of slight and transient hemiplegia, it is good work to localise the lesion, but it is far better to examine the patient's heart, arteries, and urine. A man who has one day's trifling incapacity in speech, or even only a trifling bleeding at the nose, is, if he have any chronic Bright's disease too, in a worse case—is less likely to live, I mean—than a patient completely and permanently hemiplegic from embolism. Although I have spoken of a patient's getting rid of the paralytic effects of small lesions, I did not say we cured him. It is perfectly certain that a person recovers from hemiplegia, although the local destruction is not, or is but partially, repaired. Why recovery, or what anyone calls recovery, occurs in these cases, is an anatomico-physiological question.

Once more I urge that anatomy and physiology are integral parts of our clinical knowledge or directions of investigations of particular cases. In a large class of cases, where the functional affection is not negative, but the exact opposite—morbid exaltation of function—it is imperative to keep the physiology of the cases distinct from their pathology, or we shall not see what the really important medical problems are. If we take the case of epilepsy, we see that the distinction is of practical moment. A man is subject to epileptic fits. He is apparently well; then suddenly he is convulsed all over; next day he is apparently well again. Now, in this case, we cannot yet carry out the threefold method, but we should attempt it. Our anatomical knowledge is defective; we have not yet got to know the organ in fault—the particular part, I mean. Thanks especially to Hitzig and Ferrier, we have got to know much of value as to localisation in epileptiform seizures; but, as to epilepsy, nothing at all certain. But we feel sure of our physiology—that nerve-tissue somewhere is highly unstable, and that it occasionally liberates much energy, or, in other words, discharges excessively. The excessive movement outside is a certain sign of an excessive nervous discharge inside. And since in nearly every patient the fits are always the same in kind, however different in degree, we infer that a group of cells have become permanently abnormal, highly unstable, or, metaphorically speaking, "explosive". What I wish to urge is, that this is only an abnormal physiological state, only a great excess of a normal physiological condition. If a healthy man move a limb, there is a liberation of energy by some parts of his nervous system; and if he be convulsed all over, there is only a great exaggeration of such a normal process. To repeat, our anatomical knowledge of epilepsy is only vaguely inferential. Our pathological information is *nil*. We have only certainty as to the physiological process. If we did know exactly the locality of the abnormal physiological condition, we should still have the pathology to find, but we should know where to search for it. The pathological question, the more important thing for medical men, is this: By what abnormality of nutrition is the local hyperphysiological condition produced? Facts as to the causes of epilepsy are

wide of the mark unless they bear on this one point. Enumeration of the so-called causes of epilepsy is valuable, but the facts gathered are only some materials towards ascertaining the direct pathological causation. The man who finds out by what pathological process it comes to pass that certain parts of the nervous system become so physiologically abnormal that they occasionally discharge excessively, will have done work which has not yet been done—the best medical work on epilepsy. Putting it somewhat too narrowly, the question is: "In what tissue of nervous organs does the abnormal nutritive change begin?" It is often assumed, without evidence, that it begins in nervous tissue.

The illustration from the case of hemiplegia was, as to its pathology, very roughly handled. We must carefully distinguish betwixt direct and indirect pathology. The lesion on which, so to speak, symptoms directly hang, is often very indirectly produced. The distinction betwixt direct and indirect pathology is necessary for precision in prognosis and in therapeutics.

There are very few nervous diseases in the sense that the essential elements of nervous organs, cells and fibres, go wrong primarily; in most cases they suffer indirectly. For precision in pathology, and, consequently, in therapeutics, we do not think of nervous organs as being made up solely of nervous elements. The ingredients of a nervous organ are not only nerve-cells and fibres, but also the subordinate elements, blood-vessels and connective tissue. And nearly all diseases of the nervous system of which there is a known morbid anatomy are diseases beginning in the subordinate elements; the nervous tissues are innocent but suffer. Most of them are not in a strict sense nervous diseases at all. Hence a study of pathology corrects specialism. To take but one case: the commonest nervous system is an arterial affair. Hemiplegia, in the vast majority of cases, is owing to blocking up of a diseased artery or to rupture of one. Nerve tissue is not here in fault, but suffers. It deliquesces (as in softening), or is smashed up by irruption of blood. A man's nerve tissue does not begin to soften; it is often locally starved because its arterial supply is cut off—it is boycotted. If a man can take care of his arteries, he need have but little fear of hemiplegia and apoplexy. His nervous tissues will take care of themselves. If we could conceive a man so badly educated and so curiously minded that he knew nervous symptoms well and nothing else, he would, if he made *post mortem* examinations, become de-specialised. He would find that he must start anew by studying cardiac, arterial, and renal diseases, syphilis, gout, rheumatism, and so forth. Out of that new study he would get a reasonable basis for prognosis, and for the care of his patients. In a word, he would find that the pathology of most nervous diseases was indirect, and would cease to take a merely nervous view of them.

The best illustration of indirectness of pathology is given by that most important clinical group of cases, syphilitic affections of the nervous system. Without denying that syphilis may primarily affect nerve-tissue, what I only feel sure of is, that it begins in subordinate tissues of nervous organs. The most nearly direct method of "attack," if I may use the word, is when a nerve trunk is the seat of syphilitic disease; but in other cases the process is indirect. Thus the commonest kind of so-called syphilitic hemiplegia depends directly on local softening of the brain, and indirectly on syphilis. This is an excellent illustration, showing how pathology gives precision to therapeutics. What a man has really to treat, if he is trying to cure a patient of syphilitic hemiplegia of this kind, is "local softening of the brain," not syphilis. The order is this: a man has a chancre; he gets rid of it and of subsequent secondary symptoms. Months or years later, when apparently well, except perhaps for headache, some of his cerebral arteries are becoming syphilitically diseased, and then one unfortunate day a branch is blocked up, and he becomes hemiplegic. A very little change happens that day, although the consequences are grave; but for that little seeming accident there has been long, slow, insidious preparation. The syphilis is slow, the thrombosis is rapid. This case for treatment, so far as the hemiplegia is concerned, is as certainly one of local softening of the brain as hemiplegia from ordinary embolism is. To call it syphilitic hemiplegia is all very well, but to think of the paralysis as being a direct result of syphilis is crude pathology.

Next as to therapeutics. Suppose the patient recovers rapidly under iodide of potassium, should we say we have cured him? There are the facts that he is syphilitic, that he took the iodide, and is now well again. No one denies this sequence. But, then, it so happens that there is another fact. It is quite certain that some hemiplegic patients get well without any drugs whatever. Whether a patient recovers from hemiplegia or not is a question of the size of the lesion. Those who make *post mortem* examinations do not invoke shrinking or disintegration of the plug, or re-establishment of collateral circulation, because they know that they find holes in the motor tracts of

patients who have recovered from hemiplegia—the patients got well, were not cured. So that the hypothesis that the iodide cured the patient is not warranted by facts. Of course, we should treat the patient for syphilis, for besides more obvious reasons there is the strongest presumption that other cerebral arteries are diseased, and we may rid them of disease. If the paralysis be transitory, we go on treating the patient for syphilis, to prevent further paralysis. Everybody has a well-grounded faith in treatment of syphilis—or of its recent effects at any rate. But I submit that if we could sweep away every vestige of syphilis by drugs, we should not, by so doing, cure the hemiplegia. It is easy to let ignorance stand to us for knowledge. We may believe we have cured our patient by drugs, because we do not know that hemiplegia will pass off without the use of any. But confidence is not always a sign of sagacity, but may result because we have not made numerous *post mortem* examinations. In the case instanced, there is a plug in the vessel, and consequent local softening. For drugs to do anything towards ridding the patient of his hemiplegia, they must help to get out the plug and to restore starved nerve tissue. Now, as a matter of fact, there is in these cases actual destruction of nerve tissues. If we could look into the man's head we should see that a part of his brain is boycotted. We cannot get at it by drugs.

There is another kind of so-called syphilitic hemiplegia, essentially unlike the one already mentioned. The facts are that a man, the subject of syphilis, has pain in the head for weeks—the best time for anti-syphilitic treatment—significant of the formation of a cortical gumma. One day he has a convulsion, very often beginning unilaterally, and after it he is temporarily hemiplegic (sometimes monoplegic). The process by which the hemiplegia results from syphilis is a doubly indirect one. No one supposes that the gumma discharges; but that nerve-cells round about it do. Thus, the stages are—(1) Formation of a gumma; next (2) induction of instability by nerve-cells, exactly as by a glioma, possibly by a sort of encephalitis; then (3) sudden excessive discharge; and (4) consequent hemiplegia.

Syphilitic paralysis of a cranial nerve, and the two kinds of syphilitic hemiplegia, are utterly different in the pathological changes on which the symptoms directly depend, although syphilis is respectively the direct, the indirect, and the doubly indirect cause of them.

There is a class of cases of nervous disease—the neuroses—of which the pathology is unknown: chorea, epilepsy, insanity, neuralgia. In these diseases, little or nothing definite has, according to most authorities, been found *post mortem*; and, curiously, the fact that nothing is found, used to be considered proof that there was nothing to find. The statement that we do not know what there is in a particular disease, is sometimes taken to be equivalent to saying that there is nothing. We call the neuroses functional affections—a term, I submit, which should be kept for physiology. There can be no alteration of function without some material change. A man who does not make *post mortem* examinations may look on slight and transitory local paralysis as not depending on a material change, but if he did make such examinations, he would not hold that hypothesis. I repeat that we do not know the pathology of the neuroses. But now comes the curious point. We speak most confidently of the inheritance, interchangeability, and fundamental community of pathological character of those very diseases of which the ascertained morbid anatomy is nothing, or next to nothing. Thus there is assumed to be a community of nature betwixt epilepsy and insanity. It may be so. For my part, I have not heard of any facts tending to prove anything of the kind. The evidence adduced goes only to prove that many epileptics become insane. The neuroses are spoken of confidently as being nervous diseases in the sense that the pathological changes begin in nervous tissues. Where is the proof when we know nothing of their pathology? There is no proof. Again, pathology prevents our ideas on this subject being out of focus. Suppose a man has epilepsy, or paralysis, or chorea, and suppose that all his relations had the nervous symptom or disease, hemiplegia; is there any proof that he inherits a tendency to a nervous affection—that his epilepsy is owing to his nervous tissues beginning to go wrong? Not the smallest; because the hemiplegia is owing to arterial changes. If the family history in such a case tends to prove anything, it tends to show that the pathology of the patient's epilepsy is primarily arterial, and only secondarily nervous.

There is a metaphysical pathology. The cases are those on which we either do not obtain *post mortem* examination, or find nothing *post mortem*. It is rather difficult to define metaphysics. Some people call psychology metaphysics; some call anything very difficult and complex about mind and brain metaphysics; some use it merely as a term of abuse. I do not think a great pity that some metaphysics is not taught in schools, but I think a pity that it is not in the curriculum. This may seem a strange remark, but the reason for making it is not to urge that they should

be metaphysical, but for the diametrically opposite reason that they should be less metaphysical. It is a mistake to suppose that those who write books on metaphysics are the most metaphysical. They have, at any rate, the knowledge that they are dealing with metaphysics.....

A good deal under the guise of practicality is pure metaphysics. There was once a man who could conceive an abstract Lord Mayor. The conception he had, so he averred, had neither head, arms, legs, nor corpulence; it was not an image of any particular Lord Mayor, nor a fusion of several, but an abstract Lord Mayor. Well, we think this metaphysician was too confident in his powers of conception. But do we not imagine ourselves capable of the same kind of marvellous feats? Let us look at a case of aphasia. A man does not speak, and yet can understand what we say to him, and can think—on ordinary things, at any rate. These are the facts; no one disputes them. Now comes the metaphysician, who proffers the explanation that the patient has lost words, but retains the memory or ideas of words. There are, it seems, words, and also memories or ideas of words, which latter, somehow, are not words. Now, what is an idea of a word which is not a word? It is, like the abstract Lord Mayor, simply nothing at all.

We should deal with the difficult and the complex in as realistic a manner as we do with the simple. The hysterical patient, who is said to have paralysis of the will, has some material change. What it is we do not know; and we never shall know, if we be content with metaphysical explanations which, in one sense, explain everything, but really explain nothing. I have long expressed the opinion that, for the scientific study of diseases, we should regard them as examples of Dissolution—using this term as the opposite of Evolution. In this way, we shall avoid the errors of confusing the psychical with the physical, and shall steer clear of metaphysical explanations.

THERAPEUTIC MEMORANDA.

HERPES ZOSTER OCCURRING DURING ARSENICAL TREATMENT.

A GIRL of ten years of age came under my care, in December last, for chorea. She was treated by arsenic, in doses of three minims of the solution, three times a day. After taking this for two months, the chorea having considerably improved, a well-marked attack of herpes zoster took place on the right side. There was no pain, nor any of the constitutional symptoms, which often supervene after a prolonged course of arsenic.

Mr. Hutchinson, many years ago, called attention to the fact, that herpes occurs in patients taking arsenic, with sufficient frequency to render it probable that the drug is the cause of the eruption. This is the first instance which has come under my notice, although almost all the cases of chorea which I have treated during the last four years (chiefly out-patients at a children's hospital) have taken arsenic.

The cases collected by Mr. Hutchinson are chiefly patients with other skin-affections; but one of them is a case of chorea, related to him by Dr. Woodman, in which shingles occurred after thirty days' treatment by three-minim doses of Fowler's solution. Dr. Duffin has recorded a case of psoriasis treated by arsenic, in which the eruption appeared simultaneously with the ordinary constitutional symptoms. More recently, Dr. Finlayson has described two cases—one of acne, and the other of chorea—in which herpes occurred during arsenical treatment.

I may add that, in my case, the treatment was suspended on the appearance of the rash; but, in some of the cases previously described, although the arsenic has been continued, the herpes has run its course, and disappeared in the ordinary time.

A. M. EDGE, M.D., M.R.C.P., Manchester.

SURGICAL MEMORANDA.

POSITION IN THE TREATMENT OF DISEASE.

HAVING seen in the JOURNAL for the 15th ultimo an article on "Position in the Treatment of Disease," I was reminded of several cases of inguinal hernia met in my practice, in which, when ordinary means failed, I have easily reduced the protruded bowel by placing pillows under the patient's hips so as to elevate the pelvis, removing the pillow from under the head, keeping the patient in the supine position all the time, and allowing the "force of gravity" to act. A few minutes generally were sufficient to effect reduction easily.

R. FULLERTON, B.A., M.B.

REMARKS ON THE SYSTEMATIC TREATMENT OF AGGRAVATED HYSTERIA AND CERTAIN ALLIED FORMS OF NEURASTHENIC DISEASE.

*Being an Introduction to a Discussion in the Medical Section of the
British Medical Association at Worcester, on August 9th, 1882.*

By W. S. PLAYFAIR, M.D., F.R.C.P.,

Professor of Obstetric Medicine at King's College, and Physician for the Diseases of
Women and Children at King's College Hospital.

GENTLEMEN,—When your President did me the honour of asking me to open a discussion on the Systematic Treatment of Hysterical and Neurasthenic Diseases, to which I had already drawn the attention of the profession in a series of papers in the *Lancet* in May, June, and November of last year, I suggested to him that he should endeavour to persuade Dr. Weir Mitchell, of Philadelphia, whose method I had adopted and carried into practice, to undertake himself the task he had proposed to me. I much regret, for your sakes, gentlemen, that Dr. Mitchell was unable to accept your President's invitation, for I am sure that it would have been most interesting and profitable to have heard from that distinguished physician an exposition of his views on a matter of such great practical moment. Until I had actually put into practice Dr. Mitchell's method, I, in common, I am sure, with the vast majority of his profession, looked upon the distressing and unhappily common cases we are about to discuss as a *very opprobrium medicinæ*. Nothing could possibly be more hopeless than the experience of all of us of these wretched instances of broken and shattered lives, these bed-ridden, helpless creatures, who became a burden not only to themselves but to all around them, making happy homes miserable, and exhausting at once the patience, and the resources of those who are responsible for their care. Who is there amongst us who cannot point to some typical example of this kind, in which the patient at least, after every sort of treatment and drug has been used; after not one, but twenty doctors have been consulted; after every method, orthodox and heterodox, has been used in vain, has been allowed to drift into this hopeless state to which I have alluded, from pure despair of alleviating her sufferings, which are none the less real because we are satisfied that they are purely functional, and are not associated with any definite organic disease. To teach us how to lift such cases from the slough into which they had fallen is no slight achievement; and I may say, without exaggeration, that, having paid great attention to this subject for the last eighteen months, I have not only acquired a daily increasing confidence in the value of Weir Mitchell's method, but have had more satisfactory and surprising results from it than I have ever before witnessed in any branch of my professional experience, and that I now more confidently undertake the care of a well selected case of this kind, than I do of almost any malady that comes under my charge. The reason for this confidence and this success is, I think, not far to seek. We have to do with cases which are, to a great extent, psychological in origin. Heretofore, although all well instructed physicians recognised this fact, they have not been in the habit of trusting to methods of treatment which were based on a scientific conception of the nature of the disease. In default of other means, recourse has been had to an useless system of drugging with the so-called nerve tonics, while the patient has been left to the unaltered morbid influence of the psychological causes, which, in nine cases out of ten, have so large a share in the production of the illness. Although the grave forms of hysterical disease we are considering differ from each other in endless variations, the peculiarities of each requiring most careful study, there is scarcely a single one of them in which unhealthy mental influences do not play a most important part, if not in causing, certainly in keeping up the disease. The injudicious and constant nursing, the craving for sympathy, the fact that the sick-room becomes the centre of interest for the patient and her friends, the constant discussion of feelings and symptoms, all have a most marked and prejudicial effect; and so long as these continue in operation no course of medicine or treatment, however judicious, has any reasonable prospect of success. As I shall presently show, the complete and perfect isolation of the patient from all these unhealthy

conditions forms the very foundation and essence of the systematic management of these cases; and when once this has been accomplished, an enormous leverage has been obtained for the successful application of other methods of cure. I do not propose to occupy your time with any long description of the forms and symptoms of hysterical disease to which the treatment is applicable, or to their pathology. No study could be more interesting, but the time at my disposal is altogether insufficient for such a task. I shall, therefore, content myself with a very brief outline sketch of the typical instances of neurasthenic disease in which systematic treatment is of most use, and follow this by an equally short sketch of what that treatment consists. And I must beg my hearers to remember that I cannot enter into any but the most elementary details on both these topics, for a fuller account of which I must refer them to the writings of Weir Mitchell, and Goodell, as well as to my own former papers. I may say here that while the latter were entitled, "The Systematic Treatment of Nerve-Prostration and Hysteria connected with Uterine Disease," this was chiefly because my attention was first directed to the subject in consequence of the frequent association of these states with disease of the reproductive organs in the female. It would be a great mistake, however, to conclude that there is any necessary or constant connection between the two. Indeed, although very frequently the nerve-state has originated in connection with uterine disease, in a large proportion of the cases I have seen, it has completely overshadowed the originating local disorder. I am not sure that I should not, in common honesty, make the somewhat humiliating confession that in many instances over much and injudicious local treatment has, in my opinion, at least intensified, and kept up the now dominating neurasthenic disorder, as in a case under my care as I write, in which the patient may fairly be said to be suffering from palsy on the brain—so incessantly is she thinking of one or other of the seventy-nine different instruments which she has had inserted in the last few years in America and in this country.

It is, perhaps, superfluous to recall to your minds the extremely varying and complex forms of the neurasthenic diseases, which may be fairly classed under the heading I have selected for this communication. Still I think it likely that it is only those medical men who have paid special attention to this subject, and who have had opportunities of watching cases of this description, that have properly realised how multiform, strange, and misleading these nervous diseases really are. As a matter of fact, probably no two cases are ever precisely alike, and every individual instance calls for the most careful and minute study, if we are to hope for a successful result in its management, not only of its physical symptoms, to make sure that we do not confound real but obscure organic lesion with simple functional disorder, but also of the special mental character of the patient, since much of our success must depend on a judicious reading of this, and on our tact in dealing with it. Anyone who attempts to treat such diseases without careful study of the psychological characteristics of each individual patient, will inevitably fail.

The type of case best adapted for systematic treatment is, in my experience, the worn and wasted, often bedridden woman, who has broken down, either from some sudden shock, such as grief, or money losses, or excessive mental or bodily strain. At first, perhaps, there may have been only a debility, constantly, however, on the increase, daily more and more yielded to, until at last all power of effort is lost, fostered, too often, by injudicious sympathy, and the constant nursing of devoted relatives and friends. Coincident with this is the total loss of appetite, the profound anæmia, and the consequent wasting of the tissues, so characteristic of these cases. On the soil so prepared are often developed the graver protean forms of hysterical disease, such as paresis, or paralysis, vomiting, disorder of motion, hystero-epilepsies, and many others which constitute the despair of the physician, and which must be more or less familiar to all of you. Such, in endless variations, are the cases which those of you who have attempted to cure them by ordinary medication will, I am sure, admit to have given unsatisfactory results, and caused more disappointment than almost any other in your practice.

Now, the principal elements in the systematic management of these cases are:

1. The removal of the patient from unhealthy home-influences, and placing her at absolute rest;
2. The production of muscular waste, and the consequent possibility of assimilating food by what have been called "mechanical tonics"; viz., prolonged movement and massage of the muscles by a trained shampooer, and muscular contractions produced by electricity;
3. Supplying the waste so produced by regular and excessive feeding, so that the whole system, and the nervous system in particular, shall be nourished in spite of the patient.

On each of these I shall offer one or two brief observations.

1. The removal of the patient from her home-surroundings, and her complete isolation in lodgings with only a nurse in attendance, is a matter of paramount importance. This is a point on which I am most anxious to lay stress, since it is the great crux to the patient and her friends; and constant appeals are made to modify this, which I look upon as an absolute *sine quâ non*. I attribute much of the success which I have been fortunate enough to obtain in my cases to a rigid adherence to this rule. In almost every instance of failure in the hands of others of which I have heard, some modification in this rule has been agreed to, in deference to the wishes of the friends; as, for example, treating the case in one room by herself in her own house, or in admitting the occasional visits of some relatives or friends. While, however, the patient is to be rigidly secluded, it is incumbent to secure the attendance of a judicious nurse, with sufficient intelligence and education to form an agreeable companion. To shut up a refined and intellectual woman for six weeks with a coarse-minded stupid nurse, can only lead to failure. I have had more difficulty in obtaining suitable nurses, sufficiently firm to ensure the directions being carried out, and yet not over-harsh and unsympathetic, than in any other part of the treatment. Whenever my case is not doing well, I instantly change the nurse—often with the happiest results. In addition to the isolation, the patient is put at once to bed, to secure absolute rest. In many cases, she is already bedridden; in others, there has been a weary protracted effort, and the complete repose is in itself a great gain and relief.

2. Under the second head comes systematic muscular movement, having for its object the production of tissue waste. This is administered by trained rubbers, and here again is a great practical difficulty. The so-called professional rubbers are, in my experience, worse than useless, and I have had to teach *de novo* a sufficient number of strong, muscular young women; and the aptitude for the work I find to be very far from common, since a large proportion of those I have tried have turned out quite unsuited for it. I cannot attempt any description of this process. I need only say that it consists in a systematic and thorough kneading and movements of the whole muscular system for about three hours daily, the result of which at first is to produce great fatigue, and subsequently a pleasant sense of lassitude. Subsidiary to this is the use of the faradic current for about ten to twenty minutes, twice daily, by which all the muscles are thrown into strong contraction, and the cutaneous circulation is rendered excessively active. The two combined produce a large amount of muscular waste, which is supplied by excessive feeding; and, in consequence of the increased assimilation and improved nutrition, we have the enormous gain in weight and size which one sees in these cases, it being quite a common thing for a patient to put on from one to two stones in weight in the course of five to six weeks. The feeding, at regular intervals, constitutes a large part of the nurse's work. At first from three to five ounces of milk are given every few hours; and for the first few days the patient is kept on an exclusively milk diet. By this means dyspeptic symptoms are relieved, and the patient is prepared for the assimilation of other food. This is added by degrees, *pari passu* with the production of muscular waste by massage, which is commenced on the third or fourth day. By about the tenth day the patient is shampooed for an hour and a half twice daily, and by this time she is always able to take an amount of food that would appear almost preposterous, did not one find by experience how perfectly it is assimilated, and how rapidly flesh is put on. It is the usual thing for patients to take, when full diet is reached, in addition to two quarts of milk daily, three full meals, viz.—breakfast, consisting of a plate of porridge and cream, fish or bacon, toast and tea, coffee, and cocoa; a luncheon, at 1 P.M., of fish, cutlets or joints, and a sweet, such as stewed fruit and cream, or a milky pudding; dinner, at 7 P.M., consisting of soup, fish, joint and sweets; and, in addition, a cup of raw meat soup at 7 A.M. and 11 P.M. It is really very rare to find the slightest inconvenience result from this apparently enormous dietary. Should there then be an occasional attack of dyspepsia, it is at once relieved by keeping the patient for four and twenty hours on milk alone.

Next to the isolation of the method to which I am here to direct your attention. As to the results, I have already published several remarkable illustrative cases, so that it is perhaps not necessary to do much more in this direction. I may say, on looking back at my cases, that the only ones with which I have any reason to be disappointed are those in which the primary selection has been bad; and in the few in which the results were not thoroughly satisfactory, I had doubts as to their suitability for the treatment, which I expressed beforehand. These include one case of chronic ovarian disease, and one of bad antelexion with fibroid enlargement of the uterus, in both of which the local disease prevented any really beneficial results. In a

third case, I had to stop the treatment in a week, in consequence of cardiac mischief; two others were cases of positive mental disease; and in one case there was true epilepsy. I have no doubt that any positive co-existent organic disease of this kind should be considered a contraindication. In my other cases, the results have been all that could be wished, and in many of them the patients have been restored to perfect health after having been helpless bedridden invalids for years; in one case twenty-three without ever putting a foot to the ground, in others sixteen, nine, six, and so on. In two instances my patients were in such a state, that it was found absolutely impossible to move them except when anaesthetised; and they were brought to London by their medical men long distances under chloroform, in each case leaving in six weeks perfectly cured. I am not desirous of occupying your time by long details of cases, having already published several; but, as many of my hearers have probably not seen my former papers, I shall conclude by a short notice of some of my recent cases, which will illustrate the classes of disease in which this method is so useful; and I select them not only for their own interest, but because the uselessness of all ordinary treatment in such conditions is proved by the fact that I have with regard to each of them a list of their former medical attendants, amounting in one to no fewer than twenty-five in number, and including the names of many of the most eminent consultants in the country, of itself a sufficient proof that all that the most advanced medical knowledge and skill could do had been tried in vain.

CASE I. On the 24th of April last, I was consulted on the case of a young lady from the North of England, suffering from intense hysterical vomiting. This had commenced six years previously, after severe mental strain. Latterly, she could keep nothing but a single mouthful of milk on her stomach, and this only when mixed with whiskey, so that in this way she was taking three to four glasses of spirit daily. She was terribly emaciated, weighing only 4st. 7lbs. Her mother wrote of her, "it is just five years last Christmas-day since she has ever retained a single meal. Her symptoms have been most distressing, and have resisted every kind of treatment. Her young life has been completely blighted, and I have long since given up her case as quite hopeless." The rapidity of the cure, in this instance, was almost ludicrous. In three days after she was isolated, she was keeping down two quarts of milk, it is needless to say no longer with the aid of whiskey. In ten days she was eating with an enormous appetite, and in six weeks she left town weighing 7st. 8lbs., a gain of 3st. and 1lb., and has since remained quite well.

CASE II. The next case is illustrative of the evil effects of over much education and mental strain, in a clever girl of highly developed nervous organisation. It was placed under my care by the advice of one of our most eminent metropolitan physicians, who had been seeing her frequently in consultation with her own medical attendant for several years, and besides him many other physicians, equally eminent, had been consulted. This young lady was seventeen years of age. At the age of fourteen, when working, she had suddenly broken down, got complete hysterical hemiplegia, and for four years had never been out of bed or moved either of her lower limbs. In addition, she had a loud barking cough, which could be heard all over the house, and which had resisted every kind of medication. No food could be taken beyond milk, and a biscuit, and an orange. This case was placed under my care as a sort of test, and I was particularly anxious that it should turn out well. As to the result, I need only say that, at the end of a month I drove her out in my carriage, dropped her at the top of the street in which she lived, and made her walk down to pay her parents a visit. She has since remained perfectly well. It was a curious and characteristic point that her cough, which had resisted for years all sorts of energetic treatment at home, entirely ceased forty-eight hours after she was removed, and was never again heard.

CASE III. The next instance is one out of many of the same sort I have had under my care, and is a typical example of the kind of case best suited for this treatment. In this, there was no definite illness, no simulated disease, as in the last lady, but a general and complete break down. Her medical man sent her to me with the following note. "She has all her life been an invalid, with no well-defined symptoms; sometimes headache and nausea; at others spinal irritability, giddiness, etc. In fact, she is a typical hysteric or neuralgic patient. She never stirs out of the house, or moves from her bed or sofa, eats next to nothing, and is never happy unless seeing a doctor, or taking physic." It was, as was to be expected, that this young lady was wasted to a skeleton. Her chief complaints were nausea, headache, backache, intense nervous depression, and timidity (so that she was unable to speak to a stranger), and absolute anorexia; skin dry and rough; menstruation irregular; entirely dependent on chloral and morphia for sleep. She was twenty-nine years of age, and for nine years had been entirely on her back. I

need say no more about this case, than that it was as successful as the rest of the same type I have had to deal with, any one of which I might have selected as an illustration. In six weeks, she was walking about; in two months, she started on a sea-voyage with her nurse, with directions that she should be forced to mix as much as possible with the passengers, to overcome her dread of society. Only two days ago, she came to report herself to me, having travelled alone from the country by rail; and I positively did not at first recognise her—so different was the well-dressed, healthy-looking woman, from the wretched invalid of a few months ago. She tells me that she now plays tennis; goes out to picnics and parties; and enjoys life like anyone else.

CASE IV. The last example with which I shall trespass on your patience, I am tempted to relate, because it is one of the most remarkable instances of the strange and multiform phenomena which neurotic disease may present, which it has ever been my lot to witness. The case must be well known to many members of the profession, since there is scarcely a consultant of eminence in the metropolis who has not seen her during the sixteen years her illness has lasted, besides many of the leading practitioners in the numerous health-resorts she has visited in the vain hope of benefit. My first acquaintance with this case is somewhat curious. About two months before I was introduced to the patient, chancing to be walking along the esplanade at Brighton with a medical friend, my attention was directed to a remarkable party at which everyone was looking. The chief personage in it was a lady reclining at full length on a long couch, and being dragged along, looking the picture of misery, emaciated to the last degree, her head drawn back almost in a state of opisthotonos, her hands and arms clenched and contracted, her eyes fixed and staring at the sky. There was something in the whole procession that struck me as being typical of hysteria, and I laughingly remarked, "I am sure I could cure that case if I could get her into my hands." All I could learn at the time was, that the patient came down to Brighton every autumn, and that my friend had seen her dragged along in the same way for ten or twelve years. On January 14th of this year, I was asked to meet my friend Dr. Behrend in consultation, and at once recognised the patient as the lady whom I had seen at Brighton. It would be tedious to relate all the neurotic symptoms this patient had exhibited since 1864, when she was first attacked with paralysis of the left arm. Among them—and I quote these from the full notes furnished by Dr. Behrend—were complete paraplegia, left hemiplegia, complete hysterical amaurosis, but from this she had recovered in 1868. For all these years she had been practically confined to her bed or couch, and had not passed urine spontaneously for sixteen years. Among other symptoms, I find noted, "awful suffering in spine, head, and eyes", requiring the use of chloral and morphia in large doses. "For many years she has had convulsive attacks of two distinct types, which are obviously of the character of hystero-epilepsy." The following are the brief notes of the condition in which I found her, which I made in my case-book on the day of my first visit. "I found the patient lying on an invalid couch, her left arm paralysed and rigidly contracted, strapped to her body to keep it in position. She was groaning loudly at intervals of a few seconds, from severe pain in her back. When I attempted to shake her right hand, she begged me not to touch her, as it would throw her into a convulsion. She is said to have had epilepsy as a child. She has now many times daily, frequently as often as twice in an hour, both during the day and night, attacks of sudden and absolute unconsciousness, from which she recovers with general convulsive movements of the face and body. She had one of these during my visit, and it had all the appearance of an epileptic paroxysm. The left arm and both legs are paralysed, and devoid of sensation. She takes hardly any food, and is terribly emaciated. She is naturally a clever woman, highly educated, but, of late, her memory and intellectual powers are said to be failing."

It was determined that an attempt should be made to cure this case, and she was removed to the Home Hospital in Fitzroy Square. She was so ill, and shrieked and groaned so much on the first night of her admission, that next day I was told that no one in the house had been able to sleep; and I was informed that it would be impossible for her to remain. Between 3 P.M. and 11.30 P.M., she had had nine violent convulsive paroxysms of an epileptiform character, lasting, on an average, five minutes. At 11.30, she became absolutely unconscious, and remained so until 2.30 A.M., her attendant thinking she was dying. Next day, she was quieter, and from that time her progress was steady and uniform. On the fourth day, she passed urine spontaneously, and the catheter was never again used. In six weeks, she was out driving and walking; and within two months she went on a sea-voyage to the Cape, looking and feeling perfectly well. When there, her nurse, who accompanied her, had a severe illness, through which her ex-patient nursed her most assiduously. She has since remained, and is at this moment, in robust

health, joining with pleasure in society, walking many miles daily, and without a trace of the illnesses which rendered her existence a burden to herself and her friends.

In conclusion, I may remark that it seems to me that the chief value of this systematic treatment, which is capable of producing such remarkable results, is, that it appeals, not to one, but many influences of a curative character. Everyone knew, in a vague sort of way, that, if an hysterical patient be removed from her morbid surroundings, a great step towards cure is made. Few, however, took the trouble to carry this knowledge into practical action; and, when they did so, they relied on this alone, combined with moral suasion. Now, I am thoroughly convinced that very few cases of hysteria can be preached into health. Judicious moral management can do much; but I believe that very few hysterical women are conscious impostors; and the great efficacy of the Weir Mitchell method seems to me to depend on the combination of agencies which, by restoring to a healthy state a weakened and diseased nervous system, cures the patient in spite of herself.

Dr. CLIFFORD ALLBUTT said that the reason why he had asked Dr. Playfair to open the discussion was, that he had been very much struck by the case, to which Dr. Playfair had not referred, of a lady he had sent to him from Yorkshire, a few months ago. Her removal was said to be impossible, and she could only be taken away under chloroform and swung in a hammock. He could add his testimony to the cure that was effected in that case, and certainly it was of the most astonishing kind. She was a lady of very high culture, and not a hysterical patient of the ordinary kind. She was a person of great mental control, and there was no morbidness about her, and her case was one of a purely physical neurasthenia. She had been ill for an indefinite period, was perfectly helpless, and her life was perhaps more a misery to herself than to anybody about her. But she was cured in about six or eight weeks, then went on a sea-voyage, and was now perfectly well. He also saw a case which put him in a very difficult position, not very long ago. He was asked by the Midland Railway Company to see a lady who had been in a railway accident, and was in a state of hystero-epilepsy. It was absurd to say she was an impostor, but, mindful of these cases, he was obliged to go into the witness-box and say that she could be well in six or eight weeks. It was a strong step to take, and subjected him at the time to a great deal of unfavourable criticism. He did not know whether or not her friends had subjected her to this plan of treatment. With regard to the excessive dietary, he said that a rough observation had been made, with the result of showing that there certainly was no great quantity of undigested material or overflowing luxury of consumption, so that the cure was not entirely a mental one, but was distinctly also a physical, as he supposed Dr. Playfair meant to point out. Finally, he had had one or two cases of male patients, and he should like to ask Dr. Playfair if he had any; also whether, he did not think that, in some other cases attended with great defective nutrition, and where there was some degree of organic disease, possibly some amount of malnutrition threatening phthisis, the treatment might not be in some degree extended.

Dr. ROSS (Manchester) bore testimony to the great value of the treatment under discussion. He laid stress upon the necessity of complete separation of the patient from her friends, and the selection of a suitable nurse. He believed that, although Dr. Mitchell's treatment was possibly not new in the sense that its separate recommendations were now made for the first time, it was new in the sense that these recommendations were, for the first time, combined so as to form a complete scheme of treatment.

Mr. D. DE BERDT HOVELL (London) said that, if Dr. Playfair had proved anything, he had proved the absurdity of the term hysteria. Mr. Hovell had for the last twenty years been fighting against the one-eyed pathology which referred all these cases to the uterus and ovaries. No doubt these organs necessarily became involved; but to regard them as the cause was not only to miscall the disease, but to misdirect the treatment. All cases were caused by some circumstances depressing nerve-power, physical shock, a moral shock, and very frequently disappointment. Want of power and susceptibility to irritation were essential conditions of this state, and in many cases recovery was slow because the recuperative power was low. There was also great feeling of helplessness, which was misinterpreted into craving for sympathy. Many patients eventually lapsed into paralysis, or rather paresis. Mr. Hovell was of opinion that the sympathetic system was involved in this disease. He also thought that the condition of exhaustive debility explained the great capacity for food which some patients showed in recovery.

Dr. MYRTLE (Harrogate) said he unfortunately lived in a place where, for the last twenty years, hardly a year passed without his

seeing one or two cases of hysteria. In his experience, one of the most essential points of treatment was to remove the patient from her usual surroundings; the next was to obtain her confidence. One thing that ought to be considered was, the want of power of co-operation possessed by the patient. Too much must not be attempted, but strong measures must be brought down to the weakness of the power of co-operation in the patients. A further plan was to encourage them in well-doing, as the recovery of many patients was retarded as much by the cold-heartedness of their friends as by the injudicious sympathy of some of them. He was perfectly well aware of the difficulties of dealing with these cases, but he was pleased to hear this paper, because he was perfectly satisfied that these cases were very much misunderstood, both by the patients' friends and the medical attendants.

Dr. DRUMMOND (Newcastle-on-Tyne) said he was exceedingly pleased to have had the opportunity of listening to the able exposition of Dr. Weir Mitchell's plan of treatment of aggravated hysteria by Dr. Playfair. He must confess that in a very great measure his cases of aggravated hysteria were amongst hospital patients, and he must add that he had not succeeded as well as he could have wished in his attempt to treat them by that method; the fact being, that the nurses are capable of being appealed to by the patient. In his opinion, there were, generally speaking, three gross forms of hysteria—(1) that entirely independent of the will; (2) that under the control of the will; and (3) the more or less malingering form. Dr. Drummond gave instances in illustration of his views.

Dr. RANSOME (Manchester) remarked that, in several cases of hysteria associated with incipient phthisis, Dr. Weir Mitchell's plan of treatment had not only cured the hysteria, but had also been of great service in improving the condition of the lungs.

Dr. HENRY BENNET (Weybridge) remarked that the interest connected with Dr. Playfair's paper had attracted many members from the adjoining section, the Obstetrical. In the absence of any other volunteer, he felt called upon to break a lance in favour of the old Hippocratic doctrine, which referred hysteria in many cases, not in all, to the uterine organs, especially in young females. He prided himself in having been the first to introduce to the profession, many years ago, a fact now generally acknowledged—viz., that uterine disease, inflammatory as well as others, was not unfrequently found in virgins, young or otherwise, and was often the real cause of the worst forms of hysteria. Owing to his having brought these facts before the profession when he was in full practice, he had seen very many cases of this kind, in consultation or otherwise. He had usually cured them merely by getting at the disease and removing it, without any special treatment of any other kind. He fully admitted that aggravated hysteria existed without uterine disease, or might continue to exist even when the originating uterine disease had been cured, and that it might require other than surgical treatment. Dr. Mitchell had cured one of his own cases, that of a young American lady, who remained all but bedridden after the removal of uterine disease. This fact, however, is not a reason for ignoring the practical facts to which he alluded, which the experience of a long clinical career had proved to be true. He constantly read in the writings of pure physicians (not gynaecologists), treating of aggravated hysteria, cases which to him were, most undeniably, forms of uterine disease, although the writers did not recognize the fact, for want of gynaecological knowledge.

Mr. ROSS JORDAN (Birmingham) said he thought very highly of the views so ably and forcibly expressed by Dr. Playfair. From the experience of one or two cases, imperfectly carried out, he thought the plan of treatment of the greatest advantage. He wished more particularly to say a word or two in regard to some of the opinions expressed by one of the speakers (Mr. De Berdt Hovell), as to hysteria not being the result of uterine disease. He thought many of the cases had such origin; and that physicians, more particularly those who professed a special knowledge of the nervous system, took a heavy responsibility on themselves, when they systematically ignored the existence of uterine and ovarian disease in their cases. Needless to say, many cases of hysteria, which had been treated without success as hysteria, were cured, simply, by the removal of the uterine disease. He alluded to such cases to give weight to his own views, which he thought might be of service to the profession. He wished to say that, if such cases were properly treated, in their earlier stages, there would not be so many chronic invalids, nor so much profound hysteria.

Dr. LEECH (Manchester) called attention to two cases of neurasthenia in men, which had recently come under his notice. He noted that, in both cases, the patients had been treated by a system of rest, and had obtained a complete recovery. He wished to say that, in the case which had been alluded to, the patients had been treated by a system of rest, and had obtained a complete recovery.

Dr. MANNING (London) remarked on the frequency of relapse in all

cases of hysteria; and asked whether Dr. Playfair had seen relapses in his own cases, or knew of them in those of Dr. Weir Mitchell. He wanted to know what had been the experience of others in the history of these cases, and their final termination, before the introduction of this treatment. He believed that the secret of the whole matter was the thoroughness of the treatment, and the complete confidence in its success. He believed that we much needed the same thoroughness in the treatment of other cases; and this could only be obtained by recognising the truth of the plan of the treatment which it was proposed to employ.

Dr. PLAYFAIR said, in answer to the President (Dr. Clifford Allbutt), that he had not sufficient experience of the effect of the treatment in men, although doubtless in suitable cases it might answer well. In other diseases it certainly did good—as in chorea. He had himself recently cured a most intense case of chorea, of nine years' duration, by this means, which had previously resisted every treatment. He had little to say in answer to the other speeches, except that the explanation of the enormous quantities of food taken was, beyond question, the excessive tissue waste produced by massage. The waste required increased fuel, and in the process of assimilation the patient recovered. It was a strictly physiological process, based on improving the nutrition of the patient. He looked upon real organic disease as a positive contraindication. As to the question of relapse, all he could say was that hitherto none of his cases had relapsed; although, as a matter of common sense, every now and again these interesting neurotic women must be expected to go wrong again.

ON A CASE OF ACUTE ASCENDING PARALYSIS: CHRONIC ALCOHOLISM.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

BY A. S. MYRTLE, M.D., HARROGATE.

THE following case I have thought worth bringing before your notice, not only on account of its rarity and connected history, but as affording an example of metastasis of disease, such as I have never either seen or read of. For years the organs which exhibited the poisonous action of alcohol were the liver, stomach, and uterus, all were kept in a state of irritability and hyperæmia; and both liver and uterus were materially enlarged, the latter failing in the performance of its functions, with sterility as the natural result. As soon as the first symptom of spinal mischief made its appearance, the organs previously affected began to show an amount of healthy activity which puzzled and misled me: the usual sickness and vomiting ceased, the appetite for wholesome food and capacity for digesting the same returned, the tenderness and fulness over the liver gave way, the bowels acted regularly, the urine became healthy, and the function of menstruation natural.

In order to obtain a clear history of this exceptional case, let me carry you back to 1870. A. B. was then 13 years of age, and at school. She went to bed quite in her usual health. About 2 A.M. she was seized with pain in the epigastrium, this was followed by hæmatemesis, and when I got to her about seven, she was drained of blood, the lips and gums were pale, the pulse running at a rate which defied counting; skin hot. On examining the abdomen, I found that the liver was the source of mischief, it was greatly enlarged and tender. Obstruction to the circulation in the portal system had resulted in rupture of vessels. On inquiring into the history of the girl, I found she had always been delicate, that from infancy she had taken rather large quantities of wine, and that her allowance of alcohol had been two glasses of strong beer and two glasses of port wine daily. This explained the condition of my patient. With the cessation of food and complete absence of all stimulants, she rapidly regained health, her liver speedily losing all signs of congestion.

She continued well as long as she remained at school, and I did not see her until 1878, a year after marriage. She then consulted me on account of dyspeptic, biliary, and uterine functional disturbances, and showed all the usual symptoms attending such a condition. I found that, after she left school, she had again been ordered wine, beer, and even brandy, and that she had been in the habit of taking the last two every day. Since her marriage, she had rather increased than diminished her allowance, and generally finished with some brandy-and-water at bedtime. She consumed nothing. She was not a drunkard; she had been told she required stimulants, and she took them, not

because she liked them, but because she felt she could not get on without them. I told her that her organs were in such a state that treatment would do little good unless she, in a great measure, gave up taking the amount of drink she was having. I persuaded her to take light hock or claret, and with treatment she soon improved.

In 1879, she came again before me. She had gone back to her old ways—had become more indolent and self-indulgent. Having no child, she had nothing to interest her, and her husband allowed her to do as she liked. She was much troubled with sickness, and, as she had ceased menstruating, she fancied she was pregnant. This, I found, was not the case; her uterus was as large as a cricket-ball and hard; the ovaries tender; and the abdomen greatly distended. She had an unnatural appetite, and craved for cockles, etc. The liver was felt below the ribs, and the slightest pressure on the stomach caused attempts to vomit. She could not take any food before one o'clock. On rising, she had a glass of sherry; then, feeling exhausted from dressing, she took another about twelve; also beer with an early dinner; more wine after it, and spirits at night. I reasoned with her, but she shut me up by saying, "Well, if it will kill me, I must just be killed; life is not worth much."

In 1881, I found all her symptoms greatly aggravated. Every morning, she spent from an hour to two hours in vomiting, bringing up very little mucus tinged with bile. She complained of great sinking at the stomach; pain in the liver; a filthy taste in the mouth; total loss of appetite; and was very hysterical. I sent her from home, and, while away, she had a severe epileptic fit, after some excitement. She returned to my care, but was now irritable and sleepless, and the attacks of vomiting were more severe than ever. She continued to suffer throughout the whole of 1881, more or less, from these symptoms.

Early in January 1882, she had another seizure, and two minor attacks after it; then she began to complain that she could not walk as far as usual; she felt weak, and each day found she could walk less and less. The vomiting, however, ceased; she could take some breakfast with relish; the bowels began to act naturally; the pain and fullness of the liver diminished; the menses appeared, and returned at the usual period; the tenderness over the ovaries left, and the uterus felt soft and much smaller. She also, of her own accord, took less stimulants; and I began to think matters might turn out better than I had ever hoped. Still the weakness of the knees increased, and she complained of a feeling of coldness in her legs and numbness in her arms; also, that her feet felt hot and burning; and that, when out walking for the shortest distance, unless she had a wall, railing, or person close to her, of which she might catch hold, she felt she must stop and dare not go on. Numbness now affected the legs; and, when she walked over the floor, she felt as if a piece of thick matting intervened between the soles of her shoes and the carpet. The fingers now began to give her trouble; she could not control her pen, nor hold any minute object, unless she kept her attention to it. She could not fasten a button or a pin in her dress, and everything she took hold of gave her an unnatural sensation.

About the end of February she was roused out of sleep about 4 A.M. by severe shooting pains in the calves of both legs, which, increasing in intensity, did not leave her for a couple of hours. These pains returned regularly for some weeks, and sometimes were so bad she became delirious. Physical examination at this time revealed nothing; there was no constitutional disturbance, no fever, no painful spot on pressing over the spine, no paralysis of any muscle or group of muscles, and no hyperæsthesia or anesthesia localised in any part. With her eyes shut she could walk steadily and straightly across the room. About the end of the third week in March profuse menorrhagia set in. Weakness increased rapidly, and about the 14th of the month I got Dr. Clifford Allbutt to see her with me. He made a most careful examination. She was very clear and collected in all her statements. Patellar tendon-reflexes were manifested. I do not think we tested her for ankle-clonus, but we found no very marked sensory or motor manifestations, no wasting of muscles; in fact, at that consultation she appeared in her best form; and although we saw there was grave cause to fear the early approach of serious organic changes in the nerve centres, still, considering the great loss of blood recently incurred and her hysterico-epileptic history, we concluded that we might possibly find that her present symptoms were traceable to functional causes. We gave a very guarded prognosis, and enjoined great moderation in the use of stimulants. Two days after Dr. Allbutt saw her, she said, "I wish you had never brought him to see me; he has made me so much worse. All the things he asked me about, and which I told him I had not got, have come upon me. My toe-nails feel as if they were being torn out by the roots; the skin of some portions of my legs, if touched, gives me excruciating pain; when one leg rests upon the other I cannot move it back again, and now I cannot stand alone but tumble

down, and when I walk with help I drag my legs after me. I have shooting pains from my spine down to my finger tips; my feet feel ever so much bigger than they are, and I have the sensation as if a tight cord were tied round my waist."

On examining the spine, I found her wince on slight pressure over the second, third, fourth, and fifth dorsal vertebra; and with deep pressure she cried out. Portions of the skin were exceedingly painful even if touched lightly; other parts close to these might be pinched or pricked without her feeling anything. The galvanic current caused intense agony, but no muscular contractions. Her breath, I observed, was most putrid. She could not turn in bed, and her feet and ankles were swollen; this swelling disappeared on elevating the limbs for a few seconds—showing that it had its origin in vaso-motor paresis.

On April 6th, I called in Dr. Broadbent of London, who examined her with me on that day and on the 7th, and he pronounced the case to be one of ascending paralysis. By this time, the muscles of the thumbs had wasted very perceptibly; the vaso-motors had become implicated, and had lost control over the vessels; and the symptoms already enumerated had increased greatly. Dr. Broadbent thought it would be well to try the effect of opium internally, and the thermo-cautery to the spine, as he considered the degeneration of the cord had not reached parts essential to life, and possibly might be arrested even yet. I had to wait for three days before I got the thermo-cautery. On the morning I received it, I found my patient worse in every way. She was rambling; her right eyelid drooped; she had a double squint, and saw only half my face; her breathing was deep and slow. I at once made up my mind not to use the cautery. The disease had spread rapidly along the spine to the base of the brain, and no good could follow any treatment. She fell into a semi-unconscious state, but could be roused to answer questions. On the 15th, her nurse directed my attention to a curious appearance on the thighs. The posterior half of both was white, bloodless, and looked like a portion of a dead body. A line of demarcation ran from the centre of the knees up the thighs to the hips. Above that line, the skin presented its natural life-like characters; below, all was without any sign of vitality. Two days after that, the body was equally divided into a dead lower and a living upper segment by a line as distinct as if it had been made artificially. She continued to take nourishment. All the muscles of her body became paralysed. She never moved any portion of her body except the muscles of her face, and died from coma on April 30th.

There was no necropsy, which I regret, because we are really in the dark as to the pathological changes which occasion the symptoms of this rare and fatal disease. Dr. J. Magee Finny of Dublin has given the best account of it, in the *BRITISH MEDICAL JOURNAL* for May 20th, I have yet met with; no mention is made of it in Dr. Bristowe's last edition of his *Theory and Practice of Medicine*; and Dr. Byrom Bramwell, in his work on *Diseases of the Spinal Cord*, states that "the conditions which predispose to and excite this disease are unknown." It is therefore most desirable that all cases of this nature should not only be carefully studied, but brought before us. I was much struck with a remark made by Dr. Clifford Allbutt during our consultation. He said: "I have often seen women given to the abuse of stimulants suffer from severe shooting pains in the legs, and these were always accompanied by great muscular weakness. The spine of women seems to be more affected in alcoholic poisoning than men, whose brains become affected instead; so we have spinal paralysis in the one; delirium in the other. Of this I am certain, that delirium tremens seldom appears among women; in my long experience, I cannot recall a single case, and among men I have met with hundreds." In the outset, I spoke of the sudden disappearance of the symptoms arising from dyspeptic, hepatic, and uterine derangements, as soon as the first sign of mischief affecting the motor tract showed itself; and, rightly or wrongly, I look on this as a form of metastasis as true in its nature as that which we frequently meet with in gout and rheumatism, where the local symptoms in distant joints suddenly subside, and we, with that, have the sudden development of cardiac or cerebral evils threatening the life of the patient. I have not said one word regarding the treatment adopted in this case, because I have nothing new to tell you, and am bound to admit that all the remedies tried were of no use whatever; even sedatives failed to alleviate, and sometimes I thought actually aggravated, the very symptoms they were intended to relieve.

Dr. CLIFFORD ALLBUTT said, he was bound to admit that he did honestly think in his own mind, knowing also that she came of an exceedingly neurotic family, that the case was one of functional organic disease. He had been under this misfortune for his diagnosis, that the symptoms which were asked for had not appeared. The cases of acute ascending paralysis, of which he had seen several, were, as described in the books, very much more rapid than this one. It was im-

possible at the time he examined the case, he thought, to have avoided being misled. Those shooting pains were not, he thought, mentioned in any of the books. They were familiar, however, to him, and he was struck by their absence in this case. They did not necessarily mean ascending paralysis, as, the alcohol being withdrawn at certain stages, a cure might result. They, no doubt, pointed to some early and perhaps remedial spinal attack.

Dr. BROADBENT (London) had had the advantage of seeing the case described by Dr. Myrtle at a later period than Dr. Allbutt, when there was no longer any possibility of misapprehending the serious nature of the disease; the paralysis was marked and associated with a peculiar flabbiness of the muscles; there was wasting of the muscles of the thumb, and especially swelling and congestion of the limbs when they were in the dependent position for a few minutes. He would not himself have placed the case in the category of acute ascending paralysis. He was familiar with this disease, having seen several cases; and, in addition to the length of time over which the symptoms extended, the physiology of the case in question was different from that of acute. He considered the case to belong to a group of which he had seen four or five examples besides that of Dr. Myrtle's patient. The disease was a peculiar form of paralysis which he had only met with in women, and as a result of alcoholic excess. The loss of power did not affect the lower extremities first and completely, gradually ascending to the chest and arms, but was more or less present in all the limbs; in the upper extremities the extensors of the wrist were often predominantly affected at first, but later the flexors suffered, and then the hand dropped according as the forearm was pronated or supinated; there was a peculiar softness and flabbiness of the muscles when they were handled, and the very remarkable congestion and swelling of the feet and hands mentioned by Dr. Myrtle when they were allowed to hang down even for a few minutes. This was of course due to vaso-motor paralysis, and probably had much to do with the peculiarities of the affection. All the cases he had seen proved fatal except one, but he had obtained a *post mortem* examination of only one of the patients, and that at too late a period after death for microscopic investigation. To the naked eye, the spinal cord presented no abnormal appearances. His experience coincided with that of Dr. Myrtle with regard to delirium tremens in women. He had never seen a well marked example of delirium tremens in the female, and he had never seen the form of paralysis under consideration in the male.

Dr. FITZPATRICK (Liverpool) asked Dr. Myrtle whether, before or after the succession of epileptic convulsions, there was any trace of albumen in the urine. He agreed with the remarks of the President (Dr. Allbutt) that the case was not one of acute ascending paralysis. He had a similar case of a lady, aged 32, in whom the acute symptoms as described in the paper came on only in August once. The case terminated fatally in the following January. Albumen was present in the urine in his case.

Dr. CUMING (Belfast) had seen two cases of acute ascending paralysis in which no alcoholic history whatever was present. He had been struck by the retention of power of the sphincters and of urination. He had often observed the pains in the lower limbs in females with suspicion of alcoholism. Delirium tremens, although less common in females, was by no means unfrequent, probably owing to differences in the way in which the alcohol was taken.

Dr. HARE (London) confirmed, both from the experience of hospital and of private practice, the statements as to the different results of alcohol-taking on the two sexes. Delirium tremens he had met with, relatively, very rarely amongst women, and he was inclined to think that alcohol produced fatal effects less rapidly amongst women than amongst men. These points were the more remarkable, because, from inquiries amongst publicans, he had learnt that while men were the great consumers of beer (or diluted alcohol), women were the great consumers of spirits or the more concentrated drinks. He had been assured by intelligent publicans in London, that where they sold one pint of spirits to men, they sold fully five to women.

Dr. MYRTLE, in reply, said he had examined the urine very frequently, and had never found a trace of albumen nor any abnormal product. He had called it acute ascending paralysis, because, although not so very acute in its earlier course, yet the fresh burst of symptoms preceding death was very acute and very marked, three different sets of symptoms coming on within a few hours. There was no need for passing the catheter; and the bowels acted even more regularly after paralysis than they had done before.

THE salary of the apothecary to the Bandon Dispensary has been increased by £10 per annum.

THE STUDY OF THE FACE AS AN INDEX OF THE BRAIN.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By FRANCIS WARNER, M.D. Lond., M.R.C.P.,

Assistant-Physician and Lecturer on Botany at the London Hospital; Assistant-Physician to the East London Hospital for Children.

THE face is a region of the body well worthy of clinical study. We may observe its form, colour, and mobility; and the effects of movement in causing expression. The movement is the outcome of the action of the brain.

The tissues forming the structure which we call the face are mainly the skin, with its vessels and vaso-motor system; the subcutaneous fat; the facial muscles, supplied by the facial nerve; and some of the masticatory muscles, supplied by the fifth nerve.

Most of the variations of facial expression are produced by the facial muscles, which are acted upon by the changes in the brain; and these are the special indications of the cerebral condition to which attention will here be called. The muscles of mastication are less expressive of the condition of the brain than are the facial muscles; but they may become the subject of spasm, atrophy (see Case, *Lancet*, January 7th, 1882), or may produce teeth-grinding, as the result of conditions of the brain.

In almost all cases, the best indications of the conditions of the central nerve mechanism are its effects as seen in the spontaneous action of the muscles; and it is by the result that we usually judge of the central condition. Such effects are conveniently spoken of as nerve-muscular signs. Nerve-muscular signs are the best indices of the brain; the change in the brain affects the muscles; these control the position of the visible parts; and, from the facial changes resulting, we gather our information.

We are here studying the results of cerebral action upon muscles, according to well understood principles of physiology; while physiognomy deals mainly with the shape of the brain-case, and the passive condition of the face.

The principal movements of the facial muscles are these.

1. Dilatation and contraction of the facial foramina; probably this corresponds in significance to flexion and extension.
2. Elevation and depression of parts. Such conditions are well seen by comparing the two sides of the face in a case of Bell's paralysis.
3. Retraction and drawing forward of parts, as in grinning and screwing up the mouth.

To examine a face, hold a piece of paper in front of it, with one edge vertical; either half of the face can then be covered in turn. Again, the face may be divided into three zones, by holding the paper with one margin horizontal, leaving the forehead above the eyebrows uncovered; or, the face below the lower margin of the orbits may alone be exposed, showing the mouth, most of the cheeks, and the *ala nasi*; or, again, the middle zone, including the eyes with the upper and lower eyelids, may be viewed alone.

After looking for symmetry in a face, the nerve-muscular condition of the individual parts may be compared. A different condition of the different zones has, possibly, about the same kind of significance as an unequal condition of flexion and extension of the different fingers. A condition of different activity in the three zones of the face is a departure from physiological calmness (e.g., a smile, or snarl); it may be normal or abnormal. An unequal condition of the different zones is very common in "nervous people."

In the upper zone, we have the occipito-frontalis and the corrugator supercilii. Here we see the outcome of brain-action in those conditions termed grief, surprise, etc., producing muscular action and corrugating the forehead. The occipito-frontales are often seen overacting in imbeciles, and in cases of chorea; sometimes, also, they overact as a mere "chronic nervous habit." Symmetry in this zone is usually maintained. In the middle zone asymmetry is less uncommon, but is seen in winking and in ptosis. The important muscles here are the orbiculares oculorum. With megrim, and in conditions of depression, a marked change is often seen in the midfacial zone, due to a fulness about the eyes, especially about the under eyelids; the orbiculares have lost their tone, the skin hangs too loosely, the skin of the lower eyelid, instead of forming a convex surface, passes as a plane from the ciliary margin to the lower margin of the orbit. If the patient be made to laugh, the orbiculares are energised for the moment, and the look of depression is lost.

Passing on to the consideration of the lower facial zone, we see here the most marked effects of facial spasm or palsy from brain-disease—e.g., in hemiplegia and lesion of the crus cerebri. Thus the weakness of the face is well demonstrated by making the patient show his teeth or smile. Now, the muscles of this region are those most commonly

seen in spontaneous action in imbeciles; it is these muscles that work awkwardly in nervous one-sided grinning, and in this region we most commonly see asymmetry of the features, due to nerve-muscular conditions. It is interesting to note that this region of the face is the most affected by brain-disease (paralysis), and in "nervousness" (irregularity of the mobile features). Again, it is the levator labii superioris in the lower zone which produces one-sided snarling, one of the lowest expressions produced by the human face. In complete development and perfect health the features are usually regular in passive form and in symmetry of movement. In most expressions, the symmetry of bilateral movement is complete; from this we infer that the nerve-mechanisms for each side of the face are intimately connected.

In observing how easily facial asymmetry is brought about, we see evidence that the union of the facial centres is easily dissolved and not very strong, the asymmetry being especially seen in the lower zone; thus asymmetry is produced by nervousness (see one-sided grinning), by the desire to attack (see *Darwin on the Expression of the Emotions*, page 250) (snarling), or by such defective nutrition or development as produces unequal features when in motion. The higher, more intelligent expressions are symmetrical. Union of the facial centres is less perfect than the union between the motor centres of the eyes, for the cerebral condition producing "emotion" cannot cause dissociated movement of the eyes. We find here an illustration that symmetry of action, as well as symmetry of structure, is part of the law of beauty.

It may be remarked as a peculiarity of the facial muscles in man, that they are usually free or disengaged, not mainly occupied in doing a definite work, but their movements are mainly the spontaneous outcome of brain-action. The facial muscles are usually very mobile, and often illustrate the struggle of nerve-muscular actions; this may be seen in the conflict of the muscles about the mouth in the endeavour not to cry. The study of nerve-muscular signs in the limbs shows the importance of observing whether "the movement of small parts"—e.g., the fingers—be thoroughly good; this kind of observation in the facial region is, I think, represented by "the finer movements of expression". These are totally absent in some cases of paralysis agitans, although the larger movements of the face can be voluntarily performed. When fatigued, the brain does not act well in producing the small fine movements of either hand or face. We sometimes see a nervous play of the features; this, I imagine, depends upon slight irregularity of the muscles producing slight movements. In convulsion, both clonic and tonic, and in tetanus, the larger muscles usually produce the most marked effect.

In observing different types of face, we become at once struck with the fact that some faces express intellectuality, others vulgarity; some faces are very mobile and very expressive, others are passive and immobile.

The peculiarity of vulgar faces may be roughly divided into two elements. 1. Physiognomy or the shape of the brain-case and face, together with the character of the facial tissues, and the structure of the features and parts of the face. Here, probably, we have an example of the coincident defective or coarse development of the face and the brain.* This illustrates the relation of morphology and function, the structure of the face, and the coincident structure and function of the brain which moves the face. Elements contributing to this character of face are a large under jaw, a thick immobile condition of the facial skin, thick lips, etc. It will be seen that these are mainly conditions in the development increasing the protective character of the skin of the face; the thick immobile tissue is better able to resist the action of external agencies, but it is also less mobile under the action of nerve-muscular changes. The large lower jaw may be very useful for mastication or defence, but it does not serve to increase the play of nerve-muscular actions.

2. The second typical characteristic is the nerve-muscular condition of the face. Such signs are more directly indicative of intellectuality of the brain; hence we should study a face as the index of the brain, when it is seen in action as well as when at rest. The mobility in the different zones and the relative condition of these areas give indications of the condition of the mental nerve-mechanism. These considerations afford some evidence that facial expression results from nerve-muscular action, the outcome of the motor action of that part of the nerve-mechanism which produces mental states.

* See "Defective Developmental Conditions", *Medical Times and Gazette*, Jan. 21st, 1882. Coincident defects I there show to be common.

NEW HONOUR FOR MEDICAL PRACTITIONERS.—The *Chicago Medical Review* reports that a sapient member of a Southern State legislature has introduced a Bill, providing that in case of death from disease or injury, the name of the physician, who had attended the deceased during the last illness, shall be placed upon the tombstone.

A CASE OF SPINAL HEMIPLEGIA FOLLOWING GANGRENE OF THE RIGHT GREAT TOE.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By AGMONDISHAM VESEY, M.B., MAGHERAFELT.

A GENTLEMAN, aged seventy years, for about three months complained of severe pains in both calves, and of burning sensations in both feet. To alleviate these, he frequently bathed his feet in cold water. Previously he had always enjoyed excellent health, and, as he said, had never given a fee to a medical man on his own account. He indulged occasionally somewhat freely in the use of ardent spirits, but, as a rule, was most temperate.

On May 18th, 1882, he put on a pair of shoes which were rather tight for him, and walked five or six miles. This was followed by severe pains in both feet, the tops of the great toes being especially affected. He pared the nails very closely, and instead of the pain being alleviated it increased, and a purple spot formed at the base of the right great toe, with swelling and redness of the dorsum of the right foot.

On May 26th, he first consulted me. The right great toe was purple and cold, and the rest of the foot swollen, red, and shiny. The pain was stated to be almost unbearable in both feet, and though more agonising in the left foot, there was no swelling or discoloration. The tibial arteries in both sides were permeable, and there was no evidence of thrombus here or elsewhere. There was also pain and stiffness in the ring and little finger of the left hand; sensation normal.

On May 29th, the right great toe was unmistakably gangrenous; the superficial veins of the right forearm were hard, cord-like, and filled with clots. There had been no pain complained of in this region. Elsewhere, the veins were quite pervious and normal to the touch. A gradual improvement took place until June 16th, when I detected a systolic bruit in the heart. The condition of the veins of the right arm were the same, and there was no apparent change in the left hand. He had a fair appetite, full control over the bladder and rectum, and no distress in breathing.

On June 17th, in the evening, the left arm was found to be completely paralysed. There was no paralysis elsewhere. There was full power of flexion and extension in the left leg; but though he said it was feeling colder than the other leg, the temperature was not below par except in the foot. The nose was purple at the tip and cold up to the base. Large distended veins were visible here, which were not to be seen previously.

On June 18th there was complete paralysis of the left arm and leg. There was no facial paralysis, and no paralysis of the tongue. Speech was distinct and articulate—no ptosis, no deafness, no difficulty in swallowing. The muscles of the left arm felt flabby and doughy. The breathing was more rapid but not laboured, and the condition of the cardiac murmur was unaltered. He had full power over both bladder and rectum. The right side of the body was found to be anæsthetic: pinching the skin or pricking it with a needle gave no pain. The pain from the gangrenous toe ceased to give any trouble, though previously large doses of morphia were required to keep it in check on his toe with a spoon dipped in hot water.

Hyperæsthesia, too, was noticed on the left side, but not to the same extent as the anæsthesia on the right side. It was confined to the upper part of the thorax, the upper arm, and the shoulder. Owing to continual presence of anxious relatives, who were most strongly opposed to my trying what they called any "experiments," I was unable to satisfy myself as to whether any band of anæsthesia was to be found at the upper border of the hyperæsthetic region, or whether the hyperæsthesia extended to parts below those I have mentioned. All I can say is, that pain of a more excruciating character than before was felt in the left leg and foot.

The patient gradually sank, and became comatose four hours before death on June 19th. No other paralysis supervened. No *post mortem* examination was permitted.

The comparative rarity of spinal hemiplegia must be my apology for bringing this imperfect report before the Section. Owing to the causes stated, I am unable to give any information as to the condition of the reflexes, or as to the diminution or abolition of the common or special sensibility (muscular sense) of the paralysed muscles. The absence of a *post mortem* examination makes it impossible to state with accuracy the exact seat and cause of the lesion. That it was probably situated in the cervical enlargement of the spinal cord, and was caused by softening,

FIFTIETH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in WORCESTER, August 8th, 9th, 10th, and 11th, 1882.

THIRD GENERAL MEETING, THURSDAY, AUGUST 10TH.

THE third general meeting was held on Thursday, August 10th, at the Guildhall, at 10 A.M. The chair was taken by Mr. HUSBAND, subsequently by Mr. WHEELHOUSE, and later by the PRESIDENT of the Association.

Report of the Medical Reform Committee.—Dr. WATERS (Chester) read the report of the Medical Reform Committee. It was published at page 232 of the JOURNAL for August 5th. He moved:

"That the report of the Medical Reform Committee be adopted, and the Committee be reappointed as follows—Dr. E. Waters, Mr. Wm. D. Husband, Dr. Alfred Carpenter, Dr. M. M. De Bartolomé, Dr. C. Chadwick, Dr. Balthazar Foster, Mr. Ernest Hart, Rev. S. Haughton, Mr. H. Nelson Hardy, Dr. D. J. Leech, Mr. C. Macnamara, Mr. F. E. Manby, Mr. W. H. Michael, Q.C., Mr. R. H. B. Nicholson, Dr. A. P. Stewart, Dr. W. F. Wade, Mr. C. G. Wheelhouse."

He said: In presenting this report to the Association, the Medical Reform Committee may fairly congratulate the members on having at last reached a period in their labours when they may justly look forward to the termination, on a satisfactory basis, of the long struggle for medical reform which has been unceasingly carried on by the Association during the last half century. In the year 1832, the second year of the Association, Dr. Barlow read an exhaustive paper on Medical Reform. A Special Committee of the House of Commons was then appointed, but with barren results; for the complete evidence was never published. Important facts connected with the licensing system and diploma-conferring powers of several of the corporations were elicited. Legislation was subsequently attempted. The Association nominated a Medical Reform Committee, under the chairmanship of the late Sir Charles Hastings. This Committee started with the one great object of improving the general and professional education of the medical man in the interest of the public as well as of the profession. For years the desperate battle continued, until at last the imperfect Medical Act of 1858 became law. This was simply accepted as an instalment of medical reform, for it did not embody two of the cardinal principles for which the Association had from the first striven. A *National Pharmacopœia* and a *Register* of the profession were provided for; reciprocity of practice was granted, by which bodies like the Apothecaries' Hall of Ireland and other corporations, whose qualifications previously held good in limited districts only, enabled their licentiates to practise as registered practitioners in all parts of the kingdom, thus conferring a privilege they did not before possess, but which, having gained, they have fought hard to maintain. Licences embracing only one branch of the profession were, and still are, numerous on the *Register*. In 1858, the Association strenuously resisted the registration of these half-qualified men, but were defeated; improved preliminary education was also demanded, but equally in vain. With these vital defects the Bill of 1858 could not stand; men, not allowed to attend paupers, remained at full liberty to practise on the general public. Amendment of the Medical Act became inevitable. In the year 1867, at the first annual meeting held in Dublin, the Association passed a resolution, with only two dissentients, to the effect that no Medical Act would be tolerated by the profession which did not accede the direct representation of the profession on the General Medical Council. This demand, and also that of one conjoint board for each division of the kingdom, to examine all candidates for admission to the profession in the three branches of medicine, surgery, and obstetrics, were amongst the essential points laid down by the Association long before the passing of the Act of 1858. From 1867, when the Association, in default of any aid from the General Medical Council, again seriously resumed action, these two objects have been unswervingly insisted on. I need not refer to the different Bills laid before Parliament, nor to the labours of the Select Committee during two sessions of the last Parliament; suffice it to state that the points for which we have for nearly fifty years contended have at last gained the approval of a Royal Commission, embracing some of the most powerful intellects of the age. In paragraph 14 of the Report of the Royal Commission, it is stated: "It is our opinion that the holding of a licence ought to be conclusive evidence of sufficient proficiency in medicine, surgery, and midwifery. After a long and careful inquiry, we have arrived at

the conclusion that such a standard of proficiency can only be ensured by reducing the number of licensing authorities." The Commission then goes on to propose "that there shall be one Medical Council, and that, in each of the three divisions of the United Kingdom, there shall be a Divisional Board, representing all the medical authorities of the division; that the right of admitting to the *Medical Register*, and a general control over the proceedings of the Divisional Boards, shall vest in the Medical Council." Paragraph 28 of the report is: "We propose that the Medical Council shall be the sole licensing authority." The modification of the constitution of the Medical Council is the other great point which the Association has sought, believing its present constitution to be radically vicious, in that the corporations, which should be controlled by it, have an enormous preponderance upon it. In respect of such preponderance of representation, the Royal Commission have reported, in paragraph 26: "Holding the opinion that the Medical Council ought to be as far as possible removed from individual influences and prejudices, we have proposed that the members representing upon it the medical authorities should be appointed by the Divisional Boards, and no longer by single universities and corporations." The paragraph in the report of the Commission relating to direct representation is as follows: "The direct representation of the profession upon the Medical Council is a question which has been so long and fully argued, that we feel it unnecessary to enter upon it further than for the purpose of expressing our conclusion. While we insist that the reason of the existence of the Medical Council is the interest of the public, we cannot but recognise the vital interest of the whole medical profession in the constitution of that body. It seems to us highly important that the profession should have full and complete confidence in the Council; and, seeing that the governing bodies of the medical corporations, which now elect members of the Council, can hardly be said to represent the great majority of practitioners, we think it advisable to give the general practitioner an effective voice in the body which will be the principal authority of the medical profession. We see no reason to suppose that the members elected by direct representation will be less eminent than those nominated either by the Crown or the Divisional Boards." Mr. President and gentlemen, these are the words of the Royal Commission passing judgment on these two points of medical reform which are associated with the history of the Association from its earliest days. Other and great statesmen have expressed their approval of the principle of direct representation; among them may be cited the Premier himself, the present and the past Chairman of Committees of the House of Commons, Lord Mount Temple—who carried the Bill of 1858 to a successful issue—and many others. "The imperfections and low standard of some examinations" is referred to in paragraph 6 of the report. From these extracts it is undoubted that the persistent action of the Association in support of medical reform has at last found the fullest justification; and the report of the Royal Commission is an honourable recompense. It now only remains for the Association to apply for and support legislation on the basis of the report, and to carry out the suggestions of the Medical Reform Committee to that end. For the laudatory manner in which my efforts in carrying out the will of the Association in this matter are alluded to in the report of the Council, I have to express my sincere thanks. The one great ambition of my life is to gain the regard and esteem of my professional brethren, and I shall indeed be proud as well as gratified should success crown the efforts in which I have been most ably supported by zealous and judicious colleagues, and above all been backed by the powerful influence of this great Association. In conclusion, I must also acknowledge with gratitude the valuable aid given by the *Lancet*, the *Medical Press*, and the Irish Medical Association. Mr. President, I beg to move the adoption of the report.

Mr. HUSBAND (Bournemouth) seconded the motion, which was carried.

Mr. SIBLEY (London) moved:

"That this meeting congratulates Dr. Edward Waters, the energetic chairman of the Medical Reform Committee, and the Committee over which he so ably presides, on the report of the Royal Commission, endorsing the views on medical reform which they have so ably, on the part of the Association, maintained for so many years; and most heartily thanks them for their successful and self-denying exertions."

He was sure that the resolution would meet with cordial approval. They had abundant reason to congratulate Dr. Waters and the Committee for the work that had been so energetically carried on. The more important features of medical reform, advocated by the Committee and the Association, appeared now on the point of being secured. That was the case with reference to an uniform minimum qualification, which had involved such great difficulties, owing to the different views of the various corporations. Already, the corporations had co-operated to a certain extent in the desired direction; but what the profession had

to guard against was the underbidding of the bodies, with a view to attract candidates. A still more important point was a direct representation on the Medical Council. All had a great regard for the members of that body, who were among the most eminent men in the profession; and it might be difficult to draw up a list of men equally distinguished, or in whom they could place equal confidence. But they lacked one important element: they did not represent the interests of all the grades and branches of the profession. However great their knowledge, they could not appreciate the feelings and interests of working general practitioners; nor could they fully understand the qualifications to practice required, for instance, in manufacturing districts, where a certain degree of rough and ready learning was wanted, without perhaps the refinement and finish which those practising in the great centres of life might be disposed to think necessary. Those points, as he had said, were now likely to be granted; and the thanks of the Association were eminently due to Dr. Waters and the Committee for their exertions, which were likely to be brought to a successful conclusion.

Mr. MARTIN COATES (Salisbury) seconded the motion. Hospital and general practitioners felt that the profession had been greatly sacrificed to the vested interests of the Corporation. A still greater reform than that which was proposed was needed, but it was a step in the right direction. He was very much dissatisfied with what he had heard as to the examinations by public bodies. What could be more absurd than that a teacher at a medical or surgical school should examine the candidates for diplomas? It was true that no examiner was permitted to examine the scholars from his own school, but he examined those of other schools that were in competition with his own, and with many examiners there would be a temptation to reject such candidates; indeed, there was a strong suspicion amongst the students that there were many cases of that kind, and such a suspicion was of course enough to disturb their confidence in the justice of the examinations. He had himself known cases in which men had been sent up by their teachers as certain to pass—demonstrators of anatomy, for instance—who, by the harshness, cynical conduct, and unfair and unnecessary questions of the examiners, had been rejected, and their career in life spoiled.

The motion was unanimously adopted, amid hearty acclamation.

A MEMBER inquired what number of representatives of the profession it was proposed to send to the Medical Council.

Dr. WATERS, in acknowledging the resolution, said it had always been contended that the profession should have on the Medical Council a representation amounting to one-half that accorded to the universities and corporations. According to the recommendations of the Royal Commission, those bodies would no longer have the privilege of sending delegates to the Medical Council, but would have to compete to elect representatives in each division of the kingdom in the proportion of four for England, two for Scotland, and two for Ireland. No individual corporation would be especially represented, but all would unite in establishing a divisional board in certain proportions, to be defined in the first instance by Parliament, and subsequently open to revision every ten years by the Medical Council. In order to give to the profession a proportion of one-half, there would be two representatives in England, one in Ireland, and one in Scotland. Thus the Council would be greatly diminished in numbers, corporate influence would be lessened, and the profession would at last have its voice heard through its own direct representatives. It would depend upon the profession to rise to the occasion, and to appoint such men as would worthily represent it. The Royal Commission was happily of opinion that the professional representatives would be in no way inferior to those sent by the corporations or nominated by the Crown.

Report of the Committee appointed to obtain Restrictive Legislation for Habitual Drunkards.—Dr. A. CARPENTER (Croydon) presented this report. It was published at page 235 of the JOURNAL for August 5th. He moved:

"That the Report of the Habitual Drunkards' Committee be received and the members of the Committee be appointed as follows, with power to the said Committee to do all such things as they may deem proper:—
 Messrs. John A. Allen, Carpenter, Dr. G. F. Blandford, Mr. William Blandford, Dr. W. Cameron, M.P., Dr. J. W. Eastwood, Dr. B. G. Eastwood, Surgeon-General C. R. Francis, Mr. W. C. Garman, Mr. George Holthouse, Dr. H. Monro, Mr. G. W. Mould, Mr. R. H. B. Norton, Surgeon-Major G. K. Poole, Dr. J. Rogers, Dr. J. P. S. Rogers, A. P. Stewart, Dr. Farquharson, M.P., Dr. H. W. Stewart, Dr. J. L. H. Evans; Dr. Norman S. Kerr and Mr. J. A. Allen, Messengers."

He said the Commission should be given the power to have persons under restraint without the necessity of obtaining a warrant. When that object had been achieved, they would have to be released if that was required.

Dr. DRYSDALE (London) seconded the motion.

Dr. J. ROGERS (London), in supporting the motion, said he was glad that the suggestion he had made at Cambridge had not fallen to the ground—that some effort should be made to restrain drunkenness amongst habitual drunkards of the pauper class. It was impossible for any one to imagine the amount of misery and wretchedness that he had had the unfortunate opportunity of observing during twenty-two years' control of a large Metropolitan workhouse. There were many persons whom he knew he could control, if they could only be detained in the house a certain time; but in consequence of the way in which they were allowed to go in and out, it was hopeless to attempt to do anything for them. He had, however, induced his board of guardians to pass a regulation to prohibit any habitual drunkard permanently chargeable to them from having his liberty if he returned drunk on his liberty day; in such cases the person's liberty was stopped for six months, and during that time he (Dr. Rogers) took very good care that no intoxicating drink reached him. The next step taken by the Committee should be to seek an interview with the President of the Local Government Board, to urge upon him the desirability of issuing some such recommendation from head-quarters. If the authorities declined to move in the matter, some independent member should be asked to introduce a short Bill conferring the necessary powers upon boards of guardians.

Mr. GRAY (Cannock) supported the resolution. He said he held one of the few licences for habitual drunkards, and he desired to urge strongly the ineffectual character of the present Act of Parliament. The number of applications made to him by families of habitual drunkards was appalling, but he had only one person in his house under the present Act. When families were informed of the steps that had to be taken to put the Act in force, they declined to take them. He would strongly suggest to the Committee that the consent of one guardian, the husband or the wife, together with a witness, should be sufficient to enable one justice of the peace to take the necessary action. Some persons seemed to be of opinion that sending an habitual drunkard to a licensed establishment was like sending him to a prison. The conductors of such establishments, however, always did their best to make everything as comfortable as possible, and do everything in their power to restore the health of the patients.

The motion was unanimously adopted.

The Motion was unanimously adopted.
The Joint Committee on State Medicine.—Mr. HUSBAND (Bournemouth), in the absence of Dr. A. P. Stewart, moved the reappointment of the Joint Committee of the British Medical and Social Science Associations, namely: Mr. L. Angell, Dr. J. T. Arlidge, Dr. E. Ballard, Dr. C. O. Baylis, Dr. Reddoe, F.R.S., Dr. F. J. Bond, Dr. W. E. Buck, Mr. E. Chadwick, C.B., Dr. A. Carpenter, Dr. G. W. Child, Mr. W. Clode, Mr. R. R. Collins, Dr. W. H. Corfield, Dr. T. O. Dudfield, Dr. G. F. Duffey, Dr. R. Farquharson, M.P., Dr. Farr, C.B., F.R.S., Dr. Cornelius Fox, Dr. W. T. Gairdner, Captain D. Galton, C.B., F.R.S., Dr. Grimshaw, Mr. Ernest Hart, Mr. G. W. Hastings, M.P., Mr. A. Haviland, Mr. B. Latham, C.E., Mr. J. Liddle, Dr. H. D. Littlejohn, Dr. R. D. Lyons, M.P., Mr. W. H. Michael, Q.C., Mr. F. G. P. Neison, Colonel Oldfield, Dr. C. F. Parsons, Dr. Phené, Dr. G. H. Philipson, Mr. F. S. Powell, Dr. A. Ransome, Dr. B. W. Richardson, F.R.S., Dr. Joseph Rogers, Dr. A. P. Stewart, Mr. G. J. Symond, F.R.S., Dr. J. W. Tripe, Dr. N. Tyacke.

Dr. CARPENTER (Croydon) seconded the motion, which was unanimously agreed to.

Address in Surgery.—Mr. WILLIAM STOKES (Dublin) delivered the Address in Surgery. It was published at page 256 of last week's JOURNAL.

Mr. T. P. TEALE (Leeds) moved:

"That the warm thanks of the Association be given to Professor Stokes for his able Address in Surgery."

It was, he said, a great pleasure to him to move the resolution. He was one of those who had the privilege of listening to the eloquent Address in Medicine by Mr. Stokes's father, many years ago in London. It was a remarkable thing that, within so short a period of time, they should listen to father and son; the one representing the highest forms of medicine in the sister kingdom, and the other the highest forms of surgery. He had known Mr. Stokes for some years, and, during the last year and a half, had been most intimately associated with him in a very anxious and laborious task, during which period he had learned to value his character, his judgment, his honesty, and his true versatile talents. It was not easy to find men such as he, and as they had met together, during the time of true heroism, patriotism, and patriotism, without feeling the better for it, and resolving to try to shape their own thoughts and actions in accordance with what had been so admirably put before them.

Sir WILLIAM MAC CORMAC (London), in seconding the motion, said that the noble, earnest, enthusiastic sentiments uttered by Mr. Stokes were worthy of him, and of the profession to which they all belonged. The address contained a generous tribute to the power and value of culture amongst them, and it afforded an ample proof that it was not wanting in Professor Stokes himself. He was sure they would all indorse and sympathise with the generous way in which he had alluded to the leaders of the profession.

The PRESIDENT, in putting the motion, expressed the gratification with which he had listened to the address of Professor Stokes. If there were some things that were now going on in Ireland which most of them regretted, they certainly had no reason to regret the decadence of Irish eloquence, which was still handed down from father to son, and prevailed throughout the whole country.

The motion was unanimously adopted, and was briefly acknowledged by Mr. Stokes.

Presentation of the Stewart Prize.—The PRESIDENT, in presenting the Stewart Prize, which has been awarded to Dr. Vandyke Carter, Surgeon-Major I.M.D., explained that amongst the prizes offered by the Association was one of fifty guineas, founded by Dr. A. P. Stewart for good work done and researches instituted regarding the origin, spread, and prevention of epidemic disease, with a view to encourage the continuance of the same. Surgeon-Major Vandyke Carter was now in India, and Surgeon-General Walker would receive it on his behalf.

Surgeon-General WALKER, in receiving the prize on behalf of Surgeon-Major Vandyke Carter, said that the prize was an acknowledgment of minute and extensive research in connection with relapsing fever as embodied in a recently published work, entitled *Spirillum Fever*. The Association was honouring one who had a world-wide reputation for his original researches on leprosy and mycetoma in Great Britain and its colonies, and in America, and for his illustrations, mostly from his own dissections in the truly admirable work *Gray's Anatomy*. Dr. Carter would feel disappointed if he (Surgeon-General Walker) failed to acknowledge the obligation of the profession, and indeed of the public, to Dr. Stewart in assigning to the Association, in trust for the public good and for the profession, the Testimonial Fund which had been subscribed by his medical brethren to mark their high estimation of his public and private character.

FOURTH GENERAL MEETING: FRIDAY, AUGUST 11TH.

THE fourth general meeting was held in the Guildhall, on Friday, August 11th; the PRESIDENT in the chair.

Notification of Infectious Diseases.—Dr. CARTER (Liverpool), in opening a discussion on this subject, said he wished to draw attention to the great usefulness of the Public Health Act of 1872, which was passed after free, full, and fair discussion in Parliament, and which had been accepted in a loyal spirit by the profession, and had been followed by most useful results. The essential principle of the Act was, that every medical man was regarded as the medical officer of health of the family he attended; but scarcely had the Act been introduced, when intimations were given of a desire for other Acts, founded on other principles, for the compulsory notification by medical men of infectious diseases, the compulsory removal of patients to hospitals, and so on; and a fine, and, in the last resort, imprisonment, to be inflicted upon medical men who declined to notify. That principle was founded on two unwarrantable assumptions: that the medical man ordinarily attending his patients was not able, or did not care, to limit the spread of infectious disease; and that no one but the medical officer of health was able or cared to do it. The instance of Bolton had been brought forward, as a test case, for determining whether compulsory notification by medical men was a proper proceeding. He wished distinctly to state, in order to avoid misconception, that, as an abstract proposition, he was in favour of early notification; but he did not think that the compulsion should be put upon the medical men. In the case of Bolton, a period of ten years before compulsory powers were obtained had been arbitrarily selected. During those years, it had been found that the mortality from certain infectious diseases had been greater than during a smaller number of years since compulsion had been established; and it had been, therefore, argued that the Act had done good. He maintained that that was an illogical and inherently vicious process. Taking Liverpool, which was more liable to the inroad of infectious diseases than any other town in the kingdom, it was found that that city, and the country generally, had progressed without any Act, half as fast again in regard to those infectious diseases as Bolton had with an Act of Parliament. In Edinburgh, which had been cited as an instance of the entire success of the Act, the mortality had been distinctly raised during the two years succeeding the application of the Act. Dr. Littlejohn, in his minute to the Local Government Board,

expressly mentioned the effect of the Act on measles, as demonstrating its usefulness. What were the facts? In February this year, 440 cases of measles were reported to the health authority, and in the succeeding month, instead of there being a diminution, the number was 1,118, and in the next month 1,239, showing that the disease went on with complete indifference to the Act, and all that was demonstrated was the utter impotence of the medical officer of health to deal with it, and that he had distributed about 3,000 half-crowns for having that fact shown to him. Blackburn had had an enormous mortality from typhoid and scarlet fever since the introduction of the Act. He did not know how that was to be explained, except on the assumption (which was backed up by incontestable evidence) that in such towns concealment was directly promoted. The mortality in Blackburn from typhoid fever was one in 4.4 cases, and it was the same in Bolton under the Act. Had anyone ever known of a mortality approaching in its ghastliness to that? It could only arise from one of two reasons: either a great many cases were never reported, so that the mortality appeared to be high when it was not so, or the operation of compulsory notification and compulsory removal must have been dreadfully disastrous. Thus, besides promoting concealment, the Act promoted a spirit of antagonism between the two branches of the medical service which ought to work in harmony. He should like to ask Dr. Littlejohn if it was the fact, as had been stated in the *BRITISH MEDICAL JOURNAL* and in the local Edinburgh papers, that Dr. Bowie was prosecuted, at the instance of a sanitary official, for having returned a case as gastric fever when it should have been typhoid fever; and whether it was stated that the sanitary official, from his long experience, knew better how to diagnose than the medical man in attendance; and, further, whether Dr. Bowie was actually fined. He knew that in Jarrold a doctor, whose name he need not mention, returned a case as being one of infectious disease. Wishing to keep within the four corners of the Act, and knowing that the disease would probably be infectious, but not wishing to commit himself to an actual specific diagnosis, he returned the case as being one of an infectious character. He was immediately summoned by the medical officer of health for not returning it as a case of typhus fever, and the magistrate was informed that the medical officer, who was very much the junior of the medical attendant, was able to diagnose the case instantly, and that therefore, there had been no difficulty about it. Dr. Bond, of Gloucester, had recently said, "I should be afraid to say how many cases returned to me as diphtheria, mild sore throat, and so on, are really cases of scarlet fever;" so that, if the Act had been in operation in Dr. Bond's district, an inevitable conflict would have taken place. A correspondent of the *Lancet* had recently asked, "Is it proper, when I send a notification to a medical officer of health, for that gentleman not merely to come in and examine the drains, but to request to see my patient, and ask that he might examine the prescriptions and so on?" That was one of the consequences of the Act, and no doubt there were a great many others of the same kind. It was evident that the operation of the Act would lead to a great deal of heartburning and ill-feeling between medical officers of health and the general practitioners, and thus check the steady onward progress being made in the general health under the wise provisions of the Public Health Act. As a proof of the strong feeling existing in his own neighbourhood, he had brought with him a petition to Parliament which had been signed by 260 medical men in Liverpool, including the President-elect of the Association, and almost every medical man in consulting and general practice in the town, against the adoption of the newly introduced principle. Extensive petitions of the same kind had been presented from Newcastle-on-Tyne, Rochdale, and many other towns. He proposed,

"That it be an instruction to the Council that the opinion of the members of the Association be taken on the question of the compulsory notification by medical men of infectious diseases, directly or indirectly to the sanitary authorities."

Dr. WHITTLE (Liverpool), in seconding the resolution, said he hoped that the proposed *plébiscite* might be taken in the quiet of the recess, and before there was an opportunity of a Bill being introduced in the next session of Parliament. He held in his hand a petition brought from Ireland by Dr. Jacob of Dublin, signed by four or five hundred medical men, against the compulsory imposition upon them of the duty of notification. The difficulties connected with the carrying out of the principle must necessarily be very great. Mr. Ritchie, medical officer of health in Leek, had stated that, according to his experience, all the benefits which were hoped to be derived from notification were obtained in his district by the cordial and general co-operation of the profession with himself. That was the true principle, and he did not see why it should not be adopted everywhere. It was the principle upon which he had himself always acted, and should continue to act.

medical man. It should be remembered that all medical officers of health were not men like Dr. Littlejohn. If they could secure such men as Dr. Littlejohn to carry out the Act throughout the country, there would be no objection to the penal clause, because it would never be put in operation.

Mr. HASTINGS, M.P., said he had introduced a Bill for the Notification of Infectious Diseases, with the express desire that, as soon as it had been read a second time, it should be sent to a Select Committee. The Bill, however, had been blocked by Mr. Thomasson of Bolton, who was supported by Mr. Hopwood—two gentlemen who were known as amongst the most violent opponents of vaccination in the country, and who had been most persistent in their attacks upon the medical profession generally. There had been other agitations in the country with regard to medical and sanitary legislation; and he sincerely hoped that the present agitation would not be continued on the same lines as those to which he referred, but would be carried out in a spirit worthy of a scientific body, and with an endeavour to place the real facts temperately before the public. If the subject were not taken up by the President of the Local Government Board, he should certainly reintroduce the Bill at the earliest opportunity next session, in the hope that it might be sent to a Select Committee to take evidence and report upon it. There had been a Committee sitting to consider eight Bills, introduced by different corporations, to establish, among other things, a system of notifying infectious diseases. He was a member of that Committee, and he had been astonished to find how little could be said by the witnesses against the system of notifying disease. The Committee took care that ample notice should be given to all parties interested in the different boroughs; but not a single petition had been laid before them, except one from Bolton, against the system of notification, and that was withdrawn when the parties were asked if they desired to address the Committee by counsel. There were thirty-one cities and towns in Great Britain, which had voluntarily adopted the system; and it might be taken for granted that they knew their own business as well as those who were opposed to the system. The opinion of the inhabitants of those places, including medical men, was decidedly in favour of the continuance of a system which they believed tended to improve the general health. Seeing that there were thirty-one cities and towns that had adopted, and desired to retain, the method, why should it be thought an intolerable hardship to have it extended throughout the kingdom? He wished to remind them that there was already throughout the entire kingdom a system of compulsory notification of disease by medical men; he referred to the certificate of the cause of death. [*No, no.*] The certificate as to the cause of death was compulsory, and surely there could be no greater hardship in having to certify with a view of saving the living. The method proposed by Dr. Carpenter would cause greater hardship and greater risk to medical men than the one proposed in the Bill. If the notification were voluntary on his part, the patient might have reason to complain if he gave notice; but, if it were compulsory, no complaint could be made of his having obeyed the law. If there were a system of dual notification, he failed to see what hardship there could be. The medical attendant could communicate with the householder, and the householder could send in a certificate. In that case there could be no breach of confidence, because the medical man would have the right to say to the householder, "If you will not do it, I must." That would probably be the best way to meet the difficulty. They ought to trust to an impartial investigation by a Select Committee rather than make any rash declaration of opinion by *plébiscite* or otherwise before having heard all the facts of the case.

Dr. FITZPATRICK (Liverpool) denied that the death certificate was compulsory, and said that he had frequently refused to give it. Dr. Littlejohn had forgotten to state that the law which he carried out in Scotland was different from that proposed in England. The reason why there were so many notifications in Edinburgh was, that there was a fee of half-a-crown for each certificate. The love of Scotchmen for the baubee was proverbial. With regard to the question of rivalry, he admitted that none would exist if all medical officers were like Dr. Littlejohn; but when there were gentlemen in the profession who considered to take £5, £10, £15 or £20 a year as medical officers of health, they could hardly fail to be rivals to the local practitioner. The patient would naturally say, "Instead of paying two doctors I may as well have the medical officer of health, and very likely the fee will satisfy his conscience a little." [*Laughter.*] Complaints were constantly being made in the medical papers of the interference of men of this class. He believed the medical men generally felt the obligation of doing what they could to prevent the spreading of disease. In his own experience he had always been able, amongst rich or poor, to separate infectious cases, and he had no doubt that the experience of others was the same.

Dr. CARTER asked Dr. Littlejohn if it was a fact that the death-rate of Edinburgh had risen from 20.22 to 20.25 since the Act had been passed.

Dr. LITTLEJOHN said it was not the fact.

The PRESIDENT then put the amendment, which was carried.

On the amendment being put as a substantive motion,

Dr. MAHOMED (London) moved a further amendment, which he said he proposed with a view of carrying out the suggestion of Dr. Carpenter. They were all anxious that infectious diseases should be notified; but the question was, whether medical men ought to be compelled to become private detectives of the Government, or whether every householder should be expected to do his duty to his neighbour. He proposed—

"That this meeting earnestly desires compulsory notification of infectious disease, but it wishes to express its opinion that the compulsion to notify should be placed upon the householder as his duty as a citizen, and not upon the doctor."

If the principle of the amendment were adopted, it would be the duty of the medical man to inform the householder whether the disease was infectious or not; and if he neglected that duty, he might be reasonably subjected to a penalty.

Mr. HUSBAND (Bournemouth), in seconding the amendment, said he had always protested against the State throwing on the medical profession duties which it ought not to be called upon to perform. They were all agreed as to the necessity of notification; but it was not right to take the duty from the head of the family, who was properly responsible in the matter, and place it upon the shoulders of medical men.

Dr. A. CARPENTER wished to remind the members that a similar Act was in operation with reference to animals, and that no penalty was inflicted upon the veterinary surgeon, but upon the owner.

Dr. BROADBENT (London) said, that unless the duty of notifying was imposed upon the medical men, the desired object would not be accomplished. In the absence of such compulsion it would be in the power of any employer to put the greatest possible pressure upon the medical man not to reveal the nature of the disease.

Dr. MAHOMED's amendment was then put and carried, and it was also carried as a substantive motion.

Presentation of the Middlemore Prize.—The PRESIDENT presented, on behalf of the Association, to Mr. William Adams Frost, of London, a prize of sixty guineas from the Middlemore Fund for his essay on the "Scientific and Practical value of Implements in Ophthalmic Medicine and Surgery," made or published during the past three years.

Collective Investigation Committee.—Dr. HUMPHRY (Cambridge) presented the report of the Collective Investigation Committee to the Committee of Council. It was published at page 234 of the JOURNAL for August 5th. He proposed:

"That the report of the Collective Investigation Committee be approved and adopted, and the gentlemen whose names are as follows be re-appointed a committee for the ensuing twelvemonths, viz., Professor Humphry, F.R.S., Mr. C. G. Wheelhouse, Dr. W. F. Wade, Dr. T. C. Allbutt, F.R.S., Dr. Alfred Carpenter, Dr. B. Foster, Mr. W. D. Husband, Dr. F. A. Mahomed, Dr. A. Ransome, Dr. Sieveking; with power to add to their number."

He was happy to say that the work was going on most satisfactorily, and had been taken up with great warmth by a large number of Branches and of individuals. He hoped that really good work of that kind would be done by the Association, which was the only body by which it could be carried out. He had heard from several quarters that the Association had hit the right nail; he might add that, in the person of Dr. Mahomed, it had employed the right hammer to drive in the nail steadily and forcibly. He had been most enthusiastic and judicious, and had travelled almost throughout the country inspiring enthusiasm in various directions. Of course an important work of that kind could not be carried on without some not inconsiderable demands upon the funds of the Association. Some persons had thought the funds of the Association were too large, and he was happy to think that the Committee would be able to diminish them to a certain extent.

Dr. DICKSON (London) seconded the motion, which was unanimously adopted.

Report of the Parliamentary Bills Committee.—Mr. ERNEST HART brought up the report of the Parliamentary Bills Committee. It was published at page 233 of the JOURNAL for August 5th. He proposed:

"That the report of the Parliamentary Bills Committee be received and adopted, and the gentlemen whose names are as follows be re-appointed the Committee for the ensuing twelve months: Barnes, J. Wickham, Esq., 3. Bolt Court; Barnes, Dr. Robert, 15. Harley Street; Bryan, Dr. J. M., Northampton, Representative of the South Midland Branch; Bucknill, Dr. J. C., F.R.S., Hillmorton, Rugby;

Carpenter, Dr. Alfred, Croydon; Dewes, Dr. E., Coventry, Representative of the Birmingham and Midland Counties Branch; Ewart, Surgeon-General, Brighton; Foster, Dr. B., Birmingham, Representative of the Birmingham and Midland Counties Branch; Gibson, Dr. G. A., Edinburgh, Representative of the Edinburgh Branch; Grigg, Dr. W. C., 6, Curzon Street; Hardy, H. Nelson, Esq., Dulwich; Harris, J. D., Esq., Shrewsbury; Harrison, Reginald, Esq., Liverpool, Representative of the Lancashire and Cheshire Branch; Hart, Ernest, Esq., 38, Wimpole Street (Chairman); Henry, Dr. A., 132, Highbury Hill, Representative of the Metropolitan Counties Branch; Holman, Dr. C., Reigate, Representative of the South-Eastern Branch; Jackson, Arthur, Esq., Sheffield, Representative of the Yorkshire Branch; Jones, Dr. Eytton, Wrexham, Representative of the North Wales Branch; Kerr, Dr. Norman S., 42, Grove Road, N.W.; Macmillan, Dr. A., Hull, Representative of the East York and North Lincolnshire Branch; Morris, Dr. E., Spalding; Nicolson, Dr. D., Broadmoor, Representative of the Southern Branch; Orange, Dr. W., Broadmoor, Representative of the Reading Branch; Ord, Dr. William, 7, Brook Street; Partridge, Surgeon-General, Anerley; Philipson, Dr. G. H., Newcastle-on-Tyne, Representative of the North of England Branch; Pranker, John, Esq., Langport, Representative of the West Somerset Branch; Quain, Dr. R., F.R.S., 67, Harley Street; Rees-Phillips, Dr. S., Exeter, Representative of the South-Western Branch; Rogers, Dr. Joseph, 33, Soho Square; Rogers-Harrison, C. H., Esq., 55, Stockwell Road; Sibley, Septimus, Esq., 7, Harley Street; Smart, Sir W., M.D., K.C.B., 21, Castleton Road, West Kensington; Stewart, Dr. A. P., 75, Grosvenor Street; Taylor, Dr. W. M., Hatton Hall, Penrith; Vinen, Dr. E. H., 17, Chepstow Villas, Bayswater; Williams, Dr. Charles, Llandudno, Merionethshire."

The work of the Committee, he said, had for many years been a very onerous one. The members attended the meetings at great personal sacrifice of time and trouble; and it was their earnest desire to carry out the objects and wishes of the Association as far as they were in possession of them. The vote which had just been passed by the members of the Association gave to the Committee a new instruction, which he could promise would be carried out as loyally as previous instructions had been, so far as they were understood. With regard to the statements made in a pamphlet which had been distributed amongst the members, he believed they were unintentionally inaccurate; but as they were now about to start from a new departure, with fresh instructions, it was unnecessary to revive the controversies of the past. Their duty in future would be to urge the registration of disease by the householder without any compulsion being put upon the doctor. In moving the adoption of the report, he wished at the same time to ask the members to allow the chairman to sign a petition which had been prepared in behalf of militia surgeons, whose conditions of hardship had been fully explained in the JOURNAL, and taken into consideration by the Parliamentary Bills Committee.

Dr. EYTON JONES (Wrexham), in seconding the motion, said he felt he was only doing a public duty in saying how deeply they were all indebted to Mr. Ernest Hart for his incessant labours in behalf of the Committee. Having attended him in some of the deputations in London, he could testify to the great difficulty he had experienced in bringing men together from different parts of the country to assist him in his public work. He was glad to find that there was so large a Committee, consisting principally of representative men, and he was sure there would be no reason to complain in future of the want of publicity for their proceedings so long as the members of the Committee did their duty.

The motion was then put, and unanimously adopted.

Dr. CARTER said he had given notice of a motion respecting the constitution of the Parliamentary Bills Committee, but the complexion of the Committee had now been materially altered, and he would therefore withdraw it.

Dr. CARTER then moved a resolution on to the Parliamentary Bills Committee, that Dr. Alexander Forster, Manchester, and Dr. Royle, Manchester; and Dr. Forster, Manchester, be appointed to the Parliamentary Bills Committee.

Dr. CARTER then moved a resolution that the report of the Scientific Grants Committee be received and adopted, and that a sum of £300 be made for the purposes of the Committee: Dr. Wade, Mr. Wheelhouse, Mr. Alfred Baker, Dr. Lauder Brunton, F.R.S., Dr. Alfred Carpenter, Dr. Chadwick, Dr. Michael Foster, F.R.S., Pro-

fessor Humphry, F.R.S., Mr. Husband, Dr. R. McDonnell, F.R.S., Dr. Rutherford, Dr. Burdon Sanderson, F.R.S., Dr. Edward II. Sieveking, Dr. A. P. Stewart, Dr. Edward Waters, Dr. S. Wilks, F.R.S., Mr. Ernest Hart, Honorary Secretary."

It would be observed that, last year, the Committee had not expended £300, but only £225. That had not been their fault; they were most anxious to have applications from suitable persons, but, as the members were aware, a good deal of work was of a vivisectional character, and the difficulties in the way were great. Gentlemen did not care to undertake the duty of applying to the authorities for the proper licences. One gentleman, who had already done excellent work, would be ready to undertake an equally important investigation but for the difficulties in the way; and, until those difficulties were removed, he, as at present advised, would not attempt it.

Dr. CHADWICK (Tunbridge Wells) seconded the motion, which was unanimously agreed to.

The Use of Alcohol.—Dr. A. CARPENTER said that at the Public Health Section on Thursday the following resolution had been adopted:—

"That the President of the Health Section place in the hands of the President of the Association, at the annual meeting, the memorials which have been read in this Section, and request that they may be published in the proceedings of the meeting."

The resolution referred to several memorials that had been presented to him as President of the Section from different societies bearing upon the subject of the use of alcohol. They were very temperately and fairly expressed, and he proposed that they be taken as read and published in the minutes of proceedings.

The motion, having been seconded, was unanimously adopted.

Votes of Thanks.—The following resolutions were unanimously adopted:—

Moved by Dr. KEALY (Sheffield), seconded by Dr. HARRISON (Clifton):

"That the warm thanks of the Association be given the Mayor and Corporation of Worcester for granting the use of the Guildhall and Music Hall for the purpose of the Fiftieth Annual Meeting."

Moved by Mr. JONES MORRIS (Portmadoc), seconded by Mr. PARRY (Ferne):

"That the Magistrates of the County of Worcester be requested to accept the cordial thanks of the Association for granting the use of the Shire Hall on the occasion of the Fiftieth Annual Meeting."

Moved by Dr. BRIDGWATER (Harrow), seconded by Dr. E. WATERS (Chester):

"That the best thanks of the Association be presented to the Dean of Worcester for his Sermon at the Cathedral on Tuesday last, and to the Dean and Chapter for permitting the use of the Cathedral for the performance of the sacred oratorio of the 'Creation', and for the special service accompanying it."

Moved by Mr. HARTUM (Bath), seconded by Mr. E. DAVIES (Swansea):

"That the grateful thanks of the Association be given to the Philharmonic Society, and to the members of the Worcester, Gloucester, and Hereford Choirs and Choral Societies, and to the Organist to the Cathedral (Mr. W. Done), for their beautiful performance of Hadyn's sacred oratorio of the 'Creation'."

Moved by the PRESIDENT, seconded by Mr. W. D. HUSBAND (Bournemouth):

"That the best thanks of the Association be given to the Lord Lieutenant and the Countess Beauchamp for their hospitable reception at a garden party in the grounds of Madresfield Court."

Moved by Dr. CARPENTER (Croydon), seconded by Mr. ERNEST HART (London):

"That the cordial thanks of the Association be given to the President of the Association, Dr. W. F. Wade, and to the Honorary Secretaries, Dr. H. C. Moore, and Dr. J. C. Moore, for the service with which they propose to bring the Fiftieth Annual Meeting to a close."

Moved by Dr. FELCE (London), seconded by Dr. EYTON JONES (Wrexham):

"That the Reception Committee, the Honorary Secretaries (Dr. Crowe, Dr. H. C. Moore, and Dr. J. C. Moore), and Mr. Buck, the Honorary Treasurer, be warmly thanked for their able, devoted, and successful labours."

The President, Dr. W. F. Wade, left the chair, which was taken by the Treasurer, Dr. W. F. Wade, in the absence of the President of the Association.

It was moved by Mr. ERNEST HART (London), seconded by Dr. A. P. STEWART (London):

"That the hearty thanks of the Association be given to the President,

Dr. W. Strange, for his able and courteous conduct of the Fiftieth Annual Meeting."

The proceedings of the Fiftieth Annual Meeting then terminated.

LUNCHEON.

MEMORIAL OF SIR CHARLES HASTINGS, FOUNDER OF THE BRITISH MEDICAL ASSOCIATION.

The luncheon given by the Worcester and Hereford Branch to members of the Association took place on Wednesday, August 9th, in the Great Hall, Shire Hall. About 500 members were present. The chair was taken by Dr. STRANGE, the President of the Association. The Very Reverend the Dean, the Mayor of Worcester, and Mr. G. W. Hastings, M.P., were present.

After luncheon, the health of the Queen was drunk.

The PRESIDENT then said: My Lord, Mr. Mayor and gentlemen, the object of our meeting is twofold. First, we are met to do honour to the memory of our founder, Sir Charles Hastings. [*Applause.*] Then, we meet in order that we may have the pleasure of seeing as many friends as we can possibly pack in this great building; and, as this is the largest assembly we shall have, the occasion is a proper one for wishing you a hearty welcome to Worcester. The next toast (which will be drunk in silence) is the memory of our most worthy founder. It will be spoken to by Mr. George Hastings, who will give you some memorials of his father; and by Mr. Husband, who, from the high position he has held for many years in connection with the Association, perhaps knows more than anyone else of the exertions made by Sir Charles Hastings in its behalf.

Mr. HASTINGS: Mr. President and Gentlemen, I need not tell you that this is an occasion which strikes chords of deep emotion in my mind. You are all here to do honour, for which I thank you, to the memory of Sir Charles Hastings; but no one present can, in nature, feel as I feel at this moment. I am about to endeavour to say a few words to you upon several points which I think will illustrate to the Association which he founded, and which he served and loved so well, my father's character. He was a boy of great energy—a characteristic which he maintained through life. Like most boys of energy, he was much more fond of out-door pursuits, such as hunting and shooting, than he was of his books. But, from the earliest period of his life, singular to say, he manifested a leaning towards the pursuits of that profession which he afterwards adopted. There was nothing around him to lead him towards it. Born and bred in a country rectory, with its usual surroundings; having no single relative, and, as far as I am aware, no intimate friend, who was a member of the profession; even as a child, and still more as a young boy, his great love was to nurse anyone or anything that was sick or ailing. I have heard it often told by members of his family—by one who is now living at the age of a hundred years, still in full possession of her faculties—that he was seldom found without a sick chicken or some other creature about the place that needed his care; and that his one desire seemed to be to devote himself to anything in distress. At an age when most boys would still be at school, he expressed a desire to begin to learn the medical profession, and he was allowed to place himself under the care of two country practitioners living not far from his native home. He showed in a few months such remarkable aptitude, that they advised that he should be sent to London to have the advantage of seeing the hospitals and hearing public lectures. When he was only just turned eighteen, and possessed no medical qualification of any kind, he was elected by a majority of a single vote, after a close contest among the governors, house-surgeon of the County Infirmary at Worcester. I remember hearing the late Lord Lyttleton say that, unless the fact had rested on indisputable evidence, he should have refused to believe that a boy of eighteen could have manifested such wonderful capacity for his future profession as to be elected house-surgeon of an important medical institution, with an opponent in the field of the highest character, and a member of the Royal College of Surgeons. I venture to say that no one who has occupied the position has more fully justified the choice than he did by the services which for three years he rendered to the Worcester Infirmary. While there, he commenced those experimental researches which laid the foundation of his fame. There was practising in Worcester an eminent physician, who afterwards removed to London, where he was well known—Dr. Wilson Philip. He was then engaged in researches on the nature of the circulation and the action of the blood-vessels; and my father gladly undertook for him his experiments, and trained himself under Dr. Wilson Philip's eye to conduct the researches which he afterwards made for himself. He then left for the University of Edinburgh; and, when there, it is said that he was the first student of that University, and probably, therefore, the first student in the kingdom, who used the microscope for the purposes

of physiological research. He was ridiculed for it; but Charles Hastings had then, as throughout life, a mind impregnable to ridicule, because he knew that he was seeking truth, and seeking it in the right way, by actual experiment; and so completely did he outlast any prejudice of that kind, and so high was his reputation in the University, that when he took his degree of M.D. in 1818, he was offered by the Senate the professorship of physiology which had just then fallen vacant by the resignation of Dr. Gordon. I have more than once heard my father say that he was well aware of the brilliancy of the prospect held out to him by that professorship. With his love of experimental research, and his aptitude for it, it is not too much to believe that, if he had accepted the appointment, he would have forecasted some of the remarkable discoveries made in later years, and have, perhaps, been the first experimental physiologist of the day. But he always added, "I refused, because, from the moment I turned my attention to the medical profession, my aim was to become the first physician of my native county." A few months after his refusal, he settled in this city as a physician. It is not for me to say how he succeeded. There are many here who know that, in a very few years, he was in possession of the leading practice in Worcester and the neighbourhood, a practice which remained to him during the whole of his life. There was nothing of which my father was so proud among the many honours that in his later years were showered upon him, as to be a practising physician. It was the pride and glory of his life that he had attained to his original ambition of professional distinction and repute. [*Applause.*] I need not add that my father's professional success was in a large degree owing to the remarkable work which he published a few years after he commenced his practice. That work was the result of the continuation of the experiments which he had commenced under Dr. Wilson Philip. It has long been out of print, but a copy is in the medical library in this city, and in the library of the College of Physicians. It has been translated into more than one continental language; and I hold in my possession a number of letters and addresses, diplomas and honorary degrees, sent to him from various parts of Europe and America, in recognition of the value of his book. But my father was not merely a practising physician. From the earliest time that he followed his profession, he turned his attention to the wider question of the public health. At a time when sanitary matters were little understood, when the ordinary medical practitioner believed that his only duty was to cure the disease of the individual patient, Sir Charles Hastings had grasped the idea that the grand function of the medical profession was to prevent disease among the public. [*Applause.*] He gave a remarkable instance of his public spirit, and his devotion to self-imposed public duty, when the cholera first made its appearance in England, and at that time visited Worcester. I have heard from old inhabitants—and I see present the son of one from whose lips I have heard much on the subject—that my father, at that time, by his self-sacrifice and his fearless courage, when others fled and the whole city was in dismay, saved the lives and the health of the population. I know that the mayor and the corporation put themselves into his hands, and said: "Save us from this pestilence." He had the population removed from all the more crowded and pestiferous districts to the hills around, where they lived in tents and booths. He attended, I believe, individually, every case of cholera; he saw to the speedy burial of the dead, and to the cleansing of insanitary places; and I venture to say, that to him on that occasion may, without exaggeration or undue praise, be applied the words of Scripture—that, like the prophet of old, "he stood between the living and the dead, and the plague was stayed." [*Applause.*] My father paid great attention to the writings, reports, and inquiries of all the early sanitarians; and I have a considerable collection of the works which he had gathered together upon the subject. There may be some present who remember the lectures and public speeches, in which, again and again, at a time when such questions were hardly beginning to be understood, he urged upon the people of Worcester the need for pure water, for ventilated houses, and well-cleansed streets. Those who will refer to his papers, will see the remarkable facts that he brought forward, and how thoroughly he had grasped the question which has since, in a great degree, been understood by us all. And I cannot refrain from adding, what I perhaps know more of than any other living person, that it was owing in a great degree to my father's help, that the Public Health Section of the Social Science Association took, from the first, the prominent position that it assumed. He threw into it from the beginning all his energy, no doubt largely from natural affection towards myself, but in a great degree also from the need that he felt of spreading the knowledge of sanitary science among the people. Those who remember the remarkable address on public health, which he gave as President of the Section at the meeting in York, will bear witness how largely and deeply he had studied, and how well he could expound

the highest principles of the public good in relation to health. But there was another aspect in which my father's public work must be viewed. From the first, he was a naturalist and a man of science. An early Fellow of the Geological Society—the first, I believe, who ever wrote upon the geology of Worcestershire; the early expounder of all the remarkable geological features on the flanks of the Malvern hills; the friend of Murchison and Sedgwick, both of whom I remember seeing at his breakfast-table on the memorable morning when they started to the Malvern hills, the one to discover and to write his Silurian System, the other to investigate the system of the Cambrian rocks; the discoverer (as I may call my father) of the remarkable formation of the salt-rocks at Droitwich and the neighbourhood, and the first who pointed out that the brine-baths there were a great curative means for rheumatism and kindred diseases—my father put all these together in his work on the Illustrations of the Natural History of Worcestershire, now nearly two generations ago. Growing out of those researches of his was the museum in Worcester—so remarkable among provincial museums—to which he devoted more than thirty years of his life, and which, by the grace of the city of Worcester, will henceforth and for ever bear his name. [Applause.] Those studies of his led him to be one of the original members of the British Association for the Advancement of Science. He was at the first meeting at York, and you will find his name enrolled in the *Transactions* amongst those who helped to found that famous body. Now, what I desire to point out is, that it was out of all that I have been narrating to you that the British Medical Association took its origin in my father's mind. Out of love for his profession grew the desire to bring the members of that profession in unity together. Out of his zeal for the improvement of the public health came the wish that there should be in existence a public body that might, with professional knowledge, expound to the people, and practise for them, the principles of sanitary science. And out of that British Association for the Advancement of Science, of which he was an active member, came his idea of the organisation of another body which should do for the medical profession what the British Association was doing for science at large. So that, in what I have been saying, I have only been narrating what were the primary causes of the one great fact, the one great success of my father's life—namely, that he established and carried on this Association. I know, as few can know, how much he worked for it. I know that for many years, when he was acting as its honorary secretary, after a day passed in the assiduous pursuit of his profession, he would come home to spend the hours of the night or of the early morning in conducting the correspondence, organising the growth, and arranging for the meetings of your Association. I know that to the end of his life he remained devoted to your cause. Of the many meetings held, he never missed one; and his lasting desire, the desire which he expressed to his medical attendant when on his death-bed, was that, so far from the Association suffering from his death, it might go on to greater success, and fulfil all the expectations he had ever formed of it. Gentlemen, in saying this, I have endeavoured, as far as I could, to confine myself to simple facts. It is not the office of a son to pronounce his father's eulogy. Nor is there any need. The reputation of Sir Charles Hastings is bound up with the British Medical Association. Your great Society has been founded and exists on the stable basis of a wide profession, loyal to its traditions, and true to the public good. You embrace within your numbers a majority of the whole body of medical practitioners in Great Britain. Your organisation ramifies over the habitable globe; and on your ranks, as on the Queen's dominions, the sun never sets. I believe that your permanence is as assured as your present success and utility. You will celebrate in this ancient city, fifty years hence, the centenary of your existence, as you celebrate your jubilee to-day. Before you then, as before you now, will be a long and high career. Gentlemen, these things being so, permit me, in one word more, to crave your consideration. On this happy and triumphant day, bearing his name, inheriting his blood, bound to him by everlasting ties, I claim the privilege of committing to your hands for all time my father's well-earned fame. [Loud applause.]

MR. HUSBAND: After the memorial which filial piety has raised to the memory of so great a man as Sir Charles Hastings, I had hoped that some other person would have had the task of following the speech to which we have listened with so much interest. But, sir, as you are now our leader, I obey your command. In the first place, let me say how grateful we all (especially those who knew Sir Charles Hastings nearly fifty years ago) feel towards him for this great and noble Association. Sir, that meeting at Worcester in 1832 was a remarkable one. We have heard about provincial meetings and provincial interests, in comparison with metropolitan; but I think that there are no names that will live longer than some of those who assisted

Sir Charles Hastings on that occasion. When we remember such names as Dr. Kidd, Dr. Barlow, the two Conollys, Mr. Hodgson of Birmingham, Mr. Soden of Bath, and Mr. Hetling of Bristol, and the aid they rendered, we cannot but feel a deep debt of gratitude, not only to Sir Charles Hastings himself, but to the noble band of men who sympathised with him and cheered him in his labours. Our founder worked at a remarkable time. Though he may have seen farther than most other men, he could hardly have realised how greatly steam and electricity would render it possible to extend this Association throughout the length and breadth of the land. At present, its influence is felt wherever the English language is spoken. No greater tribute has been paid to that influence than by one who is its avowed enemy. When in the Royal Commission the other day some of the most acute intellects of the age endorsed the opinions on medical reform which Sir Charles Hastings enunciated from the first, why did one of its ablest members sever himself from his associates? It was because he had a dread of the influence of the British Medical Association. Yes, we are now a power in the State, and it is felt that no great measure affecting the profession can hope for success unless it has the *imprimatur* of this body. It was my privilege at Derby to hear the statesman-like speech of Sir Charles Hastings, when he enunciated those principles of medical reform which, thanks principally to the energy of Dr. Waters and those who have acted with him, have now been adopted by the Royal Commission, and which must mould any legislative enactment. From those principles I trust we shall never swerve. After the founding of the Association, it was the tact and kindly feeling of Sir Charles Hastings that led us safely through one part of our history in which we appeared likely to suffer disappointment. We had stormy discussions, and, at the second meeting at York, we went through three days without the relief of any scientific work. I would wish to vindicate what Sir Charles Hastings did on that occasion. Having founded a provincial association, he said that until he had the assurance of the majority of the members that they desired to enlarge its borders, he felt bound to stand to his original idea. But when that desire was expressed by the members, no one who was present can forget the kind and graceful way in which he listened to the proposal. Let me conclude what I have to say by reading the few words with which Sir Charles Hastings ended his inaugural address.

"Gentlemen, you will, at any rate, admit that the objects I have thus hastily introduced to the notice of the meeting are worthy of deep meditation. The contemplation of them appears to me, indeed, to open to us a vast and unbounded prospect, and to beget high and lofty thoughts of our future proceedings. I may be sanguine in my expectations; but I cannot help indulging the gratifying, the cheering, the delightful thought, that, if we engage in this undertaking, as we are bound to do by the obligations which our profession imposes on us, with the zeal and alacrity of men anxious for the good of mankind, the Association must be of some use; must have a direct tendency to extend the empire of knowledge, and to increase our power over disease. *Valeat quantum valere debet.*"

The PRESIDENT, in presenting a marble bust of Sir Charles Hastings to the mayor and corporation, said that, had not their founder's life been rather prematurely cut off by disease, it would have been quite within the bounds of possibility that he himself should have been present on that occasion to receive the acclamations of the members; and the sight would have been a grand one. Solon had said: "Call no man happy until he is dead." Another sage had declared—

"The evil that men do lives after them,
The good is oft interred with their bones."

A greater than either had said: "The good man goeth to his rest and his works do follow him." These sayings, contradictory as they might appear, were true in different senses. Surely they might transpose the somewhat cynical words of Shakespeare, and say: "Happy is the man the evil of whose life is buried with his bones, but the good that he did lives after him." And of no man in their neighbourhood could that be said with more propriety than of Sir Charles Hastings. Like all men, he had his faults; but it was doubtful whether any now remembered them. The good that he did lived to the present day, and culminated at that moment, assembled as they were in large numbers to do honour to his memory, and to proclaim the success of the Association which had been reared by his genius and established by his perseverance. It was fitting that his fellow-citizens should honour the memory of one who had ministered with skill and mercy among them; and that his fellow-practitioners should join in testifying to his talents and his energy. The bust which he had the honour of presenting to the town, when placed in the public library, would look down upon many generations of the youth of Worcester endeavouring to improve the talents that God had given them; and he trusted that

the memory of the good deeds of Sir Charles Hastings would remain as long as the imperishable marble itself. [Applause.]

The MAYOR OF WORCESTER said that, as the representative of his fellow-citizens, he gratefully accepted the beautiful work of art presented to the town by the Association, which he had the authority of Mr. Hastings for saying was an admirable likeness. The bust would be treasured as a memorial of one whose life, talents, and many good qualities had shed lustre upon the city of his adoption. It would also be regarded as a memento of the jubilee meeting of the British Medical Association, now returned in strength and vigour to the city whence, fifty years ago, it issued a mere weak bantling. It would likewise be valued as a work of art by a Worcestershire artist, Mr. Brock. The citizens of Worcester most heartily welcomed the Association to their ancient city. They were proud to have among them medical men who were so well able to carry on the Association founded by Sir Charles Hastings and his colleagues. He desired to congratulate Dr. Strange on the honour conferred upon him by his brother medical men; and at the same time to congratulate the Association on having secured the services at its jubilee meeting of so able, courteous, and judicious a president. [Applause.] Again he begged to offer his cordial thanks for the handsome gift presented to the "faithful city".

The company then separated.

THE DINNER.

The annual dinner of the Association was held at the Guildhall on Thursday evening, August 10th. Dr. STRANGE, the President, was in the chair, and was supported by the Lord Bishop of Worcester, the Dean (Lord Alwyne Compton), Sir James Paget, Bart., the Mayor of Worcester (Colonel Stallard), Sir Richard Temple, Bart., G.C.S.I., Sir E. A. H. Lechmere, Bart., M.P., Mr. G. W. Hastings, M.P., Mr. T. Rowley Hill, M.P., Mr. McIntyre, Q.C., M.P., Rev. Canon Melville, the President of the Council (Mr. Wheelhouse), the Sheriff of Worcester (Mr. Goodwin), the Mayor of Hereford, Mr. Stokes, Dr. Humphry, Dr. de Pietra Santa (Paris), Dr. Sutton (Pittsburg), Dr. Crowe, Dr. Wade, Mr. S. Southall (Town Clerk of Worcester), Mr. C. H. Birbeck, Dr. Chadwick, Mr. Husband, Dr. Borchardt, Dr. Waters (Chester), Dr. Moore (Belfast), Rev. Canon Cattley, Rev. E. Vine Hall, Ald. Josiah Stallard, Mr. W. Done, Dr. A. Carpenter, Mr. Ernest Hart, Dr. Dempsey, Dr. A. P. Stewart, Dr. Allbutt, Mr. Prichard, Mr. Bartleet, etc. More than two hundred were present.

The PRESIDENT gave the health of the Queen, which was loyally received.

The next toast was "The Prince and Princess of Wales," also proposed by the President.

Sir RICHARD TEMPLE, G.C.S.I., proposed the health of the Army, Navy, and Volunteer Forces. It was well, he said, that the toast should be drunk by such an assembly, at a moment when English sailors and soldiers were proceeding to encounter, not only a human enemy, who it might be hoped would prove contemptible, but other enemies before whom the stoutest heart might quail, namely, the rising waters of the Nile, and the fevers that might follow. The Russian Emperor once said that he had two generals in reserve—General January and General February. In like manner, the enemies of Great Britain had now in reserve General Nile and General Malaria. Medical men were well aware that nowhere was a better status maintained for them, that nowhere were their emoluments more completely secured, even down to the very evening of life, than nowhere were their services recognised as more vital, than in tending the wounded under fire. They would drink the toast, therefore, with a peculiar knowledge of its significance in the highest and deepest sense. He would couple the toast with the name of Surgeon-General Longmore, who, after brilliantly displaying the enthusiasm of humanity in actual warfare, had become the greatest authority in the kingdom upon military surgery; and also with the name of Lieutenant-Colonel Stallard, who was known throughout the whole country as the embodiment of all that a volunteer commandant ought to be. [Applause.]

Surgeon-General LONGMORE, in acknowledging the toast, said that the medical service was about to be put upon a severe trial. The records of former campaigns in Egypt showed that they would probably have to encounter grave, acute diseases in that country. He believed that the medical departments of the army were well prepared to meet whatever exigencies might arise. There were in the expedition men of great knowledge and great experience in tropical and sub-tropical diseases, and with their great skill and the great improvements that had taken place of late years in the organisation of field and stationary military hospitals, and with the complete stores that had been sent out, the department would be found equal to the occasion.

[Applause.] He had no doubt that, at the conclusion of the campaign, the departments would be found as worthy of the approval of the authorities and of their professional brethren as they had been in recent campaigns in South Africa and in the Ashantee war.

Lieutenant-Colonel STALLARD said that the spirit of the reserve forces had been shown, by the way in which the men of the first class army reserve had joined their colours within the last few weeks, and that at a time when harvest operations were in full swing throughout the country. With regard to the volunteers, the present campaign was the first in which volunteers proper had been permitted to share the honours of war with their brethren of the line, and he had no doubt they would acquit themselves creditably if the opportunity were presented to them.

Dr. HUMPHRY proposed the health of the Bishops and Clergy of the dioceses of Worcester and Hereford. The sciences, he said, of theology and religion bore to the science of medicine somewhat the same relation as that which physiology bore to anatomy. It was the part of medical men to minister to the body; to investigate its processes; to tend it from its entrance into life until the time of its departure; to guard it from evil and contagious influences; to watch over it in all the varied periods in life; to help it to retrace its steps when it had erred from the right path, and after death to consecrate it, where they were allowed to do so, to the great purpose of usefulness to those who remained. [Applause.] The work of the other profession was to minister to the mental, moral, and spiritual qualities of men, to keep them from the contagion of evil influence; and to prepare them for higher and better conditions. The two sciences were essentially the one to the other. No deterioration of body could take place without a corresponding deterioration of the mental and moral faculties. Dirt, disease, and demoralisation were essentially connected; and in like manner a healthy, moral, and mental tone was the necessary associate of a healthy body. The great danger of the future of civilised countries was the moral deterioration, which would be followed by the physical degeneration of the species. It was an easy thing to cleanse the sewers and clear out the houses, but it was a far more difficult thing to purify the moral atmosphere, and for that work they were dependent in the main on the profession whose health he proposed. Both professions should unite their efforts on the common platform of usefulness to humanity, and should stand together upon the holy ground of the sick chamber. They both had heresies to contend with, and let them beware how they despised those heresies. Every heresy had somewhat of truth in it, and their effort should be not to extinguish the spark of truth, but to nurture it and keep it alive. The President had stated in his admirable address to medical men that he had no thirty-nine articles to subscribe to. If the address had to be given at the end of the evening instead of the beginning, the President would probably have said that, although they had not thirty-nine articles, they had a tendency to create for themselves a code of discipline, and of articles of a still more intolerable kind. While they sometimes spoke scoffingly of the experience of another profession, let them beware lest they become still more intolerant themselves. He begged to associate the toast with the names of the Bishops of Worcester and Hereford. He was glad to remember that those two bishops, as well as the Dean of Worcester, were members of his own University. The Bishop of Worcester was for many years its guardian spirit, to whom they always looked for advice and assistance in their difficulties. He was the man, among all others, who stood in the breach when questions respecting the medical school were pending. Some of their friends had passed away from them—some upwards to the episcopal bench; some, he grieved to think, downwards into the abysses of the Alps, where another of his dear and excellent pupils had lately fallen a victim. Such losses were almost more than they could bear. When, however, they lost the Bishop of Worcester, their grief was to a certain extent compensated by reflecting on the gain he would be to the diocese and to the Church of England at large. [Applause.]

The BISHOP OF WORCESTER, in acknowledging the toast, said that, under any circumstances, the clergy of the two dioceses would gladly welcome the British Medical Association at any place, but they had a special pleasure in welcoming it at its birthplace on the occasion of its jubilee, founded, as it had been, by their distinguished citizen, Sir Charles Hastings. He congratulated the Association on the position it had attained, growing, as it was, in public estimation, and increasing largely in numbers. He sometimes wished that a Society for the Suppression of Useless Societies existed—[laughter]—but he must except those two great societies, the British Association for the Advancement of Science and the British Medical Association. He desired to take that opportunity on behalf, not only of the clergy of the dioceses of Worcester and Hereford, but of the kingdom, to ex-

press their thanks to the medical body at large for the support and help which they received from them on all occasions in their own families, and especially in the infirmaries scattered all over the country. He often looked with intense admiration at the work which medical men did in the infirmaries, for which they obtained no reward except the gratitude of the poor patients whom they relieved, and of the managers of those excellent institutions. In every parish in the country, there was no one whom the clergy looked upon as a greater friend and helper than the medical man who attended the sick and suffering.

Dr. A. CARPENTER, in proposing the health of the Dean and Chapter of Worcester, referred to the kindness of that body in placing the cathedral at the disposal of the Association, at the opening service, and for the performance of the oratorio, and expressed a hope that the profession would take to heart the cautions which the Dean had given them in his admirable sermon.

The DEAN OF WORCESTER acknowledged the toast. He said that it required a great amount of courage to undertake to preach before such an assembly in the Cathedral. He had, however, done what he felt to be his duty, and only wished that he could have done it better. It had been a great satisfaction to the Chapter and to himself to receive the members of the Association in the Cathedral to hear the oratorio; and they had taken care that it should be presented in such a form as that all might feel that they were not assembled in a concert-room, but in a cathedral, to offer praise to Almighty God. They were all greatly indebted to the efforts of the Philharmonic Society for its kind assistance, and also to the able organist and musical trainer, and the pupils who had done so much credit to their master.

Sir JAMES PAGET, who was received with loud applause, said: Mr. President, my lord, and gentlemen, I will, if you please, take a part of your kind applause to myself; but I am sure I shall be right in ascribing a large portion of it to the fact of your being aware of the toast which I have the honour to propose to you. [*Vo. no.*] It is the toast of "Prosperity to the British Medical Association," a toast which I think we shall not drink with less heartiness because I suspect all of us fully believe that in the time to come it will be thoroughly fulfilled; and that an Association such as this, which can show so brilliant a gathering, and such admirable good work done after a lapse of fifty years, may fully expect to face, with still increasing usefulness, another fifty years, and fifty years after that, and I know not how many besides. If we look at the history of the Association in the past, of which I can myself remember many years, there have been slight undulations in its progress; but there has never been anything like a recession from the great principles on which it was started. It has been constant in its steady advance; constant in its usefulness; constant in the influence it has exercised upon the profession; constant, best of all, in the promotion of knowledge and good feeling amongst all the members of our calling. In proposing "Prosperity to the British Medical Association," I may be permitted to refer to two of its chief functions, which I suppose may be described as political and scientific; but I am sure you will excuse me if I speak rather of the second than of the first, being that to which I am by disposition far more inclined, and that of which I may speak with some knowledge after many years of study, leaving the other to those who can speak of it with much more knowledge than myself. Many of you have had the advantage of hearing—I regret that I could not be present during its delivery, but I have had an opportunity of reading an abstract of it—the address delivered by our President; and I should indeed be glad if I could have expressed, as he did, the opinions which he holds in regard to the relation of our profession to political work. In referring to the slight interest which I have had in the political work of the Association, I do not refer to that part of its work which is included in its self-government: for I hold that, as the President expressed it yesterday, our great anxiety, our great strife, should be to be a self-governed profession—[*Applause*]—to know our own wants, and not to go to others to help us; to find out the remedies for ourselves; to find out by careful, patient controversy, and mutual concessions, how we may, without any external help, bring about the results which the best and the largest number of us wish for. Let us be, as all highly cultivated persons should be, self-governed. None can know so well as ourselves our need; none can know so well the remedy we require. It tells of feebleness, of cowardice, and want of self-reliance, when we want to go to any Parliament living to help us. [*Applause*.] More than this I will not say. While I hope for the prosperity of the Association in all its political bearings, chiefly in its self-government, and for which it has its own parliament, if I speak now more of the scientific progress of the Association, I speak of that of which I have had better knowledge, having more carefully watched it; and I do not know any part of the work which could be spoken of with more hearty congratulation. I had the singular hap-

piness (singular amongst those who are here, for very few are now present who were then here, though I see some around me) of being at the meeting of the Association in this same hall in the year 1849, when the admirable and revered President of the Association was Sir Charles Hastings. I remember at that time that the scientific aspects of the profession were looked upon as things not exactly belonging to a body so eminently practical as the Association professed itself to be. It was to promote in all its best aspects the immediate utility of the profession, the practice of it from day to day, the best methods of watching the sick, and carrying out the practical work devolving upon us. When I now look at the list of Sections, I see that the subjects brought forward include many in regard to which it would be hopeless to think that any real practical advantage will come within the next twenty or thirty years. Now I hold that this is a very good test of true scientific inquiry and true scientific temper. There is, I believe, a society in this kingdom called the Pure Mathematical Society, and I have been told that they have one toast after dinner, "Prosperity to Pure Mathematics; may it never be of any use to any man." [*Much laughter.*] Now, while not falling in with that in its strictest meaning, I think it does represent strongly what should be the temper of any man of science: that he should not think of looking to any very great practical advantage. Let him find out the truth now, let the utility of it come, as it most surely will. [*Applause.*] Especially let him not look at that utility of truth which comes in the form of a money reward. In regard to science, I cannot but say that great changes have taken place in this respect. Every science is becoming an opportunity of money-making. I remember the time when ours was pointed at as rather an exception to the rule. Chemists, physicists, electric scientists, were regarded, as they were in truth, as men giving themselves to the pursuit of knowledge purely for the love of truth and the admiration of God's works. They have now reached the condition of a profession better than our own. I do not for a moment doubt that it is so much the better for science, and that all those sciences will be pursued by a larger number and with more zeal; but I fear, and I should fear for ourselves, that when the gain is the direct utility of the pursuit of science, the mind and character of scientific men will suffer in proportion. I earnestly hope that this Association will take its full share in promoting the early education of all our students in thoroughness and accuracy, an education so thorough that, although they that look on may say they are absolutely learning things that can be of no use in their after-profession, they shall yet pursue that knowledge with all their hearts, for there is an utility in all science which is inevitable, the utility of learning with accuracy. [*Applause.*] I speak with some hesitation or with some warning as to what we are in danger of. It is that in the multiplication of scientific pursuits, and in the multiplication of the means of publishing, we are losing the accuracy which should lie at the very beginning of our inquiries. There was a time when poetry, history, and all knowledge could be transmitted by word of mouth. Everyone could then be a good oral witness, and I suppose men were never, I will not say liars, but never inaccurate. Well, if one asked now-a-days what is the use of hearsay, if one were to ask how far one could rely upon anything which is matter of common conversation, there is not a fact stated that would bear the smallest building of science upon it. With our increased means of publishing, it must be remembered that the publishing of error is quite as easy as the publishing of exact truth, and that everything published has to be scrutinised with the most exact care, for the error that may be mingled with it. This I hold is what this Association will have to bear well in mind, while it promotes, in every form and by any multiplication of its sections that may be necessary, the study of exact science—science which may be considered to be for the present, and for a long time to come, useless. I doubt not that this will be the career of the Society. Year by year it will continue to inquire and discuss, and every year it will be eliciting truth. Only let disputes be chiefly on the political side. Do not let our disputes be very noisy on the scientific side. Remember always that it is only through clear and undisturbed waters that you can see what lies at the bottom. In storms of controversy, there is nothing to be found but the billow that moves to mischief and the foam that disappears. [*Loud Applause.*] I feel assured that there is no toast proposed to-day that will be fulfilled in a perfect manner more than my own, no toast of which we can have year after year a repetition with a more clear consciousness that every year last year's toast was justified, and has been well answered. I propose to you then, "Prosperity to the British Medical Association," coupling the toast with the name of one of whom I will only say that I believe he represents in this Association exactly the temper, the feeling of justice, the feeling of liberality to all, which should be the characteristic of all; that he does it also with a clean and clear pursuit of knowledge, whether it be useful or

not. May he live long enough to apply the knowledge he has acquired with the greatest utility, and the greatest possible advantage to those who may be so happy as to be under his care; but I know that he believes both for himself and for all around him, that whether it be useful or not, whether it be profitable or not, if it be only true, the knowledge to be gained must be gained at any price. [*Applause.*]

Mr. WHEELHOUSE, in responding to the toast, thanked Sir James Paget for the kind manner in which he had referred to him, and in the name of the Association he thanked the mayor and the citizens of Worcester for the efforts they had made to make the meeting as successful and brilliant as any of its predecessors. He also thanked the profession in the town, upon whom the stress and burden of the effort had chiefly fallen. At the same time, he desired to thank the professional musicians who had given them so much pleasure at the cathedral. After such a reception, it could hardly be doubted for a moment that the Association was in a prosperous condition. The little band of men who were gathered together at the time when Sir Charles Hastings first instituted the Association had grown to about ten thousand members, and that fact alone was sufficient to show that the Association had pursued a most prosperous and successful career. His earnest prayer was that that prosperity might be long continued, as he believed it would be if only they were true to themselves. Their thanks were greatly due to those who had delivered the annual addresses. For himself he felt, as no doubt many others did, that he should leave the "faithful city" a better and a wiser man, and determined to seek after higher and greater truth than he had ever been able to attain. He would remind them of the fable of the bundle of sticks. So long as they pulled together they could do great things, but if they broke asunder, each man thinking only of his own interest, the Association would decline in prosperity and utility. If it had not been for the magnificent oration that they had heard at the luncheon on Wednesday—an oration replete with filial piety—he should have been glad to say something with regard to the founder of the Association; but he felt that any words that he could say would only detract from the splendid address which had brought so vividly before them the life and character of Sir Charles Hastings. If their founder could only have lived to see the success which the Association had attained, he would be heartily rejoiced that the work he had begun had gone on increasing year by year as a labour first of love, secondly of utility, and thirdly of patient, earnest scientific endeavour in searching after truths, to find out which they had bound themselves together for life. [*Applause.*]

The PRESIDENT proposed the health of the Lord-lieutenant of the County and the County Magistrates. He alluded to the great assistance, pecuniary and otherwise, rendered by Earl Beauchamp to the local charities, especially those of a medical nature. He had watched his career for more than twenty years, and could testify that he subordinated everything to the good of the institutions which he supported. Mr. Hastings also, as vice-chairman of the quarter sessions, had done everything in his power to foster local institutions, and to promote the advancement of social science.

Mr. HASTINGS, M.P., in the absence of Earl Beauchamp, who was detained in London by his legislative duties, acknowledged the toast. The magistrates of the county, he said, though not able to do much in reference to the meeting of the Association, had done what was in their power by giving up to the members, for the first time, the entire use of the Shire Hall for the purpose of their annual gathering. He need not say how happy a week it had been to him. He was one of the few who were present thirty-three years ago in that room when his father presided over the dinner of the Association, and he well knew the progress which the Association had made since that time, especially in regard to the advance of medical science, which was the great object of its existence. It had had great influence in bringing the profession together, and keeping it united. That was another of the great objects which Sir Charles Hastings had in view; and all who remembered him would recollect the sympathy which he had with all his kind, and above all, with his medical brethren. The Association which he had founded, and which he had loved so well, had prospered in a way which he could hardly have expected, and exercised an influence not only throughout the kingdom, but over the whole civilised world. He well remembered the speech of Dr. John Conolly in proposing his father's health; but he did not think that even he, with all his warmth of imagination and depth of feeling, could have anticipated all the good which Sir Charles Hastings had done in founding the Association. He hoped that the Association would continue to prosper, and that the aim of every one of its members should be, above all, the promotion of the public good.

Sir E. A. H. LECHMERE proposed the health of the President, and said he desired, as President of the St. John's Ambulance Association, to express the cordial thanks of himself and his colleagues for the gene-

rous aid rendered to that Association by the medical profession. The inhabitants of Worcester were delighted that Dr. Strange had been so highly honoured in connection with the present gathering, and they all felt that he was worthy of the honour. He was held in high esteem for his social and professional qualifications. He had been constantly associated with all the hospitals and other charitable bodies of the city; and one of his first acts was an endeavour to provide an open space in the centre of the city for the benefit not only of the rich but of the poor—an effort, however, that had been frustrated in consequence of a want of appreciation on the part of his fellow-citizens. Dr. Strange's ambition had always been to be counted among the learned and the good who strove to make the future happier than the past.

The PRESIDENT, in acknowledging the toast, said that, when it was whispered that the jubilee meeting of the Association ought to be held in the city of its birth, he was struck dumb at the prospect of 10,000 members or their representatives coming to so small a city. Englishmen were not, however, to be cowed, and his *confrères* took the matter up with characteristic energy. Indeed, if they had not done so, they never could have held up their heads, and he himself should have emigrated forthwith. [*Laughter.*] If their means were small, he knew that the generous spirit of the strong would not think ill of the weak in putting forth their best endeavours. The time so long looked for had at length come, with all its duties, anxieties, and pleasures. There had, doubtless, been many shortcomings, but he and his brethren had endeavoured to do their best for the accommodation and comfort of the members. [*Applause.*] Whatever the profession had done, the Association had, at all events, received a most cordial reception from the heads of the city and the county. The Mayor and Corporation had placed the Guildhall at their disposal. The Mayor had entertained them with his accustomed hospitality, and he had no doubt that, if any other prominent citizen had been in his place, the result would have been the same. The Dean had also risen to the occasion in receiving the Association as he had done in the cathedral, and Earl Beauchamp had heartily responded to his (the President's) suggestion that he should give a garden party to the members. His earnest desire and prayer was that the varied incidents of the meeting might show the world that medical men were as mindful of their duties as ever, that they were made of the same stuff as their fathers, and would be always ready to apply their time and talents to the alleviation of misery, manifesting that true philanthropy which was really the crowning honour of their profession.

Dr. WADE, in proposing the health of the Mayor and Corporation of Worcester, said that the success of the meetings of the Association depended to a great extent upon the good will of the authorities. They were greatly indebted to the Mayor and Corporation for the use of so magnificent a building for their meetings and entertainments, and in manifesting so cordial a sympathy with the objects of the Association.

The MAYOR OF WORCESTER, in acknowledging the toast, said that the Corporation and citizens heartily welcomed the Association to the city. He could assure the members that the splendid presentation which they had made to the Corporation in the bust of Sir Charles Hastings, would be deeply treasured as a memento of that occasion, and as a memorial of the good and able man who had shed so much lustre upon the city.

Dr. CLIFFORD ALLBUTT proposed the health of the President-Elect, Dr. A. T. H. Waters. He congratulated the Association upon the prospect of meeting next year in so noble a city as Liverpool, and on the selection as President of one who would vie even with the present President in the grace and cordiality with which he would welcome them.

The PRESIDENT acknowledged the toast on behalf of Dr. Waters, who, he said, was unable to be present, having left with his family for the continent.

Dr. WEST proposed the health of the writers of addresses, and officers of Sections coupled with the names of Dr. Wade, Mr. Stokes, Dr. Allbutt, and Mr. Prichard. He was glad to have made the personal acquaintance of Dr. Wade, to whom they owed so much for his researches on diphtheria, and albuminuria associated with it. They had also learned much from Dr. Allbutt in his ophthalmoscopic teachings. Another name comprised in the toast was that of Mr. Stokes, whose father was his (Dr. West's) teacher and revered friend during the time he lived in Dublin; one of the best men and truest Christians he had ever known in his life. Another name in the list was that of a former pupil of his own in St. Bartholomew's Hospital—the son of a great and good father, whose high fame he worthily maintained.

The toast was briefly acknowledged by Dr. Wade, Mr. Stokes, Dr. Allbutt, and Mr. Prichard.

Mr. HILL, M.P., proposed the health of the Reception Committee

and the Honorary Secretaries and Treasurer, which was acknowledged by Dr. Crowe.

Mr. PRICHARD proposed the health of the Editor of the BRITISH MEDICAL JOURNAL.

Mr. ERNEST HART said that, instead of making a speech, he would read the following lines, which, he said, had been forwarded to him by an anonymous friend, with reference to editorial duties.

"Can he leave all his wrongs to the future, and carry his heart in his cheek?
Can he do an hour's work in a minute, and live on a sixpence a week?
Can he courteously talk to an equal, and browbeat an impudent dunce?
Can he keep things in apple-pie order, and do half a dozen at once?
Can he press all the springs of knowledge, with quick and reliable touch,
And be sure that he knows how much to know, and knows how to not know too much?
Does he know how to spur up his virtue, and put a check-rein on his pride?
Can he carry a gentleman's manners within a rhinoceros' hide?
Can he know all, and do all, and be all, with cheerfulness, courage, and vim?
If so, we perhaps can be makin' an editor 'outer of him!
And 'tis thus with our noble profession, and thus it will ever be; still
There are some who appreciate its labours, and some who perhaps never will."

As long as he held the office of Editor, he would endeavour to act for the good of the Association and of each individual member.

The company then separated. A selection of glees was sung during the evening.

SERVICE AT THE CATHEDRAL.

A LARGE number of the members of the Association attended Divine service at the Worcester Cathedral on Tuesday, August 8th, when a sermon was preached by the Dean of Worcester, Lord Alwyne Compton. They were accompanied by the Mayor (Lieut.-Colonel Stalard), and several members of the corporation, who assembled at the Guildhall and walked in procession to the cathedral. A slightly altered form of Evening Service was used, the lessons being read by the Revs. Canons Melville and Wood. The Very Rev. the Dean selected as his text Job xxiii, 8-9, and Psalms cxxxix, 7-9. He observed that these passages seemed at first sight to be contradictory, and, if taken by themselves, inclined them to think that they represented different phases of religious thought and religious knowledge. But if they were closely examined, it would be seen that there was no such difference, that the patriarch was as firmly convinced of God's universal presence as was the psalmist. Was not the mental condition of Christians much the same? Some there were who, because they could not see God, concluded that He was not there; and some there were who said that He might indeed be there, but as they could not see Him they could have no certainty of His presence. Setting aside the assertion of the atheist that because he could not find God therefore God was not; what did they think of the more modest conclusion of the agnostic, that God might be or might not be? Were they justified in believing in God, although they could not see Him with the eye of science? After alluding at some length to the different opinions held as to whence came religious belief, the Dean said they could not grasp all the problems which presented themselves as being connected with the creation, how it began, how matters began to move, how life first arose—all these were matters which they could not master, which they could scarcely conceive. It was impossible for the Christian to thoroughly understand how He whom they believed eternal and unchangeable should have begun to create. It was difficult for one who was not Christian to understand how matter which he looked on as eternal began at some time or another to move in a wonderful way. Eternity in the past was one of those facts which they could not deny, but which they could not grasp—it might be could not prove, but certainly could not disprove. The central truths of Christianity were essentially miraculous. The Incarnation brought before them facts quite transcending all the course of events in which science was concerned. The great event of the Resurrection was spoken of not only as an important part of the whole scheme of redemption, but also as a proof of Christianity, and there they found what they expected to find somewhere—the meeting-place of faith and science. In conclusion, the Dean said he had spoken on the subject not without hesitation, knowing that many amongst the congregation must of necessity have it brought before them in their professional studies; but the truest solution of the difficulties contained in the matters to which he had alluded was to be found not so much in study as in work. There was a large congregation.

Haydn's oratorio, "The Creation," were performed by the Festival Choirs of Worcester, Gloucester, and Hereford, these local resources—the value of which has often been proved—being supplemented only by the engagement of Miss Anna Williams. The chorus numbered 200 voices. The service commenced at a quarter to eight o'clock with the Lord's Prayer, and the sentences, "O Lord, open thou our lips," etc. "The Creation" was then sung, the recitatives and airs being taken by Miss Anna Williams, Mr. Dyson, and Mr. Millward (of Worcester Cathedral). Miss Williams sang "The marvellous work," "With verdure clad," and "On mighty pens;" and her great reputation as a singer in oratorios—upheld by the prominent part she has taken in several Festivals of the Three Choirs—renders it unnecessary to praise her execution of them. Mr. Dyson sang the tenor solos, "Now vanish," "In splendour bright," and "In native worth;" and Mr. Millward the bass solos, "Now furious storms," "Rolling in foaming billows," "Ye winged tribes," and "Straight opening," with a degree of skill that fully justified those who arranged the service in their selection of the singers. The members of the Festival Choirs are so familiar with the music, and so well qualified to perform it worthily, that an excellent rendering of the choruses was looked for, and the expectation was not disappointed. Mr. Done acted as conductor, and Mr. Garton was at the organ. After the chorus, "Achieved is the glorious work," several collects were said; and a collection, amounting to £63, was made for the British Medical Benevolent Fund.

ENTERTAINMENTS.

EARL BEAUCHAMP'S GARDEN PARTY.—On the afternoon of Friday, August 11th, Earl Beauchamp, Lord-Lieutenant of the county of Worcester, and Countess Beauchamp gave a garden party at Madresfield Court to the members of the Association. There were also present a large number of the inhabitants of the city and county, including many ladies. The meeting was, we believe, the largest social gathering of the kind that has been seen for many years—at least, in the county of Worcester. The visitors were received by the Lord-Lieutenant and Countess Beauchamp, and afterwards spent a very pleasant afternoon in promenading over the grounds, on which, at various points, were stationed two bands—those of Messrs. Synner and of the 2nd Worcestershire Rifle Volunteers—and a party of glee-singers from Birmingham.

SOIRÉE AT THE SHIRE HALL.—On the evening of Friday, the President and Mr. G. W. Hastings, M.P., received the members of the Association and other visitors, including a large number of ladies, at a *soirée* in the Shire Hall. The company, on entering the large hall (the same as that in which the presentation of the bust of Sir Charles Hastings had taken place on the previous Wednesday), were provided with chairs; and sat for nearly an hour listening to an excellent performance of vocal and instrumental music. They afterwards walked in other parts of the building and in the garden at the rear, which was lighted up with Chinese lanterns, and where a portion of the glees announced in the programme were sung. The weather was fine, and a very pleasant evening was spent.

VISIT TO DROITWICH.—At the invitation of Mr. Rock, the proprietor of the Royal Brine Baths, a large number of the members of the Association visited Droitwich on Friday, August 11th. In response to a suggestion made by the Mayor (Alderman Blick), the inhabitants of the borough decorated it with flags, banners, and streamers, which floated in the breeze from almost every house on the road from the station to the Baths. At the entrance to the station was an arch composed of flowers and evergreens, bearing on the one side in letters of salt, the staple trade of the town, "Welcome to Droitwich," and on the other "Success to the Medical Congress." Placed on the arch were four vases, made of salt. At the Westcroft Inn there was a pretty display of flags extending across the street. The front of the Raven Hotel showed skilful ornamentation by the display of flags and flowers. Near to St. Andrew's Church was a floral arch bearing on both sides the words *Sal sapit amur*, ornamented with vases of salt. At the entrance to the Baths was another arch, having on it the words, in letters made of salt, "Success to the Royal Saline Baths." The company arrived by special train, and walked to the baths, where they were received by Mr. Rock, who presided at luncheon, and he was supported on the right by the Mayor (Alderman Blick), the Venerable Archdeacon Lea, and Dr. Bainbridge, and on the left by Dr. Roe (Secretary), Mr. H. F. Vernon, Mr. J. Holyoake, and the Rev. W. W. Douglas. After luncheon, Mr. Rock gave the toast of "The Queen." "The health of Mr. Rock" was proposed, and

SPECIAL SERVICE AT THE CATHEDRAL: HAYDN'S ORATORIO, "THE CREATION."

The service held in the Cathedral, on Wednesday, Aug. 9th, was a feature unprecedented in the annals of the Association, and was most acceptable to many citizens as well as to the visitors. Parts 1 and 2 of

thanks given to him for the manner in which he had entertained the company.—Mr. ROCK and Dr. BAINBRIDGE responded, the former hoping that for cases of disease for which they were specially applicable the baths would be widely used. Dr. BAINBRIDGE recommended the baths to those who were affected with certain diseases. Mr. ROCK proposed "The Health of the Mayor and Corporation of Droitwich." He thought, after the manner in which the citizens had responded to his invitation to decorate the borough, the very least they could do would be to drink his health.—Alderman BLICK (Mayor) thanked those present for the compliment they had paid him. In the district they felt the warmest interest in the baths, and they had hoped that the visit of the British Medical Association would be the means of their becoming more widely known, and that they would be productive of good to the town and neighbourhood. Owing to the shortness of time no other toasts could be proposed. The company left to catch the special train which was waiting to convey them to Malvern in order to attend the garden party given at Madresfield Court.

MEMBERS PRESENT AT THE ANNUAL MEETING.

THE following list includes the names of members and visitors present at the annual meeting in Worcester, which were entered in the book provided for that purpose in the reception-room.

Abraham, P. S., Esq., Dublin; Acland, Theodore D., M.B., London; Adams, W., Esq., London; Agar, Samuel H., Esq., Henley-in-Arden; Aikins, W. T., M.D., Toronto, Canada; Aldred, H. Allen, M.D., London; Allard, W., Esq., Tewkesbury; Allbutt, T. Clifton, M.D., F.R.S., Leeds; Allen, M. S., Esq., Dudley; Amyot, T. E., Esq., Diss; Anderson, R. J., M.D., Belfast; Andrews, Edwyn, M.D., Shrewsbury; Andrews, Henry C., M.D., London; Archer, John, Esq., Birmingham; Archer, Wm. G., M.B., Birmingham; Arlidge, J. T., M.D., Stoke-upon-Trent; Arthur, James, Esq., Henley-in-Arden; Ashby, Henry, M.D., Manchester; Ashford, E. C., Esq., Bath; Ashmead, George, Esq., Brierley Hill; Atkinson, Francis E., Esq., Settle; Atkinson, R., Esq., Powick; Atkinson, Robert, Esq., Halifax.

Baber, Ed. Cresswell, M.B., Brighton; Bailey, F. J., Esq., Liverpool; Baker, Alfred, Esq., Birmingham; Baker, J. W., M.D., Derby; Balding, D. B., Esq., Royston; Balfour, G. W., M.D., Edinburgh; Ball, John A., M.B., Heaton Norris, Stockport; Banks, W. Mitchell, M.D., Liverpool; Bantock, Geo. Granville, M.D., London; Barford, James G., Esq., Wokingham; Barham, C. M.D., Truro; Barling, H. Gilbert, M.B., Birmingham; Barnes, J. Wickham, Esq., London; Barnes, Robert, M.D., London; Barr, Thomas, M.D., Glasgow; Barron, G. B., M.D., Southampton; Barrow, Benjamin, Esq., Ryde, Isle of Wight; Bartlett, T. H., Esq., Birmingham; Barton, Maurice S., Esq., Market Rasen; Barrum, John S., Esq., Bath; Barwell, Richard, Esq., London; Bassett, John, M.D., Birmingham; Bates, Tom, Esq., Worcester; Batten, Wm. Smith, Esq., Bromsgrove; Bayley, R. L., M.D., Stourbridge; Beddoe, John, M.D., F.R.S., Clifton; Bellingham, Joseph, Esq., Dudley; Bennett, Henry, M.D., Weybridge; Benson, Arthur H., M.B., Dublin; Bernard, Walter, F.K.Q.C.P., Londonderry; Bird, P. Hinkes, Esq., London; Birt, George, M.B., Stourbridge; Blackford, John C., Esq., Cannock; Boileau, J. P., M.D., Netley; Bond, Francis Thomas, M.D., Gloucester; Borchardt, L., M.D., Manchester; Boughton, John H., Esq., Tewkesbury; Boughton, W. B., Esq., Staunton; Bower, Ernest D., Esq., Gloucester; Bowley, A. A., Esq., London; Bradshaw, J. D., M.B., London; Brailey, W. A., M.D., London; Brett, A. T., M.D., Watford; Bridgman, I. T., Esq., Berkeley; Bridgewater, Thomas, M.B., Harrow; Brierley, J. E., M.D., Manchester; Briggs, H. M., Esq., Birmingham; Broadbent, Samuel W., Esq., Dalton-le-dale; Broadbent, W. H., M.D., London; Brompton, A., Esq., Rome; Broom, John, M.D., Clifton; Brown, George, Esq., London; Brown, G. J., Esq., Birmingham; Brown, George A., Esq., Tredegar; Brown, H. J., Esq., Worcester; Brown, J. B. S., M.D., Ealing; Brown, Walter, M.B., Gloucester; Browne, H. Langley, Esq., West Bromwich; Browne, Lennox, Esq., London; Browne, J. Walton, M.D., Belfast; Bryant, Thomas, Esq., London; Buck, C. W., Esq., M.R.C.S.E., Settle; Buck, J. Randle, Esq., Worcester; Buck, W. E., M.B., Leicester; Budd, H. G., Esq., Worcester; Bullock, T. W., Esq., Warwick; Busby, A. R., Esq., Bath; Butlin, Henry T., Esq., London; Buzzard, Thos., M.D., London; Byers, J. W., M.D., Belfast; Bainbridge, W. P. Y., M.B., Droitwich; Bompiani, A., M.D., Rome.

Caldwell, R. A., M.D., New York; Cameron, A. H. F., Esq., Liverpool; Carpenter, Alfred, M.D., Croydon; Carpenter, W. H., M.D., New York; Carter, Alfred H., M.D., Birmingham; Carter, Charles Henry, Esq., Pewsey; Carter, W., M.D., Liverpool; Cathcart, Charles W., M.B., Edinburgh; Cauty, H. E., Esq., Liverpool; Chadwick, Charles, M.D., Tunbridge Wells; Chapman, T. A., M.D., Hereford; Charles, T. Edmonstone, Esq., Kirkcovan, Wigtownshire; Chavasse, Thos. F., M.D., Birmingham; Cheate, Thomas H., Esq., Burford; Clarke, W. Bruce, M.B., London; Clark, J., M.D., Lichfield; Clark, Thos. E., M.D., Clifton; Bristol; Clarke, W. J., Esq., Gravely Hill, near Birmingham; Clendinning, J. G., Esq., Coseley; Clibborn, Wm., M.D., Birmingham; Coates, Wm. Martin, Esq., Salisbury; Colahan, Nicholas W., M.D., Galway; Coghill, J. G. Sinclair, M.D., Ventnor; Collins, W. J., M.B., London; Cook, Francis, M.D., Cheltenham; Cooke, E. Marriott, M.B., Powyke, near Worcester; Coombs, S. Wellesley, Esq., Worcester; Cooper, F. W., Esq., Leytonstone; Corbin, M. A. Bazille, Esq., Guernsey; Cornwall, James, Esq., Fairford; Cornwall, W. C., Esq., Birkenhead; Cossar, Thos., M.D., Edinburgh; Coupland, Sidney, M.D., London; Cousins, J. Ward, M.D., Portsmouth; Cowell, George, Esq., London; Crespi, Alfred J. H., Esq., Wimborne; Crichton, E., Esq., Laxfield; Critchett, Anderson, Esq., London; Crockett, E., Esq., Wolverhampton; Cross, F. Richardson, M.B., Clifton; Crossby, H. E., M.D., Nice; Crosse, Thomas W., Esq., Norwich; Crowe, G. W., M.D., Worcester; Cullen, David, M.D., Cheltenham; Cullingworth, Charles J., M.D., Manchester; Cumming, James, M.D., Belfast; Cupples, George, M.D., San Antonio; Cuthbertson, J. M., Esq., Droitwich.

Darby, Thomas, Esq., Bray; Davidson, A., M.D., Liverpool; Davies, Andrew, M.D., Cardiff; Davies, Ebenezer, Esq., Swansea; Davies, H. N., Esq., Cymer; Davies-Colley, T., M.D., Chester; Davis, Maurice, M.D., London; Dawson, W. H., Esq., Malvern; De'Ath, R., Esq., Buckingham; Dempsey, Alex., M.D., Belfast; Denham, J. Knox, Esq., Dublin; Denning, E., Esq., Stow-on-the-Wold; Dennis, F. S., M.D., New York; Devereux, D., M.D., Tewkesbury; Dew, H. R., Esq., Bristol;

Dewar, James, M.D., South Queensferry; Dewar, John, Esq., London; Dewes, Edward, M.D., Coventry; Diamond, H., M.D., Twickenham; Dickson, Walter, M.D., London; Dix, J., Esq., Hull; Dixey, Harry E., M.D., Malvern; Dixon, W. H., M.D., Sunderland; Dolman, A. H., Esq., Derby; Donovan, Wm., Esq., Whitwick; Douglas, Justyn George D., M.D., Bournemouth; Douglas, W. M.D., Leamington; Drage, Charles, M.D., Hatfield; Drew, Joseph, M.B., Beckham; Drummond, David, M.D., Newcastle-on-Tyne; Drummond, Ed., M.D., Rome; Drysdale, C. R., M.D., London; Duncanson, J. J. Kirk, M.D., Edinburgh; Durrant, C. M., M.D., Ipswich; Dutton, Thomas, M.B., Chichester.

Eagar, R. T. S., M.D., Stourbridge; Eagles, Woodfield, Esq., Aylesbury; Eales, Henry, Esq., Birmingham; Eastwood, J. W., M.D., Dinsdale Park, Darlington; Eberle, J., Esq., Thirsk; Eddowes, Wm., M.D., Shrewsbury; Edgington, R. W., M.D., Birmingham; Edis, Arthur W., M.D., London; Elkington, G., Esq., Edgbaston, Birmingham; Elliott, Henry F., Esq., Ruyton Eleven Towns; Ellis, Richard, Esq., Newcastle-on-Tyne; Ellis, T. S., Esq., Gloucester; Elliston, W. A., M.D., Ipswich; Esler, Robert, M.D., Belfast; Evans, Charles, Esq., Bakewell; Evans, Charles J., Esq., Northampton; Evans, Maurice G., M.D., Cardiff; Everett, D., Esq., Sydenham; Ewart, Joseph, M.D., Brighton.

Farino, Louis, M.D., Turin; Fegan, Richard, M.D., Blackheath; Felce, Stamford, M.R.C.P., London; Fell, Walter, M.B., London; Fendick, R. G., Esq., Clifton; Fergus, Walter, M.D., Marlborough; Fernie, W. T., M.D., Great Malvern; Field, George P., Esq., London; Fisher, Thomas, Esq., Wigan; FitzPatrick, W. H., M.D., Liverpool; Folker, W. H., Esq., Hanley; Foote, G., Esq., Kingston; Ford, J., M.D., Eltham; Fosbroke, G. N., Esq., Bidford, Alcester; Foster, B., M.D., Birmingham; Fothergill, J. Milner, M.D., London; Fox, Edward Long, M.D., Clifton; Fox, R. Dacre, Esq., Manchester; Fox, T. Calcott, M.B., London; Frank, Philip, M.D., Farnborough; Franks, Kendal, Esq., Dublin; Fraser, Donald A., Esq., Burnham; Frazer, William, M.D., Bournemouth; Freeman, A. J., M.D., San Remo, Italy; Freer, E. L., Esq., Loxells, Birmingham; Frost, W. A., Esq., London; Fulcher, G. A., Esq., Beckford; Fuller, L., Esq., Streatham; Fuller, William, M.B., Oswestry; Fyfe, George, M.D., Edinburgh.

Gabb, John, Esq., Bewdley; Gallimore, T., Esq., Denton, Manchester; Gardner, Richard C., Esq., Mustapha, Algiers; Gardner, W. H., Esq., London; Garner, J., Esq., Birmingham; Gaskell, R. A., Esq., St. Helen's; Garstang, T. W. H., Esq., Dobcross; Gervis, W. S., M.D., Ashburton; Gibbs, Hezeage, M.D., London; Gibson, John H., M.D., Hull; Gillam, T. H., Esq., Bromyard; Goodchild, J. A., Esq., Bordighera; Gornall, John H., Esq., Warrington; Gould, A. Pearce, Esq., London; Gowing, B. C., Esq., Salisbury; Graham, J. E., Esq., Toronto; Gray, F. J., Esq., Cannock; Green, William E., Esq., Sandown; Greensill, J. N., Esq., Great Witley; Greenwood, J. W., Esq., Ossett, Wakefield; Grewock, John, Esq., Pershore; Griffiths, T. D., Esq., Swansea; Grigg, W. Chapman, M.D., London; Gripper, Walter, M.B., London; Groves, J., M.B., Carisbrook; Grubb, J. S., Esq., Waterbeach.

Hackney, John, Esq., Hythe, Kent; Hadden, W. B., M.D., London; Hall, J. E., Esq., Swansea; Hall, Wm., Esq., Lancaster; Hall-Wright, Matthew, Esq., Birmingham; Hardie, Gordon K., M.D., London; Hardy, H. Nelson, Esq., Dulwich; Hare, Charles J., M.D., London; Harmer, W. M., F.R.C.P., Hawkhurst; Harris, Henry, M.D., Redruth; Harris, Wm. J., Esq., Worthing; Harrison, A. J., M.B., Clifton; Harrison, C., M.D., Lincoln; Harrison, Reginald, Esq., Liverpool; Harrison, Damer, M.K.Q.C.P., Liverpool; Hart, Ernest, Esq., London; Haslam, Wm. F., Esq., Birmingham; Hatton, G. Stokes, M.D., Stoke-on-Trent; Haughton, Edward, M.D., Upper Norwood; Haward, Edwin, M.D., London; Hawkins, A. F., Esq., Birmingham; Hay, Matthew, M.D., Edinburgh; Haycraft, John, M.B., Birmingham; Haynes, Allen L., Esq., Evesham; Haynes, F. H., M.D., Leamington; Haynes, Horace E., Esq., Evesham; Haynes, Stanley, M.D., Malvern; Haynes, Sydney W., M.B., Birmingham; Henry, Alexander, M.D., London; Hensley, Henry, M.D., Bath; Higginson, Alfred, Esq., London; Hill, Alfred, M.D., Birmingham; Hill, H., Esq., Worcester; Hill, J. Higham, M.D., London; Hill, M., Esq., Bootle, Liverpool; Hinings, John Wm., Esq., Bromyard; Hiron, J. H., Esq., Sudley; Hobbes, J. L., Esq., Stourbridge; Hoggan, George, M.B., London; Holbeche, Arthur O., Esq., Malvern Wells; Holdsworth, Samuel, M.D., Wakefield; Hollings, Robert, M.D., Wakefield; Hollinshead, F., Esq., Selly Oak, Birmingham; Holman, C., M.D., Reigate; Holt, James, Esq., Castleford; Horton, Henry, Esq., Bromyard; Hovell, D. De Berdt, Esq., Clapton; Howell, T. Mark, Esq., London; Hudson, R. S., M.D., Redruth; Hughes, John Howl, Esq., Ombersley; Humphreys, W. C., Esq., Swansea; Humphry, G. Murray, M.D., F.R.S., Cambridge; Humphry, L., M.B., London; Hunter, Wm. Lovell, M.D., Pudsey; Husband, W. D., Esq., Bournemouth; Hutchinson, Jonathan, Esq., F.R.S., London; Hyde, G. E., Esq., Worcester.

Inglis, Alex., M.D., Cheltenham.

Jackson, A., Esq., Sheffield; Jackson, F., Esq., Birmingham; Jackson, J. H., M.D., F.R.S., London; Jackson, Vincent, Esq., Wolverhampton; Jacob, Archibald A., M.D., Dublin; Jacob, E. L., Esq., Clapham; Jacob, Ernest H., M.D., Leeds; James, J. Brindley, Esq., London; James, J. Rowland, Esq., Pontypridd; Jeffreys, Richard, Esq., Chesterfield; Jennings, J. C. S., Esq., Malmesbury; Jessop, Chas. Moore, M.R.C.P., Winchfield; Jessop, T. R., Esq., Leeds; Job, Samuel, Esq., Newark; Johnson, C. H., Esq., Basingstoke; Johnson, James, M.B., Sutton Coldfield; Johnston, Thomas, Esq., Belper; Johnston, J. S., L.K.Q.C.P., Sheffield; Jolly, Robert, M.D., Birmingham; Jones, Derry, Esq., London; Jones, Edgar A., Esq., Fownhope, Hereford; Jones, J. T., Esq., Corris, North Wales; Jones, John William, L.K.Q.C.P., Colehill; Jones, Talfourd, M.B., Brecon; Jones, T. Eytton, M.D., Wrexham; Jones, William, Esq., Ruabon; Jordan, Furneaux, Esq., Birmingham; Jordan, W. R., Esq., Birmingham; Juler, Henry E., Esq., London.

Kealy, John Robert, M.D., Gosport; Keetley, C.R.B., Esq., London; Keetley, Thomas B., Esq., Grimsby; Ker, Hugh R., Esq., Halesowen; Kerr, Norman, M.D., London; Kershaw, A., Esq., Farnworth; Kidd, Philip H., M.B., Great Yarmouth; King, Edward P., Esq., Chesham; Kingsley, Henry, M.D., Stratford-upon-Avon; Knott, J. F., Esq., Dublin.

Laidlaw, W. G., M.D., Tranmere, Birkenhead; Lambert, J., M.D., Birkenhead; Lanchester, H., M.D., Croydon; Langmore, J. C., M.B., London; Latimer, Henry A., Esq., Swansea; Laxton, H., Esq., Clifton; Lay, Charles, Esq., Yoxford; Leach, D. J., M.D., Manchester; Leftwich, R. W., M.D., London; Le Page, J. F., Esq., Durham; Lewis, Daniel, M.D., New York; Lewis, Lewis, M.D., Plymouth; Little, Edward, M.D., Wimbledon; Little, J. F., Esq., Ben Rhydding; Littlejohn, H. D., M.D., Edinburgh; Livy, John, M.D., Bolton; Longmore, Surgeon-General T., Netley; Low, R. Bruce, M.D., Helmsley; Lowdell, Surgeon-Major C., St. Leonard's; Lowdell, S. P., Esq., East Grinstead; Lowe, Howard, Esq., Birmingham; Lund, Edward, Esq., Manchester; Lunn, W. J., M.D., Hull; Lyle, Thomas, M.D., Bromsgrove.

MacAlister, D., M.B., Cambridge; Macarthur, A. J., M.D., Anstruther; McBride, P., M.D., Edinburgh; MacCarthy, W. F., M.B., Worcester; MacCormac, Sir William, London; MacDonnell, M. S., Esq., Woolwich; MacHardy,

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 19TH, 1882.

THE JUBILEE MEETING AT WORCESTER.

THOSE who have perused our notice of the jubilee meeting of the Association at Worcester in last week's JOURNAL, will have been prepared to learn that the fiftieth annual meeting retained throughout a character which will leave nothing but pleasant remembrances in the minds of those who were present. Worcester, it is true, as a cathedral city of but moderate size, does not possess all the advantages in the form of means of receiving and accommodating large bodies of visitors which the great industrial towns and cities enjoy; but any deficiency that might at first have been supposed to exist, was more than compensated by the hearty good will and energy with which the President and his professional colleagues in the city and district, supported cordially and generously by the public of all classes, threw themselves into the work of giving their visitors a welcome which should be worthy of the occasion. The success which attended their endeavours has been of a kind which must be most gratifying to all who took part in the preparations for the meeting. To each and all—members of the medical profession, cathedral clergy, and city and county authorities—the Association is grateful for the pleasant and hospitable reception which it met with in the faithful city of Worcester.

Where all worked so cordially, it is difficult to say to whom thanks are most due. We may, however, begin an attempt at enumerating those whose labours deserve grateful recognition, by referring to the Very Reverend the Dean of Worcester, who, on the first day of the meeting, preached a special sermon to the members of the Association, and permitted the Cathedral to be used on the second evening for the performance of a portion of Haydn's oratorio "The Creation", accompanied by a special service. Never before, as far as we know, in the annals of the Association, have the members enjoyed such a sublime treat as was afforded them in listening to the music of the great composer, rendered most efficiently as it was by the organist, and by the members of the celebrated choirs of Worcester, Hereford, and Gloucester. The share which the Dean and Chapter, and also the organist and choirs, bore in the proceedings of the visit of the Association to Worcester will, we are sure, be long remembered with gratitude and pleasure by all who were present. At the close of the musical performance in the Cathedral, a collection was made in aid of the British Medical Benevolent Fund, when the sum of sixty guineas was raised.

The county magistrates and the mayor and corporation of Worcester were not backward in practical expressions of goodwill. By the magistrates, the use of the Shire Hall was granted for the use of the meeting; and by the mayor and corporation, the Guildhall and Music Hall were placed at the disposal of the Association. Ample accommodation and every convenience for holding both the general and the sectional meetings were thus provided. Nor did the good feeling of the authorities exhaust itself with the provision of meeting room. The mayor, on the first day of meeting, hospitably received a large number of the members of the Council of the Association at dinner in the Guildhall; having previously, with the members of the corporation, officially accompanied the visitors to the service at the Cathedral. The Lord-Lieutenant, Earl Beauchamp—whom we may venture to regard as the

exponent not only of his own feelings, but of those of the county magistrates—showed his good will by receiving the members of the Association and the ladies who accompanied them at a garden-party in the grounds of Madresfield Court, which was also attended by numerous visitors from all parts of the county.

The *soirée* at the Shire Hall, given at the close of the last day's meeting, conjointly by the President and Mr. G. W. Hastings, M.P., was very largely attended, and was a most pleasant termination to the proceedings.

Turning to our own brethren, thanks are due to the members of the Worcestershire and Herefordshire Branch for the hospitable arrangements made by them to receive a large number of members of the Association at luncheon in the Shire Hall, on the occasion of the presentation of the bust of Sir Charles Hastings to the Mayor and Corporation of Worcester. The large attendance showed the interest felt in the occasion. A full account of the proceedings, including a *verbatim* report of Mr. George Hastings's interesting account of some of the characteristic features of his father's life, is given on another page. We may here congratulate Mr. Hastings on being a witness of the respect in which his father's name is held; and, further, on possessing a position and influence among the magistrates of the county, which must have been of material aid to him in his desire to co-operate with those who sought to do honour to the memory of the founder of the Association.

To the Reception Committee, which included the names of many members of the Association in Worcestershire and Herefordshire; to the honorary local secretaries—Dr. Crowe of Worcester, Dr. H. C. Moore of Hereford, and Dr. Pike of Malvern—the bearers of no small share of "the burden and heat of the day"; and to Mr. Randle Buck, the honorary secretary of the Museum Committee, hearty thanks are due for their endeavours to make the meeting successful; and congratulations also, on the thorough success which attended those endeavours. The President, Dr. Strange, may be briefly described as having been all that a President should be; at once energetic, firm, judicious, and courteous.

Before concluding, we must not omit to mention the officers of Sections, especially the secretaries. These gentlemen each year undertake a laborious task; and those who were appointed to the Sections this year did their work well. Our personal thanks are due to them for the readiness which they have shown to aid us in the endeavour to obtain a complete account of the proceedings in the Sections, which it is intended to publish as quickly as circumstances permit.

The splendidly fine weather which prevailed throughout the week contributed not a little to the pleasure of the meeting and of the excursions which followed it. Every circumstance, indeed, combined to make the fiftieth annual meeting of the Association one which will long be remembered as being unsurpassed by any of its predecessors as a happy assemblage of the medical profession, while it has surpassed them in the interesting feature of the occasion—the commemoration of the foundation of the Association in Worcester fifty years ago.

THE CONVICT SERVICE.

YOUNG medical men may well pause and think seriously, before entering the convict service in its present state; for, besides the various points that have been mentioned from time to time in these columns, there are others of which it would be well for members of the medical profession to take note.

Our attention has been lately drawn to the fact that at any time, a medical officer may be called upon to perform extra duties, without the slightest chance of getting any remuneration: for an assistant-surgeon, fortunately not now in the service, was left in sole charge of one of the largest prisons, in the winter time, to do the work of two medical officers, without the usual substitute, and, on his applying for compensation for the extra work done, he was informed that the directors were not in a position to meet his wishes; although payment for a substitute is pro-

vided at the prison alluded to. He then, being dissatisfied with the directors' answer, referred the correspondence to the chairman, but no further notice was taken of his communication. Another injustice on the part of the authorities is, that to one of the largest prisons there is attached a small one situated three miles off, which has to be visited by the medical department of the large one; the principal part of the work falling of course on the assistant-surgeon, who has to visit it at the request of the medical-officer, in addition to all the other duties that have to be performed. The place being difficult of access, and there being about ninety men located there, any of whom may be liable to accident or suicide, makes the responsibility a very heavy one; and there is no pay whatever for this extra work, the place being only recognised as a branch prison, and candidates entering the service, are permitted to remain in blissful ignorance of this irksome duty.

The reason why a few senior men still remain in the service is probably this: that in former days it was in many respects better than at the present time, and it is rather difficult for a man who has been many years in the service to recommence life, as it tends to unfit him for other branches of the profession; and some who have been in it for eight or nine years are probably waiting to complete their time, for a pension; but the majority of medical men leave it after the first two or three years, disgusted with their short experience.

We may again remind our readers that the pay of an assistant-surgeon is £210 a year, which, in some instances, is less than that of the Clerk of the Works and the Chief Warder; it is only a little more than half that of a Deputy Governor, whose duties are purely mechanical, and who has plenty of spare time at his own disposal; whereas an assistant-surgeon must be always at hand in case of any emergency, for if he were absent at such a time, he would probably have the felicity of encountering a coroner's jury, ready to catch at any excuse to censure him.

The point, however, which most impresses itself on us, is the enormous responsibility of the medical department, for on it depends the whole working of a prison, as no prisoner can undergo any form of punishment, be received into the prison, or be placed at any labour without the instructions of the medical officers. If any dispute should arise between the medical officer and the governor, as often happens, owing to the propensity of governors to give unnecessary trouble and worry to the medical department, the word of the governor always has more weight at the Home Office than that of the medical-officer, no matter which of them may be in the wrong. The fact that there are five vacancies in the medical department speaks for itself; especially as three of them were caused by the resignation of the senior assistant-surgeons, who valued their professional status more than so-called "promotion".

In conclusion, let us earnestly warn our younger professional brethren from entering such a service, where, besides inadequate pay, hard work, and great responsibility, (to say nothing of liability to assaults from prisoners), the brain is frequently worried by petty annoyances, which certainly should not be added to the many cares of a professional man.

THERE are at present twenty-four candidates for the twelve vacancies in the Naval Medical Service. The examination is now proceeding.

THE fifth autumn congress of the Sanitary Institute of Great Britain will be held at Newcastle-upon-Tyne from September 26th to the 30th.

A REMARKABLY low death-rate is recorded at Dover during the past quarter, the total deaths representing an annual rate of 9.1 per 1,000 of population.

AN extensive outbreak of typhoid fever has occurred at Bangor, which the health-officer, Mr. Rees, has attributed to a polluted water-supply. The circumstances attending the outbreak are to be the subject of inquiry at the hands of Dr. Barry, the recently appointed inspector to the medical department of the Local Government Board.

A TERRIBLE death happened recently at Walsall, where a youth died in fearful agonies from the effects of having drunk a mixture of nitric acid and mercury, in mistake for ginger beer.

IT is stated that no appointment will be made to the Chair of Animal Morphology in the University of Cambridge, rendered vacant by the death of Mr. F. M. Balfour.

M. SAINT PAUL has offered the French Academy of Medicine a sum of 25,000 francs to found a prize for the discovery of a cure for diphtheria. The competition is open to all the world, and not confined to the medical profession.

A GREAT improvement is exhibited in the health statistics of Mercara Gaol, in the Province of Coorg. The admissions per 1,000 of average strength fell from 2,506 in 1880 to 2,063; and the percentage of deaths decreased from 99.8 to 56.69. The average daily sick was 45.01, against 51.56 in the previous year. The principal cause of disease is reported to have been cold and damp, combined with the malarious condition of the climate.

THE French Association for the Advancement of Science meets this year at La Rochelle, on the 24th inst., for its eleventh session. M. Janssen is the president-elect. There will be excursions to the places where oysters and mussels are cultivated. Deep-sea dredging will take place on board the *Ardisnade*, under the direction of Professor Giard, of Lille. The Channel Tunnel is among the subjects set down for discussion.

AN important literary and scientific discovery is announced from Salonica. The works of the celebrated physician, Galen, which were supposed to have been lost, have been discovered by M. Papageorges. They are in manuscript; date from the fifteenth century, and appear to have originally formed 248 sheets; 144 are in good condition, 24 are mutilated or worm-eaten, and 80 are missing.

THE report of the Improved Industrial Dwellings Company for the half-year ended the 30th June last states that the mortality in the company's buildings for the year 1881 was 16.4 per 1,000, as against 21.2 in the metropolis. The birth-rate was 38.6 in the dwellings and 34.7 in the metropolis. The total number of dwellings in occupation is now 3,916, for the accommodation of about 19,500 persons, and the works in hand will provide for 539 families, or upwards of 2,000 persons, making a total of 4,455 families, or about 21,500 persons.

THE WOUNDED IN EGYPT.

THE wounded marines and sailors, who have been removed from Alexandria to Malta, are all doing well. The *Tamar* is intended to be used as a temporary receptacle for the sick and wounded prior to their transfer to Malta or Haslar.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.

THE new and long needed home for this prosperous charity is rapidly approaching completion. The new buildings in Church Street, which are placed upon an advantageous corner site, and present two handsome front elevations, are being erected at an estimated cost of £17,000. Towards this sum, donations to the value of about £6,500, including one £5,000 from a lady, have been promised.

THE CONTAGIOUS DISEASES ACTS.

AT the final division for the adoption of the report by this Committee, the majority consisted of Mr. Osborne Morgan, Mr. Cavendish Bentinck, Mr. Bulwer, General Burnaby, Lord Crichton, Dr. Farquharson, Sir Henry D. Wolff, and Colonel Digby; and the minority of Mr. Stansfeld, Mr. W. Fowler, Dr. Cameron, Mr. Hopwood, and Mr. Burt. Colonel Tottenham and Mr. Hanbury Tracy, who were both

understood to be favourable to the present satisfactory report, and Mr. Ernest Noel, who was unfavourable, did not vote in the final division.

THE HEALTH OF THE TROOPS IN EGYPT.

THE medical officers in charge of the troops in Egypt have all received printed instructions from the Army Medical Department for preserving the health of the troops during the campaign. The fevers, various forms of cholera, dysentery, poisoning from bad water, and other diseases which may be expected, are all carefully indicated, and the best treatment suggested. Precautions as to soil and site of camps, water-supply, latrines, food, tents, quarters, and personal hygiene of troops, are given in detail. There is also an appendix on the climate of Egypt, and more especially that of Alexandria. These instructions will prove most useful, and are just what was wanted to put the medical officers on the *qui vive*.

LOCAL IMPROVEMENT BILLS.

ON the motion of Mr. Sclater-Booth, a new Standing Order was made by the House of Commons on the 11th instant, to provide for such cases as those which were referred this session to the Select Committee on Sanitary Clauses in Local Bills, of which the late President of the Local Government Board was Chairman. The new Standing Order provides, amongst other things, that, in the case of any Bill promoted by a municipal corporation, or other local authority having powers of local government or rating, the Committee on the Bill shall consider the clauses of the Bill with reference to the following matters: 1. Whether the Bill gives powers relating to police or sanitary regulations in conflict with or in excess of the provisions or powers of the general law; 2. Whether the Bill gives powers which may be obtained by means of by-laws made subject to the restrictions of general Acts already existing. And the Committee shall report specially to the House in what manner any clauses relating to these matters have been dealt with by them; whether any report from any Government department relative to the Bill has been referred to the Committee; and, if so, in what manner the recommendations in that report have been dealt with by the Committee; and any other circumstances of which, in the opinion of the Committee, it is desirable that the House should be informed.

PUNJAB MEDICAL MISSION.

THE report of the Punjab Medical Mission Society records extensive and excellent work during the past year. There is a mission to the Biluchis, and another to the Cashmiris. At the Biluch Hospital, Mr. Jukes had treated 875 patients, and paid 1,139 visits, three-fourths of these having been in November and December. In the Zenanas, diagnosis had still been attended with the usual difficulties, the physician having been allowed only to feel the pulse and see the tongue; the hand thrust out from under the sheet, and the tongue protruded through a hole in the sheet. Dr. Downes and Mr. Neve had under their care 10,800 patients, and had paid 29,393 visits at the Cashmir Hospital. Dr. Downes records his acknowledgments to the BRITISH MEDICAL JOURNAL for hints as to new treatment in hernia. Asthma, which had been very common, had been benefited by the inhalation of a spray of ipecacuanha wine. A simple and inexpensive antiseptic treatment had been followed in surgical cases, with the best results. The dressing consisted of cotton-wool soaked in solution of carbolic acid, and was not in general disturbed till between five and ten days.

OFFENCE UNDER THE SALE OF POISONS ACT.

GEORGE THEODORE MILLSON, of 172, Caledonian Road, Islington, appeared on an adjourned summons taken out by Mr. G. R. Templeman, Assistant-Secretary of the Chemists' and Druggists' Trade Association of Great Britain, for unlawfully selling by retail, on July 20th, a certain poison—*laudanum*—the bottle containing the same not being distinctly labelled with the name of the person selling the said poison.

The evidence on behalf of the prosecution was to the effect that Mr. Templeman, who resides at Burlington Chambers, New Street, Birmingham, upon the 20th of last month, went to 172, Caledonian Road, which is a post-office and chemist's shop, and purchased two-penny-worth of *laudanum*, the defendant serving him. The bottle containing the poison was labelled "*Laudanum—Poison—Saunders and Co., chemists, 172, Caledonian Road.*" Upon another occasion, Mr. Templeman went to the shop and obtained a postal order, and defendant signed it as being postmaster. Mr. Glazier pointed out for the prosecution that in this case there had clearly been an infringement of the provisions of the Act, because the defendant was, for all they knew, the person belonging to these premises, and that Saunders and Co. did not exist, and that he, not being a certified chemist, had no right to be dealing with poisons, and he must ask for a conviction. The magistrate said the seller of poison was bound to label the bottle or packet containing it, and fined the defendant £5 and costs.

LIABILITY OF MUNICIPAL CORPORATIONS FOR EFFECTS OF IMPURE WATER-SUPPLY.

AT the Leeds Assizes, on August 3rd, the case of *Milnes versus* the Corporation of Huddersfield was heard. Mr. John Jessop Milnes, solicitor, of Huddersfield, sued the Corporation of that borough for £5,000, in compensation for damages alleged to have been sustained in consequence of drinking water impregnated with lead, supplied to him by the Corporation. Mr. Willis, Q.C., Mr. Waddy, Q.C., and Mr. Dodd were for the plaintiff; and Sir Farrar Herschell, Q.C., M.P., Mr. Forbes, Q.C., and Mr. Lockwood were for the defendants. The case, as stated on the part of the plaintiff, was that, in its passage through the leaded service-pipes, the water supplied to him by the defendants absorbed lead in such quantity as to become dangerous to life. Through drinking that water, the plaintiff had been palsied to a certain extent. He all but lost his life; and his business, through his inability to attend to it, fell off seriously. Evidence was adduced to show that, if ever the plaintiff recovered, which was doubtful, a long time must elapse. The case for the defendants was, that they were only responsible for the water being unwholesome when placed in the mains. It was common ground, on both sides, that the mischief to the water was caused in its passage from the mains to the service taps in the plaintiff's house. The point as to the liability of the Corporation was reserved for argument in London—the special jury at Leeds being only asked to assess damages in case the Corporation should be held to be liable. The jury assessed the damages at £2,000.

WATERING-PLACES AND HEALTH-RESORTS.

THE Registrar-General, in his last quarterly return, draws opportune attention to the statistics of the principal English health-resorts. The mean annual death-rate during the last quarter was 16.8, the zymotic rate being 1.72. These rates contrast favourably, not only with those of all England and Wales, which were 19.0 and 2.45 respectively, but also with those of the more rural part of the country which remains after excluding from the calculation the seventy-eight chief towns or urban districts; for in this comparatively rural part the general death-rate was 17.8, and the zymotic rate was 1.94. It is but just to these resorts to note that their death-rates are doubtless in some degree higher than they would otherwise be, owing to the very fact of their being health-resorts—of their being, that is, places to which persons in weak health flock in considerable numbers, in the hope of finding benefit. This, however, affects the general death-rate much more than the death-rate from zymotic diseases. The zymotic rate was 0.00 in Lyme Regis, Sidmouth, Dawlish, and Dartmouth, and did not exceed 1.00 in Whitby, Yarmouth, Lowestoft, Southend, Herne Bay, Eastbourne, Worthing, Bognor, Weymouth, Exmouth, Torquay, Ilfracombe, Weston-super-Mare, Aberystwith, Beaumaris, Bangor, Llandudno, Rhyl, Malvern, Leamington, Buxton, Matlock, and Harrogate. In the remainder it was above 1.00, but under 3.00, with the exception of

Folkestone, where it was 3.38, mainly owing to diphtheria; of Blackpool, where it was 4.05, mainly from measles; of New Brighton, where it was 4.46, mainly from scarlet fever; and of Brighton, where it was as high as 4.87, mainly from measles, whooping-cough, and scarlet fever.

DEATH FROM THE ADMINISTRATION OF CHLOROFORM.

On the 9th instant, the Southwark Coroner, Mr. W. J. Payne, held an inquest at Guy's Hospital on the body of William Thomas Stout, aged 36, who expired under the administration of chloroform at the hospital on the previous Saturday. William Lambeth said that, on that day he and the deceased were at work at Messrs. Stannah's, engineers, Southwark Bridge Road, when his left thumb was jammed between the cogs of a machine. Witness stopped the machine, and the deceased was taken to Guy's Hospital. The house-surgeon who saw him said the thumb must be taken off. He advised him to have chloroform, and witness remained while it was administered, but saw no one examine his heart to see if he could stand it. He struggled very much at first, and then appeared as if dead. Mr. Robert Arthur Millingham, house-surgeon, said the left thumb of the deceased was completely shattered by the machine, and the bone was broken in six places. He advised chloroform, and the deceased assented. He asked no questions of the deceased as to his health, nor was his heart examined. On feeling the pulse, he thought the deceased had no organic disease, but, while proceeding with the inhaler, on which he had put three separate doses of 30 drops of chloroform, the deceased showed symptoms which necessitated restorative measures being used. Upon his coming to, witness told the dresser to go on as rapidly as possible with the operation, as he could not administer chloroform again; but, just as the dresser began to operate, the pulse failed, the heart ceased beating, and the man was dead. A *post mortem* examination since showed that death was due to chloroform acting upon a fatty heart, which condition could not be discovered by the stethoscope or the pulse, and probably the deceased was not aware that his heart was affected. Witness had had a good deal of experience in the administering of chloroform, and, in reply to the coroner, said that, though laughing gas was not dangerous, its effects did not last long enough to permit an operation like this, which would have taken a quarter of an hour. The death-rate from chloroform was about 1 per 1,000. The jury returned a verdict of "Accidental death".

DIPHTHERIA AND SCHOOL CONGREGATION.

A NOTEWORTHY instance of the spread of disease by the agency of schools is afforded by Dr. Sykes in his last annual report on the sanitary condition of Portsmouth. During 1881, the borough was visited by a widespread epidemic of diphtheria, which caused no fewer than 205 deaths, a mortality from this cause unprecedented in the annals of Portsmouth. Dr. Sykes attributes the widespread nature of the epidemic (1) to the carelessness and curiosity of neighbours visiting infected houses, and taking the disease home to their own children; and (2) to the congregation of large bodies of children in schools. This last cause was a most potent factor in the dissemination of infection. In the earlier stages of the epidemic, numerous cases were discovered in which the disease was undoubtedly contracted at two of the Board schools in the borough. This is evident from the fact that, during the first quarter of 1881, two-fifths of the cases either attended these schools, or had members of the same family doing so. Convinced of the importance of closing these places, Dr. Sykes made personal application to the authorities with this object, but unfortunately without success. Later on in the year, it was found that one of these schools was playing a still more important part in the spread of the epidemic, the sudden extension of the disease in its immediate neighbourhood being attributed to which the complaint had been caught at the school. Indeed, during the last quarter of the year, no fewer than seventy-five children had either attended there, or been infected by members of the same family. Another establishment was acting in a like manner, but the authority was now successful in obtaining the closure of the

two schools for some weeks after the Christmas holidays (making together an interval of eight or nine weeks), with the effect of causing diphtheria to gradually but certainly disappear from the two neighbourhoods. A marked diminution in the numbers of those attacked was also observed at the close of the summer holidays.

BEARER-COMPANY INSPECTION AT SOUTHAMPTON.

THE members of the Ambulance or "Bearer" Company, connected with the 2nd Hants Rifles, were officially inspected at Southampton, by Surgeon-General Longmore, of Netley, on the 2nd instant. The whole corps marched to the Common, headed by the band. The part known as the cricket-ground was cleared, the space being kept by the volunteers, assisted by some policemen. Three ambulance-wagons were on the ground, together with a supply of field-stretchers, bandages, and other requirements; and a clump of trees, situated at a convenient spot, was improvised as the hospital, guards being placed around it. Dr. Trend, senior surgeon of the battalion, acted as hospital surgeon—Mr. Caesar, who kindly carries out the duty of instructing the company, being on the "field." The company having been put through a series of stretcher exercises, the corps proceeded to skirmish: and presently men were seen to fall wounded, whereupon one of the ambulance-wagons hastened forward, and the bearers soon began to bring the injured ones into hospital. The hospital soon became full of men, bandaged according to their supposed injuries, the natures of which were ticketed upon them. At the conclusion of the inspection, the corps was formed up into square, the ambulance company in front. Surgeon-General Longmore said that this was the second time he had had Volunteers. He attempted last year to give some little explanation of the important duties bearer-companies were intended to accomplish in modern military organisation. He did not, therefore, need to repeat what was said on that occasion; but he must repeat, what it was his pleasure to say to them then, that they had shown by what they had done how excellent the training was of their esteemed surgeon, Mr. Caesar; and, at the same time, how intelligently they appreciated the information given to them. It was impossible to see them do what they had done, without fully comprehending that they must have given a great deal of time and attention to the practical details of the work. They might have observed in the papers, during the last few days, descriptions of the force sent out to Egypt; and, if so, they would have noticed that, to each division of that force, a bearer or half-bearer company was attached; and he was quite sure that, if the expeditionary force should be engaged in active hostilities in Egypt, they would see the advantage of the arrangement in the more rapid and perfect attention to the wounded on the field, and the better appreciation of what was to be done to prevent any aggravation of the injuries they had already sustained. In fact, bearer-companies were now as much a part of military organisation as the trained ranks for the fighting: and they had done well in not neglecting attention to this part of their military duties. Colonel Vandeleur returned thanks to Surgeon-General Longmore for having come, at great inconvenience to himself, to help them in their work with his valuable assistance.

THE CASE OF SMALL-POX AT GUY'S HOSPITAL.

AT a recent meeting of the Metropolitan Asylums Board, the committee for Stockwell Hospitals reported, pursuant to reference, upon the correspondence which had taken place between the Local Government Board and the authorities of Guy's Hospital respecting the circumstances attending the admission into the Stockwell Small-pox Hospital of a patient named John Tyson, who, on May 17th, presented himself among the crowd of out-patients at Guy's Hospital, and was detected by the medical officer on duty to be suffering from small-pox. He was advised by the medical officer to leave the out-patient room, and apply for admission to a small-pox hospital through the intervention of the parish authorities, and without exposing himself unnecessarily to the danger of others. What became of the patient afterwards, the hospital authorities did not ascertain. To ensure the safety

of the general patients, the governors of this hospital for many years past have prohibited the admission into the hospital of persons suffering from small-pox or scarlet fever; and when patients admitted with other affections had developed these distempers in the wards, the governors had taken measures to have such patients either removed to the asylums for contagious diseases, or to their own abodes, in the event of the patients, or their friends for them, expressing a desire to go home rather than be sent to another hospital. The governors urged upon the Local Government Board the advantage which would accrue to the patient, the public, and to the general hospitals, if the Asylum District Board would remove the stringent regulations which at present hampered the admission of ordinary hospital patients to their asylums for infectious disease, and allow the medical certificate of the resident medical officer of the hospital to be a sufficient guarantee that the patient was eligible for treatment in the asylum. The committee, having given careful consideration to such correspondence, were unanimously of opinion that it was highly desirable, and indeed necessary, that at every general hospital there should be provided an isolation room, in which should be temporarily detained persons suffering from infectious disease until such time as they could be removed in an ambulance to one of the hospitals provided for their reception and treatment; that the difficulties attending the removal of such patients would be greatly diminished were the simple certificate of a medical officer of the hospital at which the person might have applied in the first instance sufficient to ensure admission into one of the infectious hospitals under the control of the managers. The committee recommended that a communication, based upon the opinions above expressed, should be forwarded to the Local Government Board and to the authorities of all the general hospitals in the metropolis.—Mr. Bostock, in moving the adoption of the report, censured the action of the Guy's Hospital authorities in sending this man adrift; for, if the atmosphere had been charged with the medium of contagion, this patient, who rode in an omnibus on his way to Stockwell, might have been the means of spreading the disease among many. He considered that every general hospital should have the accommodation for temporarily isolating patients found to be suffering from infectious disease.—Mr. Sedgwick said that, had the patient presented himself at the Middlesex Hospital, within half-an-hour he would have been conveyed to an infectious hospital.—Dr. Fowler was not sure that the action of the Guy's Hospital authorities was not illegal, as any one who was accessory to the exposure of an infectious patient was liable to certain penalties under the Sanitary Acts. The report was adopted.

SCOTLAND.

SEVERE CASES OF MEASLES AT FRASERBURGH.

FOR some time measles has been prevalent in Fraserburgh. At this season there is a great influx of strangers engaged in the operations of the herring curing. The disease appears to be specially obnoxious to the Highland women thus engaged, as four of them (all Macs), from twenty to twenty-four years of age, died of the disease last week in one locality in Fraserburgh.

THE NATURAL HISTORY CHAIR, ST. ANDREW'S.

THE Chair of Natural History in St. Andrew's University, vacant by the translation of Professor Alleyne Nicholson to the same chair in Aberdeen University, has been filled up this week, by the appointment to it of Dr. Macintosh, at present Physician Superintendent of the Lunatic Asylum, Murthly, Perthshire. Dr. Macintosh is well known for his studies and writings in natural history, and is at present an examiner on that subject in Edinburgh University. The Marquis of Ailsa is patron of the chair.

THE SANITARY WORK IN A LARGE CITY.

FROM a report, prepared by Mr. K. M. MacLeod (the Sanitary Inspec-

tor of Glasgow), on the work of the sanitary department of Glasgow for the past five years, a good opinion can be formed of the extent of such operations in a large city. During those five years, 38,624 cases of infectious diseases were registered; 33,818 apartments used by patients with infectious diseases were fumigated; 7,800 people applied for hospital accommodation; 7,141 vaccinations were effected; and nuisances of various descriptions, to the number of 89,111, were removed. No fewer than 20,985 inspections were made to prevent the sale of unwholesome articles of diet, and 249 seizures of unwholesome food were made; as a result of which, 14,582½ lbs. of beef, 9,319 lbs. of pork, 18,525 of fruit, 11,295 lbs. of fish, and 4,000 eggs, were destroyed as unfit for food; and this, in most cases, was by consent of the owners. Since the municipal regulation of dairies came into force some time ago, there have been 929 dairies on the register, and under the supervision of the municipal authorities within the city. As to the management of lodging-houses, there have been fifty-two prosecutions for contravention of the rules laid down for the management of such, and thirty-eight convictions have been obtained. In connection with the latter—but as referring to another city, and therefore not in Mr. MacLeod's report—it may be noticed that at present the Edinburgh authorities are active in the prosecution of persons contravening the municipal lodging-houses regulations—a subject of much importance to the public health, considering the season and the overcrowding that usually exists in those quarters of Edinburgh where the poorer Hibernian and other immigrants usually concentrate.

IRELAND.

SMALL-POX IN CLONMEL.

FIVE cases of small-pox were last week admitted into hospital, and the total number now under treatment amounts to eighteen. There is no doubt that the epidemic is spreading, and that the families of those attacked are taking every means to conceal it.

PORTAFERRY DISPENSARY DISTRICT.

AN election for a medical officer took place last week in the vacancy caused by the decease of Dr. Alexander Filson. There were eight applicants, and a poll having been taken it was found that there was a tie between two of the candidates, Messrs. Dunne and Hastings, each having polled seven votes, so that a fresh election must take place.

MALLOW UNION.

AN advertisement for a medical officer to Doneraile Dispensary District was recently issued, the salary stated being £120 *per annum*. Dr. O'Riordan was elected, but the guardians reduced his income to £100 a year. The Local Government Board have been appealed to, and they very properly refused to sanction the reduction, and the salary will remain at £120.

LEDWICH SCHOOL OF MEDICINE.

THESE premises are being remodelled and, in a great measure, rebuilt, so as to provide everything requisite for the thorough practical instruction as well as the comfort of the students. They will include the following:—(a) *Physiological Laboratory*, sixty feet in length, well lighted, and fitted with every appliance necessary for the teaching of histology and practical physiology in accordance with the most advanced modern views. (b) *Chemical Laboratory*, fitted with all modern appliances, and capable of accommodating at least seventy students. (c) *A Room* specially designed for the teaching of operative surgery and surgical appliances. (d) *A Museum* for the teaching of pathology and osteology. (e) *A Preparation Room* supplied with lift, spirit tanks, etc. (f) *A Lavatory*, etc., supplied with hot water.

NOTES FROM EGYPT.

A SPECIAL CORRESPONDENT writes as follows from Alexandria, under date August 9th.

The sanitary state of the town of Alexandria continues to be exceedingly satisfactory. Great fears were entertained that some serious disease would break out, as it seemed hardly in the power of man to clear away the *débris* and filth with which the town was found littered after the bombardment, before some serious outbreak of disease had overtaken us. Streets covered with the *débris* of the contents of houses, of shops, hardware and software, contents of stores of every description, thrown in the streets by Arabi's soldiers and their followers; corpses here and there, and carcasses of animals, large and small, all in an advanced state of decomposition—such was the condition of Alexandria for the four or five days succeeding July 11th, during which the state of confusion and panic, and want of assistance, admitted of nothing being done.

One of the first acts of the Khedive after the bombardment was to appoint a local sanitary commission to aid the British naval authorities to clean the town, and look after its sanitary state generally. Four local medical men, Drs. Ardouin, Dutrieux, Loudynski, and Mackie, by request of the Khedive, formed themselves into a commission to organise a sanitary service for the town, having obtained a grant of money from the Control for labour expenses. The work of clearing the town of corpses and putrid carcasses was at once commenced. These were all conveyed to some distance outside the walls of the town, and buried in deep trenches covered with quicklime. The bodies of those killed in the forts were buried where they lay, in the holes and trenches dug by the shot and shell from the guns of the fleet. The indescribable destruction worked by the English guns on the forts was such as to render it impossible to extricate the corpses, already half putrid, from the enormous masses of ruins in which most of them were nearly wholly imbedded. The guns of the monster ironclads had dug the graves and performed the burial of most of their victims, leaving little to be done but to smooth over the rough work performed by the machinery of modern civilised naval warfare.

The dead having been disposed of, the next thing to be done was to clear the town of dying animals. Thousands of animals, dogs, cats, goats, sheep, etc., were lying or staggering about the streets dying of hunger or thirst, ready to crawl away and end their days in some dark alley where their presence would have been detected later by the disagreeable odour of putrefaction. The Sanitary Commission decided on the immediate destruction of all such, as there was no food to be had for them, and soon there would be no water. Domestic animals had also been left to die, shut up in houses from which the owners had fled; and when their presence made itself known, an order was obtained from the military authorities to open the houses and remove the carcasses. It is to be feared that in many of the native houses there are human corpses, as the Arabs think that many sick and bedridden were left behind when the general stampede took place, but none up to this time have been found.

The water-supply, which is fast diminishing, is becoming every day a more serious question, on account of the great increase of the population by the return of refugees. For some time after the bombardment, the whole civil population remaining in Alexandria amounted to a comparatively small number of persons strolling wearily about the streets looking at the burnt remains of what were their homes. To-day the civil population is estimated at from 20,000 to 30,000. By careful management the water in the Mahmoudieh Canal will hold out for about eight days more, provided that during that time it remains in a state fit for use. It already begins to taste and smell rather disagreeably; but the health of the population remains good, and up to the present no disease exists amongst them which can be attributed to bad water. The troops have suffered a little from diarrhoea, which has been attributed by some to the bad quality of the water, but there are many other agents which no doubt have their effect in producing it. When the water-supply from the canal either stops or becomes unfit for use, we have still in reserve sufficient water for a week or two, if carefully looked after in the numerous cisterns and wells in and about Alexandria. The great difficulty will be the distribution of water from these to the population. According to present arrangements, each individual or household will be furnished with a ticket, to be presented at the cistern, entitling him to a certain quantity. As these cisterns are at a considerable distance from some parts of the town, and labour is difficult to be had even by payment, and many, having lost the whole of their property by the fire, are not able to pay, it is probable that many poor householders have hard times before them, and that the time of sickness among the population of the town is now approaching. Condensed water, of which

there will be a plentiful supply, will be a reserve if the cisterns and wells be used up before Arabi is dislodged, and the Nile water let into the canal; but the distribution of it will be even more difficult, unless it be conveyed in tanks or by other means to convenient parts of the town.

The endemic hæmaturia, which is still the scourge of the fellah population who drink the unfiltered water from the Nile and canals, is one of the diseases to which our soldiers will be exposed, and against which it will be difficult for them to guard. Nearly three-fourths of the natives in some parts of the Delta suffer from this disease; while Europeans living in the same locality, who use none but well filtered or well boiled water, escape it. Any European who has contracted the disease has, in my experience, always confessed to having habitually used the muddy unfiltered water from the canals; and there can be little doubt that the Bilharzia hæmatobia finds its way into the system by the water. The disease prevailed amongst the French troops of the expedition of 1800.

The general health of the English troops in Egypt up to the present is, I am informed, very satisfactory. They have been greatly favoured by the weather, which has been all that could be desired for an Egyptian summer—clear dry atmosphere, temperature not exceeding 80° to 82° in the shade, with fresh sea-breeze day and night. The trying season is, however, yet to come. The autumn months in Egypt are generally hot and damp, without the mild refreshing breeze from the sea which prevails in the summer months. But little evaporation from the body goes on to relieve congestion of internal organs. Then commences the season of diarrhoea and dysentery, congestion of liver, heat-apoplexy and heat-asphyxia, ophthalmia, and fevers. To add to other difficulties, the country will probably be fully inundated by the overflowing of the Nile, which is generally high enough for purposes of irrigation by the canals, with which the Delta is intersected, about the middle or latter part of August, and reaches its maximum height about the middle of September. Twice during twenty-one years I have lived in Egypt the Nile has overflowed its banks to such an extent, that great part of Lower Egypt was so completely under water that some of the villages on the banks or near the large canals had to be deserted. Towards the latter part of September and October, hot desert winds occasionally prevail, which will prove trying to heavily equipped troops on the march, or troops employed at field work. One of Arabi's last acts, as far as we know here, has been to cut off the supply of sweet water from Suez and Port Said. At both places the population is small, so that the difficulty of supplying them with condensed water will not, it is thought, be great.

IRISH GRADUATES' ASSOCIATION.

THE Annual Meeting of this Association was held at Worcester on August 9th; the President, Dr. E. Waters (Chester) in the chair. A Council meeting was held previously. The annual report was read and adopted. A vote of thanks to the retiring President, Dr. J. T. Banks (Dublin) was carried by acclamation. The number of members was reported to be 207, showing a great increase. The motion, "That Dr. Gerald Yeo, of King's College, London, be President-elect," was carried." Dr. Balthazar Foster having resigned the office of treasurer, and being appointed vice-president, Dr. James Thompson, late of Leamington, was elected as honorary treasurer. Votes of thanks were duly proposed, seconded, and unanimously carried, respectively, both these gentlemen for their past services as treasurer and secretary to the Association since its foundation. Dr. William Frazer (Bournemouth) was elected honorary secretary for the provinces, *vice* Dr. James Thompson, who, on coming to reside in London, had vacated this office. Votes of thanks to the Committee of Council of the British Medical Association, Reception Committee, and the honorary local secretaries, were proposed and adopted. After the meeting, the members and several guests, including ladies, to the number of thirty-three, dined together at the Star Hotel, Worcester. The usual loyal and other toasts were proposed, and the company separated, after spending a most pleasant evening.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE Thirty-Seventh Annual Meeting of this Association was held on the 2nd instant at Glasgow, Professor GAIRDNER presiding. After a vote of thanks to Dr. Hack Tuke, the President for the past year, the usual routine business was proceeded with.

Dr. ORANGE was elected President for the year 1882-3, and it was agreed that the next annual meeting should be held in London.

A report was submitted from a committee, which had been appointed in 1876 to revise the statistical tables of the Association. The alterations proposed to be made in the existing tables having now received

the full attention of the members generally, the committee submitted a set of revised tables embodying the amendments which had been agreed on, and it was resolved that the revised tables should be adopted for one year, and that the committee should be continued for the present as a committee of reference upon the subject.

It was also resolved, upon the motion of Dr. MURRAY LINDSAY, that steps should be taken to draw the attention of the Government to the pressing question of the superannuation of Asylum officers, in accordance with certain principles embodied in resolutions passed by the Association in 1879.

Professor GAIRDNER, the President for the year, delivered an address, in the course of which he endeavoured to show that the members of the Association, as being what the world called specialists, and he, as a professor of medicine in general, had in reality but one aim in view, and that they were guided by one and the same scientific method and doctrine in dealing with the unsound mind on the one hand, and the unsound body on the other. It was a characteristic of the work of the members of that Association that it had become a specialism, not through individual impulses or for individual gain, but through circumstances in the nature of the work itself, making it in some degree a public function. They were, however, by no means secure against the tendency, inherent in all specialisms, to dissociate their cultivators from the general stream, so to speak, and from the actual facts and principles of the healing art in general. It would be by no means surprising were the treatment of the insane to become a specialism wholly divorced from the progress of medical science and medical art; and it is not too much to say that, whatever else was intended by it, the honour they had done him by placing him in the chair was a distinct recognition of the fact that such divorce was possible, and that they would regard it as a misfortune. While they were devoted to the treatment of the insane, they had not ceased to be physicians. He was not at all wedded to any theory of the Association of "mind and brain" or "body and mind"; but he held it to be an unquestionable truth that the analogies, and even the laws, of bodily functions, shed an immense amount of light on the study of mental diseases, and *vice versa*. Referring to the brilliant advance which had taken place in the healing art in relation to the insane, he would ask what was the essential basis of that great and beneficent change—or, rather, what was the common principle, speaking of it from the physiological and medical point of view, illustrated in all the changes which made the difference between the Bedlam of 1815 and the asylum of 1882. It was that, in the whole pathology of disease, the normal function must be held to underlie the abnormal; and that, in the cure and treatment of disease accordingly, the sound elements still remaining must be carefully respected, strengthened, and built up again; if possible, being, however, in all cases, anxiously tended and nursed; the sound man within the unsound, the sane man within the insane, being supported and buttressed, as it were, so as to reduce to a minimum the injury caused by the disease. He held this principle to be, in the largest sense of the word, a humane one; and it was carefully grounded on the consideration of human nature as a whole, and not taken piecemeal. Being so, it was humane in the narrower sense that it did not allow of any amount of disease and action or function, whether of mind or body, depriving the sick man of any of the privileges of our common humanity, which could, in the nature of the case, be accorded to him.

Dr. HACK TUKE, in proposing a vote of thanks to Professor Gairdner, said that he could assure him that he had fulfilled one of the objects which the Association had in appointing him as President, and that was to break down the wall which too often existed between insanity and other forms of disease, and to record a recognition of their protest against the divorce between psychology and general medicine.

Mr. MOULD, in seconding the motion, said that he was sorry to hear that they were spoken of as alienists. They might be specialists, but they simply had special principles and advantages for the treatment of their patients. They could not but feel it a great honour to have in the chair a man who stood in the foremost place in medicine in Scotland, and in honouring him they had honoured themselves.

The motion was carried with applause.

A resolution of thanks was tendered to the Faculty of Physicians and Surgeons for the reception which they had given the Association; and this was acknowledged by Dr. SCOTT ORR, who, in the course of his speech, said that he was glad to think that now-a-days much more attention was paid to the education of medical students in the psychological branch of the science of medicine, and that, through the liberality of medical superintendents, asylum wards were always open for their instruction. He himself looked back with great satisfaction upon the training and experience he had received in this way.

ASSOCIATION INTELLIGENCE.

GRANTS FOR SCIENTIFIC RESEARCH.

THE Scientific Grants Committee of the British Medical Association desire to remind members of the profession engaged in the researches for the advancement of medicine and the allied sciences, that they are empowered to receive applications for grants in aid of such research. Applications should be made without delay to the General Secretary, at the office of the Association, 161A, Strand, W.C., and must include details of the precise character and objects of the research which is proposed.

BRANCH MEETINGS TO BE HELD.

NORTH WALES BRANCH.—The annual meeting will be held at the Westminster Hotel, Rhyll, on Tuesday, September 5th. Members desirous of reading papers or of proposing new members, are requested to communicate the titles of the papers and the names of candidates to the Honorary Secretary on or before Monday, the 14th instant, that they may be inserted in the circular convening the meeting.—J. LLOYD-ROBERTS, Honorary Secretary.—Denbigh, August 1st.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Friday, August 11th.

The Artisans' Dwellings Bill.—The EARL OF ROSEBERY, in moving the second reading of this Bill, said that the Act of 1875 had been greatly improved by the Amendment Act of 1879. It having been felt, however, that even the latter measure was incomplete, a committee was appointed to consider whether further legislation on this subject was necessary, which had arrived at conclusions which were embodied in this Bill. There were four points in the Bill to which he desired to call attention. The first was, the modification of the provision compelling the reconstruction of houses in unsanitary districts. The Bill repealed the enactment on this subject of the Act of 1879 as far as regarded the country. As far as London was concerned, it gave the urban authority a discretionary power as regarded the rebuilding of houses for one-half of the inhabitants displaced. The second point was, that the Bill simplified the steps necessary for acquiring unsanitary houses. In the third place, the Bill explained the ambiguous language of the Act of 1879, under which arbitrators had felt themselves compelled to award somewhat extravagant compensations. In the fourth place, it was intended to amend Mr. Torrens's Artisans' Dwellings Act so as to enable the local authorities to take houses in unsanitary districts which, although not unsanitary in themselves, were the cause of unsanitation in others. He believed that this Bill would be a material improvement upon the Act of 1879. The Bill was read a second time.

The Lunacy Regulation Amendment Bill.—On the motion of the LORD CHANCELLOR, the Commons' amendments to this Bill were considered and agreed to.

MILITARY AND NAVAL MEDICAL SERVICES.

NAVAL MEDICAL SERVICE.—In accordance with the provisions of Her Majesty's Orders in Council of February 22nd, 1870, and February 4th, 1875, Fleet-Surgeon William Hoggan has been placed on the retired list from the 30th ultimo, with permission to assume the rank and title of a Retired Deputy Inspector-General of Hospitals and Fleets in Her Majesty's Fleet from that date. The undermentioned gentlemen have been entered as surgeons in Her Majesty's Fleet, with seniority of March 31st, 1880: Henry Garrard Jacob, William Manley Lory, William Spencer Lightfoot.

VOLUNTEER AMBULANCE SERVICE.

IMMEDIATELY after the battalion inspection of the ambulance attached to the 2nd Volunteer Battalion, South Wales Borderers, 1st Monmouthshire Rifles, had been satisfactorily concluded, on the Marshes, Newport, on Thursday, August 3rd, Colonel Glyn proceeded to the ground occupied by the ambulance. The bearer company, commanded by Surgeon Ready, provided with stretcher, knapsack, water-bottles, haversacks, splints, and bandages, was drilled most efficiently by Sergeant Thompson, and, by desire of the Colonel inspecting, the bearer company proceeded to show how the wounded were treated on the field, and, having been dressed and attended to according to the injuries sustained, moved to the ambulance quarters set aside for their reception. Colonel Glyn was especially pleased with the manner in which the company improvised a stretcher, using for that purpose two rifles and blanket, by which was demonstrated the feasibility of moving the wounded off the field, in case of the absence of the regulation appliances for that purpose. The inspecting officer expressed his satisfaction and pleasure to the

medical officer in charge. There was one casualty on the ground, caused by the spike of a volunteer helmet wounding a comrade's hand, causing rather severe hæmorrhage. The injured man was promptly attended to. The ambulance corps of the 1st Monmouthshire meet twice weekly for lectures, drill, and the necessary practical instruction, and are most attentive in carrying out the important duties which they have undertaken.

THE MEDICAL OFFICERS FOR EGYPT.

The following medical officers have been selected to proceed on active service with the Egyptian Expeditionary Force, viz.:—Deputy Surgeons-General J. A. Hanbury, M.B., C.B., and J. Ekin, M.B.; Brigade-Surgeons J. A. Marston, M.D., W. G. N. Manly, V.C., O. Barnett, C.I.E., R. W. Jackson, C.B., H. R. L. Yeale, M.D., E. G. McDowell, S. Fuller, E. F. O'Leary, M.D., and E. M'Grath; Surgeons-Major F. B. Baker, Grenadier Guards, W. R. Lane, Scots Guards, G. Perry, Coldstream Guards, J. H. Beath, M.D., J. G. Grant, J. Warren, W. Tanner, B. T. Giraud, M.D., W. Sly, W. C. Boyd, T. S. Comyn, M.B., F. Pennington, T. Walsh, J. Robinson, T. Barnwell, G. S. Davie, M.D., T. Ramsay, W. R. Kerans, J. E. Clark, S. K. Ray, F. G. Hume-Spry, M.D., 2nd Life Guards, R. de B. Riordan, R. P. Ferguson, W. H. B. Clapp, M.D., F. B. Scott, M.D., W. Nash, M.D., R. W. Troup, M.B., J. A. Shaw, M.D., F. Howard, M.D., R. C. C. Hickson, M.D., T. S. Lloyd-Barrow, M.D., G. F. Dooley, W. Tomlinson, T. F. O'Dwyer, M.D., L. Corban, M.D., D. C. G. Bourns, J. Candy, M.D., W. O'B. White, W. A. Catherwood, M.D., H. W. A. Mackinnon, W. Alexander, M.D., E. Townsend, M.D., T. C. Tolmie, C. F. Pollock, M.B., W. H. M'Namara, M.D., W. D. Wilson, M.B., G. Shaw, J. Walker, M.B., and R. Anderson; Surgeons J. H. C. Whipple, Coldstream Guards, A. H. Anthonisz, M.B., O. F. Molloy, R. V. Ash, M.B., J. G. Rogers, M.B., P. B. Connolly, W. E. Webb, M.B., R. G. Tomsett, P. J. M'Quaid, M.D., T. J. Galloway, M.D., W. B. Miller, M.D., J. Prendergast, J. A. Smith, J. Martin, J. E. V. Foss, M.D., C. P. Turner, B. W. Wellings, J. S. Forrester, R. H. Gardner, M.B., S. H. Carter, M.B., E. W. Kelsall, W. H. Allen, W. T. Johnston, M.D., E. R. Power, M.B., H. L. Donovan, M.D., A. H. Harding, P. B. Connolly, G. E. Twiss, R. W. Ford, T. C. Nugent, L. W. Swabey, G. Haselden, R. E. R. Morse, W. J. Lyons, M.D., W. Rowney, M.D., T. R. Lucas, M.D., C. J. Addison, A. G. Kay, M.B., W. W. Pope, R. C. K. Laffan, C. A. P. Mitchell, M.D., T. B. A. Tuckey, F. A. Harris, C. B. Lewis, T. H. Parke, F. A. B. Daley, M.D., A. S. Rose, M.D., D. L. Porter, J. Battersby, M.B., J. Maconachie, A. H. Morgan, C. H. Dixon, M.B., T. Moynihan, M. W. O'Keeffe, T. J. O'Donnell, J. Osburne, R. P., Hetherington, M.B., R. C. Johnstone, M.D., A. M. Davies, H. W. Hubbard, T. E. Noding, J. R. Yourdi, M.B., G. W. S. Magrath, M.B., A. V. Lane, J. W. Beatty, M.D., G. E. Weston, and E. D. Farnar. The following officers are told off for duty with the Medical Establishment at Cyprus, viz.:—Deputy Surgeon-General J. Lamprey, M.B.; Brigade-Surgeon J. C. Loft-house; Surgeons-Major A. J. Fergusson, F. Falwasser, T. G. Bolster, M.D., and W. H. Steele, M.D.; Surgeons W. H. Gubbins, N. M'Creery, W. Keays, J. C. Cutting, R. J. C. Hackett, M.D., and R. T. M'Greath, M.D. The officers of the Army Hospital Corps appointed to do duty with the Egyptian Expedition are—Captains of Orderlies F. Philpot, D. Pringle, R. T. Osborne, and W. Joseph; Lieutenants of Orderlies W. A. Moss, D. O'Connor, W. M'Kay, F. Tighe, H. Graham, E. Enright, H. Hynd, L. Gorman (Hon. Captain), R. Howell, J. D. Marshall, T. Connor, and T. Phillips.

OBITUARY.

ANDREW LEITH ADAMS, M.B., F.R.S.

On the 29th July, at Queenstown, this distinguished Scotchman passed away, not much beyond the middle period of life. The second son of Dr. Francis Adams of Banchory-Ternan, the well-known classical scholar and translator, he was educated at the Grammar School, Aberdeen; graduated at Marischal College in 1846; became M.B. in 1848; and member of the Royal College of Surgeons of Edinburgh, in the same year. Entering the Army Medical Department in October 1848, he was gazetted Assistant-Surgeon to the 94th Foot in India, but was soon transferred to the 22nd Regiment, in which corps, first in the junior and then in the senior rank, he passed the greater part of his twenty-five years of army life. He served in medical charge of the detachment, 22nd Regiment, with the expeditionary force under Sir Sydney Cotton, in 1854, against the Mohmand tribes on the Peshawar frontier (medal with clasps); came home with the regiment from India; was temporarily removed from it, on volunteering for the Crimean war, by being

sent to work in the Scutari hospitals, 1855; received his promotion as Surgeon, September 1855 (somewhat short of seven years' service); reverted to his old corps, and served with it consecutively in the United Kingdom, Malta, New Brunswick, and again at home, on its return from foreign service in 1869. He retired on half-pay, with the honorary rank of Deputy Surgeon-General, in January 1875. His innate love for natural history soon showed itself; and, availing himself of the facilities for leave in the old days of three and two assistant-surgeons to each regiment, he followed the bent of his inclinations, and in pursuit of sport in Cashmere; and his observations in the Himalayas he embodied in his *Wanderings of a Naturalist in India*; his Mediterranean experience is given in *Notes of a Naturalist in the Nile Valley and Malta*; and that of North America in *Field and Forest Rambles*. It must not, however, be supposed that he was negligent of professional subjects, for the journals of the day contained papers from time to time; and buried in successive blue books may be found contributions from his untiring pen, notably the history of the cholera epidemic in the Maltese Islands in 1865, written in conjunction with Surgeon-Major Welch, the then assistant-surgeon of the regiment, an epidemic which so forcibly illustrated the influence of human intercourse in the dissemination of the disease. But that which brought Adams so prominently forward in the scientific world was his geological and palæontological work in Malta—the laying bare of the early history of the Mediterranean basin as a vast continent on which elephants and hippopotami roamed, now submerged with the exception of the Maltese island group. During his six years' service in Malta, he extended and developed the work commenced by Captain Spratt, R.N.; and his excavations, assisted by money grants from the British Association, led to the discovery of two more fossil elephants in addition to the pigmy one previously known, and also to the prior existence of a large tortoise swan, and rat. These results he embodied in successive reports to the British Association, and in a monograph "On the Dentition and Osteology of the Maltese Fossil Elephants" (*Transactions of the Zoological Society*, London, vol. 9), and to this work he was mainly indebted for the coveted F.R.S., an honour which has fallen but to few army medical men. Nor was his interest limited to medicine and science, for no matter in what country he was located, he invariably assisted in the well-being of the community. This was especially conspicuous in Malta, and the local journals were indebted to him for much valuable information on sanitary matters and means of improving the general health of the island. Again, too, while occupying the post of recruiting officer in London, points of interest met with were given in a paper on "The Recruiting Question from Medical and Military Points of View" (*Journal of the United Service Institution*, vol. 18); in a contribution to the *Lancet* on the "Heredity of Abnormalities and Deformities;" and in one to the *British and Foreign Medical Chirurgical Review* (No. 109), "On the Physical Requirements of the Soldier." He was one of those men who looked with regret at the fact that in such a branch of the service as the Army Medical Department, which is dependent for its status among the other branches so much on the professional and scientific attainments of its members, no inducements were held out to men to progress on these lines. In his time, so now, recognition of professional or scientific work by promotion has found no place. On retiring from the service he first occupied the professional chair of Natural History in the Royal College of Science for Ireland, and in 1874 vacated it for a similar chair in the Queen's University, Cork. This latter he held to the time of his death, largely developing its influence and scope. He was made LL.D. in 1881, and D.Sc. of Queen's University in 1882.

In one sense he may be regarded as a self-made man; his advancement and position were essentially his own making. His was a life of constant work and perseverance, always pressing on even when trammelled by ill-health. The talents committed to him certainly suffered no deterioration at his hands, and he seemed to have constantly before his eyes the injunction of the preacher—"Whatsoever thy hand findeth to do, do it with thy might."

He leaves behind him a widow, who is already well-known in the literary world, and two sons, and another work on natural history not yet in print.

PORRO'S OPERATION IN ITALY.—From a return published in the *Annali di Ostetricia* for August, we learn that, since its introduction in 1876, Porro's operation of removal of the uterus and ovaries, complementary to Cesarean section, has been performed in Italy thirty-eight times. Deaths occurred in twenty-four cases, and recovery in fourteen, or in 36.9 per cent. Of the successful cases, as many as six were operated on in the Lying-in Hospital of Milan, in the practice of Professors Chiara, Mangiagalli, and Negri.

MEDICAL NEWS.

UNIVERSITY OF EDINBURGH.—The following gentlemen received degrees in Medicine and in Surgery, on Tuesday, August 1st, 1882.

Degree of Doctor of Medicine, with the titles of the Theses. (** denotes those who obtained prizes for their dissertations; * deemed worthy of competing for the dissertation prizes: † commended for their dissertations.) Alfred George Barrs, England, M.B. and C.M., 1875: On Adherent Pericardium of Rheumatic Origin, with Cases. ** Howard Bendall, England, M.B., 1880: On Acute Farcy in Man, together with an Inquiry into the Cause of Death by Fat Embolism. George Reith Brebner, Scotland, M.B. and C.M., 1869: Theory of Vaccination. * Robert William D. Cameron, Scotland, M.B. and C.M., 1879: Restraint in the Management and Treatment of the Insane. * John Merrit Chisholm (M.A. Edin.), M.B. and C.M., 1878: The Etiology of Malarial Fevers. ** John Halliday Croom, Scotland, M.B. and C.M., 1868: Clinical and Experimental Studies from the Royal Maternity Hospital. Lionel Druitt, England, M.B. and C.M., 1877: Paroxysmal Hematuria; or Paroxysmal or Intermittent Hematuria, or Hemoglobinuria. William Grant Furley, Scotland, M.B., 1875: Acute Rheumatism; its Pathology and Treatment. Bernard James Guillemand, England, M.B. and C.M. (with First Class Honours), 1878: Notes on the Nutrition and Health Management of Young Children. Henry Handford, England, M.B. and C.M. (with Second Class Honours), 1878: On the connection between Hemorrhagia and the Early Stage of Pulmonary Phthisis. * Edward William Hope, England, M.B. and C.M., 1878: Clinical Notes on Fever and Small-pox. Edward De Warren Hutchinson, England, M.B. and C.M., 1879: On Infection. * John Rudd Leeson, England, M.B. and C.M., 1876: Chronic Hydrocephalus. * George Le Fevre, England, M.B. and C.M., 1877: On Post Partum Hemorrhage. * James Mackenzie, Scotland, M.B. and C.M., 1878: Clinical Report of Case of Hemiparesis Spinalis. * Charles Alexander M'Lean, Monte Video, M.B. and C.M., 1879: Clinical Notes on Optic Neuritis and Atrophy of the Optic Nerve. Donald Urquhart MacLennan, Scotland, M.B. and C.M., 1878: Notes of Cases of Diseases of the Abdomen. * Samuel Rutherford Macphail, Scotland, M.B. and C.M., 1878: Carbolic Acid Poisoning, with special reference to Poisoning from the use of the Acid in Surgery. Robert William Mead, England, M.B. and C.M., 1879: Some of the Diseases of the Stomach. Arthur William Oakes, Australia, M.B. and C.M., 1879: The Medical, Surgical, and Domestic Uses of Eucalyptus. William Bruce Oliphant, Scotland, M.B. and C.M., 1879: Medical Climatology, with Special Note on Seavoyages and on the Climate of Pau. * James Crawford Renton, Scotland, M.B., 1873: Report of Clinical Work at the Glasgow Eye Dispensary. * Joseph Carne Koss, Madeira, M.D. and C.M., 1880: Observations upon the Modes of Treatment of Pleurisy with Effusion; with special reference to the Therapeutic Value of Thoracentesis. William Shaw, England, M.B. and C.M., 1878: Observations on the Excretion of Urea. * George Daniel Smith, England, M.B. and C.M., 1875: On the High Altitude Treatment of Phthisis Pulmonalis. * Thomas Peter Anderson Stuart, Scotland, M.B. and C.M. (with First Class Honours), 1880: Nickel and Cobalt; their Physiological Action on the Animal Organism. * Herbert Coupland Taylor, England, M.B. and C.M., 1878: The Climatic Treatment of Phthisis, and its Geographical Distribution. * Alexander Thom (M.A. St. And.), Scotland, M.B. and C.M., 1877: On the Relation of Pyrexia to Germs, and on Salicylic Acid as an Antipyretic Remedy. * James Thomson, Scotland, M.B. and C.M. (with Second Class Honours), 1879: Gelatinous Degeneration, with special reference to its Pathology. * Alfred Croudson Tunstall, England, M.B. and C.M., 1875: Influence of Climate on Disease. Charles Scott Watson, Scotland, M.B. and C.M., 1876: Cerebral Motor Discharge and Myotatic Irritability. * Albert Wilson, England, M.B. and C.M., 1878: Clinical Research with the Sphygmograph.

Degree of Bachelor of Medicine and of Master in Surgery. (a indicates that the candidate passed the examinations with First Class Honours. b indicates that the candidate passed the examinations with Second Class Honours.) Robert Swan Aitchison, Scotland; Thomas Aitchison, England; Leonard Thomas Fitz-Samuel Archer, Barbadoes; b Herbert Harding Ashdown, England; a Frederick Ashwell, England; a George Armstrong Atkinson, England; Thomas Ridley Bailey, England; Peter Baillie, Scotland; a Minas Manook Basil (M.A. Calcutta), Persia; Basanta Kumar Basu, India; George James Hamilton Bell, Shetland; Horace Lynden Bell, Ireland; William Barnett Benjafield, England; Joseph Shepherd Bolton, England; John Henry Richard Bond, England; Philip Grierson Borrowman, Scotland; Henry St. George Boswell, India; Charles Harper Bourne (B.A. Durham), Barbadoes; b John Bowie, Scotland; Alister Stuart Bowman (B.A. Sydney), Australia; Nathaniel Thomas Brewis, England; Sidney William Bryant, England; William Augustus Buchan, Wales; George Burn-Murdoch, Scotland; Percy Bellamy Bury, England; William Hall Calvert, Scotland; b Samuel George Campbell, Natal; Francis Charlesworth, England; b Archibald Kennedy Christie, Scotland; James Simpson Clayton, England; Joseph Osborne Closs, Scotland; Philip Brunelleschi Cousland, Scotland; James Henry Davidson, Cape Town; John Davies, England; a Auguste Sheridan Delepine, Switzerland; b George Cecil Dickson, Scotland; John Robert Dobie, Scotland; John Wilson Duckett, England; Henry Aylmer Dumat, Mauritius; Robert Smith Dunlop, Scotland; William Henry Dutton (M.A. Melbourne), Australia; Henry James Fletcher, England; Alexander Forbes, Scotland; Alexander Ross Fraser, Scotland; Elias Fraser, England; b Thomas Alexander Fraser, England; George Wilson Galletly, Scotland; William Gay, England; Lawson Gifford, Jamaica; Herbert James Gilbert, England; William Anstey Giles, Australia; Thomas Gilson, Scotland; Joseph Edward Godfrey, Demerara; James Graham (M.A. Edin.), Scotland; Francis William Grant, Scotland; Henry Lewis Grant, Scotland; John Grant, Scotland; William Francis Grant, Calcutta; Thomas Duncan Greenlees, Scotland; John Griffin, England; Clement Bryce Gunn, Scotland; George Frederick Guthrie, England; Harry Pinnington Hallows, England; Hugo M'Cauley Hardcastle, Egypt; b Arthur William Hare, England; Francis William Nicol Haultain, Ceylon; Francis Henry Hawkins, England; Robert Samuel Finlay Henderson, Calcutta; Selby Herriot Henderson, Scotland; William Whittington Herbert, Wales; Alfred Peter Hillier, (B.A. Cape of Good Hope), England; Thomas Alfred Hird, England; Charles Edward Holland, Scotland; Richard Humphreys, Wales; James Hutchison, Scotland; George Washington Isaac, England; John Henry Jackson, Eng-

and; Granville Jameson, England; Robert Wyatt Jamie (M.A. Aberdeen), Scotland; Cecil Willoughby Johnson, India; James Johnston, America; John Johnston, Scotland; John William Johnston, Scotland; Thomas Christopher Johnson, England; Charles William Jones, England; Daniel Marinus Jones, Bonn; Arthur Corrie Keep, England; George Kerr (M.A. Oxon.), Scotland; Arthur King, England; Ernest Kingscote, England; Ernest Dormer Kirby, England; William Henry Lang, Scotland; Percival Basil Le Franc, India; Robert Lesly, England; John Liddell, Scotland; Samuel Towers Linklater, Orkney; George Duncan Logan, Scotland; Duncan Romaine M'Arthur, Ceylon; b William Burns Macdonald (M.A. Edin.), Scotland; John M'Fadyen, Scotland; William Mackay, Scotland; Alexander Flyter Mackenzie, Scotland; John Eddie Mackenzie, Africa; Robert Mackinlay, Scotland; Thomas George M'Lauchlan, Scotland; Edward Orr Macniven, Scotland; William Grant Macpherson (M.A. Edin.), Scotland; Adam Macvie, Scotland; Ernest Edmund Maddox, England; George Manook, India; François Paulus Marais, Cape of Good Hope; Rivis Mead, England; Thomas Cockburn Meggison, England; Arthur William Thomas Ffintoff Mickle, England; Arthur John Macket King Mill, Scotland; Bernard Langley Mills, England; Arthur Malcolm Moore, New South Wales; Edward Henry Morgenrood, Cape of Good Hope; Charles James Mouncey, England; Richard Ulysses William Murray, Ireland; James Aitken Myrtle, England; John Brady Nash, Australia; Alfred James Neale, England; Ernest Frederick Neve, England; Ebenezer Henry Lawrence Oliphant, France; Edmund Stuart Palmer, England; b George Keppie Paterson, Scotland; a Diarmid Noel Paton (B.Sc.), Scotland; Frederick Erskine Paton, Scotland; Robert William Philip (M.A. Edin.), Scotland; Thomas Philip, Scotland; John Randal Phillips (B.A. Durham), Barbadoes; a George Carrington Purvis, India; John Rees, Wales; Herbert Rendell, Newfoundland; Alfred Gordon Richardson, Wales; Thomas Charles Rowland, Wales; Ridley Herschel Rozenzweig, Cape of Good Hope; Charles Casely Scott, England; Thomas Laidlaw Shearer, America; Robert John Shaw Simpson (M.A. Edin.), Scotland; Francis William Sinclair (M.A. Edin.), Scotland; Frederick Archibald Sinclair, Jamaica; William Skinner, Scotland; Allen Thomson Sloan, Scotland; a David Smart, Scotland; George Arbuthnot van Someren, Scotland; John Buchan Spence (M.A. Edin.), Scotland; Ernest Henry Stancombe, England; b Joseph Stapleton, Australia; Donald M'Pherson Stevenson, Scotland; b Ralph Stockman, Scotland; Alexander Stookes, England; Jean Renaud Suzor, Mauritius; a Sidney Johnson Taylor, England; William Taylor, Scotland; William Fookes Thompson, England; William Thyne, Scotland; Charles John Tiffen, England; Percy Everard Todd, England; David Treharne, Wales; John Andrew Turner, New South Wales; Alexander Valentine, Scotland; Edmund Vaudrey, England; Michael John Verdon, Ireland; Johan Carel Voigt, Cape of Good Hope; Walter Oliphant Walker (M.A. Edin.), Scotland; John George Wallace-James, India; a Harold Fuller Watkins, England; William Henry Weston, England; John Whitaker, England; Robert Musgrave Whitham, England; John Mackie Whyte (M.A. Edin.), Scotland; Ernest Wilcox, England; Robert Arthur Williams, Wales; Hector M'Lean Wilson, Scotland; Henry Garnett Wilson, England; William Wilson, Scotland; William Cleaver Woods, England; William Younan, India; George James Young (M.A. Edin.), Scotland.

Degree of Master in Surgery.—Howard Bendall, M.D.

The Ettles Prize for 1882 was divided between George Armstrong Atkinson, M.B., C.M., and Sidney Johnson Taylor, M.B., C.M. The Beane Prize was awarded to George Armstrong Atkinson, M.B., C.M. The Syme Surgical Fellowship was awarded to Howard Bendall, M.D. The Buchanan Scholarship was awarded to David Smart, M.B., C.M.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 10th, 1882.

Cox, Roland Frederic, Twickenham.
Myddelton-Gavey, Edward Herbert, Littlehampton.
Smith, James Edward, Hammersmith.
Thomas, Arthur William, Chelsea.
Treasure, William Beeson Crawford, Crewkerne.

The following gentlemen also on the same day passed their Primary Professional Examination.

Appleton, Harry, Charing Cross Hospital.
Grimmer, Charles G., St. Bartholomew's Hospital.

MEDICAL VACANCIES.

The following vacancies are announced:—

BRIGHTON AND HOVE DISPENSARY.—Resident Dispenser. Salary, £100 per annum. Applications by the 21st instant.
CANCER HOSPITAL, LONDON AND BROMPTON (FREE).—Resident House-Surgeon. Salary, seventy-five guineas per annum. Applications by September 2nd.
CAPE COPPER MINING COMPANY, South Africa.—Assistant-Surgeon. Salary, £300 per annum. Applications to the Secretary, 6, Queen Street Place, E.C.
CHELTENHAM GENERAL HOSPITAL AND DISPENSARY.—Dispenser Salary £80 per annum. Applications by September 1st.
CHICHESTER INFIRMARY—House-Surgeon and Secretary. Applications to the Secretary by September 9th.
DARLINGTON HOSPITAL.—Junior House-Surgeon. Salary, £100 per annum (out-door). Applications to C. Tanson, Esq., Fairfield, Darlington.
DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL, Leicester Square, W.C.—Demonstrator of Contour and Cohesive Fillings. Salary, £50 per annum. Applications by September 29th.
DONCASTER INFIRMARY AND DISPENSARY.—Dispenser and Assistant to House-Surgeon. Applications to the House-Surgeon.

DOWNPATRICK DISTRICT LUNATIC ASYLUM—Assistant to Resident Medical Superintendent. Applicants must be unmarried, be doubly qualified, and possess a diploma in midwifery. Salary, £100 per annum, with furnished apartments, fuel, light, washing, first-class rations, and attendance. Election on September 2nd.

EARLSWOOD ASYLUM FOR IDIOTS, Redhill, Surrey.—Medical Practitioner. Salary, £400 per annum. Applications endorsed "Medical Superintendent", the Board of Management, 36, King William Street, London Bridge, E.C., by August 21st.

GLOUCESTER COUNTY LUNATIC ASYLUM, near Gloucester.—Medical Superintendent. Applications addressed to the Committee of Visitors, Wotton, near Gloucester.

LONGFORD UNION—Medical Officer for Longford Dispensary District. Salary, £100 per annum, with £25 per annum as Medical Officer of Health, registration, and vaccination fees. Election on the 7th proximo.

NATIONAL DENTAL HOSPITAL, 149, Great Portland Street, W.—Assistant Dental Surgeon. Applications by August 22nd.

NATIONAL DENTAL HOSPITAL, 149, Great Portland Street, W.—House-Surgeon. Salary, £50 per annum. Applications by August 22nd.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney.—Resident Clinical Assistant and Registrar. Salary, £70 per annum. Applications by the 21st instant.

NORTH STAFFORDSHIRE INFIRMARY, Hartshill, Stoke-upon-Trent.—House-Physician. Salary, £100 per annum. Applications by August 23rd.

PICKERING UNION—Medical Officer. Salary, £20 for the Workhouse, and £40 for the District, with the usual medical fees. Applications to R. Kitching by August 26th.

PORT ELIZABETH PROVINCIAL HOSPITAL, Cape Colony.—Medical Practitioner. Salary, £350 per annum. Applications to Captain Mills, C.M.G., 9, Albert Mansions, Victoria Street, S.W., by August 21st.

ROYAL INFIRMARY OF EDINBURGH—Pathologist. Applications to Mr. Peter Bell by September 30th.

SALISBURY INFIRMARY—House-Surgeon. Salary, £100 per annum. Applications by the 25th instant.

ST. GEORGE'S, HANOVER SQUARE, PROVIDENT DISPENSARY, 59, Mount Street—Resident Medical Officer. Salary and allowance for last year, £214 4s. 3d. Applications to Mr. G. H. Leach, Secretary, by September 30th.

WINCHOMB UNION—Medical Officer. Salary, £65 per annum, in addition to midwifery, surgical, and vaccination fees. Applications by August 25th to J. H. Stephens.

MEDICAL APPOINTMENTS.

BARNES, R. M.D., appointed Honorary Consulting Physician to the Chelsea Hospital for Women.

BERRY, G. A. M.B., appointed Assistant Ophthalmic Surgeon to the Royal Infirmary, Edinburgh.

BLACK, R., L.S.A., appointed Assistant House-Surgeon to the Sussex County Hospital, *vice* E. S. Dashwood, M.R.C.S., resigned.

BOND, J. W., M.D., B.S., appointed Resident Medical Officer to the General Hospital, Birmingham.

CAMPBELL, P. E., M.B., appointed Senior Assistant Medical Officer to the Metropolitan District Asylum, Caterham, *vice* G. S. Seccombe, L.R.C.P., resigned.

CRALLAN, G. E., M.R.C.S.Eng., appointed Assistant Medical Officer to the County Lunatic Asylum, Cambridge, *vice* T. R. H. Clunn, M.R.C.S., resigned.

DAVISON, I. T. R., M.D., C.M., appointed Senior Resident House-Surgeon to the Liverpool Hospital, *vice* J. M. Chisholm, M.A., M.D., resigned.

DONKIN, Charles, L.R.C.P., appointed House-Surgeon to the Hartlepool Hospital, *vice* A. F. Lenthall, L.R.C.P., resigned.

ERWIN, Samuel J., L.R.C.P., appointed Medical Officer to the Chorlton Union, *vice* G. R. Brebner, M.B., resigned.

FITZPATRICK, M. M., M.B., C.M., appointed Junior Resident House-Surgeon to the Royal Southern Hospital, Liverpool, *vice* W. H. Irwin Sellers, M.B., promoted.

HORSFALL, T., M.R.C.S., appointed Assistant House-Surgeon to the Cumberland Infirmary, *vice* A. H. Proffit, M.R.C.S., resigned.

LOW, A. B., M.D., appointed Medical Officer to the Sunderland Union Workhouse, *vice* J. T. R. Davison, M.D., resigned.

MANN, I. D., M.D., appointed Honorary Physician to the Salford and Pendleton Hospital, *vice* J. T. R. Davison, M.D., resigned.

MIDDLEMISS, G., L.R.C.P., appointed Medical Officer to the Workhouse of the Darlington Union.

MOULLEN, C. W. M., F.R.C.S., appointed Junior Assistant Surgeon to the London Hospital.

O'CONNOR, Bernard, M.D., M.R.C.P.Lond., appointed Physician to the Hospital for Diseases of the Chest, Mount Vernon, Hampstead, *vice* Dr. J. T. R. Davison, M.D., resigned.

W. H. Irwin, M.D., M.P., F.R.C.S., appointed Senior Resident House-Surgeon to the Royal Southern Hospital, Liverpool, *vice* J. T. R. Davison, M.D., resigned.

SPICER, R. H. Scans, B.Sc.Lond., M.R.C.S., L.S.A., appointed Resident Medical Officer to the Royal Southern Hospital, Liverpool, *vice* J. T. R. Davison, M.D., resigned.

THOMAS, E. G., M.B., appointed Assistant Medical Officer to the Metropolitan District Asylum, Caterham, *vice* S. E. Duncan, L.R.C.P., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The Registrar-General has received the following returns of Births, Marriages, and Deaths for the week ending August 12th, 1882, and for the corresponding week of the previous year.

BIRTHS.

BARNES, R., on the 12th instant, the wife of C. Clark, of the City of London, has had a son.

WILLIAMS, G., on the 12th instant, at Fallowfield, Manchester, the wife of H. Williams, of the City of London, has had a son.

DEATHS.

CHAVASSE.—On August 13th, at 9, Duchess Road, Edgbaston, Samuel Chavasse, M.R.C.S., late of Newhall Street, Birmingham.

WEBSTER.—August 8th, Cecil Webster, Surgeon, Bewdley, aged 49.

HEALTH OF FOREIGN CITIES.—The following statistics, derived from a table in the Registrar-General's last weekly return, afford trustworthy indications of the recent health and sanitary condition of various foreign and colonial cities. In the three principal Indian cities, the death-rate averaged 23.0, and was equal to 20.9 in Bombay, 21.3 in Calcutta, and 28.6 in Madras; cholera caused 18 deaths in Calcutta, and small-pox 4 in Madras. According to the most recent weekly returns, the average annual death-rate per 1000 persons, estimated to be living in twenty-two European cities, was equal to 29.0 per 1000; this rate showed an usual marked excess upon the average rate in twenty-eight of the largest English towns, which last week did not exceed 21.1 per 1000. The rate in St. Petersburg was 48.0, but showed a decline from still higher rates in previous weeks; diarrhoeal diseases caused 193, diphtheria 16, and small-pox 10 deaths within the city. In three other Northern cities—Copenhagen, Stockholm, and Christiania—the death-rate did not average more than 25.0, the highest rate being 29.5 in Stockholm, whereas 32 of the 99 deaths resulted from diarrhoeal diseases, and 5 from diphtheria. The Paris death-rate was equal to 21.0, and showed a decline from the rates in recent weeks; 47 deaths from typhoid fever, and 42 from diphtheria and croup were registered during the week. The 191 deaths in Brussels, of which 34 were fatal cases of diarrhoea and two of small-pox, were equal to a rate of 24.4; 66 fatal cases have occurred in this city since the beginning of May. The death-rate in Geneva was so low as 16.5. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the death-rate averaged only 21.5; the rate did not exceed 16.9 in Rotterdam, where one fatal case of small-pox was reported. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 33.2, and ranged from 23.8 and 25.6 in Munich and Vienna, to 37.4 and 37.5 in Trieste and Buda-Pesth; the death-rate from diarrhoeal diseases showed a marked excess in most of these German cities, but especially in Berlin, Breslau, and Buda-Pesth. Small-pox caused 13 deaths in Vienna, and 3 both in Prague and Buda-Pesth. In three of the principal Italian cities, the death-rate averaged 27.0 per 1000, and ranged from 24.6 in Rome, to 35.9 in Venice; typhoid fever caused 6 deaths in Turin, and measles 6 in Venice. In four of the largest American cities, the average death-rate was 38.3, the highest death-rates being 39.0 in Brooklyn and 40.8 in New York. Diarrhoeal diseases were especially fatal in each of these four American cities. Scarlet fever continues somewhat fatally prevalent in New York and Brooklyn, and 7 deaths from typhoid fever were reported in Philadelphia.

CREMATION IN ITALY.—In a recent article, the *Gazetta Medica Italiana*, gives some interesting statistics, relative to the progress of cremation in Italy. There exist in all, twenty-two cremation societies in various parts of the country chiefly, however, in Northern and Central Italy. The members of these societies are over 5,000 in number. At Lodi, cremation has been adopted, or authorised, by the municipality itself, as a means of disposing of dead bodies, consequently, in that progressive community, there is no longer any necessity for a special cremation society. The total number of bodies cremated in Italy from 1876 to 1881 was 219, of which, 73 were females. Various forms of apparatus are employed in cremation as well as a variety of substances as fuel. Thus in Milan, gas, coke, and wood have been severally used, while in Padua Venini's plan of using gazogene has found most favour. The Italian and foreign societies are in close communication with each other, while at Milan a Central and as it were International Committee, sits. The object of this committee is to disseminate in every country a knowledge of the benefits of cremation and also to agitate for the repeal of any legislative enactment which may exist against it.

PRESENTATION.—Mr. John Bowes, of Richmond, Yorkshire, has been presented with a silver epergne and two candelabra, of the value of 170 guineas, in recognition of his valuable services as a medical practitioner for fifty years.

SUPERANNUATION.—The Bridgewater Guardians have granted, and the Local Government Board have sanctioned, a superannuation allowance of £25 per annum to Mr. Richard Axford, Medical Officer to the Workhouse and No. 3 District, upon his resigning from ill-health.

The concluding volume of Professor Politzer's *Lehrbuch der Ohrenheilkunde* has been published, and may be obtained through Messrs. Williams and Norgate, or other foreign booksellers.

OPERATION DAYS AT THE HOSPITALS.

- MONDAY**..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopaedic, 2 P.M.
- TUESDAY**..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 2 P.M.
- WEDNESDAY**.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopaedic, 10 A.M.
- THURSDAY**.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.
- FRIDAY**..... King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.
- SATURDAY**.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

- CHARING CROSS**.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin M. Th.; Dental, M. W. F., 9.30.
- GUY'S**.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu. F., 12.30; Dental, Tu. Th. F., 12.
- KING'S COLLEGE**.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.
- LONDON**.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.
- MIDDLESEX**.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.
- ST. BARTHOLOMEW'S**.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopaedic, F., 12.30; Dental, Tu. F., 9.
- ST. GEORGE'S**.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopaedic, W., 2; Dental, Tu. S., 9; Th., 1.
- ST. MARY'S**.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., Tu. F., 2; Eye, Tu. F., 9.15; Ear, M. Th., 2; Skin, Tu. Th., 1.30; Throat, M. Th., 1.45; Dental, W. S., 9.30.
- ST. THOMAS'S**.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.
- UNIVERSITY COLLEGE**.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. T., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15. Throat, Th., 2.30; Dental, W., 10.3.
- WESTMINSTER**.—Medical and Surgical daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with Duplicate Copies.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

SUGGESTION FOR A SICK FUND.

SIR,—I have long wished to make a suggestion to my professional brethren (and can only do so through the medium of the medical journals) that there should be for us all a sick fund, or general club, by which a man, when he is totally disabled, shall receive sufficient sick pay to keep him going, and to pay a *locum tenens*. Suppose each medical man were to subscribe, say, £2 2s. a year; and, in case of illness from disease or accident, he would, during his incapacity from attending to his professional duties, receive, say, £10 a week. I would leave the management of rules, etc., to a committee appointed for the purpose, and I only wish to place the skeleton of the idea before the profession, and leave it to more experienced heads to put it into working order. I am sure that many a man is working hard outdoors when he ought to be in bed, and thus, perhaps, laying the seeds of some disease which, with proper rest, might be avoided. These cases are so numerous, that it is obvious some remedy should be sought for them. I have been called up at night, and had to go six miles in the rain and snow, with slight jaundice, an ulcerated throat, and a temperature of 102°, thereby lengthening my convalescence by quite a fortnight. How many have fared worse still? but they cannot afford to pay a *locum tenens* £3 3s. a week, and so they slave on in misery. Of course, if such a club were started, each sick member should get a certificate of illness signed by two medical men, if possible, both when he goes "on the box", and when he goes off.—I am, sir, faithfully yours, A. H. BOYS, L.R.C.P.Ed. Lodway, Pill, near Bristol.

COMMUNICATION OF HYDROPHOBIA.

SIR,—I send you an extract from my lectures on "Hydrophobia, its History, Pathology, and Treatment", in reply to a most important query of Mr. Henry Taylor's.

At Lecture I, page 17, I ask the question: "Can hydrophobia result from the bite of a man or animal who is not labouring under that disease?" "In reference to the possibility of a disease resulting from the bite of a dog, who at the time of, and for several months after, inflicting the bite was in good health, it is to be observed that M. Velpeau reported to the Société Médicale d'Emulation the case of a boy who, while in perfect health, was bitten by a dog with which he was playing. The bite was treated by the author as if it had been an ordinary wound, as there was no reason to believe that the animal was in any way ill. On the twenty-sixth day from the injury, the boy died, with what M. Velpeau considered to be the symptoms of hydrophobia, yet the dog never presented any signs of departure from health, and was killed on the day the patient died. In the *Lancet* is reported a fatal case of hydrophobia that, in five months, succeeded the bite of a dog whom the deceased and others had been irritating. The animal was alive and well at the time of the patient's death."

"These and similar cases oblige me to come to the conclusion that the bites of non-rabid dogs, even though they may not have been ill previous to or after the injury, can, in some rare cases, and under circumstances which tend to excite their anger, produce true hydrophobia in man."

I have put the word *oblige* in italics: happier, far happier, to be able to prove the contrary; but I believe it to be our firm duty, though proofs are against us, to tell our patients "there is no danger". Acting on this, I never allow a dog who has bitten anyone to be destroyed, unless for safety sake.—I am, yours, etc., THOS. C. SHINKWIN. North Mall House, Cork.

OPHTHALMIA AT ALEXANDRIA.

In an article, entitled "Alexandria", which appears in a recent number of the *Gentleman's Magazine*, from the pen of Mr. C. F. Gordon Cumming, appears the following passage:

"The amount of ophthalmia is something frightful. It is due chiefly to the intense dryness of the atmosphere, and the subtle impalpable dust which for ever floats in the air above the crowded city. Exceeding dirt also does its part; while the swarms of flies which cluster on the sores, and there revel undisturbed, are a sight to fill one with disgust. Of course, they carry infection to the next eye on which they settle, and so the loathsome disease spreads, and that with such frightful rapidity, that sometimes the whole eye is reduced to a mere opaque pulp within twenty-four hours, even when the sufferer is otherwise in perfect health. The consequent amount of blindness is startling, and I believe the computation is that one man in six has lost the sight of either one or both eyes. Even where actual blindness does not exist, the powers of vision are singularly defective; and when it became necessary for the railway in selecting its servants, to test their sight, it was found that a very small minority of the candidates could distinguish a red signal from a green one at a distance of a hundred yards."

MR. LAWSON TAIT AND LISTERISM.

SIR,—In the address in Surgery, Mr. Stokes says: "An attempt has been made by Mr. Lawson Tait to draw a distinction between the effects of germs on dead and living tissues, the only serious consequences being, it is alleged, those which result from their introduction into the system through the medium of dead tissue. Such is the contention." Such is no contention of mine. What I did say was this: "The only point between Mr. Lister and myself is that Mr. Lister assumes for living tissue the same series of phenomena as he finds in dead infusions; and this I deny altogether."—I am, etc., LAWSON TAIT.

TINCTURE OF IODINE IN ERYSIPELAS.

SIR,—So satisfied am I of the value of the tincture of iodine as a local application in erysipelas, that I gladly welcome any notice of its extended use by the profession. In that light, the article of Dr. Hutchinson in the JOURNAL of August 5th is satisfactory; but, in other respects, he does me an injustice. He speaks of my communication as a report of a case of traumatic erysipelas. Such a case I certainly mentioned a little more in detail, as it was the one which suggested the use of iodine; but if Dr. Hutchinson will take the trouble again to refer to my letter, he will see that I spoke of the successful treatment of fourteen other instances of both traumatic and idiopathic erysipelas, and even described the mode of application of the iodine in a case of erysipelas of the scalp.

I should be glad if Dr. Hutchinson will kindly give the date of occurrence of his single case.—I am, yours truly, Warrington, August 8th, 1882. C. N. SPINKS.

PRACTICE IN THE SUBURBS OF LONDON.

SIR,—Will you allow me to ask a question in the JOURNAL relative to private general practice in the suburbs of London? What, for instance, would be an average time before a man would be able to earn, say, £5 a week? I name this sum as barely sufficient to cover the expenses of a very modest household. I speak, also, of an educated man, well qualified, but without introduction or friends in the neighbourhood, who simply, as it were, "cast anchor", and hoped and waited attentively.—I am, etc., SPES.

THE BRADSHAW LECTURE ON THE INFLUENCE OF THE SYMPATHETIC ON DISEASE.

*Delivered before the Royal College of Physicians of London,
August 18th, 1882.*

By EDWARD LONG FOX, M.D., F.R.C.P.,
Consulting Physician to the Bristol Royal Infirmary.

WHEN you, sir, did me the honour of inviting me to deliver this lecture here to-day, I was tempted to the choice of a subject that is not only a vast one, but also, perhaps, somewhat indefinite.

Anyone who has worked for many years in the science and art of medicine must feel some diffidence in expressing views that may be open to controversy, before any body of men so highly educated as are the members of the medical profession at the present time. But this diffidence is necessarily rendered greater, when his immediate audience are persons closely connected with this great College; and, although this feeling must obtain with reference to all lines of thought connected with medical science, it is very specially the case with regard to the subject of this lecture, the Influence of the Sympathetic System on Disease, inasmuch as, without depreciating the earnest investigations carried out in Germany, in France, in Italy, in Russia, on the physiology and pathology of this portion of the nervous system, yet much of the best observation on the subject, much of the best reasoning on what may be called sympathetic phenomena, based on clinical and pathological data, has been placed before the profession at large by Fellows and Members of this College of Physicians. And if to-day the mention by name of any observer be perchance omitted, it will not be from want of due recognition on my part, but either because independent observations have been made in this, as in other scientific questions, almost synchronously in different countries, but chiefly that the results of many investigations have become, like those of Claude Bernard, household words amongst us. One word more I should like to say. Some years ago, the sympathetic system was the subject of the Astley Cooper prize at Guy's Hospital. Although the prize essay has never been published, by the kind permission of the author, Mr. George Arthur Woods of Southport, and the extreme courtesy of the authorities at Guy's, I have been favoured with a perusal of it; and it is only right thus publicly to express my obligations.

The influence of the sympathetic system on disease must necessarily depend on its functional position in the economy. Is it in any sense an independent system? Has it functions of itself? Do its ganglia own a power possessed by no other portion of the frame, disconnected from any other system? or is the sympathetic only a nervous organ of conduction, carrying impressions from the internal viscera to the cerebro-spinal system, conducting to these internal viscera, and to the vessels, orders from the higher nervous centres? Are the sympathetic ganglia only the central formation from which peripheral nerves are formed, and the residue left after their formation? Is the sympathetic, in Hermann's words, nothing else than a branched roadway from the cerebro-spinal system, into which overflow paths of innervation from all points of the great nerve-centres, to spread to all sides of the periphery?

Did the sympathetic possess no intrinsic independence, it would be idle to speak of its influence on disease, except in so far as its connecting lines of fibres were compressed, or their conducting power otherwise interfered with. But bound up together as all nerve-tissue in the body is, the fœtus has been expelled from the uterus at, or almost at, full time, showing therefore, a normal capacity of absorbing nutrition, and a healthy circulation, without any trace of a cerebro-spinal nervous centre, owning only the sympathetic system as the nerve-element in its composition.

The opinion of Claude Bernard that the sympathetic ganglia are real nervous centres, that the sympathetic is the motor nerve of the circulation, that the vaso-motor system is the regulator of heat, of nutrition, and of force; the dictum of Goltz that the tone of the arteries is maintained by local centres, situated in their own immediate vicinity, and that it is wholly independent of the cerebro-spinal axis; the fact

mentioned by Woods, that reflex irritation of vaso-motor nerves (unlike reflex irritation of cerebro-spinal nerves) is entirely limited to the particular tissue or organs supplied, so that these nerve-fibres must have their centres in the sympathetic ganglia; the statement of Parkes, that nutrition is perfectly carried on with complete destruction of the cerebro-spinal centres, are all founded on observations or experiments that cannot be controverted.

Seeing, too, the impossibility of tracing a fibre of Remak in the tissue of the brain or spinal cord, the existence of vaso-motor centres in these organs, proved as it is by vaso-motor disturbances on lesions of certain districts of the cerebro-spinal centres, affords by no means positive proof of sympathetic ganglia being directly fed and influenced by them. The sympathetic connection between the medulla oblongata and the two chief centres in the cervical cord, the vaso-motor centre for the head and face, and the oculo-pupillary, is proved by experiment and by pathology. Such centres may lie in the cord and yet not be of it; and the whole system consists not only of the well known chains of ganglia, of the nerves and plexuses of the internal organs, of a vaso-motor apparatus for the whole body, but of important ganglia that are situated, probably for purposes of correlation, within the tissues of the great centres of the cerebro-spinal system.

The possible independence of the sympathetic is shown by an experiment of Vulpian. He found that, some days after the transverse section of the sciatic nerve, or of the brachial plexus, when the corresponding pulps of the paws of the animal had become quite pale and anæmic, one might, by slight rubbing of these pulps, cause a reflex congestion. This vaso-dilator reflex effect seemed to the author to prove the existence of peripheral nervous centres, ganglia, and nervous-cells in relation with the vaso-motor nerve-fibres.

And this leads to one more preliminary remark—viz., that certain phenomena seem to prove indubitably the existence of vaso-dilators. Not only must Claude Bernard's discovery of this property in the chorda tympani, and Eckhart's in the nervi erigentes, be accepted as proof of this view, but it is more probable that all the centrifugal nerves from the cerebro-spinal system carry vaso-dilator fibres. They act by inhibiting the activity of the ganglion-cells in the nervous plexuses around the vessels, thus causing a diminution of the vascular tonicity. They are to be considered, not as constant, but as occasional antagonists of the vaso-constrictor nerves. Goltz held that the dilatation which occurs after section of nerves is due, not to paralysis of the vaso-constrictors, but to stimulations of vaso-dilator fibres; and in his original experiment on the chorda tympani, Claude Bernard showed that both constriction and dilatation of vessels may be obtained not only directly, but by reflex action.

Dr. Handfield Jones has shown that irritation may be reflected from the fifth nerve to the vaso-motor nerves of the arteries supplying the skin of the face, and that these, in consequence of the morbid impression, become dilated, not contracted as they nominally should according to the laws of reflex action.

The lesions to which the sympathetic is subject are manifold. In a large number of these coarser lesions, the influence is not that of the sympathetic on disease, but of disease on the sympathetic. Both in ataxy and in tetanus, redness of the semilunar ganglia has been observed. Inflammation of the semilunar ganglia has been associated with headache, hypochondriasis, vomiting, and death from marasmus; inflammation of the left portion of the solar plexus with pertussis, spasmodic vomiting, and convulsions; inflammation of the ninth and tenth thoracic ganglia, after retrocession of an exanthematous disease, with opisthotonos; vascularity of the sympathetic nerves in the chest, and of the semilunar ganglia, with tetanus; great increase in the size of the lower cervical ganglia with cretinism; great increase in size of all the ganglia with idiocy; enlargement of all the abdominal sympathetics and of the splanchnic nerves with diabetes; increase in size of the semilunar ganglia with a case of tuberculous suprarenal capsule; increase of size of the same ganglia with cancer of the stomach. One of the semilunar ganglia was of the size of a filbert, and cartilaginous, in a case of madness. The abdominal ganglia have been found large, lobulated, yellowish, and of firm consistence in chronic peritonitis. Cholera has been sometimes associated with inflammation of the solar plexus and of the semilunar ganglia.

According to Pio Foa, lesions are most commonly seen in the cervical and the abdominal ganglia. These lesions are—simple and fibrous atrophy, hyperæmia, sclerosis, fatty and pigmentary infiltration, amyloid degeneration, accumulation of colourless blood-corpuscles, and the presence of micrococci in the blood-vessels of the ganglia. These changes are well marked in syphilis, leukemia, a high degree of cachexia, pellagra, tuberculosis, cardiac disorders, and infectious diseases.

Fournier thinks that the sympathetic system is affected in secondary syphilis, as shown by variations of temperature, by sweating, and even by epileptic seizures; but his views seem founded more upon symptoms than on pathological anatomy.

The most usual lesions are pigmentation, colloid degeneration, with proliferation of endothelial cells, and secondary fatty metamorphosis; interstitial hyperplasia, leading to atrophy and sclerosis of nerve-elements; and such lesions are more than enough to modify vaso-motor functions, and, according to their seat, to lead to very various morbid phenomena.

Morselli has found fatty degeneration and atrophy of ganglion cells, with thrombotic obliteration of the vessels of the cervical ganglia; whilst, in a case of unilateral swelling, Ebstein has seen very dilated and varicose blood-vessels in the ganglia of the affected side. Colomiatti has seen lipoma of the sympathetic, and a tuberculous nodule in the last left dorsal ganglion but one of the great sympathetic, and a similar nodule on the communicating bands between this ganglion and the one above it. The same observer has seen cancer of the semilunar ganglia, compressing and atrophying the cells, entering into the nerve-trunks and the substance of the neurilemma.

In sunstroke, hæmorrhage has been found in the upper cervical ganglion. Hilton saw attenuation of the right side of the heart, associated with shrivelled ganglia of the same side of this organ; whilst Giovanni considers fatty degeneration rare, but thinks that the sympathetic resents most of the diseases affecting the whole system, and that lymphatic infiltration of its ganglia is the expression of the peculiar influence which it suffers. This condition, he believes, he has found in pleuropneumonia, cardiac disease, tuberculosis, aneurysm of the aorta, diffused tumour, acute and chronic nephritis, chronic enteritis, cirrhosis of the liver, suppurating ovarian cyst, typhoid fever, cancer, puerperal peritonitis, puerperal fever, pyæmia, pellagra, syphilis, scurvy, leukæmia splenica, tabes mesenterica, tabes dorsalis, erysipelas, epidemic cerebro-spinal meningitis, hydrophobia, exophthalmos, angina pectoris, and diphtheria.

An atrophic shrinking of the nerve-cells proper, and a calcareous mass occupying the position of the inferior cervical ganglion, were found by Dr. Shingleton Smith in a case of exophthalmos. A late observer has found very definite lesions of the sympathetic in phthisis; dilatation of vessels in the ganglia, proliferation of the connective tissue, hyperplasia of the epithelial covering of the capsules of nerve-cells, atrophy and pigmentation of cells. In chronic cases, there was found an enormous development of dilated blood-vessels; the external membrane of the ganglia (with its internal processes), the external capsule of the ganglionic nerve-cells, the neurilemma of the nerve-fibres, and the tunica adventitia of the blood-vessels, were all greatly thickened. This was especially the case in the inferior cervical ganglion. The lesions of the sympathetic on the healthy side, in unilateral phthisis, were but slight. The sympathetic lesions may be considered secondary. But the ganglionic affection, though caused by the previous disease, may itself induce some of the phenomena of the disease, as the hectic flush of the cheek and the facial perspiration, even if it do not determine certain trophic changes in the lungs.

The investigations of Dr. Saundby, one of our most accurate pathologists, seem to prove that the relationship between the renal lesion in Bright's disease, and the changes observed in the ganglia and surrounding connective tissue, must be regarded as secondary rather than primary.

It is easy to understand that such lesions, secondary in themselves to the diseases with which they are connected, yet important upon the course of the disease certain phenomena. Flushing, sweating, tremors, hæmorrhage, hæmaturia, pyæmia, etc., are all examples of this.

These facts are more than mere matters of pathological interest. Given a recognisable lesion of a sympathetic ganglion or nerve, we find certain phenomena following this as a sure consequence. It is not our own experiments, but the many cases of the sympathetics, that, on the other hand, give us the same results, when a morbid lesion of the sympathetic nerve or ganglion, as that we are dealing with, is found, and they depend on a morbid condition of the structure, even though the lesion cannot be recognised by our means of investigation. It is what happens to the body. The changes in the internal organs, and the morbid action of the sympathetic, is only an illustration of the method of reasoning this thought. A ganglion, or a series of ganglia, or a series of nerves, is changed in some way by the disease, and the result is a morbid action of the sympathetic system, by which the various phenomena, referred to from disease in the organ, or by the disease, are caused; and that these phenomena change in some way the course of the disease; for, as their result, are seen phenomena precisely corresponding to the effects of coarse experiments

upon the sympathetic in animals, and of easily recognised lesions upon these organs in man. We see the starting-point of the irritation, the channels by which the irritation is conveyed, the consequence of the irritative action beyond the ganglion; but the absolute condition of the ganglion itself, in so far as it differs from its state in health, is incapable of being in all cases demonstrated. The irritation may arise from some portion of the same nervous system, or from any portion of the cerebro-spinal. It may be reflected only on its own fibres, or upon cerebral or spinal nerves. The exodic response from the ganglia may be carried back solely to the point of origin, or in very various directions to many organs, and through many and various channels. The reflected effects may be motor, sensory, or vaso-motor, or all together; and yet the ganglionic centre of this reflex arc may seem, even microscopically, to be unchanged.

That change of some kind ensues cannot be doubted. All that can be said is, that it is a change so minute as so far to baffle our means of research, or so transient as to pass away before the possibility of *post mortem* examination.

In a very interesting paper read at the International Medical Congress last year, Dr. Woakes speaks of the inferior cervical ganglion as a correlating nerve-centre. He has formulated anatomically data that are occurring to all practitioners every day of their lives; and his paper seems to me to afford additional evidence, both of the independence of at least the vaso-motor portion of the sympathetic, and also of its multifarious connections with the cerebro-spinal system. He shows the association between injury of the fibres of the brachial plexus and loss of consciousness. The shock resulting from the concussion of the brachial nerves is propagated to the inferior cervical ganglion, and thence reflected as a wave of vessel-dilatation to the vertebral artery. This dilator wave is appreciated first of all in its peripheral branches, producing an immediate large accession of blood to them. This effect on the internal auditory branch of the dilated vertebral artery, the sudden tension of the intralabyrinthine fluid, produces the phenomena of falling and unconsciousness. Through the inferior cardiac nerve of this ganglion, great agitation of the heart may be induced. The vertigo attending indigestion under certain circumstances is an illustration of the same correlation, sometimes with, sometimes without, a sensory aura. This vertigo may also be associated with mottling of the hands and forearms, due to congestion of the superficial arterioles.

This note on the correlation of the ganglia can be expanded almost *ad infinitum*. The syncope induced by a blow over the solar plexus, the palpitation and even faintness consequent on indigestion, the pain, vomiting, and depression of spirits set up by the passing a gall-stone, the transient hemiparesis produced in some people by the presence of ice in the stomach, the flux from the intestinal vessels as a sequence of the irritation of some foreign body in the canal, the numerous phenomena—motor, sensory, and vascular—associated with renal calculus, the peculiar pulse of peritonitis, the collapse of perforating ulcer of the stomach or intestine, perhaps the increased circulation of blood in the liver and the increased secretion of bile following injury to the solar plexus—are all instances of a similar fact with reference to this great nervous centre and its immediate branches.

But it remains for the hypogastric plexus to afford the most suggestive illustrations of this correlation. Without saying that all hysteria owns an uterine origin, the phenomena that are sequential to the morbid lesions of the uterus and its appendages can be seen to implicate most of the important organs of the body. The deep-seated sense of pelvic uneasiness, nearly similar in position and sometimes qualling in intensity the sacro-coccygeal pain attending piles, the paresis of intestine evidenced by meteorismus, the increased flow of limpid urine, the vomiting, the hiccough, the frequent diarrhoea, the palpitation, the faintness, the sighing respiration, the globus, the difficulty in deglutition, the blushing, the dilated pupil, the tears, the tinnitus, the excitation of the emotional area, the occasional epilepsy, melancholia, and mania, to which such patients are liable, are all examples of afferent irritation carried to the solar plexus, and thence, from ganglion to ganglion of the sympathetic chain, to the three cervical ganglia—thence to the eye, the cerebral vessels, and the medulla oblongata.

The same causes, reflected from sympathetic ganglia to the sensory centres, induce the various morbid states, and under these circumstances; whilst a similar irritation of a ganglion starting from a nerve to a motor centre will lead to morbid action, such as those which did some considerable time ago of a ganglion of a nerve from a sensory centre, as the rapid twinkling of the eyelids.

Nor is the reverse side of the picture without its peculiar in-

terest. Not only may uterine irritation induce emotion, but emotion may in itself induce all kinds of vaso-motor irritation or paresis, especially the latter. The emotion of terror, affecting primarily vaso-motor centres in the cortex of the brain, sends a parietic effect down the various ganglia in the body, besides inducing its own particular conditions on the cerebro-spinal motor nerves. It affects especially the sympathetic cardiac nerves, the accelerating nerves of the heart, leaving the chief influence on this organ to the inhibitory branches of the vagus, which this nerve derives from the spinal accessory. Blanching of the face, and even syncope, may result. By its parietic effect on the splanchnic nerves, the great inhibitory nerves of the intestine, the peristaltic movement of the gut is morbidly increased, and the tendency to evacuation of the bowels results, so frequent with young recruits on first going into action.

Blushing, a sense of heat, and sometimes arterial pulsation, are ordinary effects on the face in certain emotional states—anger, joy, shame, bashfulness, and intimidation. Vulpian believes the emotional centre to reside in the annular protuberance. From this centre, the medulla oblongata and spinal cord are influenced; and thus, according to circumstances, may be caused either contraction of certain muscles of animal life, or a sudden state of muscular feebleness, or disturbance of the cardiac movements, or secretory alterations in the intestines, or, coincidentally with these, some modifications of vascular tone in certain regions of the body, especially of the face and head.

Blushing is not always limited to the face. In nervous women, it is seen on the anterior superior part of the thorax as far as the mamme, and even to the lower part of the sternal region, and above the clavicles, and over the shoulders. In a patient now under observation, the conjunctive reddens, tears flow, a dark purplish blush suffuses the face, the neck, especially below the ears, and the whole of the anterior chest to the nipples, if she merely think of anxieties that she may, but very improbably will, have to undergo. In this case, the purplish blush is not in all places synchronous, but various islets of colour are separated by regions of skin of ordinary whiteness, and gradually coalesce; illustrating the observation of other physicians, that the skin is mapped out into small vascular territories, more or less independent of each other, each under the influence of distinct vaso-motor nerves, or even of peripheral vaso-motor ganglionic centres. In a nervous man, whose case is recorded by Vulpian, blushing occurred on exposure, not only over the above-named regions, but over the anterior surface of the abdomen and the upper half of the thighs.

Paralysis of the splanchnic induces hyperæmia of the capillaries of the contorted renal tubules, with albuminuria and diuresis.

Emotional influence may reach the seven lower dorsal ganglia, from which the splanchnic nerves are derived, or with which at least they are connected, from the vaso-motor centre in the medulla oblongata by a branch that descends through the osteo-fibrous sheath which incases the vertebral artery, and thus by way of the inferior cervical ganglion; or the channel of conduction may be by way of the cord also.

One sees, therefore, anatomically, by how small an expenditure of force emotion may partially paralyse the cardiac and splanchnic branches of the sympathetic.

The vesical plexus, containing a few motor but more sensory and reflex acting fibres, is constantly affected reflexly by irritation from adjoining organs. But its chief motor nerves are derived from the superior and inferior genito-spinal centres in the spinal cord; and the effect of emotion on the bladder, causing frequent micturition, one of the most usual results of terror, and probably experienced by a large number of candidates for examination, is due to paralysis of the purely sympathetic plexuses, allowing undue play to the motor influence of the sacral nerves from the centrum genito-spinale.

This reversal of the course up and down the sympathetic, the emotion acting directly downwards on the various ganglia, the uterine irritation acting upwards, in what may be called a series of reflex arcs, form the main difficulty in the diagnosis of the cause of that aggregate of morbid phenomena that, as a convenient expression for formulating our ignorance, we term hysteria, and has been well formulated by Mr. de Berdt Hovell. And putting aside those cases of crying and laughing, of globus, of hysterical vomiting, clanging cough, *et hoc genus omne*, which are really under the influence of the will of the patient, or are indulged in from a selfish desire to concentrate all attention upon herself, the Protean disease under discussion is, in the more numerous cases that are likely to fall under the notice of a physician, a very real ailment. Cases that are frequently the *opprobria medicina* are so, because the exciting cause is not found, sometimes scarcely sought for; and Dr. Tilt, and those who think with him, have done good service in reminding us that the name given to the disease by our predecessors was founded very largely on ascertained fact. Scherschensky finds that the uterine plexus contains the most important, if not the only, motor

nerves, which can produce actual movement of the uterus on stimulation of their peripheral ends. Stimulation of the central ends produces only violent vomiting.

Nor is it only in strictly physical phenomena that this pelvic irritation manifests itself. The somnolence, the trance, the contracture, the clonic convulsion of the hystero-epileptic, are evidently due to reflex paresis, or reflex irritation. Do not the more purely mental phenomena own the same origin? Is not emotion a brain-discharge, at least as much as epilepsy? and the suspicion, the anger, the fear, the melancholy, seen in various phases of this strange condition, are surely due to the variation in the calibre of the arteries, and consequent change in blood-supply, due to the influence of the cervical ganglia on the circulation of the brain.

Many people shrink from the word "materialism." It is because the word has been used to represent so limited an outlook. To recognise that the brain acts in accordance with the great laws of nature; that this thought and that emotion are, so to speak, discharged in relation to the amount and quality of the circulating fluid and the regions it traverses, is not materialism in a bad sense, but simply a statement of the method by which these laws work in correlation. And when we see vaso-motor effects manifested in the motor area of the brain, and coincidentally with these the psychical phenomena just mentioned, it would be unscientific not to recognise a similar condition, as the exciting cause of these emotions, obtaining in a non-motor cerebral area.

Differing in degree, rather than in kind, Hypochondriasis stands out for both sexes, and especially for our own, as a term that includes self-concentration, irritability, suspicion, melancholy, and various physical phenomena. All honour to the old Greek physicians who associated as cause and effect morbid action of the liver with depression of spirits. The blood may thus, in an impure state, affect every vaso-motor centre in the brain or elsewhere; or some chronic form of indigestion will give rise to a morbid impulse, often reflected to the inferior cervical ganglion, and so through the cardiac nerves to the heart, or to the upper and middle cervical ganglia, and from them to the cerebral circulation, but most frequently to the thoracic ganglia, and from them along the splanchnic nerves to some other portion of the solar plexus, leading to distension of the colon, to borborygmus, to constipation, or diarrhoea. In each case, the influence is reflex; but the reflex arcs may be somewhat complicated, or at least multiple. The starting-point is by no means always the liver. Cancer in any portion of the frame, especially of the peritoneum or of the abdominal viscera, seems frequently to be the exciting cause. The various phenomena associated with the sympathetic chain will readily be recognised by all practitioners as the symptoms most usually complained of by sufferers from hypochondriasis. Tinnitus, vertigo, confusion in the head, faintness, palpitation, a sense of impending dissolution, dyspepsia, constipation, meteorismus, with various mental delusions and extreme depression, irritability, or torpor of mind, are common enough.

Abnormalities of taste and smell, hallucinations of hearing, the falsity of which may or may not be recognised, anæsthesia, hyperæsthesia, paræsthesia, to say nothing of the numerous sensations connected with the spermatic and hypogastric plexus, must all be explained by reflex irritations of a similar kind. Perhaps the main difference between these reflex arcs, and those in which the centre is wholly cerebro-spinal, lies in the fact that one afferent irritation in the domain of the sympathetic is enough to set in action many efferent results. It may be so slight, that it is carried to the first ganglion in its neighbourhood, and be reflected back either to the seat of irritation, or to some spot in its immediate vicinity. It is almost certain, indeed, that this effect is invariably produced on the vaso-motor nerves of the part first affected. But in many cases of hysteria and hypochondriasis the irritation does much more; it may affect all the ganglia above mentioned in the way described; it may miss the upper and concentrate its action on the middle, or more specially on the inferior cervical; or the efferent effect may act only on the splanchnic nerves, or without touching them, on the semilunar ganglia, or on some one or more of the plexuses connected with them. But in these morbid states, as in some others, the most common reflex arc seems to be made of irritation starting from the solar plexus, running up to the inferior and middle cervical ganglia, or even higher, causing a reflex paralysis of the middle and inferior cardiac nerves, and permitting therefore the inhibitory action of the vagus to act uncontrolled by these nerves and to diminish the action of the heart.

The reflex action of such conditions is illustrated by Dr. Wilks's cases of sympathetic mania from the presence of a tumour in the abdomen, from adherent omentum, from unilateral hernia, from misplacement of the colon, and from cæcal abscess.

Of other forms of neurasthenia, the description would be almost

the same. In several cases, in my own practice, there has been a peculiar subjective sensation all down the spinal cord, never amounting to pain or paralysis, but causing a restlessness combined with a lack of energy that is very distressing to witness. Calabar bean has at times served to promote recovery.

The nervous terror of such patients is a marked feature; terror of horses, of crossings, of fire, of water, sometimes associated with that shrinking from meeting other people that is seen in other nervous complaints. The causation of these symptoms is, in a word, starvation of the nervous centres, either by calling too much on them in the way of work, of anxiety, of sexual indulgence, of fatigue of any kind, or by absolute starving these centres of the fatty material requisite. The mechanism is by way of the vaso-motors, as is shown by the remedial agents by which such patients are benefited, as well as by the nature of the phenomena themselves.

This reflex mode of action can scarcely be left out in the consideration of any one point in which the sympathetic is involved. By no means is it least in the great questions of inflammation.

From the masterly Lectures on Inflammation delivered here last spring by Dr. Burdon Sanderson, one may gather certain dicta, which amount almost to axioms.

1. The statement of Lister, that stasis is not due to alterations of the circulating blood, but to a change in the channels, through which it has to pass.

2. The temperature of an inflamed part never exceeds that of the rectum.

3. Cohnheim has shown that the increased temperature of external organs, when inflamed, depends on the activity of the circulation.

4. Determination of blood is a frequent precursor of inflammation, but it is not a part of it.

5. Reflex congestion produced by stimulation of sensory nerves is not the same as inflammation.

It has been known, since Claude Bernard's experiments, that division of nerves belonging to the system of organic life gives rise to three great classes of phenomena, acceleration of the passage of blood through the vessels, increase of temperature, exaggerated activity of the secretions.

The physiological history of inflammation is briefly this:

1. Some source of irritation, cold, a blow, a burn, a septic focus.

2. The centripetal nerves, whether sensory or not, which are within reach of this irritation, are excited more or less violently.

3. These nerves transmit to the vaso-motor centres of the region the excitation which they have undergone.

4. The tonic activity of these centres is disturbed, and suspended more or less completely.

5. Hence follows cessation or diminution of the tone of the vessels that are subordinate to these centres.

6. Consequently, more or less considerable dilatation of these vessels occurs.

7. But this vaso-motor disturbance can only be considered as favouring the development of inflammation. It is only secondary in importance, and does not suffice of itself to make up the phenomenon that we call inflammation. It places the vessels in a condition for easily and necessarily receiving more blood; it induces stasis of circulation, and offers facilities for the emigration of leucocytes; but the initial phenomena of inflammation consist in the disturbance of the intimate nutrition produced in the organised living tissue. The vitality of the cell having been gradually lowered by the previous state of its nutrition, it is thereby placed in a condition of vulnerability, and is ready at any moment to respond to morbid impressions. These may be reflex, as the impress of cold, causing pneumonia, it may be; or direct, as from the presence of morbid germs in the blood. And the vaso-motor action of the vessels, which, without this previous alteration of the cell-nutrition, would stop short at non-inflammatory congestion, is of enormous importance in the development of inflammation. It is this that carries the process on, and it is this that, in the case of the bulbous swellings, is carried on by the vaso-motor centres of the spinal cord, and it is this that, in the case of the internal organs, is carried on by the vaso-motor centres of the brain.

It is early by thrombi, others that are permeable are dilated, and the course of the blood, instead of being continuous, as in the normal state, becomes jerky, as in the normal state, and thence is carried, partly at least, the sensation of pulsation in the arteries.

It is this that, in the case of the bulbous swellings, is carried on by the vaso-motor centres of the spinal cord, and it is this that, in the case of the internal organs, is carried on by the vaso-motor centres of the brain. In the inflamed region, it probably consists in the suspension of the tonic activity of these centres. At any rate, a reflex irritation of vaso-dilator nerves is in most cases difficult of proof.

This theory of inflammation is practically a mere statement, in other words, of the dictum of Vulpian, that, in pneumonia, besides the mechanism of the cold impressions influencing in a reflex way the nutrition of the lungs through the nervous centres, there is need to admit, first, a general predisposition to inflammation; and, secondly, a local predisposition, which renders the respiratory organs more sensitive to the reflex action of cold than other parts of the body.

But although vaso-motor paresis has little or nothing to do directly with the initial phenomena of inflammation, there are numerous instances of indirect action. Why do we look with grave suspicion on pulmonary congestion, or a similar condition in any other portion of the system? Is it not that a region so affected is peculiarly liable to take on active mischief? that is, a part that for a time has been affected only by means of partial paralysis of the vaso-motors, can very readily be found to be the seat of inflammation. It was this prominent fact that probably misled observers as to the rôle of the vaso-motors in inflammation. Congestion so often passes into inflammation, that the former was supposed to be the cause of the latter. But the explanation of the connection is that given above. A congested part becomes gradually of necessity a part in which nutrition is badly performed. The affected spot, becoming less and less perfectly nourished, is *ipso facto* more or less vulnerable to influences external to itself; in other words, it is predisposed to inflammation. The external influence arrives; it modifies directly or reflexly still further the nutrition of a part already vulnerable, already possessing unstable cells; and the predisposition, the external influence, the modification of nutrition by the exciting cause, and the vaso-motor paresis, make up the necessary factors in the causation of inflammation.

This slow predisposing influence of congestion is markedly increased if it result in oedema. The vaso-motor nerves are implicated in causing oedema in more ways than one. Paralysis of vaso-motors dilates the arteries, and fills them with blood. The capillaries become abnormally distended, passively dilated, and, in the case of any hindrance to the nervous circulation, oedema results. Or oedema may be reflex, following a dilatation of vessels due to reflex sensory irritation. The capillaries may remain patent, or be thrombotic; and we have traumatic irritation of centripetal nervous fibres, suspension of tonic activity of certain vaso-motor centres, paralytic dilatation of the muscular tissue of the vessels, diminished *vis-a-tergo* in the veins, and so oedema. Or, again, reflex paralysis of vessels, with enfeebled *vis-a-tergo*, gives rise to a relative intravenous stasis, an increased pressure on the capillaries, and issue of liquid from the vessels. From whatever cause, the water-logging of a tissue by oedema must necessarily interfere with its nutrition.

This part of our subject can scarcely be left without a few more words on congestion. M. Notta observed conjunctival redness in thirty-four of sixty-one cases of neuralgia of the fifth nerve. This congestion may extend over half the face, and even inside the mouth. It may be explained by the hypothesis of vaso-dilators; but, as this cannot be universally proved, it is enough to say that the transmission of the excitation along the sensory centripetal nerves to the vaso-motor centres of the regions where these nerves are distributed, may suspend the tonic activity of these centres, so as to cause a paralysis of the vessels of the corresponding regions. A similar reflex congestion may be occasionally seen in connection with neuralgia of other nerves.

The congestion of the second stage of acute inflammation is somewhat different causation. It is due to a dilatation of the vessels of the integument, that depends on a certain degree of vaso-motor paralysis, succeeding the stage of excitation of the cutaneous nerves in the first stage. This is not owing merely to fatigue of the nerves, as the dilatation is in no proportion to the duration or intensity of the cold stage, but to a special modification of the vaso-motor apparatus, produced directly or indirectly by the morbid agent. Fatigue of nerves may in many cases add to this. Vulpian, whose views on congestion I have already mentioned, attempts to explain the morbid congestion of the exanthematous in a similar way, and a consideration of the subepithemic vessels, and the way that, in morbid, this mechanism seems to show that the vaso-motor centres act on sets of microvascular territories, distinct one from another; and that congestion of the internal viscera, the lungs for instance, in typhoid fever, is due to a functional modification of the vaso-motors of the lungs, similar to that of the vaso-motors of the skin; whilst, although the fullness of the spleen seems to depend on a relaxation of the cellular elements in that organ, yet it is not a relaxation in the same sense as in typhoid fever must be induced by morbid weakness and activity of the vaso-motor apparatus of this organ.

Nor can I forbear mentioning the congestion of the cheeks in pneumonia

from reflex dilatation of the vessels of the cheek, unilateral pneumonia being often associated with unilateral congestion of the cheek; or the occasional phenomenon, in inflammatory disease of the lungs, of the arm of the affected side being hotter than the other, probably from reflex irritation carried to the bulbo-spinal axis and reflected along the brachial plexus, and the vaso-motors included in it. Of the same order is the congestion of internal organs, notably of the intestinal mucous membrane, following burns on the surface of the body. Ulceration of the duodenum is not unfrequently met with as a sequence of such burns; and the mechanism is centripetal irritation from the skin to the spinal cord, reflected down to the semilunar ganglia and the subordinate vaso-motor nerves to the intestine.

In diseases accompanied by pyrexia, there is no necessary connection between the state of the cutaneous vessels and the sweat-glands. In the third state of ague, the vessels seem in the same state as in the second, and yet sweating occurs. Probably, in the normal state, fibres from the sympathetic exercise a moderating action on the secreting work of the sweat-glands; when these fibres are paralysed, then hyperidrosis occurs.

Paralysis of the vaso-motor centre in the medulla oblongata by injury causes decreased production of heat, and probably always increased dissipation of heat, depending on the fact that the medullary centre dominates the vessels all over the body, and that general dilatation of all the vessels produces a sluggishness in the movements of the blood in all parts of the body. Increased heat of blood cannot, therefore, depend on this general paresis of all the vaso-motors, but must be due to affection of the controlling inhibitory heat centre or centres, that have been found by experiment to lie above the medulla oblongata.

What is known about the influence of the sympathetic on sweating has been mainly observed in cases of unilateral hyperidrosis. Eulenburg and Guttman have remarked that, after section of the cervical sympathetic—in one case in the left sympathetic—there were very varicose and dilated vessels, which perhaps, when full, pressed on some of the sympathetic nerve-elements, and so paralysed them; also that, by galvanisation of the cervical sympathetic, the secretion of perspiration in the arm is increased. They think that this is due to currents entering the brachial plexus or the spinal cord, and has nothing to do with the sympathetic proper.

Unilateral ephidrosis is sometimes seen in exophthalmic goitre. Schwabach records a case in which pressure on the cervical sympathetic was associated with heat and redness of the right side of the face, and unilateral sweating on the least exertion. In Seguin's case, there was normal perspiration on the left side of the face, whilst the right side was absolutely dry, and here the right sympathetic was adherent to the sheath of the vessels. In Ebstein's case of unilateral sweating, there were very dilated and varicose vessels in the ganglia of the affected side.

In Seeligmüller's case of a woman who had had right ephidrosis during the whole of life, and in whom all the symptoms of paralysis of the right cervical sympathetic were manifested, there was found after death sclerosis and fatty degeneration of the right cervical sympathetic.

We find that sweating follows paralysis of the sympathetic, whilst vaso-motor paralysis, sufficient to cause extreme dilatation of vessels, is not necessarily associated with sweating. It is certain, therefore, that one of the functions of the sympathetic is that of inhibiting overaction in the sweat-glands, of maintaining tone in these organs; and that hyperidrosis depends, not on the vaso-motor nerves, but on secreting fibres emanating from the cord through the rami communicantes to the sympathetic ganglia.

Seeligmüller asserts that the position of the sweat-centre is doubtful. It resides possibly in the spinal cord, possibly in the upper surface of the brain. That the irritation that excites hyperidrosis may be reflex, is seen in those cases of extreme perspiration of the palms of the hands induced by indigestion; and instances of perspiring feet, not only hyperidrosis but osmidrosis, are not wanting, in which the existing cause is to be sought in abdominal and pelvic irritation.

Vaso-motor paralysis is not necessarily accompanied by the secretion of sweat, but the reverse statement does not hold good. The secretion of sweat is accompanied by vaso-motor paresis, and if there be a paralysis of the vaso-motor centres that preside over the vascular tone of the sweat-glands, hæmatidrosis, bloody sweat, may result. And in spite of cases of simulation and of red fungus, it is certain that such bloody sweat is met with, depending on paralysis of the sympathetic fibres inhibiting the action of the sweat-glands, plus an intense vaso-motor paralysis of the vessels of these organs, and such a consequent congestion as may lead to rupture of vessel.

The influence of the sympathetic on the nutrition of a part, and on its circulation, render it, to say the least, one of the chief factors in

inflammatory disease of every organ of the body. The vaso-motor supply of the cerebral and meningeal vessels brings the brain and its membranes into close relationship with the cervical ganglia. Take general paralysis of the insane. The lesions found *post mortem* are many and various, but in all cases there may be found cerebro-meningeal hyperemia, that has often proceeded to emigration of leucocytes, distention of vessels, impediments (chiefly thrombotic) to the circulation, irritative overgrowths of the connective nuclei of the walls of the vessels, and probably also of the neuroglia. This is only a somewhat more modern expression of Calmeil's dictum, that the pathological lesion is chronic inflammation of the brain, especially of the superficial part of the convolutions, the grey substance, and the meninges. In addition to the *délire ambitieux*, which is sometimes wanting, and which, occurring in a few other morbid states of the brain, cannot be considered pathognomonic of general paralysis, early inequality of the pupils, a sense of fatigue that yet does not overcome the tendency to wakefulness, irritability of temper, slight paralytic phenomena of speech, of prehension, and of locomotion, with great facility in the formation of bed-sores, would be some of the more remarkable symptoms of this condition. Not only does the inflammatory character of the disease connect it with the sympathetic, not only can the intermission of the morbid phenomena be explained in no other way, but the inequality of the pupils has been thought by some to point to the same fact. My friend Dr. Thompson, of the Bristol County Lunatic Asylum, justly says, however, that the asymmetry of the pupils is due to the want of symmetry in the rate of progress of the cerebral lesion.

Myosis is a symptom that so often occurs in disease, apt, as it is, not only to assist a diagnosis, but frequently to increase the gravity of the prognosis, that it may be advisable to devote a few words to it. Contraction of pupil is seen to follow compression of the cervical sympathetic by tumour to the extent of paralysing the sympathetic branches. In a recent case of some obscurity, the diagnosis of aneurysm was rendered certain by the unilateral myosis. This symptom is seen in lesions of the pons Varolii, in sclerosis of the medulla oblongata, in disease of the cervical cord, especially in tabes cervicalis, and sometimes in progressive muscular atrophy. It is found in traumatic paralysis of the brachial plexus from simultaneous paralysis of the cervical sympathetic, the vaso-motor fibres being unaffected.

With the exception of one or two ciliary nerves of separate origin, all the branches destined for the iris and ciliary muscle proceed from the ciliary ganglion. What influence is exercised on the ganglion by each of the three nerves by which it is supplied?

1. The oculo-motor has undoubted action on the sphincter of the pupil. The pupil becomes dilated and immovable in paralysis of this nerve. This nerve is the condition, *sine quâ non*, both for reflex and accommodative movement of the pupil.

2. The filaments of the sympathetic acting on the pupil arise from the spinal cord, and pass into the anterior roots of the two lower cervical and six upper dorsal nerves. There is slight contraction of pupil on section of this nerve, and gradual dilatation on irritation of it in the neck. After division of the sympathetic in the neck, the upper part passes into fatty degeneration. The action of the sympathetic root consists in a persistent exaltation of tone of the radiating fibres. It is not proved that it acts on the accommodation. Irritation of the sympathetic in the neck causes contraction of the vessels of the iris. Dilatation of the pupil from irritation of the sympathetic nerves is not due to contraction of vessels (the diminution of blood in the iris lessening contraction of the sphincter muscle), but depends on contraction of the radiating fibres of the iris.

3. The influence of the fifth nerve is doubtful, but it is probably sensory. As a motor influence it may act on the ciliary ganglion, either to increase the action of the fibres of the oculo-motor, or to diminish that of the sympathetic.

If these views are correct, and they are those of Donders, the position of the sympathetic in the causation of myosis is not a very important one. Certainly, in general paralysis of the insane, where the lesions are largely intracranial, the myosis is due to irritation of the oculo-motor nerve rather than to the paralysis of the sympathetic; and if, in addition to this state of the third nerve, there be irritation of the fifth also, the effect of the sympathetic would be rendered *nil*. The influence of the sympathetic on the pupil can only be seen when neither of the other nerves supplying the ciliary ganglion are irritated or paralysed. The intermissions of general paralysis depend on the greater or less congestion of the brain or its membranes. Vulpian, indeed, goes further, and suggests that many of the so-called apoplectic attacks in this disease are not due to overdistension of the vessels, but to anæmia of parts of the brain, such anæmia being the result of reflex vaso-constrictor phenomena. The foci of white softening sometimes

found in general paralysis may have this origin, but far more frequently is it the sequence of thrombotic blocking of minute arteries.

A similar reflex constriction of vessels may occur in tuberculous meningitis, or in tubercle of the brain, from the irritation of the foreign growth; but this theory is unnecessary, as the interference with the calibre of the vessels is fully accounted for by the early growth of tubercle on their adventitia.

Nor can more than the ordinary vaso-motor influence be traced in most of the other morbid conditions to which the cerebro-spinal nervous system is liable. In meningitis, in mania and melancholia (except that these latter may show remissions) in hæmorrhage, in softening, in sclerosis of the brain and cord, in inflammation of the cells of the anterior horns or in atrophy of the same, the sympathetic has not much to do directly. In one disease just mentioned—progressive muscular atrophy—the fact that the lesion is due to a malnutrition of cells of the anterior cornua, induced by a condition of the nutritive vessels rendered morbid by an abnormal state of the vaso-motor nerves, is probable, but certainly has never been demonstrated. It is, however, only fair to say that Sir Charles Bell thought the sympathetic was concerned in this disease, and that Jaccoud shares his views; and that, besides the lesions of the anterior horns, the cervical ganglia of the sympathetic have been found converted into fat, whilst the raised temperature, in the early stages diminished later, the increased perspiration, the atrophy of the layers of skin, the painful swelling of joints, and sometimes the contraction of one pupil, all point to some sympathetic connection. In pseudo-hypertrophic paralysis, one case has been attributed to paralysis of the sympathetic; but from the study of the physiology of the sympathetic, the course of the disease, the *post mortem* appearances, and the sufficiency of other explanations for the lesions, the conclusion is almost necessary that the sympathetic has little or nothing to do with this disease. It is quite another question whether progressive muscular atrophy has not some influence on the sympathetic. Myosis in this disease is rare; but, when it exists, it may depend in some sort on the cutting off more or less of the influence of this nerve from the ciliary ganglia, so that, its inhibitory effect on the contraction of the pupil being removed, the oculo-motor acts with great intensity. But this and all other sympathetic phenomena in progressive muscular atrophy seem to be secondary in point of time to the disease itself.

In sunstroke, the primary condition is twofold: paralysis of the inhibitory heat-centre, and paresis of the chief vaso-motor centre on the medulla oblongata. The loss of tone in the capillaries and small arteries, and the consequent congestion, is especially seen in the lungs, and forms an important element as to the peril of the patient. Hæmorrhages have been found in the ganglion cervicale supremum.

In epilepsy, there is much to be said about vaso-motor influence, although the opposite view has been taken by distinguished Fellows of this College. Meynert believes that in epilepsy the hippocampus major is a vaso-motor centre, irritation of which causes spasm of vessels, and so epileptic convulsions. Nothnagel considers vascular cramp an essential factor in all epileptic seizures. Rinswanger says that, in a typical fit, excitement of the convulsive centre and of the vaso-motor centre are co-ordinated. If the excitement of the vaso-motor centre exist alone, there is *le petit mal*. If excitement of the convulsive centre exist alone, we have those rare cases of motor epilepsy, convulsion without loss of consciousness. Most frequently, both centres are excited together.

The influence of emotion, especially the terror at the sight of another person in an epileptic fit, seems so prominent in this disease, that this alone points to a vaso-motor basis.

Dr. Gowers, however, states his case clearly enough. The three views most in vogue are these.

1. Epilepsy is simply a disease of the vaso-motor centre in the medulla oblongata, setting up vaso-motor spasm affecting particular arteries, and thus causing local cerebral anæmia, which induces the discharges from the convulsives. This theory is held by few.

2. Convulsion depends on discharge of motor or convulsive centres in the medulla oblongata; while loss of consciousness is the result of arterial spasm in the hemispheres, due to the action of the vaso-motor centres in the medulla.

3. The view of Dr. Hughlings Jackson; that the local discharge in the brain causes the spot arterial contraction, and this determines the convulsive discharges.

To this Dr. Gowers objects, that pallor of the face is often absent; that, when present, it is no proof of anæmia of the brain, but is probably due to the contraction of peripheral vessels excited by the discharge in the brain; and that convulsion is not usual in cardiac syncope; that this third view is not needed, and is opposed to the

fact, proved by experiment, that functional debility causes reflex dilatation, and not contraction, of vessels.

He would say that the phenomena of epilepsy depend on instability of resistance, rather than on any primary change in the energy-producing action of the cells. It seems open to question whether this somewhat negative theory suffices to explain all the various forms of epilepsy; whether, particularly, it demonstrates the mechanism of *le petit mal*. On the other hand, Echeverria has recorded twenty-six cases of epilepsy, in almost all of which there was found sclerosis or fatty degeneration, or amyloid degeneration, or pigmental infiltration of the cervical sympathetic, and often two or more of these changes united; sometimes also a similar condition of the solar and other abdominal plexuses.

Again, although the extraordinary high temperature in the status epilepticus is not a proof of the implication of the sympathetic, and may be caused merely by paralysis of the inhibitory heat-centre in the brain, yet this great heat can hardly arise without some vaso-motor change, even if this very paralysis of heat-inhibition be not caused by anæmia of the centre from reflex contraction of its vessels.

The numerous instances of true epilepsy, caused by reflex irritation from distant organs travelling upward by way of the sympathetic, are not wholly explicable by the theory of instability of cells. The epileptic condition, consequent on irritation of the uterus and its appendages; the gastric epilepsy in men, of which Pomeroy speaks as answering to uterine epilepsy in women, are only some of the examples of this reflex condition.

The difficulties are the greater, inasmuch as all theories must be more or less hypothetical. It seems likely that the convulsive centre in the medulla is a minute corpus striatum for collecting, modifying, radiating convulsive motor phenomena from the cerebral motor area; that epilepsy with convulsion may depend on direct or reflex irritation of this centre, but far more frequently on some condition of cells in the cerebral motor area, that may well be termed instability; that these lesions and their consequent phenomena may be wholly independent of vaso-motor disturbance; but that loss of consciousness, occurring either as an early symptom of the convulsive form of epilepsy, or as an independent phenomenon in *le petit mal*, owns as its cause anæmia of the non-motor area of the brain; an anæmia depending on vaso-motor irritation. Brown-Séquard's experiment, showing that compression of the cervical sympathetic was a valuable means against *le petit mal*, points to the truth of this latter proposition.

The whole question of optical delusion is more or less under the influence of vaso-motor action. In health, the impression of an external object is carried to the retina, and thence to the corpora quadrigemina. Thence it is transmitted to the angular gyrus as a sensory centre, and reflected on to the anterior lobes for perception. But in certain variations of the vascular tone of the vessels of the angular gyrus this centre seems to have the power of evolving optical delusions, wholly irrespective of external impressions. Many of the phenomena of febrile delirium, of delirium tremens, and of mania are produced by vascular congestion, or by anæmia, of the angular gyrus. Probably, too, the false sensations of optical impressions depend on a similar congestive condition of the gyrus, including many of the varieties of hallucination and illusion.

[To be continued.]

THE POISON OF MUSHROOMS.—Professor Ponfick, of Breslau, has lately made experiments on the common mushroom, of which the following are the results. All common mushrooms are poisonous, but cooking deprives them, more or less, of their poisonous qualities. The repeated washing with cold water which they usually undergo to clean them, takes away a portion of the poison, and boiling does the rest; but the water in which they have been boiled is highly poisonous, and should always be carefully got rid of. Experiments made on dogs showed that if a dog ate one per cent. of its own weight of raw mushrooms it fell sick, but recovered; if it ate one and a half per cent. the poison had a more violent but not fatal effect, and if it ate two per cent. it was inevitably fatal. The water in which mushrooms had been boiled was far more poisonous than even the raw mushrooms, while the mushrooms thus boiled could be taken without hurt to the amount of ten per cent. of the weight of the dog's body. Washing with cold water does not remove all the poison, so that mushrooms thus prepared are poisonous when taken in larger quantities. Dried mushrooms are still dangerous for from twelve to twenty days, and also the water in which they have been boiled. They require to be dried for at least a whole month, and are only really safe after four months' drying.

A NOTE

ON

THE NEW HOSPITAL AT ANTWERP.

By JOHN MARSHALL, F.R.S.,

Professor of Surgery in University College, and of Anatomy to the Royal Academy, and Senior Surgeon to University College Hospital.

WITH REMARKS ON THE ADVANTAGES OF THE CIRCULAR WARD SYSTEM OF HOSPITAL CONSTRUCTION.

By DAWSON WILLIAMS, M.D., Fellow of University College.

NOTE.—The original plans for this hospital, providing eight circular ward towers, each of two stories in height, were sent in at a public competition in the year 1872. Their author was M. Backelman, an architect, residing at Antwerp. They were approved by the Hospital Committee and by the authorities of that city, and received, in 1873, the first premium in the competition. According to rule, they were next submitted to the central authority in Brussels, "Le Conseil d' Hygiène," and after considerable delay and discussion they were, in 1875, reported on unfavourably by Dr. Vlemminckx—so far, at least, that certain changes in them were insisted on. To these changes M. Backelman objected, and indeed he declined to make them. Two of his pupils, however, MM. Bilmeyer and Van Riel, at the urgent request of the Antwerp "Administration des Hospices," submitted a modification of the original plans, and in 1876 these were agreed to by the Brussels authorities. The circular system was not hereby interfered with. The foundations of the buildings were commenced in 1877 and were finished in 1878. Since then the works have been continued, and now the edifice is completed, but awaits the introduction of the flooring and internal fittings.

My own ideas on the subject of circular wards were explained in a paper read at the meeting of the Social Science Association held at Cheltenham in August, 1878, and were forthwith published in a separate pamphlet. It was only in March, 1879, that I heard anything of the Antwerp hospital. I immediately sent to M. Backelman and M. Vlemminckx copies of my pamphlet, and since that time I have, through the kindness of my former pupil, Dr. Peter Thomson, of Brussels, made myself acquainted with the progress of this new and interesting hospital. I have also had reports upon it from two other pupils—Dr. Easmon, now of Fort Quetta in Africa, and Mr. Stonham, at present acting as surgeon on board one of the Union Line African steamships, the latter of whom brought me quite recently from M. Backelman the plan of the buildings, as they are now completed, a reduced copy of which has been made to accompany this communication.

On comparing this plan with one which I obtained in 1879, I find that, besides certain deviations in the arrangement of the administrative departments of the hospital, the circular ward towers are placed further apart from each other, the plot of ground occupied being itself somewhat larger than in the first plan. Besides this, I observe that the necessary ward offices (water-closets, lavatories, etc.) have been placed beyond the ward towers as separate constructions, in accordance with the method represented in my pamphlet, whereas no such arrangement had appeared in the original Antwerp design.

The frontage of the plot of ground on which the entire establishment stands measures about 188 yards, and its depth from front to back is about 247 yards; the entire plot, which is wider across the middle, contains about 11 acres.

The buildings are of red brick, with courses and finishings of yellow stone. The cost of the buildings alone is said to be about £64,000; and, when these are completely fitted throughout for the reception of patients and the administrative staff, nearly £120,000 will have been expended. The proposed uses of the several parts are indicated on the accompanying plan. The corridors of communication form open cloisters, and will be provided with tramways—a means of transport which will also be adopted throughout the basement, lifts being provided at certain points.

Each circular tower is about 78 feet in external diameter, so that the wards, two in each tower, are about 66 feet in diameter, somewhat larger than in my own plan, which allows about 61 feet. There will be twenty beds in each ward, arranged next to the wall, with a window or door intervening between every two beds. Each patient will have a ward-space of 2,744 cubic feet; but, making a deduction for the necessary partial occupation of such space, there will be an actual air-space of about 2,500 cubic feet for each bed.

In the centre of the wards, there is to be a lift, and also vertical shafts, with inlets, for the admission of air, which is to be warmed, when necessary, by a heating apparatus placed in the base of each tower. The outlets for the egress of the impure air are to be in the wall at the circumference of the wards. A system of propulsion by means of a steam fan, to be worked from the engine-house in the rear of the ground-plot, is to be provided, so that, at will, fresh air can be driven along underground channels into the warming chambers in the basements of the several towers, where, in hot weather, the air can also be cooled. It is further provided that the exit air-shafts shall be in connection with the flues of the furnaces in the warming chambers. It is calculated that 5,500 cubic feet of air per bed per hour can be made to pass through the wards if required.

The circular wards will be on one side for males, and on the other for females. Some will be for children, some for infectious cases, and so on. Besides the 320 beds thus provided, there will be from 100 to 120 additional beds in smaller or single wards, for special purposes, such as for particular operations or private cases.

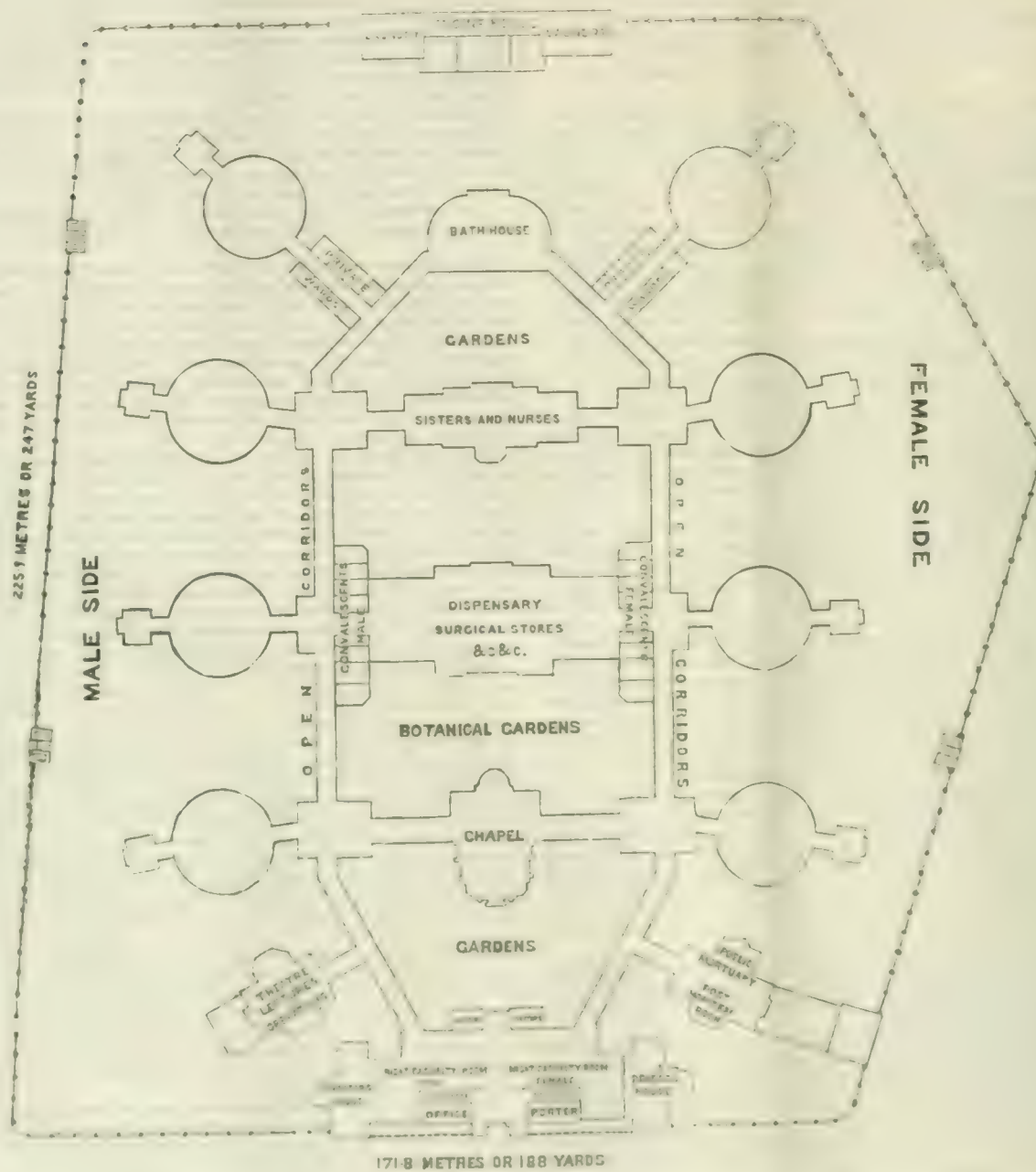
It is expected that the establishment will be opened for use by the ensuing autumn, or, at the latest, by the end of this year.—J. M.

REMARKS.—As the paper in which Mr. Marshall first elaborated the circular system was read before the National Association for the Promotion of Social Science in 1878, it may not be out of place to give here an outline of the grounds upon which the suggestion was made. The paper, together with remarks and illustrations by Mr. P. G. Smith, has been republished in pamphlet form*; Mr. Marshall deals with the general question of the adaptability of the circular form to the requirements of a hospital, while Mr. Smith investigates the various questions of cost and mode of construction, which come especially within the province of the architect.

After the site upon which a hospital is to be built has been determined on, the points of most essential importance, are those which relate to the actual form and method of construction of the building itself. Certain well understood conditions have to be fulfilled with regard to (a.) freedom of frontage, and exposure to air and light; (b.) the wall space, floor space, and cubic space allotted to each patient; (c.) the ventilation and warming of the wards; (d.) the number of patients under one roof, the isolation of the wards from each other, and from their sculleries, lavatories, water-closets, etc.; and lastly (e.) the detachment of the administrative from the sick department. The pavilion system has been devised to meet these requirements, and it is the object of Mr. Marshall's paper to show that the maximum of advantage is obtained by choosing the circular form for the wards. Each desideratum may be examined separately. A circular ward would be uniformly free to all quarters of the compass, except at one point, where an open or partially open corridor would connect it with the other wards, or with the offices, so that this form must give freedom of frontage, and must also permit of the freest possible access of light and air. If it be true, as has been stated on good authority, that "the worst wards are those where least air and light are provided," and that "a closed court with wards around it is the worst arrangement," then, since a circular ward is the inverse of this last named plan, it would follow that this form is best adapted to fulfil the desired conditions, "its uniformly rounded exterior, receding from all adjacent buildings, would receive light, air, and wind from every direction." Mr. Smith points out that, on this part of the question, the circular form is peculiarly attractive to the architect, who, when dealing with oblong wards, is sometimes compelled to place one long face of a ward, full against a prevalent wind, or to deprive it of its proper complement of sunlight, or free air space; with the circular form the wind can only strike full face at some single point of the circumference, and since this recedes, not along a straight line, but along a curve from its point of closest proximity to other premises, there is the least possible interference with neighbour's rights to light and air.

With regard to the wall-space, floor-space, and cubic space for each patient, the circular form offers certain evident advantages, except in the case of very small wards. It is not adapted for wards with less than eight beds; but, for wards containing about twenty beds, a little calculation shows the capabilities of the system. The two systems, the oblong and the circular, may be compared on the basis of a ward to contain twenty-two beds, allowing 8 feet of wall-space to each bed. A circular ward constructed to meet this would have a diameter of 61 feet, an internal wall-surface of 191½ feet, and would afford a floor-space of 2,922 square feet. An oblong ward 30 feet wide, to fulfil the same conditions, would have to be 88 feet long; the internal surface of

* *On a Circular System of Hospital Wards*, by John Marshall, F.R.S., etc., with Remarks and Illustrations by Percival Gordon Smith, A.R.I.B.A., etc. London: Smith, Elder & Co., 1878.



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wall would be 236 feet, while the floor-space afforded would be only 2,640 square feet; the circular ward, therefore, would give 133 square feet to each bed, the rectangular ward 120 square feet. From the form of the floor, and its greater dimensions, it follows that the beds in a circular ward would be more widely separated from those opposite, owing to the large central area that would be afforded; thus, in an oblong ward 30 feet wide, the distance from the foot of one bed to that of the bed opposite to it would be 18 feet; in a circular ward (61 feet in diameter) it would be 48 feet; the quantity of air between the patients would of course be greater, and the central space might be utilised for dining-tables, tables for dressers and nurses, and other conveniences. From what has been said with regard to floor-space, it necessarily follows that the cubical air-space for each patient would be relatively greater in the circular than in the oblong ward, here supposed; with a height of 15 feet in each case, the oblong ward would give 1,800 cubic feet per patient: the circular would give 1,995 cubic feet.

The ventilation of a circular ward would, it is thought, be easily carried out. Horizontal currents of air would sweep more readily and uniformly around the external surface of a circular than an oblong building. For the purpose of "natural ventilation," every such horizontal movement of the outer air would become available, from whatsoever quarter or side it came. Openings arranged in windows or walls, or both, would admit air on every, or on any desired, side. "Sharp draughts across the wards, down-draughts on the walls opposite and relatively near to open windows, deficiency of movement of the air with certain winds, and the unequal or opposing extracting power of two or more fireplaces would not exist." Mr. Smith considers that it would be advisable to have central extraction-shafts for the removal of foul air, though recognising that some of the apertures in the external wall would usually act as outlets, while others acted as inlets, the particular set discharging either function depending no doubt on the direction of the wind. The warming of the ward would be most advantageously affected by a central source of radiating heat, supplemented where necessary by hot-water pipes around the circumference.

As to the number of patients under one roof, this would very much depend on the purpose for which the hospital was required. One story, where the space covered by the whole building was of no moment, would be the most advantageous arrangement, and in fever hospitals would probably be necessary. But, where land was valuable, two or three such wards as have been described might be built one above the other, forming a circular ward tower, which would contain sixty-six patients. The various wards in the same tower would be reached by a staircase opening into the connecting corridors, and not directly into the wards. In the same way, all the water-closets and ward-offices would be disconnected from the wards themselves, and from excrescences, as it were, from the corridors. The circular form would lend itself very well to an efficient system of ward administration; the central area would form the natural domain of the nurses, who from that coign of vantage would be able with ease to command every patient in the ward, each bed being almost equidistant. Such a ward, too, would be easily kept clean, since it would offer no inaccessible corners to act as traps for dust, scraps, and such like "unconsidered trifles."

All the administrative buildings, the residential and official rooms, the operating and clinical theatres, and the out-patient and dispensary departments, "would be arranged in quadrangular blocks, from which the circular blocks, or ward towers for the in-patients, would be more or less widely detached, being communicated with only by the open or partially open corridors."

With regard to the cost of construction, Mr. Gordon Smith is of opinion, that while the walls would cost rather less to erect than in the case of rectangular walls, the flooring and roof would be more costly; the window sashes, glass, and doors, however, would not need to be curved, and, on the whole, he believes, "that the difference of cost between a circular block of wards, and an ordinary pavilion, for a corresponding number of beds, with equal space per bed, would be but slightly in favour of the straight building." As to the artistic possibilities of a hospital with wards on the circular principle, Mr. Smith expresses himself very decidedly: "in skilful hands," he says, it "would lend itself in the most happy manner to the production of buildings which would undoubtedly be the pride of the towns possessing them," and he instances the tomb of Cecilia Metella at Rome, the Baptistery at Pisa, and the Albert Hall at South Kensington, as proving the favour which circular buildings have found with artists from remote times down to the present day.

At the Medical and Sanitary Exhibition at South Kensington last summer, some of our readers may remember to have seen a drawing made to illustrate Mr. Marshall's system, by Mr. Francis E. Jones,

architect, representing a hospital on the circular ward system, adapted to a confined site such as that which may eventually be available for the University College Hospital. Four circular ward towers occupy the angles of the site, which is, roughly speaking, quadrangular; each tower contains three stories of wards, accommodating 54 patients in each tower; beneath there is an arched basement, and above a glazed day room for convalescents. The centre of the site is occupied by the administrative block, which takes the form of a Maltese cross, and contains all the necessary staircases. The ward towers communicate with the central block by cross-ventilated corridors.*

MEDICAL RUBBING.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Worcester, August, 1882.

By J. FLETCHER LITTLE, L.R.C.P.Ed., Ben Rhydding.

MEDICAL rubbing, when skilfully done, is one of the most effective and powerful remedies that we possess. If it is done by ignorant or untrained hands, it is capable of doing immense injury.

Medical rubbing can restore the wasted muscle, can unloose the stiffened joint, can promote the enfeebled circulation, can bring back sensation to the benumbed limb, can soothe the irritated nerves, and can promote digestion and assimilation by causing healthy waste and excretion. The principles of medical rubbing are simple and easily understood, so that any medical practitioner can train a suitable person in a few lessons.

The rubber should be strong and healthy, bright and cheerful, with plenty of energy and intelligence. A stupid lout cannot make a good rubber.

The hands of the rubber should not be too small nor too large. They should not be bony nor clammy, nor horny nor doughy. They should be firm, warm, supple.

The position of the rubber should always be that of perfect ease. No one can rub if they are craning over a patient, or in a cramped or constrained position. The patient must always be placed in such a posture that the rubber is perfectly at his ease. If this is not done the rubber soon tires, uses unnecessary force, hurts the skin, bruises the muscles, and does more harm than good. The position of the patient should also be one of perfect ease. No muscle should ever be rubbed except it is soft, and no joint except the skin over it is relaxed. The skill of the rubber is greatly aided by the science of physicians in placing the muscles and joints in the most suitable position. The patient should be lying down on a low bed or couch, and the rubber sitting close to or standing by him.

The limbs should always be rubbed from the extremities upwards and the trunk from above downwards. The rubbing I am going to demonstrate to you is a combination of what I learnt at Paris amongst Professor Charcot's cases, and at Philadelphia last autumn, when I had the great privilege of seeing a dozen or more of Dr. Weir Mitchell's cases undergoing what is now called the "rest cure."

It is a combination of the "skin friction," "French massage," "muscle rolling," and "kneading," "deep thumbing," and "medical calisthenics," or the Swedish movement cure, which I shall fully explain in the demonstration.

Many attempts have been made to supersede the human rubber; and if any of you are in London, I should advise you to visit the Zander establishment above the Soho Bazaar, Soho Square, Oxford Street, where you will see some series of most costly and ingenious machines for doing what any medical rubber can do with his own hands.

Dr. Roth and his son, Mr. Bernard Roth, have shown what the concentrated will can do when brought to bear on an enfeebled muscle. Gentlemen, you can now combine every advantage of all these systems by the simple means I shall now show you.

* A ground plan and full description will be found in the *London Medical Record*, for July 15th, 1881, page 296.

"LA JOIE FAIT PEUR."—A curious incident is reported in connection with the recent accident to the Great Eastern Railway express train. A woman living near Ely, whose daughter was in the train, was very much troubled about her safety; and, on her reaching home with but little injury, the mother became so overjoyed, that she was seized with an apoplectic fit, and has since died.

But, as a dilated heart is now-a-days universally recognised as an efficient cause of murmur,* it only remains to show—

3. *From the results of clinical experience*, that the attenuated blood of chlorosis—the serous polyæmia of Beau—is accompanied by a condition of heart similar to that produced by repeated bloodlettings; and that the cardiac hæmic murmur appears and disappears in a manner consistent with this theory. Wunderlich† and Friedreich‡ have described the chlorotic heart as dilated; while Beau,§ Damberger,|| and Stack¶ have adopted the more rational view, that it is hypertrophied as well as dilated; and Dr. Heitler of Vienna, one of the most recent writers on cardiac disease, speaks of the dilated hypertrophy of the chlorotic heart as a well-known and acknowledged fact.** Beau has distinctly pointed out that the chlorotic murmurs are not due to anæmia, but to spanæmia—serous polyæmia††—a condition in which the blood is not diminished in amount, though its nutritive and oxygenating properties are very much lessened. The primary murmur in such cases is the venous hum, depending upon abnormal friction between the spanæmic blood and the venous walls, and the formation of sonorous fluid veins at certain favourable points within the venous lumen. The next phenomenon observed is an accentuation of the pulmonary second sound, unquestionably due to increase of the intrapulmonary blood-pressure, the only possible cause for this being obstruction to the onward flow of the blood; and, in a disease such as chlorosis, this can only be due to loss of tone and contractile force in the cardiac muscle, which in this respect suffers no less than the external muscles, in all of which this loss of tone is so obvious. Less able to do its work, and with no less work to do, the heart slowly dilates, as it always does in similar circumstances; and it also slowly hypertrophies, as it must do to prevent things from coming to an absolute standstill. The dilatation is due to loss of muscular tone or elasticity; the hypertrophy to that natural law by which a hollow muscle hypertrophies when opposed to an obstacle with which it is still able to cope. And that the heart, under these circumstances, is still able to cope with its troubles, is due to the fact that it always works well within its powers, and has a large reserve of energy to call upon when required. As the heart dilates, the mitral and tricuspid valves become incompetent, and give rise to murmurs. The regurgitation through the tricuspid gives rise to undulations in the jugular veins; and the abnormally large ventricular blood-waves give rise to systolic murmurs in the pulmonary and aortic areas, which are also propagated along the carotids, and may be heard on the slightest compression in every artery in the body.

Thus, we have murmurs in every area of the heart in advanced chlorosis—the primary indication of cardiac lesion being an accentuated pulmonary sound, due to loss of tone of the left ventricle. And I am sure that we all agree with Hayden, that the primary cardiac hæmic murmur is basic; that it is not propagated in any special direction, but radiates round the pulmonary area, in the neighbourhood of which lies its position of maximum intensity. As has been already pointed out, there are no causes of murmur operative at the pulmonary orifice, which are not at least as active at the aortic opening; so that a murmur in the one position would certainly be accompanied by a murmur in the other, which would of course be propagated along the aorta, and more or less distinctly into the carotids also. This murmur cannot, therefore, be pulmonary; and, indeed, on careful examination, its position of maximum intensity is found not to be over the pulmonary artery at all, but from one to two inches to the left of the sternum, in the second interspace. In this position I never fail to detect, at least during expiration, some faint pulsation; and occasionally this pulsation is so great as to form a tumour, which has been made to record its own movements graphically;‡‡ and which, at least upon one occasion, has been mistaken for an aneurysm by a very competent physician.§§ Both Walshe and Hayden recognise “percussion-dulness in the second left interspace,” with pulsation in the second, or second and third, left interspaces, about an inch from the sternum, as physical signs indica-

tion of dilatation of the left auricle;* and Dr. Gibson's graphic records very distinctly prove the auricular source of the pulsation in those few cases in which such records have been obtained. There is therefore no room for doubt that in these special cases, and it is plainly to be inferred that in all cases presenting similar if less well-marked characteristics, this murmur is propagated outwards from the dilated appendix of the left auricle.

In mitral stenosis, it is no uncommon thing to have the appendix of the left auricle pulsating in the second left interspace; and it is still more common to have a basic systolic murmur, with a position of maximum intensity precisely similar to that of the basic murmur—viz., one inch and a half or two inches to the left of the sternum. This murmur, Naunyn† has distinctly proved to depend upon mitral regurgitation, the fluid veins impinging on the tense auricular wall, and throwing them into sonorous vibrations; these are conveyed to the chest-wall by the auricular appendix which lies in contact with it at the base of the heart.

Naunyn's views have been accepted by Paul Niemeyer,‡ Gerhardt,§ and all recent authorities. The basic position and auricular character of a mitral regurgitant murmur, in certain cases, is therefore a well acknowledged fact. That the primary cardiac hæmic murmur is of this character seems to be proved by these facts: (1) in chlorosis the heart is dilated and hypertrophied, and the primary murmurs are certainly not arterial in character; (2) the position of maximum intensity of the primary hæmic murmur and of Naunyn's murmur is precisely the same; and (3) the graphic record of the pulsation present in both classes of cases is similar; and, as it is known to be auricular in the one, it is most likely to be auricular in the other also, especially as it is certainly neither ventricular nor belonging to the conus arteriosus.|| The dilated character of the heart in chlorosis is further proved by the apex-beat being either entirely absent, or only faintly perceptible; not in the usual position, but just beneath the lower part of the sternum. This is due to dilatation of the right ventricle, which dilates *pari passu* with the left ventricle, and, like a water-cushion, separates it from the chest-wall, leaving the dilated appendix of the left auricle the only part of the left side of the heart in contact with the chest-wall. The peculiar position of the primary hæmic murmur is no doubt largely, if not wholly, due to this. Shortly after the appearance of the primary hæmic murmur, a tricuspid murmur with jugular undulation is found to be developed. This is naturally accompanied by a pulmonary, and also of course by an aortic systolic murmur; the active cause in the production of both of these murmurs being the large blood-wave sent on by the dilated and hypertrophied ventricles, as was first, I believe, pointed out by Beau.¶ The aortic murmur is propagated into the carotid arteries; and about the same time, we also have a systolic murmur in the mitral area; but this is probably due to the right ventricle being now so dilated, that its apex occupies the position of the apex of the left ventricle in health.

It is only rarely, and chiefly in a peculiar class of cases, that we have an opportunity of observing the gradual development of the hæmic murmur from area to area; but we all have frequent enough opportunities of tracing the involution of this murmur; and, if carefully traced, it will be found to die off precisely in the reverse order to that which I have described, the venous hum being the last to disappear.

With a short auricular appendix, it is, of course, quite possible that the primary hæmic murmur may be pulmonary, or aortic, or possibly tricuspid in character. I have never seen any such case, but, were it to occur, it would strengthen and not invalidate my position. My argument is, that the cardiac murmurs of chlorosis are formed in a dilated and hypertrophied heart, and that the primary position of the murmur is, in by far the larger proportion of cases—if not in all—to be found over the left auricular appendix, where it comes up from behind just to the left of the pulmonary artery. And, having shown this theory to be consistent with physics, with the results of experiment, and with clinical experience, I now leave it with my professional brethren, assured that, if not now, at least ere long, it will be universally adopted.**

Dr. CLIFFORD ALBUTT (President of the Section) said they must feel themselves peculiarly fortunate in having had this paper read in

* Vide Gairdner's *Clinical Medicine*, Edinburgh, 1862, p. 592, p. 597, and p. 600, note; also *Ed. Med. Jour.*, July 1856, p. 55, for a paper by Dr. Gairdner entering fully into the literature of the subject; also Dr. Bristowe, in the *British and Foreign Medico-Chirurgical Review* for July 1861, p. 215; and Dr. McDowell, in the *Dublin Quarterly Journal*, vol. xiv, 1852, p. 352; vol. xvi, 1853, p. 76; and vol. xvii, 1854, p. 90.

† *Handbuch der Pathologie*, Stuttgart, 1856, Band iii, s. 647; Band iv, s. 534.

‡ *Krankheiten des Herzens*, Erlangen, 1867, s. 172.

§ *Archives Générales de Médecine*, 41ème série, tome ix, 1845, p. 169 and p. 457, etc.

|| *Lehrbuch der Krankheiten des Herzens*, Wien, 1857, ss. 88 and 246.

¶ *Gazette Hebdomadaire*, 1863, p. 262.

** *Wiener Medicinische Wochenschrift*, June 1882, s. 634.

†† *Op. cit.*, p. 145 and p. 169, etc.

‡‡ *Vide Lancet*, September 1877, p. 418; and *Ed. Med. Jour.*, October 1877, p. 299, and May 1878, p. 102.

§§ *Vide Balfour, Clinical Lectures on Diseases of the Heart*, 1882, p. 176.

* Hayden, *Op. cit.*, p. 576. Walshe, *Op. cit.*, p. 31.

† *Berliner Klinische Wochenschrift*, April 1868, p. 190.

‡ *Handbuch der Percussion und Auscultation*. Erlangen: 1870. Band ii, Abtheilung 1, S. 140.

§ *Lehrbuch der Auscultation und Percussion*. Tübingen: 1871. S. 283.

|| *Vide Ed. Med. Jour.*, August 1882, pp. 121, 128, and 129.

¶ *Loc. cit.*, 1845, p. 158; and *Traité d'Auscultation*. Paris: 1856. P. 366, etc.

** For an account of the position and mechanism of the hæmic murmur, *vide also the Lancet*, September 1877, p. 383; and Balfour's *Clinical Lectures on Diseases of the Heart*, etc. London: 1882. P. 165, etc.

the section. Until that afternoon, his own mind had been in a state of perfect mist as regarded hæmic murmurs. It had very early occurred to him that the explanation which attributed them to the condition of the pulmonary orifice was entirely out of the question, and he wondered that even its original observer was not soon possessed with its untruth, because in no kind of way did it correspond to the conditions they should expect to find if the murmurs were formed in the pulmonary artery. Now they were asked, and he thought very properly asked, to take some *vera causa*, the most likely they could get, and push it forward as far as they could go. That was, he thought, the only way in which they could get at the truth in these things. It would be very difficult, as Dr. Austin Flint had said to him, and was scarcely courteous to the writer, to discuss off-hand the physical side of the question, to which he had given such attention and pains. But, from the clinical side, they might offer some remarks. In referring to the occurrence of dilatation of the heart with cure, Dr. Balfour had touched a subject on which he (Dr. Clifford Allbutt) had long intended to publish some results of his own experience, and he was extremely glad to hear one of the first authorities of the day state that as a fact. He had not the slightest hesitation in saying that cases of morbid degrees of dilatation—that was to say, showing positive disease, many of them of advanced years, fifty or sixty years old—recovered under diet, careful nutrition, and the use of iron. He believed, therefore, that not merely what they called functional dilatation in young ladies, and after hemorrhage and so on, but what he should call morbid dilatation, associated with fatty degeneration—he did not like the term—did recover, even when attended with hæmic murmurs. Then, as regarded the position of these murmurs, he had always supposed a very large number of them were mitral regurgitant. He should like to ask Dr. Balfour what he thought about the appearance of hæmic murmurs in cases in which, as far as he knew, the heart was not dilated. Perhaps Dr. Balfour would say it was dilated. But he (Dr. C. Allbutt) would say that, in cases where the heart was degenerated, as in progressive pernicious anæmia, his impression was that the heart was not dilated, but simply atrophic. What had also struck him was the absence of chlorotic murmurs in other cases of dilatation, and so on, not of anæmic causation. He was under the impression that a great many cases of dilated heart would be still found in which there were no basic murmurs. There was something in the peculiar ways in which the dilatations were brought about, namely, from anæmia, and spanæmia, and so on; and if brought on in other ways, such as valvular disease, and so on, there were not murmurs further than those changes would account for. One case of his, if singular, would be a mere curiosity, and therefore of little importance; but, if any other member had met with similar cases, it might be important. He believed that he had once met with a case of murmur corresponding to the second interspace across the sternum in anæmia. It was the case of a man about thirty years of age, labouring under a great deal of anxiety from his affairs, exceeding anæmic, and very much broken down indeed. He had given him a very definite opinion that he had aortic valvular disease, with aortic regurgitation. But, on recent examination, when he was very altered in appearance and health, all traces of murmur had absolutely disappeared. He would be obliged if members would describe any other case of the kind that had occurred.

Dr. AUSTIN FLINT (New York), in commenting on Dr. Balfour's paper, said that hæmic murmurs were frequently met with in apparently healthy persons.

Dr. THEODORE WILLIAMS (London) could not entirely agree with Dr. Balfour as to the cause of chlorotic murmurs being a dilated state of the right side of the heart. If it were so, would not this appear with increased cardiac dullness? Again, the contrast between the appearance of chlorosis and that of the ordinary dilated right side of the heart with the livid tint and gorged capillaries was as marked as it could be. Dr. Williams thought that some cardiac hypertrophy often followed prolonged anæmia, the condition producing greater difficulty of circulation.

Mr. MAC ALISTER (Cambridge) described how Professor Ludwig and Dr. Hesse, of Leipzig, had lately succeeded in overcoming the great mechanical difficulties in the way of determining the exact form of the heart in systole and in diastole. By a method of great ingenuity, they at length were able to obtain casts of the still living dog's heart in its systolic and in its diastolic configuration. These showed clearly the hitherto misunderstood relation of the *ostia venosa* at the beginning of the systolic stroke to that at the end of it. The area of the base in systole was only one-half of the area in diastole. The *ostia*, which were round and wide in diastole, were oval and oppressed in systole. The valves even in the healthy heart were incompetent to close such orifices as were seen in diastole. The great share of the work of clos-

ing these orifices was done by the contracting heart itself; the opening which the valves were called upon to close were already in great part contracted by the approximation of their borders. It was thus conceivable that anything which interfered with the nutrition of the heart as a muscle might impair its power to perform its share in closing the orifices. The valves were structurally sound, but they were called upon to close larger orifices than in health. This was not necessarily because the *ostia* were dilated; it was because they were insufficiently contracted. Mr. MacAlister urged this as a help to the understanding of how regurgitation might be produced without valvular lesion and without real dilatation, but simply from malnutrition and imperfect contraction of the heart-muscle. He exhibited casts of the heart in support of his view.

Dr. BROADBENT (London) agreed with Dr. Balfour in his account of the effects ultimately produced on the heart by chlorotic anæmia, that there might be dilatation of the ventricles and tricuspid, and mitral regurgitation; but he was unable to accept his explanation of the murmur heard at an early stage of the disease in the left second space an inch or more from the edge of the sternum. He had been acquainted with Dr. Balfour's views for some time, and had taken much trouble to test them by careful observation, with the result that up to the present moment he felt bound to reject them. His first difficulty was this, Dr. Balfour said that the murmur of chlorosis heard in the left second space was due to mitral regurgitation, but he gave no explanation of the fact that systolic murmurs much louder than this, undoubtedly due to mitral regurgitation, audible at the apex, and round to the angle of the scapula, were not heard in this situation. If a mitral murmur not loud enough to be heard at the apex were audible over the auricle, some reason ought to be given why the louder murmur, audible at the apex, was not present over the auricle. There were, no doubt, cases in which the systolic mitral murmur of valvular disease was heard higher up in the chest than usual, and up to the left second space, but this was when there was an unusual degree of dilatation and hypertrophy of the left ventricle, causing it to be exposed along the left border of the heart; and the rule was, that systolic apex-murmurs, however loud, did not reach the second space. Another difficulty was, that he had never seen after death the auricular appendix, or any part of the auricle near the surface of the chest as high, as the second space. The appendix came round the pulmonary artery just at its origin from the conus arteriosus, which was at the level of the third space; in no stage of chlorosis was there any reason to suppose that there was excessive dilatation of the auricle, and he did not believe that, as a matter of fact, the auricular appendix ever lay beneath the chest-wall at the point in question. Dr. Balfour had spoken of auricular pulsation felt in the same situation, *i.e.*, in the left second space, in mitral stenosis, as a reason for concluding that a mitral regurgitant murmur might be heard here; but he had examined every case of mitral stenosis he had seen since the publication of Dr. Balfour's book, and had never been able to satisfy himself of its presence. He could not, indeed, understand how pulsation of the auricle could be felt through the chest-wall. In assisting Dr. Sibson in the experiments by which he determined the form of the heart in systole and diastole, he had had the opportunity of watching the heart in action for hours in dogs and other animals; and, if the finger were applied to the ventricle of the exposed heart, it was powerfully thrust out during the systole; but, applied to the auricle, it received no appreciable push. The auricular appendix, again, the only part of the auricle which reached the chest-wall, was at the moment of the auricular systole suddenly and rapidly withdrawn. It must be borne in mind that, in those cases in which auricular pulsation was supposed to occur, there was extremely high pressure in the pulmonary artery, which would make the pulsation in the vessel powerful and extensive. Dr. Balfour had quoted Dr. Gibson's traces as conclusive evidence of auricular pulsation, and it might be said that instrumental records could not deceive. Dr. Broadbent, however, had seen enough of instrumental investigation to know that it required careful checking, and that the personal equation of the observer had to be taken into account. He had read Dr. Gibson's paper without being at all convinced, rather the contrary, of the occurrence of auricular pulsation. For his part, Dr. Broadbent saw no difficulty in accepting the pulmonary artery as the seat of the murmur heard in the left second space. It was not always the case that the seat of maximum intensity of a murmur was immediately over the point at which it was produced, as was seen in aortic regurgitation and mitral regurgitation; and it might very well be that a murmur arising at the pulmonary valves would be better heard a short distance along the vessel. He had sometimes been inclined to think, however, that the murmur under consideration might arise at the bifurcation of the artery, more especially as it could often be heard upwards and to the left for some distance. There was one point in the history of the development of

cardiac changes in chlorosis, which Dr. Balfour had omitted to mention. He had spoken of the accentuation of the pulmonary second sound, but he had said nothing of the accentuation of the aortic second sound, which was equally constant. Dr. Broadbent thought this important, and that in it was the key to the production of the dilatation of the left ventricle, and to the difference pointed out by Professor Austin Flint between chlorotic anæmia and the anæmia of phthisis and cancer, in respect of venous murmurs. It was an unexpected thing that, in a disease such as chlorosis, characterised by debility, there should be high arterial tension, but such was the fact; and it was indicated not only by the accentuated aortic second sound, but also by the character of the pulse. Of course, the increased tension was relative rather than absolute. The high arterial tension implied resistance in the peripheral circulation, and this would throw increased work upon the heart, and so give rise to dilatation. With regard again to the presence of venous murmurs in chlorotic anæmia and their absence in phthisical anæmia, if pointed to the same fact as the increased peripheral resistance and arterial tension in chlorosis, namely, that the primary change was in the blood; and there might be some relation between the two.

Dr. DRUMMOND (Newcastle-on-Tyne) said that he was in the habit of teaching that, in his opinion, the chlorotic murmur, heard as a systolic *bruit* in the second left interspace, was not due to mitral regurgitation, but was really the result of vibration of the pulmonary artery, which occurred on account of the sudden state of high tension into which it was thrown by a rapid systole. The fact that no aortic murmur was heard, was due to the difference to be found in the structure of the walls of the two vessels. Dr. Drummond asked Dr. Balfour to account for the appearance of the chlorotic murmur in cases of rapidly developed spanæmia due to hæmorrhage.

Dr. BALFOUR, in reply, thanked the members of the section for the interest they had taken in his paper. The subject was well deserving of it, as, from its relation to curable dilatation, it was, perhaps, the most important murmur they had to deal with. They would all remember what Senac had said—the longer and more carefully they studied diseases of the heart, the more difficult it seemed to make any practical use of their studies. What, for instance, could they hope from treatment in dilatation of the heart? Why this was, if he was right, the most curable of diseases. The President had referred to the presence of hæmic murmurs in cases of pernicious anæmia. This was constantly the case when spanæmia was present, especially in cases of gradually fatal hæmorrhage, and in such cases he had always found the heart slightly dilated and hypertrophied.* In phthisis and malignant disease, on the other hand, there was anæmia and no spanæmia. The hæmic murmurs were absent, and the heart was atrophied and not dilated. Even in spanæmia the murmurs occasionally disappeared before death, owing to loss of cardiac energy. The President had also referred to an interesting case of curable aortic regurgitation, the result of spanæmia. This was no doubt due to loss of tone in the arterial tissues, coupled with the high arterial tension constantly present in these cases, as Dr. Broadbent had pointed out. He himself had seen no case exactly the same, but temporary aortic regurgitation in somewhat similar conditions was not unknown, and he had even seen it occur in the pulmonary artery, apparently from excessive intrapulmonary tension. Dr. Flint had said that hæmic murmurs were often present in cases of apparent health, and no doubt this was so; but in all such cases the blood would be found to be really spanæmic and deficient in hæmoglobin. Dr. Williams had very properly pointed out that the signs of dilated right ventricle, as seen in cases of emphysema, were very different from those present in chlorosis. But the cases were widely diverse; the peculiar phenomena in emphysema were due to the limitation of the capillary area within the lungs, forming a positive obstruction to the onward flow of the blood, of which the dilated right ventricle was only one symptom. In chlorosis, on the other hand, the dilatation was solely due to loss of tone, there was no positive obstruction, and the conditions and signs were perfectly different. The dilatation in spanæmia, though greater and more permanent, was entirely similar to that trifling form which was readily brought about by holding our breath, when the apex-beat would be found to disappear, from the dilating right ventricle gradually pushing it back from the chest-wall. Dilatation of the right auricle might usually be detected by percussion; dilatation of the right ventricle could not be so discovered, but might readily be inferred from other physical signs. Mr. MacAlister's interesting communication did not invalidate, but rather confirmed his position. The mere mechanism of the dilatation was of little consequence; his object was to get the spanæmic heart acknowledged to be always dilated, and to use this as a standpoint for further investigation and as a basis for treatment. In re-

gard to Dr. Broadbent's remarks, he acknowledged that large auricles were somewhat rare, but they did occur, and even Dr. Broadbent would be sure to see one by-and-by. The late Professor Bennett had sent him his first large auricle as a case of aneurysm, and it was the accidental occurrence of several such cases together that led him to investigate the conditions under which they occurred. The reason, or at all events one reason, why the mitral murmur in chlorosis was audible at the base, and not over the apex, was because the dilated left auricle was the only part of the left side of the heart remaining in contact with the chest-wall, the left ventricle being pushed backwards by the dilated right side. The auricular murmur was not unfrequently present along with a loud mitral murmur, when the conditions were favourable; and, when it was absent, the physical condition and relations of the auricle would be found to be entirely different. The auricular pulsation was not due to the systole of the auricle, but to its distension by the regurgitant blood during the ventricular systole, as Dr. Gibson had pointed out, and as was very well shown both by the character and time of the tracings.* Dr. Gibson had enjoyed exceptional opportunities of observing and getting tracings from auricular pulsations; he had also obtained tracings from the conus arteriosus in a case of split sternum; and a single glance at the tracings from the auricle was sufficient to show that they were quite peculiar. Something no doubt might be said as to personal equation in regard to graphic tracings, but the tracings he referred to had all been taken by the same man; the equation was therefore the same for all, and he thought they might be reasonably accepted at least as a basis for further investigation. Dr. Drummond's idea, that the murmur was due to vibrations in the pulmonary artery was inconsistent with the fact that the position of maximum intensity was not over the pulmonary artery at all; it was, moreover, an old theory, which had more than once been adopted and been discarded.† His object in initiating this discussion was to bring out the truth, and to direct their attention to the probability of the murmurs of chlorosis being due to dilatation, the result of debility. He was satisfied that a careful consideration of the hæmic murmur from this point of view was well worthy of their most serious consideration, and he begged again to thank them for the attention they had already bestowed upon the matter.‡

* *Vide Lancet*, Sept. 1877; *Ed. Med. Jour.*, Oct. 1877 and May 1878, also August 1882.

† By Meyer, Bamberger, and Gerhardt; *vide* Naunyn's paper in the *Berliner Klinische Wochenschrift* for April 27th, 1868, p. 189. Von Dusch also adopted a similar view, *vide Lehrbuch der Herzkrankheiten*; Leipzig, 1868, p. 205.

‡ In Marshall Hall's paper in the *Medico-Chirurgical Transactions* for 1833, vol. 17, and especially in Beau's paper in the *Archives Générales de Médecine*, 4^{ème} série, tome ix, 1845, will be found a full account of the development of the hæmic murmur after bloodletting, showing the rapid way in which it sometimes develops, and the interesting way in which further bloodletting temporarily stops it.

SYPHILITIC INFECTION OF THE FINGER IN MEDICAL MEN.—Dr. Fessenden N. Otis communicates to the *Independent Practitioner* of March particulars of eight cases of syphilis contracted by physicians in making digital examination of the vagina of syphilitic women. The initial lesion of this form of syphilis is described as being uniformly a papule, "coming soon to be of a deep red colour, and presenting a superficial abrasion, becoming circular and deeper by a slow molecular necrosis; not by ulceration with formation of pus; the secretion thin and serous, and drying into a scab which is soon displaced by the fluid accumulating underneath." He also remarks "the entire absence of induration; in its place a slight, flat, juicy-looking, boggy swelling, or elevation, about like a small peppermint in size and thickness." As proof of the efficacy of treatment, which was continued in five of the cases for one and a half to two and a half years, he states that subsequently "eight healthy children have been born, and both they and the parents have continued free from any evidence of syphilis."

HYOSCYAMINE IN INSANITY.—Dr. Grieve, of the Colonial Lunatic Asylum at Berbice, reports that he has tried hyoscyamine in a few cases of insanity, but without encouraging results. Three negroes, two of whom were suffering from chronic mania and one from acute mania, took the drug. The preparation used was the crystal, and the dose to begin with was one-sixth of a grain twice a day. This produced marked physiological effects; the pupils were widely dilated, there were staggering gait ending in complete inability to walk, loss of power of articulation, and dribbling at the mouth, giving an appearance of total and helpless imbecility. Whilst this condition lasted, the patients were quiet, but as soon as it passed off noisiness and restlessness returned. So quickly was tolerance of the drug established, that the dose had in one case to be trebled in three days, and then lost its power over the patient, after which it was not considered advisable to push the treatment any further. None of the patients permanently improved in condition from the use of the hyoscyamine.

* One such case will be found narrated at p. 173 of Balfour on *Diseases of the Heart*. Second edition: 1882.

REMARKS

ON THE

EARLY OPERATIVE TREATMENT OF STRUMOUS JOINT-DISEASE.

Being an Introduction to a Discussion in the Section of Surgery at the Meeting of the British Medical Association in Worcester, August 1882.

By J. GREIG SMITH, M.A.,

Surgeon to the Bristol Royal Infirmary.

THE ordinary means at our disposal for the treatment of strumous joint-disease may be given as rest, excision, and amputation. A few cases, caught early, recover with rest and simple auxiliaries; many drift on to excision; in not a few, we have to remove the limb along with the joint. Excision has year by year been rescuing more and more limbs from amputation; may it not be possible to carry the improvement still farther back, and to rescue more and more cases from excision?

Sound lines of treatment must be built up on a true pathology, and the pathology of strumous joint-disease is not yet by any means worked out. This is not the place to discuss pathological doctrines, so therefore I cannot lay before you detailed evidence in support of the views I uphold. I may, however, be permitted briefly to enumerate a few points in the pathology of strumous joint-disease, which may serve as premises from which to draw conclusions. The form of joint-disease for which we have most frequently to perform the operations of excision I believe to be, in the large majority of instances, strumous. Here, as elsewhere, struma manifests its presence first in lymphatic or lymph-glandular tissues. The red marrow in the ends of the long bones is a lymph-glandular organ of prime importance. The synovial and subsynovial tissues are peculiarly rich in lymphatic structures. In one or other of these, the red marrow, or the synovial tissue, does chronic joint-disease begin. At the outset, and for some portion of their course, they are distinct diseases, showing different symptoms and requiring different treatment; towards the end, when the disorganisation is complete, it may be impossible to say how they began. The one I would call synovio-arthritis, the other medullo-arthritis.

There is now no doubt that the pink marrow is a blood-gland of the highest importance, intimately concerned in the manufacture and destruction of the blood-cells, and partaking actively in diseases affecting the blood-glandular system. When it is inflamed in the habit of body called strumous, we find that the elements behave after the well known manner. There are the same chronicity, the same tendency to caseation, the same possibility of their being starting points for a miliary tuberculosis. But there are many points of difference. Inside the compact shell the gland among the bony trabeculae is unlike subcutaneous tissue of the neck in this very important point, that it has no room to swell. The proliferating tissues strangle themselves in their growth and form little necrotic abscesses; or they force their way along the line of least resistance, which is, for many of the bones, towards the joint-cavity. In the bodies of the vertebrae (Pott's disease) the outer shell is very thin, and breaks down at once in front. In the bones of the fingers and toes the compact outer shell is very dense, and resists the expansile force for a long time before it gives way. In the ends of the long bones the caseation, when it occurs, is usually directed towards the joint-cavity. As it advances, it causes the cartilage in blisters, eating it away from below, and ultimately sets up suppuration in the joint-cavity. In this instance, (there is not at first any pulpy synovial membrane to serve as a buffer between the abraded ends of bone, and the pain may be very severe.

This is primarily and essentially an inflammation of marrow—a medullitis. The associated changes—osseous, synovial, cartilaginous, and ligamentous—are, in every sense, subordinate.

Now, if this be the condition which exists, it is clear that the chances of spontaneous cure are not great. Firstly, there is the general fact, that strumous glandular inflammations do not readily resolve but usually drift on to caseation or suppuration. Secondly, there are the special conditions, that the marrow is bound down to one unalterable position, and that the very proliferation must threaten self-destruction; and, thirdly, even if it had an outlet, the bony trabeculae entangle and retain the inflammatory products.

Grounding our practice on these principles, we begin early by giving an outlet to the inflamed and proliferating tissue. But merely drilling a hole, through the outer compact bone into the trabeculae, is not enough. A sad experience of several cases of mastoid abscess has convinced me that mere trephining will not always cure. We must gouge or scrape away as many of the trabeculae as we can: for these still confine the inflammatory material after the compact bone has been removed. And so in strumous medullitis, we must gouge or scrape away bodily the cancellous bone, and the inflamed marrow which it confines. Practically, this is easier than, on theoretical considerations, it would appear. With a Volkmann's spoon, or similar instrument, we can take away without very much force the diseased portions; when healthy structure is met with, the resistance is greater, and we need go no further.

I have, in one of our journals, already described the sort of operation I would recommend in the earlier stages of hip-joint disease—the most common variety of medullo-arthritis. For the other joints, the operation may be exceedingly simple, and required no description. Here I may say, that I believe the use of Listerism to be of great value. Such an operation as I have described, resulting in the formation of a cavity inside the end of a long bone, and interfering with such an exquisitely sensitive tissue as pink marrow, is not to be lightly undertaken. It is here that we can turn to practical account that extraordinary process of organisation of blood-clot. We close up the wound completely, and we need not remove the dressings for a month, when we expect to find everything healed.

This account takes it for granted that most of our cases of medullo-arthritis are not cases of miliary tuberculosis. Miliary tubercles may appear in the pink marrow, either as a part of acute miliary tuberculosis, and then it is incurable; or as a local infection from a caseating abscess, and then it is beyond excision; but, as a disease in itself, I think it must be very rare. I am afraid that we surgical pathologists are somewhat more vague even than physicians in the meaning we attach to that uncertain word—tubercle.

The other form of disease is one of synovial and subsynovial tissue—synovio-arthritis. If I were asked to express it shortly in terms of pathology, I should call it synovial inflammation *plus* lymphatic obstruction, and I shall say nothing more about the too familiar pulpy tissue than this. Why should this pulpy synovitic material be so doggedly permanent and so aggressive—we might almost say with the older pathologists—so malignant? I believe it is chiefly because one element of this peculiar inflammation is a blocking of the lymphatic channels, keeping up an œdema which has a further effect of compressing the veins, and so making matters worse. Up to a certain stage, this lymph blocking may cure itself if we judiciously assist it; but when it has gone on to complete obliteration of all the eliminatory channels, we can understand why it should be so difficult of cure.

In the earlier stages, if the joint be full of fluid, and we think that tension keeps up the mischief, incisions into the joint (Mr. Teale's plan) and free drainage may do much good, and even cut the disease short. But if we go thus far, why not go further and remove the pulpy synovial tissue, or as much as we conveniently can, at the same time? The nail of the fore-finger, or a steel scraper, may remove a good deal of it; and if these fail, we can have recourse to scissors or scalpel. There is no fear of hæmorrhage.

This, then, is the position I take up. When a case of incipient joint-disease comes to us early, we ought to give a fair trial to simple remedial measures. If it be synovial in origin, we give the ordinary means a trial. I think that passive movement, sometimes accompanied with gentle shampooing, ought to be carefully carried out in some cases. Certain I am of this, that prolonged rest in synovio-arthritis is productive of a fatty change in the pink marrow, accompanied with a rarefaction of bone which is in itself enough to render excision of the joint unsuccessful. If after a lapse of time, measured by weeks, or at most by two or three months, the disease be evidently not improving, we ought to lay open the joint antiseptically, remove as much of the pulpy degenerative material as possible—at all events peel it off the articular cartilage—and drain it for two or three weeks. If, after this, it be not cured, excision should be done.

If the disease be medullitis, I think the best treatment at first is absolute rest inside a plaster case. Counter-irritation, especially the actual cautery, may be tried. These being ineffectual, I would gouge and evacuate the diseased marrow. If suppuration have not started in the bone, I should not drain, but seek healing by organisation of clot. If this be not curative, I would excise.

These fragmentary remarks are all that I can give on operative means as preventive of excision; and I have no doubt that the discussion will show to us that many surgeons are now doing similar operations, though only a few have published results. I have already said

that I think the very best results are to be got by Listerism. When we come to excise, though the advantages of Listerism are perhaps not as marked, still I believe they are palpable enough. This I say from observation of individual cases, and not from a study of statistics.

As indicative of the value of excision at various stages and in different hands, statistics I believe to be almost useless. If we excise joints only slightly diseased, we get excellent results, and, *ceteris paribus*, our results deteriorate as our cases are bad. Indeed, it might be that the worst results are got from the hands of the best surgeon; for he would excise where other men would amputate; and he would cure where other men would excise.

I think that Listerism in excision of joints has done harm in one way. Surgeons used to be chary of encountering the dangers of excision until the case had gone sufficiently far to warrant the risk to life which the operation involved. Now, with the help of Listerism, I am afraid that joints have been excised too early; that is to say, before simple remedial measures have had a fair trial. But, on the whole, it has, I believe, done good service.

The great practical difficulty in the treatment of these cases is to find out some simple definite rules of procedure—when to palliate, when to gouge, or drain and scrape, when to excise. I believe that we must make up our minds once for all to do without such rules. The variables in any given case of joint-disease are so numerous, that it is impossible to deduce from them any constant. We must first know the pathology, the natural course of events; we must carefully map out the lesion, its position and nature; and then we treat each individual case on its own merits. Such a law, for instance, as to always excise when abscess appears must be erroneous. For not only may abscess appear in the earlier stages, when the disease is curable by means simpler than excision; but no abscess may form, even after the disease has far advanced.

To sum up:

1. Strumous disease starts either as a synovitis or as a medullitis, and requires different forms of treatment as it is one or the other.
2. In synovio-arthritis, while recommending the use of such measures as elastic compression over cotton-wool, counterirritants, and functional rest, I believe that a systematic use of passive motion is beneficial.
3. In medullo-arthritis, absolute rest in plaster-of-Paris I believe to be, on the whole, the best form of treatment—better than extension, and better than counterirritants and other means.
4. If there be no signs of improvement after a few weeks' use of such treatment, I believe that we ought to step in and operate. In synovio-arthritis, the most generally useful plan would be, to make large incisions into the joint, peeling the granulations off the articular cartilage, and removing as much of the pulpy material as possible, and freely draining. In medullo-arthritis, we ought to remove the inflamed marrow from the inside of the bone along with the trabeculae, and endeavour to fill the cavity with blood-clot. In both cases, I would operate antiseptically.
5. If these means fail, then excise; but excise early.

Mr. TEALE (Leeds) expressed his full sympathy with Mr. Greig Smith in his efforts to study and surgically treat joint-disease in its earliest beginnings; in fact, at a period before those more serious and secondary degenerations had taken place with which, as a rule, the surgeon had to deal, and which rendered perfect recovery of the healthy functions of a joint all but hopeless. During the last six years, Mr. Teale had occasionally attempted to deal with one factor in the early stages of joint-disease, by subcutaneous incision of the capsule in the hip and knee joints, during what he supposed to be an active inflammatory condition of the synovial membrane, attended with severe pain, and probably effusion and tension. His first case came about in the following manner. Having decided, with the assent of his colleagues, to cut freely into a knee-joint which he supposed to be in a state of acute suppuration, he found, on making the first puncture, that turbid synovia escaped, not pus. Convinced that free incisions were not justified, and seeing that the joint was wounded, he decided to enlarge the opening into the capsule, whilst maintaining a small puncture of the skin. This proceeding was repeated in three or four places. The result was that pain rapidly abated, all acute symptoms ceased, and the patient left the hospital with a movable joint in a few weeks. The leading idea in this proceeding was, not to puncture and tap the joint, but to provide an opening or openings through the capsule which should allow continuous escape (drainage) of the fluid effused into the tissues outside the joint, where fluid, not being pus, could be absorbed. He was confirmed in such a view by what he knew of the old practice of treating hydrocele in children by acupuncture. The favourable result in this case has led him to practise it in six or eight cases of

painful hip, in which acute disease was supposed to be setting in. The result in most of them had been most striking; some, after one operation, having at once lost all pain, and being able to walk soundly in two or three weeks, and not returning to the infirmary with relapses. The good effect of such puncture had been strikingly confirmed by a recent case in the Leeds Infirmary, in which Mr. Jessop adopted the same course, with immediate relief to the pain and threatening symptoms of acute hip-disease.

Mr. BARWELL (London) said that, concerning the two points of treatment advocated by Mr. Pridgin Teale and Mr. Greig Smith respectively—viz.: subcutaneous incision of the synovial membrane, and perforation of inflamed and suppurating bones, he would like to say a few words. The former was advocated by him in the first edition of his work on *Diseases of the Joints*, twenty years ago. In the second edition, he advocated the use of the aspirator, partly because the fluid could be thus seen; partly because, if the liquid were pus, the probable abscess about the joint which would result was avoided; but the instrument sometimes failed, and then subcutaneous incision must be substituted. The perforation of inflamed or suppurating bones, in the neighbourhood of joints, was strongly advocated by him in the same work, under the name of paracentesis ossium. Several forms of this disease existed, one more especially in the epiphysal ends of long bones, or in short bones of young persons. The special pathology was described in that work, and the methods of performing paracentesis, after which the larger number of cases would do well.

Mr. LUND (Manchester) drew attention to the importance of early treatment in cases of joint-disease; and, where this was undertaken, the advisability of delay before resorting to excision or amputation, and the probability of averting them entirely. He illustrated this by what Sir William Fergusson had himself told him—viz.: that, though he was the great exponent of the operation of excision of the knee, the first case in which that great surgeon had occasion to resort to it in his private practice occurred only a few years before his death.

Mr. MARTIN COATES (Salisbury) reminded the meeting of the treatment of chronic synovitis, whether with or without suppuration, by the pure rubber bandages; aided, when the joint was tense, with a collection of synovia, by aspiration. Mr. Coates related two cases of diseased tarsus with suppuration, and one without suppuration, and one of diseased knee-joint with suppuration. Two of the cases of diseased tarsus quite recovered; another, though the subject had a tubercular cavity in the right apex, was much improved.

Mr. HENRY MORRIS (London) remarked that, in addition to the cases of synovial arthritis, in which (as he himself, like Mr. Barwell and Mr. Teale, had found) during one stage, aspiration, and during another stage, free incision and drainage were successful, if combined with absolute fixation, there was still another class of cases in which an exploratory incision into the joint, or an exploratory trephining of one of the bones of the joint, might obviate excision of the joint, just as an exploratory incision into a tumour of the breast sometimes saved amputation of the mamma. Mr. Morris referred in illustration to two cases, a specimen of one of which was in the Middlesex Hospital museum, of an excised upper end of the femur; and to another case of excision of the head of the humerus, by a most experienced surgeon, in which the excision of the joint might have been spared in the former case by the removal of a small sequestrum at the back of the head of the femur and within the head, a short distance beneath the articular surface, in the latter.

Mr. GREIG SMITH, replying, criticised Mr. Teale's cases as being acute ones, and not analogous to the subject of his paper. Moreover, Mr. Teale gave no information as to the extent of joint-disease, or as to the ultimate history of the cases. Mr. Barwell's method of aspiration also was suited for acute cases with effusion into the joint-cavity; whilst the mere perforation of an inflamed articular end of bone was something quite different from what he (Mr. Smith) advised; which was, that, in cases of white swelling, the diseased tissue should be scraped or gouged bodily away, and the resulting cavity be filled with organising blood-clot. In cases of fractured patella, aspiration or subcutaneous puncture was, no doubt, to be preferred.

POISONING BY ACONITE.—The death of a servant girl from the incautious use of tincture of aconite, given her by a dentist to use as a local application to relieve the pain of periostitis, is reported by the *Dentist's Journal* from Brooklyn, New York. The dentist stated at the inquest that he told the patient to "tip the bottle on her finger, and then rub it on the gum;" this she seems to have done frequently during the day. The girl obtained the tincture on Thursday, was taken ill next day, got worse on Saturday, and died on Sunday morning, the cause of her illness not being suspected till it was too late. The dentist was censured for his want of judgment.

A CASE OF COMPOUND RE-FRACTURE OF THE PATELLA, IN WHICH THE FRAGMENTS HAD BEEN ALREADY SUTURED.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By WILLIAM THOMSON, A.M., F.R.C.S.I.,

Surgeon to the Richmond Hospital, Dublin; lately Examiner in Surgery, Queen's University, Ireland; Member of the Surgical Court of Examiners, Royal College of Surgeons, Ireland, etc.

THERE are few subjects in surgery over which more battles have been fought than the treatment of fracture of the patella. The ambition of many surgeons is directed to the attainment of bony union, which they deem an absolute necessity in such cases. Apparatus, great and small, complicated and simple, have had their inventors and upholders; but all, it must be confessed, have had pretty much the same result—failure. Transverse fracture of the patella is an obstinate accident; it steadily resents interference, until not a few have come to believe in the treatment which is practically summed up in leaving matters alone. Within the past few years, however, the subject has taken a new development; and now we are not unaccustomed to hear of suture of the fragments with silver wire—not only as a proceeding suitable in cases which have resisted other treatment, but as justifiable immediately after the accident.

It may help to throw some light upon a difficult subject, if I submit the sequel history of a case in which such an operation was performed—the first, I think, in which we are able to examine the actual parts involved in what was regarded as a successful surgical proceeding.

I was sent for to my hospital, late one evening, to see a man who had just been brought in, and who was the subject of a very remarkable accident. He was aged about thirty-six, and had filled the position of first officer in a large foreign-going ship. I found him lying in bed, suffering from an extensive rupture of the knee-joint. There was a great gaping wound running directly across the knee, extending from condyle to condyle of the femur, with edges as sharply defined as if they had been made by a surgeon's knife. The patella was broken transversely; and, as the patient could not extend the limb, and the thigh and the leg lay at about right angles to each other, the condyles of the femur and the articular surface of the tibia were fully exposed. There was considerable oozing. As the case was one requiring very careful consideration, I determined to consult my colleagues next morning; and meanwhile dressed the wound with thymol gauze, etc.

The history I received from the patient was an interesting one. He had been operated upon by the late Mr. Amphlett, of Charing Cross Hospital, London, about a year previously. I subsequently wrote to that gentleman, not long before his lamented death, and received from him a letter, of which what follows is a portion.

"T. G. came under my care last autumn, while I was taking charge of the Seamen's Hospital, Greenwich, during Mr. Johnson Smith's absence from home. He had, about three weeks previously, fractured the left patella, for which he was treated at a foreign hospital (Amsterdam). When he came under my care, there was a very wide separation of the fragments, and the patient experienced the very greatest difficulty in locomotion on this account; and, as it did not seem to be a case at all suitable for help by means of any mechanical appliance, I (after consultation with my colleague, Mr. Davies-Colley) determined to make a resection of the broken fragment of the patella. This I accomplished, uniting the ends and passing stout silver wire. I effected drainage by means of two tubes passed right through the joint. The patient did very well—the temperature only rising to 100.3°. Some time afterwards, the wires were removed, and the fragments appeared to be united by bone. The joint, however, remained stiff."

Mr. Amphlett further said he had notes of the case, which he asked me to supplement; but I regret that his sad death disarranged our designs.

The patient stated that, after he left Greenwich, he gradually improved; but the joint had hardly any motion. It was slightly flexed, so as to cause him to walk on the anterior part of the foot, and he was unable to pursue his occupation. On the evening of the accident, he was leaving a shop; and when stepping down to the pavement, his toe caught in some obstacle; the limb was violently flexed as he tried to save himself from falling. He at once felt something snap, and an excruciatingly terrible mischief had been done.

After a full consideration of the case, we believed that excision

offered a fair chance of success. This was accordingly at once performed. The fragments of the patella, and thin sections of the femur and the tibia, were removed; and the limb was put up in a thymol dressing, and in a plaster-of-Paris splint. The subsequent history may briefly be told. There was a good deal of suppuration, but there were no serious symptoms at any time; and the patient left hospital in eleven weeks, with the wound perfectly healed, a limb about three-quarters of an inch short, and much more useful than before the accident. I have seen him frequently since. He was able to lay aside artificial support soon after he left the hospital, and he walks so well that his lameness is hardly perceptible.

The fragments which were removed are now upon the table. They consist of the fractured patella and sections of the femur and the tibia. The latter two present examples of fracture *par érasement*. On the tibia, just at the termination of the anterior arm of the external semilunar cartilage, is a thin plate of bone about the size of a sixpence, which has been torn out of a corresponding depression in the inner margin of the external condyle of the femur. The piece of bone is movable, and is attached to the tibia by a short fibrous structure. Just in front of the spine of the tibia is another minute piece; and along the inner margin of the articular surface, and somewhat anteriorly, is a strip about three-quarters of an inch in length and a quarter of an inch wide, from which bone has been torn. Finally, on the femur, about midway between the condyles, is a nodule of bone on a fibrous stump, torn from a depression half an inch in front of the spine of the tibia. The articular cartilages are smooth and healthy. The external inter-articular cartilage is perfect; but the inner one has disappeared altogether.

The patella itself is in two fragments. The fracture has taken place nearly in the line of the old injury; but there can be no doubt that osseous union existed in the bone after the original operation. Four holes remain (two above and two below the line of fracture) to indicate the position of the wire sutures. Union had taken place for about two-thirds of the distance across. Beyond that is a separation between the portions of the patella amounting to one-third of an inch. The fracture was almost extra-articular, only encroaching on the line of cartilage to the extent of half a line. The cartilage has nearly altogether disappeared, except round the margins.

This case presents many interesting features, and suggests some questions which it will be of advantage to consider. The character and the extent of the injury are remarkable. The fracture was not produced in the ordinary fashion, by muscular contraction, but very much in the same way that a long bone may be broken in its shaft by some violence applied at its distal parts. The difference I make is, that here the patella was fixed by the adhesions which had been set up after the operation, and entered into the formation of the practically ankylous articulation. The whole joint was fractured; and the patella, as a constituent part of it, yielded to the same force, but not to the contraction of the quadriceps extensor muscle. The extent of the wound was also remarkable, for it reached from condyle to condyle: so that, when I came to excise the parts, I found it unnecessary to enlarge it in that direction, and had simply to convert it into an H by making an incision at each extremity of it. The rupture of the soft structures in this way was due to the previous operation. The integument had become adherent to the patella and other parts; it was very tense over the slightly flexed joint; and, when that flexure was increased, there was no possibility of the already much stretched skin resisting the sudden strain.

I am not aware of any case precisely similar to this; that is to say, of compound fracture of the patella (or rupture of the knee-joint) after bony union had been attained in the same bone for a previous fracture. This bursting of the knee-joint has occurred, however, on a few occasions, under somewhat different circumstances.

The late Mr. Poland, of Guy's Hospital, London, records a case in which a man had a wound on the patella about three inches and a half long, exposing the bone. The case progressed favourably, and the wound was nearly cicatrised, when, eight weeks after the first accident, he fell, tearing open the wound and fracturing the patella, so that the joint was opened. An attempt was made to save the limb by bringing the parts together, but pyæmia followed, and ultimately the patient was saved by amputation (*Medico-Chirurgical Transactions*, 1870).

Mr. Poland says he has only found one case, in the practice of Pelletan, bearing a strict analogy to the foregoing. There was first a wound, which was healed; and three months afterwards the patella was broken, and the newly cicatrised wound torn open. The parts were brought together; but gangrene threatened, there was delirium, and the patient died on the twentieth day, no opportunity for amputation having offered (*Clin. Chirurg.*, tome ii, p. 155).

In Sir Charles Bell's case, there was fibrous union of a fractured

patella, then rupture, laying open the joint. Immediate amputation followed (*Operative Surgery*, by Sir C. Bell, vol. ii, p. 204, pl. v).

Dr. Croker King mentions a similar case. There the patient refused secondary amputation, and recovered (*Medical Press*, December 8th, 1847, p. 353).

Cases of compound fracture of the patella, from whatever cause arising, are fortunately of comparative rarity, for the mortality is at least 25 per cent.; and, as to the rest, very few indeed recover with perfectly useful joints. Mr. Poland, in the paper already referred to, has collected sixty-nine cases of this injury, including gunshot-wounds. In twenty, the fragments of the patella were removed at once, with three fatal results; there was one secondary resection of the joint; four primary amputations with two recoveries; and five secondary amputations with four recoveries. Several recovered with stiff joints, after passing through long periods of suppuration.

The treatment pursued in this case may be questioned, especially by those who believe that, under the conditions of antiseptic surgery, wounded joints are not of serious moment. But we had here to weigh the probabilities of recovery by a treatment which would have consisted in bringing the fragments together and waiting for repair; or by the removal of the articular portions and the bringing together of vivified surfaces of bone as in excision. Between these, I had no doubt as to the course to be pursued. The joint was already a disabled one; it had lost its natural movement; it had been freely exposed to septic influences; and the result at best would have been ankylosis in the flexed position. But that ankylosis would have been reached through the tedious process of exfoliation of the cartilages, with all the attendant dangers of suppuration. The shock to the patient was but very slightly increased by removing the ends of bones already fully exposed, while the probability of speedy recovery with a sound and healthy ankylosis was rendered more sure.

But another and more important question is suggested by this case, and that is, as to the treatment of transversely fractured patellæ by cutting down upon the fragments, and directly suturing them by silver wire. This method of dealing with such accidents appears to have been first practised by Professor Cooper of San Francisco. In the *Medical Times and Gazette* of November 2nd, 1861, he writes: "Our method of treating transverse fractures of the patella, and one which has thus far been invariably successful, is as follows. Make a longitudinal incision of sufficient length to expose the fragments; drill the anterior margins of them with a drill one line in diameter; then pass a silver wire through the holes thus made, and, by crossing the ends and pulling stoutly upon them, bring the separated parts together. A knot is then made by twisting the ends of the ligatures together, which holds the fractured portions of the patella in apposition, by which a bony union always takes place." As essential to success, he insists that the wound be healed by granulation, and not by first intention. Lint should be placed in the wound, and the limb tightly bandaged from the toes to the middle of the thigh. The wires are removed about the sixth or eighth week.

Dr. Hector Cameron, of Glasgow, was the first in this kingdom to perform the operation, protecting it by all the safeguards of the Listerian method, and he has since been followed by many surgeons not only here, but on the Continent and in America.

Now we have arrived at a time when suture of the patella is advocated and practised not only in cases of non-union, but in every instance as a regular treatment. But when we come to look at the results which have been obtained, we are not impressed by the magnitude of the success. It is true that the patients generally recover, but some of them have narrowly escaped death, and such a risk would demand a very considerable advantage as its reward. In the cases reported by Henry Smith (*Lancet*, August 1878), Rose (*Lancet*, November 22nd, 1879), Royes Bell (*Lancet*, November 1st, 1878), Holmes (*St. George's Hospital Reports*, vol. x, 495), Lister (*BRITISH MEDICAL JOURNAL*, June 11th, 1881), movement of the joint was retained in a few instances, but it was not apparently free, and patients are described as walking with a slight limp, using a stick, and so on.

Is a fractured patella, united by ligamentous bonds, which afterwards stretch, so great a misfortune after all? I have never seen a case of osseous union in a living subject, and I have never seen a case in which a patient was disabled to any great degree by his fractured patella. Every surgeon has met with cases which get on very well without bony union, and without any special apparatus. I do not mean to say that in no instance ought this operation to be done, but I think it ought only to be recommended where the injury has become an absolute impediment to the patient's progression. In the present case, at all events, the man's position was not improved. He had a too flexible joint before the operation and a stiff flexed one after it, a condition which might have been practically secured by a properly adjusted

knee-cap. Moreover, I think we render these persons so operated upon often liable to such an accident as is here reported; for we may have, instead of movement, aspurious insecure ankylosis, with a joint covered by cicatrised and tightened integuments, liable to rupture on very slight provocation.

If, however, the operation in such cases should be rarely resorted to, it seems to me that it cannot be justified in recent accidents. Experience shows us every day the admirable results which may be attained by simple methods, and the facility with which persons with broken patellæ may pursue their avocations. Is it to be laid down as a rule that we are to wipe out such probabilities altogether, and to lay open a man's joint at once? If we could be assured of perfect motion with perfect union the justification would be strong, but who can assure us? Passive motion is always late and limited, because we cannot disturb the uniting fragments; and, meanwhile, changes are being effected in the synovial membrane, the cartilages and the ligaments generally, which may end in giving us a much worse joint than if we had left it alone. I am quite conscious of the great advances in operative work which the Listerian method has allowed to be made; but, thorough believer as I am in its efficacy and its complete safety where accurately carried out, there are risks which will always surround it, as they surround every scientific method. It has enabled us to do great things, but even with its help I cannot believe that we are justified in attempting to do what is unnecessary, when that proceeding is attended not only with danger to limb but to life also.

Mr. JESSOP (Leeds) advocated the treatment of fractured patella by direct union by wire-suture, and related two cases which had lately been under his care in the Leeds Infirmary. The first was one of compound fracture in a young man who, after falling from a considerable height in a quarry, lay exposed without help several hours. The wound (which extended quite across the joint), the fractured surface, and the joint itself, were filled with ashes, lime, and dirt. Much time and pains having been spent in cleansing the injured parts and in rendering them aseptic, the fragments were united by means of two silver wires passed through holes drilled through the bone, and the wound was dressed, and subsequently throughout treated antiseptically. The course of the case throughout was quite equable, and free from all inflammatory complications; union of the fragments took place without perceptible movement, and a perfect joint resulted. The second case was one of simple fracture of the patella, in which, from two to three weeks after the receipt of the injury, the fragments were exposed by incision and wired together, as in the former case, and with a like satisfactory result.

Mr. WHEELHOUSE (Leeds) related two cases of fracture of the patella—one compound, the other simple and of long standing—in which the joint was freely laid open, carefully cleansed under antiseptic precautions, and the bone sutured with silver wire. In both, cure was complete and lasting.

Dr. MOORE (Belfast) spoke of the sudden swelling in cases of fractured patella as indicating blood-effusion, and advocated the use of the aspirator to remove this. He also referred to the too frequent neglect of early treatment, and its influence in producing deformity.

Mr. TEALE (Leeds) related a case of badly united fracture of the patella of several months' standing. The fragments were widely separated, and the patient was constantly in danger of falling, especially in going downstairs or down a hill. Mr. Teale cut down upon the fragments, sawed off a disc from each, and united them by wire. Some difficulty in approximating the fragments was overcome by aid of Malgaigne's hooks. Full Listerian precautions were adopted. The patient made an uninterrupted recovery. Mr. Teale also stated that, for the last fifteen years, he had abandoned all mechanical appliances in the treatment of fractured patella, the limb being allowed to rest in an unconstrained position, supported by sand-bags. He believed that attempts to approximate fragments by external appliances were simply useless; the approximating forces being represented by ounces, whereas the separate forces, muscular, and from effusion, were represented by pounds.

AN examination for local surveyors and inspectors of nuisances was held by the Sanitary Institute of Great Britain on June 8th and 9th. There were thirteen candidates. The Institute's certificate of competency to discharge the duties of local surveyors was awarded to F. Hubber and J. W. Witts; and the Institute's certificate of competency to discharge the duties of inspectors of nuisances was awarded to H. Abrams, W. Atkins, J. Baxter, S. C. Fairchild, A. Finlay, T. Lightfoot, G. Steers, and N. Wright.

DR. H. SLADE, retired fleet-surgeon, R.N., committed suicide at Bodmin by severing some of the arteries in his right thigh.

EXPERIENCES OF RESECTION OF THE HIP-JOINT.

Presented to the Section of Surgery at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By GEORGE COWELL, F.R.C.S.,

Senior Surgeon to the Westminster Hospital, and to the Victoria Hospital for Children.

MUCH has been written and said during the last few years about the treatment of joint-disease without excision; and, as a result, some discredit has been thrown, both intentionally and unintentionally, on that operation. In company with many other surgeons, I am confident that the excision of diseased joints is a proceeding which has preserved many lives and limbs in the past, and has very largely sustained its reputation as a measure of conservative surgery. If the excision of joints be destined ever to find its place in a museum of the surgical barbarities of the nineteenth century, it will not be because it is a proceeding unsuitable for the treatment of a certain class of cases under fairly appreciated conditions; but it will be because surgeons possess a better knowledge of the pathology of joint-disease, a fuller power of diagnosing its varieties and early stages; because there is a wider recognition by the people of the necessity of seeking surgical advice at the earliest possible moment; and, finally, because the progress of sanitary science will afford equal facilities for the hygienic and the mechanical treatment of all classes of the community. Our discussion to-day is a step in the direction of improving our knowledge in some of these respects; and it will be a happy day when we are able to cure the disease before the joint has been damaged to an extent in which excision or ankylosis, amputation or death, are the only possible terminations. I am very far from saying that the operation of the excision or resection of joints has not been misapplied. I believe that it has been performed when other modes of treatment might have sufficed; that it has been undertaken when local disease had advanced too far, or when other conditions existed in the patient which rendered such a proceeding unsuitable; and, further, that the method of performance and the subsequent treatment have not always been well calculated to ensure success. But this is only equivalent to saying that we are not all or always endowed with an equal amount of wisdom and judgment. Our very difficulties and failures have, however, had the advantage of stimulating a more extended study of the pathology, diagnosis, and treatment of joint-disease, and of suggesting our interesting discussion of to-day. But I venture to remind you that, whilst we are endeavouring to improve our knowledge in these respects, and learning to restrict the operation of resection of diseased joints, we must avoid running into the opposite error of failing to recognise its immense value in proper cases. For my own part, I desire to record my earnest protest against any sweeping general condemnation of it.

Thus far, I have spoken generally; but it must also be remembered that it is altogether impossible to form any adequate judgment or to formulate any expression of opinion on the general subject of excision which shall be of general application. The conditions of its application to different joints vary so widely, that each operation must be considered on its own merits; and I think that our knowledge of the subject will advance more steadily if we confine our attention to each joint separately.

I believe that there is no joint-disease which can be more satisfactorily treated in its early stages than ordinary hip-disease (morbus coxae). But, for a successful result, three conditions are essential: 1, early and correct diagnosis; 2, proper hygienic surroundings; 3, the possession and intelligent use of the necessary surgical appliances. If these conditions are fulfilled, that excision of the hip is rarely necessary in our private patients. It is precisely because one or more of these conditions have been wanting in many of our hospital cases, that the disease has advanced beyond the curable stage, and that excision has often been required. As surgeon to a children's hospital, well as to a large general hospital, I have had to deal, during the last three years, with a large number of cases of morbus coxae; and, out of 246 cases of all stages of the disease, I have performed 65 excisions, whilst 181 cases were treated in other ways. Of the latter, I have no exact record of the number of deaths; but they were numerous, chiefly from suppuration in connection with pelvic caries and necrosis. Of the excisions, I have an exact record; of these, 30 were boys and 26 girls.

Ages.		Deaths.	Per Cent.
18 and upwards	.....	3	100
12 and under 18	.....	2	10
6 " 12	.....	2	5.88
3 " 6	.....	0	0
65	.....	7	10.77

The deaths were from tubercular meningitis, phthisis, or the more immediate results of prolonged suppuration. Three of the other cases subsequently required amputation, and recovered. The rest recovered with more or less useful limbs. Many of the elder children had discharging sinuses for more than twelve months, and a few for several years; but, even in them, the shortening and deformity were less, and the limbs more useful, than in the cures by ankylosis. The best cases were amongst the younger patients, many of whom recovered most perfectly, with only the line of cicatrix and one inch to one inch and a half of shortening to show that excision had been performed, the firm ligamentous union permitting complete flexion and a fair amount of rotation, and the wasting of the muscles entirely disappearing with their restored use.

The conclusions that I have formed on the subject are these.

1. Resection should be restricted to cases where there is distinct grating in the joint, accompanied by either pain or profuse suppuration, or failure of health.

2. It should be performed without loss of time, as soon as these conditions are recognised.

3. It is inadmissible in patients over eighteen years of age. All three of my older patients died with more or less prolonged suppuration, and without the slightest attempt at repair. I have never seen an adult patient recover from excision of the hip.

4. The younger the patient (my youngest patient was three and a half) the more satisfactory the result, and the more rapid the repair.

I now perform the operation antiseptically, and always remove the great trochanter with the head of the bone. By not postponing the operation, the acetabular mischief is usually slight. Both ends of the wound are closed with two silver sutures, a tube being inserted so as to keep the centre of the wound, opposite the acetabulum, open. I prefer Bryant's splint, and fix the limb operated upon about one inch shorter than the other. This extension is a matter of great importance, as I am convinced that the muscular contraction forcing the shaft of the femur against some part of the acetabulum is a frequent source of subsequent failure, and of undeserved discredit of the operation. In the last few cases, when possible, I have placed the children for the first few weeks in the prone position (face downwards), so as to avoid soaking the bandages with urine. I have tried this plan for too short a time to express any positive opinion with regard to it; but it answers its purpose exceedingly well, and is marvellously tolerated by the little patients.

NOTES ON THE TREATMENT OF ABSCESS IN BONE.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By HENRY MORRIS, M.A., F.R.C.S.,

Surgeon to, and Lecturer on Surgery at, the Middlesex Hospital.

IN 1787, John Hunter, after stating that abscess in bone may find its way to the surface, added, "the crown of the trephine is often necessary in order to get at the seat of abscess." It would thus appear that trephining or drilling for circumscribed abscess in bone was practised by the great master of surgery more than a century ago. It is, however, only since the publication of Sir Benjamin Brodie's paper in the *Medico-Chirurgical Transactions* (1832), just fifty years ago, that the operation has become the almost universally approved treatment of this affection.

It is indeed the only proper treatment: and probably the differences of opinion respecting it now-a-days, are confined to the rarity or frequency of the cases which require it, and to the degree of risk attending it. Possibly there are still surgeons who consider, as the late Professor Syme did, that the disease is a very rare one in surgical practice, and that the operation is attended with grave danger. The following six cases, which have occurred in my practice during the last two and half years, point, however, to an opposite conclusion; and seem to indicate that abscess in bone occurs more frequently than is generally supposed; whilst, as regards the consequences of the operation, my personal experience, up to this period, has led me to think that good alone results therefrom in properly recognised cases.

CASE 1. *Chronic Abscess and Caries of the Outer Condyle of the Humerus.*—Sigismund H., aged 44, a courier, was admitted on November 17th, 1879. Twenty-five years ago he contracted syphilis.

of I. Hunter, quoted by Mr. Bryant in his *Practice of Surgery*, 1848 and 1863.

For nine years he had suffered from facial rheumatism and facial neuralgia. About ten months ago he had suffered pain in the right shoulder, and pain and stiffness in the right elbow. The pain in the elbow he described as being "like a pressure of several hundredweight upon the bone." The lower end of the humerus had been enlarged for four months, and for five months he had been unable to straighten his forearm. No treatment had given him any relief.

On admission, there was enlargement of the condylar end of the humerus, especially of the outer condyle; and pressure at one spot on the outer condyle excited pain. He complained of always suffering, but of having frequent paroxysms of great pain, which he described as taking the course of the musculo-spiral nerve to the shoulder.

I proposed to trephine the bone at the tender spot, but this he refused until December 1st, when he returned, requesting that the operation should be done. The periosteum, which was greatly thickened, was peeled aside, and the outer condyle pierced with a small drill without result; but, on enlarging the opening thus made with a gouge, a small sequestrum was exposed, surrounded by a few drops of pus. The cavity was large enough to admit the end of the finger; its walls were hard and smooth, but the bone between the cavity and the joint was somewhat softer than natural.

From this time the pain ceased, and on December 20th, he left the hospital before the wound had healed, being able to extend his forearm beyond an angle of 120°. After four or five weeks more the wound closed, and he has remained well since.

I saw him on June 25th, 1882, when he described himself as "never better in his life," and he could use his arm quite well; flexion, pronation, and supination were perfect, and extension could be carried to the extent of 148°.

CASE II. Abscess in the Upper End of the Shaft of the Tibia: Fibrous Ankylosis, with Displacement of the Knee.—Francis R., aged 35, a man of good physique, but having the aspect of much suffering, was admitted in July 1881. He was deeply pitted with small-pox; had never had syphilis. Seventeen years before admission, he struck his right knee against the rung of a ladder, and this injury led to stiffening of the knee and swelling of the bone below the joint. For five or six years, an open wound existed over the upper third of the tibia; then it closed, to break out again and again. At length, it finally healed; but, throughout the whole of the time since the accident, he had suffered pain, sometimes worse than at others, in the tibia. During the last six weeks, walking had greatly aggravated the pain.

On admission, the right knee was fixed, and the tibia displaced slightly backwards and outwards. The right tibia was much thickened in the upper part of its shaft. The skin over the enlarged bone was natural, except for a supple thin cicatrix. There was tenderness on firm pressure over all the thickened part of the bone, and even slight pressure on one spot gave rise to pain. Of late, the pain in the bone had been continuous, allowing him no sleep by night and no rest by day. Many remedies had been tried and failed. I believed there was an abscess in the tibia; and therefore, on August 5th, cut down upon it, and drilled the bone deeply in two places without evacuating pus. The periosteum was much thickened, and the bone was tough and dense. Relief was immediate and complete, and continued for two months; but on October 28th, 1881, about one month after discharge, he returned to the hospital, suffering all the old pains as severely as ever. On November 2nd, I therefore made another incision down to the bone, cutting along the cicatrix of the former wound. There was no difficulty in detecting the places where the drill had been previously introduced; they were filled with soft and ossifying granulations. Along one of these, a gouge was worked; and, when it had been pushed a little further into the bone than the drill had gone, about three drachms of foetid pus escaped. A steady recovery followed; on December 20th, the wound had quite closed; and, on January 3rd, 1882, he left the hospital quite well, though his knee was, of course, still stiff. I last saw him on March 1st, 1882, in perfect health; and I should have heard from him had his leg not remained sound and painless.

CASE III. Central Necrosis and Abscess in Lower End of Tibia.—Ferdinand L., aged 8, injured his left leg by slipping his foot between some railings. A week afterwards, the bone was swollen just above the ankle, and painful enough to keep him awake at night. After four months' treatment without benefit, he was admitted in January 1882, with uniform expansion of the lower end of the diaphysis, slight redness and heat of the skin over the swelling, and some tenderness on pressure. The fibula was unaffected, and the movements of the ankle were painless and free. He suffered little or no pain after admission; but, in about three weeks, the soft parts became very red, cedematous, and tender; so that, on February 24th, I made an incision over the front of the tibia, and peeled back the periosteum, which was a good deal thickened, and partially detached from the bone. Pus at

once oozed through a small aperture in the expanded bone; and, on enlarging this, between two and three drachms of fluid pus, some inspissated pus, and a small piece of necrosed bone, were removed. The cavity was lined by a smooth vascular membrane, which was scraped away. There was but little hæmorrhage. He made an excellent recovery; and, in the beginning of May, he left the hospital wearing a temporary steel support for the leg. He has continued well since.

CASE IV. Central Necrosis of Right Fibula: Chronic Abscess in Lower End of Left Femur, giving rise to Suppuration around the Knee.—Joseph B., a fairly healthy looking lad was admitted first on October 19th, 1880, when six years old. His family history was good, but he had some slightly enlarged glands in the neck.

About Christmas 1879 he complained of pain in the right ankle, which became more and more severe, and extended up the leg. Considerable swelling followed in the upper and outer part of the right leg. He limped in walking. Three months before admission, a small piece of bone came away through an opening which had formed over the right fibula. Three weeks before admission, after a fall on his knees, he felt pain in the lower part of his left thigh, and a little swelling formed above the left knee.

On admission, there was a sinus over the upper third of the shaft of the right fibula leading to necrosed bone, and a day or two after admission a long slender central sequestrum was removed from the fibula. The wound healed rapidly.

On November 27th, between two and three ounces of serous fluid were removed from the swelling over the left femur. It was clearly bursal, and the bursa did not refill. After the removal of the fluid, the lower end of the shaft of the femur was felt to be much expanded. On February 4th the boy was discharged quite well, except that the lower end of the femur was painlessly enlarged.

For eleven months he remained well, but on the 10th of January, 1882, he was re-admitted with extensive suppuration around the lower end of the left femur, and in the popliteal space. All the parts about the left knee were exceedingly tender, and any movement of the knee made the child scream. The joint itself was not, however, affected. On the following day two incisions were made, one above the inner condyle of the femur, and the other at the lower part of the popliteal space, and several ounces of matter were let out. The lower end of the femur could now be felt greatly enlarged. After this, the temperature, which had been 102°, fell to 98.2°, and did not rise above 99° till January 21st; then it rose again, and was frequently as high as 101.6°. The pulse was rapid, the appetite declined, and pain and tenderness about the lower end of the femur and over the knee became very acute. These symptoms, supervening upon a long standing enlargement of the femur, led me to the opinion that a chronic abscess or central necrosis in the lower part of the femoral diaphysis was the cause of all the mischief. Accordingly, on February 2nd, I made an incision down upon the front of the femur—which was rough as well as expanded—and then peeled off the thickened periosteum with the rest of the soft tissues. A very small opening leading into the interior of the bone was thus exposed, and enlarged by means of a gouge. After going through a considerable thickness of dense, tough, but not very hard bone, an abscess-cavity, as large as a walnut, was laid open, and about half an ounce of laudable pus escaped. More pus was mopped out with pieces of absorbent wool, and the walls of the cavity were well scraped. The patient made a good recovery, lost all pain from the day of the operation, and was discharged well and with a movable knee on May 9th, 1882. There was one inch and a quarter of lengthening of the left limb, due solely to increase in the growth of the femur. The boy remains quite well up to the present time.

CASE V. Abscess in the Lower End of the Tibia.—On February 28th, 1882, Arthur F., aged 10, an active and well grown boy, was brought to me on account of a circumscribed swelling of the left tibia, about one inch above the ankle-joint. It came on after jumping from a height, between two and three months before I saw him. The swelling was slowly but steadily increasing. Pain—which for a long time had not been great, and had only been felt at all after walking or standing a good deal—had latterly occurred in paroxysms severe enough to cause him to cry, and keep him awake at night. The attacks of pain sometimes continued many hours, and would then pass off for a week or more. There was tenderness on pressure over the whole of the inner surface of the swelling, but more acute at one spot than elsewhere. I recommended the use of the trephine at the most tender point, and, on March 7th, I removed an egg-spoonful of cheesy-looking semifluid pus from the interior of the lower part of the shaft. After the operation there was no return of the old pain. Within three weeks, he was well enough to return home; and I saw him, perfectly recovered, on July 13th.

CASE VI. *Central Necrosis of Astragalus*.—Frances S., aged 12, a delicate looking girl, was admitted on December 18th, 1881. Twelve months before admission, swelling appeared on the outer side of the ankle. Pain, most severe at night, preceded the swelling by some months. Gradually the whole ankle-joint became soft and swollen, like an ordinary white swelling of the ankle. Tenderness on pressure was most marked over the lower end of the fibula. A plaster-of-Paris splint was worn till March 21st, 1882, when she returned to the hospital, feeling no better. In less than a month after removing the plaster-of-Paris, and whilst the limb was still kept fixed, the ankle-joint showed undoubted signs of suppuration; the temperature rose, and rigors set in. On April 17th, an incision was therefore made in front of the inner, and another behind and below the outer, malleolus. On introducing the finger into the outer wound, I felt a small movable fragment of rough bone close to the articular facet for the outer malleolus. This was lodged in a cavity in the astragalus which was large enough, after the removal of the fragment, to receive the tip of the finger, and was limited by perfectly smooth and uniformly hard walls. The joint was washed out with a solution of tincture of iodine, the wounds covered with terebene and oil on lint, and the limb immovably fixed on a splint. Subsequently, the terebene was changed for iodoform, which was dusted over the weak exuberant granulations which had formed. The limb was still kept immovably fixed. No pain has been suffered since the operation; the joint has resumed almost its natural shape, and the wounds are all but cicatrised. I look forward to the patient recovering with a slightly movable joint.

REMARKS.—The operation which was performed in these cases was not, strictly speaking, trephining. In two of them, after dividing the periosteum by a linear incision, and peeling it off for a certain distance, pus was seen to ooze up through a small opening in the bone; and the abscess-cavity was opened up by applying the gouge to this spot.

In three other cases, after dividing and peeling off the periosteum in the same way, a drill was first introduced, and then the drill-hole was enlarged with the gouge. It is not always sufficient to use a drill under the impression that, if a cavity be reached, pus will escape from it along the side of the drill, or through the hole made by it, after its removal; for, as Case i shows, a little pus with a fragment of necrosed bone may occupy a cavity, but not declare itself by welling up; or the pus may be only semifluid, and too thick to flow, as in Case v. Under either of these conditions, the use of the gouge is needed to expose the abscess.

After emptying it of its contents, the walls of the cavity were in each case well scraped, or rubbed with dry lint, or a fragment of sponge; it was then washed out with iodine solution; and absorbent cotton-wool, or lint soaked in terebene and oil (1 part to 6), was introduced.

In all the cases the limb was immovably fixed in splints; and the subsequent treatment consisted in irrigating the cavity with iodine solution (tincture of iodine, four drachms to the pint of warm water) daily, or every second or third day, according to the amount of discharge; and the application of the terebene and oil on lint.

The situation of the abscess in Case i was on the epiphysal portion of the humerus, though all the epiphyses had years before become commingled with the rest of the bone. In the next four cases, one or the other extremity of the diaphysis of a long bone was the seat of disease, though in only one of them was the neighbouring epiphysis commingled with the shaft. In Case vi, the abscess-cavity was in an irregular, not a long bone. Though this is unusual, it is by no means unique. I have seen the os calcis similarly affected; Mr. Annandale has reported a case in which the lower jaw was the seat of a chronic circumscribed abscess; and most surgeons have seen the mastoid bone similarly affected from extension of disease from the middle or external ear.

In the case in which the epiphysal end of the humerus was affected, the elbow had become contracted, and the bone between the abscess and the articulating surface was softening down. In all probability, the elbow joint itself would soon have been disorganised. In three cases in which the ends of the diaphyses were affected, the joints were not involved; but in two of them (Cases iii and iv) the abscesses, after remaining chronic for some months, took on a more acute form, and led to inflammation of the surrounding soft tissues. In Case iv it produced a suppurative inflammation of the soft parts, which was ultimately cured by the use of the trephine, and the removal of the bone.

It is interesting to note that in these cases (Cases iii and iv) little or no pain was experienced, the soft parts being affected. This was probably owing to the fact that, in the course of the disease, the soft parts were not inflamed, and the pus which had

for a time limited the abscess. These products, by filling the natural spaces of bone, cause considerable intra-osseous pressure, and excite the severe, dull, and continuous pain which is an usual symptom of chronic abscess in bone.

In Case vi, in which the astragalus was the seat of the disease, the ankle-joint became early involved, and thus in great part, if not entirely, the symptoms of circumscribed bone-abscess, or central necrosis, were marked; at any rate, the cause of the suppuration of the ankle-joint was not suspected until actually ascertained. It no doubt was an exceptional case, for the great majority of chronic bone-abscesses are in the long bones. But even in them more is seen, in hospital practice, of cases where the abscess has been overlooked or neglected, and has gone on to extensive disorganisation of the bone which it involves, or of the joint in nearest proximity to it, than of cases in which the abscess, still circumscribed within narrow limits, is the only cause of suffering.

To avoid the very serious sequelæ of this affection, as well as to give relief to the distressing pain which it occasions, the diagnosis of bone-abscess and central necrosis is a matter of great importance. I make no distinction between the cases in which pus alone, and pus with a small sequestrum, is contained in the cavity, because there is an identity in the processes resulting in the formation of such sequestra, and in those producing small sloughs of connective tissue in the acute circumscribed inflammations of soft parts.

The diagnosis, it must be confessed, is often very difficult: chronic periostitis, chronic osteitis, and cysts and solid tumours of bone, need to be distinguished from abscess in bone. Periosteal thickenings more commonly affect the middle parts of the shafts of long bones, and are generally amenable to local medicinal treatment; whereas chronic abscess in bone generally attacks the ends of the diaphyses or the epiphyses, and is not in the least benefited by remedies.

Cysts in bone will be rightly treated by being laid open in the same way as a chronic abscess; and chronic osteitis, of the form which gives rise to severe continuous or neuralgic pain (the *ostéite à forme névralgique* of the French), will be relieved or cured by the use of the trephine; whilst the solid tumours require amputation or excision.

Thus, though an accurate diagnosis is admittedly difficult, if not impossible, in some cases, the possibility of falling into error, in spite of careful deliberation, should not discourage us from making an exploratory operation in doubtful cases of disease of bone.

Indeed, I would venture to say that, if we made it a rule to trephine or drill in all cases of chronic enlargement of bone attended with continuous or paroxysmal pain, and which rest and remedies have failed to cure, we should have the satisfaction of saving life itself in some instances, and of restoring to ease and usefulness the limb in very many others.

ON BORO-GLYCERIDE IN OPERATIVE SURGERY.

By RICHARD BARWELL, F.R.C.S.,

Senior Surgeon, Charing Cross Hospital.

Presented to the Section of Surgery, at the Annual Meeting of the British Medical Association in Worcester, August 1882.

THERE can be no doubt that the dressing of operation-wounds, by some material, and in some method, that shall prevent fermentation or putrefaction of their secretion, greatly promotes their safety, and is almost a prophylactic against those secondary constitutional effects which we know by the names pyæmia, septicæmia, etc. But there is great doubt as to whether the particular method introduced by Mr. Lister is the best means of obtaining the object in view. It certainly is a very inconvenient one; and, although in hospital practice we may easily, and in the practice of a town, where distances are small, may with some difficulty provide or transport all the cumbersome paraphernalia required, the method can hardly be carried out in the rural practice of a wide district, especially if operation be needed on a sudden emergency. In military surgery, during war time, it is simply an impossibility.

Time will not allow me to discuss here the probable uselessness of the spray directed upon the wound. Certain it is that the pulverised stream and the eddies it produces cause more atmospheric dust to fall on the bare surface than would otherwise be the case. If we give full credence to the germ-theory, and believe that germination of certain parts of this dust is the direct cause of putrefaction, it must, nevertheless, be acknowledged that, however rapid the reproduction may be, it yet occupies an appreciable time. Therefore if, no spray being used, the wound is immediately washed with the germicide, whatever it may

be, we can quite as effectually destroy those micrococci that may have been deposited as we can do while yet they are floating in the air.

But carbolic acid is a topical and general poison.* The local irritation is such that the wound has to be guaranteed against its continued contact by a material termed protective; and even then, pretty severe irritation, causing excessive wound-secretion, is the rule rather than the exception; and, when the cancellous bone-structure of young subjects is laid bare, as in excisions, a local osteomyelitis is very apt to be produced.

The absorption of carbolic acid by the wound has been deadly,† but has more frequently been not quite fatal. In the early part of this year (February), I removed a fibroma from a lady's back, under the spray, and used the usual mode of carbolic acid dressing. That night I was sent for, and found my patient apparently sinking. A little urine had been passed about an hour before; it was quite inky. There was frequent vomiting, and nothing could be retained on the stomach. Pulse 48; breathing 31, very shallow; pupils rather contracted, scarcely responding to light. That this was not the vomiting of ether was shown by the fact that, when I visited her about four in the afternoon, she had only vomited once, and had taken some food without difficulty. The operation was at nine in the morning, and the distressing symptoms came on almost exactly twelve hours after. Besides using the spray, the wound had been filled with a 3 per cent. solution of carbolic acid; but, as I had placed a good pad over it, all must I think have been squeezed out.

Impressed by these considerations, but chiefly by the records of carbolic poisoning, I have for some time past been endeavouring to find a reliable safe antiseptic. Thymol, in my hands, entirely failed, nor has the eucalyptus answered my expectations. Boracic acid seemed to me the most reliable substance. I found it, however, very unmanageable, and was actually engaged in trying to overcome certain difficulties, when, on April 1st, 1882, Professor Barff's lecture on the preservative qualities of boro-glyceride appeared. Mr. Barff courteously at once complied with my request for a sample; and, after a few experiments, which I may be excused for omitting, I began its use on the human subject. I have brought some of this substance with me; it is, as will be seen, a soft solid, softer now than in colder weather; by placing the bottle for a while in very hot water, the material comes to be of the consistence of treacle. I do not conceive that the solution of boracic acid in glycerine—for this is merely a saturated solution in the hot fluid—confers upon the former any new quality; it merely renders it more manageable, especially more soluble in water, and more miscible with other substances.

The mode in which I generally use it is as follows. For economy's sake, I generally cleanse my hands and instruments, also the patient's skin, with carbolic acid. I then operate in the open, without any spray or further precaution. The operation completed, the wound is thoroughly mopped and sponged with a five per cent. solution of boro-glyceride in water (that is, one ounce to a pint); or, in case of a cup-shaped wound, I fill it with the solution. After this, the wound is stitched and covered with eight or ten layers of lint, and, where necessary, as in amputations, also with a light bandage similarly soaked. The whole is then enveloped in thin mackintosh; if no oozing take place, there is no need for dressing again for three or four days, sometimes for more. When the dressing is removed, all parts of the wound where the lips have been adjusted are found united or uniting, according to the time elapsed, the surrounding skin being entirely free from redness or any sign of irritation; it is, on the contrary, soft and white like that of a baby. One point in the dressing which I have left till now is the drainage, whether it be desirable or not. My cases, of which I will immediately give a summary, have not enabled me to decide that point with absolute certainty. In two cases in which I omitted that appliance, one had for two days a temperature of 99.5° to 99.8°; one for three days a temperature of 100.2° to 101.0°, a mere traumatic, not a septic, temperature, since it began at once, and ended in from forty-eight to seventy-two hours. Others, notably a breast case, with glands extracted from the axilla, making a deep hollow, had no fever at all.

I will now give a table of the cases which I have treated with boro-glyceride after the manner described, omitting three or four minor operations, which all healed with equally remarkable celerity. It is only necessary to premise that no condition can better test the value of an antiseptic than a large deep abscess; the first three cases are of that description.

No.	Description of Case.	Date of Operation.	Date of Healing.	No. of Days.	Drain-tube.	Highest Temperature.	
1	Large abscess over lower ribs (two bare and rough)	April 21	May 3	12 days	—	—	Temperature on one day, 102°, from constipation; fell to normal after aperient acted.
2	Retroperitoneal abscess	May 4	May 8	4 days, all but drain	Yes	102°	All except opening for drainage healed in five days. Abscess closed in fifteen days. Temperature traumatic.
3	Retroperitoneal abscess	July 6	—	—	—	—	All parts except drainage-opening healed in seven days, but operation inadequate; must remove kidney.
4	Removal of large fatty tumour from side	July 13	July 18	5 days	Yes	98.8°	Drain removed on the second day.
5	Separation of penis from scrotum	Aug. 1	Aug. 7	6 days	No	98.6°	Transverse incision, length of penis, sewn longitudinally.
6	Deligation of femoral artery	May 4	May 8	5 days	—	100.6°	The temperature was normal, save one morning for a few hours; it subsided on action of enema.
7	Amputation of both mammae	May 11	May 20	9 days	Yes, no	99.2°	Wound from one axilla to the other, overlapping, not meeting, at sternum; glands from axilla. In one, drainage-tube; in other, not.
8	Amputation of left mamma	July 27	—	—	—	—	The skin in centre of wound could not be kept together; all else well united on fifth day.
9	Amputation of left mamma	Aug. 2	Aug. 7	5 days	No	99.1°	Patient had no rise of temperature till third day, then from constipation. Glands removed from axilla.
10	Amputation above ankle-joint	July 13	July 21	—	—	—	Except one part where wound granulated. Boy aged 10, exceedingly strumous. Temperature declined after operation till tenth day, hæmaturia and pyrexia recurring twice.
11	Amputation in lower third thigh	June 1	July 10	9 days	No	103°	Temperature rose to 103° on night of operation, then fell, and on third morning was normal—different diluent.
12	Amputation in lower third thigh	June 27	July 3	6th day, save one spot	—	98.6°	One of the stitches had been insecurely twisted by my dresser; all the rest were healed on sixth day, the badly secured part five days afterwards.

Now these cases, though not very many in number, show clearly that boro-glyceride is not only a perfectly reliable antiseptic, but that it promotes rapid healing of wounds.

Of three amputations of the mamma, one cannot heal quickly, because I was obliged in one part to leave a rather wide gap, but even in these, wherever the lips were in contact, union took place in five days. Of the other two, one was double, and the wound was enormous, at one place its edges would not be quite adapted, yet I sent the patient back to Mr. Hughes, her attendant at Deal, on the eleventh day; all healed save a small granulating spot. Of the third case, to which I was called by Dr. Farr, of Kensington, I can only say, that the rapidity of healing was almost marvellous. She had no pain nor fever, and sat up for half an hour on the third day.

In one amputation of the thigh, I used as my diluent vaseline; it did not do as well as an aqueous solution. The other amputation of thigh was healed in six days, save one spot where a suture had been insufficiently secured, and the skin therefore allowed to gape. Had it not been for this piece of carelessness, I would have boasted of getting a thigh amputation well within a week; as it is, the man got up on the seventh day. The other amputation healed very well, although such complications as hæmaturia, probably indicating tuberculosis of the kidneys, will keep the lad long under care. The other cases need no comment.

I would point to the fact that the ease and celerity of dressing, and the absence of a spray wetting everything within its radius, are a great gain to the patient as to the surgeon. The simplicity of arrangement, the freedom from cumbersome apparatus, render this method particularly well adapted for military surgery, and for practice in rural districts,

* Certain experiments of Buchner and others go to show that carbolic acid does not destroy the life of bacilli; it merely renders the wound surface an unfavourable nidus for their reproduction.

† See Case by Mr. Gould, *Clinical Society's Transactions*, vol. xiii, p. 201.

and I firmly believe it will be found to conduce quite as much as any other method to the absence of blood-poisoning, and more than any other to rapidity of convalescence.

Let me also call attention to the use of this material for injection into the bladder in cystitis. When the mucus and urine are inclined to decompose and to become ammoniacal, this compound acts a charm. I have found it invaluable if any irritation arise after litholapaxy.

ON HYSTERECTOMY.

Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By G. GRANVILLE BANTOCK, M.D.,
Surgeon to the Samaritan Hospital, etc.

THE subject to which I wish to direct your attention to-day is that of Hysterectomy. What I mean by this term is the removal by abdominal section of a fibroid or fibrocystic tumour of the uterus, whether involving a part or the whole of the body of the uterus, or not. It is scarcely necessary, on an occasion like this, that I should defend the nomenclature at any length. I would merely point out that the term hysterectomy, used by some authors, has already been appropriated to Simpson's operation of division of the cervix; that Freund's operation describes the complete extirpation of the uterus, and Porro's the removal of the body of a pregnant uterus, together with both ovaries. Now, the operation of extirpation of a fibroid or fibrocystic tumour varies so much in its details, that it is impossible to find a name, based on anatomical considerations, that will include every case; yet the term hysterectomy appears to me to meet the essentials of the case, and I accept it as sufficiently comprehensive and descriptive. Besides, the best names are not those which most closely and correctly describe any operation, as in two of the instances just mentioned, and in others that will occur to you.

Forty years ago, this operation was unknown. It is true, however, that the abdomen had been opened more than once, viz., even as early as 1825 and 1826; but the recognition of the uterine nature of the disease deterred the operators from proceeding further. It was reserved for Dr. Clay of Manchester—whose claims as the pioneer of ovariectomy in this country have, by the way, not been sufficiently recognised in some quarters—to lead the way in this matter also, by his operation in August 1843. For several years, the operations were "few and far between", and invariably with a fatal result; and it was ten years ere a success was scored. America claims this in the case of Burnham, and, with those of Kimball and Boyd, has the credit of the first three. Nearly twenty years elapsed ere a successful case occurred in this country; and this, again, falls to the credit of Dr. Clay. Here, however, it is right that I should mention that, in 1851, Mr. Baker Brown, after removing a multilocular tumour of the right ovary, successfully cut away a small pediculated fibroid, the size of a hen's egg. For the first twenty years, the operations averaged about one a year; and it is a curious fact that these operations, with one exception, were the result of an error of diagnosis: the operator, in each case, believing he had to deal with an ovarian tumour. According to Péan, the history of this operation comprehends three distinct periods. "In the first, which extends to 1843, surgeons meeting with fibroid or fibrocystic tumours of the uterus instead of ovarian cysts recoiled before the consequences of amputation of the uterus, and did not complete the operation." In the second, which he calls the period of attempts and gropings, and which comes down to 1862, "surgeons, emboldened by a more extended practice of ovariectomy, and encouraged by the success obtained in cases complicated with a fibroid, were at first unable to overcome, took a sanguine view, and no longer hesitated to cut away the body of the uterus, whatever an error of diagnosis led them in presence of a tumour, in connection with the organ. They were, as it were, enabled to progress in the operation, everything having been done for an ordinary ovariotomy. In the third, the operation entered a new phase. In the month of April 1863, Kimball, of Boston, removed a pediculated fibroid of the uterus, made an abdominal incision, and, by the use of the ligature, detached not only the tumour, but the body of the uterus, and the abdominal amputation of the uterus. He was followed by several others, and the operation was not only performed, but was successful; for, whilst Péan

less correct diagnosis, others claim this honour for Kimball. Kimball's case occurred in 1853, and therefore ten years anterior to Kœberlé's.

However this may be, it is a fact that the results of the operation for well nigh thirty years were a fearful mortality, and it was not till ten or twelve years ago that this operation can be said to have been placed on a footing at all creditable to surgery; and we must assign the honour of this to the distinguished French surgeon, Péan. From September 1869 to February 1872, Péan operated nine times, with the very gratifying result of seven recoveries. I know not what Péan's statistics are now, but up to April 1875 they presented a marked contrast to anything done in this country on a large scale to the same date, viz., a mortality of only 29.1 per cent., out of 24 cases—a result which I believe was due to his mode of performing the operation—specifically his treatment of the pedicle. Still the general mortality was very great. In 1875, Dr. Samuel Pozzi collected a series of 119 cases, with a mortality of 64.7 per cent. In 1879, Dr. Letouzey published a further series of 84 cases, with a mortality of 42.8 per cent. And even so recently as two years ago, viz., at the Cambridge meeting of this Association, Mr. Spencer Wells stated that he had completed the operation in 34 out of 60 cases, in which he had opened the abdomen to find a fibroid or fibrocystic tumour of the uterus, and of these 18 died, and only 16 recovered, or a mortality of 52.9 per cent. But there were bright spots on this hitherto dark picture, for Keith was, in his quiet way, operating with his usual success; with such success that up the present time he has lost only one out of 12 cases, and in 1879 Dr. Thomas Savage (of Birmingham), published a series of 6 cases with 5 recoveries; a very encouraging result, though somewhat discounted by a reference, in the same paper, to two cases previously done, with a fatal result.

This is not the occasion, nor will time permit me, to enter on the history, symptoms, diagnosis, progress, and termination of fibroid or fibrocystic tumours of the uterus, or to enter on a comparison of the relative merits of hysterectomy and oöphorectomy so dear to the heart of Mr. Lawson Tait. Perhaps, I ought to apologise to Mr. Tait for associating his name with the term oöphorectomy. I use it for brevity's sake, and must be understood as implying what he prefers to call the "Removal of the Uterine Appendages." Suffice it to say that, while on the one hand, it is allowed that fibroid tumours do not often kill, that they have not that fatal tendency which is so characteristic of the ovarian, on the other hand it is now admitted that there are certain cases, and in not a small proportion, in which this operation affords the only hope of relief from very distressing symptoms, or even of averting death. Such are the cases of true fibro-cyst, of cystiform degeneration of a hard fibroid, of cases in which pain is the predominant symptom, and a few in which hæmorrhage threatens the life of the patient, or this combined with pressure on important viscera. It must be obvious that in most of these cases the removal of the uterine appendages can be of no service.

If any one were asked to name the most characteristic symptom of uterine fibroid, he would probably answer "hæmorrhage." But it is a remarkable fact that in only 4 of the 21 cases in which I have operated was this a prominent symptom at the time of operation. In one case, of which I show you a photograph, menorrhagia had been at one time so severe as to produce very marked anemia, but the patient had recovered from this condition, and the operation was undertaken for the relief of pain. The explanation of this hæmorrhage will be found in the presence of a large mucous polypus, and the pain was probably due to the intestinal adhesions and pressure. In one case the pressure was such as to produce great œdema of the lower extremities, and albuminuria to the extent of one-third, which, with profound anemia, presented no very inviting prospect to the operator.

One does not usually associate the idea of adhesions with fibroid tumour; yet there were adhesions in no fewer than 9 of my 21 cases. In one, the adhesions were universal; viz., to the parietes, omentum, and intestines, and the intestines were adherent to one another, and to the parietes; in three there were adhesions of the omentum only, in two the adhesions were intestinal only, in two pelvic only, and in one they were omental and intestinal.

Every one who knows anything of fibroid tumours, will agree with me that it is not every case that is suitable for operation—assuming that the symptoms are serious—and chiefly because of the relations of the growth to the pelvic contents. I may also say that I have myself refused to operate in several cases that seemed most favourable for operation, because the symptoms were not such as to justify me in bringing such a proceeding. A tumour which grows out laterally from the uterus, and carries with it the broad ligament, offers insurmountable difficulties in the control of hæmorrhage; or when the disease encroaches on, or actually involves, the vaginal portion of the cervix. Such cases, if attended with severe hæmorrhage, must be left to the doubtful benefit of oöphorectomy. Hence there must of necessity be a certain

amount of selection, not all in favour of the operator. Yet, with the method I now follow, I am able to do cases that I should not have dreamed of touching two years ago. It is a simple matter when one has to deal with a small pedicle springing from the fundus or free surface of the uterus, as in a case reported by Dr. Godson before the Obstetrical Society of London for Mr. Wells, in which a small tumour was torn away from the back of the uterus without any hæmorrhage resulting; or as in some cases more recently reported by Mr. Wells, in which the uterine body, though more or less involved, was quite healthy, and of normal size. But it is a very different matter when the pedicle is as thick as your wrist, or thicker, or where there is fibroid degeneration of the uterine body, or the tumour involves the whole of the uterine body, and the base of the tumour measures twelve inches on the cut surface, as in my twentieth case, of which I here show you a drawing. I well remember the first case in which I opened the abdomen, many years ago, to find that I had mistaken a soft fibroid of the uterus for an ovarian tumour, only to close it again on recognising the uterine origin of the tumour, and its broad base. I should not now leave such a case unfinished; yet, two years ago, I should not have dared to proceed with many of the cases in the table.

I have quoted Péan to the effect that up to a certain period the operation was the result of an error of diagnosis. It is only very recently that this reproach no longer applied so widely. In my second case, the operation was undertaken for a supposed ovarian tumour; but this was very excusable, seeing that the patient had been already tapped, and that there was a large cyst with very thin walls anteriorly, with all the solid matter beyond reach, and a good pedicle from the fundus of the uterus. In another, the removal of the uterine body with some small fibroids was a necessity of the case, and due to the injury inflicted on the uterus in the separation of one of the ovarian tumours. In a third case, the intention was to perform oöphorectomy for the arrest of hæmorrhage, as the tumour encroached so much on the cervix that I dared not contemplate hysterectomy primarily; but insuperable difficulties with the left ovary compelled me to have recourse to supravaginal amputation. In all the other cases, the operation was undertaken with the specific intention of removing the tumour. Yet my twentieth case is a striking instance of error of diagnosis, for it was certified by a very distinguished surgeon as a multilocular ovarian tumour. In this instance, I suppose, the elasticity was mistaken, as in many instances it has been, for fluctuation.

I now come to the operation itself. It is not necessary that I should dwell on those steps of the operation that are common to it and ovariotomy. On these I need only remark that the incision must be in proportion to the size and nature of the tumour, an incision of four or five inches being made, first to ascertain the possibility of removing the tumour, and then enlarged as required. With regard to ovariotomy, tables have been constructed with the view of showing that a long incision is more dangerous than a short one; but this is only a curious example of reasoning from false premises, the results having been attributed to the length of the incision rather than to the gravity of the case. In my experience, an incision of twelve inches has healed just as well as one of six. Adhesions must be separated and bleeding points secured, as in ovariotomy.

But when we come to the treatment of the pedicle, or of what stands for it, and which is often the uterine body itself, we come to the crucial point.

How, then, is the pedicle to be treated? When the pedicle is narrow, and springs from the fundus or free surface of the uterus, I believe it is immaterial whether it be treated by the intraperitoneal method, *i.e.*, the ligature, or the extraperitoneal. If the ligature be used, care must be taken to ensure complete arrest of hæmorrhage. This is not always an easy matter, for such is the peculiar nature of the uterine tissues that they give way before the force of the ligature to such an extent, that in a few hours fatal bleeding may ensue. An additional precaution is at our command by dividing the pedicle in such a way as to get two flaps, which are brought together by interrupted or continuous suture. Mr. Wells, while strongly advocating the ligature in all cases, attributes to the bringing together of the peritoneal edges an importance which it does not possess; for he thinks its advantage lies in the covering over of the raw surface and shutting it out of the peritoneal cavity. He appears to me to miss the point of his own practice, which is rather the additional security against hæmorrhage. Who ever heard of anyone shutting out the raw surface of an ovarian pedicle? And yet, in thick pedicles, there is an extensive raw surface left. It would undoubtedly be an advantage if we could always treat the pedicle in hysterectomy by the intraperitoneal method, as it would very considerably shorten the period of convalescence.

When, on the other hand, the pedicle is very thick and vascular, no method of applying the ligature will suffice to secure the patient against

hæmorrhage. Now, it must not be supposed that I have a prejudice against the ligature as such, seeing that I was the first in this country to revive and urge its systematic use in the treatment of the ovarian pedicle, and that I have adhered to it until I have the satisfaction of seeing its almost universal adoption. But, having treated my first case of hysterectomy in the very way since advocated by Mr. Wells, and with a fatal result in the way just indicated; having, moreover, seen hæmorrhage from stumps kept outside, that had been compressed by means of the *serre-nœud* to an extent far exceeding the power of any man's pair of hands; bearing in mind that Hegar has returned to the extraperitoneal method with the most satisfactory result; that Keith has, up to the present time, lost only one out of twelve thus treated; and that those who have adopted this method have had the best results, I should be ignoring the lessons of experience if, in deference to high authority, I continued to rely on the ligature and the intraperitoneal method. That the practice suggested by Olshausen of applying an elastic ligature, and leaving it within the peritoneum to become encapsuled, will ever become at all general, I do not for a moment believe. Leaving the ordinary ligature to be absorbed, has been called an unsurgical proceeding, but surely this is the most unsurgical of all.

Péan employs Cintrat's instrument, which has this disadvantage: that the loop is twisted, and is not available for the arrest of hæmorrhage when the tissues have shrunk and the loop has become quite slack. This happened in the only case in which I used it, and I had not only to sear the surface several times with the actual cautery, but to untwist the wire and adapt it to Kœberlé's instrument.

Hegar prefers the elastic ligature with the extraperitoneal method; but, as the principle is the same, I shall not quarrel with him on that account.

For my part, I prefer Kœberlé's *serre-nœud*, which has this advantage: that the constricting force is entirely under command. It is also very easy to apply, and is thoroughly efficient. Now, I do not claim any originality in this beyond the fact that, in the chaotic state of the treatment of the pedicle in this country at the time when I began, I stumbled upon it in my groping after a more reliable method than I had yet seen or read of. I had not seen Péan's memoir until quite recently, and it was only by private information that I had, also recently, learned Keith's method and results; for, with that modesty and reticence which are so characteristic of him, he has continued to "hide his light under a bushel".

In applying this instrument in a case of supravaginal hysterectomy, it is desirable to include the ovaries. Sometimes, however, this cannot be done, as the ovarian ligaments are too short, and then the ovaries must be ligatured separately. I have had to do this in two cases. As an instance of what can be done, I may again mention that, in my twentieth case, of which I have shown you a drawing, the cut surface from one ovary to the other measured twelve inches. Yet all this was readily brought together. After the loop is thoroughly tightened, the stump is transfixed close to the wire with two specially constructed pins with guarded points either before or after the tumour is cut away. In closing the wound, I take care to bring the peritoneum together as accurately as possible around the stump, and I have never seen any reason to regret the omission of separate stitches to keep the peritoneal surfaces together, considered so important by Hegar. In some cases, the drag on the stump is so great as to depress the surface below the level of the pubes, and it is remarkable how little trouble this occasions. It might be thought that disturbance of the bladder would be inevitable, but the parts seem able to accommodate themselves in a wonderful way, and it is not at all unusual to find the bladder contain at one time as much as eight or ten ounces of urine within the first twenty-four hours.

By the time the dressings are applied, it will be well to give an extra turn or so to the screw; and the facility with which this can be done will make more plain the source of danger when a thick pedicle is entrusted to the ligature. I think it unnecessary, if not injurious, to sear the surface of the stump with the actual cautery or to apply perchloride of iron. The stump, surrounded with dry absorbent gauze, dries up better without either of these.

The stump will be dressed as often as necessary. Should there be any discharge—and this will be in proportion to the drag on the pedicle and the amount of raw surface in connection with the dead portion of the stump—it may be kept free from putrefaction by using a mixture of glycerine and rectified spirit in equal parts, either with or without 4 or 5 per cent. of eucalyptol. In from seven to fourteen days, according to the nature of the pedicle, the *serre-nœud* may be removed, and in a day or two the pins, one at a time, and the stump trimmed. There will then be left a funnel-shaped depression, corresponding in breadth and depth to the size of the stump, the amount of dragging, and the thick-

Cases of Hysterectomy in which the Pedicle was secured by Koerber's Serre-Naud.

No.	Medical Attendant.	Age.	Condition.	Date.	Disease.	Operation.	Weight of Tumour.	Duration of Operation.	Result.	Remarks.
1	London Hospital	29	S	Feb. 1, 1882	Fibroid, cystiform degeneration	Amputation of Tumour only	11 9	105	R	Omental and Intestinal adhesions.
2	Dr. Granville Bantock	40	S	Jan. 1, 1882	Hard Fibroid	Amputation of Tumour—both Ovaries	0 9	60	R	
3	Dr. Archer, Wandsworth	M	S	May 1, 1882	Fibroid, cystiform degeneration	Do. Do.	11 11	60	R	(Tumour enveloped in Omentum—abortion 6 weeks previously; 3-4 months.
4	Samaritan Hospital	40	S	June 20, 1882	Multiple Fibroids	Supravaginal Hysterectomy—both Ovaries	11 11	60	R	Omental adhesions.
5	Dr. Rout	28	S	Aug. 4, 1882	Double Ovarian, Uterine Fibroids	Supravaginal Hysterectomy and double Ovariectomy	132 0	100	R	Right Ovarian Tumour universally adherent; Uterus torn.
6	Dr. Matheson	40	S	Nov. 11, 1882	Multiple Fibroids	Supravaginal Hysterectomy—both Ovaries	132 0	100	R	Ovaries ligatured separately.
7	Dr. Debenham	40	M	Feb. 1, 1882	Do.	Do. do.	132 0	100	R	
8	Mr. Francis, Bourton	40	S	...	Fibroid, cystiform degeneration	Do. do.	132 0	100	R	Severe Menorrhagia.
9	Dr. Campbell, Radcliffe-on-Trent	40	S	...	Do. Do.	Do. do.	4 8	85	R	Adhesions—Parietal, Omental, Intestinal.
10	Dr. Herbert Snow	40	S	Apr. 1, 1882	Do. Do.	Do. do.	4 8	85	R	Adhesions—Intestinal.
11	Mr. Robinson, Bedford	40	S	...	Multiple Fibroids	Do. do.	132 0	100	R	Pelvic adhesion; Secondary Hæmorrhage on 18th day.
12	St. Thomas's Hospital	40	M	June 1, 1882	Do.	Do. do.	132 0	100	R	Acute localised Enteritis.
13	Samaritan Hospital (Out-Patient)	40	S	...	Hard Fibroid	Do. do.	132 0	100	R	Very extensive Omental adhesions.
14	Dr. Bannister	40	S	July 5, 1882	Do.	Do. do.	132 0	100	R	Profound Anæmia—Albuminuria.
15	Dr. Matheson	40	S	...	Intramural Fibroid	Do. do.	132 0	100	R	Severe Menorrhagia—Anæmia.

Other Cases of Hysterectomy.

No.	Medical Attendant.	Age.	Condition.	Date.	Disease.	Operation.	Pedicle.	Weight of Tumour.	Duration of Operation.	Result.	Remarks.
1	Dr. Tarle	40	S	Nov. 1, 1882	Fibroid, cystiform degeneration	Supravaginal Hysterectomy	Ligatures	11 9	105	D	Slight oozing from stump—Septicæmia.
2	Dr. Wynn Williams	32	S	June 30, 1882	Fibroids	Supravaginal Hysterectomy	Ligatures & Serre-Naud on Uterus	3 8	90	D	Hæmorrhage from broad ligament; drainage-tube—failure.
3	Mr. Mapleson	40	S	Apr. 14, 1882	Fibroid, cystiform degeneration	Amputation at the Fundus	Ligatures	17 0	100	D	Severe Intestinal adhesions—
4	Samaritan Hospital (Out-Patient)	40	M	...	Hard Fibroid	Amputation—one Ovary removed	Ligatures	17 0	100	D	Hæmorrhage from stump; small pelvic adhesions.
5	St. Northern Hospital	40	M	Aug. 1, 1882	Two Fibro-cystic	One removed, other drained	Ligatures	17 0	100	D	
6	Dr. Granville Bantock	40	M	May 13, 1882	Soft Fibroid	Partial Enucleation and Supravaginal Hysterectomy	Serre-Naud on Uterus	56	100	A	(48 hours); con-

ness of the parietes. I have seen it in a stout subject two inches deep. This is dressed with the glycerine and spirit lotion, and after the separation of all dead tissue, the hole closes with scarcely a drop of pus. Care must be taken to make it granulate up from the bottom, so as to avoid a troublesome sinus.

I should not omit to mention a remarkable occurrence in my sixteenth case, No. 11 of the first table. On the eighteenth day, when all dead tissue had come away, and there was a clean, healthy, granulating surface of small extent, alarming hæmorrhage took place from the stump and through the vagina. The time corresponded with the next menstrual period.

While, then, I admit that in the case of a small pedicle springing from the fundus or free surface of the uterus, the extra, or intraperitoneal method may, either of them, be employed according to the predilection of the operator, or even when the uterine body is somewhat involved, as in some cases reported last year by Mr. Wells, yet it is a very different thing where the relations of the tumour or tumours to the uterine body are such as to involve supra-vaginal amputation of that organ in order to remove the whole of the disease. While, also, I am aware of the strong advocacy of the intraperitoneal method by Wells, Schroeder, and Olshausen, the latter of whom has recently reported twelve cases, with eight recoveries and four deaths, or mortality of 33 per cent., with the aid of all the supposed advantages of "Listerism," yet, in such cases as these, I have no hesitation in affirming that the best results will be obtained by the extraperitoneal method. Such was the method adopted and consistently followed up by Péan, such also the method returned to by Hegar with the result that of twelve consecutive

cases only one died; and such also the method adopted by Keith, as already stated. In all these the principle is the same, though the details vary. And when, finally, I tell you, what a glance at the tables will show you, that of fifteen cases treated exclusively in this way only one died, while of six treated otherwise, and chiefly by the ligature, five died, I think I have strong grounds for the confidence with which I recommend this method, believing, as I do, that if a practice of which the principle has the sanction and recommendation of such men as Péan, Hegar, and Keith be carefully and intelligently followed, we, who are in the habit of operating, paying no heed to or even smiling at the fulminations of some men high in authority, shall yet see hysterectomy attain to a position as creditable to surgery, and as beneficial to suffering humanity, as that now held by its foster-mother, ovariectomy.

Dr. DEWAR inquired the reason for operating in Dr. Bantock's cases, as he understood from the paper that there had been severe hæmorrhage in four cases only out of the twenty-one in which the operation had been performed.

Dr. EDIS (London) thought that, with such results as those of Dr. Bantock before us, it was painful our duty, when patients with fibroid disease displayed very urgent symptoms, to set before them the chances of relief which surgery offered. He knew a time approaching when a medical man would almost be regarded as guilty of homicide if he neglected, under such circumstances, to hand his patient over to someone who had made this operation his specialty.

Dr. JOHN WILLIAMS (London) said that he could not agree with the remarks that had fallen from Dr. Edis. There was a very large num-

ber of women, the subjects of fibroid disease of the uterus, who went about presenting no symptoms of any kind. There was another large number who presented only slight symptoms, and there were some who suffered severely. In many of them, the hæmorrhage could be controlled. In four only of Dr. Bantock's cases was hæmorrhage present. It was not stated why the operation was undertaken, but doubtless the reasons were sufficient. Out of the twenty-one cases, there were six deaths, representing a mortality of nearly 30 per cent. Dr. Williams thought that the cases which called for operation were not numerous. He had done it four times, with three recoveries. In the case which died, the fibroid weighed 28lbs; the broad ligaments were tied in sections, and the neck of the uterus secured with whipcord. Death was occasioned by hæmorrhage from the ovarian artery. He had not himself seen contraction of the uterine stump and loosening of the ligature.

Dr. ROUTH (London) was struck by the statement of the last speaker with reference to the slipping of the ligature. In his (Dr. Routh's) Lettsomian lectures, he had collected a large number of cases of removal of fibroids of the uterus, some of them being instances of mistaken diagnosis. In several of the fatal cases, the result was due to this slipping of the ligature, of the liability of which Dr. Bantock had spoken. When the pedicle had been transfixed, this had not occurred. Hence the practical advantage of first transfixing by needles. He thought Kœberlé's small *écraseur* was a most excellent instrument. If, as he had himself observed in Dr. Bantock's cases, the *écraseur* could be tightened fifteen minutes after the operation, it showed that simple ligature was insufficient. He considered it essential that transfixion should be employed, and that Kœberlé's instrument should also be used to constrict the tissues. Lastly, he could not suppose that in all his cases Dr. Bantock had operated without exercising judgment. If the mortality was great, it was because the cases sent to Dr. Bantock were such as were incurable by any other means. This must be the case whenever men become noted in connection with any special operation. That with such unpromising cases Dr. Bantock had been so successful was, he considered, matter for encouragement and congratulation.

Dr. WALLACE (Liverpool) remarked that in Liverpool he had a large field of observation, and saw a considerable number of fibro-cystic uterine tumours yearly. He had operated several times when driven to do so by the urgency of the symptoms, rendering the patient unable to perform her duties, or threatening her life. But he did so with reluctance, seeing that the whole tendency of the life history of these growths was to recovery, and that he had never seen a patient die from them. He mentioned a case in which he thought Dr. Bantock's method would not have answered. He removed the tumour, ligaturing the vessels as they were opened. A flap was reflected from the lower third of the tumour, which was enucleated, twisted, brought outside the parietal wound, and clamped. The *serre-nœud* would not have been applicable, and if it would, it must have been left in the peritoneal cavity.

Dr. BANTOCK, in reply, said that he considered that, even in the absence of profuse hæmorrhage, it was a surgeon's duty to give what relief was in his power in cases where the pain was so severe as to entirely incapacitate the patients. With regard to the liability of the uterine tissues to shrink, and the ligatures to become thereby loosened, he could assure Dr. Williams that a larger experience would convince him of the reality of the danger.

OBSTETRIC MEMORANDA.

PLACENTA PRÆVIA.

ON Sunday last, I was called to a labour—to all appearance normal. Examination *per vaginam* detected the placenta, extending for some distance across a semidilated os uteri on the anterior aspect, so that it must have been detached from the posterior part of the uterus; the bag of membranes bulged behind this during the pains. Having intentionally lacerated the placenta to some extent, with the result of but covering my finger with blood, I ruptured the membranes, when only a little blood escaped, or rather a flow of liquor amnii streaked with blood. As the head descended pretty quickly by acting on the uterus, and as no hæmorrhage of importance occurred in the intervals between the pains, I considered it safe to allow the labour to be terminated without aid, unless occasion should offer when the forceps could terminate it without delay. About three hours after I first saw the patient, and with no other aid save external manipulation, the mother, a primipara, gave birth to a strong female child. The placenta was soon expelled, but the uterus still felt like a large doughy mass; but soon after the expulsion of about a pint (not measured) of blood, firm contraction of the uterus resulted. The case has progressed favourably. The

placenta was healthy, and was lacerated over a surface of about two by three inches.

This is one of the many cases which militate against Simpson's theory of hæmorrhage in placenta prævia, and may also add some additional force to the objections against meddlesome midwifery.

JOHN REID, M.A., M.B., C.M., Rochdale.

PROLONGED USE OF CHLOROFORM IN INSTRUMENTAL LABOUR.

ON August 6th, 1878, I was sent for to a case of labour at full time, when I found the os dilating and vertex presenting; I also found antero-posterior deformity. The promontory of the sacrum projected a good deal forward, but the brim was not narrower than I have frequently delivered a living child through, at full time, with the long forceps. After some hours, I found the os fully dilated, labour-pains strong, and the head becoming impacted. I thereupon applied the long forceps, and endeavoured to extract under chloroform, but ineffectually. I then called in a neighbouring practitioner, who also thought he could deliver with the long forceps, but failed. I then performed craniotomy, using Simpson's perforator freely, and breaking up the cerebral substance, and afterwards using craniotomy-forceps, crotchet, etc., but all to no purpose. The base of the skull was so much ossified and so large, that we could not move it, though we applied the long forceps over it, and again endeavoured to extract, injecting tepid water, etc.

We then called in a third doctor, who also failed, after repeated trials. We finally arranged to perform Cæsarean section if another endeavour to deliver by the forceps failed. The patient was then fully anæsthetised, and held firmly by my two brethren and a nurse, while I again applied the forceps and made very forcible traction, when I was delighted to feel the head yield, and effect the delivery of a very large male child.

As soon as the chloroform sleep passed off, we gave a pill, with two grains of opium, and repeated it daily for a few days, syringing with a weak tepid antiseptic injection. The patient made an excellent recovery, without a single alarming symptom.

What I desire to point out in reference to this case is, that for over six hours (from 4 A.M. to 10.30 A.M.) the patient was almost continuously under the influence of chloroform; that she had no excessive *post partum* hæmorrhage, no vomiting, no nervous shock; and that her recovery was almost as rapid, and fully as perfect, as in the most favourable case of natural labour. These good results I attribute largely to the free and full and prolonged administration of chloroform. I fear that ether would have a greater tendency to favour *post partum* hæmorrhage, and induce vomiting. I have, however, never used ether during my obstetric operations, but chloroform I have repeatedly used in my midwifery practice, and sometimes in prolonged cases, and have never found the slightest ill results to follow its use.

I gave the details of this case to my friend Dr. L. H. Ormsby, and I was glad to see, by a letter he subsequently wrote on the subject in the JOURNAL, that he specially excepts obstetric practice when he contends for the superiority of ether over chloroform as an anæsthetic.

J. WYBRANTS OLPHERTS, L.M., L.R.C.P.E.,

Certifying Factory Surgeon for Lurgan, etc.

TROUBLESOME LABOURS.

PERHAPS the following four successive cases of midwifery may be of interest.

CASE I.—On July 1st, I was called in to attend a Mrs. P. in her first confinement. I found the patient reclining on the bed in great agony. The os uteri was fully dilated; and I was much puzzled at feeling, instead of a foetal head, a large, soft, fluctuating mass. Being anxious about the case, I sent for my partner (Mr. Orford of West Town), who, after making an examination, came to the conclusion that some portion of the child's back was presenting, and recommended turning. I therefore administered chloroform; and, after about one hour's manipulation, my partner succeeded in extracting, with some difficulty, a male child (dead), with a hydrocephalic head. In this case, the presentation was natural; but the state of the head caused the deception. The mother in this case made a rapid recovery.

CASE II.—On July 30th, I was sent for to attend a Mrs. B. in her second confinement (her first child having been born six years previously). The nature of the case necessitated the use of forceps; but, it was only after using considerable force, that I was enabled to bring the head of the child into the world; and I awaited the natural expulsive powers of the uterus to complete the delivery. I was surprised, however, to find that, notwithstanding the sharp pains the woman

continued to experience, the body of the child still remained firmly fixed. As several minutes had elapsed since the birth of the head, and believing the child would be sacrificed, I placed my hands on each side of the head (I was quite unable to hook my fingers under the shoulders), and, after using some force, succeeded in completing the delivery. The child when born scarcely showed any signs of life, but was quickly restored by a little shaking. The woman, with the exception of a lacerated perineum, is doing well. In this case the child was a very large one.

CASE III.—I was called a few days ago to visit Mrs. W., aged 26, a primipara. The midwife who attended had not been able to manage the case. On making a vaginal examination, I found the head resting on the perineum. Thinking to expedite delivery, I put on the forceps; but, to my surprise, found, on making traction, that the head appeared to slip from between the blades, which were withdrawn on several occasions without success. After some perseverance, however, I managed to get the blades fixed; and with some trouble delivered a child with a very elongated head, from before back, much flattened from side to side, and with a tendency to hydrocephalus. The mother and child are doing well. In this case the head of the child was particularly narrow across the parietal region, whilst it was much swollen over the frontal and occipital regions; and it was owing to the blades being placed over the former position, that the head slipped away whenever I made traction.

CASE IV.—Mrs. H., aged 32, was seen by me on August 13th. The patient had been confined twice previously of still-born children. The labour, although very severe, was natural; but, as the woman was becoming worn out with pain, I applied the forceps, and extracted what appeared to be a dead child. Much to the amusement of the nurse (who appeared to think it absurd on my part to do so), I endeavoured to restore animation in the child by Sylvester's method. I was rewarded in about half an hour with complete success. At the present time, the mother and child appear to be doing well.

W. HOWARD CORY, M.R.C.S. Eng., Nailsea.

CLINICAL MEMORANDA.

CHERRY-STONE IN APPENDIX VERMIFORMIS: TYPHLITIS: ABSCESS: AND SUBSEQUENT PASSAGE OF STONE.

A. M. A., a mason and plasterer, aged 35, of good family-history, came under my notice in January 1881. Previously to my seeing him, he had symptoms and had been treated for typhlitis, and appeared to be doing well. Three weeks later, a swelling appeared over the right inguinal region, at first about three or four inches in diameter, gradually increasing to seven and a half, with fluctuation. The patient being very anxious to have active treatment, I aspirated, and withdrew about five ounces of pus, very much discoloured. By careful search with a sound, no foreign body could be detected. This only left a central depression and a large amount of surrounding thickening rather brawny, which remained troublesome for about two months, irrespective of all local and general treatment. Ultimately, the opening was allowed to heal, and the tumour became much smaller in size, remaining so for three weeks, when a large accumulation of pus again formed. This time I opened it with an ordinary scalpel, and on probing it with a common catheter found the cavity very large. On pressure, a substance came out with the pus, which proved to be a cherry-stone. This must have been lodged in the appendix vermiformis some time, as it was quite friable, easily broken up with slight pressure. I presume the stone set up inflammatory mischief, adhesion, and ulceration, and subsequent abscess; the whole process occupying nearly four months. The man made a rapid recovery.

JAMES PARETTE, L.R.C.P., College Green, Bristol.

THERAPEUTIC MEMORANDA.

TINCTURE OF IODINE IN ERYSIPELAS

In the JOURNAL for August 5th is an account of a case of erysipelas treated by Dr. Hutchison of Scarborough. It may strengthen my opinion in favour of the remedy if the cure was owing to the specific use of iodine. I simply mention a case which occurred in my practice recently, and which very strongly impressed me with the value of this treatment.

The patient was suffering from an ordinary smart attack of idiopathic erysipelas of the face, for which I had prescribed the usual full doses of steel to be taken internally, and collodion to be applied to

the affected part. At my next visit, I found the patient's face considerably more swollen and painful, and presenting a brown appearance. On inquiry I learned that, by mistake, tincture of iodine had been used instead of collodion; but my annoyance was only equalled by my delight on finding that the symptoms very speedily subsided, and that such a rapid and complete cure of the disease I had never before witnessed.

THOMAS A. G. BALFOUR, M.D. Ed., F.R.C.P. E.

REPORTS

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

CHARING CROSS HOSPITAL.

INJURY TO SKULL: TETANUS: TRACHEOTOMY: DEATH.

(Under the care of Mr. BELLAMY.)

[We are indebted to Mr. A. JOLLYE for the notes of this case.]

On Sunday, May 21st, the patient, A. W., was swinging upon the back of a dray, when another boy suddenly pulled out the pin holding up the back. He fell off upon his forehead, sustaining a triangular cut commencing about a quarter of an inch above the centre of the right superciliary ridge, and running to the centre of the forehead, where it divided, one cut extending directly upwards for about three-quarters of an inch, and a similar cut passing down towards the nose, about a quarter of an inch long. He was brought to the hospital by his father: some sutures were put on, and the wound was strapped. On the same evening, about an hour or so after the accident, the child complained of headache and of feeling faint. His mother laid him on the bed, and she noticed his mouth seemed to be drawn down, and his legs twitched a good deal; but this soon passed off. His mother never noticed this again.

On May 24th, three days after the accident, he was brought to the hospital (out-patient department), when the sutures were removed on account of the amount of discharge from the wound, and the mother was ordered to poultice it. The child seemed perfectly well, and took his food well until Saturday morning (May 27th). He was allowed to run about out of doors, as usual.

On May 27th, his mother noticed his mouth seemed drawn down again (especially his upper lip); and, when food was offered him, he could not open his mouth for more than a quarter of an inch. He, however, took a good quantity of milk.

On the following night, as he did not seem so well, his father brought him to the hospital, and he was admitted at 11 P.M. He complained greatly of his head aching. The saliva ran from his mouth, and his eyes watered considerably. He was never insensible, and there was no loss of speech, though he spoke very indistinctly. There was a good deal of discharge from the wound. His mouth remained closed within a quarter of an inch. The masseters, scalenes, sterno-mastoids, and trapezii were firmly contracted. His temperature was 100°, and his bowels were confined. He could not eat, but drank milk readily. He did not appear to be in pain.

On May 29th, at about 6 A.M., he had an attack of spasm, his legs being drawn up and suddenly thrust out again. He rolled over and over in bed, and his face became very dark in colour. On the 30th, tetanus was present. He had a similar attack about 12 A.M., but no more after this until early on the following morning. He had slept pretty well most of the night. He was given two castor-oil capsules on May 30th.

Throughout May 30th he had spasm every four or five hours, more than before. About 9.30 P.M. he had a very severe spasm. The house-surgeon, Mr. Wigan, was sent for, and tracheotomy was performed for spasm of the glottis. The child was almost completely cynosed. The usual treatment was adopted after the operation. After this the muscles (before mentioned) became relaxed, with the exception of the masseters. During the night he seemed easy, and had only one very slight spasm. The temperature was, in the morning 100°, and in the evening 98.4°. He was given the following mixture, and ice was applied to the face. He took the mixture well; tincture of opium \frac{ij} ; spirit of hygieine \frac{ss} ; water \frac{ss} .

On the morning of May 31st he had a very slight spasm; he seemed rather better. The temperature in the morning was 101.4°, in the evening 100°. He took milk very well. The acetic mixture was continued every three hours instead of every two. On June 1st he had no spasm, but did not seem quite as well as on the previous day. The

mixture was again given every two hours. The temperature in the morning was 98.2°, in the evening 98.6°.

On June 2nd he had another spasm at 6 A.M., and frequent attacks throughout the day. He was given the following mixture:—R Tincturæ aconiti Miss; vini ipecac. ℥ij; oxymel scillæ ℥ij; aquæ ad ʒj; every two hours. At one o'clock on this day he seemed to be getting rapidly worse, having frequent spasms; he was given, as an emetic, twenty minims of ipecacuanha wine, to be repeated if necessary. This produced no effect. At 6 P.M. he had a very severe spasm, and at 7 P.M. died, apparently from exhaustion. The temperature in the morning was 98.8°; in the evening it was not taken.

Necropsy.—The body was well nourished; there was some green discoloration of the abdomen from decomposition. Rigor mortis had disappeared. There was a small scalp-wound, the edges of which were healthy, over the centre of the forehead. A small branch of the supratrochlear nerve was seen to have been divided by the incision. The surface of the brain was slightly congested, but the substance was perfectly healthy. No lesions could be detected. The trachea had been opened by a small incision in the usual spot for tracheotomy. The whole length of the trachea was congested internally, and this condition extended into the small bronchi. On the inner surface and surrounding the wound was some thick white membrane, extending upwards into the larynx and downwards for about three-quarters of an inch; this was thick, firm, and attached. The lungs were healthy, with the above exception. All the other organs were healthy.

SUBLUXATION OF THE FOURTH CERVICAL VERTEBRA, PRODUCED BY A SUICIDAL ATTEMPT AT HANGING: RECOVERY.

(Under the care of MR. BARWELL.)

M. C. C., aged 63, was brought to the hospital on June 6th, 1882, by policemen. It was stated that, in a fit of despondency, the man had fastened a rope to some firm object in his room, had tied the other end round his neck, and thrown himself from the window; the fall was eleven or twelve feet. He was seen to fall, and was immediately released.

Mr. Pittard, house surgeon to the hospital, found him quite unconscious, breathing with some difficulty, and very slowly. The limbs were perfectly flaccid; no sign of sensation, no reflex action, could be produced by pinching them. The only external wound was a broad but slight abrasion extending from behind the angle of the jaw to the middle line, about the region of the aricoid cartilage. On examination behind, Mr. Pittard found evident displacement of parts. He at once sent for the surgeon, who shortly afterwards arrived.

Mr. Barwell found the man lying perfectly still, but the limbs were not entirely flaccid; they did not, at the time of his examination, when raised, fall quite inert on the bed. Also, when the man's hand was lifted, his elbow supported by the mattress, and he was told loudly in his ear to keep it so, there was an evident effort to obey, although it sank slowly down. The pupils were contracted, but moved slightly to light. The breathing was between 17 and 20 per minute, the pulse was 24. The state therefore had evidently improved in the three-quarters of an hour since his admission.

On tracing the line of the cervical vertebrae upwards, the seventh, sixth, and fifth were in their normal place, but then there was a sudden gap. Indeed, the fifth could be felt unusually distinctly, the fourth and third not at all, the upper part of the cervical spine being in a line much more anterior than the lower part; while the parts covering it were very soft and yielded easily to pressure forward. Nevertheless, since the breathing was normal or nearly so, and since the man's condition was improving, Mr. Barwell would not undertake any attempt at reducing the displacement, but ordered him to have only a very low pillow, to which the head was to be secured by bandages.

June 7th. The man passed a quiet night, but it was impossible to say whether he really slept, or remained simply semi-conscious. The temperature was 101.5°. At this date, he complained of pain at the back of the neck, but not very much; he was greatly troubled by a pain round the lower ribs, what he called "an iron hoop round him."

June 8th. There was no material change; the sense of constriction at the lower part of the thorax continued, but was less severe. The upper part of the neck behind was less yielding.

June 9th. The cord-like feel was now slight; the neck seemed assuming a more normal position.

June 11th. There had been no further evidence of spinal injury.

June 13th. The cervical vertebrae had very nearly resumed their normal position, being no doubt, as Mr. Barwell explained, slowly reduced by the elasticity of the intervertebral fibro-cartilage.

June 16th. The man was virtually well, and the neck normal in shape. He was kept in the hospital a few days beyond the above date, as it was thought better not to risk the effect of his being brought before the magistrate; but he was quite well, and had sustained no permanent injury.

THE GENERAL HOSPITAL, BIRMINGHAM.

OPERATION FOR STRANGULATED UMBILICAL HERNIA: SLOUGHING OF SKIN OVER SAC: DELIRIUM TREMENS: RECOVERY.

(Under the care of MR. BARTLEET.)

[From notes by H. G. BARLING, M.B.]

E. S., a brewer's drayman, aged 40, stout, and rather bloated in appearance, was admitted on the night of December 4th, with a strangulated umbilical hernia. The previous history of the hernia was, that it appeared as a small tumour, of the size of a marble, six years ago. A truss was soon after applied to it; but, being inconvenient, was replaced by a wide belt, which, however, did not prevent the rupture from increasing in size, especially during the winter, when he suffered from bronchitis. He was occasionally troubled with excoriation of the skin adjacent to the umbilicus; but otherwise suffered inconvenience only from the size of the hernia, until the evening before admission. Then, without any particular cause, he had great pain of a colicky character in the rupture; this varied during the night. He took oil to open the bowels, but without effect; and, on the following morning, he noticed that the tumour was tense and sore when pressed. His pain and discomfort increasing, he came to the hospital twenty-four hours after his first symptoms. On admission, he had an anxious look. The hernia was as large as two fists, tense and tender; none of it could be reduced. The bowels had not been open for thirty-six hours; and vomiting now set in; Mr. Bartleet therefore decided to operate.

December 4th. An incision, two inches long, was made at the left side of the neck of the rupture. The sac was opened; and, on passing the finger in, a constriction was found at the upper margin of the tendinous ring. On dividing this, some intestine was easily returned—the bulk remained in the sac, and the wound was closed. Listerism was adopted at the operation and subsequent dressings.

The patient was very comfortable afterwards, and his bowels were open on the following morning (December 5th); but in the evening his temperature rose to 104.5°, although there was no pain nor tenderness in the abdomen, and the general condition was good. He was ordered a grain of opium pill every four hours.

December 6th. The dressing was changed for the first time; the wound looked quiet; the temperature was 102.5°; the bowels were again open.

December 8th. The dressing was reapplied; the skin over the tumour was beginning to slough; the temperature was 101.8°.

December 9th. The wound was dressed twice, owing to the amount of discharge from the sloughing skin. He was ordered four ounces of brandy in each twenty-four hours.

December 10th. The wound was dressed twice; the patient was very low; the brandy was increased to six ounces.

December 11th. The wound was again dressed twice; delirium tremens set in, and he had to be restrained by straps.

On December 12th, there was slight diarrhoea, and on December 13th it still continued. The wound was dressed once only; the sloughing of skin was stopped; the integument was nowhere destroyed in its entire depth; delirium had ceased.

December 15th. The diarrhoea had ceased.

December 25th. He had steadily improved; antiseptics had been left off. He went out eight weeks after admission.

On July 1st, he was in good health, and able to do his work; but his bowels were open three or four times every day.

ROYAL ISLE OF WIGHT INFIRMARY.

GLAUCOMA FOLLOWING DISLOCATION OF THE LENS.

(Under the care of Dr. A. G. DAVEY.)

[From Notes by MR. THEO. M. KENDALL.]

SARAH S., aged 63 years, married, received, about three months ago, a blow in the left eye. This, she stated, set up a great deal of inflammation, which, however, appeared to have cleared up without any special treatment; vision, however, was permanently impaired.

On March 29th, 1882, the left eye began to become painful and inflamed. On April 1st she presented herself at the infirmary, and was admitted. The left eye was greatly inflamed, and the conjunctival vessels very prominent. The cornea was opaque with leashes of blood-vessels running up into its centre. The eyeball was very hard. The right eye was slightly impaired in vision, and slight

pricking pains. There was no marked redness. Pain in the left eye was intense. The left eye was excised soon after the admission of the patient. On examination it was found that the lens was dislocated into the anterior chamber, and was firmly adherent to the cornea. There was complete synchysis of the vitreous humour, and the retina was detached at its lower border. The patient made a good recovery, and was discharged three weeks after the operation.

REVIEWS AND NOTICES.

THE PHYSICAL SIGNS OF PULMONARY DISEASE. By GRAHAM STEELL, M.D. Edin., M.R.C.P. Lond., etc. Edinburgh: Mac-lachlan and Stewart; London: Simpkin, Marshall, and Co.; Manchester: J. E. Curnish. 1882.

THIS is a short work of ninety-two pages intended "for the use of clinical students". Commencing with a short account of the anatomy of the lungs, Dr. STEELL proceeds systematically with the inspection, palpation, percussion, and auscultation of the chest in health and in disease. He then adds a few words on succussion, and closes with a short appendix on Laryngoscopy.

Dr. Steell's anatomical introduction is clear and concise, but it might with advantage have indicated more pointedly the outline of the lung on the chest-wall. Fig. 1, it seems to us, would lead the student to put the margin of the lung too high. His account of the inspection, palpation, percussion, and auscultation of the chest contains information that every clinical student will find useful, that is, provided he take the advice frequently given him to verify the word description by the actual fact. Perhaps Dr. Steell's observations on emphysema would not lose in clearness by a little compression, more especially considering the relative attention given to other diseases. Within his short space, Dr. Steell manages to incorporate a good comparison of the nomenclature of the English and German schools. As physical problems, the causes of the various physical signs are so complicated, that any reasoning upon them must always have a secondary value to the actual *post mortem* proof of the physical conditions concomitant with the signs. Dr. Steell recognises this fact, and any theorising as to causes occupies a subordinate position. The appendix on Laryngoscopy is necessarily short and incomplete. Is it not somewhat misleading to say that the great cornu of the hyoid bone lies under the floor of the fossa outside the aryteno-epiglottidean fold?

While we consider that it is unwise to separate in this absolute manner the examination of the lungs from that of the heart, we can cordially recommend the book as a clear and trustworthy guide to the student commencing his clinical studies.

THE STUDENTS' GUIDE TO MATERIA MEDICA AND THERAPEUTICS IN ACCORDANCE WITH THE BRITISH PHARMACOPEIA. By JOHN C. THOROWGOOD, M.D., F.R.C.P., Physician to the City of London Hospital for Diseases of the Chest; Physician to the West London Hospital, and Lecturer on Materia Medica at the Middlesex Hospital. Second Edition. London: J. and A. Churchill. 1882.

THIS work, we are told, is intended as a guide for students while attending a course of lectures on the materia medica and the preparations of the *British Pharmacopæia*, and as an aid to them in preparing for their examinations. The author starts on the assumption that "every student reads the *British Pharmacopæia*", but on what grounds he arrives at this opinion we are not told. Be that as it may, the *Guide* is to supplement the *Pharmacopæia* in the student's hands, and its object is to give an account of the chemical composition of medicines, to explain the chemistry of the processes by which remedies are prepared, and of the reactions which occur in applying tests of their purity.

In treating of the uses of medicines, the author tells us that he has endeavoured to avoid burdening the memory with that which might be uncertain and unsettled. This is undoubtedly a wise precaution; but we much fear that, in his endeavour to avoid saying anything that might appear uncertain or unsettled, he has left out a great deal that it is very important the student should know. In fact, so much is omitted, that the student will hardly find enough left to justify him in presenting himself for examination. What there is of it has been well and carefully done, but the author has hardly kept pace with the times, and has omitted all mention of a great deal that has been published during the last four or five years. We quite understand that the work is intended only for students, and that its object is simply to enable them to pass their examinations, and not to obtain a knowledge of their profession; but it must be remembered that nowadays examiners in materia medica are more exacting than they were ten or

fifteen years ago, and that they are no longer satisfied with a bald knowledge of the contents of the *Pharmacopæia*. It is only an act of justice to Dr. THOROWGOOD to say that, in spite of the subtitle of his work, he does not confine himself strictly to the official preparations. We find, for example, both gelseminum and iodoform mentioned, although the former is dismissed in six lines, and our knowledge of the latter is summed up in two short paragraphs of five lines each. Many drugs in daily use are altogether omitted, whilst others are passed over in the most cursory manner. We are quite sure that Dr. Thorowgood could give us much valuable information, the result of his own ripe experience; and that he has refrained from so doing, simply because he has fallen into the common error of underestimating the capabilities of students and the requirements of examiners. We have read the work with attention, and are satisfied that it is the result of much care and labour, and that it is singularly free from misstatement or error of any kind.

NOTES ON BOOKS.

Winters Abroad. By R. H. OTTER, M.A. 8vo. Pp. 236. John Murray. 1882.—This book gives the best practical account of the various climates of the Australian continent and of the Cape that we have come across. We may say the same of what the author tells us of Davos. He gives a very distinct and somewhat favourable account of life at the latter place. Egypt and Algiers are treated of at some length, but there is less novelty in what he says of them. We may not perhaps agree entirely with the author in all his opinions, but he is very fair and dispassionate in his judgments, and we believe that practitioners as well as invalids may get many useful hints from a perusal of his work.

Davos Platz. By ALFRED WISE, M.D. 12mo. Pp. 74. London: J. and A. Churchill.—In this little work Dr. Wise gives his own experience of Davos, along with observations on its climate. The book contains a good deal of information, which is worthy of the consideration of those who are thinking of sending patients to winter in high altitudes.

REPORTS AND ANALYSES AND DESCRIPTIONS OF NEW INVENTIONS IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

SOAP-PAPERS.

UNDER the name of "Soap-sheets," Messrs. Keithofer and Neffe of Vienna have introduced a patented invention, of which the *premium mobile* may be found in the practice in foreign hotels of not providing soap in lavatories and bedrooms. These soap-sheets, intended especially for the use of the traveller, are made up into neat little books of the size of a miniature pocket-book. Each leaf, when detached and wetted, forms in itself an independent piece of soap, and is sufficient for once. The invention is already popular abroad, and its neatness and ingenuity recommend it.

MEDICAL EXAMINERS IN THE CITY OF CORONERS.—Some months ago, we gave, in a series of articles, a history of the methods adopted in various countries for carrying out coroners' inquests, or analogous modes of inquiring into the causes of suspicious deaths; and we spoke with special commendation of the system adopted in the State of Massachusetts, of appointing medical examiners instead of coroners. In an interesting address on the history and work of the Massachusetts Medico-Legal Society, its retiring president, Dr. Amory, claims for the novel method adopted by that State the following advantages, after four years of its experience: 1. That the investigation of the cause of death after supposed violence is unattended with the disagreeable and harassing circumstances of partial publicity which were necessary under the old coroners' system; 2. A more certain and definite knowledge of the cause of death; 3. An inquest under a magistrate, who presents his verdict without the inconvenience of a jury; 4. A written and detailed account, from both medical and judicial examiners, which forms a more convenient record for use by the district attorney in presenting the case before the grand jury; 5. A financial saving to the Treasury; 6. An opportunity for study of pathological science. During the year 1880, there were made 935 views of bodies by the medical examiners, and 229 necropsies.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st.

Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 26TH, 1882.

SOME RECENT DEVELOPMENTS IN ANTISEPTIC SURGERY.

To those whose acquaintance with antiseptic surgery dates back to the time when the carbolic dressing of Lister was first introduced, and can remember the rigid ritual enjoined in its use, the last substance added to the surgeon's armamentarium must be the source of some quiet amusement. It appears that, about two years ago, a man applied to Dr. G. Neuber, assistant in the clinic of Professor Esmarch in Kiel, with the story that, eight or ten days earlier, he had suffered a severe accident to the forearm, which had resulted in extensive laceration of the soft parts, rupture of the wrist-joint, and fracture of both bones of the forearm. The first dressing applied to this severe compound and complicated fracture was a thick coating of mould from the moor on which the man was at work. After burying the limb in this, a rough wooden splint was applied. When, ten days later, the man came into Kiel, he appeared to be in good general health; and, after the astonished surgeons had thoroughly removed the whole of this primitive dressing, they found that the wound was free from suppuration—in some parts already united by first intention, in others granulating in a satisfactory manner. Struck by this brilliant result, Dr. Neuber proceeded to investigate the antiseptic qualities of turf-mould. These qualities were already being recognised in other quarters. It had been found that the turf, which is of a remarkably fibrous and friable character, acted as a powerful deodoriser of fecal and other like offensive substances. A company has been started for the purpose of popularising the new material, under the name of "moss-litter", as a bedding for horses; and the mould has been used in the latrines of infantry barracks in Brunswick. We recently inspected a large range of new stabling erected by a railway company, in which the "moss-litter" was extensively used, and was found to act so effectually as a deodoriser, that the same bed could be used for two or three months. Dr. Neuber found that the dust or fine powder arising in the preparation of the moss-litter for the market also possessed a powerful affinity for ammonia, carbonate of ammonia, and other products of decomposition. A series of experiments in the use of the mould as a surgical dressing were made, and the experience gained may be thus summed up. The turf-mould, reduced, as we gather, to a powder, is enclosed in gauze bags which have been thoroughly washed in carbolic acid solution. The bags are made of two sizes, and the mould in the smaller is mixed with iodoform in the proportion of 2.5 per cent.; the mould in the larger bag is saturated with a solution of carbolic acid (5 per cent.). In applying the dressing, the wound is first washed with carbolic or with chloride of zinc lotion, or powdered with a little iodoform. The small bag is then placed over the wound; over that a large bag is adjusted; and both are retained in place, and an equable pressure kept up, by a gauze bandage. The dressing was used by Professor Esmarch in fifty-five cases, among which were included seven resections and osteotomies, five amputations, twelve extirpations of tumours, and two herniotomies. The results were most satisfactory. The only death was in a case of advanced tabes dorsalis, where the operation of nerve-stretching was followed by pyæmia. In thirty-one cases, there was no fever at

all; in only five cases was it necessary to remove the dressings, owing to either local or general disturbance; and, as a rule, they were left in place for a fortnight. The advantages claimed for the mould are, briefly, that its absorbent power is so great that wounds remain perfectly dry under its use; that it absorbs the products of decomposition, and probably checks their formation; that the pads are very soft and elastic, easily adapting themselves to the surfaces of the limbs and trunk; and that, finally, turf-mould affords the cheapest known antiseptic, since it costs only about one-ninth as much as the carbolic gauze (Listerian) dressings. In a second communication, Dr. Neuber gives the results in a second series of cases, among which were instances of ovariectomy, hysterectomy, and operations for floating kidney. This second series of seventy-eight cases resulted in but three deaths, due respectively to tetanus, to delirium tremens, and to gangrene of the leg after resection of the knee in a "bleeder". Where it is proposed to leave the dressing undisturbed for a fortnight or more, Dr. Neuber applies glass bandages externally.

Very different is the opinion which appears to have been formed at Kiel with regard to the use of iodoform. It was used in cases of so-called tubercular joint-disease, but the results obtained were not at all so good as in a similar series of cases where the Listerian dressing was used; the joints were laid open, scraped, and the cavity then either filled up with iodoform, or dusted over with it. The conclusion is, that the method is not quick, is not radical, and does not protect the patient from relapse. The grand objection to its use, however, lies in the dangerous symptoms of poisoning by which the use of iodoform has been followed, and which are particularly apt to occur in the very cases where its use otherwise would offer the greatest advantages—namely, in operations about the mouth and air-passages. Dr. Neuber has to record two deaths from iodoform-poisoning after operations about the mouth, the symptoms being of the character described in an article on page 913 of our last volume. He advises that not more than about a drachm of iodoform should be used at any one dressing, and that the gauze or wool used should not contain more than ten per cent. of the drug. Dr. Schmid, on the other hand, from experience gained at the Augusta Hospital in Berlin, believes that iodoform has a specific action on the tubercular process in joint-disease; he, however, seems to have obtained equally good results with dressings of salicylic acid in operations on bones. After the removal of a sequestrum, he fills up the cavity with powdered salicylic acid, and covers the wound with salicylic wadding; the dressing is left undisturbed for a week or a fortnight. In this method he puts sometimes more than six hundred grains into a wound at one dressing, yet he has never had a single case of salicylic poisoning. Dr. Hahn (*Berliner Klin. Woch.*, 24, 1882) has used iodoform in severe cases of extirpation of the uterus through the vagina, six of which were successful; he dusted the vaginal wound with iodoform, thoroughly powdered the vagina with the drug, and finally plugged the canal with iodoform-gauze. At the end of twenty-four hours, the vagina was thoroughly washed out with a solution of salicylic acid, and the iodoform reapplied. In this method, the iodoform is applied to the vaginal wound through a speculum, and can be seen to come into direct contact with the intestine.

Yet another antiseptic has been used recently in London, at Charing Cross Hospital and at St. Bartholomew's Hospital among others; this is boroglyceride, which was introduced in the early part of this year in a lecture by Professor Barff; he recommended it as a preservative for meat and other kinds of food. Great powers of arresting decomposition being claimed for the new body, it was not many days before it was in use as a surgical dressing. As supplied by the manufacturers, it is an opaque white substance, not unlike boracic ointment, but freely miscible with water, to which it imparts a faint milky tinge. It is a body of definite chemical composition ($C_3H_5BO_3$), which forms a definite hydrate with a large quantity of boiling water, and is not, we are informed, decomposed when diluted in the proportion useful in surgery—namely, one part to twenty or thirty of water. Such a solution is inodorous, it has a slight saltish taste, and is quite unirritating

to a wounded surface; under its use, wounds of all kinds do extremely well, and heal fully as rapidly as under carbolic acid dressings, over which boroglyceride has the advantages that it does not irritate the wound or the surrounding skin, and that it is, so far as is known, entirely innocuous when applied to a wounded surface. An article on the use of boroglyceride, by Mr. Barwell, of the Charing Cross Hospital, will be found at page 362 of the present number of the BRITISH MEDICAL JOURNAL.

That we have by no means exhausted the list of bodies which may yet be of use in antiseptic surgery is proved, if proof be wanting, by the discussion on the subject at the Surgical Congress held at Berlin in June last. The subject was introduced by Dr. Kummell, of Hamburg, who related the good results he had obtained with glass powder and corrosive sublimate. He uses a solution of corrosive sublimate of the strength of one part in 2,000 of water, cotton-wool soaked in a solution of the sublimate of the strength of one part in 200 of water, silk and catgut treated with the same, and, for dry dressings, glass powder disinfected with corrosive sublimate. He has also met with success by the use of finely ground burnt quartz, and an external pad of glass wool. We have seen samples of this glass-wool, which resembles the finer qualities of ordinary cotton wool, but has a harsh feeling, is very brittle, and easily reduced to a fine powder by rolling it between the fingers; it is quite indestructible by acids or by boiling, so that it is easily cleaned, and in the mass forms a fairly soft and elastic pad. A vast number of other substances were also recommended, such as sand, pipe-clay, ashes, sawdust, charcoal, and carbonate of bismuth. The only points upon which all were agreed seemed to be that the operation itself should be conducted so that the wound was at its conclusion left in an antiseptic condition, and that some absorbent body should be in contact with the wound to absorb discharges, and keep up a little gentle pressure. In addition, it appeared that German surgeons are strongly in favour of leaving a wound undisturbed for as long a period as possible, for one, two, or three weeks at least.

PUBLIC CONVALESCENCE.

THERE is nothing in nature more irksome than general discourses, especially when they turn chiefly upon words. We have used the above title as being an equivalent of *Die Öffentliche Reconvalescentenpflege*, the name of an admirable work which has recently appeared in Germany from the pen of Dr. Paul Gueterbock. No doubt, the general reader has from time to time, by the publication of short paragraphs in this JOURNAL and elsewhere, become familiar with some features of the question of convalescent homes; but the number of individuals who have endeavoured to obtain even an average acquaintance with the subject is, we believe we are correct in saying, small. That that department of the care of patients, "convalescence", should bud off from the parent stem, and form itself into a separate existence, is only another example of the law of evolution which defines progress as the passage from like to unlike. Time was, when no regular recognition of "convalescence" apart from general treatment could be said to exist. The appearance of Dr. Gueterbock's work must be regarded as a distinct landmark in its literature, not so much from any particularly new matter, as for the fact that, so far as we are aware, it is the first volume of its kind which deals solely and separately with the subject of "convalescence". Scattered about in journals and in volumes dealing with other related matters, a good deal of information has been forthcoming, but anything which could be called a literature of its own did not exist. The number and variety of considerations which centre about the subject are only fully realised, when an attempt has been made to recall and record them all. No apology is therefore needed for the creation of a special department entitled convalescence.

Dr. Gueterbock's book consists of a general and a special part; the former treats of convalescent hospitals generally, and of the care of convalescents, both in ordinary hospitals and apart from them; the special department deals with the accommodation and management in Germany, England, France, Italy, the Netherlands, and United States

of America. It would be impossible to do anything more than touch upon some of the more important questions in the space at our disposal; nor would more than this be desirable, as there is nothing specially novel in the details of this volume. This book is altogether gratifying to an Englishman, for its pages teem with the facts of English convalescent homes and authorities. Very early in the general part, we come across a table showing the comparative expenditure of the Manchester Royal Infirmary, and its affiliated convalescent home at Cheadle.

The history of the origin and growth of our knowledge of convalescence would be very interesting. Häser (*Geschichte Christlichen Krankenpflege*) says that, as early as 1283, at the hospital founded at Cairo, there was a separate room for the use of convalescents. Looking at the question from the point of view of evolution, some progress would have to be made with the care of the sick before enough knowledge would exist to guide the proper management of convalescence. Dr. Gueterbock thinks that political events in different countries probably played a part in promoting or hindering the development of such matters; e.g., the French Revolution of 1789, and the expulsion of the Stuarts from England. Rapid strides in the right direction have been made during recent years, especially in England; and it is for this reason that any work in any language pretending to deal in a comprehensive manner with the subject must draw largely on English material and authorities.

To get a broad view of "public convalescence", we must take in not only the care of hospital, but of all other patients. The trying difficulties with which medical men have to contend in the case of private patients are felt by every right-minded individual; the disastrous events which have happened (we allude to relapse of convalescents, owing to unhygienic surroundings and the spread of infection by convalescents from contagious diseases) are a sufficient explanation for this. And the difficulties are only somewhat lessened in the case of hospital physicians and surgeons. The typical state of affairs would be that every hospital should have its own convalescent home, like St. George's or the Hospital for Sick Children.

It is still a moot point whether a "day-room" is of value in an ordinary hospital. Miss Nightingale has taught that no patient should stay an instant longer in hospital than necessary. Dr. Gueterbock, in opposition to Dr. Sander, does not think there is an advantage in having a great number of convalescents in a hospital. Tenon said it might be estimated that two-thirds of hospital inmates were really ill, and one-third convalescent. At the end of the last century, the Hôpital de la Charité numbered two convalescents to five sick.

Amongst the many important things are the site, construction, administration, and finance of convalescent institutions. The advantage of having the patient away from the atmosphere of crowded towns and centres of industry is patent to all; then, unquestionably, some convalescents would do better in one climate, others in another; hence the specialisation of institutions in this respect. No doubt the presence of separate places for every special disease is to be deprecated as a rule, yet we maintain that a certain degree of differentiation is advisable, and is true progress. We may here mention another feature, viz., that many convalescent homes are only open during the summer; the report of the Charity Organisation Society (1880) gives 48 out of 157 as remaining open during the whole year.

Some latitude in construction must be allowed. In England (as Gueterbock mentions), we have frequently turned ordinary dwelling houses into convalescent homes; an excellent disposal of material on a larger scale is Mr. Burdett's plan of a cottage convalescent home, which is reproduced in Dr. Gueterbock's work; on a still larger scale, there is the Asylum at Vincennes, which also contains an "infirmary" for the reception of cases of relapse. There is much to be done in the administration and personnel of these institutions, apart from the usual hygienic measures of ventilation, heating, drainage, and so forth.

On what we may term the religious aspect of the question, a whole book might be written. Dr. Gueterbock gives a full account of the transactions and revelations of the Eastbourne Convalescent Home and

the Hospital Sunday Fund. Germany is confessedly behind us in the possession of special convalescent homes organically attached to hospitals. The cost of patients in different institutions is thoroughly gone into by Dr. Gueterbock. We may say that the average cost per head at the Berlin Infirmary is not very different from that of the Convalescent Asylum at Vesmet, and is about 3¼ francs per day. Trélat is quoted, that the average daily cost of each patient in Paris hospitals is 5 francs. From this, it would appear that a patient costs less in a convalescent than in an ordinary hospital. But the point cannot be settled in so easy a manner. France and Italy very early recognised the necessity of establishing separate institutions for the convalescent. The Dutch have convalescent homes, but not in any special connection with the ordinary hospital. The system is but little developed in America.

In conclusion, we hope that we have said enough to show that the subject is thoroughly worthy of practical consideration, and that it is so because of the really great complexity and number of aspects which it presents.

MEDICAL AND SOCIAL ASPECTS OF TEMPERANCE.

At an early date, we advocated the establishment of "coffee-taverns" as one of the most patriotic and useful of modern enterprises. The term which was then, we believe, a new one, and used for the first time in these columns, has now become familiar throughout the country; and the London coffee-taverns, whose initiation we then furthered, have been so widely reproduced, that the fact and the word are alike the common property of all. Not that it must be supposed that the work itself was then for the first time begun, or that the metropolis led the way, or that medical men have the pleasing consciousness of having first originated the movement. It began and fructified in the provinces, where it is still much more successfully carried on than in London; and it began with the clergy and with gospel teetotallers as part of their mission work; while the Liverpool cocoa-houses and others of provincial situation gave, as they still give, the most promising examples of noted success. There can be no doubt, however, of the immediate and extended influence throughout the country of the London coffee-taverns formed by the association established for that purpose, and in whose initiation we have the happiness of having taken a personal share, with the associated help of Dr. Norman Kerr, Mr. Pope, Mr. T. Hughes, and Mr. Barnard; to that influence, the rapid establishment of "coffee-taverns" under that new title abundantly testifies. The large number of communications which we receive from medical men from all parts of the country afford evidence of the earnest and active interest which the members of our profession and of our Association took in this eminently sanitary and civilising work, and how largely they have contributed to its extension and its efficiency. It is, therefore, with no small satisfaction that they will find the strong and possibly reluctant, but therefore the more powerful, testimony which is now borne to the good effects of those labours by officials well able to form a judgment. The Commissioners of Inland Revenue, in their report on the present year, ending in March 1882, write of the beer duty:

"The duty, however, fell short of our estimate; and, instead of £8,800,000 (as estimated), the net receipts, after paying drawback on beer exported, amounted to only £8,530,819. This deficiency appears to have been due to a slight falling off in the consumption of beer, as we have been informed by several eminent brewers in the metropolis that, notwithstanding the increase in the population, a less amount of business has been done. This may be accounted for in several ways, but principally, we think, by the improved habits of the people. Temperance principles seem to be influencing certain classes of the population largely, the past year having been, apparently, one of unusual progress in this direction. This movement has been greatly encouraged and promoted by the erection of coffee-taverns; and when we mention that between thirty and forty limited liability companies for carrying on coffee-taverns have been formed in various places during the past year, and that over one hundred new establishments have been opened in the metropolis, some of them on an extensive and expensive scale, it will

be seen that the success of such enterprises must sensibly lessen the consumption of alcoholic drinks. The manufacture of temperance drinks has also been exceedingly brisk; and whether from a prevailing demand for such beverages, or from a love of novelty on the part of the public, an unprecedented number of them has been advertised. Some of these contain no alcohol whatever; but in others, such as 'ginger ale', a certain amount of spirit is generated by fermentation; but we are careful to insist upon the conditions that they shall not be made from malt and hops to resemble ordinary table beer, and shall not contain more than three per cent. of proof spirit."

In the steady encouragement of temperate habits, the growing effect of medical opinion, enunciated in the famous Declaration concerning Alcohol (BRITISH MEDICAL JOURNAL, vol. ii for 1871, p. 737, has undoubtedly played a part. There is some danger of reaction, from the dislike which educated physiologists and physicians cannot but feel to the extravagant denunciation of alcohol, under all circumstances and in all conditions, in which some of those indulge whose zeal overmasters knowledge.

THERE have already been a few deaths from enteric fever among the sailors and marines at Alexandria and Malta; but the disease is controllable, and has not assumed an epidemic form.

IN the year ending the 31st of March, the excise duty on medicine vendors was net £4,688 15s., in addition to the stamp duty on patent medicines of £144,883 9s. 6d.

LADY STRANGFORD has left England for Alexandria, accompanied by several nurses. She goes out in connection with the charitable enterprise of the Knights of St. John.

THE Naval Medical Department has furnished every sailor and marine in the expedition to Egypt, with a charcoal portable filter fitted with caoutchouc tubes. This form of filter was used in the Ashantee expedition, and answered its purpose well.

IT has been decided by the Hove Commissioners, on the recommendation of the works committee, to expend £2,580 for carrying out various alterations in the sewerage system, suggested in the report of Sir Joseph Bazalgette to the Brighton Town Council.

THE *Cambrian* says that Madame Adelina Patti will give a grand morning concert at the Albert Hall, Swansea, on Thursday, September 14th, for the benefit of the hospital of that town. The arrangement of the programme Madame Patti has taken in hand herself.

A DANGEROUS epidemic has, it is stated, broken out in Russia, which has been attributed to the incredibly overcrowded state of the prisons. A central hospital is being erected at Viborg, in connection with the epidemic.

THE French Association for the Advancement of Science will begin its eleventh meeting on August 24th, at Rochelle. There is a section of Medicine, and English physicians and biologists will be cordially welcomed.

M. MARTINEAU has treated six hundred syphilitic patients by subcutaneous injection of ammonio-mercuric peptone. He has performed 11,000 injections in all; he has never had any mishaps, neither phlegmon nor abscess, even in a patient suffering from diabetes mellitus. He has hardly ever seen any signs of stomatitis or salivation, nor any of the phenomena of mercurial cachexia, or gastro-intestinal disturbance.

DR. LEVINSTEIN, superintendent of the asylum at Schöneberg, near Berlin, died on the 7th instant, at the age of fifty-one. He was well known as an enlightened psychological physician, and especially for his writings on the form of insanity due to the habitual use of hypodermic injections of morphia.

A STATEMENT appeared a few days ago in a daily paper, on the authority of a telegram from a correspondent at Limerick, that a foreign vessel had arrived at Foynes on the Shannon, with two cases of Asiatic cholera on board; and that the vessel had been placed in quarantine. The medical officer of health at Foynes, however, informs us that no case of Asiatic cholera has come under his notice, either on board ship or otherwise.

MR. RANDLE BUCK of Worcester, who officiated as Secretary to the Museum Committee on the occasion of the recent meeting in Worcester, has received a gratifying recognition of his efficient and courteous services from several of the exhibitors in the museum. On the evening of Friday, August 11th, a silver salver was presented to him by the representative of the firm of Messrs. Allen and Hanburys. It bears the following inscription: "Presented to J. Randle Buck, Esq., L.R.C.P., by a few exhibitors at the Museum of the Jubilee Meeting of the British Medical Association, held at Worcester, August 1882, in recognition of his ready co-operation and unvarying courtesy and kindness."

THE Report of Council of the British Medical Association, published in the JOURNAL of August 12th, contained an announcement of the death of Mr. Jeston of Henley-on-Thames. We have received from Mr. May of Reading, an old member of the Association and friend of Mr. Jeston, a letter stating that our venerable associate enjoys excellent health and vigour, and at present fills, for the fifth time, the office of Mayor of Henley. It gives us much pleasure to be able to correct the report of his death; and we are sure that all members of the Association who have met him at the annual meetings, will be glad to hear that he is still among us.

MEDICAL STORES FOR THE LIFE GUARDS.

WE understand that an abundant supply of drugs and surgical appliances was embarked on board the *Calabria* along with Surgeon-Major Hume-Spry. The statement in the daily papers, that this surgeon was sent out by the Army Medical Department without surgical appliances, is, therefore, inexplicable.

CORONERS' EXPENSES.

THE following were the disbursements of the different coroners for the county of Middlesex: Sir John Humphreys, Eastern District, 154 inquisitions from July 4th to August 4th, £248 7s. 10d.; Dr. G. D. Thomas, Central District, 98 inquisitions from July 4th to August 2nd, £200 11s. 6d.; and Dr. Diplock, Western District, 58 inquisitions from July 4th to August 3rd, £85 19s. 6d.

DIARRHOEA AT ALDERSHOT.

THE cases of illness among the Volunteers at Aldershot must have occurred in consequence of the men neglecting the warnings posted as to drinking and washing water. Notices to the effect that "This water is for washing only", or "This water is for drinking only", are posted over the different water-taps. In spite of all warnings, the men, when hot and tired, will drink the first thing that comes to hand.

SANITARY MUSEUM OF NEW SOUTH WALES.

THE Colonial Government are making rapid progress with the organisation of a sanitary museum of New South Wales, which has now been permanently established in the Garden Palace at Sydney, the building in which the International Exhibition of 1879 was held. Arrangements are now being made for the shipment of contributions to the museum from manufacturers in this country, which for the most part consist of sanitary appliances and articles connected with building.

SMALL-POX IN UTERO.

MR. SWEETING, in his last report on the Fulham Hospital, mentions an undoubted example of the incubation of small-pox *in utero*, which came under observation. In this case, the mother was attacked

on July 19th, the child was born on the 21st, and its eruption appeared on July 28th. Two infants born in the wards, of mothers suffering from small-pox, were vaccinated immediately after birth. In one, where the birth occurred seventeen days after the mother's attack, the operation was unsuccessful, and death ensued; in the other, where birth occurred eight days after the mother's invasion, it was successful, and the child did well. Another infant, who was vaccinated unsuccessfully on admission, fourteen days after the mother's attack, died.

STIMULANTS IN THE MELBOURNE HOSPITAL.

THE amount of alcoholic stimulants prescribed at the Melbourne Hospital has been the subject of considerable discussion by the managing committee. From the report of a recent meeting, we learn that there has been a very great reduction in each of the various liquors prescribed, except whiskey. Taking the last week in April as an average for 1882, the decrease in cost for the current year would be as follows: Brandy, £542; wine, £72; gin, £27; rum, £13; champagne, £64; porter and ale, £117; or £835 in all. On the other hand, the increase in the charge for whiskey would be £11. Excluding the brandy used in the form of spiritus vini gallici, between the 1st and 29th of April there had been a decrease of 267 ounces of brandy, 397 ounces of wine, 14 ounces of gin, 12 ounces of rum, 6 ounces of champagne, and 42 ounces of porter and ale.

THE FLESH OF TUBERCULOUS ANIMALS.

THE City Physician of Vienna, Dr. Kammerer, has addressed a report to the magistrates of that city on the dangers which threaten the health and life of the population through animals affected with tuberculosis. The victims are insidiously struck down, says Dr. Kammerer, through two of the most important articles of daily diet—milk and meal. The milk of cows with tuberculosis acts as an unconscious vaccination upon adults and children who partake of it; and, in the case of the latter, the seed of tuberculosis is being imperceptibly sown amongst thousands in the great towns. Dr. Kammerer regards infection by this channel as being quite as fruitful a source of the disease amongst the young as hereditary, to which it is usually traced. He regards it as exceedingly doubtful whether boiling or roasting ever so thoroughly can effectually eradicate the germs of infection in the flesh of tuberculous animals.

MORTUARY SCANDALS IN THE METROPOLIS.

THE disgraceful condition of the metropolis, as regards mortuary accommodation, has repeatedly been the subject of comment in these columns. At a recent meeting of the Strand Board of Works, attention was directed to the fact, that, neither in the parish of St. Clement's nor in the Duchy of Lancaster, was there a mortuary for the reception of the dead; and it has happened recently that a gentleman who expired in the law courts had to remain there. The existence of such a state of things reflects great discredit on our local sanitary administration; but it is due to the Strand Board of Works to state, that there is some prospect of their district being provided with mortuary accommodation. Its provision is to be dealt with as soon as the question relating to the disinfecting chamber in Denzil Street has been decided by the Court of Chancery, providing that the Board are permitted to retain these premises.

THE DANCE OF DEATH.

IN a recently published report by the Board of Trade on the overcrowding of emigrants in lodging-houses, Dr. Brodie states that he has been personally informed that, when the beds in the lodging-houses are full, an itinerant musician is introduced to attract the attention of the sleepers, who are encouraged to rise and join the dance in which those who have been unable to obtain sleeping accommodation are engaged. When this *ruse* has succeeded in getting those in bed to vacate their places, the beds are then occupied by those who first commenced the dancing, so that the same bed or floor-place may be occupied by different persons during the night. It is not difficult,

therefore, Dr. Brodie adds, to comprehend the fearful state of overcrowding that must necessarily exist, and the consequent poisonous state of the air.

ALLEGED CASE OF FASTING.

AN account has been published in the daily press of a singular case of fasting that has recently occurred at Reigate, where a woman, aged 34, has, it is alleged, lived without food or drink for fourteen days. The woman, who has been obtaining her livelihood by laundry work, states that she left Brighton for London on foot, in search of work. She reached Reigate in a penniless condition; and, feeling ill and exhausted, entered a shrubbery, where she made up her mind to lay down and die. It is stated that the woman has described several circumstances that took place within her view and hearing during the time. Upon being found, she was taken to the police-station, and was seen by two medical men, and carefully treated. It is very singular, as the report explains, that, in a short time after her admission to the work-house, she partook of the ordinary diet without experiencing any ill effects. The woman is now doing well, but she is persistent in insisting on the truth of her statement.

THE TYPHOID EPIDEMIC AT BANGOR.

THE outbreak of typhoid fever at Bangor is occasioning considerable uneasiness and alarm. Up to last week, no fewer than 141 cases had occurred, eight of which terminated fatally. Dr. Barry, one of the medical staff of the Local Government Board, who has been investigating the circumstances of the outbreak, corroborates the opinion of the health-officer, Mr. Rees, that the chief cause is to be found in a polluted water-supply, and that the subsequent spread of the disorder has been due to defective drainage arrangements. The local authorities have engaged the services of trained nurses from London; and, as the hospitals are full, arrangements have been made for the erection of tents. Much distress prevails, and the bishop has placed himself at the head of an organisation intended to assist the poor and aid the nursing institutions. One nurse has, it is stated, as many as sixty cases under her charge. According to the latest advices, the outbreak presents no sign of abatement, fresh cases being reported almost daily. An additional supply of trained nurses has been obtained, and the appeal for subscriptions to relieve the poorer classes of patients is being liberally responded to, Lord Penrhyn subscribing £100. Fortunately, there are comparatively few fatal cases. The officer of health has for the second time condemned the filter-beds at the reservoirs, which, he says, are infected with germs of typhoid. He recommends that the water should be allowed to pass direct from the river, pending a proposal to take it from Ogwen, or one of the large river lakes. Arrangements are being made for a supply of tent-hospitals, which the Bishop, who is co-operating with great zeal with the local authorities, has expressed a readiness to have erected in his park.

ENDEMIC HÆMATURIA IN EGYPT.

THE *Times* correspondent in Egypt draws attention to the danger menacing our troops from the endemic hæmaturia which prevailed largely among the French troops in the expedition of 1799. It is stated on the authority of Dr. Mackie of the British consulate, that about three-fourths of the fellaheen population, suffer from this distressing scourge. It is often fatal, generally leaves permanent mischief, and is always of long duration. Last year, about a dozen of the staff of the Eastern Telegraph Company at Suez, were invalided within a month or two from this disease. Dr. Murison, assistant to Dr. Mackie, who reported on it to the Company, found that all those who were attacked had, when out walking or shooting, drunk directly from the Sweet Water Canal, near Suez, swarming, as do most of the canals in the country, with molluscs and small worms. If drinking directly from the canals, or bathing much in muddy water, be avoided, and water well boiled or well filtered (the filter being kept well cleaned and in good order), be alone used for drinking purposes, the disease may be prevented. The Mediterranean troops have, it seems, been left unprovided with any filters, and it is certainly,

greatly to be hoped that the authorities will immediately adopt measures to save our troops from so formidable and painful a disease as hæmaturia.

VACCINATION AND SMALL-POX.

SOME further evidence of the value of vaccination as a prophylactic of small-pox is afforded by the statistics of Fulham hospital recently published by Mr. Sweeting. During the year sixty-nine fresh members of the staff were engaged, all of whom were re-vaccinated before going on duty. Four of these had previously suffered from small-pox, including two nurses. Not a single case of the disease occurred amongst them, although the total number of staff at one time numbered eighty; and that it was due to re-vaccination and not insusceptibility to fever, is shown by the fact that ten of them had recently taken scarlatina. Mr. Sweeting also gives the statistics of the incidence of small-pox upon the staff since the institution of the hospital. The total number of the staff amount to 295, and of these forty-two had previously had small-pox, while five only caught the disorder. Four of these five had been re-vaccinated, and in all cases the disease was mild and recovery rapid.

SMALL-POX IN STAFFORDSHIRE.

AN extensive outbreak of small-pox is reported at Wednesbury. In a special report on the epidemic, the health-officer states that the disease was introduced as far back as March last. During the twenty weeks following, and ending with July 28th, 217 cases were reported; of these 202 recovered and 15 died, 11 being unvaccinated. Of those who recovered, 162 were mild and modified cases, and 40 were confluent attacks. The deaths were equal to 7.5 per cent. of the total cases. Prompt measures were resorted to, to stamp out the disease. Information was spread by means of bills and placards, and a house-to-house visitation made; but these measures have been taken under considerable difficulty, owing to the absence of any notification of the occurrence of fresh cases. Unfortunately, the town possesses no hospital accommodation for isolating cases of infectious disease, and many persons have been reduced to a state of pauperism in consequence of the prevalence of small-pox. Acting upon the advice of their health-officer, the local board have resolved, somewhat late in the day, to erect a number of temporary huts. The disease is reported to be rapidly on the increase in South Staffordshire. Gateshead has also been visited with a serious outbreak, but there special provision has been made for readily isolating persons attacked.

ASSES' MILK.

PROFESSOR PARROT, on the basis of the experience of the extensive nursery of the Hospice des Enfants Assistés of Paris, considers demonstrated the superiority of asses' milk over that of other animals in the hand-feeding of infants. M. Parrot has seen this milk bring about the veritable resurrection of infants. He formulates his practical conclusions in the following propositions. In the absence of a good nurse, a milch ass is the best substitute for infants. Its sober character, the tolerance which it has of stable-life, especially also the chemical constitution of its milk, which very closely approximates to that of the mother, place it first among animals which can be utilised for artificial feeding of infants. After it come in order the mare, the goat, and the cow. A she ass in full milk can only satisfactorily nourish three infants of the average age of five months. In places where the goat can live free, and find the food which it likes, it may be substituted without inconvenience for the ass. Asses' milk should play a large part in the treatment of children's diseases. It is particularly indicated in gastro-intestinal affections. Exceptionally, it will replace with advantage the mother's milk. All public institutions destined for the maintenance of new-born children and young infants, healthy or diseased, should be provided with arrangements for keeping, in proportion to need, asses and goats. Not more than two, or at most three, infants should be under the charge of one person.

QUARANTINE IN INFECTIOUS DISEASES.

THE French Minister of Public Instruction has recently submitted to the Academy of Medicine of Paris the question—"How long is it necessary to keep children away from school after an infectious disease?" M. Hillairet replies to this question in respect to the eruptive fevers, mumps, and diphtheria. With scarlet fever, measles, and small-pox, the children should be kept isolated from their comrades, he thinks, for forty days. With chicken-pox, the duration of the isolation should be twenty-five days. Mumps are certainly infectious; the infection appearing to be especially communicable by the respiration. The period of isolation necessary, taking into consideration the longest period of duration, is twenty-four to twenty-five days. The longest period of isolation for diphtheria he states at forty days. The isolation should be absolute; and, where it cannot be thoroughly carried out in the school establishment, the patient must be sent away. Clothing, linen, and the apartment are required to be thoroughly disinfected.

SWISS VACCINATION LAW.

THE Swiss correspondent of the *Times* states that Mr. Tebb, of the International Antivaccination League, is as much mistaken in describing the Swiss Epidemic or Contagious Diseases Law, which failed to pass the ordeal of the Referendum on July 30th, as a compulsory vaccination law merely, as in ascribing its rejection to the determination of the Swiss people to have no such law forced upon them. In nineteen out of the twenty-two Cantons, compulsory vaccination laws are already in force. The measure was rejected for various reasons: because of its inquisitorial provisions touching the isolation and treatment of patients suffering from fevers and other contagious diseases; because the Cantons consider themselves quite competent to make epidemic laws of their own, if they want them; and—the strongest reason of all—because the people desired to protest against the centralising tendencies of the Federal Government, which is perpetually proposing laws that trench, or are supposed to trench, on the legislative independence of the Cantons. On the very same day, indeed, a measure for the protection of inventions met with a like fate; and, in many parts of the country, the people have declared their intention of voting against whatever comes from Berne.

WET-PACKING IN ASYLUMS.

It would be interesting to obtain precise and authoritative information as to the value of wet-packing, in the treatment of mental diseases, and to know precisely in what class of cases it is found beneficial, and in what cases it is contraindicated. At present, the estimation in which it is held, seems to vary greatly in different asylums. In some, it is never employed under any circumstances; in others, it is pretty frequently resorted to. The Commissioners in Lunacy note that, in the interval between their two last annual inspections of the Sussex Asylum at Haywards Heath wet-packing had been employed in the cases of six men and four women, the former on 28 occasions, for 103 hours in the aggregate, the latter on 27 occasions for 82 hours. No wet packing had been prolonged beyond four hours, and generally, it had been for a much shorter time. One of the women so treated, had also been dry-packed nine times altogether for 36 hours, once only, so long as six hours. The Commissioners are well advised in regarding this form of treatment as a species of restraint, and in recording the amount of its employment. It is a remedy which may be beneficial when prudently and skilfully used, but which might do harm if indiscriminately employed; and which might, in unworthy hands, degenerate into an instrument of punishment.

STIMULANTS IN THE GEORGE'S-IN-THE-EAST.

THE guardians of St. George's-in-the-East had the subject of stimulants brought before them at a recent meeting, and passed a resolution expressing satisfaction with the report of the medical officer, and requesting him to apply the same treatment to inmates of the workhouse as to patients in the infirmary. It is a curious fact that Dr. Niel

Cooper had of his own accord discontinued the use of malt liquors in the workhouse, but had renewed the allowance, against his own convictions, and solely in deference to an intimation from the Board. This is an effectual answer to the insinuation frequently thrown out against the profession, that they stand in the way of reduced stimulation, and, in opposition to the guardians, keep up the expenditure on alcohol. Dr. Cooper's satisfactory report was that he had diminished the annual charge on this item from £231 to £95, a decrease of £136, notwithstanding 211 more admissions, and a lower death-rate of 2.1. Dr. Cooper continues to administer stimulants as a medicine, with due caution and in defined doses. Dr. Cooper reported that the withdrawal of the beer ration to nurses and the substitution of a cash equivalent had a marked effect on the discipline of the infirmary. He had found them perform duties personally which, previously, convalescent patients had been bribed by beer to do. He had not, since the change, had occasion to report any officer for intoxication, and he had found the nurses keep awake much better than when they drank their allowance of beer.

MIDWIFERY IN THE SANDWICH ISLANDS.

THE brother (non-medical) of one of our members resident in Honolulu, gives the following description of the *modus operandi* of the Hawaiian midwife. "The midwives here are for the most part men—usually old men. When the woman's time draws near and labour commences, she is placed sitting on a man's knees with her back to him. He then clinches his hands over her abdomen, and with all his strength hugs the woman to him, until the child is actually forced into the world, falling to the floor between the operator's feet. The umbilical cord is then cut, and always left very long. Then the woman is placed upon her feet, and the midwife takes her tongue, and draws it steadily until she gulps, or retches, this action causing the prompt ejection of the after-birth. After this she goes and flounders about in the sea, and returns to land, ready for such domestic duties as may fall to her lot or inclination. Native children are—as may be inferred from the way in which they are introduced to existence—very easily born; but should the baby stick at all, or make any bother about being born, then the mother knows it is going to be half white, as this latter kind of baby is so much bigger in the forehead. It is a wise child that knows its own father in this country. So well recognised is this fact that natives never ask, 'Who is your father?' but only, 'Who is your mother?' when they desire any acquaintance with one another's genealogy."

CORONERS.

THE *Observer* mentions that a very curious inquiry has recently been heard before the Lord Chancellor, sitting in chambers. His lordship is, it seems, *ex officio*, censor of coroners, and can remove a coroner *suo motu*, if he be dissatisfied with his conduct. This is a very wide power, especially when we reflect that the Lord Chief Justice of England is General Coroner of the Realm; and that he is, consequently, liable to be brought before the Lord Chancellor—censured, admonished, and deprived of his office, with all its dignity and with such few emoluments as may attach to it. Statute law, however, is invariably bad law, and we must take it as we find it. In the present case, the gentleman dragged into court was coroner for one of the home counties; and the offences alleged against him were, that he had unduly delayed inquests, and had in some cases refused to hold them where the police considered them necessary. His answer to these charges was simple. If, he urged, he were to hold an inquest whenever he was requested to do so by the police, his district would need twenty coroners instead of one; and, as regarded the delay, he alleged that a county coroner may often have to travel from one place to another, and thence to a third, and thence to a fourth—a journey of some hundred miles in all; and that it is impossible to settle inquests so as to meet the exact convenience of the friends and relatives of the deceased. Lord Selborne, as we understand, was so far impressed with these representations as to exonerate the coroner from serious blame; but he delivered himself of a somewhat

voluminous judgment, which—with a view to the guidance of coroners in future—ought to find its way into the *Law Reports*, but which, having been delivered *in camera*, will probably never again be heard of.

A STRANGE DEATH.

THE Coroner for Central Middlesex has concluded an inquiry relative to the death of a man, Robert Anderson, in St. Pancras parish, who was found dead in bed under mysterious circumstances. In an envelope was found a letter, addressed to his brother, with whom he lived, which ran thus: "Mr. R. Anderson, poisoned." Three other similar letters had been posted to other relatives before the deceased's death. The handwriting on the envelopes was altogether different from that of the letters. No paper, cup, bottle, poison, or indeed any article, was found which threw light on the cause of death. The divisional surgeon of police for Paddington, who made the *post mortem* examination, found the body far advanced in decomposition. There was no appearance of corrosive poison in the throat or mouth. The intestines, heart, liver, and other viscera were healthy. The brain was an indistinguishable pulp from decomposition. The posterior surface of the stomach was somewhat reddened. Mr. Blyth, who made an analysis, did not find any poison; and, in a report which was read at the adjourned inquest, is reported to have given it as his opinion that death had probably resulted from apoplexy or kidney-disease. Since the viscera were healthy, and the man was only thirty-two years of age, this opinion appears to be contrary to probabilities; moreover, the man had been observed to be strong and eccentric, and the letters referred to above were presumably in the handwriting of the deceased. Mr. Blyth's opinion does not seem to have commended itself to the jury, for it was only after a long deliberation that they returned an open verdict.

SPREAD OF DIPHTHERIA BY THE WIND.

IN commenting upon the high rate of mortality from diphtheria and croup, which together caused nearly half the zymotic mortality in the Carnarvonshire Combined Sanitary District during 1881, Mr. Rees, in his annual report, discusses the probable spread of diphtheria by the prevailing winds. The most noteworthy outbreak occurred in the Pwllheli rural district. On March 4th, a death from diphtheria took place at Bryn-y-gwynt, about four miles west-south-west of Rhiw, where the disorder was prevalent. A boy had left Rhiw suffering from sore-throat; and, shortly after his arrival at Pwlldefaid, several cases of sore-throat arose, but mostly of a mild character. The worst case was that of a brother of a girl who died at Bryn-y-gwynt, who went home; and, though he recovered without any suspicion having been aroused of his having diphtheria, his sister unmistakably developed the disease. When Mr. Rees arrived at the house, the funeral had taken place; the house had been cleansed and whitewashed, the chaff-bed had been emptied on the manure heap, and the ticking and clothing washed, after having been first exposed to a strong south-west wind. The notification of the death of this patient reached Mr. Rees too late to prevent this well-meant, but mischievous, action of the friends of the deceased. Early in April, notice of a death from diphtheria at Llanistyn was received; a child aged six had sickened about the 1st, and died on the 6th. Nothing could be discovered in connection with the house, of a character so exceptional that it could be reasonably supposed to have given rise to the disease. The house is seven and a half miles from Bryn-y-gwynt, where the last death took place, and is situated to east-north-east of it. On the day when the clothes and the chaff were exposed to the wind, its direction was: March 17th, south-west, light; 18th, south-west, fresh; and 19th, west-south-west; after which it shifted to north-west and west. In the present stage of the question, as to the dissemination of diphtheritic germs by the wind, isolated observations cannot count for much; and, while recording these data, it would not be wise to attach too great importance to them. They may, however, as Mr. Rees explains, prove to be useful in future, if considered in conjunction with others over more extended areas.

VACATION LECTURES IN BERLIN.

THE next course of vacation lectures to medical practitioners, given by members of the medical Faculty of the University of Berlin, will commence on September 20th, and continue till near the end of October. The course will be as follows. 1. *Anatomy and Histology*: Professor Hartmann, Human Anatomy: Dr. Jürgens, Pathological Anatomy with dissections, Normal Histology, and Normal and Pathological Anatomy of the Brain and Spinal Cord; Dr. Grawitz and Dr. Friedlander, Pathological Histology; Dr. Wernicke, Anatomy of the Brain and Spinal Cord; Dr. P. Guttman, Pathological Anatomy of the Mammary and Pelvic Organs. *Physiology*: Professor Christiani, Physiology of the Organs of Sense, and the Undulatory Theory in relation to Acoustics and Optics; Dr. Herter, Medical Chemistry. *Materia Medica*: Dr. Steinauer, Materia Medica and Experimental Toxicology. *Medicine*: Dr. A. Fränkel, Dr. Litten, and Dr. Guttman, Clinical Medicine, with special reference to methods of Physical Diagnosis; Dr. Riess, Diagnosis of Internal Diseases; Dr. B. Fränkel, Laryngoscopy and Rhinoscopy; Dr. Tobold, Laryngoscopy; Dr. Zuelzer, Examination of the Urine; Dr. Lazarus, Pneumatic Therapeutics. *Psychiatry and Diseases of the Brain*: Dr. Sander and Dr. Moëli, Psychiatry especially in its Forensic Aspects. *Diseases of the Nervous System and Electro-Therapeutics*: Professor Bernhardt and Dr. Remak, Electro-Diagnosis and Treatment of Nervous Diseases; Dr. Wernicke and Dr. Gnauck, Diseases of the Nervous System. *Surgery*: Dr. Hahn and Professor Küster, lectures on Recent Progress in Surgery, and courses of Operative Surgery. *Ophthalmic Surgery*: Professor Hirschberg, practical course of Ophthalmic Surgery; Dr. Horstmann, Methods of Ophthalmic Research, especially the use of the Ophthalmoscope and the Determination of Refraction. *Aural Surgery*: Dr. Trautmann, a practical and theoretical course. *Obstetrics*: Dr. A. Martin, Dr. Landau, and Dr. Löhlein, Gynaecological Operations; Dr. Runge, Obstetric Operations, with special reference to Forensic Midwifery. *Diseases of the Skin, and Syphilis*: Professor G. Lewin and Dr. Heymann, Syphilis and Diseases of the Skin; Dr. Zuelzer, Diseases of the Skin. *Forensic Medicine and Hygiene*: Professor Liman, *Post Mortem* Examinations; Dr. Falk, State Medicine and Sanitary Police; Dr. Herter, Hygienic Chemistry; Dr. L. Lewis, Toxicology. The instruction will, in each course, be of a practical as well as a theoretical character. Further information may be obtained from Professor Hirschberg, 36, Karlstrasse, Berlin, N.W.; or Herr Anders, 2, Hagelsbergerstrasse, Berlin, S.W.

GRAND LARCENY IN ITS MEDICAL ASPECTS.

DR. DAVID W. YANDELL, whose visits to London in recent years have done much to strengthen the bonds of union, sympathy, and mutual respect, between the medical profession in this country and in America, delivered, in February last, the valedictory address of the session in the University of Louisville, Kentucky, in which he is Professor of Surgery. Choosing as his subject the life of Dr. Richard Oswald Cowling, a distinguished teacher in that institution, who was carried off, twelve months ago, by acute rheumatism, at the age of forty-two years, in a career of much promise and considerable achievement, Dr. Vandell made it evident that Dr. Cowling was an able surgeon, with high unselfish aims, and a man of truly gentle and generous nature; and that he possessed a sense of humour, combined with moral courage and literary skill, that well fitted him to play a really useful part in the United States in the rôle which he had taken up as censor of medical frauds and impositions. In the *Louisville Medical News*, which he started and edited with strong logic, unflagging intrepidity, and unailing good taste, he assailed certain medical institutions that were unworthy of the support of honest men, and succeeded in stamping out more than one of them. And in this crusade, irony was one of his favourite weapons, and one which he wielded effectively, as may be seen in the following clinical lecture, purporting to have been delivered at a certain questionable medical college, which advertised, amongst its unique advantages, that its students had access to the abundant clinical material of the State Peni-

tentiary. "Our prognosis, gentlemen, in cases of grand larceny must necessarily be guarded. It depends greatly on the amount the patient has taken before we see him. I think it would be safe, however, to put it down from two to four years. Relapses are particularly bad, as they indicate a diathesis in this direction. In regard to treatment, there is no specific; but, by exercising a proper restraint over the patient, a second attack may be postponed for a time. Our chief concern is to prevent a breaking out. Dietary and hygienic measures are all important. In England, sea-voyages to Australia have been prescribed with benefit. Short hair is desirable, that the brain may be kept cool; and loose-fitting clothing, that the body may be comfortable. We believe greatly, too, in rendering the patient as attractive as possible to himself; to which end, the dull monotony of our modern fashions is relieved by the alternate stripes of white and black which you see the patient exhibit in his coat and trousers. A bath taken *à fresco* at the pump on Saturday afternoons, and a vigorous scrubbing with yellow soap, does much to promote the action of the skin, and to divert the mind. A pint of pea-nut coffee, sweetened with sorghum, three times a day; a modicum of bacon (sow-belly of the poets), and baked beans, form an appropriate diet in this complaint; and these, with moderate exercise—say about ten hours a day at the rock-pile, or breathing the invigorating atmosphere of the hemp-factories—make up our treatment. Our attentive clinical assistants, Messrs. Thrashem and Shootem, will take the case in charge, and report progress." All that Dr. Yandell tells us about Dr. Cowling deepens our regret that so gifted a man was not longer spared to shatter shams and expose abuses, while at the same time he laboured zealously at professional work.

A DENTAL HERESY.

It appears that, like the professions of medicine and divinity, that of dentistry has its heresy. From the account given of it by Dr. H. S. Chase, one of the authors, in the *Medical and Surgical Reporter of Philadelphia*, we learn that it is called the "New Departure" by the dental journals, though who first gave the movement that title is not known. The New Departure is not only a new method of practice, but the theory upon which the practice is based is also new. The practice is described as involving methods of saving the natural teeth entirely diverse from the old methods, and its history is as follows. About eight years ago, Dr. Fletcher, in England, announced in the dental journals that nine out of every ten gold fillings leaked. That is, the gold plug did not exclude saliva from the cavity of decay in which it was placed to do such duty. An "experimental dental club" in America demonstrated the truth of the assertion, much to the disgust of its members. About this time, Dr. Palmer of Syracuse, New York, asserted, in the *Dental Cosmos* of Philadelphia, that the failure of operations with gold lay mainly in its incompatibility with "dentos" (tooth-bone), forming with the latter a galvanic battery of low power, but of constant operation, of which gold was the negative element of the battery, and "dentos" the positive. As is well known, it is the positive element that suffers chemical disintegration in the battery. The entrance of saliva under and around a gold plug in a tooth gives the condition of a constant battery; and, consequently, a constant decay of the tooth occurs at that point. Dr. Chase of St. Louis, and Professor Flagg of Philadelphia, early "took hold" of the subject; and "not only made extended investigations themselves, but also interested several gentlemen, who are teaching physical science in well-known colleges and universities. The latter confirmed the theories of the 'New Departure Corps' by experiments in the line of metallurgy and magnetism." When the results of these investigations were given to the dental profession through its magazines, there ensued great excitement; and for six years there has been war between the "New Departure men" and the "gold men." The present condition of the heresy is put by "an eminent dentist, and president of an important dental society," in the following words, written in a private letter, recently, to Professor Flagg: "....." I feel, as I know do hundreds of others, that I owe much to you and your

confères, Drs. Palmer and Chase, for the work you have done in making more plain and practicable the great business of saving teeth; and, although it is still the fashion to deride the 'New Departure' doctrines in the dental meetings, I know of none who have not been influenced by them; and I believe there are not many who do not apply them at this day in practice." The outcome of the whole heretical movement is this: gold as a filling material takes an inferior position. During the eight years that this subject has been under discussion, the thought of the profession has been turned towards the discovery of materials that would be in more "electrical harmony" with tooth-bone than gold is, and also make water-tight and saliva-tight fillings; and there has, it is alleged, been great success in this line. Alloys of metals have been made, which, being amalgamated, make not only water-tight plugs, but even those which will exclude alcohol as a test of completeness, and which have a tint more in harmony with the colour of the enamel than gold has. Besides metallic alloys, there are chemical combinations made at the instant introduction into the cavity of decay, which are in comparative electrical harmony with dentos; and are, indeed, "the positive element in the dental battery." All this is interesting to the profession and to the public, and so far it is comparatively new to us; and will, we hope, bear investigation.

SCOTLAND.

THE SOUTHERN HOSPITAL FOR GLASGOW.

THE Committee in charge of the proposed hospital for the South of Glasgow have secured a suitable site at the Queen's Park, four acres and a quarter in extent, at five shillings a square yard, and building operations will be commenced soon.

BRITISH ASSOCIATION AT ABERDEEN.

AT a meeting of the various public bodies of the town and county of Aberdeen held last week, it was resolved to appoint deputies to appear at the Southampton meeting of the British Association to urge the claims of Aberdeen as the place of meeting for 1884. Oxford is said to be, owing to some unknown cause, unable to carry out arrangements for the meeting which was to be held there in 1883.

HEALTH OF EDINBURGH.

LAST week, the mortality in Edinburgh was 16 per 1000. A new feature in the weekly report is the publication of the number of cases of infectious diseases notified by practitioners to the health-officer. During the week, there were 58 such notifications, of which 39 were of scarlet fever, and 7 deaths from such diseases.

OUTBREAK OF FEVER IN CUPAR FIFE.

A SERIOUS, though happily limited, outbreak of fever has occurred at Cupar Fife. Of the cases reported by Dr. Wm. Whitelaw, the medical officer of health, on the 9th instant, two have since died, and three others have been noted, some are still in a critical condition. The disease seems to be limited to the district in which it began as no new cases have occurred elsewhere.

FIFE AND KINROSS LUNATIC ASYLUM.

AT a meeting of the Board of the Fife and Kinross District Lunatic Asylum held last week, the report of Dr. Sibbald, Commissioner in Lunacy, was read and considered. In the report, it was shown that a reduction of thirty inmates had been made since the last visit of the Commissioner; also that the extent to which pauper lunatics were sent to such asylums varied greatly in different parts of the country—thus, in the county of Renfrew it was at the rate of 141 persons per 100,000 of the inhabitants, while in the county of Forfar 249 per 100,000 are detained in asylums. The difference in the amount of asylum accommodation thus required, if provided as it would be for Fife and Kinross, and taking it at the average cost of district asylum accommodation, would involve a difference for every 100,000 of the population of more

than £18,000 in the burden on county assessment, or a difference of more than £33,000 for a population equal to that of Fife and Kinross. At the date of the last entry the asylum was again almost full, and it seemed probable that a further extension would have to be undertaken at a very early date. One important effect in the reduction effected by the superintendent, Dr. Turnbull, would be, if the same policy be continued, to postpone indefinitely the necessity for such an extension. In the report it was also noted that 124 men and 123 women were industriously employed. The general impression produced by the inspection was very favourable to the manner in which the asylum was conducted.

THE BOARD OF SUPERVISION IN SCOTLAND AND BOARDED-OUT CHILDREN.

THE system of boarding-out children by the parochial authorities has recently had attention directed to it by the circular issued by the Board of Supervision, and which they require all inspectors of poor to comply with, and to carry out the regulations contained in it. As the subject of baby-farming in Scotland recently occupied some space in the columns of the JOURNAL, we append the regulations which the Board of Supervision have sent to the parochial authorities in connection with boarded-out children. 1. The inspector of the parish of settlement shall furnish the inspector of the parish of residence annually, in the month of January, with a list of all children boarded-out by the parochial board in the latter parish, the said list to contain the following information: (a) the name and age of the child, (b) whether Protestant or Roman Catholic, (c) the name and address of the person with whom the child is boarded, and (d) the allowance per week payable to the guardian. 2. The inspector of the parish of residence shall retain the list for the use of himself and other Poor-law officials, but shall not make its contents public by laying it before his parochial board or other wise. 3. The inspector of the parish of residence shall immediately inform the inspector of the parish of settlement of any circumstances affecting the welfare of the child that may come to his knowledge.

IRELAND.

ACCIDENT TO A MEDICAL PRACTITIONER.

DR. FRIER, of Waringstown, surgeon, met last week with a severe accident whilst driving. The reins broke, and the horse starting off at a furious pace, Dr. Frier jumped out of his vehicle, but was thrown on the back of his head and sustained a compound fracture of the skull. He lies in a very precarious condition.

BOARD OF SUPERINTENDENCE OF DUBLIN HOSPITALS.

THE annual report of the hospitals (nine) which receive a Parliamentary grant, shows that on April 1st, 1881, there remained 798 patients in these institutions, while the number admitted during the year was 8,970, making a total under treatment of 9,768, of whom 9,050 left the wards cured, relieved, or were dismissed, including 452 who died. The average number of beds daily occupied was 718.11, and the time spent in hospital averaged 20.9 days. The Government's annual grant is £15,722 15s. 9d., which with subscriptions, donations, Hospital Sunday Fund, and other receipts, show a total for the year ending March 31st last of £38,653 18s. 1d. The hospitals were generally found in a satisfactory condition, suggestions being made by the board only on a few minor matters. For example, in Steevens's Hospital they recommend that coloured quilts should be discontinued as unsuitable, while the bath arrangements for the surgical wards are defective, and no change has been made in respect to the objectionable position of the water-closets. In the Hardwicke Fever Hospital no patients suffering from delirium tremens are to be admitted in future, or to be treated in the same wards with fever patients, which is in accordance with a former suggestion of the board. Regret is expressed that in the Rotunda Lying-In Hospital no hospital regulation exists which insures the blankets being washed and purified after each labour case. The mortality in these several hospitals amounted to 5.12 per cent. on those treated to a termination.

HEALTH OF DUBLIN: QUARTERLY REPORT.

DURING the quarter ending July 1st, there were registered in the Dublin Registration District 2,662 births, a number equal to an annual ratio of 1 in 32.7, or 30.6 in every 1,000. There were 2,329 deaths recorded, affording an annual ratio of 1 in 37.4, or 26.7 per 1,000; but, omitting the deaths (66) of persons admitted into public institutions from localities outside the district, the rate was 26.0 per 1,000. Zymotic diseases caused 2,780 deaths, being 329 under the number for the March quarter, and 200, or 42 per cent., under the average for the second quarter of the past ten years. Measles caused 119 deaths; fever, 63; diarrhoea, 32; and erysipelas, 11. There were only four deaths registered from scarlet fever, and but one from whooping-cough. Phthisis caused 322 deaths, a number above the average, and diseases of the respiratory organs 498, being 260 less than the number for the preceding three months; the deaths in this group comprise 317 from bronchitis, and 130 from pneumonia. There were 192 deaths of children ascribed to convulsions. Forty deaths were due to apoplexy, 151 to diseases of the circulatory system, 45 to diseases of the liver, and 31 to diseases of the urinary system.

LOCAL GOVERNMENT BOARD FOR IRELAND: ANNUAL REPORT.

FROM the tenth annual report which has been issued this week, we learn that the average daily number of persons receiving in-door relief during the year amounted to 52,772, being 1,024 fewer than in the preceding year. The out-door lists, it is also satisfactory to learn, diminished by 687, the average daily number being 60,196 against 60,883. During the year ended the 22nd January last, the total number of deaths in the various workhouses was 11,247, showing a decrease of 1,693 deaths as compared with the number last year. Of these, fever caused 552, as against 758; lung-disease 2,317, against 2,323; and deaths by small-pox 64 as compared with 97 last year. There were for the twelve months ending September 29th, 56,027 admitted into workhouses for sickness, being a decrease of 6,582 as compared with the previous year; a decrease of 831 in the number suffering from fever or other contagious disease, while there was an increase of 3,315 in the number admitted who were not sick. In the various dispensary districts, the medical officers during the year attended 444,931 cases at the dispensaries, and 187,562 patients at their own homes, or a total of 632,493, and vaccinated 113,557 persons. The vaccination returns show the large decrease of 34,271, the smallest number recorded since 1863. Of these 113,557 persons vaccinated, 94,381 were under one year old when vaccinated, 15,614 above one year, while 3,562 were re-vaccinations. During the year ended 22nd of last January, small-pox caused 64 deaths in workhouses against 97 in the year preceding, while the number of cases treated in dispensary districts were considerably less than those recorded in the twelve months ending September 30th, 1880, the number being 114, as compared with 863. The disease during 1881 principally prevailed in the Belfast, Killarney, and Waterford unions. As regards fever, there were 9,713 cases attended by dispensary medical officers, being a decrease of 1,498 as contrasted with 1880; and also a decrease in the number of scarlet fever patients by 1,053. There was a considerable outbreak of measles in the Dublin district, commencing in October 1881; and from October 1st, 1881, to April 1st, 1882, 2,750 cases were treated in dispensary patients and 205 in workhouses, making a total of 2,955. Of these, 2,457 recovered, 356 died, and the remainder were under treatment on April 1st. The medical charities' expenditure amounted to £157,244, under which heading is included the cost of medicines and medical appliances, salaries of medical officers and apothecaries, vaccination-fees, and other expenses, showing an increase of £3,869 over that of the preceding year. The Commissioners have recommended loans, amounting to £202,374, to various towns in Ireland, principally for sewage and water-supply; while the amount of sanitary expenditure in rural sanitary districts came, in the year ended September 29th last, to £48,918, in comparison with £51,927 in the year preceding.

POOR-LAW OFFICERS' MEDICAL ASSOCIATION.

THE annual meeting of the members of the Poor-law Medical Officers' Association was held in the Law Library, Worcester, on Wednesday August 9th; Dr. JOSEPH ROGERS (President of the Council) occupying the chair. There was an average attendance of members.

The CHAIRMAN gave an able *résumé* of subjects of interest in the affairs of Poor-law medical officers, about most of which he had written in the BRITISH MEDICAL JOURNAL during the year, prefacing it by observing that, within the last two years, in consequence of certain occurrences, he had made up his mind to abandon, so far as he was individually concerned, the idea of appealing to the Local Government Board, and had determined to endeavour to mould the Association into a Mutual Defence Association. In that spirit, he last year brought before the meeting at Ryde what he had written upon during the year; and he now proposed to briefly refer to what he had touched upon in the columns of the JOURNAL during the past twelve months, and which would show the large amount of injustice perpetrated upon Poor-law medical officers by boards of guardians. Proceeding with his *résumé*, he remarked:

On page 502, September 17th, 1881, will be found my reply to a medical gentleman, who wrote to complain that, having been requested to visit a lunatic detained at a police-station, he was not subsequently called on by the relieving officer to certify, but that the parochial surgeon was called in. Similarly, he complained that, having had a case of lunacy occurring in a patient in humble life, the same relieving officer called in the same parochial officer. I pointed out that the choice of the medical officer rested with the magistrate or justice of the peace, but that ordinarily the determination of the certifier was left with the board of guardians, who found the fee.

Mr. CORNWALL (interrupting): I beg your pardon; the boards of guardians have nothing to do with paying the fee.

Dr. ROGERS: The money is paid out of the poor-rates. It is desirable that it should be publicly known that, though the justices of the peace can call in anyone they like, and determine the amount of the fee, yet boards of guardians are called upon to pay the money. It would be very desirable were this Association to memorialise the Home Secretary, asking for some modification of the Lunacy Acts, whereby the district or workhouse medical officer in whose district or union the case occurs should be the certifier in each case. By the absence of such proviso, much injustice is perpetrated.

On page 576, October 1st, will be found my comment on the complaint of a correspondent, who wrote to state that, when he was appointed medical officer of health, he was paid a stipend of £20 a year, but that he and his colleagues were mulcted of their extra fees, which were worth £40 a year. He naively asked whether, as the health appointments had been determined, he would, together with his colleagues, be entitled to a resumption of the extras. I pointed out that they could only have been taken away with their assent, and that their procedure was clear, to unitedly demand their restoration.

On the same page, a writer requested the editor to state his opinion as to whether it was competent for a board of guardians to appoint a gentleman non-resident in the district to the office which he, a fully qualified practitioner resident therein, was willing to undertake. I pointed out that, under existing regulations, it was not competent for a board to make such appointment; and that his remedy was clear, to memorialise the central authority thereon, if he considered he was aggrieved. Here let me state that the Association has applied to the Local Government Board as to the advisability of relaxing the stringency of their regulations in this particular, but up to the present with no good result.

On page 724, October 29th, 1881, I drew attention to the last annual report of the Commissioners in Lunacy, in which some statements appeared reflecting very seriously on the capacity and status of the Poor-law Medical Service. The statements, though evidently written by some official, derived their importance from the fact that the report was signed by that venerable philanthropist, Earl Shaftesbury. Our Association subsequently wrote to his lordship, and pointed out how grievously the statements reflected on the Poor-law Medical Service, and how much they were in conflict with the real facts of the case, of which the writer must have been ignorant. His lordship frankly replied, and expressed regret that pain should have been given to such a very deserving body of public servants. The correspondence will be found at length on page 835 of the JOURNAL, in the issue of November 19th.

In the issue of November 5th, 1881, page 760, will be found a short report of our proceedings, when the above, and the question of non-resident medical officers, were taken into consideration. In the latter, we pointed out that, in the future appointments of non-

resident medical officers, if, on the report of the guardians appointing and the inspector of the district, it appeared that the reasonable requirements of the sick poor would be fairly met, then such appointments should not as heretofore be subject to annual re-election. As I have before observed, a letter embodying the above was sent to the Local Government Board; but, up to the present, without any beneficial result.

At the same time, we drew attention to the scandalous aspersion of an anonymous slanderer, which appeared in the *Morning Post* of October 6th, 1881, which was to the effect, "that Poor-law medical officers were in the habit of performing capital operations unnecessarily, solely for the fees paid for the same." In conjunction with Mr. Barnes, I waited on the editor, and requested the insertion of a letter, pointing out the ignorance and malevolence of the slanderer. This was inserted on page 1001 of the JOURNAL on December 17th.

A Poor-law medical officer wrote to know whether he would be justified in refusing to attend a person, as a pauper, whom he knew to be in a position to pay for advice; secondly, what could the Poor-law medical officer do when the guardians would not allow the necessities we order; thirdly, whether parish patients obliged to bring their orders before a certain time in the morning; and whether medical officers could refuse to go after that time, if the order were not marked urgent. I replied: 1. By strongly advising that attendance should be given in every case where an order had been given; but that, if the medical officer were aware that the pauper could pay, he should report the same to the guardians, and, in default of any attention being paid to the complaint, then to the Local Government Board; 2. That it had been shown that it was impossible to compel a board of guardians to grant extras, as the medical officer had only the power to recommend and not to order. I also pointed out that, in nearly every case where the medical officer got into conflict with a board of guardians on this point, that, on appeal to the Local Government Board, the medical officer went to the wall. 3. That, although paupers are generally given to understand that attendance at the surgery, etc., must be made before a given hour, that it would be very hazardous to deny them medical relief simply because they had not attended to this requirement.

In the issue of December 24th, 1881 (page 1039), I drew attention to medical relief in the Hartismere Union, Suffolk. It would appear that the district medical officer of Reshanges, in this union, held the appointment at the annual wage of £10 a year—medicines to be provided. Somewhere about this date he resigned, whereupon the guardians proceeded to a fresh election. Two candidates applied for the post. One was Dr. Eustace Firth, living at Debenham, close by; the other, Mr. C. L. Cuthbert, living at Rendlesham, six miles away. The guardians selected the younger and more distant candidate, but, it would appear, not without protest; for a memorial was sent to the Local Government Board, asking them not to sanction the appointment. In my comment on this transaction, I wrote as follows: "I should not draw attention to it, were it not for the opportunity it affords for expressing my strong disapproval of the board that offers, the medical gentlemen who compete for, and the central department that sanctions such parsimonious proceedings. Unfortunately, the latter has yet to learn how much of the pauperism they are appointed to control is due to sickness, and notably to the neglect of it, and which such improper and parsimonious appointments perpetuate and intensify."

At page 1073, December 31st, I replied to a Scotch Poor-law medical officer, who wrote to complain that one of his patients, belonging to another district but resident in his, had been visited, without his knowledge or assent, by the medical officer of the pauper's legal district. He asked: 1. Whether it was legal; 2. Whether it was wise. In my reply, I stated that I did not consider that the medical officer had committed an illegal act, but that he had certainly sinned against the laws of good fellowship; but that the transaction was so contemptible, that I advised his ignoring it.

In the issue of January 7th, 1882, page 13, will be found a letter from me on the alleged punishment of sick paupers in workhouses, written under the following circumstances. A very sensational report had been brought up by the House Committee of the Birmingham Workhouse, as to certain alleged proceedings of the medical officer, Dr. Simpson; and the chairman moved that this gentleman no longer possessed the confidence of the board. Ultimately, it was decided that, pending an official inquiry, the chairman should not recommend any action on his conduct. Seeing, although the charges were vague, that they were, and were intended to be, a serious reflection on the conduct of a professional brother, I wrote, pointing out the exceptional difficulties that were connected with a medical officer's duty, notably in a large urban workhouse, in the form of malingering, general insubordination, and general deception, which he had to encounter. I illustrated my position, and consequently that of others, by citing several instances of deception, etc.,

and the heroic treatment I had adopted towards these impostors. My letter was reproduced locally, and I believe aided materially the defence Dr. Simpson was enabled to make.

In the issue of January 14th, page 71, I answered two questions. One was, whether a medical officer was entitled to a fee of 2s. 6d. for visiting a pauper child boarded-out, at the first visit as well as the subsequent ones. I took the opportunity of pointing out how much our profession suffered by the absence of co-operation; that no other Government would tolerate for a moment the injustice under which we laboured; and reminded him that "union is strength". The other question related to an appointment where a non-resident medical officer had been selected for office without previous advertisement of the vacancy. The answer showed that such procedure was illegal.

On page 137, January 28th, will be found an analysis of a Poor-law inquiry held by Dr. Mouat and Mr. Wodehouse, which resulted in the medical officer being called on to resign his office. I propose to give an epitome of the case, as it is instructive. It would appear that, in July of the preceding year, the medical officer had attended one C. M. in labour without an order. His deputy attended for him, and reported on return retained placenta and flooding. The next day, the medical officer visited her, and found her in an exhausted condition, and diagnosed peritonitis, etc., of a low type. He prescribed opium pills and permanganate of potash in a crystallised form, to be used as a lotion, etc. When the messenger came, he gave the permanganate, but unfortunately did not give the pills, and the permanganate was given without written instructions. On the girl returning for the pills, he gave two powders instead, again without written instructions. On the next day, he received a pressing message to attend, as she was much worse. On arriving, he found that she had swallowed the permanganate in mistake for the powders, which had not been given her. He then prescribed a mustard emetic, and on leaving left instructions to give her another if sickness did not come on. After three-quarters of an hour, he returned; and finding that she had not been sick, decided that the powders should be given her, and left word that they were to let him know how she progressed. The next day, he heard that she was worse, but he did not visit her. On the next morning, at 11 A.M., he received an urgent order from the relieving officer to visit her. This he did not do until 2 P.M., when he heard that she had died at 12.15 P.M. I have read many letters from the Local Government Board to medical officers after official inquiries, but have never read anything so terribly damatory as the one sent to this medical officer, and I regret to state that I could not see any grounds on which I could justify his conduct. What adds to my regret in this case is this, that the medical officer sent all the documents in the affair to me, and asked my help in the matter; and when I wrote and stated I could not defend his conduct, I was pressed by some medical officer in his neighbourhood to modify my opinion. Had I done so, it would have been of no avail; added to which, it would have weakened any influence I might exert in any case of proved official injustice.

In the issue of February 11th, page 213, will be found a report of a council meeting, when we not only tendered our sympathy to Dr. Simpson, medical officer of Birmingham workhouse, in the persecution to which he had been exposed, but pointed out that the requirements of this large workhouse could not be fairly met by the very limited medical staff provided by the board of guardians.

In the same issue, on page 214, will be found a reply to a correspondent, who wrote to complain of his having given evidence in a police court, and subsequently certified the lunacy of the party, for neither of which he had been paid. I pointed out the law of the case, and showed him that he should have applied for the same.

On the same page, I answered a correspondent whose case was a very hard one. He had visited and certified in a case of lunacy, travelling twenty miles in so doing. He had sent in a claim of £1 1s., and the guardians reduced the same to 10s. 6d., or a fraction over 6d. a mile. I have repeatedly pointed out that the determination of the amount of the fee does not rest with a board of guardians, but with the magistrate or justices, who can give as much in reason as they like, and the guardians must pay. Similarly, as regards fees for midwifery, in the absence of a specific contract, the regulations of the Local Government Board apply; and the fee varies from 10s. in an ordinary case to £2 in one of danger and difficulty.

In the issue of February 25th, page 290, I pointed out, in answer to a question, that the officers of a workhouse are not entitled to, nor can they claim, the gratuitous aid of the medical officer. The question has been decided very strongly in that form in London. The workhouse officers are not paupers, and the medicines are provided for paupers exclusively.

In the issue of March 4th, page 328, will be found an annotation on the case of Dr. Pullin, of Sidmouth, Honiton Union, from which it

appears that, on the 24th of January last, the son of one Harriet Willman took an order to Dr. Pullin, worded thus: "Please attend Harriet Willman, residing at Lidford, on account of illness." On asking the son what was the matter, he got for answer, "She has been sick, and has got spasms." Whereupon, considering that it was an attack of indigestion, he gave the son, an adult, some medicine—unfortunately, without written instructions—with the remark, "Give that to your mother; and tell her that, if she is not better after taking it, to let me know, and I will go and see her." No further application was made to Dr. Pullin for attendance, and shortly afterwards the woman died. A coroner's inquiry was held, when it was shown that the woman's death was due to a chronic affection of the liver and stomach, and the jury exonerated Dr. Pullin from all blame. At a subsequent meeting of the board of guardians, Dr. Pullin was called upon to resign. Thereupon he wrote to me for advice; and I wrote in reply, "Certainly not; you have done nothing worthy of death or of bonds." In my comment on this case, I expressed regret—first, that Dr. Pullin did not see the woman; secondly, that he supplied medicines without written instructions, because, from the tone of the local press and the majority of the board, the failing to do this was seized hold of; I also pointed out the necessity that exists, in cases where a visit is necessary, that it should be set forth on the order, and that every urgent case should be so described. These rules have invariably been adopted in the metropolis since the introduction of the dispensary system. Subsequently, a Poor-law inquiry was held, and, as a result, Dr. Pullin's conduct was commented on exactly as I have above referred to in my annotations; and the board was censured for laxity of conduct in the matter of the issue of orders. If any one desire to get an idea how far a board of guardians can go in browbeating and insulting a medical officer, who is an educated man and a gentleman when compared with them, I would refer them to the *Devon Weekly Times* of February 17th, 1882, wherein you will see how abominably the doctor was treated by the board of guardians.

In the issue of March 18th, page 406, there is an annotation, "What is a Pauper?" It was written in consequence of the report of a lively scene which took place at a meeting of the Isle of Wight Board of Guardians, when a copy of a letter was read which had been addressed to the Local Government Board by Dr. M. Barker, who wrote to the central department for a definition of the word, alleging, as his reason, that he was attending several cases on medical relief orders where the parties were well able to pay for medical attendance. The Board did not give the definition, but referred him to Article 206, General Consolidated Orders, from which it appears it is the duty of a district medical officer to attend any and everybody to whom the guardians, the relieving officers, or the overseers, may have given an order; the only remedy left to the medical officer being, that he can report the same to the guardians at their next meeting.

In the issue of March 11th, 1882, page 360, I drew attention to the case of Dr. Milne of Shipdham, Medical Officer of the Swaffham Union. This gentleman, when he succeeded to the appointment, was told that it would be after the rate of 7s. 6d. a case and the ordinary mode of attendance. On the receipt of his first quarter's salary, he found he had been misinformed as to his pay. He therefore wrote to the clerk for definite information. The clerk, in reply, wrote to state that it was difficult to define it, but that he would write and let him know. He waited twelve months, and then wrote again; but neither to that letter nor one written six months afterwards did he get any reply. Last Michaelmas, although there had been much sickness, he got no salary at all. He waited two months, and then wrote for pay. Getting no reply, he called on the relieving officer, and asked him to make inquiries for him. Two days afterwards, he saw him again, when he remarked that they thought in the office that some money had been sent to him; but, as they could not find any receipt, supposed it had been overlooked. A few days afterwards, £3 16s. was sent him. The amount was so inadequate for the services rendered, that Dr. Milne wrote to the chairman on the subject; but this gentleman did not send any reply. At about this time, Dr. Milne received an order to attend an aged woman, which was issued by the assistant overseer. As it was not marked urgent, and Dr. Milne had other patients to attend to, he contented himself with saying, "Take the order back, and get it marked urgent if my services are immediately required, when I will see her to-day; and, if not, I will see her to-morrow morning." No other application was made to him, as the old woman shortly afterwards died. At the inquest which was held, Dr. Milne was exonerated from all blame, and a rider was added, that the method of doing business by the Swaffham Board of Guardians was peculiar, and required revision; in which opinion the coroner concurred. Having supplied the reporter with notes of the inquest, he was summoned to attend the meeting of the guardians, when, after the customary browbeating, the fol-

lowing resolution was come to: "That, having heard Dr. Milne's explanation, the board considers it did not justify him in not obeying the order, and desires that he will be more careful in future." They also consider it an act of indiscretion for one of their officers to cause reports to be published in newspapers reflecting on the character of the guardians, whether true or not.

In the issue of March 25th, page 444, will be found a letter signed H. S. The subject of which this letter was an exposition came to me in the usual way, and was dealt with as an annotation. The editor considered it would best appear in the form of a letter. It referred to an interpretation of certain sections of an Act of Parliament called the Coroners' Witnesses' Act. Dr. Danford Thomas, Coroner for Central Middlesex, taking a new interpretation of the 6th and 7th William IV. cap. 89, sect. 5, thought fit to direct *post mortem* examinations to be made and evidence given in his court by the medical officer of the Holborn Sick Asylum Hospitals, and subsequently refused payment of the customary fees. I challenged that interpretation, and showed, not only in the JOURNAL, but also in the *Lancet*, that Dr. Thomas was wrong in his law, and still more wrong in his conduct towards that profession to which he owed his position. I refer you to page 521, April 8th, for Dr. Thomas's defence. I think I am not egotistical when I state that I believe in the result I effectually refuted him. In the issue of April 15th, page 560, will be found my reply to Dr. Thomas's remonstrance. In the issue of April 29th, page 640, will be found an able letter from D. B. Balding, coroner for Herts, on this coroners' question.

In the same issue, you will find the opinion of our Council thereon, as well as the conclusion at which we arrived *à propos* of the circular letter of the Local Government Board of March 17th, in which the department imposed fresh obligations in reference to small-pox cases occurring among the casual poor, and that without any provision for extra payment.

At the same meeting, the very important question of the publication of reports from, and charges made against, poor-law medical officers at board meetings was taken into consideration; and a resolution was come to deprecating such statements and reports as calculated to be very injurious to such officers, as the charges were oftentimes made and no opportunity afforded of effectually rebutting them; and that the reports furnished to boards of guardians were in their nature privileged, and ought not in the interests of the public service to be thus dealt with.

In the same issue, a letter appears complaining of the appointment of an unqualified medical officer, when I pointed out that such appointment must be reported to the central authority, who could and would annul it if cause was shown.

In the issue of May 13th, page 719, will be found a report of a deputation to the President of the Local Government Board on the superannuation of poor-law officers, and an account of the speech I made. This deputation was a composite one, consisting of clerks, relieving officers, masters of workhouses, etc. I had no hesitation in throwing in our lot with those officers, seeing that we have, as a service, a great deal in common with them; and it occurred to me, that we should be more likely to get compulsory instead of the present permissive superannuation, if we made common cause in our effort to amend the Act. An interview was asked for, in consequence of a circular letter which had been issued by the Local Government Board defining the circumstances under which superannuation should be granted, and placing us in the same category as ordinary civil servants. My observations were directed to show that poor-law officers were a class *sui generis*, and as such ought to be dealt with on different grounds. Thus, civil servants enter on their duties at very early ages; clerks, medical officers, relieving officers, masters, nurses, porters, etc., at a mature age; and to put these in the same category when estimating their claims to superannuation as the ordinary civil servant, would be most unfair. The reply of the Department to our deputation, summarised, is as follows: 1. Sir J. Lambert gives a reply generally in the negative. 2. As is customary with the Department, whilst refusing to entertain the view advanced by the memorialists, he proceeds to point out that the Department, after all, did not intend to object to their prayer under certain conditions and circumstances. 3. With regard to the proposal, that superannuation allowances should be compulsory, they adopt the same form of procedure. The Department did not concede a single point in the matter.

Here let me observe that we propose to discuss this subject to-day; and to solicit the co-operation of the superintendents of county asylums, and the whole of the officers of the same, and Poor-law officers generally, in an united effort to amend the Acts relating to this subject, as they labour under the same disabilities.

In the same issue will be found my reply to a question, as to whether any fee could be obtained from a board of guardians in difficult or instrumental midwifery, when I pointed out that such fees had been accorded; and illustrated my own experience, where fees, varying from £1 to £8 10s., had been granted and sanctioned by the Local Government Board.

In the issue of May 20th, page 759, will be found my reply to an inquiry as to whether it was legal to charge 2s. 6d. for each quarterly visit to a lunatic inmate, when I pointed out that this came under the duty of a workhouse medical officer. At the same time, I advised that every workhouse or divisional medical officer should look at the terms of his contract, as that governed the fees and their amount to which he was entitled. In the absence of such contract, the general orders of the Local Government Board apply.

In the issue of May 27th, 1882, page 799, will be found a report of a case which occurred in St. George's Westminster Union, where the medical officer (Mr. S. Benton) refused to give a certificate in the case of a child ordered for industrial training without a fee of 2s. 6d. I commended the courage of Mr. S. Benton in thus acting; but I have not heard what has resulted. [Since the above was said, I find that the Local Government Board has decided in favour of Mr. Benton.]

In the issue of June 17th, 1882, page 927, will be found an annotation on the case of Mr. Sykes, of the Doncaster Board of Guardians. This gentleman had amputated the fingers of two patients, crushed by machinery, and subsequently sent in a claim, which the clerk (Mr. J. Falconer) refused to acknowledge, on the grounds that Mr. Sykes should have got a second opinion ere operating. Mr. Sykes showed that, to have done this, he must have either sent his patient about two miles to the nearest surgeon, or have waited till he could have secured his attendance; and that to have done this would have been needless barbarity. The *Globe*, a London newspaper, in commenting on this action of the clerk and of the board, said that it would have been more honoured in the breach than in the observance.

In the same issue will be found two other replies to medical officers writing for information, one of which relates to the case of a man who fractured his leg whilst drunk; his club doctor was called in, and attended to the man. The club refused him sick-pay; and the guardians had to keep the man. The medical officer wrote to know whether he could claim his fee. I replied, certainly not.

In the issue of July 1st, page 37, will be found the case of Dr. M. O'Connor, district medical officer of the North Witchford Union, Cambridgehire, who had been requested to attend, without an order, a mother aged 27, and a son aged 9, the latter having sustained a fracture of the leg. On visiting the two cases, he requested the friends to get an order; but the relieving officer refused to give one until he had consulted the board. At their meeting an order was given for the mother, but refused in the case of the son—the guardians alleging that Dr. O'Connor had attended him as a private patient. On appeal to the Local Government Board, the Department declined to interfere with the decision of the board. I thereupon brought the case under the notice of Dr. Farquharson, M.P., who wrote to Mr. Dodson. I have not yet heard the decision of the Department thereupon.

In the issue of July 29th, 1882, page 195, will be found an annotation on the reply of the Local Government Board *à propos* of the inquiry in the case of Dr. Pullin. This gentleman is let off with a very mild censure from the Local Government Board; not so the guardians, they are told that the assistant overseers are not legally entitled to give orders for medical relief, except under very urgent circumstances, and they further point out that the grant of an order by such an official must be considered to imply urgency.

On the same page will be found my reply to a correspondent, who writes to complain that club patients, and others in receipt of club allowances or in possession of means, are frequently foisted on medical officers of workhouses, that the guardians deduct the cost of their maintenance, etc., but the medical officer gets nothing. On this I remark, that the complaint he makes lays bare a grievance specially to be noted in large urban workhouses—that persons temporarily demented by delirium, or drunk, or temporarily disabled by drink (though in possession sometimes of large means), are taken into and treated by medical officers of workhouses, and beyond the sum paid to the respective boards, they go out without even thanking the medical officer. I cannot but hope that some remedy will be found for this. It would be desirable to bring the subject under the notice of the Local Government Board, so as to secure that persons of good means who had been medically treated in the workhouse should not go out by simply paying the guardians so much a day for their maintenance, and leave the medical officer without any remuneration. I also point out that this is a subject that ought to be dealt with by our Association.

During the last week, I wrote an annotation on the case of Dr.

Grubb, Waterbeach, one of the district medical officers of the Chester union, who has been refused payment of £3 for treating a fractured thigh on one M. Pearson, the excuse being that she was first seen by Mr. Bridges of Cottenham, who temporarily applied splints. Dr. Grubb was also refused payment of 3s. 6d. for a truss he supplied. Dr. Grubb has twice written to the Local Government Board, but that body has declined calling the board to account. It is not a little peculiar, but it is true, that the department will interfere readily enough if a fee be wrongfully paid, but almost invariably sides with a board of guardians in any act of injustice which may be perpetrated on a medical officer. Dr. Grubb has intimated his intention of suing his board in a court of justice; I only hope he will have the pluck so to do.

In conclusion, Dr. Rogers said the questions that had come up for answers during the year were about the same number as those answered in the preceding year. Hardly a week passed throughout the year, in which some question was not referred to him to answer. Ten and a half years ago, he visited Worcester at the invitation of the Worcester Chamber of Agriculture, to address them on the subject of medical relief to the poor. Eleven years ago, he delivered an address on the same subject, and some Worcestershire gentlemen who were present invited him to visit Worcester and again deliver it. The only special gain which had accrued to the neighbourhood and the medical officers residing therein was, that appliances and medicines were now found at the cost of the guardians; but he might mention that since that time he had had fewer complaints from Worcester and the immediate neighbourhood, than from any other part of the country. He had worked for some years with a view to inducing boards of guardians to treat their medical officers well, as the officers would then treat their patients better, and the shortening of the duration of sickness would lessen the cost to the union. His views had been supported in correspondence which he had carried on with past Presidents of the Local Government Board; but, unfortunately, boards of guardians were made up too much of the class who looked solely to the saving of the rates, and considered it their duty to make hard and bitter bargains with their medical officers. As the result of personal experience, he was inclined to think that a most unkind feeling existed throughout the country between boards of guardians and their medical officers. He believed it arose from the circumstance that the pauper poor were looked upon as a terrible incubus by boards of guardians, and therefore anybody who had anything to do with them was tarred with the same brush. Very little good would come of agitating for alterations unless there was shown, on the part of the medical officers themselves, a spirit of greater determination, though, as far as he could, he should continue to advocate an amended system of treatment to them.

The HONORARY SECRETARY (Mr. Wickham Barnes) read the financial report for the year, which was as follows.

"After the able and exhaustive address of our worthy and energetic chairman, little remains to be said by the honorary secretary. I will, however, state, in the absence of our treasurer, that our balance is within a trifle of what it was last year; and, taking into consideration the depression in the farming districts, we must feel thankful that it is as good as it is. I need not mention that it is always our endeavour to keep the expenses of the Association down as much as possible. I am pleased to announce that we have had many fresh members join our ranks, but, at the same time, we have lost several old and tried friends through death. You must allow, according to the statement of Dr. Rogers, that some good has been effected, yet much remains to be done; and I think that every Poor-law medical officer, whether he be satisfied or not with his appointment, will join with us in making the service one to be sought after, and one to be looked up to, instead—as is now too often the case—of being accepted either as something to begin upon, or with the view of keeping out opposition. I cannot close these remarks without bearing testimony to the continuous labours and untiring zeal of our chairman; without him, we should be like a ship without a rudder; he not only has the knowledge, but has the courage to carry out his convictions; he is also most ably seconded by our two vice-presidents, Mr. J. Cornwall and Mr. D. B. Balding, the former coming ninety miles, at great inconvenience and expense, to attend our meeting; and Mr. Balding, one of our most regular attendants at every council meeting, also coming forty miles. In conclusion, our hearty thanks are due to the JOURNAL of the British Medical Association for their advocacy at all times, besides giving us free use of its columns when occasion requires."

Mr. BALDING proposed a vote of thanks to the Editor of the BRITISH MEDICAL JOURNAL for having placed that paper at the services of the Association during the past twelve months.

Mr. WOODWARD (Worcester) seconded; and, referring to the attendance of paupers, observed that the pauper orders were worded as follows: "You are requested to visit and undertake the treatment of the

following case." That meant they would undertake to visit a person who was perfectly able to come to them. [Applause.] He drew the attention of his board of guardians to the fact some time ago; and Mr. Longmore, the then vice-chairman, supported him, and said the Local Government Board ought to be communicated with on the point. Formerly, there was a footnote at the bottom of the orders, setting forth that they were to be delivered at the surgery before nine o'clock in the morning; but for many years his board had cut off that footnote, and the consequence was, that the orders were brought at all times during the day. He would not, however, complain if the majority of them were delivered before ten o'clock in the morning. He bore personal testimony to the cases mentioned by Dr. Rogers not being exceptional ones; and, with regard to what had been done, very little would be accomplished if it were not for the exertions of the chairman. No progress could be made except by means of the Association. Poor-law, he had no doubt, was an opprobrium on the profession, but it could only be removed through the influence of their and similar associations. The great object was to increase the number of members. He had endeavoured to do so, but unfortunately he had not succeeded as well as he could have desired. The subscription was not large, and those whose incomes were but limited would, he felt certain, if they well considered the matter, subscribe five shillings *per annum* for the purpose of helping forward Dr. Rogers's superhuman efforts.

The motion was carried, and the Honorary Secretary was directed to communicate the vote of thanks to the Editor of the JOURNAL.

During the discussion which ensued,

Mr. JENNINGS (Malmesbury) said he had been an union medical officer for forty-two years, ten in Chippenham Union, and for the last thirty-two of the third district of Malmesbury, comprising an area of 11,858 acres, with a population of 2,887. He had to travel three miles to see his first patient, and eight miles to see his last, over ground a portion of which it was impossible to traverse either in winter or summer, except on horseback. He was permanently appointed at a salary of £50 *per annum*, with extra fees amounting to about £28 *per annum*. For the last twenty-five years, he had kept a qualified assistant to do his work, at a salary of £150, and he found drugs and appliances of every description, but he was never allowed anything for expensive remedies. His salary was raised to £60, and, after repeated applications, to £65, the board of guardians declining to give him any more, although his expenses amounted to about £30 a year. He should have resigned his appointment on attaining the age of sixty years, had he not expected that a superannuation allowance would be granted him in consideration of his having lost at least £50 a year during the time he had held the position. He resigned his appointment last Midsummer, and a meeting of the guardians was held on August 5th, at which it was unanimously agreed to refuse a superannuation allowance, and he was not even thanked for his assiduous attention to his duties during so long a period. The district was so poor, that no medical man could obtain sufficient private practice for a maintenance, and he did not remember a single private patient ever calling him in in consequence of his holding an appointment. In answer to one of the members, he said he was permanently appointed, and was not subject to annual re-election.

The CHAIRMAN promised to make inquiries regarding Mr. Jennings's case.

The CHAIRMAN invited the Rev. G. Bourne, chairman of the Evesham Board of Guardians, to address the meeting; remarking that, if they passed strictures upon boards of guardians, they did not mean to imply that many of those who constituted the different boards were not gentlemen of high character, and incapable of ungentlemanly behaviour towards their officers.

The Rev. G. BOURNE thanked the meeting for allowing him to be present at the discussion. It was always most desirable to hear both sides of the question. It was important for boards of guardians to learn the opinions of medical men generally throughout the country; and, when he received an invitation to be present at one of the meetings to be held during the week, he availed himself of the opportunity to attend that meeting, anticipating that an interesting discussion would take place. He had not been disappointed. The harder words they could give, the better. He was not very thin-skinned, and did not care how hard they hit boards of guardians, as they were public bodies, and ought to be able to listen to hard words, and to learn the opinions entertained about them by their medical officers. On one point he would go with the meeting heartily, but in a different direction from that taken by some of the gentlemen present—he alluded to the pay and appointment of medical officers. He was utterly against all superannuation. He did not see why his child should be taxed to pay what he ought to pay himself, and he did not like to throw any burden which he ought to bear upon those who came after him. They might agitate very fairly

for a medical officer to be paid entirely by the Consolidated Fund, or by the Local Government Board, but perfectly independent of boards of guardians. He also thought they might agitate fairly that the medical officer of health should not be appointed, as it were, by competition. When a vacancy occurred, men were invited to send in tenders. That was not the principle to go upon. They should try to get men resident in the neighbourhood, who would discharge the duties fairly, and receive remuneration sufficient; but he did not want that remuneration to have anything to do with boards of guardians. Let the guardians appoint the man, but let the Local Government Board determine what the amount of his salary should be. With regard to the distance which had to be travelled by medical officers, he failed to see how that difficulty was to be obviated. The salary paid to many medical men was beggars' pay, and not remuneration for educated men; but how to better it, under the present system, he did not know. Referring to another point, he observed, as a clergyman, that the poor were very exacting of the attendance of the medical man. That was his experience of forty years, and that was the feeling which he entertained.

The HONORARY SECRETARY said the payment of the salaries of medical officers out of the Consolidated Fund was a point which boards of guardians should not give up. They liked to have the medical officers as their servants, and pay them. That was one of the greatest difficulties with which the Association had to contend.

The CHAIRMAN said the fact was that, in their efforts to throw the whole of the salaries of medical officers upon the Consolidated Fund, they had been met by successive Chancellors of the Exchequer committed to opposite views; and the present Chancellor of the Exchequer had expressed a dislike to subventions of all kinds.

Dr. SMITH (Pershore), after expressing his gratification at the remarks of Dr. Rogers and the Rev. G. Bourne, said there were many members of the profession—some even in his own town—who were afraid of going forward for fear of being weeded out if they attended meetings of that kind. He inquired whether a board of guardians possessed the right of baiting their medical officers in the presence of persons not members of the board; observing that he had been baited cruelly by his board in the presence of several members of the Assessment Committee. Such treatment was likely to damage any medical man in his private practice, and he had no possible means of protecting himself against such conduct.

The CHAIRMAN said no one but the clerk to the board had a right to be present on such occasions.

The Rev. G. BOURNE pointed out that an Assessment Committee was composed of members of boards of guardians.

Dr. SMITH, continuing his remarks, said, in his district, a pauper was defined as a man who did not earn more than three shillings per head of his family per week.

Mr. BALDING observed that might be the opinion of an individual relieving officer.

Mr. JENNINGS said, in his district, a man in full work, no matter how large a family he had, was not considered a pauper.

Mr. GRUBB complained of not having been able to get a copy of the contract which he made with his board, until he moved in the county court. The clerk to the board took no notice of his application, and the point was one to which he wished to draw particular attention, as it was of considerable importance.

The Rev. G. BOURNE: Did no one ask the Chairman of the Board?

Mr. GRUBB: The board will not take any notice of my letters until I threaten them with legal proceedings. I shall propose that the matter be taken into consideration at the next Council meeting.

The CHAIRMAN said he should have appealed to the Local Government Board had he been in Mr. Grubb's position; but the difficulty had never cropped up with him. He hardly thought it was legal for the board to refuse to supply a copy of the contract, as a man had a right to see anything which he had signed.

Dr. CORNWALL, as one who had been engaged for nearly forty years in the Poor-law service, wished to particularly impress upon Poor-law medical officers the fact that, unless they gave the Council and the Association generally greater support, the Association must inevitably cease to exist. It was absolutely necessary that the funds should be increased. They had last year a case—it was a typical one—in Suffolk, where a medical officer had behaved in a very unbecoming manner towards the Poor-law authorities. The sum of £15 was offered for any legal expenses that might be incurred; and, had the amount been paid, it would have nearly swallowed up the Association's funds. They could not go to war without weapons. Dr. Rogers, who worked in aid of the Association from the very love of the thing, seemed literally to revel in attacking everybody. In these days, when the skin was so thick, people—and public bodies especially—required to be hit

pretty hard, or else they did not take any notice of anything. He intended asking at the next meeting of the Council whether they could not make some arrangement with the Mutual Defence Association. Let them, he said in conclusion, take hold of one case, and show boards of guardians that they had funds at their disposal; and that such funds would, when occasion required, be liberally used in the support of what was their entire living.

Shortly afterwards, the proceedings terminated with the passing of a vote of thanks to Dr. Rogers for his admirable *résumé*.

THE FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of Fellows of the Royal College of Surgeons of England, called by advertisement, was held at the Medical Library, Worcester, on Thursday, August 10th. There were present: Mr. C. G. Wheelhouse (Leeds), in the chair; Mr. William Adams (London); Mr. Allard (Tewkesbury); Mr. J. Archer (Birmingham); Mr. Banks (Liverpool); Mr. Balding (Royston); Mr. Carter (Pewsey); Mr. Cowell (London); Mr. Crosse (Norwich); Mr. Cornwall (Fairford); Mr. Pearce Gould (London); Dr. Harris (Redruth); Mr. Reginald Harrison (Liverpool); Mr. Haslan (Birmingham); Mr. Husband (Bournemouth); Dr. Howard (London); Sir William Mac Cormac (London); Mr. Manby (Wolverhampton); Mr. Rushton Parker (Liverpool); Mr. Augustin Prichard (Clifton); Mr. Oliver Pemberton (Birmingham); Mr. Solomon (Birmingham); Mr. Lawson Tait (Birmingham); Mr. T. P. Teale (Leeds); Dr. Rayner (Stockport); Mr. W. L. Underhill (Tipton); Mr. Welch (Honiton); Mr. Watkin Williams (Birmingham); Dr. Roger Williams (London); and Mr. Bartleet (Birmingham).

Mr. BARTLEET said he had received numerous letters, approving of the meeting at Worcester; and expressions of regret at inability to attend from Mr. Macnamara of London and Mr. Pilcher of Boston.

Mr. WHEELHOUSE and Mr. BARTLEET explained the objects of the meeting.

It was proposed by Mr. LAWSON TAIT, seconded by Mr. OLIVER PEMBERTON, and, after considerable discussion, resolved *nem. con.*:

"That an Association of Fellows of the Royal College of Surgeons of England be and hereby is formed.

"That the object of this Association be the consideration of all matters affecting the interests of the Fellows and the government of the College.

"That the annual meeting of this Association be held at and during the annual meeting of the British Medical Association.

"That the Fellows attending the present meeting do form a Committee of this Association for the present year; and that Mr. Wheelhouse be President, Mr. Husband Treasurer, and Mr. Pearce Gould and Mr. Bartleet Secretaries; and that all Fellows of the College be eligible as members, upon payment of an annual subscription of five shillings."

THE USE OF ALCOHOL IN MEDICINE.

DURING the sitting of the section of Public Medicine at the annual meeting of the Association in Worcester, several letters and memorials were presented, bearing on the use of alcohol in medicine. On the proposal of the president of the section, Dr. Alfred Carpenter, they were laid before the general meeting, with a request that they might be published in the JOURNAL, which was agreed to.

1. "From the Gloucester Women's Temperance Association, signed by Alfred Carpenter, Esq., M.D., President of the Public Medicine Section of the British Medical Association, 1882.

"DEAR SIR,—We have heard with much interest of the meeting on the 'Public Medicinal Aspects of the Alcohol Question' which is to take place during the forthcoming medical conference, and, with all the friends of temperance, rejoice that it is to be held under your most able presidency.

"Our deep sense of the evils which arise from intemperance—more especially our conviction that this intemperance has of late years been on the increase amongst those of our own sex in all classes of society—has emboldened us to join with others in pleading, through you, with the members of your noble profession for an increased care in regard to the medicinal prescription of alcoholic stimulants. It is through a belief that these drinks are essential to the maintenance of health, and under the plea of the 'doctor's orders,' that many women fall by degrees into intemperate habits. We fully recognise in these cases the difficulties of the doctor's position, and the injustice to which he is often subjected as to the way in which his instructions are carried out, or, perhaps, misinterpreted. But these very difficulties and this injustice, we would submit, call for the most thoughtful and conscientious care before the doctor allows his patients to be able even

to quote his permission for their use of intoxicating drinks; and also indicates the great importance, whenever possible, of finding some substitute for these dangerous remedies. It is not necessary for us to allude to the deplorable results of female intemperance. It is because they are so terrible, so widespread, that we feel we are justified in making this appeal to the members of a profession whose influence, in enlightening the public as to the true nature of alcohol, far exceeds that of others.

"And because we also remember that—through the Christ-like attributes of his profession, the doctor possesses no ordinary power to comfort, to help, and to protect, and that this power is often exercised with such nobility of self-sacrifice—we believe we cannot plead in vain for the weak and for the suffering amongst our sisters.

"Signed on behalf of the Women's Christian Temperance Union,
LOUISA BOWLY, President; ELIZABETH BAXTER, CAROLINE BROWN, Secretaries.

"Gloucester, August 4th, 1882."

2. "To the President and Members of the Public Medicine Section of the British Medical Association to be held at Worcester.

"The Memorial of the Plymouth Friends' Temperance Association sheweth,—That the members of this society are anxious to put forth every effort to reclaim the victims of the drinking habits of this country. In this work your memorialists often meet with the statement from those they would benefit that their present condition has resulted from the use of stimulants ordered by their medical attendants. Whilst fully recognising the right of the medical profession to use any means it deems necessary for the alleviation of suffering and the cure of disease, yet your memorialists would earnestly and respectfully ask you to lessen the possibility of this excuse by limiting, so far as in your opinion is consistent with your patients' welfare, the number of those to whom intoxicating liquors are recommended.

"Your memorialists would remind you of the solemn responsibility which must attach itself to him who knowingly prescribes alcohol to a patient who has formerly been enslaved thereby, and who may now be free from its curse.

"In conclusion, they would pray that many members of your noble profession, rightly using the opportunities they have of influencing individuals, may earn the blessing promised in the words, "Let him know that he who turns a sinner from the error of his way shall save a soul from death, and shall hide a multitude of sins."

(Signed) "R. REYNOLDS FOX,

"President of the Friends' Temperance Association, Plymouth."

3. "To the President and Members of the British Medical Association.

"The members of the Plymouth, Devonport, and Stonehouse Ladies' Temperance Association have, in the course of their work during the past few years, become seriously impressed with the growth of intemperance amongst women of all classes. Instances have come under their notice in which women, who have at first taken stimulants under medical advice, have acquired an appetite which has led to the saddest results. They therefore venture to remind the members of the Medical Conference of the great need that exists for care in prescribing alcohol medicinally. The knowledge, also, that the influence of members of the medical profession is helping to stem the tide of intemperance encourages them to bring this important subject before the Conference.

"AGNES E. WESTON, President.

"M. C. F. pro A. M. RICHARDSON, Secretary."

4. "From Members of the Society of Friends in Berkshire and Oxfordshire.

"The members of the Women's Quarterly Meeting of the Society of Friends for the district comprehending the Counties of Berkshire and Oxfordshire, held at Charlbury on the 18th day of the 7th month, 1882, desire very respectfully to address the Medical Conference assembled at Worcester.

"While thankfully acknowledging the increasing caution of medical men in recommending alcoholic stimulants, we venture afresh to call attention to the sad prevalence of intemperance among women, who too often plead that such stimulants have been ordered by the doctor, and are needful for their health. We would earnestly request that when it is considered absolutely needful to order alcoholic remedies, they may be prescribed in fixed doses like any other medicine, and, if possible, not in the forms commonly used as beverages.

"Signed in and on behalf of the Women's Quarterly Meeting,

"CATHARINE FARDON, Clerk."

5. "From the Women's Quarterly Meeting of the Society of Friends in Yorkshire.

"York, 7th month, 26th, 1882.

"The Women's Quarterly Meeting of the Society of Friends, consisting of representatives from all parts of Yorkshire, desire to call the

attention of the Medical Conference to the prevalence of drinking habits among women of all classes. They beg respectfully to commend the subject of prescribing alcohol to the careful consideration of the Conference, and, whilst rejoicing in the smaller amount of stimulant now given by medical men, they cannot but feel it very important that, in cases where alcohol is required, it should be prescribed in the same way as any other medicine, and not indiscriminately recommended as a beverage.

"Signed on behalf of the meeting,

"HENRIETTA PRIESTMAN, Clerk."

FIFTIETH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

PROCEEDINGS OF SECTIONS.

It has been decided to publish in successive numbers of the JOURNAL the papers read in the sectional meetings, and to append to each paper the remarks made thereon in the course of discussion. For this purpose, a supplement of sixteen pages will be added to the JOURNAL each week, for as long a time as may be necessary. In this place, therefore, instead of publishing abstracts of the papers read, as in previous years, we shall do little more than enumerate their titles, and the names of the members who took part in the discussions.

SECTION A.—MEDICINE.

Wednesday, August 9th.

In the temporary absence of the President, Dr. CLIFFORD ALLBUTT, F.R.S., the chair was taken by Dr. G. W. BALFOUR, one of the Vice-Presidents.

Dr. FLETCHER LITTLE (Ben Rhydding) read a short paper on Medical Rubbing, and demonstrated his mode of practising it. The paper is published at page 351.

Dr. CLIFFORD ALLBUTT then took the chair as President, and delivered an address, which was published at page 261 of the JOURNAL for August 12th.

Dr. W. S. PLAYFAIR opened a discussion on the Systematic Treatment of Aggravated Hysteria and allied forms of Neurasthenic Disease. The subject was discussed by Dr. Clifford Allbutt, Dr. Ross, Mr. De Berdt Hovell, Dr. Myrtle, Dr. Drummond, Dr. Ransome, Dr. Henry Bennet, Mr. Ross Jordan, Dr. Leech, and Dr. Mahomed; after which Dr. Playfair replied. The discussion was reported in full at page 309 of last week's JOURNAL.

Dr. MYRTLE (Harrogate) read a paper on a case of Acute Ascending Paralysis in a patient who was the subject of Chronic Alcoholism. Dr. Clifford Allbutt, Dr. Broadbent, Dr. FitzPatrick, Dr. Cumming, and Dr. Hare took part in the discussion which followed. The paper was published at page 312 of last week's JOURNAL.

Thursday, August 10th.

Dr. CLIFFORD ALLBUTT, President, took the chair at 2 P.M.

Dr. BALFOUR (Edinburgh) opened a discussion on Chlorotic Murmurs, which was continued by Dr. Clifford Allbutt, Dr. Austin Flint, Dr. C. Theodore Williams, Mr. MacAlister, Dr. Broadbent, and Dr. Drummond; after which Dr. Balfour replied. The paper, with the discussion, is published at page 352.

Dr. AUSTIN FLINT (New York) read a paper on the Self-limited Duration of Pulmonary Phthisis.

Dr. C. T. WILLIAMS (London) read a paper on the Contagion of Phthisis.

A discussion on the two papers followed, in which Dr. Clifford Allbutt, Dr. Henry Bennet, Dr. C. R. Drysdale, Dr. C. Barham, Dr. Balfour, and Mr. J. A. Goodchild took part. Dr. Flint and Dr. Williams replied.

Dr. A. J. HARRISON (Clifton) read a paper on Primary Endocarditis; remarks on which were made by Dr. Allbutt, Dr. Balfour, Mr. Yates, and Dr. Ashby.

Dr. D. C. McVAIL (Glasgow) read a paper on the Interrupted or Wavy Breath-sound of Phthisis, on which Dr. Clifford Allbutt and Dr. C. T. Williams made remarks.

Friday, August 11th.

Dr. CLIFFORD ALLBUTT, President, took the chair at 9.30 A.M.

Dr. LEECH (Manchester) opened a discussion on the Treatment of Cardiac, Hepatic, and Renal Dropsies. The discussion was continued by the President, Dr. Thomas, Dr. W. Carter, Dr. Roden, Dr. Philipson, and Dr. Broadbent; and Dr. Leech replied.

Dr. S. S. RODEN read a paper on the Brine Springs of Droitwich : after which the proceedings of the section came to an end.

Several other papers, put down for reading in the section, were not read for want of time. They were as follows.

Dr. SAUNDBY and Mr. EALES : The Ophthalmoscopic Appearances in Anæmia.

Dr. WARNER : The Study of the Face as an Index of the Brain.

Dr. SHINGLETON SMITH : Two remarkable Cases of Locomotor Ataxy, with Anomalous Symptoms.

Mr. J. F. KNOTT : Charcot's Disease of Joints.

Mr. E. ROBINSON : Cases of Telegraphist's Cramp.

Dr. RICKARDS : Chorea and its Relation to Rheumatism.

Mr. DE BERDT HOVELL : The Latent Effects of Shock.

Dr. MALET : The Physical Differences between Binaural and Uniaural Stethoscopy.

Dr. DRUMMOND : Auscultation of the Trachea and Mouth in the Diagnosis of Thoracic Disease.

Dr. DRYSDALE : Treatment of Phthisis by Alpine and Marine Climates.

Dr. ROBERTSON : Family History in Relation to Contagion in Phthisis.

Dr. THOMAS : Jaundice.

Dr. BYERS : The Previous Symptoms in Cases of Perforation of the Bowel in Enteric Fever.

Dr. THIN : A further contribution to the Treatment of Alopecia Areata.

Mr. SEDGWICK : The Extended Influence of Atavism in Hereditary Disease.

Mr. CAUTRY : Treatment of Psoriasis by Chrysophanic Acid, given internally.

Dr. LITTLE : Rheumatic Arthritis.

Dr. LEDIARD : Iodine in the Body.

Dr. BALFOUR demonstrated three cases of Spanæmia at the Infirmary.

Dr. STRANGE exhibited an interesting case of Aneurysm.

SECTION B.—SURGERY.

Wednesday, April 9th.

Mr. AUGUSTIN PRICHARD, President, took the chair at 3 P.M., and delivered an introductory Address, which was published at page 263 of the JOURNAL for August 12th.

Mr. GREIG SMITH (Bristol) opened a discussion on the Early Operative Treatment of Joint-Disease as a Preventive of Excision. Mr. Teale, Mr. Barwell, Mr. Lund, Mr. M. Coates, and Mr. H. Morris took part in the discussion; after which Mr. Greig Smith replied. The paper with the discussion is published at page 356.

A paper by Mr. COWELL, on Experiences of Resection of the Hip-joint, was taken as read, the author being engaged in another Section when called on.

Mr. HENRY MORRIS (London) read a paper on a Series of Cases of Abscess in Bone. It is published at page 360.

Mr. W. THOMSON (Dublin) read a paper on Compound Re-fracture of the Patella, after Suture of that Bone. Mr. Jessop, Mr. Wheelhouse, Dr. Moore (Belfast), and Mr. Teale took part in the discussion which followed. The paper, with the discussion, is published at page 358.

Mr. REGINALD HARRISON (Liverpool) described a Case of Litholapaxy, in which a Stone weighing $2\frac{1}{2}$ ounces was removed at one sitting. At the conclusion of the paper, Mr. PEARCE GOULD (London) showed a photograph of fragments of stone weighing 1,380 grains, which had been removed by Dr. Bigelow at one sitting.

Dr. WARD COUSINS (Southsea) read a paper on the Safety of a Long-beaked Staff in Lithotomy. A discussion followed, in which Mr. T. H. Bartleet, Mr. Langley Browne, Dr. Simon, Mr. Lund, and Dr. Griffiths took part; after which Dr. Ward Cousins replied.

Thursday, August 10th.

Mr. AUGUSTIN PRICHARD, President, took the chair at 2 P.M., when the following papers were read.

Mr. THOMAS BRYANT (London) : Aneurysm of the Popliteal Artery : one cured by Pressure, the other by means of Speir's Artery-Constrictor, the Operation being conducted under Strict Antiseptic Precautions.

Mr. W. THOMSON (Dublin) : Ligature of Innominate Artery for Subclavian Aneurysm. In this paper, Mr. Thomson described a case of which brief notices have lately appeared in the JOURNAL, and showed the specimen taken from the patient.

Mr. DOLMAN (Derby) : Case of Ligature of the Left Subclavian for Traumatic Aneurysm of the Axillary Artery.

Mr. T. H. BARTLEET (Birmingham) : On the Ligature of Large Arteries.

Mr. BENNETT MAY (Birmingham) : Remarks on the Choice of a Material for the Ligature of Large Arteries in continuity; with Cases, including one of Ligature of the External Iliac Artery.

The reading of the foregoing papers was followed by a discussion, in which Mr. Lund, Mr. John Dix, Mr. R. Barwell, Mr. W. Stokes, and the President took part.

Mr. A. W. MAYO ROBSON read a paper on an Antiseptic Atmosphere to replace the Carbolic Spray in Operations; with an Account of Experiments and Cases. The Apparatus was shown, and appeared to very effectually impregnate the air with eucalyptus vapour.

A paper by Dr. GEORGE ELDER, entitled, Notes on a Successful Case of Nephrotomy and Nephrectomy for Scrofulous Pyelitis, was read in his absence by Mr. Manby, one of the Secretaries to the Section.

Mr. LAWSON TAIT read a paper on a Successful Case of Nephrectomy. The patient (a young woman) and the kidney removed were exhibited.

Dr. CULLINGWORTH read a paper on a Case of Nephrectomy by Abdominal Section. The specimen was shown. Mr. Lawson Tait made some remarks.

Mr. R. H. B. NICHOLSON read a paper on a Case of Gastrotomy. Mr. LAWSON TAIT described a Third Successful Case of Cholecystotomy. The gall-stones removed were exhibited.

Mr. LAWSON TAIT also read a paper on a Series of One Hundred Consecutive Cases of Ovariectomy performed without any Listerian Details. The paper was discussed by Dr. Aikins (Toronto), Dr. Ward Cousins, Mr. Martin Coates, Mr. W. Thomson, Dr. Bantock, Dr. Sutton (Pittsburg), Mr. R. Barwell, and Dr. Taylor; after which Mr. Tait replied.

Dr. WARD COUSINS showed a New Instrument for Hypodermic Injection; and an Instrument for performing Incision of the Chest—a Trocar converted into a Knife.

Friday, August 11th.

The chair was taken by Mr. PRICHARD, President, at 9.30 A.M.

Mr. HOWARD MARSH opened a discussion on Bone-setting.

Mr. WILLIAM ADAMS read a paper on the Selection of Cases for Forcible Movement in the Treatment of Stiff Joints, and the Method of Procedure.

Remarks on the subject of Bone-setting were made by Mr. Dacre Fox, Mr. Bernard Roth, Mr. Pearce Gould, Mr. Richardson Cross, and Mr. Martin Coates; after which Mr. Marsh replied.

Mr. W. MITCHELL BANKS read a paper on the Radical Cure of Hernia by Removal of the Sac, and Stitching together of the Pillars of the Ring. Mr. Spanton, Mr. H. Morris, and Mr. Kendal Franks, took part in the discussion which followed.

Immediately on the close of the Section, the President expressed his appreciation of the services of the Secretary, Mr. F. E. Manby, whose labours had been considerable, and without whose aid it would have been impossible to get through the large amount of work which had been accomplished out of the heavy list before the Section.

In connection with this Section, the following demonstrations were given at the Infirmary.

Mr. NOBLE SMITH (London) gave a demonstration of some new Mechanical Surgical Appliances.

Mr. BERNARD ROTH (London) gave a practical demonstration of the Medical Gymnastic Exercises recommended by him in an article on the Treatment of Lateral Curvature of the Spine, published in the BRITISH MEDICAL JOURNAL for May 13th, 1881.

Dr. THURMCHUM (London) demonstrated his apparatus for Electro-caustic Ablation of Tumours and Outgrowths in Cavities, particularly Nasal Polypi, Enchondromata, and Exostoses; also Illumination of Cavities by the Electric Light, etc.

Several papers, which were set down for reading in this Section, were not read for want of time; viz.,

Mr. H. LANGLEY BROWNE : On Ten Years' Antiseptic Surgery at the West Bromwich Hospital.

Mr. CHAUNCEY PUZEY : On Acute Traumatic Malignant Disease.

Mr. KENDAL FRANKS and Mr. P. S. ABRAHAM : On so-called Sponge-grafting.

Surgeon-General LONGMORE, C.B. : On a Successful Case of Trephining for Gunshot Wounds.

Mr. LENNIX BROWNE : On the Eradication and After-treatment of Nasal Polypi, with an Illustration of an Arrangement for Illuminating the Nostril.

Dr. CHARLES WARDEN : On Osteotomy for Genu Valgum and Genu Varum, with Cases.

Mr. BERNARD ROTH : The Early Treatment of Flat-Foot; also Fifty Cases of Lateral Curvature treated without Supports and without Suspension.

Mr. RUSHTON PARKER : A Case of Strangulated (?) Omental Hernia.

Mr. MARTIN COATES : On the Treatment of Bronchocele, Enlarged Glands, etc., by the Subcutaneous Injection of Iodine.

Dr. McVAIL: On the Treatment of Gonorrhœa by Open Wire Bougies.

Dr. C. R. DRYSDALE: On the Treatment of Secondary and Tertiary Syphilis.

Mr. F. TREVES: On the Treatment of certain Fractures of the Lower End of the Femur.

Mr. J. F. WEST: Rapid Lithotripsy.

SECTION C.—OBSTETRIC MEDICINE.

Wednesday, August 9th.

The Secretary read a letter from the President of the Section, Professor LEISHMAN of Glasgow, regretting his inability to attend the meeting. The chair was taken by Dr. J. G. SINCLAIR COGHILL, one of the Vice-Presidents, who, after a few words expressive of the disappointment he, in common with every member of the Section, felt at the unavoidable absence of the distinguished President, proceeded to the ordinary business of the Section.

Dr. GRANVILLE BANTOCK read a paper on Hysterectomy. Dr. Dewar, Dr. Edis, Dr. John Williams, Dr. Routh, Dr. Wallace, and the author of the paper, took part in the discussion which followed.

Dr. DEWAR read a paper on Dysmenorrhœa as a cause of Hystero-Epilepsy. A discussion followed, in which Dr. Bantock, Mr. T. Dalton, Dr. Grigg, and Dr. Nesfield, took part; and Dr. Dewar replied.

Dr. EDIS read a paper on the Rational Treatment of Menorrhagia. A discussion followed, in which Dr. Morris, Mr. T. Dalton, Dr. Routh, Dr. Wallace, and Mr. Crockett took part.

Dr. ROUTH read a paper on the Etiology and Treatment of certain Varieties of Dysmenorrhœa; on which remarks were offered by Dr. Edis, Dr. Dewar, Dr. Bantock, and Dr. Wallace.

Thursday, August 10th.

The chair was taken by Dr. EDIS, Vice-President. A discussion on Sabinvolution of the Uterus, its Causes, its Relation to Uterine Disease, and its Preventive Treatment, was opened with a paper by Dr. JOHN WILLIAMS, which was read, in the absence of the author, by Dr. Cullingworth. It was continued by Dr. Playfair, Dr. Henry Bennet, Dr. Dewar, Mr. Nunn, Mr. Latimer, Mr. Dalton, Dr. Bantock, Dr. Griffiths, Dr. Wallace, Dr. Dempsey, Dr. Routh, Mr. McDonovan, Dr. Nesfield, Dr. Walter, Mr. Vevers, and Dr. Edis.

Dr. WALTER read a paper on a Successful Case of Transfusion of Blood after severe *Post Partum Hemorrhage*. Dr. Edis made some remarks.

Dr. CHARLES J. CULLINGWORTH (Manchester) mentioned the case of a woman, aged 26, otherwise healthy and well formed, in whom there exists a double uterus along with the comparatively rare abnormality of a complete membranous septum vaginae. The patient menstruates regularly, though with pain, and has been twice married, but never pregnant. The two vaginal orifices are each protected by a hymen; the right orifice, with its hymen, being apparently intact, while the left has undergone some dilatation. The vagina is of normal length. There is a distinct cervix uteri to be felt on each side of the upper extremity of the septum. The uteri are small, the sound passing only two inches. When a sound is passed simultaneously into each uterus, the two sounds cannot be made to touch, showing that the septum uteri, like the septum vaginae, is complete. The sounds pass, not laterally as in the bicorned uterus, but in the normal direction, and no sulcus can be detected between the cornua externally. The bladder and urethra, with its orifice, are normal.—Dr. EDIS related a case of double uterus, in one half of which a pregnancy occurred. It was believed to be a case of extra-uterine pregnancy, as a sound had been passed, and the uterine measurements found almost normal; but, on a subsequent occasion, a sound was passed into the pregnant half of the uterus, and miscarriage resulted. Finally, the case was made out to be one of double uterus.

Mr. VEVERS read a paper on a Case of very uncommon Form of Concealed Hemorrhage during Labour.

Friday, August 11th.

The chair was taken by Dr. EDIS, Vice-President.

Dr. W. SQUIRE read a paper on Bromic Ether as an Anæsthetic in Obstetrics. Mr. Spanton, Dr. Spratly, Dr. Dewar, and Dr. Edis, took part in the discussion which followed; and Dr. Squire replied.

Mr. LAWSON TAIT read a paper on the Parallel Histories of Two Cases of Bleeding Myoma. Dr. Sutton and Dr. Edis made some remarks.

Mr. T. W. HARROPP GARSTANG read a paper on Urethral Caruncle. Dr. Edis, Dr. Dewar, and Dr. Cullingworth took part in the discussion which followed.

Mr. J. G. NEVITT showed and described a new form of Intra-uterine Stem Pessary. A discussion followed, which was shared in by Dr.

Barron, Dr. Dewar, Dr. MacArthur, Dr. Cullingworth, Mr. Garstang, Mr. Donovan, Mr. Stevens, and Dr. Edis; after which Mr. Nevitt replied.

The following papers were also put down for reading in this Section:—

Dr. JOHN WALLACE: Note on the Existence of Temporary Albuminuria in the Acute Stages of Perimetritic and Parametritic Inflammations, as well as in the Chronic Suppurative stage.

Mr. GEORGE RIGDEN: The Management of some Abnormal Head Presentations.

Dr. G. ELDER: The Stomachic Disorders of Uterine Disease.

SECTION D.—PUBLIC MEDICINE.

Wednesday, August 9th.

The Section was opened at 3 P.M. by the President, Dr. ALFRED CARPENTER, who delivered an Address, which was published at page 265 of the JOURNAL for August 12th.

Mr. G. HASTINGS, M.P., said that the President's Address pointed out that Sir C. Hastings was a sanitarian, and that great honour was due to those who undertook sanitation so many years ago. He eulogised the late Dr. Seaton, not only as a gifted naturalist, but as one who worked hard for the Association.

Dr. NEALE read a paper on Ready Means of Surrounding Patients with Absolutely Pure Air, and demonstrated his punkah.—At the conclusion of the paper, Dr. ROBERT SMITH inquired whether or not the solution of caustic soda was the sole contents of the trough.—Dr. NEALE replied in the affirmative, and that the proportions were one pound of caustic soda to three gallons of water.

Mr. ATKINSON read a paper by Dr. SWEET on Sanitation in Hospitals, Drainage and Water Supply Past and Present of the Worcester Infirmary. The paper was discussed by Mr. Crespi, Dr. West, and Mr. Nunn.

Mr. MILLICAN read a paper on the Etiology of Acute Specific Diseases.—The PRESIDENT suggested that the discussion upon this paper should be deferred until Friday, when allied subjects should be introduced.

The PRESIDENT presented a memorial from the Women's Christian Temperance Union of Gloucester, and another from the Women's Quarterly Meeting of the Society of Friends for Berkshire and Oxfordshire, asking the Section to use its influence in putting down the use of alcohol.

Dr. NORMAN KERR introduced a discussion upon The Public Medicine Aspects of the Alcohol Question. The debate was continued by Dr. Gray, Dr. W. Drysdale, Dr. J. P. Carter, Dr. Sealiff, Dr. Ritchie, and Dr. Derby. Dr. Norman Kerr replied, and proposed the following resolution:—"That the President of the Section be requested to place the memorials now read before the general meeting on Friday with a request that they may be published in the proceedings of the Association."—This was seconded by Mr. JOSEPH SMITH (Guildford) and carried unanimously.

The memorials are published at page 384.

Thursday, August 10th.

The Section opened at 2 P.M.; Dr. A. CARPENTER presiding.

Dr. DE PIETRA SANTA (Paris) read a paper *Sur la Fièvre Typhoïde à Paris de 1879-82*; on which remarks were made by Dr. Bond and Mr. Ernest Hart.

Dr. RANSOME read a paper on the Scientific and Practical Objects of the Registration of Disease.

The Section decided to discuss the question of Compulsory Notification of Infectious Disease after the papers bearing upon the subject had been read.

Dr. CARTER (Liverpool) read a paper on the Compulsory Notification of Infectious Disease by Medical Men.—Mr. NELSON HARDY proposed, and Mr. G. BROWN seconded, that the "discussion be proceeded with".—Mr. VACHER proposed as an amendment, and Dr. BRUCE LOW seconded, "That the papers of Dr. Slade King and Mr. Paget be read in succession". The motion of Mr. Nelson Hardy was carried. The undermentioned gentlemen spoke in the following order: Dr. Whittle, Dr. E. Haughton, Mr. G. Brown, Dr. Slade-King, Dr. Bond, Mr. Sykes, Mr. Davies, Dr. Livy, Dr. Littlejohn, Dr. Ritchie, Mr. Everett, Mr. Nelson Hardy, Dr. West, Mr. Gornall (Warrington), Dr. Broadbent, Dr. E. Wilson, and Dr. A. Carpenter.

Friday, August 11th.

Dr. A. CARPENTER opened the Section at 9.30 A.M.

Dr. DRYSDALE read a paper on the Influence of Food-Supply on the Death-Rate.—Dr. J. Smith made some remarks on the paper.

Dr. E. WILSON read a paper on Some Peculiar Features in a Recent Epidemic of Measles at Cheltenham.

Mr. VACHER read a paper on the Transmission of Disease by Food.—Dr. Drysdale, Mr. Page, and Mr. Millican discussed the paper; and Mr. Vacher replied.

Dr. GROVES read a paper on House-Sanitation in Rural Districts.—The PRESIDENT thanked Dr. Groves for his paper, and suggested that, if published and circulated in rural districts, much good would result.

Dr. C. WEST exhibited Plans of a Sanatorium proposed to be erected at Nice, in the South of France, for the reception of visitors to the hotels who may chance to be attacked by any contagious fever while resident there. The institution is proposed to be constructed at a distance of from one to two miles outside the town, and on a site of from three to four acres. It is intended that it shall consist of—1, a central administrative block and two lateral pavilions facing south, containing in two storeys twelve chambers, each 16 feet long by 13 high, and 13 wide, with a separate ward-kitchen and vestuary, and communicating by means of a corridor 9 feet wide with three closets and slop-sinks on each floor, provided with cross-ventilation, and cut off by means of a lobby equally with cross-ventilation from the corridor. The whole interspace between the closets is occupied by large French windows, so hung as to admit of their removal in all except very cold weather; while, further, the windows admit of being opened at all times. Earth-closets are intended to be used, partly on account of the absence of any but cesspool drainage; partly because, since the building will often be uninhabited, the water in water-closets and traps would be likely to dry up, and easy passage be thus afforded to sewer-gas. The slop-sink and other drainage is taken immediately out of the house into pipes with open hopper heads and two disconnections before it reaches the drain conducting to the two large cemented cesspools on either side of, and at least a hundred feet from, the building. The storm-water is collected by rain-water pipes all round into a tank. The ventilation is provided for by a double hung sash with a deep lower rail, and above that a light reaching to the wall-plate, and falling inwards like a Sheringham ventilator; a corresponding light over the door; two opposite floor-ventilators; and a Boyle's outlet-ventilator in the chimney. There is to be also a separate small-pox pavilion of one storey, with four patients' rooms, each capable of receiving two patients, being 20 feet by 13, by 13; and two nurses' rooms between the two patients' rooms; with a convalescent-room, kitchen, and necessary offices in a building communicating with the patients' part by an open corridor. The small-pox pavilion is proposed to be placed at least 100 feet from the main building, and to stand east and west so as to avoid any direct current of air from it to the main block. There are to be also a disinfecting station (100 feet behind the main block) similar to that at Nottingham; a laundry; and other necessary offices. These plans, which had been submitted to Mr. Gordon Smith, and Dr. Buchanan of the Local Government Board, before they were drawn up by Dr. West, and Mr. Keith D. Young, the architect to the London Fever Hospital, were examined by Dr. Wilson of Cheltenham and Dr. Bond of Gloucester, who made various suggestions calculated still further to increase their utility, which was admitted very cordially by the meeting, who expressed their hearty approval of the endeavours to meet a great and acknowledged want.—At the conclusion of Dr. West's remarks, the PRESIDENT said that, had time allowed, he would have suggested that a committee be nominated to report to the Section upon Dr. West's plans.—Dr. WILSON remarked that he felt strongly the necessity that exists for hospitals for infectious cases in all places of fashionable resort such as Nice. Having had some experience in the matter of fever hospitals, he would wish to call attention to one or two points in the plans before the Section. He was glad to see the principle adopted of complete isolation for small-pox in a separate building, believing as he did that this is essential if disease is not to be spread in the hospital itself. 1. The aspect of this building east and west might possibly be open to objection in view of the annoyance caused by excessive light in small-pox unless the windows are carefully guarded. 2. The closed window running along one side of the wards would appear to interfere with cross ventilation which is so very desirable. 3. Looking to the question of expense, Dr. Wilson thought that a separate nurses' room for each patient might be dispensed with, provided ample space was allowed in the private wards for the patient and one or two nurses. The nurse's place in acute disease is not in a room of her own, but in the ward with the patient. 4. He thought that allowing a closet to each patient was an unnecessary addition to expense; and he would suggest that if earth-closets, with all their difficulties and annoyances, were adopted, some plan of burning the excreta might be devised, and all chances of subsequent danger from this source would thus be avoided.

Dr. BOND read a paper on Scarlatinal Sore Throat, and its Relations to other Throat-Affections.—Mr. Vacher and Dr. A. Hill made some remarks.

Mr. PAGE (Redditch) read a paper on Closure of Parochial Schools

During the Prevalence of Zymotic Diseases." The following papers were taken as read:—

Dr. IMLACH: Quarantine in Theory and Practice.—The PRESIDENT thought Dr. Imlach's paper to be an important one, and suggested that it should be considered next year at Liverpool, where the subject was of great local importance.

Dr. SLADE KING: Private Medical Practitioners and the Public Health Acts.

Mr. NELSON HARDY: Hospital Sunday and Hospital Reform.

Dr. MOORE'S Short Notes on Vaccination were taken as read.

The PRESIDENT announced that he regretted that Mr. Dyke's paper on Closing of Schools in Times of the Epidemic Prevalence of Contagious Diseases was withdrawn in consequence of the illness of the writer. He proposed "That a vote of thanks be accorded the secretaries for the efficient manner in which they had discharged their arduous duties." This was seconded, and carried unanimously.

A vote of thanks to the President and Vice-Presidents was also carried unanimously.

EXCURSIONS.

EXCURSIONS TO STRATFORD-ON-AVON, LEAMINGTON, ETC.—A large number of members of the Association proceeded to Stratford-on-Avon, Leamington, Kenilworth, and Warwick, on Saturday, August 12th. On reaching Stratford the party were met by Dr. Nason and Dr. Kingsley, both of whom have been mayors of the borough. The company was divided into sections, and the first place visited was Shakespeare's birth-place, where one party, under the guidance of Mr. J. T. Burgess, F.S.A., visited the gardens, whilst the others examined the museum and the birth-room of the immortal bard. After all the curiosities of the building had been examined and explained, the parties went towards the church, stopping to view the old house in High Street, and the grammar school where Shakespeare learnt his "little Latin and less Greek." In the lower room of the grammar school it was related that Shakespeare saw his first play, and here Mr. Burgess, at the request of a large party, gave a brief *résumé* of the poet's connection with Stratford. At the church the tomb was visited, and the entry of the poet's baptism and burial were inspected, under the guidance of Mr. Butcher, the courteous parish clerk. The party then visited the memorial buildings and theatre, and inspected the new pictures which have been recently placed therein. After a visit to the gardens at New Place, where Shakespeare died, they went to the town hall, where light refreshments were provided by the local members of the profession. Afterwards, the members proceeded by special train to Leamington, where they arrived shortly before two o'clock, and were received by Dr. Baker, Dr. Haynes, Dr. Thursfield, and Mr. Jeaffreson. The excursionists at once adjourned to the Royal Pump Rooms, where a sumptuous luncheon had been provided. Dr. Tibbits, of Warwick, presided, supported by Alderman Bright (mayor), the Hon. and Rev. Canon Leigh, and a large number of the local gentry. Altogether there were about two hundred and fifty present. Luncheon over, the chairman proposed the health of "The Queen," which was loyally honoured. "Success to the British Medical Association" was also proposed by the chairman. He said it was owing to the kindness of his medical brethren at Warwick and Leamington, that he had the pleasure of giving the representatives of the British Medical Association a cordial welcome to the town of Leamington. To all his medical friends, as to himself, it was a source of unbounded happiness to see such a representative assembly in Leamington, and it was also a great pleasure to note the kindly feeling which had been shown on all hands towards the members of the Association during the meetings at Worcester. In the magnificent reception given by the Lord-Lieutenant of Worcestershire, the public decorations at Droitwich, and the demonstrations by the citizens of Worcester, they had evidence of a growing appreciation on the part of the public of the medical profession. He felt certain that the British Medical Association, in its jubilee year, had had a worthy reception at the hands of the public in Worcestershire and the Midland Counties. In conclusion, he gave the members a hearty welcome to Leamington, on behalf of the members of the medical profession in the town and neighbourhood.—Dr. Thursfield next gave the toast of the Vicar and the Mayor.—Alderman Bright (mayor), on behalf of the Corporation, also warmly welcomed the members of the British Medical Association to Leamington.—The Hon. and Rev. Canon Leigh also returned thanks.—Dr. Lewis Lewis, of Plymouth, on behalf of the visitors, returned thanks to the members of the medical profession at Leamington and Warwick for their handsome hospitality. Dr. Brerley, of Manchester, also returned thanks.—The party then left, and proceeded to Kenilworth in a number of conveyances. At the request of the local committee, Mr. Burgess, the author of *Historic Warwickshire*, gave a description of this

magnificent illustration of the military architecture of the middle ages, and the associations connected therewith. Many of Mr. Burgess's illustrations were the result of recent investigations, and were greeted by loud applause when he terminated his address. After inspecting the castle the party returned to Warwick, visited the church and other places of interest, and returned to Worcester in the evening.

EXCURSION TO THE WYE.—About one hundred members, with their friends, left Worcester early in the morning of Saturday, August 12th, for this excursion. The train called at Malvern and Ledbury, and halted for one hour at Hereford, which allowed no more than a very hasty survey of the cathedral and general aspects of the city. Thence they proceeded to Ross, a glimpse being occasionally caught of the river Wye, as the railway crossed over it four times. At Ross, on account of the very low state of the river, the programme of taking boats to Monmouth was not carried out. The party proceeded onwards by train to the next halting place—Symonds Yat—the river being crossed twice between Ross and that place. At Symonds Yat, a halt was made of one hour, where the most beautiful scenery of the Wye was surveyed as the party ascended to the top of the cliff, 500 feet above the river. The Coldwell Rocks, precipitous and weather beaten, covered with verdure, presenting fantastic shapes like ruined towers, covered with foliage of varied hues, the mass of timber on both sides of the river being the outskirts of the Forest of Dean. The rocks on the opposite side of the river, where have been found bones of mammoth rhinoceros and fossil horse, presented a scene which made everyone wish the day was longer than twenty-four hours. Within the ruins of Tintern Abbey, the party was met by John Yates, Esq., LL.D., who gave a very interesting *impromptu* address on the Cistercian monks, which he concluded by venturing to throw out the suggestion to the medical scientists that there was much need in the kingdom of convalescent sanatoria; and where could more healthy spots be found for sanatoria than in the localities which the monks had chosen? the monks embracing the care of the poor in hospitals amongst their religious duties. Dr. Seaton having thanked Dr. Yates, the carriages were again taken, passing through the more wild and the more grand scenery as the mouths of the Wye were approached. The Wyndcliff was ascended by the party, a height of 900 feet above the river, from which a commanding prospect was obtained of wild and grand scenery of precipitous rocks and verdure, and the mouths of the Wye and Severn. Seats in carriages being again resumed, the party proceeded to Chepstow, where they partook of a luncheon. Dr. Seaton presided, and very courteously thanked the Reception Committee of the Worcestershire and Herefordshire Branch for this very pleasant termination of their week's labours. Mr. H. C. Moore of Hereford, who had carried out the programme of the day, in reply, acknowledged the reward for their labours by the universal appreciation with which they had been met. The party proceeded home by the Valley of the Severn; the line skirting the Severn for a distance of some miles, and passing close by the Severn Bridge. This bridge, which is formed of bowstrung girders, is the largest bridge of the kind in the kingdom, being more than 4,000 feet in length. They returned to Worcester in the evening, *via* Grange Court, Ross, Hereford, and Malvern. The day was charming; everyone thoroughly enjoyed it; and the universal opinion was that it was not necessary to go out of one's own country to find glorious and varied scenery.

EXCURSION TO MALVERN.—The members of the Association, who arrived at Great Malvern station at about 10.30 on the morning of Saturday, August 12th, were conveyed by carriages to Little Malvern Court, the seat of Charles Berington, Esq., where they were joined by several of the Malvern party and the Rev. J. Symonds, the well known archaeologist, who conducted them over the Court, which, besides its natural beauty of situation, possesses great interest as having been in former days a monastic institution attached to the neighbouring church, now partly in ruins. Among other objects of interest shown to the visitors was a portrait of Catherine of Arragon with her daughter Mary. In the church the glass, though much mutilated, possesses great interest. The company then proceeded to the summit of the Herefordshire Beacon, which, on a day so clear and cloudless, afforded a view which it would be difficult to surpass, either in extent or beauty. Here a short geological and archaeological sketch of the district in general, and of the Couch Hill in particular, was kindly given by Mr. G. H. Piper of Ledbury, which gave rise to some rather amusing discussion. This over, the company, among whom were several ladies, adjourned to a tent in a neighbouring field, where the medical profession of Malvern, represented by Drs. Stanley Haynes and Pike, and Mr. Tyrrell, welcomed the visitors to an excellent luncheon. When this had received ample justice, and the usual complimentary speeches had been duly proposed and replied to, the company separated to enjoy a pleasant afternoon on various points on the Malvern Hills.

ASSOCIATION INTELLIGENCE.

BRANCH MEETINGS TO BE HELD.

NORTH OF ENGLAND BRANCH.—The autumnal meeting will be held at Durham, on Wednesday, September 20th. Gentlemen intending to read papers or to show specimens or cases are requested to communicate with the Secretary.—**DAVID DRUMMOND, M.D.,** Honorary Secretary, Newcastle-on-Tyne.—August 22nd, 1882.

NORTH WALES BRANCH.—The thirty-third annual meeting will be held at the Westminster Hotel, Rhyl, on Tuesday, September 5th, at noon (12 P.M.), under the presidency of Dr. John Roberts of Chester. Dr. Baron and Dr. Rich of Liverpool will demonstrate the Bacilli of Phthisis; and other microscopic specimens will be exhibited. Papers will also be read. At 4 P.M., the members will dine together.—**J. LLOYD-ROBERTS,** Honorary Secretary, Denbigh.—August 21st, 1882.

NORTH OF IRELAND BRANCH.—A meeting of this Branch will be held in the Corporation Hall, Londonderry, on Thursday, September 7th, at 11.30 o'clock. Members intending to read papers or propose new members will kindly intimate their intention to **ALEXANDER DEMPSEY, M.D.,** Honorary Secretary, Clifton Street, Belfast.

PROCEEDINGS OF COUNCIL.

Tuesday, August 8th, 1882.

At a meeting of the Council of 1881-82, held in the Council Room of the Guildhall, Worcester, on Tuesday, August 8th, 1882; present, Mr. C. G. Wheelhouse, President of Council, in the chair; Mr. B. Barrow, President; Dr. Wade, Treasurer; Mr. W. Adams, Mr. T. E. Amyot, Dr. J. T. Arlidge, Mr. F. J. Bailey, Mr. Alfred Baker, Dr. G. B. Barron, Mr. T. H. Bartleet, Mr. W. S. Batten, Surgeon-Major Boileau, Dr. L. Borchardt, Dr. A. Carpenter, Dr. W. Carter, Dr. Sinclair Coghill, Dr. Ward Cousins, Mr. E. Crickmay, Dr. C. J. Cullingworth, Dr. A. Davidson, Mr. H. N. Davies, Dr. E. Dewes, Dr. W. Dickson, Dr. W. H. Dixon, Dr. C. Drage, Dr. D. Drummond, Dr. J. W. Eastwood, Dr. A. W. Edis, Mr. D. Everett, Dr. S. Felce, Dr. W. H. FitzPatrick, Dr. E. Long Fox, Dr. W. C. Grigg, Mr. J. G. Hall, Mr. H. Nelson Hardy, Dr. H. Harris, Dr. A. J. Harrison, Mr. Ernest Hart, Dr. A. Henry, Dr. H. Hensley, Dr. S. Holdsworth, Dr. C. Holman, Dr. R. Hudson, Dr. G. M. Humphry, Mr. W. D. Husband, Dr. J. R. Kealy, Dr. D. J. Leech, Mr. C. Macnamara, Mr. F. E. Manby, Dr. John Moore, Dr. A. S. Myrtle, Mr. A. A. Napper, Dr. S. Rees Philipps, Dr. G. H. Philipson, Dr. E. Rayner, Mr. J. Reid, Mr. G. W. Rigden, Dr. Lloyd Roberts, Dr. S. S. Roden, Dr. T. L. Rogers, Dr. James Ross, Dr. A. Sheen, Mr. S. W. Sibley, Mr. E. Noble Smith, Mr. W. D. Spanton, Mr. H. Stear, Dr. A. P. Stewart, Mr. Jabez Thomas, Dr. A. T. H. Waters, Dr. E. Waters, Dr. W. Webb, and Mr. T. Watkin Williams.

The draft annual report was read; and, after some amendment, was ordered to be placed before the general meeting of the members of this evening.

Wednesday, August 9th, 1882.

At a meeting of the Council for 1882-83, held at the Guildhall, Worcester, on August 9th, 1882; present, Mr. C. G. Wheelhouse, President of Council, in the chair; Dr. Strange, President; Dr. W. F. Wade, Treasurer; Mr. T. E. Amyot, Dr. J. T. Arlidge, Mr. F. J. Bailey, Mr. J. W. Baker, Dr. J. A. Ball, Dr. T. Barr, Dr. G. B. Barron, Mr. B. Barrow, Mr. J. S. Bartum, Dr. Walter Bernard, Dr. L. Borchardt, Dr. T. Bridgwater, Mr. S. W. Broadbent, Mr. J. W. Brown, Dr. J. W. Byers, Dr. A. Carpenter, Dr. W. Carter, Dr. Chadwick, Mr. W. M. Coates, Dr. S. Coupland, Dr. J. W. Cousins, Mr. E. Crickmay, Dr. C. J. Cullingworth, Dr. A. Davidson, Dr. A. Davies, Mr. H. Davies, Dr. A. Dempsey, Dr. E. Dewes, Dr. W. Dickson, Dr. C. Drage, Dr. D. Drummond, Dr. Eastwood, Dr. W. A. Elliston, Dr. S. Felce, Mr. G. P. Field, Dr. W. H. FitzPatrick, Mr. W. H. Folker, Dr. B. Foster, Dr. E. Long Fox, Dr. W. S. Gervis, Dr. J. H. Gibson, Mr. J. H. Gornall, Dr. T. D. Griffiths, Dr. W. C. Grigg, Mr. J. G. Hall, Mr. H. Nelson Hardy, Mr. W. J. Harris, Dr. A. J. Harrison, Mr. Reginald Harrison, Mr. Ernest Hart, Dr. Stanley L. Haynes, Dr. A. Henry, Dr. S. Holdsworth, Dr. C. Holman, Dr. R. S. Hudson, Dr. G. M. Humphry, Mr. W. D. Husband, Mr. Vincent Jackson, Mr. T. R. Jessop, Dr. J. Johnston Dr. Talford Jones, Dr. J. R. Kealy, Mr. H. R. Ker, Dr. J. Lambert, Dr. H. T. Lanchester, Dr. D. J. Leech, Mr. E. Lund, Dr. W. J. Lunn, Dr. MacLagan, Mr. C. Macnamara, Dr. D. C. McVail, Dr. F. A. Mahomed, Mr. F. E. Manby, Dr. H. Marshall, Mr. Frederick Mason, Sir William Miller, Dr. John Moore, Mr. A. A. Napper, Dr. J. J. Nason, Mr. R. H. B. Nicholson, Mr. Rushton Parker, Dr. C. Parsons, Mr. W. Pearse, Dr. S. Rees Philipps, Dr. G. H. Philipson, Mr. A. Prichard, Mr. C. Puzey, Dr. E. Rayner, Mr. James Reid, Mr. G. W. Rigden, Dr. Lloyd Roberts, Dr. T. L. Rogers, Dr. J. Ross, Dr. E. Seaton,

Mr. S. W. Sibley, Dr. E. H. Sieveking, Mr. E. Noble Smith, Mr. J. V. Solomon, Mr. J. Somer, Mr. W. D. Spanton, Dr. J. K. Spender, Dr. S. Spratly, Mr. H. Stear, Dr. C. Steele, Dr. A. P. Stewart, Dr. M. W. Taylor, Mr. H. Terry, Mr. Jabez Thomas, Dr. J. Y. Totherick, Mr. F. Treves, Dr. T. Trollope, Dr. T. Underhill, Mr. H. Vevers, Dr. A. T. H. Waters, Dr. E. Waters, Dr. F. P. Weaver, Mr. T. Watkin Williams;

The Council proceeded to elect twenty members to be members of the Committee of Council.

Twenty-five members having been nominated as follows, viz.:

Twenty by the Committee of Council, in accordance with By-law 28: J. T. Arlidge, M.D., Newcastle; T. H. Bartleet, M.B., Birmingham; J. P. H. Boileau, M.D., Surgeon-Major; L. Borchardt, M.D., Manchester; B. Foster, M.D., Birmingham; E. Long Fox, M.D., Clifton; A. J. Harrison, M.B., Clifton; C. Holman, M.D., Reigate; Leslie H. Jones, M.D., Blackpool; H. T. Lanchester, M.D., Croydon; C. Macnamara, Esq., London; F. E. Manby, Esq., Wolverhampton; Frederick Mason, Esq., Bath; R. H. B. Nicholson, Esq., Hull; Rushton Parker, Esq., Liverpool; S. W. Sibley, Esq., London; E. H. Sieveking, M.D., London; A. P. Stewart, M.D., London; T. Sympson, Esq., Lincoln; John Wood, Esq., F.R.S., London.

Nominations in accordance with By-law 29:—By W. Taylor, M.D., and J. G. Hall, Esq.; Evan Jones, Esq., Swansea. By G. A. Brown, Esq., and T. D. Griffiths, M.D.; Wm. Taylor, M.D., Cardiff. By W. H. FitzPatrick, M.D., and W. H. Manifold, Esq.; Edwin Rayner, M.D., Stockport, and G. B. Barron, M.D., Southport. By W. Carter, M.D., S. Spratly, M.D., and J. Lambert, M.D.; W. H. FitzPatrick, M.D., Liverpool. By S. Rees-Phillips, M.D., and H. Nelson Hardy, Esq.; Sampson Gamgee, Esq., Birmingham.

A ballot was taken, and the gentlemen whose names are as follows were declared to be elected: J. T. Arlidge, M.D.; T. H. Bartleet, M.B.; J. P. H. Boileau, M.D.; L. Borchardt, M.D.; B. Foster, M.D.; E. Long Fox, M.D.; A. J. Harrison, M.B.; C. Holman, M.D.; Leslie H. Jones, M.D.; H. T. Lanchester, M.D.; C. Macnamara, Esq.; F. E. Manby, Esq.; Frederick Mason, Esq.; R. H. B. Nicholson, Esq.; Rushton Parker, Esq.; S. W. Sibley, Esq.; E. H. Sieveking, M.D.; A. P. Stewart, M.D.; T. Sympson, Esq.; John Wood, Esq., F.R.S.

A deputation from Liverpool attended, and Dr. Davidson presented a cordial invitation to hold the Annual Meeting of the Association in that city in the year 1883.

Resolved: "That it be proposed to the General Meeting of to-day that the place of meeting in 1883 be Liverpool, and that Dr. A. T. H. Waters be nominated President-Elect."

Resolved: "That the Committee of Council be requested to consider in which way the direct representation of the Branches can best be secured."

Dr. John Moore, President of the Belfast and North of Ireland Branch, attended with a deputation to present a cordial invitation to hold the Annual Meeting of 1884 at Belfast.

Resolved: "That it be recommended to the Council for 1883 and 1884, that the invitation to hold the Annual Meeting of the Association at Belfast be accepted."

PROCEEDINGS OF THE COMMITTEE OF COUNCIL.

Tuesday, August 8th, 1882.

At a meeting of the Committee of Council, held in the Committee Room, Guildhall, Worcester. Present—Mr. C. G. Wheelhouse (President of Council) in the chair; Mr. B. Barrow, President; Dr. W. F. Wade, Treasurer; Mr. Alfred Baker, Surgeon-Major; Boileau, Dr. L. Borchardt, Dr. A. Carpenter, Dr. C. Chadwick, Dr. A. Davidson, Dr. C. Drage, Dr. D. Drummond, Dr. E. Long Fox, Dr. W. C. Grigg, Dr. A. J. Harrison, Dr. C. Holman, Mr. W. D. Husband, Mr. Arthur Jackson, Mr. C. Macnamara, Mr. F. E. Manby, Mr. F. Mason, Dr. C. P. Parker, Dr. S. Rees-Phillips, Dr. A. Sheen, Mr. S. W. Sibley, Mr. H. Stear, Dr. A. P. Stewart, Dr. E. Waters.

The minutes of last meeting were read and found correct.

Read letter recommending three of the candidates of the 115 whose names appear on the circular convening the meeting.

Resolved: That the remaining 112 be, and they are, hereby elected members of the Association, and the remaining three candidates be referred to the Council of their respective Branches.

Resolved: That the discussion of the question that the discussion of the question of the National Association be postponed after the General Meeting.

Resolved: That the subject of the Notification of Disease be considered at the General Meeting of Wednesday, at 12 o'clock.

Read a communication from Dr. Milner Fothergill, stating that he

was unable to attend the meeting of Tuesday evening, and asking for some other time to attend the general meetings and move the motion of which he had given notice.

Resolved: That Dr. Milner Fothergill be informed that his motion having been put down for this evening, and of which due notice had been given, no change of the agenda of the general meetings can now be made.

The draft annual report was then considered, and, after some amendment, was ordered to be laid before the General Council.

Thursday, August 10th, 1882.

At a meeting of the Committee of Council held at the Guildhall, Worcester, August 10th, 1882; present—Mr. C. G. Wheelhouse, President of the Council, in the chair, Dr. W. Strange, President, Dr. A. T. H. Waters, President-elect, Dr. W. F. Wade, Treasurer, Dr. J. T. Arlidge, Mr. B. Barrow, Mr. T. H. Bartleet, Surgeon-Major Boileau, Dr. L. Borchardt, Dr. Alfred Carpenter, Dr. J. Ward Cousins, Dr. G. W. Crowe, Dr. A. Davidson, Dr. A. Dempsey, Dr. D. Drummond, Dr. W. A. Elliston, Dr. B. Foster, Dr. E. Long Fox, Dr. J. H. Gibson, Dr. W. C. Grigg, Mr. A. J. Harrison, Dr. C. Holman, Mr. W. D. Husband, Mr. A. Jackson, Dr. T. Eyton Jones, Dr. H. T. Lanchester, Mr. C. Macnamara, Mr. F. E. Manby, Mr. F. Mason, Mr. R. H. B. Nicholson, Mr. Rushton Parker, Dr. S. Rees-Phillips, Mr. Septimus W. Sibley, Dr. A. P. Stewart, Dr. E. Waters;

The minutes of the last meeting were read and found correct.

Moved: That Dr. Strange, the President, be appointed a member of the Journal and Finance Committee.

Mr. Macnamara was nominated a member of the Journal and Finance Committee.

Dr. Stewart having resigned his membership of the Journal and Finance Committee, the President, Dr. Strange, was appointed to the vacancy.

Thirteen members having been nominated, Mr. Arthur Jackson was appointed scrutineer. A ballot was taken, and the following gentlemen were declared to be elected members of the Journal and Finance Committee for the ensuing twelve months: Mr. C. G. Wheelhouse, President of Council; Dr. W. F. Wade, Treasurer; Dr. Strange, Mr. A. Baker, Dr. L. Borchardt, Dr. Carpenter, Dr. Chadwick, Dr. B. Foster, Dr. Holman, Mr. Husband, Mr. Manby, Mr. F. Mason, Mr. Nicholson, Dr. Waters.

Resolved: That the gentlemen whose names are as follows be elected members of the Arrangements Committee for the annual meeting of 1883: The President, the President-elect, the President of the Council, the Treasurer, Mr. Mitchell Banks, Mr. Husband, Dr. Crowe, Mr. Reginald Harrison, Dr. Davidson, Dr. Stewart.

SPECIAL CORRESPONDENCE.

MALTA.

THE harbour of Malta now presents a scene of great animation, owing to the constant arrival and departure of transports conveying troops and stores to the seat of war. Fortunately, this has been a remarkably healthy season at Malta, and there are but very few cases of fever among the troops at the station. The climate, however, is pretty hot, as they contain, not only the seeds of the miasmata which were sent from the island to the front, but also several cases of dysentery and fever which have been invalided from Alexandria during the last few days. These do not appear to be serious cases. Many of the transports from England likewise send a few sick to the Malta hospitals, chiefly for primary syphilis and gonorrhoea.

At the same time, the Malta hospitals are crowded with cases of venereal disease, and the medical authorities are doing their utmost to deal with them. The mortality is not high, but the suffering is considerable.

A few cases of dysentery and fever have also been reported, and in particular, a case of dysentery which was very severe, and which terminated fatally.

It is worth noting that the mortality from pulmonary disease is not high, and that the medical authorities are doing their utmost to deal with the cases. However, it is worth noting that the mortality from pulmonary disease is not high, and that the medical authorities are doing their utmost to deal with the cases. However, it is worth noting that the mortality from pulmonary disease is not high, and that the medical authorities are doing their utmost to deal with the cases.

Dr. W. M. O'Connell died suddenly at his residence, Mullingar, last week, aged 60 years.

CORRESPONDENCE.

COTTAGE HOSPITALS.

SIR,—You suggested, in an article some time ago, that it was desirable that each Cottage Hospital Committee should contribute in its corporate capacity a small sum, in no case exceeding £5, to the Napper Testimonial Fund. Some of the hospitals appear to take up this suggestion warmly; but I regret to say that, as a matter of fact, not a single cottage hospital in its corporate capacity, of the whole of the 320 at present existing in this country, has sent one penny to the Napper Fund. I have taken a considerable interest in cottage hospitals, and have done my best to promote their efficiency and success. For this reason, perhaps, I not unnaturally feel zealous for the honour of these useful institutions; and I desire to ask the members of the medical staffs of cottage hospitals throughout the country to bring the subject of the Napper Testimonial before an early meeting of their Committees, with the view of ascertaining if any and what contribution shall be given to it. Personally, it is not the amount which I shall value; and a subscription of even five shillings would be regarded by me with satisfaction, as evidence that great public services rendered by an exceptionally able and good man, were not forgotten by those who have most benefited by them. I urge the medical men in question, and I earnestly beg of all of them with whom I am personally acquainted, to show at once that, in the case of those which are best managed at any rate, gratitude is not a lively expectation of favours to come. Let each member of the medical profession resident in the country, ask himself what he owes to Mr. Napper, whose foresight originated, and whose invariable readiness to give substantial help and information secured the success of the majority, at any rate, of the cottage hospitals which are scattered throughout the country to-day. It is, of course, a matter within the discretion of each Committee to decide whether the subscription to the Napper Testimonial Fund shall be contributed out of the funds of the hospital or the private purses of its staff and the Committee. For my part, I believe it will be best that each member of the staff and Committee of every cottage hospital shall be asked to subscribe one shilling, and that the total sum so raised should be sent forward to the Treasurer of the Napper Testimonial Fund, Mr. Malcolm Morris, F.R.C.S., 63, Montagu Square, Hyde Park, as the contribution of the hospital.—I am, sir, your obedient servant,

HENRY C. BURDETT.

39, Gloucester Road, Regent's Park, N.W.

NOTIFICATION OF INFECTIOUS DISEASES.

SIR,—I was an interested and attentive listener to the important debate which took place on August 10, under the presidency of Dr. Alfred Carpenter, in the Public Medicine Section at Worcester, and I was also present at the discussion which followed the next day at the general meeting on the subject of the Notification of Infectious Diseases. It is a matter of congratulation that, on such a special occasion, the members of our industrial Association should have declared themselves so strongly in favour of the principle of notification, though some of us may regret that the resolution finally adopted is not such as we, at any rate, think would be most likely to lead to its successful application. I write as a medical officer of health, and one, therefore, who has to look upon this question more especially from the stand-point of the sanitary authority. In venturing to express my opinion, I may be allowed to say that I do so with feelings of deep respect for those whose views differ from my own.

Hitherto I have always supposed that the plan of notification which on the whole was most likely to secure the approval of the members of the medical profession, was that which one might call the indirect compulsory system, as opposed to the direct compulsory system, which requires the medical man, either alone or jointly with the householder, to intimate the existence of infectious disease. The first of these obviates what is always put forward as the chief objection on the part of many medical practitioners to notification, that, namely, which arises from a feeling of repugnance to being obliged to become themselves the direct informers of the sanitary authority. By this system this duty is put upon the householder, the medical man only being required to do formally that which he does now as a matter of course; viz., tell the person who is responsible for the charge of the patient the nature of the disease. The only compulsion is in his being legally required to fill up a formal certificate, giving particulars as to the nature of the disease, name of the householder, and situation of the building, which it is the householder's duty to forward to the sanitary authority. The position is in fact analogous to that which he occupies in the case of

the death-certificate, where he is required to furnish certain particulars for the purpose of death-registration.

It appears now that the objection is to compulsion even in this modified form; for, if I understand Dr. Mahomed's resolution aright, the proposal is, that the sanitary authorities should be empowered to require every householder to notify to them the existence of infectious disease in his house, and no more; that it would be open to them to supply forms of certificates, which medical men might use or not, as they thought proper, their action in the matter being entirely voluntary. There would, in fact, be no reference at all to the medical man in the Act of Parliament, except perhaps where power was conferred on the authorities for the printing, distribution, and payment for the certificates to medical men who chose to use them. I have heard this idea expressed before, but have never known it to be definitely formulated.

I doubt very much whether this plan would commend itself to sanitary authorities when its nature was explained to them. There would be several practical objections to it. The most serious is that arising from the position of that section of the profession which is opposed altogether to notification. There are certain members of the profession whose attitude is that of uncompromising hostility to notification in any shape or form. There can be no mistake about this. Those who were present at the debate at Worcester will bear me out when I say, that some of the speakers showed from their remarks, that they at least regarded the demand for notification on the part of the public as in every case an unwarrantable interference with themselves and the patients under their care. They and their patients must be trusted to entirely in a matter where not only their own interests but the safety of the public is concerned. Of course, this section is a comparatively small one; but it exists, and we cannot afford to ignore its existence. What, then, would be the position of this section under the scheme which is shadowed out? As far as I can see, these gentlemen would be practically exempt from any obligation to notify, and it is not to be expected that they would do voluntarily that which they declare themselves to be strongly opposed to. We are told that the remedy for this evil lies in the fact that it is the householder's legal duty to notify; and that, where he fails to do so, he may be summoned; and that he would then have his legal remedy against the medical man if the fault lay with him. But how is the authority to become aware of the existence of the infectious disease? Well, it is said, the fact would sometimes leak out, and then the authority could take action. But supposing, in some large town, such a rumour did reach the ears of the sanitary authority, how is it to be investigated, except through the agency of the medical officer of health? and how is the medical officer of health to do this without visiting the house and examining the patient?—a proceeding which would, I think, if feasible, be generally considered objectionable. There would practically be little or no check on those who habitually refused in any way to help towards the notification of cases of infectious disease which happened to come under their treatment. It would be so very difficult to bring pressure to bear on them, that they would be virtually free to do just as they liked; and this fact could not but have a demoralising effect on those who were willing to aid the public, though under no legal obligation to do so.

As one of those whose duty it is to advise with a sanitary authority in the exercise of its functions in limiting the spread of infectious diseases, I regret that the feeling amongst members of our profession appears to be against compulsion even in a modified form; but I still hope that, when the question is more maturely considered, the system above referred to, and which is free from the main objection to notification will find greater favour, because my experience leads me to think that it is, on the whole, more calculated to serve the public ends.—I am, your obedient servant,

EDWARD SEATON, M.D. Lond., M.R.C.P.,
Medical Officer of Health and Physician to the General Hospital
August 14th, 1882. at Nottingham.

THE services of Deputy Surgeon Colvin Smith, M.D., of the Indian Medical Department, have been placed at the disposal of the Government of India by the Madras Commander-in-Chief for appointment as Principal Medical Officer in the Indian Brigade in Egypt.

DONATIONS AND BEQUESTS.—Lady Victoria Long Wellesley has given £2,000 to the Eastbourne Provident Dispensary, to establish an Infirmary in connection with it, for which the Committee have secured suitable premises.—The Ladies' Association of the Great Northern Hospital have given £105 to the building fund, and £40 to the general fund.—The Jessop Hospital for Women, and the Leeds General Infirmary, have each received £100 under the will of Mr. Thomas James Parker.

Botany.

First Class.

Oliver, Francis Wall, Int. Sc. (Exhibition), University College.
 *Fox, Wilson Henry, Int. Sc., University College.
 Aitken, Edith, Int. Sc., Girton College, Cambridge.

Second Class.

Evans, Isabel Clare, Prel. Sci., Mason College, Birmingham.
 { Basu, Jagadish Chunder, Prel. Sci., Christ's College, Cambridge.
 { Brown, Arthur Edward, Prel. Sci., Private Tuition and University College.
 Elliott, William Henry Wilson, Prel. Sci., Guy's Hospital.

Third Class.

Crouch, Charles Percival, Prel. Sci., St. Bartholomew's Hospital.
 Wray, Richard Spalding, Prel. Sci., Yorkshire and Elmfield Colleges.
 Carnegie, Douglas John, Prel. Sci., Epsom College.

Zoology.

First Class.

Dean, Henry Percy, Prel. Sci., University College.

Second Class.

Fox, Wilson Henry, Int. Sc., University College.
 May, William Page, Prel. Sci., University College.
 Marshall, Charles Frederic, Prel. Sci., Owens College.

Third Class.

Rigby, Edward Austin, Int. Sc., Stonyhurst and Owens Colleges.
 Thompson, James Edwin, Prel. Sci., Owens College.
 Haring, Nathan Charles, Prel. Sci., Owens College.

* Obtained the number of marks qualifying for the Exhibition.

N.B.—The bracket denotes equality of merit.

UNIVERSITY OF LONDON.—Intermediate Examination in Medicine.
1882. Pass List. Entire Examination.*First Division.*

Anderson, George Elliott Caldwell, Guy's Hospital.
 Bowes, William Henry, Guy's Hospital.
 Brock, James Harry Ernest, University College.
 Carr, John Walter, University College.
 Elliott, John, B.Sc., Owens College and St. Bartholomew's Hospital.
 Hayman, William Speed, King's College.
 Innes, Charles Barclay, St. Bartholomew's Hospital.
 Jones, Frederick William Caton, St. Bartholomew's Hospital.
 Jones, Samuel Cromwell, University College.
 McCabe, William Alexander Bowes, University College.
 Purslow, Charles Edwin, Queen's and Mason Colleges, Birmingham.
 Spong, Charles Stuart, B.Sc., Guy's Hospital.
 Watson, William Ivens Buswell, Guy's Hospital.
 Wells, George Lee, St. Bartholomew's Hospital.
 Woolbert, Henry Robert, University College.

Second Division.

Adie, Joseph Rosamond, University College.
 Andrews, Charles, University College.
 Arkle, Charles Joseph, University College.
 Barnett, Lawrence, University College.
 Bernard, Letitia Caroline, London School of Medicine for Women.
 Brogden, Richard William, Guy's Hospital.
 Caldecott, Charles, Guy's Hospital.
 Chapman, Harry Cecil, St. Bartholomew's Hospital.
 Cocking, William Tusting, University College.
 Cooper, Henry Charles Evans, Guy's Hospital.
 Dutt, Upendra Krishna, B.Sc., St. Mary's Hospital.
 Fenton, Herbert Alfred Hill, St. Thomas's Hospital.
 Fisher, Henry Holdrich, St. Bartholomew's Hospital.
 Flemming, Percy, University College.
 Frames, Alfred Cromwell, St. Bartholomew's Hospital.
 Francis, Alfred George, St. Bartholomew's Hospital.
 Hinds, Frank, University College.
 Hodgson, Gerald George, King's College.
 Hurst, Walter, Owens and University Colleges.
 Irvin, Frederic David, University College.
 Joberns, William, Queen's and Mason Colleges, Birmingham.
 Lankester, Herbert Henry, St. Thomas's Hospital.
 Little, Arthur Nicholas, Bristol Medical School.
 Mumby, Langton Philip, Westminster Hospital.
 Penrose, Francis George, University College.
 Pettifer, Edmund Cleaver, St. Bartholomew's Hospital.
 Pilgrim, Herbert Wilson, University of Edinburgh.
 Randell, Reginald Maurice Henry, Guy's Hospital.
 Robinson, Henry Betham, St. Thomas's Hospital.
 Rouse, Rolla Edward, St. Thomas's Hospital.
 Sellick, James Henderson, Guy's Hospital.
 Strugnell, Walter Thomas, St. Bartholomew's Hospital.
 Swain, James, Westminster Hospital.
 Taylor, Alfred Ernest, Guy's Hospital.
 Tratman, Frank, Bristol Medical School.
 Turner, Philip Dymock, University College.
 Vernon, John James Dean, Guy's Hospital.
 Vince, John Foster, Queen's and Mason Colleges, Birmingham.
 Voelcker, Arthur Francis, University College.
 Whitcombe, Philip Percival, St. Mary's Hospital.
 Williamson, Richard Thomas, Owens College.

Excluding Physiology.

First Division.

Carpenter, George Alfred, St. Thomas's Hospital.

Second Division.

Freeland, Freeland John, King's College.
 Lankester, Alfred Owen, St. Bartholomew's Hospital.

Physiology only.

Second Division.

Gross, Charles, Guy's Hospital.
 Shillito, Henry, Birmingham School and Masen College.
 Tilly Alfred, St. Mary's Hospital.

Examination for Honours.—Anatomy.

First Class.

Anderson, Geo. Elliott Caldwell (Exhibition and Gold Medal), Guy's Hospital
 Innes, Charles Barclay (Gold Medal), St. Bartholomew's Hospital.
 Woolbert, Henry Robert, University College.

Second Class.

Robinson, Henry Betham, St. Thomas's Hospital.
 Brock, James Harry Ernest, University College.

Third Class.

Flemming, Percy, University College.
 Carr, John Walter, University College.
 Watson, William Ivens Buswell, Guy's Hospital.
 Cooper, Henry Charles Evans, Guy's Hospital.

Materia Medica and Pharmaceutical Chemistry.

First Class.

Carr, John Walter (Exhibition and Gold Medal), University College.
 { Innes, Charles Barclay, St. Bartholomew's Hospital.
 { Woolbert, Henry Robert, University College.
 Flemming, Percy, University College.

Second Class.

Whitcombe, Philip Percival, St. Mary's Hospital.

Third Class.

Brock, James Harry Ernest, University College.
 { Hayman, William Speed, King's College.
 { Randell, Reginald Maurice Henry, Guy's Hospital.

Organic Chemistry.

First Class.

Innes, Charles Barclay (Exhibition and Gold Medal), St. Bartholomew's Hospital.
 *Spong, Charles Stuart, B.Sc., Guy's Hospital.
 *Dutt, Upendra Krishna, B.Sc., St. Mary's Hospital.
 Anderson, George Elliott Caldwell, Guy's Hospital.

Second Class.

Elliott, John, B.Sc., Owens College and St. Bartholomew's Hospital.
 Brock, James Harry Ernest, University College.

Physiology and Histology.

Third Class.

Anderson, George Elliott Caldwell, Guy's Hospital.
 Tratman, Frank, Bristol Medical School.
 Vernon, John James Dean, Guy's Hospital.
 { Cooper, Henry Charles Evans, Guy's Hospital.
 { Randell, Reginald Maurice Henry, Guy's Hospital.
 Spong, Charles Stuart, Guy's Hospital.
 Bowes, William Henry, Guy's Hospital.

* Obtained the number of marks qualifying for a medal.

N.B.—The bracket denotes equality of merit.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 17th, 1882.

Corner, Matthew Cursham, 113, Mile End Road, E.
 Denning, Arthur, Newhall Street, Birmingham.

The following gentlemen also on the same day passed their Primary Professional Examination.

Butler, Francis Henry, St. Mary's Hospital.
 Brookfield, Samuel, Newcastle-on-Tyne.
 Gent, George Sidney, University College Hospital.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.
 —DOUBLE QUALIFICATION.—The following gentlemen passed their first professional examination during the July sittings of the examiners.

George Ernest Claxton, India; Samuel James Camac, Dervock; Thomas Ross, Sutherlandshire; William Vaughan Roberts, Festiniog; Charles Spurgeon Davies, Canada; Richard Nason Gaggin, County Cork; Arthur Robert Steel, Aldershot; Ewen Whitwell, junior, London; Lambert Houghton, New York; Eliot William Welchman, Lichfield; William Allen Fisher, County Cork; George James Waters Garnham, Derbyshire; George Henry Taylor, Houghton-le-Spring; John Foggin, Newcastle-on-Tyne; Douglas Dixon Dryden, Plymouth; John Davies, Birkenhead; Herbert Tofft-Phillips Sinclair, India; William Henry Harris, Stony Stratford; James David Black, Cockburnspath; Daniel Joseph Patrick McNabb, Greenock; William Owen Magoris, West Hartlepool; Henry Crombleholme Bradley, Preston; Frederick William Gibson, Durham County; James Hogg, Lanarkshire; James Curtin Sheehan, County Cork; James Orr, County Antrim; John William Ridley, Wallsend-on-Tyne; Benjamin David Craigie Bell, Shetland; John Williams-Jones, Carnarvonshire; Edward Campbell Hearne, County Mayo; George Parry, Carnarvon; Edward Muscroft Taylor, Scarborough; Joseph Amy, Jersey; Walter Wignall, Skipton; Herbert Harcourt Kent, Brighton.

The following gentlemen passed their final examination, and were admitted L.R.C.P. Edinburgh and L.R.C.S. Edinburgh during July and August.

Cornelius Buckley, County Cork; William James Browne, County Derry; John Charles King, Roundstone, Galway; James William Delaney, Madras; Edward Ellis, Yorkshire; James Henry Rodgers, India; Thomas Ernest Gee, East Bridgford, Notts.; Edwin Simpson, Perthshire; Adolphe William Ott-

CHICHESTER INFIRMARY—House-Surgeon and Secretary. Applications to the Secretary by September 9th.

DARLINGTON HOSPITAL—Junior House-Surgeon. Salary, £100 per annum (out-door). Applications to C. T. Anson, Esq., Fairfield, Darlington.

DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL, Leicester Square, W.C.—Demonstrator of Contour and Cohesive Fillings. Salary, £50 per annum. Applications by September 29th.

DONCASTER INFIRMARY AND DISPENSARY—Dispenser and Assistant to House-Surgeon. Applications to the House-Surgeon.

DORE UNION—Medical Officer. Salary, £70 per annum. Applications by September 5th.

DOWNPATRICK DISTRICT LUNATIC ASYLUM—Assistant to Resident Medical Superintendent. Applicants must be unmarried, be doubly qualified, and possess a diploma in midwifery. Salary, £100 per annum, with furnished apartments, fuel, light, washing, first-class rations, and attendance. Election on September 2nd.

DURSLEY UNION—Medical Officer. Salary £80 per annum. Applications by August 30th.

GENERAL HOSPITAL, Birmingham.—Resident Registrar and Pathologist. Salary £150 per annum. Applications by August 31st.

GLOUCESTER COUNTY LUNATIC ASYLUM, near Gloucester.—Medical Superintendent. Applications addressed to the Committee of Visitors, Wotton, near Gloucester.

HORTON INFIRMARY, Banbury.—Resident House-Surgeon. Salary, £60 per annum. Applications to Mr. C. H. Davis, 18, Marlborough Road, Banbury, by September 2nd.

LEDGER UNION—Medical Officer. Salary, £60 per annum. Applications by August 29th.

LONGFORD UNION—Medical Officer for Longford Dispensary District. Salary, £100 per annum, with £25 per annum as Medical Officer of Health, registration, and vaccination fees. Election on the 7th proximo.

LONGFORD UNION—Medical Officer for Kilshee Dispensary District. Salary, £100 per annum, with £20 as Medical Officer of Health, registration, and vaccination fees. Election on August 29th.

NETHERFIELD INSTITUTION FOR INFECTIOUS DISEASES, Liverpool.—Resident Medical Officer. Salary, £80 per annum. Applications to Robert Calder, 4, Commercial Court, 17, Waterloo Street, Liverpool, by August 31st.

NORTHEACH UNION—Medical Officer for the No. 2 District. Salary, £57 10s. per annum. Applications by September 12th.

NORTHEACH UNION—Medical Officer of Health. Salary, £100 per annum. Applications by September 12th.

OLDHAM INFIRMARY—House-Surgeon. Salary, £80 per annum. Applications by August 26th.

ONGAR UNION, Essex.—Medical Officer and Public Vaccinator. Salary, £105 per annum. Applications by August 25th.

PORTPATRICK PARISH—Resident Medical Officer. Salary, £65 per annum. Applications to John McCracken, Inspector of Poor, Portpatrick.

PUBLIC DISPENSARY, 59, Stanhope Street, Clare Market.—Dispenser. Salary £1 1s. per week. Applications by August 20th.

PICKERING UNION—Medical Officer. Salary, £20 for the Workhouse, and £40 for the District, with the usual medical fees. Applications to R. Kitching by August 26th.

QUEEN'S COLLEGE, CORK—Chair of Natural History. Candidates to forward testimonials, on or before September 20th, to the Under Secretary, Dublin Castle.

ROYAL INFIRMARY OF EDINBURGH—Pathologist. Applications to Mr. Peter Bell by September 30th.

ST. GEORGE'S, HANOVER SQUARE, PROVIDENT DISPENSARY, 59, Mount Street—Resident Medical Officer. Salary and allowance for last year, £214 4s. 3d. Applications to Mr. G. H. Leach, Secretary, by September 30th.

WESTERN DISPENSARY, Rochester Row, Westminster.—Consulting Accoucher. Applications by September 10th to Mr. Henry S. Bigg, Secretary.

WINCHOMB UNION—Medical Officer. Salary, £65 per annum, in addition to midwifery, surgical, and vaccination fees. Applications by August 25th to J. H. Stephens.

MEDICAL APPOINTMENTS.

CHEESEWRIGHT, John Francis, M.R.C.S. Eng., appointed Surgeon to the Rawmarsh, Dalton, and Thrybergh Division of the West Riding Police Force.

COSGRAVE, E. M., M.D., L.K.Q.C.P.I., appointed Physician to the Simpson's Hospital, Dublin, *vice* J. Duncan, M.D., resigned.

HOLLAND, J. C., L.K.Q.C.P.I., appointed Medical Officer for the Dunganear Dispensary District to the Dunganear Union, *vice* Henry Anthony, M.R.C.S., deceased.

WINKLEY, L. J., M.R.C.S., appointed Ophthalmic and Aural Surgeon to the Preston and County of Lancaster Royal Infirmary.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

KERR.—At 42, Grove Road, Regent's Park, N.W., on the 19th inst., the wife of Norman Kerr, M.D., F.L.S., of a daughter.

NICHOLLS.—On the 9th July, at Dominica, West Indies, the wife of H. A. Alford Nicholls, M.D., of a son.

DEATH.

GILES.—On the 8th August, at his residence, Pendreath, Torquay, Richard Giles, M.D. of Edinburgh University, M.R.C.P. London, late of Oxford. Friends will please accept of this, the only intimation.

HEALTH OF FOREIGN CITIES.—The following statistics, derived from a table in the Registrar-General's last weekly return, afford trustworthy indications of the recent health and sanitary condition of various foreign and colonial cities. The annual death-rate did not exceed 20.3 per 1000 in Bombay, whereas it was equal to 29.4 in Madras; 7 fatal cases of small-pox were reported in Madras, while the deaths from "fever" were excessive in both these Indian cities. According to the most recent weekly returns, the average annual death-rate per 1000 persons, estimated to be living in twenty-two of the largest European cities, was equal to 27.7 per 1000; this rate showed the usual marked excess upon the average rate in twenty-eight of the largest English towns, which did not exceed 23.5 per 1000 last week. The rate in St. Petersburg was equal to 44.6, but showed some decline from the still higher rates prevailing in recent weeks; diarrhoeal diseases caused 206, and small-pox 13 deaths within the city. In three other Northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged 29.5, showing a marked increase upon the rates prevailing in recent weeks; this was mainly due to the fatality of diarrhoeal diseases. The Paris death-rate rose to 25.5, and showed an increase of 4.5 upon the rate in the previous week; no fewer than 106 deaths from typhoid fever, and 36 from diphtheria and croup, were registered during the week. The 199 deaths in Brussels, which included 48 fatal cases of diarrhoeal diseases and 2 of small-pox, were equal to a rate of 25.4. The death-rate in Geneva, on the other hand, showed a further decline, and did not exceed 13.6. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was so low as 20.7; the highest rate was 22.5 in Rotterdam, where one fatal case of small-pox was reported. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 31.1, and ranged from 21.5 and 24.0 in Vienna and Prague, to 37.6 and 37.9 in Trieste and Berlin. Diarrhoeal diseases showed especial fatality in Berlin and Breslau, and small-pox caused 11 deaths in Vienna and 9 in Buda-Pesth. In three of the principal Italian cities, the death-rate averaged 25.9 per 1000; it was equal to 23.6 in Turin, 25.8 in Rome, and 30.1 in Venice; typhoid fever caused 5 and measles 6 deaths in Turin, while a fatal case of small-pox occurred in Venice. In four of the largest American cities, the death-rate averaged 37.2, the highest rates being 36.7 and 46.1 in Brooklyn and New York respectively. Diarrhoeal diseases showed a further increase of fatality in each of the four American cities. Typhoid fever caused 8 deaths in Philadelphia, and small-pox 8 in Baltimore.

BAKEHOUSES.—In the quarterly report of Mr. J. Liddle, the Officer of Health for the Whitechapel District, he says:—"Public attention having been forcibly directed to the defective sanitary condition of several of the bakehouses in London, I gave directions to the sanitary inspectors to visit all the bakehouses in the district, and reports to the following effect were prepared by those officers. It was found that some of the premises used as bakehouses were in a very unsanitary condition. In Mr. Batteram's district it appeared that there are 38 bakehouses, and 23 of them were found to be dirty and ceilings broken; eight were badly paved, and in one the drainage was defective, the soil oozing up into the bakehouse. In another it was ascertained that a man suffering from fever had been sleeping for some nights on flour sacks belonging to the bakehouse, while in another, the structure was in a dangerous condition. Mr. Wrack reports that there are 37 bakehouses in his district, and that several of them were in a dirty state. The inspectors have been further directed to visit, from time to time, all the bakehouses in the district, and report on the existence of any nuisance injurious to health which may exist on the premises, and to take the necessary proceedings to obtain the removal of such nuisances. The opinion which I expressed several years ago as to the best mode of regulating bakehouses was that they should be annually licensed, like cow-houses and slaughter-houses; for since the power of the Local Boards has been transferred to the factory inspectors, the sanitary officers of this district have no reason to congratulate your board on the improvement effected in the bakehouses."

A LOW DEATH-RATE.—The last quarterly return of the Registrar-General shows the death-rate of Tenby to be the lowest, with one exception, of the thirty-seven principal watering-places in the kingdom, being 10.4 per 1,000 of the inhabitants.

VACCINATION.—Mr. J. Reader of Marshfield, Gloucestershire, has received a grant for successful vaccination in the fifth district of the Chipping Sodbury Union.

FOR the vacant coronership for the Western Division of Queen's County there are two candidates, Messrs. Phelan and Quirke. The former is a solicitor; the latter a medical practitioner.

(Sunday): excepting from 11 to 1 P.M. Also at his residence, St. Pauls, Cliffon, at 9.30 A.M. and at 7.30 P.M."

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to the Manager, at the Journal Office, 161A, Strand, London, and not to the Editor.

ANECDOTES OF THE BRITISH MEDICAL ASSOCIATION.

SIR.—The following anecdotes connected with the early days of the British Medical Association, and recently communicated to a local paper by Mr. J. Noake, a well known citizen, and lately Mayor of Worcester, seem worthy of preservation in the JOURNAL.—I am, etc., T. L.

"Sir,—It may not be inappropriate to the visit of the above Association, if I mention to you an anecdote or two connected with its infancy. You are aware that the Medical and Surgical Association originated in this city, the then Dr. Hastings, Mr. Hebb, and others being among the founders. At that time, the members numbered about 300, but since the adoption of its present national title, there has been an increase to nearly 10,000. At its early career, the *Transactions* of the Association were printed in this city, and, by reason of my connection with the local press, the duty of attending the annual congresses of the Association was assigned to me. At the various places which I thus visited, it was my good fortune to meet with distinguished members of the faculty from all parts of the United Kingdom; and it was as early as 1838 that, at Bath, I first met with the late Dr. Malden of Worcester—a gentleman not more prominent for his eminent abilities in his profession than for that geniality, wit, and humour, which always rendered his company attractive. It was at the dinner there, when champagne corks were making a great noise, that Dr. Malden rose, and, calling to a gentleman across the table, said: 'Dr. Macartney, I drink your good health, and congratulate you on coming all the way from Ireland to see so many beautiful *Drawings of Cork*! At a subsequent meeting of the Association, a question was brought on for discussion as to the desirability of reducing the physician's fee from a guinea to a pound, seeing that the guinea coin had then been withdrawn from circulation. Much was said on both sides, till at length Dr. Malden rose, with much solemnity on his countenance, and holding up a shilling between one thumb and a finger, and a sovereign with the other, he said: 'Mr. President, these coins were brought up together from their infancy, they have been associated in their youth, and now they must be considered as lovers. You know what Thompson says of such a couple:

"Young Celadon and his Amelia were a matchless pair,
With equal virtue formed and equal grace—
The same—distinguished by their sex alone:
Her's the mild lustre of the blooming morn,
And his the radiance of the risen day."

Mr. President, let no such lovers be parted.' This touching allusion to the lovers had the desired effect—the question was left *in statu quo*; and to this little incident many of the medical gentleman now assembled in this city may probably owe the one-and-twentieth part of their fortunes, while the affectionate intimacy of the two coins in question remains unbroken.—Faithfully yours, J. NOAKE.

"London Road, August 9th, 1882."

* Showing up the shilling. † Advancing the sovereign.

ANEURYSMAL VARIX.

SIR.—The report of an interesting discussion at a meeting of the Clinical Society of London on May 12th, on aneurysmal varix affecting the hands and fingers, brings to my recollection an unusual case of erectile tissue, under the care of Mr. Syme, in the Edinburgh Royal Infirmary, in the year 1850. The patient was about twenty-five years old, and had been brought from the country to the infirmary, in consequence of several ineffectual attempts being made to arrest sudden bursts of bleeding from a surface covering the knee and tuberosity of the tibia. When the poor fellow was taken into Mr. Syme's ward, he was anæmic and pulseless. Mr. Syme introduced sutures, and did everything that skill and science could suggest, but to no benefit; the hemorrhage would break out in the night. I felt interested in the case, and visited the ward every morning, expecting to find the man dead.

A consultation of all the surgical staff who were in Edinburgh at the time was held. It was decided, as a last resource, to amputate the thigh; and, on the following day, every preparation was made. There were present in the operating theatre Sir George Ballingall, Mr. Watson, Mr. Latt, Sir William Fergusson, and several others. Mr. Syme had the knife in his hand, when a visitor was introduced. He examined the man and his knee, and made one or two observations to Mr. Syme, who gave the knife to his dresser, and all left for a further consultation. On their return, Mr. Syme addressed the few students who were present, introducing Dr. Little from Sligo, who, making his holiday tour, was accidentally present. He suggested an operation, which Mr. Syme adopted. He passed the scalpel about half an inch external to the margin of the abnormal tissue, carrying it all round; then dissected the part away. There was no hemorrhage. The man was carried to bed. The part healed by granulations, and he went home stout and healthy.—I am, etc., EDWARD ROBOTHAM.

The Grove, Risca.

THE TITLE OF DOCTOR.

SIR.—In the extended controversy which is being waged with respect to the title of "Doctor," permit me to suggest an idea which has not hitherto entered into the discussion. The disputed prefix, in the provincial towns of this country at least, is adopted more as a matter of convenience than an assumption of professional standing. Among the laity, the term "Doctor" has from time immemorial been applied to general medical practitioners; not in flattery, as allocating to them a superior title to that which they may possess, but simply because "the Doctor" is always associated in their minds with the man who "doctors" them, medically, surgically, or otherwise. We engrave "Doctor" upon our door-plates in preference to Mr. So-and-so, "Physician," or "Surgeon", in order that it may be understood that we do not practise medicine or surgery exclusively, as such might imply, but collectively; and also to show where "the Doctor" is to be found. Were it otherwise, patients in need of surgical advice would naturally enough consult the man with "Surgeon" upon his door-plate, and *vice versa*. Were we to particularise our various lines of practice, and adopt Mr. So-and-so, "Physician", "Surgeon", and possibly "Accoucher", "Dentist", etc., in all of which we dabble, no reasonable door could be supposed to accommodate such an imposing signboard, and we should naturally incur the imputation of attracting patients by unprofessional means. The public, as a rule, know nothing about the relative professional titles of M.D., M.B., or Licentiate or Member of Medicine; they are all alike "Doctors" in their estimation.

As far as the legality of the business is concerned, an M.B. has no more right

to put "Doctor" upon his door or card plate than a licentiate or member of medicine, but the bulk of professional odium seems to attach to its assumption by the latter. The hypothesis than an M.D. must, in virtue of his university degree, possess superior professional skill to a licentiate or member of medicine is all rubbish. Possibly their general education may be superior, but there are ignorant M.D.'s, and well educated licentiates or members of medicine. The title of M.D. is, *per se*, no more a patent of respectability and professional skill than that of licentiate or member of medicine. The sick man in his extremity requires "the Doctor" who, independent of his qualifications, understands and can treat his disease, and does not care one straw for his general bearing. If he commands both, so much the better. No respectable physician would assume the title of "Doctor" for the purpose (as many of your correspondents imply) of representing himself as what he is not. It is used for the purpose of convenience, not of misrepresentation. Disabuse the public mind of the idea that "Doctor" is the title of a medical man, and the "vexata questio", and all the bad taste which has been shown in the matter will be set at rest at once and for ever.—I am, sir, yours faithfully, LESLIE MATURIN.

Dublin, July 22nd, 1882.

ERRATA.—In the heading of Dr. A. Vesey's paper on a Case of Spinal Hemiplegia in last week's JOURNAL, page 315, column 2, for "Magherafelt," read "Rostrevor".—At page 321, column 2, line 42, for "Implements", read "Improvements".—At page 329, column 2, the name of Dr. F. Imlach of Liverpool was accidentally omitted from the list of names of those present at the annual meeting.

STEAM-TRICYCLES.

SIR.—The use of bicycles and tricycles has of late been frequently advocated in your correspondence columns, and it is a topic which cannot fail to be interesting to the general practitioner; but, to my mind, the serious objection presents itself, that they can be of real service only to the young and robust; and, even in their case, any falling off in physical power, from illness or injury, must give rise to serious expense and inconvenience, by compelling them to have recourse to hired vehicles. The true road locomotive of the future has been indicated by Mr. Wynter Blyth in his lecture on cycling, published in this month's *Sanitary Record*, which should be read by all who feel an interest in the subject. The only obstacle to the use of steam tricycles is the Road Locomotives Act, the provisions of which are prohibitive; and it is towards their amendment that the united efforts of all who are interested in the subject should be energetically directed—the medical profession, the cycling clubs and associations, athletic clubs, and all to whom rapid road-locomotion is a necessity.

There are already two engines invented and ready for use, which fulfil every possible requirement; they are without noise, visible steam, or unpleasant odour; one of them is guaranteed to propel a tricycle one hundred miles in ten hours with perfect ease on any ordinarily good road, with the consumption of less than a gallon of petroleum oil; the other has even higher pretensions, but I am not in a position to give the details, as I have mislaid the journal in which it is described. My impression is, that the motive power is procured by the combustion of methylated spirit. There can be no doubt that, if their use were legalised, a host of competitors would dispute the field with them.

To myself, the steam tricycle would be invaluable, my district being large, and the arrangement of trains in some portions of it exceedingly inconvenient. It is not too much to say that I could often do three days' work in one with a machine which could average ten miles an hour.—Yours obediently, HUGH REES.

5, Church Street, Carnarvon, August 21st, 1882.

THE DISPOSAL OF EXCRETA.

SIR.—The suggestive letter of Dr. Logie of Sandgate on the disposal of excreta will I not, I hope, be allowed to pass without attracting general attention among those who feel an interest in sanitary questions. So long ago as the year 1864, I brought this subject before the public of Liverpool, and pointed out a very simple mode of meeting the difficulty, viz., that, instead of the water-closet system, with hundreds of miles of sewers always containing (in spite of the vast waste of water in flushing) some deposit of putrid matters, and a quantity of fertile and poisonous gas making its way into the atmosphere through the attempts at ventilation, and through the communicating pipes more or less into every house, thus making typhoid fever (in my recollection a very rare disease in Liverpool) now a matter of daily occurrence. By lessening overcrowding, we have certainly reduced typhus to a minimum, but we have, by our filthy sewer system, substituted typhoid for it; at the same time lessened, and in some instances destroyed, our fish by river pollution, and robbed the soil of what ought to return to it—spendthrift-like—at the same time sending to the ends of the world to fetch home the excreta of birds to supply the place of the more valuable night-soil, which we so wastefully and so wantonly throw away. My suggestion was that, in a certain number of streets, a shallow asphalt, not more than eight or nine inches deep, should be supplied to every house; that these should be punctually emptied and washed with lime once a week; a service of light carts being organised for the purpose, the material being carried three or four miles into the country, and disposed of to the farmers. The ashes of each house would be quite sufficient to deodorise it during the week, night-soil being only dangerous when it is allowed to become putrid, as it always was in the old privy system, the pits, from their great depth, being never quite emptied. Practically, this would be an application of the earth-closet principle, which has been found to answer so well in many places. It is objected that this system could not be applied to large towns; I believe, on the contrary, that it could be worked very easily, and that we should find it much more economical than the slovenly water-closet system, with its unavoidable accompaniment of heavy plumbers' bills from time to time. The gain in a sanitary point of view would be incalculable, as we should no longer be offended by the poisonous and fetid gas assailing our nostrils frequently as we pass the street-gratings, and sometimes even in our houses, when, by heavy rainfall or by the pressure of spring tides, the gas is forced upwards by the pressure of the flushing of the sewers. We sometimes notice the same effect when the tide is very low, if there happen to be a west wind, the wind blowing the gas straight back up the open mouths of the sewers.

As to the effect upon the land, I can speak from what I have myself witnessed, that, wherever night-soil is placed upon the land, it is capable of increasing its produce at the very least 40 per cent. Another advantage attending the adoption of this system would be the opening up of employment to a considerable number of the humblest of the people.

This would be a much more effectual way of lessening the danger of zymotic disease than would the adopting the latest craze of the sanitarians, viz., the compulsory notification of infectious diseases.—Your obedient servant, EWING WHITTLE, M.D.

Parliament Terrace, Liverpool, August 19th, 1882.

Post Office: If you cannot locate your local post office, write to the American Medical Association, at the West Group, Post Office Box 9806, Chicago, Illinois 60680-9806. Please allow four to six weeks for postage stamps.

THE BRADSHAW LECTURE ON THE INFLUENCE OF THE SYMPATHETIC ON DISEASE.

*Delivered before the Royal College of Physicians of London,
August 18th, 1882.*

By EDWARD LONG FOX, M.D., F.R.C.P.,
Consulting Physician to the Bristol Royal Infirmary.

[Concluded from page 343.]

DOES the study of hemicrania show definite abnormality of the sympathetic? The peculiarity of pain referred to only one side of the head is associated with very opposite vascular conditions.

1. In tonic or spastic hemicrania, the prevailing phenomenon is tetanus of the muscular coat of the arteries on the affected side of the head, in the region supplied from the cervical portion of the sympathetic nerve. That this is the condition of the vessels is shown by the hard cord-like temporal artery, the pale and sunken face, the small eye, the diminished temperature. The pupil is dilated during the height of the attack from increase in the tonic excitation of the dilator fibres, which arise from the cilio-spinal centre, and follow the course of the cervical sympathetic. The extreme action of these fibres overcomes abnormally the contracting power on the iris of the oculo-motor nerve. The subsequent contraction depends on a secondary diminution in innervation, akin to fatigue, corresponding to the condition of the vaso-motor fibres. Thus too, towards the end of the attack, the ear becomes red and warm, and the conjunctiva, from relaxation of its vessels following the tonic spasm, becomes injected. Increase of saliva, with a certain tenacity of this secretion, is met with in this form. Eulenberg and Guttmann consider that the pain is caused by tonic spasm of the unstriated muscles of the vessels (as in cramp and colic); that is, from pressure on nerves of sensation distributed within the muscular tissue. But it is not quite certain which branches of the fifth nerve are affected by the pain. Some localise the pain in the frontal branches, but it is more probable that the branches implicated are those which supply the dura mater, coming from all three divisions of the fifth nerve.

2. The other form, hemicrania neuro- or angio-paralytica, is characterised by relaxation of vessels, arterial hyperæmia, and increase of temperature on the affected side. The state of this side of the head and face is not unlike that of an animal, in which the cervical sympathetic has been cut. But the explanation of the pain in this variety is not straightforward. It is said to be due to irritation or compression of the nerve-elements by the temporary increase of the blood-pressure, and the greater quantity of blood in the small arteries and veins. But pain is not usually felt from congestion, at least pain of the acute intensity of hemicrania. And although in the later stages of the spastic form, when the vascular spasm gives place to dilatation, the paretic congestiveness does not perhaps equal the marked hyperæmia of hemicrania angio-paralytica, yet it is remarkable that in these latter stages of the spastic form the pain diminishes *pari passu* with the spasm, whilst, in fact, the vessels are getting more or less into the same condition that is said to cause the pain in the paralytic form. The symptoms, however, of each form of this affection, especially the oculo-pupillary phenomena, point to the cervical sympathetic, or to the corresponding half of the cilio-spinal region of the cord as the part specially implicated. And the success of caffeine, quinine, guarana, and ergot in the paralytic variety, and of nitrite of amyl, carbonic acid inhalation, hot drinks, etc., in the spastic, points to the same conclusion.

The frequent occurrence of nausea, vomiting, muscæ, tinnitus, and foul taste, are all points directly or indirectly associated with the sympathetic; and not only is tenderness met with on pressure over the last cervical and fourth dorsal vertebra, but deep pressure over the cervical ganglia excites pain. Dr. Latham's dictum is good for the spastic form, that the disease is characterised by a morbid activity of the sympathetic nerve, in consequence of a defective control or inhibition by an exhausted or enfeebled cerebro-spinal system. In hemicrania alternans, where the patient is affected sometimes by one form, sometimes by the other, the law of paretic fatigue following inordinate action

may afford the explanation of the paralytic form. In other cases, this paralytic form must owe its causation to depressing influences affecting the whole system, and especially the nervous centres, such influences being particularly those of climate, of mental strain, or of venereal excess.

Proceeding in the region of the cervical sympathetic, exophthalmic goitre comes next in order. Certain coarse lesions have been found in the cervical sympathetic with this group of symptoms. Eulenberg and Guttmann have collected nine such cases. The inferior ganglion is most frequently affected. In Dr. Warner's case, there were lesions of the sympathetic on one side of the head. The right side of the face was flushed up to the middle line, the right pupil dilated, the right iris much darker in colour of late years than the left. The thyroid normal. In a case quoted by Woods, the lower cervical ganglia, especially the right, were thicker and redder than normal. There was increase of connective tissue, growth of nuclei, and of spindle-shaped cells; ganglion-cells were few. In Dr. Shingleton Smith's case, there was marked shrinking of the cells of the inferior cervical ganglia. In one case, mentioned at the Congress by Dr. Gueneau de Mussy, there was decided pigmentation of the face, due to defect of innervation, caused by the enlargement of thoracic glands about the bronchi and trachea, in the immediate vicinity of the vagus, giving rise to irritation of the vagus.

Seeligmüller mentions a case in whom, eight days after a severe blow above the clavicle, dilatation of the pupil and of the palpebral chink, exophthalmos, pallor, diminution of temperature, and flattening of the left cheek occurred, depending on clonic narrowing of the arteries. Other observers have noticed induration and hypertrophy of connective tissue, chiefly of the lower cervical ganglia, with pigmentation of cells. Perhaps the most consistent view has been expressed by Professor Möbius, when he says that exophthalmic goitre is not an independent disease, but is a group of symptoms, partly depending on local lesions of the medulla oblongata, or the cervical cord, or the sympathetic, but partly occurring more or less in the course of severe neuroses, such as hysteria and the various psychoses. But, whilst some of the phenomena point to lesion, direct or reflex, of the sympathetic, it is not possible to credit this system of nerves with the causation of all the symptoms.

The exophthalmos itself could only be associated with the sympathetic by means of a persistent tetanic contraction in the unstriated ocular muscles, and for this there is little physiological analogy. This protrusion of the eyeballs seems to depend on deposit of fat behind the eyeball, and on venous hyperæmia, even if some spasm of the unstriated orbital muscles co-operate in its production.

One symptom connected with the eye, first noticed by von Gräfe, is due to disturbed innervation of Müller's unstriated orbital muscles; an immobility of the upper lid, which no longer follows the movements of the eyeball, as in health. This interference with the consensus of the movements of the lid with that of the globe, especially when the latter is directed downwards, may precede the exophthalmos, and is not seen in protrusion of the eyeball from mechanical causes.

The two chief sympathetic symptoms, then, are the goitre and the accelerated action of the heart; and both these phenomena are connected with paresis of the sympathetic rather than with irritation. The goitre seems wholly caused by enlargement and dilatation of vessels in the thyroid. The arteries are tortuous and pulsating, and the veins engorged. The temperature of the part is somewhat higher than of other parts of the body. It is true that division of the cervical sympathetic is not followed by this swelling of the gland, but in exophthalmic goitre we have not only conditions answering to division of the sympathetic in the neck, but extreme acceleration of the heart's action as well.

The palpitation is more difficult of explanation. If it be due to irritation of the sympathetic, the irritation must be persistent, which is contrary to physiological experience. If due to paralysis, the usual effect would be syncope; because, the influence of the cardiac nerves being cut off, the inhibitory action of the vagus would suffice to antagonise the automatic energy of the cardiac ganglia. Eulenberg and Guttmann seek to explain it by allowing a paralysis of the cervical sympathetic, the first effect of which will be a vaso-motor dilatation of the cardiac vessels (the coronary arteries); and this dilatation, by permitting a greater flow of blood to the muscular tissue of the heart, stimulates the cardiac ganglia to abnormal activity. It seems strange, however, that a similar result does not always ensue, when the action of the cardiac nerves is cut off. What need, indeed, is there, under this theory, that syncope should ever take place? Dr. Handfield Jones, however, believes that the palpitation in exophthalmic goitre is due to paralysis of the vagus. The implication of the sympathetic is shown by the perspiration and diarrhoea so common in exophthalmic goitre, as well as in the occur-

rence of pigmentary disturbances, instances of which have been already given. Trousseau has seen vitiligo in connection with it, and Leube scleroderma.

The drawing now shown, by the kind permission of Dr. Burney Yeo, is that of a case in which, with profuse perspiration, and constantly recurring diarrhoea, the exophthalmos implicated the left eye only, whilst the right side of the thyroid was enlarged. This crossing of the symptoms seems to Dr. Yeo to prove the central origin of the lesion. But there is nothing improbable in a lesion of the inferior cervical ganglion of one side co-existing with lesion of the superior cervical ganglion of the other; nor, indeed, in an affection of the cilio-spinal centre on one side coinciding with that of the spinal vaso-motor centre on the other.

Nor is the subject of progressive hemiatrophia facialis less wanting in elements of controversy. Pierson speaks of the sympathetic being affected, as evidenced by the prominence of the eyeball, and dilatation of the palpebral fissure, diminution of temperature in the auditory meatus of the affected side, and atrophy of the affected ear. Most authors mention some change of colour in the skin, pale or brown patches on the face or on the neck, sometimes preceded by an eruption of an oedematous or herpetic character.

Neither paralysis nor irritation of vaso-motor nerves experimentally gives rise to simple progressive atrophy of all or most of the tissues. Romberg considers the disease a tropho-neurosis. Baerwinkel places its seat in the ganglia of the trigeminus. Stirling thinks it is due to disturbed function of vaso-motor nerves included in the trigeminus, and destined for the vessels of the head. Eulenberg and Guttman speak of slight atrophy of one side of the face, as observed in some cases of injury of the sympathetic in the neck; and they quote Brunner's case, in which more or less of the phenomenon of progressive facial hemiatrophy seemed to depend on persistent irritation of the cervical sympathetic. Dreschfeld agrees with Romberg. In his case the vessels were not affected; but this is not always found. Sometimes there are distinct changes in the vascular tone, not necessarily connected with the atrophy: the power to blush may be lost, and may be restored without any other improvement. Dr. Dreschfeld considers that in his case the atrophy was not due to any affection of the facial sympathetic, or of the motor or sensory portions of the fifth nerve, but that it is a tropho-neurosis, following the course of the fifth nerve.

Another theory, that of Laude, denies the disease to be a neurosis at all, but a primary atrophy of the fatty tissues, the elastic tissue remaining unaffected, its retraction causing the falling in of the other soft parts and the contraction of the capillaries, the latter leading to further disturbance of nutrition. Virchow says the exact seat of the disturbance lies within the domain of the peripheral nerves; that is, a primary inflammatory lesion of the throat and face escapes on to the nerves, and so to the ganglia.

That the symptoms are due to a neurosis is demonstrated by their association with headache, with paralysis, with irritation of the cervical sympathetic, or with epilepsy; neuroparalytic ophthalmia, neuralgia, and anaesthesia of the fifth nerve, often accompanying them. It may exist coincidentally with migraine.

The muscles take no share in the atrophy. The subcutaneous fat, the proper tissue-elements of the cutis, and even the epidermoid structure, take no part in the disease. The secretion of the sebaceous follicles is arrested; that of the sweat-glands persists, but is frequently diminished. The bones of the face, and even the nasal cartilages, share in the atrophy, and sometimes the tongue, the vault of the palate, the soft palate, and the uvula. The eye, if affected at all, shows lesions associated with intracranial disturbance of the fifth nerve, which may end in destruction of the organ.

In the very few recorded cases of definite recognisable lesion of the cervical sympathetic in this disease, there has been absence of oculo-pupillary phenomena. It seems certain, therefore, that all the branches of the nerve are not considerably implicated. Is not the connection between the cervical sympathetic and the phenomena of this disease less absolutely direct? The lesion may be one of the fifth nerve, whether of its sensory and trophic branches, of its trophic and vaso-motor, or sometimes of its vaso-motor, trophic, and sensory, all together. In some instances it may be a direct disease—that is, from blood-changes, from a depressed condition of cerebral centre, from definite lesion of the nerve itself. But, instability in the nerve or its ganglion being present, the phenomena may be set up from without; and here certain conditions affecting the cervical sympathetic may act in a reflex manner. No morbid state of the cervical sympathetic, moreover, could exist without some vaso-motor phenomena, some interference with the vascular tone of the facial vessels; and this would render the tropho-neurosis of the fifth more certain in its course. The position of the

sympathetic is important, often almost all important, but in most cases secondary, affording the centripetal irritation in a reflex arc.

The objections to any theory are manifold: not only that the absence of *post mortem* records leaves all theories unproven, but because the atrophic influence of this supposed morbid state of the fifth nerve is not in accordance with experiment.

The heart has been seen to have been affected in many of the diseases that have been considered. It is specially influenced by disease or disorder of the sympathetic. Palpitation, as we have seen in discussing Graves's disease, may be from irritation of the cardiac nerves, the inhibitory action of the vagus being unchanged, the palpitation being then intermittent and often associated with dilated pupil; or, the cardiac branches being normal, palpitation would result if the accessory branches of the vagus were paralysed, in which case the palpitation would be continuous. That either of these conditions may be induced by direct or reflex influence, is only in accordance with ordinary experience.

The action of the heart would go on for a time by means of the cardiac ganglia alone, if the influence both of the cardiac nerve and of the vagus were removed; but absolute palpitation would not ensue, unless the paralysis of the cardiac nerves had caused such dilatation of the coronary arteries as would increase considerably the amount of blood brought for the nutrition of the heart, and so stimulate exceedingly the cardiac ganglia. Palpitation from terror would be by means of paralysis of the cardiac branches of the vagus; palpitation from indigestion, or from a gouty condition of blood, would be by way of stimulation of the sympathetic cardiac nerves, or of the ganglia from which they proceed. The ganglia in the structure of the heart are the reflex centres through which the excitation of the blood reaches the muscular apparatus. In suspense, the action of the heart is short and sharp; in fear, almost paralysed; under excitement, usually intermittent.

The symptoms of angina pectoris are seen under very various pathological conditions. The most pathognomonic symptoms are substernal pain, the feeling of anxiety, the disturbance of the heart's action. The pain has its origin in the cardiac nerve-plexuses, and persists even if the vagus be divided; proving that the sympathetic cardiac nerves contain sensory fibres. The pain is looked upon as the most important phenomenon, and the group of symptoms stand out as neuralgia of the heart. But it is not always so. One meets with cases with a slow feeble pulse, some faintness, a feeling of anxiety, and a sense of impending dissolution, without pain, or at least without pain for a long time. In such cases, if not cured (and being sometimes reflex, with the heart's structure healthy, they may be cured), the attacks become more frequent and intense, and sooner or later pain will be added. The communication between the cardiac plexus and the anterior division of the four upper cervical and first dorsal nerves, explains the transmission of pain to the regions supplied by the cervical nerves. As the first dorsal nerve seems to form part of the lower end of the brachial plexus, and as there are freer anastomoses of nerves on the left side than on the right, the reason of the sense of pain down the left arm is apparent. This connection of the brachial plexus with other nerves will bear further investigation. I have lately met with a case in which pressure on any part of the left brachial plexus, even grasping the upper part of the left arm, caused violent eructation. The woman was accustomed to grasp her upper arm for this purpose when she felt oppressed with flatulence.

The conditions under which angina pectoris occurs may be said to follow an anatomical distribution. According to circumstances, the automatic ganglia of the heart may be irritated or paralysed; the inhibitory action of the vagus may be increased by irritation; the cardiac nerves may be paralysed; the vaso-motor nervous system may be so influenced as to induce change in the tone of the vessels, and consequent change of blood-pressure, and, as a writer in Ziemssen's *Medicine* says, with, perhaps, some affection of the depressor nerve of Ludwig.

The influence of this depressor nerve is felt in a large number of diseases. On section of this nerve, irritation of the peripheral end has no effect; but irritation of the central end causes pain, lowers the pressure of blood in the arteries, arrests the respiration, and retards the heart. As to the mechanism of the depression, it is a reflex action exercised on the splanchnic vaso-motor nerves, producing relaxation of the intestinal vessels; thereby a large way is opened to the passage of blood from the arteries into the veins, and pressure is lowered. It is not the activity of the splanchnic vaso-motor nerves, but the reflex suspension of their activity, that is obtained by the irritation of the depressor nerve.

The cardiac reflexes are met with frequently. When one excites a

sensory nerve, or one of the posterior spinal roots, there is generally observed a passing lowering of pressure. Brusque percussion of the abdomen may arrest the heart's action. Simply touching the peritoneum will do this when it is inflamed by exposure to air. In many cases of peritonitis, the reflex action on the circulation is remarkable. All nervous action which lessens the movement of the heart is transmitted to it by the vagus.

This is scarcely the place to pass in review the various forms of angina, except to say that in most the sympathetic is primarily or secondarily implicated. We all recognise that the pathological anatomy is very variable. Cardiac lesions may be present, sometimes of the cardiac ganglia themselves, hyperæmia, interstitial inflammation, hyperplasia of connective tissue, and fatty pigmental degeneration; in some cases, destruction of ganglion-cells, and caseous infiltration of connective tissue. Such lesions are only exceptionally seen in angina. These ganglia are more usually affected by any lesion that deprives them of their proper blood-supply, as narrowing of the coronary arteries from disease. This coronary lesion often exists without angina, and angina without coronary lesion.

Pressure by diseased glands on the cardiacus magnus, and on a branch of the vagus, has been seen. Rokitsansky saw the right phrenic and the cardiacus magnus involved in a dark blue hard knot, which also implicated the descending branch of the left vagus. Lancereaux has seen congestion and inflammation of the cardiac plexus, and Seeligmüller hyperplasia of the connective tissue elements in the same plexus.

Section of the great sympathetic dilates the vessels more than is normal; on the other hand, irritation of this nerve contracts the vessels almost to complete effacement of their calibre. It seems certain, therefore, that the physiological state of the vessels is that of mean contraction—in other words, vascular tone, and the preservation of this tone is one of the chief offices of this system of nerves. Of the brain, the cord, the ganglionic plexus on the arterial wall, the sympathetic ganglia, a pathological standpoint enables us to choose the sympathetic ganglia as possessing a primary, if not wholly absolute, influence on vascular tone associated with the vaso-motor centres in the medulla oblongata and spinal cord.

The motor nerves that preside over muscular contraction, and rule the local circulation, are the nerves that issue from these ganglia of the great sympathetics, creep along on the arterial walls, and can be followed into the middle muscular coat of the arteries. The vaso-motor apparatus, therefore, is in a state of permanent activity, never in repose, never inert. The muscular tunic of the vessels is in a state of semi-contraction—in other words, of vascular tone. Variations in this tone will be the necessary sequence of various modifications of the nervous apparatus. This tone is modified, as Dr. Mahomed has said, by alterations in the vessels themselves—atheroma; sclerosis; fatty, calcareous, and amyloid degeneration; senile changes, syphilis, scrofula, alcoholism, etc. There is at least some reason to believe that aneurysm sometimes results from blood-changes that affect the vaso-motor nerves, the consequent loss of tone permitting the formation of aneurysmal dilatations.

It is found by experiment that general loss of tone can only be obtained by complete destruction of the medulla oblongata and spinal cord; but partial lesions of the cord will enfeeble the vascular tone in the parts of the body which are, by their vaso-motor nerves, in relation with the region of the cord situated behind the seat of lesion. This state of tone is a reflex act. For a reflex movement, several factors are necessary: a contractile tissue, centripetal fibres, a centre of reflexion, and centrifugal motor fibres. In a vessel, the factors of this arc exist: the middle tunic of the vessel; the centrifugal vaso-motor fibres; the bulbo-spinal centre; and, in addition to it, the sympathetic ganglion, that may act, and probably does act, as an independent centre for reflexion; and, lastly, centripetal sympathetic fibres in the vascular walls, that are irritated or excited by the blood. Sensory nerves may often act as the centripetal fibres in these reflex actions.

All the phenomena of reflex congestion, and of reflex dilatation of the vessels, from any cause, are only instances of enfeeblement or abolition, more or less complete, more or less persistent, of the vascular tone. The only nerve that clearly determines a reflex vaso-dilator action on all the vessels of the body, is the depressor nerve.

The reflex mechanism of vascular tone is seen better in the heart and arteries. Let there be, from any cause, a constriction of most of the small arteries of the body, there is, as a consequence, increase in the arterial tension. The heart strives to overcome this excess of tension, and must employ more energy for this purpose: its contractions become more vigorous, more rapid. This effect is not purely mechanical, but is under nervous influence. Under increased intra-arterial pressure,

the blood in the ventricle also undergoes, at the moment of systole, and of the opening of the sigmoid valves, an excess of tension. This impresses some excitation at the endocardial extremities of the centripetal nerves of the heart—in this case the vagus. The impression is carried up to the bulb, from which and the cervical cord is reflected a centrifugal irritation, by way of the sympathetic cervical cord and its ganglia, to the intracardiac ganglia; and so increased energy and increased rapidity of the movements of the heart. The inverse phenomenon—dilatation of vessels—induces inverse conditions; but the mechanism is nearly the same, except that the centrifugal nerve will be the spinal accessory.

Reversing the order of the phenomena, if the left ventricle from any cause be abnormally full of blood, the spinal impression on the peripheral extremities of the cardiac nerves is carried up by the depressor nerve to the bulb; and thence, by means of dilator nerves, a general reflex dilatation of vessels takes place, and especially by way of the splanchnic nerves on the vessels of the mesentery; and the heart is relieved of its pressure.

So, once again, if an abnormally small amount of blood be in the heart, the reflex action originates from the cardiac nerves, and will react on the vaso-constrictors; the vessels contract, and the blood, receiving an increased *vis a tergo*, flows more abundantly to the heart. Thus, the heart may, up to a certain point, play the part of regulator of the vessels, or at least it exercises a certain influence on their tone; whilst inversely the vessels, too, rule, up to a certain point, the energy and frequency of the movements of the heart.

Nor is it necessary that the bulbo-spinal centre should always be the centre for these reflex arcs. The sympathetic cardiac ganglia, the ganglia of the cardiac plexuses, the ganglia in the walls themselves, may be the centres for these actions of the heart; whilst, for the vessels, the centres may be sought in the minute ganglia round the vessels themselves, and even in their walls.

The pressure of the blood within the arteries is the product of several factors: 1. The introduction of waves of blood into the aorta by the ventricular systole; 2. The resistance the blood meets with in its course through the small vessels; 3. The reaction of the elastic walls of the arteries on the blood contained in them. This latter factor is the most important one; and, as the calibre of these vessels depends essentially on the degree of vaso-motor activity, this system plays no small a part on the intra-arterial pressure.

It is scarcely necessary here to point out the manifold examples of the variation of arterial tension. In what disease, indeed, is it absent? In what morbid conditions, therefore, will not the sphygmograph be of importance in an early stage? But it may be permitted to quote Dr. Mahomed's account of the series of pathological events in so-called inflammatory Bright's disease: 1. A poisoned condition of blood by uric acid or other effete material, as in scarlatina, measles, erysipelas, pregnancy, or a severe chill; 2. Arrest of the action of one of the excreting organs; 3. Increase of tension in the arterial system; 4. Transudation of the crystalloids of the blood through the kidney; 5. Albuminuria, followed by dropsy and the usual symptoms of Bright's disease; 6. Changes in the kidney and other excretory organs, as in the intestinal tract and skin, produced by acute, and afterwards prolonged, congestion, and high arterial tension, viz., exudation and plugging of tubules or follicles, fatty degeneration and absorption, and, lastly, contraction. Probably it is in the pre-albuminuric stage of Bright's disease that the importance of the sphygmograph is most clearly seen.

There are certain vaso-motor neuroses of the extremities that have lately been described by various observers. In a less degree, we most of us meet with them from time to time, and recognise the condition as one of paresis, if not of paralysis, of the peripheral vaso-motors. It may be associated with heart-disease, as in the case mentioned by Dr. Semmola at the International Medical Congress, of paralytic action of the heart due to bulbar injury, with a feeling of oppression, palpitation, sometimes even murmur; with marbling of hands and forearms (paralysis of peripheral vaso-motors); and showing *post mortem* pigmental degeneration of the bulbar nuclei of the vagus, and of vaso-motor nuclei, and, as a consequence, fatty degeneration of cardiac muscles.

Long ago, Dr. Handfield Jones quoted a case of Graves, of neuralgia of the feet and legs, the disorder not confining itself to the cerebro-spinal nerves, but involving in a high degree the sympathetic nerves also. There were pain, heat, and vascular congestion of the feet and legs, alternating with pallor, cold, and absence of pain.

But the ailment has been fully described in various countries, and with especial accuracy by Dr. Weir Mitchell. He speaks of it as a

disorder of the feet and legs generally. There is pain, especially when the foot is hanging down, but also in many cases in any position. It is sometimes associated with lesion of the spinal cord. There is flushing of the feet, both venous and arterial, and tenderness. It is generally relieved by the horizontal position; but occasionally exercise causes the feet to become cold, producing contraction of vessels. Rest seemed to induce flushing in Sir James Paget's case; at any rate, was followed by it. The pain generally precedes the vaso-motor phenomena. Dr. Mitchell thinks the disease is similar to one termed acrodynia (pain in the extremities), which was epidemic in France in 1829-30.

Other American physicians describe a similar affection of the fingers. They become so cold as to seem frozen rods. There is tingling and burning on putting them to the fire. The skin is red in patches; sometimes abscesses form at the tips of the fingers. Mitral stenosis has been found associated with it, perhaps as its cause. Dr. McBride speaks of the fingers becoming dead reflexly through the vaso-motor system; and Dr. Allan Hamilton looks on the disease as excessive irritation of the local sympathetic vaso-motor filaments. I need not say that such an opinion is founded on analogy rather than on proved anatomical facts, as the vaso-motors of the ultimate vessels of the extremities are still unknown to us.

In this ailment, there are two chief varieties: one with phenomena of paralysis of blood-vessels, the other with symptoms of contraction, especially of the vessels of the extremities.

In diffuse paralysis of the vaso-motors, there is an intolerable sensation of pulses and heat over the body. The face is red, especially the lips and the nasal mucous membrane. It is sometimes accompanied by profuse sweating, and in some cases the vaso-motor phenomena show themselves exclusively in the extremities.

A partial cramp of vaso-motors, confined to the extremities, or to the fingers, is seen sometimes in angina pectoris. In washerwomen, this cramp is associated with itching and pain. "The finger dies;" there is pallor of fingers or of the whole hand, diminution or loss of sensation to touch, stiffness of the fingers, and local diminution of temperature. It may be cured by faradisation.

More rare is the diffuse cramp of the vaso-motors, extending over all the extremities, especially at puberty. In this latter form, Seeligmüller says, the cyanosis depending on venous stasis in the capillaries and veins is a consequence of deficient *vis à tergo*, and does not result from a primary paralysis of the nerves supplying the small veins.

The contractile form may lead to secondary changes, as scleroderma; and Dr. Hadden's recent paper on the connection between vaso-motor contraction of the peripheral arterioles with myxedema is an important contribution to the same line of thought. It is sometimes accompanied with the phenomena of vascular contraction in the brain and medulla oblongata, such as disturbances of breathing, attacks of syncope, with delirium, etc.

Dr. Sturge has recorded a case of vaso-motor disturbance of the leg, with diminution of reaction both to the constant and induced currents, when the rheophores were applied to the muscles. He also thinks it due to over excitation of the vaso-motor centre.

Seeligmüller describes hydrops articuli intermitiens as a chronic affection of the vaso-motor nerves; the swelling is rapid, and equally rapid the going down. There is dilatation of all the vessels which supply the synovial membrane of the joint. The vaso-motor nature of the disease is rendered probable by its occasional coincidence, with exophthalmos and with angina pectoris.

Closely allied to vaso-motor cramp of the peripheral vessels, is symmetrical gangrene of the extremities. There is no lesion of heart or arteries. It chiefly occurs in females, especially the young. It seems to be caused by cold or by moral emotion. One, two, or three fingers may be affected symmetrically, or all the fingers and toes simultaneously. The pulse may be perceptible at the root of the segment of the gangrenous member. Raynaud thinks the interruption of blood is due to spasm of the small vessels, under the influence of excitation of vaso-motors; an excitation, which is generally reflex, either from external cold, or some affection of the genital organs, and is transmitted to the small arteries and veins.

Vulpian thinks the centre of this action is in the cerebro-spinal centre, and that this is shown by the symmetry of the disease; he doubts, however, whether the arteries are always healthy. But all the phenomena may be produced through the media of vaso-motor ganglia placed in the course of the vaso-motor nerves, and the bulbous centre may have nothing to do with it.

Dr. Bernhardt, of Berlin, has recorded two cases of vaso-motor necrosis of the extremities in the *Archiv für Pathologie und Anatomie* for last year. His second case is remarkable as being unilateral, but this may be explained from the symptoms probably de-

pending on unilateral accident. Both his cases were treated successfully by faradisation.

Such cases in their full intensity are not common; but, I repeat, lesser degrees of the disorder are not unfrequently met with in persons, especially young women, otherwise tolerably healthy. I have seen two in the last few months.

In considering some of the diseases affecting the abdominal viscera, it is well to remember that the vaso-motor nerves of the liver have their origin in the floor of the fourth ventricle, pass through the cervical and upper dorsal region of the spinal cord and the rami communicantes opposite the fourth and fifth dorsal vertebrae, to join the sympathetic, and finally enter the liver as the hepatic plexus; that the splanchnic nerve is a direct inhibitory nerve, and passes into the dorsal region of the cord; that it contains also the vaso-motor nerves of the small intestine, and that its inhibition of peristaltic action may be due to decrease of the amount of blood in the intestine; that, as we have seen, reflex action on this nerve may so far manifest a paralytic influence on the intestinal vessels, that an extreme storage of blood is produced in these vessels, lowering arterial pressure everywhere, retarding the heart, and even causing syncope; that this afflux of blood, this temporary hyperæmia, may result in diarrhoea, and is probably the explanation of diarrhoea in many morbid conditions—markedly in cholera; in cholera, too, the semilunar ganglia have been found diseased; that the peristaltic movement of the intestine is automatically excited through the parenchymal ganglia, though it can be accelerated from the abdominal and thoracic sympathetic system, and inhibited by the splanchnic nerve: and that extirpation of the coeliac and mesenteric plexuses leads to hyperæmia and ecchymosis.

Hermann says that it is still unproven whether the diarrhoea, the consequence of the extirpation of the mesenteric plexus, depends on the influence of the secreting nerves or on disturbance of the circulation. I think the latter condition is an important element in its causation. He mentions that in a dog, in which all the ganglia of the coeliac plexus were extirpated, there was great emaciation. Although life was prolonged, there was great weakness, no loss of intellect, and, after three weeks, recovery. When the animal was killed, no abnormality of the chyle-forming organs was found. Lansansky therefore concludes that this plexus is not necessary to life.

Most of the experiments on the coeliac plexus prove that it is sensitive to pain. In a similar way, we meet with hyperæsthesia of the solar, mesenteric, hypogastric, and spermatic plexuses. That that form of gastric neuralgia that is termed lead-colic, is connected with toxic lesion of the sympathetic (as of other nervous tissues), seems proved by its association with the small hard pulse due to cramped narrowing of the whole peripheral arterial system, with whiteness and coldness of the face and extremities. The cardiac energy is diminished: the apex-beat is scarcely felt; the pulse may vary from 30 to 60 in the minute. In two cases, lesion of the sympathetic has been found. In one, there was an increase of volume, and a greyish-yellow colour of the abdominal ganglia; in the other, sclerosis of the connective tissue in the coeliac plexus. Asthma, vertigo, perspiration, tenesmus, suppression of urine, and palpitation are all met with in connection with lead-colic.

The two following cases show a divergence as regards sensation that is interesting. A gentleman became very suddenly affected with acute myelitis. In the course of two or three hours he became absolutely paralytic (motor and sensory); the sphincters were useless. There was great pain just above the umbilicus, up to which spot anaesthesia was complete. For the eight days he lived, his appearance was remarkable from the very intense intestinal distension. Under ordinary circumstances, such distension would have caused much pain; but, although he resembled a barrel in appearance, he complained of no pain below the umbilicus, though the pain and distress above this point, consequent partly on the impossibility of diaphragmatic action, was considerable.

The other case was that of a young lady, aged 17, not hysterical. It was thought that she had tired her spine by over-riding. Constipation had been troublesome for six months before her illness, and it persisted as a marked symptom for many weeks. As a rule, very large and drastic enemata were retained, but from time to time fecal masses were got rid of, in one of which, on a single occasion, were found some peas, which she had eaten raw or imperfectly cooked fully two months before; the peas had sprouted in the bowel. The signs of this girl's extraordinary condition, however, all the symptoms were those of almost complete paralysis of the motor and sensory branches of the sympathetic that innervates the alimentary canal. In the case there was tenderness along the spine, from the sixth dorsal vertebra down to the coccyx. I presume the case should be called one of neurasthenia, possibly with hereditary predisposition, as the mother had been a martyr to gastric neuralgia; as it would not

be likely that irritation of the splanchnic, and so increased inhibition of peristaltic movement, would persist for so long a period.

Of course the same objection may be made to the long persistence of reflex paralysis; but another case under my own observation is somewhat striking on this point. A very sensible and active shopwoman, thirty-six years of age, gave the following account of herself. She believed she had been born blind of the right eye. At any rate, she remembered, when she was a very little girl, being taken to see an oculist in London, who said that she would never see. She could not distinguish light with the right eye. In January of the present year, she had a canine tooth on the right side of the mouth extracted. She immediately became conscious of light, and in a few days entirely gained sight in this eye. The optic disc and retina were perfectly normal, yet for thirty-six years she was quite blind, apparently from some reflex influence connected with the alveolus of this canine tooth. With such an instance, it may be well not to speak of the impossibility of reflex irritation or reflex paralysis being persistent for long periods. But the neurasthenia of the abdominal sympathetic in adult life may be only due to premature old age. The deficiency of peristaltic action, and often more or less of intestinal secretion, that is often met with in old age, depends on exhaustion, on deficient blood-supply, quantitative or qualitative, to the parenchymal ganglia, or on commencing atrophy of the spinal cord; and is simulated much earlier in life by anything that depresses power, such as various exhausting diseases, the nerve-fatigue consequent on coition, prolonged travel, etc.

Injury of the vaso-motor centre for the liver in the medulla oblongata, or of the nerves that arise from it, in their course down the spinal cord, or from the cord to the hepatic plexus, leads to paralytic dilatation of the vessels of the liver, producing hyperæmia and diabetes mellitus. Claude Bernard found the exact spot in the medulla oblongata, close to the origin of the vagus, between the nucleus of this nerve and of the acoustic. He proved that the vagus has nothing to do with the diabetic phenomena, but the sympathetic in its relation to circulation. The mechanism is by means of paralytic dilatation of these vessels of the liver, causing an increased flow of blood, and thus, by transformation of the glycogen, an augmentation in the quantity of sugar formed; this, entering the general circulation, shows itself in the urine.

The vaso-motor nerves of the liver can also be paralysed by injury of the cervical and upper thoracic ganglia of the sympathetic. Division of the splanchnic nerves does not cause diabetes. Apart from experiment, there are not many cases on record that definitely show a connection between diabetes and the sympathetic. It has been seen in lesions of the cerebellum, especially of the vermis, of the optic thalami, the crura cerebri, the pons Varolii, the middle crura of the cerebellum, and in injuries of the medulla oblongata. I have sometimes seen it follow small hæmorrhages in old people in the motor area of the cerebral convolutions. But saccharine urine has been seen in a case of sciatica, and has disappeared when the sciatica was cured. Symmetrical sciatica has been observed in association with diabetes; and I have seen symmetrical neuralgia of the fifth nerve under the same circumstances. In three cases of diabetes, there was also hyperidrosis unilaterialis; and Burdell found sugar in eighty cases out of eighty-one of intermittent fever. The glycosuria became slighter when the fever lost its intermittent, and took on its remittent type. Verneuil has recorded a similar case.

Not only is the vaso-motor action on the hepatic vessels a necessary element in the production of diabetes, but Schiff speaks of the same influence on the capillaries of the general circulation. The immediate mechanism for producing diabetes is the formation of a substance that can easily be transformed into glucose, and the presence of a ferment to induce this transformation. Schiff declares that the ferment is also produced in the capillaries of the general circulation, with the necessary element of stasis of blood; and conditions which lead to stasis are all-important to this end.

Diabetes may be a term that includes diseases of various origin. It is perfectly certain that congestion of the liver, necessary as it may be to the formation of the products that induce diabetes, is not in itself the one and only cause. How many cases of congestion of liver come before our notice, in which these diabetic phenomena do not obtain. But in a large number of cases, a number that increases the more readily we realise the relation of one part of the body with the rest by means of nervous influence, the floor of the fourth ventricle is the centre of a reflex arc for diabetes. Its centrifugal effects are not carried to the liver by the vagus—the cervical ganglia are not involved. The bulbar influence is carried down the cord, most probably, I believe, if we could only trace them, by sympathetic fibres which pass along the cord simply as along a roadway, and not partaking of the nature of

the organ, and, joining the arch between the last cervical and the first dorsal ganglion, are transmitted down the splanchnic nerves to the solar plexus; whilst some communication may also take place along the thoracic ganglia and the first abdominal ganglion, and the solar plexus be reached thus. Thence fibres go, to make up the hepatic plexus, and to rule the condition of the circulation in the liver. But this is not all. Over and above the dilatation of vessels and the increased hyperæmia of the organ, there are transmitted through the same channels other fibres that influence the phenomena of nutrition and secretion, fibres that play a part in the liver resembling that played by the fibres of the chorda tympani which excite secretion in the submaxillary gland.

The influence of the sympathetic system, therefore, is very great in diabetes. It includes direct or reflex lesion of a bulbar centre, or lesions so near as to be almost direct; hyperæmia of the liver; sometimes stasis in the capillaries of the general circulation; an influence on the secretion of glycogen, and of the ferment necessary to its transformation.

Nor is this the only condition of liver influenced specially by the sympathetic. In a case recorded by Dr. Shingleton Smith, of acute atrophy of the liver, not only was this organ very small, but there was found an atrophic condition of nerve-cells in the sympathetic ganglia. And certain injuries to the solar plexus cause increase of the circulation of blood in the liver, and increase of bile.

Injury to a spot in the floor of the fourth ventricle in close proximity to the diabetic point induces polyuria, evidently from increase in the activity of the intrarenal circulation. The polyuria is the primary condition, and is the result of the morbid state of the renal vaso-motor system. Temporary polyuria under the influence of strong emotion is of everyday occurrence; but Dr. Crichton Browne has mentioned a case of a boy in the late Dr. Begbie's wards, who was placed, very much against his will, in bed with a patient who was suffering from diabetes. The boy expressed a fear that he would catch the disease; and certainly, from the influence of emotion on the medulla oblongata, and so on the renal vessels, he became the subject of polyuria.

The recognition of the part taken by the vaso-motors of the kidney in this complaint has led to a more successful treatment of a hitherto difficult disorder. Faradisation over the kidney, and ergot, have proved useful remedies.

We come, lastly, to those diseases that are associated with pigmentation. Irritation of the splenic plexus reduces the size of the spleen. Division of the splenic nerves causes distension of spleen by dilatation of vessels. Jaschowitz divided the sympathetic in the spleen, and caused increased flow of blood, and a copious deposit of hæmatine pigment in its cells. Dr. Coupland, in his lectures here last year, stated that the liver seems to be the chief seat of the destruction of red corpuscles; for not only does the blood passing out of this organ contain comparatively fewer corpuscles than that entering it, but its cells are laden with pigment derived from the blood, which they excrete with but little modification in the bile.

Melanæmia is a transitory condition, quickly replaced by melanosis of the spleen, liver, and bony marrow. The pigment is first taken up by the white corpuscles. The small vessels are sometimes obstructed by pigment. The spleen is enlarged. The splenic cachexia is associated with destruction of red corpuscles, and consequent marked anæmia. The dark colour of the skin is produced by abundance of pigment in the vessels of the cutis. The granular pigment in the blood exists either free or in cells, or in little hyaline coagula. It is equally distributed in the heart and great vessels. The white corpuscles are occasionally increased. Much pigment means great destruction of red blood-corpuscles. The spleen is especially affected, but often after intermittent fever it is amyloid, and contains little pigment, and in this case the liver and bony marrow contain much.

In the spleen and bony marrow the capillaries pass into very wide veins—a circumstance that must act in diminishing the rapidity of the blood-current. This is an important factor in all pigmentation. There is more or less stasis of blood-current; and in this, too, the influence of the sympathetic system comes in. First comes lesion of sympathetic ganglia, especially in the abdomen, influencing the production of pigment; then the circulation of abnormal blood in the vessels, reflexly influencing their calibre; then stasis of greater or less intensity; then pigmental deposit.

Dr. Paget's beautiful case, mentioned at the Congress, well illustrates lesion of the ganglia. It was an example of lymph-adenosis, with brown pigmentation of the skin. The semilunar ganglia and solar plexus were involved in a closely aggregated mass of enlarged lymphatic glands. The pigmentation here was associated with another sympathetic symptom—profuse perspiration.

In Hodgkin's disease, lymphadenoma, the spleen may be enlarged from more causes than one; but in the form that depends on destruction of the circulation, there is much hyperæmia and a copious deposit of pigment; occasionally this is seen in the skin.

The influence of the nervous system over the proportion of the various constituents of the blood has been recognised by many physicians. Dr. Wilks speaks of fatal anæmia after shock to the nervous system, and quotes Sir Henry Marsh's case of a young lady who accidentally poisoned her father by giving him laudanum instead of black draught. The occurrence so pressed on her mind that she took to her bed, became anæmic, and before many months had elapsed died, without any apparent organic disease.

Dr. Coupland says: "The intimate relation of the nervous system with all parts of the body point to an extensive control over blood-formation, and over nutrition and secretion; so that, under certain conditions, the nervous system may bring about an anæmia other than by the exhaustion of material supplied to it by the blood."

In a case of fatal anæmia, under the care of Dr. Greenhow, reported by Dr. King, the then medical registrar to Middlesex Hospital, the reporter says that "the case must be regarded as one of defective blood-nutrition, due to morbid changes occurring in nervous centres connected with the sympathetic system, centres which normally preside over the blood-vascular and lymphatic glands, superintending the production of that highly complex fluid, which it is the special function of these glands to elaborate." In a very marked case of anæmia, associated with cerebro-spinal sclerosis, I found almost all the abdominal viscera markedly pigmented, and to a less degree the brain also.

These questions should be looked upon in connection with the known fact, that direct irritation of the solar plexus by experiment is followed by the appearance of numerous pigment-granules in the blood; whilst staining also follows irritative action on the solar plexus from cancer of the stomach, cirrhosis, and other affections of the abdominal organs. A staining in the face in phthisis is spoken of by Dr. Gueneau de Mussy as a sign of the presence of abdominal tubercle—a connection we all frequently verify.

Discoloration will occur from the action of local irritants, as heat, light, blisters, etc. In every such case, a slight local vaso-motor paralysis is induced, and more or less blood-stasis.

Anxiety may induce pigmentation that may almost remind one of Addison's bronzing. I have seen this very marked in a gentleman, from whom it disappeared when the anxiety passed away; and such cases are not uncommon. In a large number of cases, however, there is a morbid condition of the blood itself. Many years ago, Mr. Teevan recorded a case in which tension and irritation of the brow and eyelids was followed by an exudation of a blackish fluid, which persisted for eight hours, and recurred constantly during four months. The case was explained by Erasmus Wilson as depending on an altered action of the follicles of the skin of the eyelids, resulting from vascular congestion: this vascular congestion being probably vicarious to imperfect menstruation. De Mericourt, too, described a blackish, sometimes bluish, exudation on the skin, which discoloured linen, but could not be washed away, and which was connected with uterine derangement. It was worse in hot weather, and during effort, under emotion, or from fatigue.

By the kindness of Dr. Swayne, I show here plates of the arms of a lady, whose case has already been reported by him in the *Obstetrical Transactions*. The subject was a blonde, with rather florid complexion, brown hair, and blue eyes. At the time of her confinement, there was a peculiar appearance of the skin of both forearms and hands. There was a very general discoloration of the skin of the forearms, more marked on the dorsal than on the palmar aspect. On the dorsal aspect, it occupied all the surface of the arms, and existed in patches on the hands, the knuckles, and all the fingers. The skin in these spots was of a rich yellowish-brown colour, or as dark as the skin of a mulatto. The skin has been similarly affected in each preceding pregnancy; and the dark colour first appeared about the end of the third month, and increased *pari passu* with the development of the areola, until it attained its acme at the time of labour. After delivery, it soon began to diminish in intensity, and in about three months had entirely disappeared. Her mother had two children, and a daughter, the pregnancies both the arms and the neck were spotted in a similar way; and, being a very fair woman, the discoloration was still more evident than it was in the daughter.

A case like this only shows in an unusual position, and in an inordinate degree, phenomena that are met with in most cases of pregnancy. The morbid process, the staining of the face, the discoloration of the abdominal surface in pregnant women, are conditions that own one and the same cause: 1, the cachexia consequent on the pregnancy; 2, the morbid condition of the blood; 3, the morbid condition of the nervous system.

irritation to the solar plexus; 4, the consequent formation of an abnormal amount of pigment; and, lastly, the further transmission of irritation to some of the vaso-motor nerves, determining in various positions the vascular congestion and stasis necessary for the deposit of the pigment.

Many other cachexiæ possess all the necessary factors for pigmentation, if only direct or reflex influence on the vaso-motors be induced. In leucæmia, pernicious anæmia, tertiary syphilis, cancer, even chronic rheumatism, gout, and phthisis, the production of pigment from irritation of the solar plexus may constantly occur. Blepharal melasma is common during menstruation. In some women, it is permanent, associated with chlorosis or melancholia, especially in non-fertile middle-aged women. Pigment is rarely symmetrical in women. Blepharal melasma of the lower lids is very rare in men; but, when it occurs, it seems connected with sexual excess or some genito-urinary disorder.

Dr. Laycock considered the nervous sources of pigmentation to be two: one due to certain cerebro-spinal influences, the emotional; the other due to the peripheral influence of the sympathetic, without consciousness. The latter is the form in which the genital system is frequently the starting-point; but the sympathetic system is largely implicated in the emotional form also. When emotion is seen to paralyse the vaso-motors of various parts of the body, to dilate the pupil, to materially interfere with the action of the heart, to influence perspiration, the amount of urine, the catamenial function, the sexual feeling, it is impossible not to look at emotional pigmentation as essentially a sympathetic disorder. Laycock mentions the case of a woman who, in the French Revolution, incurred the anger of the Parisian mob, and with difficulty escaped being hung in the streets. Her terror caused a gradual black discoloration of the whole body, and this remained with her for life.

The reflex influence on pigmentation is beautifully shown in some experiments and observations of Pouchot. A young turbot varies in colour with the colour of the rock or of the sand on which it rests. These changes depend on the greater or less absorption of light by the bottom (whether of sand, rock, etc.), so they must be regarded as true reflex acts, having, Pouchot believes, their centre in the brain, and their starting point in retinal impressions. His experiments prove that it is the great sympathetic which governs the chromatic function. It forms the route of transmission for the influence going from the brain to the cutaneous chromoblasts; indeed, the retinal impressions transmitted to the corpora quadrigemina may be directly reflected on the vaso-motor centres.

Addison's disease, purely a disorder of the sympathetic, owns a causation similar to other pigmentary changes. The changes have been well defined as (1) a lesion of the sympathetic nervous system; (2) inflammatory processes in the connective tissue of the suprarenal glands; (3) from the products of the inflammation ensues a paralytic condition of the vaso-motor fibres of the sympathetic, and consequently an imperfect distribution of blood; (4) on this are to be saddled all the phenomena of the disease—anæmia, disturbance of nutritive functions, bronzed skin, and a secondary affection of the blood.

Eulenberg and Guttman have collected twenty cases, with more or less lesions of the abdominal ganglia, and twelve in which no lesion was recognised.

The original disease of the suprarenals may have spread to them from inflammatory conditions in their neighbourhood; but the phenomena of the disease are due to the extension of the lesion to the nerve-elements. Kolliker found thirty-three nerve-trunks in the right suprarenal capsule; and many observers have found the medullary portion of the capsule, which is essentially a nerve-centre, in a state of hyperplasia of the connective tissue, and gradually becoming mere fibrous bands. Even in cases in which lesion of ganglia cannot be found, the phenomena may arise from reflex irritation starting from the cortical portion of the gland. The disorder is associated with vertigo and other nervous phenomena; sometimes with a fetid odour of skin like that of a negro; with sighing, yawning, hiccup, and irritability of stomach.

In a case lately under my care, the dark pigmentation of skin, that was the sequence of prolonged ill-health and anæmia, in a girl with a very phthisical family history, was associated with all the symptoms of exophthalmic goitre.

Dr. Semmola considers the disease one of the ganglionic centres, independent of the suprarenal capsules; and the possibility of this view is confirmed by a case recorded by Dr. Fowler, in which, with all the phenomena of Addison's disease, there was no lesion of the suprarenals, but the ganglia were compressed by a tumour in the abdomen.

The influence of the sympathetic touches every normal function of the body, every abnormal disorder. It needs no saying, therefore, that

the present sketch is essentially inadequate. But it may be said, *en résumé*, that this system is the connecting link for function between all organs; that its close brotherhood, I had almost said cohesion, with the cerebro-spinal nerves and centres, brings into association in a thousand ways the purely nervous phenomena with those more primarily sympathetic; that it is frequently the seat of coarse lesions, but that, where the same symptoms are met with, when these coarse lesions or injuries cannot be recognised, it is only fair to believe in an irritability, a morbid condition of the sympathetic ganglia, the anatomical elements of which may probably present themselves to means of research, as these become more accurate.

In congestion, in hyperidrosis, in some forms of angina pectoris, in sunstroke, in the regulation of vascular tone, and in its many abnormalities, in vaso-motor neuroses of the extremities, in symmetrical vaso-motor gangrene, in some varieties of aneurysm and of albuminuria, in diabetes mellitus, in diabetes insipidus, in hysteria, hypochondriasis, and other forms of neurasthenia, in those protean disturbances of the economy that are excited by emotion, and lastly in pigmentation, including Addison's disease, the influence of the sympathetic seems primary, and almost, if not wholly, independent. In inflammation, including practically inflammatory disorders of all organs, in fever, in hemicrania, in exophthalmos, in progressive facial hemiatrophy, and in epilepsy, the part played by this system of nerves is secondary, though important. In most of these, however, as of other ailments, the cardiac phenomena, the conditions of vascular tone, the perspiration and diarrhoea, the marvellous influence of the abdominal nerves and vessels on the distribution of blood in the body, are evidences of collateral and coincident disturbances of the sympathetic.

This system is far more than a chain of transmission from the higher nervous centres. It often stands alone; far more often in correlation with the cerebro-spinal system.

REMARKS

ON

SUBINVOLUTION OF THE UTERUS.

Being an Introduction to a Discussion in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By JOHN WILLIAMS, M.D., F.R.C.P.,

Assistant Obstetric Physician to University College Hospital, London.

SUBINVOLUTION of the uterus is a condition of very frequent occurrence, and one credited with a very important place in the diseases of the sexual organs of the female; and yet so little is accurately known about it, that I think most of us would hesitate before making any positive assertions about its causes or its results. Whether a halting state of mind be favourable to opening a discussion, depends upon the way in which the subject is regarded. For my part, I feel it not a little inconvenient. I shall have to bring before your notice some statements respecting subinvolution which have often been reiterated, but for which I have been able to find little or no substantial evidence; I shall also call your attention to certain observations made during recent years, which have an important bearing upon the subject under discussion. I must express my regret that these are so meagre; but I trust the discussion will be the means of eliciting not opinions only, but facts calculated to elucidate a question of which little is known, and the investigation of which is surrounded by many difficulties.

Before referring to subinvolution, I must direct your attention to the process, to the arrest of which the condition is due, the process of involution of the uterus after delivery. This consists in the fatty degeneration of the enormously developed fibre-cells of the uterus, and their gradual disappearance by absorption. This process of decay is followed by one of regeneration and growth, whereby a new uterus is formed in the place, and from the ruins, so to speak, of the old one. The process of fatty degeneration is said to begin about the fourth day, and not later than the eighth, and to be completed in about four weeks. At the end of this time the formation of new fibre-cells is said to commence, and the organ is completely renovated about the end of the eighth week. This is the true process of involution, the restoration of the organ after delivery to the state which is natural to it when not impregnated. Any failure in the process of degeneration or of regeneration leads to subinvolution of the uterus. Clinically, however, involution consists in the reduction of the volume of the puerperal

uterus to the size of the unimpregnated organ. We can appreciate no more than this, and this only imperfectly by the bedside. A full account of the process can be given only when its course has been worked out both anatomically and clinically; and until this has been accomplished we can have but an imperfect knowledge of the causes of its arrest, and of the part which such arrest plays in the diseases of women.

Hieschl has studied the process of involution from the anatomist's point of view, by examining the uteri of women who had died at different intervals after childbirth. He found that the uterus weighs, immediately after delivery, 1 lb. 6 or 7 oz., to 2 lbs. 7 oz.; at the end of a week, 1 lb. 3 to 5 oz.; at the end of two weeks, 10 to 11 oz.; at the end of five weeks, 5 to 6 oz.; at the end of two months, 1½ to 2½ oz.; and concluded that the highest rate of decrease in the volume of the uterus occurs during the second week after delivery.

Clinically, several methods have been adopted to determine the rate of involution.

1. It has been estimated by measuring, day by day, the height of the fundus above the pubes. This method is open to the objection, that the measurements are affected by the varying conditions of the bladder and rectum. With care, this can be overcome—at least, in a great measure. Another source of error, and a more formidable one because it cannot be eliminated, is the fact that the difference in the measurements taken depends, not upon the difference in the size of the uterus simply, but upon this *plus* the sinking of the organ into the pelvis, consequent upon the decrease in its volume.

2. The length of the uterus has been estimated by daily measurements by means of callipers, one arm of which is placed in the vagina, and the other on the abdominal wall over the fundus. This method is also open to serious error, owing to the dilated and flabby state of the cervix, and to the impossibility of directly applying the outer arm to the fundus.

3. The transverse measurement of the uterus at its widest part has been daily taken. It has been shown, however, that even this measurement is greatly affected by the condition of the bladder; but, since the bladder can readily be emptied before the measurement is taken, this method is calculated to give more accurate results than the other two.

These three plans are available only for the first eight or ten days after labour; that is, so long as the fundus is well up above the brim of the pelvis.

4. To avoid the errors to which the preceding methods are open, as well as to enable the investigation to be carried on after the uterus has sunk into the cavity of the pelvis, the length of the uterine cavity has been measured by means of a sound or graduated bougie.

This has been done daily for the first eleven days after birth by Milsom; and Dr. Sinclair has measured the uterus once just before discharge in a large number of women confined in the Boston Lying-in Hospital, the day of discharge varying from the ninth to the seventieth after delivery. This method of catheterisation, as it has been called, appears to me to be liable to equally serious errors as the others during the ten days following delivery, in consequence of the flabby and dilated state of the cervix. After the uterus has sunk into the pelvis, however, catheterisation, combined with bimanual examination, is the only method to which recourse can be had.

The practical outcome of observations hitherto made is this. The uterus, as a rule, sinks into the pelvis on or before the twelfth day after delivery. In many cases, the organ disappears behind the pubes earlier. Jules Guérin, after having observed twenty-one cases, concluded that this happened about the fourth day. Wieland found it happen about the tenth day. Serdukoff found the fundus two to three inches above the pubes on the seventh day. Milsom found it two inches above the pubes on the eleventh day. In one hundred and thirteen cases, I found the organ in the pelvis on or before the twelfth day in ninety-six.

In some cases, the uterus is in the pelvis immediately after delivery, when involution has not begun. In others, again, the organ may be felt above the brim on the fifteenth or sixteenth day, although involution has proceeded normally. I am not going to discuss the reasons for this difference, but mention it merely to point out that the disappearance of the uterus behind the pubes is not an infallible sign of healthy involution. At the same time, it seems to me to be the best practical test we can adopt; and I will assume that the uterus has undergone normal involution when the fundus cannot be felt above the brim on the twelfth day, and *vice versa*; although this assumption will lead to some errors.

The process of involution may be arrested at any time during the stage of degeneration or of regeneration; and I may say at once that, in so far as I know, we have no means of discerning in any given case what period the process failed.

The process, together with the causes of its arrest, can be studied satisfactorily in lying-in hospitals only; and it is therefore convenient to consider the conditions which interfere with involution during the time that women usually remain in such institutions after their delivery, that is, the fourteen days subsequent to childbirth. In very few cases has the process been carefully and systematically observed after this period.

The causes of subinvolution are said to be, general debility, advanced age (that is, parturition occurring towards the close of menstrual life), multiparity, premature delivery, protracted labour, *post partum* hæmorrhage, retention of portions of the placenta and membranes, laceration of the perineum, bruising and laceration of the cervix uteri, pelvic inflammation, too early exertion or overexertion, displacement of the uterus, not suckling.

Upon the first two causes mentioned, I have no observations to offer; except that, on *à priori* grounds, general weakness may be expected to exercise an influence predisposing to retardation of involution. Although multiparity is said, and generally believed, to cause subinvolution, yet observation seems to show otherwise. Both Serdukoff and Milsom are agreed that involution proceeds better in young multiparæ than in primiparæ, although in aged multiparæ it does not go on so well.

Serdukoff confirms the general opinion that premature delivery is not favourable to the process of involution, but Milsom states that it proceeds in the same manner in those delivered in the seventh or eighth months of pregnancy as in those delivered at term. The cases of premature delivery I have had opportunities of watching closely, are too few to warrant me in drawing any conclusions from them. The effect of protracted labour is differently estimated by different observers. Serdukoff supports the general opinion that it tends to retard rapid involution, while Milsom maintains that the duration of labour has no influence upon the process. My experience leads me to agree with the latter view.

I have had delivered under my care at the General Lying-in Hospital this year 113 cases; 58 multiparæ, and 55 primiparæ. In 56 multiparæ the uterus was in the pelvis on or before the twelfth day; in two the fundus was above the brim on the fourteenth day; and in six the time was not noted; so that in 50 cases it may be assumed that involution proceeded normally. Of these, seven had a temperature of 102° Fahr. or higher for six or more days, and six had laceration of the perineum. One of the cases in which the uterus did not sink into the pelvis until the fourteenth day had sharp fever; the other was feverish for four days; neither had tear of the perineum. Of the 55 primiparæ, 52 had normal labours, in two, forceps were used, and in one the breech presented. In 40 the uterus was in the pelvis on the twelfth day; in 12 the fundus was above the brim at that period; and in three the condition was not noted.

Portions of placenta or membrane were retained in two. In both, involution proceeded badly; in one there was fever, and in one none. *Post partum* hæmorrhage occurred in two, and in both involution was retarded.

The perineum was intact externally in 13; in 11 of these, involution proceeded well, and in two badly. In 24 the perineum was slightly torn; in 18 of these, involution proceeded normally, in six badly. Deep lacerations of the perineum were found in 18; in 13 of them involution went on well, in five badly. These cases appear to indicate that lacerations of the perineum play an important part as a cause of subinvolution; for one-sixth only of those in whom the external parts were intact, was involution retarded, while it was retarded in one-fourth of those with slight, and in nearly one-third of those with deep tears. It appears further that the process is retarded in a larger proportion of those with deep than slight lacerations.

There were 28 cases in which the cervix was lacerated; in 18 deeply, and in 10 slightly. Involution went on well in 15, and badly in three of those which had deep tears; well in six, and badly in four of those which had slight tears. Hence it does not appear that lacerations of the cervix affect the process, for a larger proportion of cases of retarded involution was met with in women with slight than in those with severe tears.

Spiegelberg states that puerperal affections do not, as a rule, affect the process of involution. Hieschl says, "Puerperal diseases do not in general check in any appreciable degree this chain of changes (regenerative and regenerative), even though the uterus itself be diseased; but, on the other hand, the reconstruction, although undisturbed, is retarded in puerperal diseases, both in chronic diseases and uterine malformation (as bicorns, etc.), gives rise to a more or less extensive, but always slowly formed fibres, instead of becoming consolidated, undergo very soon a fat metamorphosis, and their condition gives rise to the marked friability and yellowness of the uterus existing in such cases as have been just men-

tioned, even after some months. The *marciditas uteri* then is nothing more than a deficient reconstruction of the organ." In estimating the influence of puerperal diseases, I shall take those cases only in which a temperature of 102° Fahr. or higher, was present for six or more days, or in which there was pelvic swelling caused by effusion. Cases of high temperature, with effusion, or marked tenderness on pressure upon the uterus, or pain on moving the organ, are clearly cases of para- or peri-metritis; while other cases of fever, when these local symptoms are absent, may be regarded as cases of inflammation of the vagina, of the inner surface, or of the substance of the uterus. There were thirty cases of high temperature; and involution proceeded well in nineteen, badly in eleven.

Effusion into the pelvis was present in eight cases; it was not large, and it disappeared rapidly in all. In one of these only was the uterus above the pelvic brim on the twelfth day. There were nine cases in which peritonitis was present, manifested by elevation of temperature, and tenderness on pressing or moving the uterus. In three of these involution was retarded, so that the general opinion that pelvic inflammation retards involution appears to be well founded. Too early exertion is enumerated among the causes of subinvolution, and it is generally believed with good reason. Dr. Goodell appears to maintain that absolute rest in bed after delivery favours the development of puerperal diseases and bad recoveries. He accordingly gets his patients out of bed once or twice daily for the first four days, and after that period they get up and dress. I have not ventured to follow this plan, and have no data which bear upon it, except that, in my hands, an opposite plan of treatment has proved at least equally successful.

The influence of nursing is generally held to be highly favourable to involution. Serdukoff alleges that, during the first four days, involution goes on more slowly in those who nurse than in those who do not, while after this period the process is more rapid in nurses. Milsom, on the other hand, maintains that nursing retards involution. According to Milsom's observations, the cervix undergoes involution less rapidly than the body. I have no accurate statistics on this point; but in many cases I have found this portion of the organ markedly retracted on the tenth and twelfth days.

Though so often met with, yet it is difficult to estimate the exact effects of subinvolution, owing to the rarity with which it is seen in an uncomplicated state. The pathological lesions which accompany it are, however, in the great majority of instances, not its effects, but in part its causes, or results common with it of causes already enumerated. To this category belong all the pelvic inflammatory lesions commonly associated with subinvolution.

There can be no doubt that subinvolution may exist without any symptom, and that the subinvolved uterus may perform all its functions normally; and there appears no reason for ascribing to subinvolution any greater evils than disorders of menstruation, together with the consequence of the increased weight of the uterus; that is, hæmorrhage, dysmenorrhœa, and prolapsus. Hæmorrhage occurs as a result of the increased area of the uterine cavity and the loss of tone of its wall. Dysmenorrhœa is consequent upon structural changes in the uterine wall, while prolapsus is the result of the increased weight of the organ acting upon weakened supports.

We may then sum up as follows. The causes of subinvolution are general debility; multiparity at an advanced age; *post partum* hæmorrhage; retention of portions of the placenta and membranes; lacerations of the perineum, and pelvic inflammations. Its results are hæmorrhage, dysmenorrhœa, and prolapsus.

The preventive treatment of subinvolution consists, in the first place, in the removal or prevention of the causes which lead to it. Some of these are irremovable; but *post partum* hæmorrhage, laceration of the perineum, pelvic inflammation, retention of portions of placenta and membrane, can in a great degree be prevented. Wounds of the perineum should be immediately and completely closed: for there is no doubt that the cases in which this is done make far better recoveries than those in which the wound is left open. I have already referred to Goodell's opinion, that prolonged rest in bed after delivery is conducive to puerperal disease and bad recoveries, and his method of treatment by early getting up. One great and perhaps the chief advantage claimed by him for this plan is efficient drainage. He maintains that, while the patient rests in bed, neither the uterus nor the vagina is properly drained of the discharges. Now, I do not think that there is any evidence that the uterine drainage is improved by the sitting or erect posture, although it is amply evident that the drainage of the vagina is greatly bettered. The position of the uterus when the woman is in the lying posture is such, that the conditions of drainage are perfect. It is not so as regards the vagina. I have no doubt that the removal of the discharges from the uterus and vagina, and the prevention of their deleterious effects upon the patient, is one of the chief

questions of the treatment of the puerperal state. I have mentioned one means of effecting this; that is, closing the wounds of the vaginal orifice. The next means is vaginal injections. These should be commenced immediately after delivery, and repeated twice a day at least. They should be abundant, hot, and contain a disinfectant. They should be abundant (three or four pints of water), in order to ensure cleanliness; they should be hot (temperature 110° to 115°), to induce contractions of the uterus and vagina; and they should contain a disinfectant, in order to destroy, as far as possible, any septic matter that may be present. Goodell has obtained excellent results by his plan of early getting up in the Preston Retreat; but equally good results have been obtained during the last twenty months at the General Lying-in Hospital by the plan of treatment I have sketched. The prevention of subinvolution means three things—an empty uterus, a well-contracted uterus, and the absence of fever; and I know of no better means of securing the second and third objects than the use of hot disinfecting vaginal injections and closing wounds of the perineum.

Dr. PLAYFAIR (London) said that no one could have listened to Dr. Williams's interesting paper without feeling that it was one of great practical value; but it was one that was not easy to discuss without study. He did not quite gather what were Dr. Williams's gauges of subinvolution, which had a condition not easy to detect *per se*, and to which attention was, as a rule, only called on account of co-existent symptoms. For all he knew to the contrary, there might be many women with subinvolution of the uterus, in whom the fact was quite unimportant, in consequence of the absence of concomitant lesions, to which it had led. He fully agreed with Dr. Williams's remarks as to causation. It was difficult, however, to understand why lacerations of the perineum should be found to be further sources of subinvolution; while lacerations of the cervix itself, much more intimately connected with the uterus, had no such effect. He was sure there must be some mistake in this, since he found lacerations of the cervix connected with subinvolution in a large proportion of cases coming under his care. As to Dr. Williams's rules for the management of the puerperal states, he would thoroughly indorse them. He felt sure that they were such as every scientific and well instructed practitioner should follow. He thought, however, he had done some little injustice to Dr. Goodell, who did not recommend movements *per se* after delivery, but simply advised that the patient should be placed, from time to time, in the semi-erect position for the purpose of effecting thorough drainage of the vagina—a point of great practical value.

Dr. HENRY BENNET (Weybridge) remarked that the range of Dr. Williams's paper on subinvolution of the uterus merely extended to the two first months after parturition, and he was quite prepared to accept the results at which Dr. Williams had arrived. The subject, however, was too important for consideration of it to stop at that epoch, influencing, as it did, the entire range of uterine pathology. He thought that Dr. Williams had made an important omission in not mentioning, among the causes of subinvolution, inflammatory lesions of the uterine organs, ovaries and uterus, which, in his experience, were often the cause of subinvolution after parturition. When he published, in 1845 and in 1848, the first edition of his work on *Uterine Inflammation*, his statement as to the frequency of these lesions were met by an indignant denial on the part of many of the gynaecologists of the day, foremost amongst whom was the late Dr. Robert Lee of St. George's Hospital. This physician stated that, on searching the records of the dead-room for uterine lesions, he had found no record of cervical inflammation in 10,000 *post mortem* examinations; indeed, scarcely any uterine disease but cancer and fibrous tumour. This led Dr. Henry Bennet to make the dead-room of this hospital the theatre of assiduous research. He long attended the *post mortem* examinations, finding constantly inflammatory lesions. Dr. West, then also incredulous, instituted research in the dead-room of St. Bartholomew's Hospital, with the same result. He so constantly found uterine inflammatory lesions in women between twenty and forty, that he concluded that they could be of no clinical importance. Thus, lesions were not found when not sought for, and were found when sought for. Both at this time, before, and since, he carefully weighed the uterus removed from its attachments, and invariably found that the weight of the organ was greater than normal—two, three, four, five ounces, instead of one and a half or two—whenever there was any diseased action, inflammatory or other, existing in the ovaries, uterus, or ligaments; in a word, there was non-involution in the child-bearing woman, enlargement in the sterile woman. The organ which alone, in the human organisation, could enlarge in nine months from an ounce and a half to two pounds, and then, in six weeks or two months, return to its normal weight, and that twenty or more times in a woman's life, was ever ready to respond to any morbid stimulus, to remain subinvolved, or to en-

large; clinical experience taught the same lesson. The uterus or its cervix was generally found enlarged on examining patients presenting marked pathological lesions. The influence of this fact on gynaecology was immense. The uterus was a very movable organ. Enlarged and heavy, it was anteverted, retroverted, prolapsed. The rational treatment was to remove the morbid condition, whatever it might be, to place the patient under favourable conditions. Once disease was removed, the uterus resumed its physiological functions; involution took place; the uterus regained its natural volume; and the displacements often either passed away or gave no trouble, causing no suffering. During the latter part of his career, he had been able to resurvey his early work. Hundreds of his patients of former days, then between twenty and forty, and thus treated, had come to him between forty and sixty, and he had then been able to ascertain that they were quite sound and well, and had been so for very many years.

Mr. DEWAR (London) was disappointed that the subject was not carried further, and treatment mentioned for subinvolution several months after delivery. What medicament, if any, would be useful; and especially, what would be the effects of ergot?

Mr. NUNN (Bournemouth) remarked that Dr. Williams had failed to notice that the sanitary condition of the patient's house was an important factor for or against involution.

Mr. LATIMER (Swansea) observed, that surely overlactation was a frequent cause of subinvolution. Abortions also were a very frequent cause. Iron he considered a wrong treatment of subinvolution.

Mr. DUTTON (Sidlesham) thought washing out the uterus and vagina during convalescence, after labour, was an important aid to the process of involution.

Dr. BANTOCK (London) regretted that he was not in a position to found his remarks on this discussion upon a knowledge of Dr. Williams's arguments. He agreed with Dr. Playfair, that it was a very difficult matter to form an estimate of the relative frequency of subinvolution; for it was only because of the symptoms which manifested themselves, at a more or less remote period, that we became aware of its existence. In his opinion, one of the most frequent causes of subinvolution was the occurrence of abortion. Whether this were due to the fact that the uterus was emptied at a time when the tissues might be said to be unprepared for those changes which were so peculiar and so beneficial, or otherwise, he could not say; but of the fact he had no doubt. Another cause was the too early getting about. While he was in obstetric practice, it was his rule never to allow a patient to get about until a fortnight had elapsed; and he was scarcely able to recall a case in which he had been obliged to treat this condition. In his gynaecological practice, he had met with a great many cases of subinvolution, and in a very large number he could usually find evidence of this cause. Another cause existed in the abuse of a too stimulating diet, and especially of alcoholic liquors. No doubt, in a considerable number, the occurrence of subinvolution might be traced to putrefactive changes in the lochial discharge, and inflammatory conditions consequent thereon. A statement of the causes of subinvolution was tantamount to a statement of the preventive treatment. He regretted that, by the terms announcing the discussion, they were prevented from entering upon the curative treatment, which, after all, was the most important branch of this subject: for, amongst the poorer class of the community, and where this condition was most frequent, it was a very difficult matter to have appropriate preventive treatment carried out.

Dr. GRIFFITHS (Swansea) remarked that he considered that the uterus, just after delivery, was in a condition similar to the stump of an amputated limb; and, just as sanitary surroundings were good for the one, so were they for the other. In each case there was a wounded surface to heal. Rest in the semi-sitting posture, during convalescence from parturition, was a very important method of drainage. Defective drainage of passages might lead to pelvic inflammation, and be followed by subinvolution.

Dr. WALLACE (Liverpool) drew attention particularly to the preventive treatment of subinvolution of the uterus. In the first place, the state of the general health of the patient had to be taken note of during pregnancy, in relationship to known causes of tendency to the lesion. In weak and insufficiently developed muscularity, a constitutional dyscrasia, a gouty, rheumatic, or other diathesis, had to be taken into consideration. The condition of the uterus, as to the existence of localised pain, either in the body of the organ, or of a peri-uterine character, must be investigated. Utero-tubal impregnation was almost invariably followed by the disease; and, in cases of previously known open Fallopian tube, Dr. Wallace had again and again seen subinvolution, and he agreed with Dr. H. Bennet in the summing up he had given of vaginal, endometric, and perimetric lesions, as a frequent cause; but, in addition, malformations of the uterus, associated with pregnancy, were attended with retarded involution. With regard to Dr.

Playfair's statements of the *post partum* treatment of patients, Dr. Wallace perfectly agreed; but, in addition, he drew the notice of the Section to the deleterious effects of pads and tight bandaging after labour, thus forcing the enlarged uterus into the pelvic cavity, without bearing in mind the fact that, after labour, the organ normally remained an abdominal organ, if left alone, and did not become a pelvic organ until involution had been completed. There could be no doubt this mistaken practice was a frequent cause of retained clots, excessive after-pains, chronic hyperæmia, and resulting subinvolution. Dr. Wallace regretted that chronic subinvolution, associated with hyperplasia, the fibrous tissues predominating over the normal mixture of muscular and fibrous elements, did not form part of the discussion; for he had hoped for some addition to our knowledge of the treatment of this difficult part of the subject.

Dr. DEMPSEY (Belfast) had observed that, if a pad and binder were applied too tight and too low down, the uterus might be pushed up by them, instead of being steadied and kept down. He had seen such results, and had found that the uterus, a few hours after delivery, escaped from under the binder, and that the fundus reached to one or other of the hypochondriac regions. This accident might prove a case of defective involution.

Dr. ROUTH (London) stated that he had gone over some of his cases of subinvolution treated in the Samaritan Hospital under his care. He found two well marked causes. 1. Either the women were very young or very old. This result was to be expected, as the women were weak, and in them the processes of reparation were necessarily often defective. This was especially the case in miscarriages, after which subinvolution was more commonly traced than after labour at full period. 2. Too early resumption of social duties, household work, but especially too early resumption of conjugal duties, was another cause, especially among the lowest orders. He thought, also, Dr. Williams's paper might perhaps lead to the belief that subinvolution was only a process first of degeneration, then regeneration, and confined to the parturient period. He believed it was often a process kept up by interstitial hypertrophy of tissue going on for months and years. This was a class of cases very common in all gynecological hospitals. This complicated subinvolution was due to some parenchymatous inflammation of the uterus, or inflammation of surrounding tissues, as Dr. Bennet had shown. But it was an error to attribute subinvolution to laceration. He believed it was a mistake. Whether it was cervical or perineal laceration, a wound was made, and the real cause was septicæmia, which poisoned the wound. He laid it down, therefore, that septicæmia was always the cause of such succeeding inflammation; in other words, septicæmia could not exist without producing local inflammation of the uterus or its appendages. The proper plan to avoid these accidents was to use hot injections with antiseptics; not cold, but hot, lest the lochia should be checked.

Mr. WILLIAM DONOVAN (Whitwick) believed the causes of subinvolution to be protracted labour, the abuse of ergot, the ulceration of the os and cervix existing previously to labour. He was strongly of opinion that injections after labour were fraught with danger. Carbolic injections, and having the child born under the carbolic spray, he looked on as simply useless and absolutely dangerous. Bandaging so as to push the uterus up under the ribs or down into the pelvis was, he believed, practically impossible; as a woman after delivery could not bear, and would not bear, the pressure necessary to displace the uterus.

Dr. NESFIELD (Manchester) remarked that vaginal injections after labour were good, but that intra-uterine injections were a serious matter, and might cause mischief, and so lead to subinvolution.

Mr. POPE recommended that ergot be given after expulsion of placenta, so as to avoid a laxity of uterine tissues, and tendency to subinvolution.

Mr. MORRIS thought subinvolution more generally due to miscarriages than to labour, a difficult one, and considered vaginal injections of various kinds to be one of the preventives of defective involution.

Dr. WALTER (Manchester) regretted that he had not arrived in time to hear the papers read on subinvolution, and confessed that, in his experience, by far the majority of cases of subinvolution miscarriage was the cause. In these cases, as well as those succeeding labour at full time, he believed the best preventive treatment was to place the patient at once on a course of ergot combined with strychnine; and he thought that, if the treatment was continued long enough, the majority of cases of subinvolution would be prevented. In these cases, however, where a traumatic lesion existed, it required, in many instances, local surgical treatment before the subinvolution consequent on the lesion could be cured.

Mr. VVYBRA (Hereford) would divide the causes of subinvolution

into those of a local and general character, and would lay stress more especially upon those of a general character, such as anæmia and debility in such cases as were met with in the poor, and overfeeding in the rich too soon after parturition, or after miscarriage, which seemed to be a fruitful cause of subinvolution, whether as the original cause or as the result of previous inflammatory attacks. He believed that the rapid suppression of the mammary secretion (which was readily done by the use of belladonna), without the use of evacuates at the same time, could not but retain in the blood protein elements, the excess of which must clog the operations of nature, quoad the retrograde change, which she attempted to carry out in restoring the uterus to a condition similar, or nearly similar, to that which existed before parturition. He would advocate the use of a bandage applied carefully from the margin of the thorax to the level of the pubes, both for the purpose of support to the uterus, and also as support to the diaphragm, especially where any considerable hæmorrhage had occurred.

Dr. EDIS (London) thought the subject under discussion was one of great interest, both in an obstetrical and gynecological point of view, and was worthy of far more consideration than had hitherto been bestowed upon it. Dr. Williams, in enumerating the causes of subinvolution, suggested inferentially the indications to be followed in avoiding its occurrence. Anticipation and prevention were the mainpoints which demanded attention. General debility might, in a large number of cases, be obviated by a careful supervision of the pregnant female, the judicious administration of tonics—such as quinine and iron, bark and acid, with regulation of the various functions and secretions. This would tend to eliminate one at least of the causal conditions—viz., abortion and premature delivery, and at the same time avert another frequent cause of subinvolution—viz., protracted delivery. The art of midwifery consisted in guiding a patient safely through the process of parturition; not allowing her power to become exhausted before rendering assistance, but supplementing feeble uterine efforts by the timely application of the binder before delivery, sustaining the bodily powers by appropriate nourishment, attending to the ventilation and temperature of the lying-in-room, and other similar details. Where the natural powers proved inefficient, the application of the forceps, so soon as the preliminary stage of dilatation of the os uteri was accomplished, would not only serve to expedite labour, but also prevent *post partum* hæmorrhage, and lessen the tendency to retention of portions of the placenta or membranes. Septic infection with inflammatory complications would thus be averted. The administration of ergot, together with the systematic application of the binder, unquestionably assisted in preventing relaxation of the uterus and keeping up contraction of the organ, thereby diminishing materially the supply of blood to the uterine tissues. The avoidance of too stimulating a diet, and especially of alcohol, unless otherwise indicated, was very important. The plan of allowing patients to sit up for necessary purposes for a brief interval seemed to be one worthy of encouragement, facilitating as it did a proper drainage of the uterus, and obviating any tendency to accumulation of the lochial secretion. It might not be safe in all cases, but, under proper supervision, was certainly free from danger. Vaginal injection of hot antiseptic solutions, night and morning, obviated the risk of septic absorption, and at the same time encouraged contraction of the uterus, and thus favoured the process of involution. Getting about too soon after delivery no doubt explained the frequency with which prolapsus uteri was met with in the lower classes, the uterine ligaments and supports having been so stretched and weakened, as to be unable to retain the bulky subinvolved uterus in its normal position. Too rigorous adhesion to the dorsal position, together with too tight and persistent application of the abdominal binder, so as to restore the figure of the patient as much as possible, doubtless accounted for many cases of retroversion and flexion, which condition again influenced the process of involution. The omission to suckle appeared to retard involution by withdrawing the stimulus to uterine contraction, long since recognised as due to mammary irritation. It must be remembered that it was in those patients who were not considered strong enough to suckle, that the predisposing causes of subinvolution were most likely to be combined. It was a question, too, whether belladonna, so frequently used in the form of plaster, lotion, or ointment, in these cases, to prevent mammary troubles, had not some influence in lessening uterine contraction; and so retarding the process of involution. The influence of subinvolution was a most potent factor in the production of certain disorders, and the sooner this fact was recognised more generally, the sooner would attention be paid to the prevention of such cases.

LYONS (London) stated that *Cambric* might be put to an excellent use when sprinkled over oiled silk. It prevents the fabric from adhering together.

THE RATIONAL TREATMENT OF MENORRHAGIA.

Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By ARTHUR W. EDIS, M.D., F.R.C.P.,

Assistant Obstetric Physician to the Middlesex Hospital; Physician to the Chelsea Hospital for Women, etc.

By the term menorrhagia, it is intended to include all cases of uterine hæmorrhage occurring in the practice of the gynecologist, whether as profuse or prolonged menstruation, or as loss of blood from the uterus other than that which occurs at or about the time of parturition.

The subject is one of much interest to every practitioner, and will, I trust, be found worthy of a brief consideration.

Uterine hæmorrhage must not in every case be regarded as a disease or entity *per se*, for which one method of treatment is universally applicable. Nor must we in every case attempt to check the hæmorrhage; for it may be merely an expression of constitutional or general vascular tension, the uterine mucous membrane acting, so to speak, as a safety-valve, a smart attack of hæmorrhage often serving to avert a still more serious effusion from the ovary, or its surrounding plexus, into the peritoneal cavity, or even preventing an attack of apoplexy at the so-called climacteric period.

Of all the organs in the body, the uterus is the only one from which blood flows as a normal physiological process, the function being influenced by many and various causes, both general and local.

A recognition of this fact is essential; for, unless we acknowledge the importance of forming a correct diagnosis in every case of hæmorrhage, our treatment will not only often be futile, but actually mischievous. Diagnosis is, in fact, the most important element of treatment, for menorrhagia is merely a symptom, not a disease. In many instances, the differentiation of the predisposing and exciting causes of any individual case under observation may be one of great difficulty, but must nevertheless be attempted. The history of the onset of the attack, whether gradual or sudden, attended or not by pain or febrile disturbance, will often give us some clue to the cause. The age of the patient often suggests the possibility of certain well defined causes, cardiac complications from rheumatic fever, hæmatocele, ovarian irritation, constipation, etc., in the young; polypi, fibroids, retroflexion, retained products of conception in the middle-aged; climacteric irregularities, cancer in its various forms, hepatic disorders, etc., between the ages of forty and fifty.

In young plethoric girls, whose sexual development is well marked, menstruation is not unfrequently profuse. In place of giving iron, which generally produces constipation, and thus aggravates the tendency to menorrhagia, the better plan is to regulate carefully the diet, avoiding alcohol and any undue amount of animal food; to give bromides, which lessen the ovarian irritation, together with some saline aperient when requisite.

In anæmic patients, iron generally proves most serviceable; but, in place of "pouring in iron", as is not unfrequently spoken of, it should be given in combination with salines in moderate doses, more as a chalybeate water than a mixture; and care must be exercised that it does not produce headache, nor spoil what little appetite may exist.

In a case recently seen in consultation, of a young lady aged 17, whose periods were very profuse, acetate of lead had been given so heroically as to produce symptoms of lead-poisoning, the gums being marked with the characteristic blue line, colic and muscular weakness being also present. This method of treatment seemed scarcely rational, considering that menorrhagia is a well marked symptom in women employed in white-lead manufactories.

In single patients, where menorrhagia is marked, and relief does not follow ordinary medicinal treatment, local investigation should be suggested, and, if necessary, insisted on. In one instance lately, a maiden lady, aged 37, who had suffered from frequent and severe losses of blood, extending over a period of several years, for which ergot and iron, kino, hæmatoxylon, and various other remedies had been prescribed in vain, was found to be suffering from a large intra-uterine fibroid polypus, of the size of a hen's egg. Dilatation of the cervix by means of tents was effected, and the growth was removed by the aid of the *craseur*, combined with torsion and traction. Medicines had been prescribed for many years, but the cause of the hæmorrhage had not been made out until dilatation of the cervix, when the source of the hæmorrhage was at once apparent. The patient convalesced rapidly, although, before the operation, she was reduced to a very anæmic condition, and her life was despaired of.

Where a married patient suffers from menorrhagia, the cause of

which is not at all obvious at first, a careful examination should be insisted upon. In no fewer than four instances recently, I have met with cases of unsuspected pregnancy complicated by polypus uteri. A brief narration of one case may prove of interest.

N. S., aged 36, married nine years, sterile, began to have irregular losses of blood *per vaginam*, in addition to the periods being profuse. Ergot was given freely, but no examination was made. When I first saw her, she was looking very anæmic, from a rather smart attack of hæmorrhage. On examining her, I found that the uterus was enlarged above the umbilicus, the cervix soft and full; it was evidently a case of uterogestation. Protruding from the cervix was a polypus of the size of a walnut. Torsion was employed, and the growth removed, pregnancy advancing to full term.

Where the slightest irregularity in the appearance of the catamenia leads to the suggestion of the possibility of utero-gestation being present, any attack of menorrhagia, especially if it recur, should be regarded as a threatened miscarriage, and treated accordingly. Should only the foetal portion of the ovum be expelled, hæmorrhage recurring so soon as the patient leaves the recumbent position, in place of contenting ourselves with giving ergot, an examination should be made, and the remainder of the ovum extracted. Where the cervix has closed up so much as to prevent the expulsion of the placenta, though this is rare, a sponge-tent should be inserted, the cervix dilated, and means taken to clear out any *débris* remaining in the uterus. The following case may serve as an illustration of many others.

Menorrhagia: Attempted Miscarriage: Removal of Ovum: Recovery.—A. B., aged 18, single, mother of twins, one only living, aged twelve months. After the first few months, during which time the patient suckled her child, she had rather a copious sanguineous discharge, lasting four or five days, and recurring every fortnight. There was then an interval of five weeks without any sanguineous discharge; but after this she had irregular losses, brighter in character than usual. In June, about three months after the cessation of any sanguineous discharge, severe flooding came on during the night, lasting an hour and a half. She was much exhausted after this, and was compelled to remain quiet. An interval of three weeks elapsed, and then a second flooding occurred, the loss being very severe—estimated at three or four quarts. The practitioner administered ergot, but failed to ascertain the cause of the flooding.

When seen by me in July, on examination the uterus was found to be excessively bulky, mobile, the cervix enlarged, the os patulous. Protruding from this latter was a dense mass, about the size of a thumb. The history pointing to the probability of its being a case of miscarriage, an ovum-forceps was inserted gently within the cervix, and the mass gripped firmly. Torsion and traction were then employed, and what proved to be the maternal portion of the ovum was removed. Ergot with bark and acid were given, rest enjoined, and appropriate nourishment administered. No further hæmorrhage occurred, and the patient made a good recovery.

In this case, the absence of any sanguineous discharge in a patient who had been losing blood every fortnight should at least have suggested the possibility of utero-gestation. The sudden hæmorrhage three months subsequently was accounted for by an attempted expulsion of the ovum. Even the second flooding three weeks later, which jeopardised the patient's life, led to no local investigation, and therefore to no explanation of the cause of the hæmorrhage, without a knowledge of which treatment could but be ineffectual.

Where two or three periods have been missed, and the question of pregnancy is tolerably certain, should hæmorrhage occur, accompanied by pain, the fact of a miscarriage having taken place may generally be assumed. If hæmorrhage persist or recur at intervals, an examination should be made. In one instance, in which I was recently consulted, the patient was allowed to go on losing blood continuously for over three months. The history of the miscarriage at once suggested the expediency of exploring the uterus. Nearly a teacupful of placenta, perfectly fresh, was removed, and the hæmorrhage at once arrested. An action was commenced by the husband of the patient against the practitioner for improper treatment, and the latter was advised to compromise the matter and stay further proceedings, by foregoing his claim for over three months' attendance, day and night, and giving the patient a substantial recompense.

Where uterine hæmorrhage is severe, whether from imperfect expulsion of an early ovum, intra-uterine polypus, submucous fibroid tumour, or other similar condition, in place of attempting to restrain the flow by pieces of linen or cotton-wool packed in the vagina, which practically have no influence in controlling the loss in the majority of cases, a far more scientific and rational method is to insert a sponge-tent into the cervix uteri. This has the double effect of plugging the os uteri, thus checking or arresting the flow, and at the same time dilating the

cervix, so as to facilitate subsequent exploration of the interior of the uterus.

Where the practitioner does not possess the requisite skill, or has not the instruments at hand, packing the vagina with pieces of sponge is far more likely to arrest the hæmorrhage than pledgets of cotton-wool, which, in place of expanding like sponge when moistened, become compressed and lessened in bulk.

Hæmatocele, or effusion of blood into the pelvis, is a frequently overlooked cause of menorrhagia. If careful inquiry be made, there will usually be found to be some history of exposure to cold, undue exertion, over-fatigue, violent straining, or injury of some sort at or near a menstrual period. Extra-uterine gestation at an early stage, although not often suspected, will often explain these cases.

In place of applying hot fomentations to the abdomen, and pouring in brandy, a more rational method of attempting to restrain hæmorrhage is to get the patient rapidly under the influence of opium, so as to allay pain and prevent restlessness, and apply cold or pressure to the abdomen by means of ice or small pads of cotton-wool and a firm binder.

If hæmorrhage be severe and continuous, and the probability of extra-uterine gestation exist, the patient's life being evidently jeopardised by the amount of effused blood withdrawn from the circulatory system, the only hope of saving the patient is to make an exploratory abdominal incision, secure if possible the bleeding vessel, or remove the ruptured cyst, as may be found advisable.

Retroflexion, accompanied by congestion of the uterus, in patients who have borne children, is not an unfrequent cause of menorrhagia. A correct diagnosis is here essential, before treatment is likely to prove of service. The two conditions are often so intimately associated, that, unless both of them be dealt with simultaneously, permanent relief cannot be obtained. The misplacement serves to keep up the congestion, and the latter equally tends to prevent the uterus from assuming its normal position. Puncturing, scarification, or the application of leeches, followed by hot water injection and glycerine plugs, may first be tried to lessen the congestion; a ring pessary, or other appropriate support, being then inserted to keep the uterus in its normal position, and thus lessen the tendency to a recurrence of the congestion.

The management of hæmorrhage, due to large intramural or submucous ulcers, is one of much difficulty. Where ergot, bromides, cannabis Indica, gallic acid, digitalis, and other similar remedies, fail to arrest the flow, and the patient's health is markedly affected by the repeated or severe losses, the question of spaying, division of the cervix uteri, or removal either of the fibroid or of the entire uterus should certainly be entertained. The results obtained during the last few years by operative interference in these cases are most encouraging, and the operation well deserves more extended trial. No patient, the subject of uterine fibroid, where the symptoms are so severe as to impair her usefulness or threaten her life, should be allowed to die without having the option of operative interference.

The following case illustrates well the importance of forming a correct diagnosis, as also the value of treatment.

Menorrhagia: Intramural Fibroid: Removal: Recovery.—M. N., aged 24, married three years, mother of one child, aged two years. Since her confinement, but especially during the last few months, the patient had suffered from frequent and severe losses of blood per vaginam. She was supposed to have had several miscarriages, but the subsequent history of the case rendered this more than doubtful. On examination, the uterus was found to be somewhat retroverted, excessively bulky, mobile. The cervix was large, the os patulous, admitting the finger. Protruding from the posterior wall a fibroid tumour, of the size of a very large hen's egg, was detected, almost sessile, the lower end presenting at about the level of the internal os uteri.

As the patient was exceedingly weak, and very much exhausted from the profuse hæmorrhage which had occurred, it was deemed expedient to plug the cervix with cotton-wool, administer ergot, and rally the patient's powers by means of strong beef-tea, jellies, milk, and other forms of nourishment, before attempting any operative procedures.

Later on, the patient was placed in the lithotomy position; chloroform and ether was administered; the cervix incised bilaterally by means of a curved bistoury; the base of the tumour was divided by the same curved bistoury, and lastly, the finger inserted in the aperture, and the tumour shifted out. Some difficulty was experienced in reaching the lower portion of the growth; a large ovum-forceps was then employed to grasp the tumour, and the removal was completed by a judicious combination of torsion and traction. It was as large as a goose's egg, and composed of dense fibrous tissue, rather as hard as cartilage. But little hæmorrhage occurred during the operation. A pad of cotton-wool, moistened with the solution of perchloride of iron, was inserted in the cervix to restrain

hæmorrhage, a morphia suppository inserted, and nourishment administered in small quantities at short intervals. The patient was much exhausted after the operation, but ultimately made a good recovery.

This case illustrates well the absolute importance of forming a correct diagnosis. It was assumed that the hæmorrhage depended upon miscarriages, and ergot was administered. Pain, due to expulsive efforts on the part of the uterus, seemed to support this view; but it is more than probable that the ovum, even had conception occurred, would have been washed away by the profuse loss of blood, before becoming sufficiently attached to permit its becoming developed.

Vascular disturbances at the climacteric, or change of life, as it is popularly spoken of, should never be treated lightly, but always carefully investigated.

In some instances, regulation of the bowels, restriction as to diet, especially the amount of alcohol, and a proper amount of outdoor exercise, will be all that is requisite. In others, the hæmorrhage persists, in spite of all treatment; and, on a careful investigation, epithelioma of the cervix uteri is at once detected, probably too late for any operative interference. In no case should hæmorrhage at this period be diagnosed as change of life, without a careful examination being made, and a correct diagnosis formed. Numerous cases could be cited illustrating this. The following may suffice at present.

Menorrhagia due to Cardiac Mischief.—C. M., aged 42, single, consulted me for profuse menstruation. The period generally lasted a full week, and recurred at an interval of from two to three weeks. During the last few months, the patient had lost far more than usual, and her general health was beginning to suffer. She had been taking medicine for the hæmorrhage for some time past, but without obtaining relief.

On examining the chest, a loud systolic murmur was detected over the apex of the heart. The pulse was small, weak, irregular, and the appearance of the patient was extremely anæmic.

As the patient herself feared that some uterine tumour was present, a vaginal examination was made. The uterus was found to be fairly normal in size and position, and there was nothing in the condition of the pelvic organs to throw any light upon the uterine hæmorrhage. A mixture of iron, magnesia, and nux vomica was prescribed, and subsequently digitalis. This had the effect of improving the heart's action. Appropriate rest and diet were enjoined, the bowels carefully regulated, and the general health attended to in every possible way. Marked improvement ensued as regards the uterine hæmorrhage.

Menorrhagia: Abuse of Alcohol: Constipation.—Mrs. G., aged 40, mother of three children, the youngest nine years old, had suffered from menorrhagia the last year or two, the periods recurring too frequently, and the loss being excessive.

She was rather stout, the complexion ruddy, the conjunctivæ yellowish, the abdomen distended. The bowels were very confined, the appetite indifferent. She slept badly, and suffered much from languor and debility, spasms in the chest, and tickling in the throat.

On examination, the uterus was found to be bulky and mobile; the os patulous; the cervical canal rather granular. On inquiry, the patient acknowledged that she had been very worried and anxious of late, and had been advised to take port wine and brandy to keep her strength up.

Complete abstinence from alcohol was enjoined. A combination of rhubarb and blue pill, to act upon the liver and to secure regular action of the bowels, was given; and a mixture of bromide of potassium, ergot, nux vomica, and cinchona was prescribed. The patient improved rapidly, and the periods soon became normal.

Cirrhosis of Liver: Menorrhagia: Death.—B. T., aged 48, married, sterile, had been fairly regular as to her periods until the last three years, since which time they had been too profuse and too frequent. She was much troubled by flatulence, constipation, anorexia, nervousness, inability to sleep, great depression, and irritability of temper. Various remedies had been tried to check the menorrhagia, but failed. I was asked to see her, with a view to determining whether any fibroid or other tumour of the uterus existed. The uterus was found to be normal in size and position, and there seemed to be nothing in the condition of the pelvic organs to explain the hæmorrhage. On examining the abdomen, it was found to be very full and distended, the walls excessively fat. The liver could be detected enlarged, hard, and nodular at the edge. The heart's action was weak, but otherwise normal, no murmur of any kind being present. The lungs were fairly healthy.

In this case, the uterine hæmorrhage was clearly due to alcoholism—enlarged liver and obstructed portal circulation. It was subsequently discovered that she sometimes took as much as a bottle of brandy in the day. She died suddenly a few months later, being found dead in her bed.

In cases of epithelioma of the cervix, where hæmorrhage is a marked symptom, in place of giving ergot or iron, and packing the vagina with cotton-wool loosely, as is too often the case, the more rational

method is to remove as much of the diseased mass as is deemed prudent, with either the *écraseur* or the curette, or both combined, and then to apply either the liquor ferri perchloridi fortior, the persulphate of iron, or the actual cautery.

Much may be done in these distressing cases to postpone the evil day, and lessen the amount of suffering consequent upon the exhaustion from repeated hemorrhages, by timely assistance. It is no reason why the patient should be left to die miserably, unrelieved by art, because the nature of the malady has been recognised to be one which at present baffles our efforts to cure it, unless complete extirpation of the uterus, by abdominal or vaginal incision, can be regarded as a cure.

Mr. MORRIS and Dr. THOMAS DUTTON (Sidlesham) remarked on the possibility of vaginal examinations in the unmarried becoming too frequent, and spoke of the difficulties that stood in the way of younger practitioners in dealing with uterine cases.

Dr. ROUTH (London) thought that perhaps country practitioners were too chary of examining their cases. Of course, promiscuous examination was wrong. But, in his experience, many ladies, married and unmarried, came to town with uterine disease, declaring that they had suffered for years, and had found their medical attendants unwilling to make an examination. He had not infrequently met with polypus or epithelioma, which might have been prevented or cured had an earlier examination been made.

Dr. WALLACE (Liverpool) said his experience was not in accordance with Dr. Routh's. The patients who consulted him (Dr. Wallace) had almost invariably been examined, and their cases diagnosed, by their own medical attendants. He considered that, when an examination was called for, it was by no means a good plan to ask permission; permission should be taken for granted.

Dr. EDIS, in reply, stated that, practically, it would be found that very few cases of severe menorrhagia occurred in young girls, and therefore the question of submitting them to examination was seldom presented; but, where menorrhagia persisted, in spite of all ordinary remedies, the fact of a patient being single should not deter us from ascertaining the nature of the disorder. If menorrhagia were regarded, not as a disease, but as merely a symptom, and the exciting cause of this were carefully investigated, we should more frequently succeed in arresting hemorrhage.

ON THE ETIOLOGY AND TREATMENT OF A CERTAIN FORM OF ENDOMETRITIS.

ACCOMPANIED WITH VERY TENACIOUS LEUCORRHOEA.

Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Worcester, August, 1882.

By C. H. F. ROUTH, M.D., M.R.C.P.,

Consulting Physician to the Samaritan Hospital for Women and Children, etc.;
Fellow of University College, London.

THERE is a variety of dysmenorrhœa which we occasionally meet with, and which is very difficult of cure. I allude to that form where, in addition to the pains about the uterine organs, to be hereafter more fully defined, there is a thick muco-purulent discharge, so sticky, that it is often wellnigh impossible to remove it.

The general symptoms of this affection resemble in many respects those I detailed in a paper read before the Obstetrical Society of London (*Transactions*, vol. xii, 136), on Fundal Endometritis, and vary according to the part of the uterus affected. To recapitulate a few particulars. First, the pain felt varies greatly; it is sometimes trifling, general uneasiness being the chief complaint, with the knowledge of the daily passage of more or less leucorrhœal discharge, which becomes yellow on the linen. More frequently, however, there is a marked feeling of weight in the uterus with bearing down; and the symptoms are greatly aggravated at the menstrual period, when colicky uterine pains are superadded. These, beginning in the back, run downwards towards the region of the round ligaments, and outside one, generally the left, or both thighs, coming on in paroxysms more or less severe. It has been stated that in such cases there is no rise of temperature, even although the pain has been excruciating, leaving no trace when once the cause has been removed. This, I am satisfied, is an error. If the temperature be taken in the axilla, it is true there is seldom any rise of temperature. If, however, it be taken in the vagina, it will be found raised sometimes to 103°. This, however, is by no means an exceptional case. In most, if not all, women during menstruation the temperature rises in the vagina.

To what is this particular discharge due? First, I believe, in most cases, it is essentially the result of gonorrhœa communicated during

the first few days of married life, whether by a gonorrhœa proper or a gleet. At least, in questioning many women, they always referred its occurrence to marriage; and in not a few of these cases, when I have been able to examine the husband also, I have found gleet. Yet, even here, I have observed what appears to contradict this view. I have found gleet present in a husband, and no sticky discharge in the wife.

If we closely question the wife, however, in these cases, we often are enabled to learn that soon after marriage, indeed within the first week, some acute symptoms supervened; abdominal pain low down, over both ovaries, especially the left, and in the groin, with more or less feverish excitement. In one case, I believe, peritonitis was the immediate result, which proved rapidly fatal. In another case, the peritonitis was more limited, and recovery occurred. Now, in both these cases the wives were believed in the first instance to be healthy; but both husbands were affected with acute gonorrhœa. The opinions of Noeggerath, and his belief that catarrh of the Fallopian tubes plays a part in the occurrence of perimetritis, and even peritonitis, have been widely made known. By most gynecologists, they have been said to be extravagant. Attention has also been called lately to this etiology by Dr. Edis. I must say, for myself, that, while I cannot go quite to the length of Noeggerath's opinions, I am quite sure that the chronic form of tenacious uterine leucorrhœa with dysmenorrhœa, of which I am now speaking, is due to gonorrhœa in most cases. In a few more cases, it is due to intense vaginitis in the virgin, which acts precisely in the same way in producing tenacious uterine leucorrhœa; a vaginitis capable of producing a gonorrhœa in the male, or rather an urethritis, which cannot be distinguished from gonorrhœa.

Whatever be the cause, however, in nearly all the cases where the discharge existing is thus tenacious, I assert distinctly also that, so far as my experience goes, sterility is the constant result. The attention is, moreover, in many cases, perhaps the majority, exceedingly difficult of cure, and for this simple reason: it is not only the uterine cervical and superior cavity which is affected, but the tubes likewise. A temporary cure by local applications to the uterus may be effected in the cavity, and for a few days a practitioner may believe he has cured the patient. Perhaps, a fortnight later, he is mortified in finding his patient as bad as ever. There has been no cure of the catarrh of the Fallopian tube, and, through the continuity of surface, the uterine mucous membrane has been affected.

I believe one of the reasons why peritonitis is not more common in these cases is, that the expulsive or downward action of the cilia of the tube directs the unhealthy secretion into the cavity of the uterus rather than into the peritoneum.

I think it will facilitate the description of the points I wish to bring especially before your notice, if I speak of this disease under three varieties, although they are but stages of the same disease: namely, (1) where it is confined to the cervix; (2) where it extends to the superior cavity of the uterus; (3) where it reaches the Fallopian tubes and peritoneum.

1. Let us speak first of the cervical variety. On examining a woman affected with this form of tenacious leucorrhœa, we generally find an accumulation of muco-pus around the cervix. This is generally removed with difficulty, but even then a more or less thick cord of the same secretion projects as a piece of string from the os, and cannot be detached. Even if a piece of thick wire, or a sound, around which some medicated cotton has been wound, be introduced into the uterus, it cannot be so removed; more and more seems to have accumulated above, and the mucus is as tenacious as ever. It is rare, however, that in such cases the operation can be done without exciting pain, just as you pass the internal os, and sometimes higher up. The severity of this pain varies. In more chronic cases, it may be slight; in others, and in these generally the dysmenorrhœa is very troublesome also; it amounts to an agony, which lasts for hours afterwards. I may here state, however, as useful, not only in these cases, but in others, where the passage of the sound is attended with pain, that the injection, *per vaginam*, of water as hot as the patient can properly bear it, is the most effective way of checking or relieving it. The moment the internal os is passed, the exact pains which the patient is accustomed to have during a period are reproduced. The patient, indeed, will spontaneously exclaim, "Oh, you are bringing on all my poorly pains." The point of starting the pain is therefore probably at the internal os. I have also noticed that, in a large proportion of cases, uterine version or flexion exists, especially anteversion; but there can be no doubt that the internal os, by reason of the pain, is the seat of spasm, which, for a time at least, precludes the passage of the cervical fluid into the superior uterine cavity. This spasm, as well as the version where it exists, is in a measure a preservative action, and often prevents the development of the second stage.

If we now look to the mechanism of the production of this affection, we may trace some of the concomitants which render it so permanent, especially with married women, or women having relations with men, and which make it so obnoxious to treatment. These are mainly two: 1. Direct suction upwards of the diseased fluid by the uterus; 2. The natural pressure downwards, and partial opening of the os during copulation.

I have elsewhere shown that, by means of a very simple instrument, we may prove that there exists a power of suction upwards by the vagina and uterus during expiration, which is entirely due to atmospheric pressure. Take an ordinary speculum; close the uterine end by a thin membrane, and the other end by a cork through which a glass tube bent at right angles passes, and which is of some length; if this speculum be filled with water, which is allowed to extend also up the tube, at each inspiration the patient makes the water will rise in the tube, while with each expiration it will fall—*i.e.*, there is a fall of the water in the tube. The mechanism of this change is too obvious to require comment. In some women, owing possibly to some peculiar folds of the mucous membrane of the vagina, which acts in a valvular manner, air is being continually sucked up, and at last fills the vagina till it provokes an expulsive effort, and the air is forcibly propelled outwards, and sometimes with a noise similar to flatus expelled *per anum*. I believe it is an operation very analogous to this which takes place *in utero*, through some condition, also of a valvular character, in the external os which causes vaginal fluids to enter into the uterus during expiration. It is, perhaps, for this very reason that, at the critical moment of the orgasm induced by sexual intercourse, repeated and sudden expirations occur, which facilitate the upward passage of the semen into the uterine cavity.

Dr. Matthews Duncan has referred this suction upwards of vaginal fluids *in utero* rather to a reverted action of the muscular fibres of the uterus; and in this manner he explains the occasional drawing upwards of intra-uterine pessaries and their enlarged dies at their distal end right up into the uterus, which often taxes disagreeably the practitioner's ingenuity to get them out again. I have also had some of these unpleasant accidents to meet. Nor is this confined to the uterus. In cases where an artificial anus has been made, I have seen large pieces of lint and cotton sucked up and disappear altogether, and never found again. Nay, more; when an anus was made in the groin, and an ivory tube with a large cap placed in it, this has also been sucked up and disappeared. In one case where this occurred, the patient is still living. Here, perhaps, there may be some reversed peristaltic action to account for it. Still it seems more rational to attribute, at least in the uterus, these effects rather to propulsion upwards by atmospheric pressure during expiration; first, because it necessitates the dilatation of the external os, which would imply an uterine contraction, which, we should suppose, would expel the contained intra-uterine pessary; and, secondly, because the uterine cilia have also an action in the expulsion of contained fluids. The moment, however, we explain it by atmospheric pressure forcing fluids upwards during expiration, and some accidental valvular action of the mucous membrane at the os uteri, the result is obvious. That such valvular action of folds of the mucous membrane does take place, is often made sufficiently palpable; but, conversely, when we try to introduce a sound, in some cases, we are prevented altogether by some fold of mucous membrane, and also by the result often noticed, and well instanced by Dr. Barnes, that, when the external os is cut, a large quantity of mucus, previously retained, obtains at once a free exit.

There is another cause also operative in such cases; the fact that, during menstruation, the uterus is forced downwards to meet the male organ, and probably the os undergoes a sort of dilatation at the same moment, both of which circumstances mechanically facilitate passage of acid fluid upwards in the uterus. The way in which gonorrhoeal fluid may thus pass into the uterine organ is sufficiently obvious.

Be it, however, gonorrhoeal or other acid vaginal fluid, it is equally obvious how, once in the cervical cavity, it will act as an irritant. It is well known that the vaginal secretion is acid, sometimes intensely so, whereas the uterine secretion is alkaline and markedly so. When an excess of acid fluid is thus sucked up *in utero*, of itself it will produce irritation leading to inflammation of the mucous membrane; and secondly, the contents of the uterus, now being acid, will kill any spermatozoa which are present, and so sterility follows as a matter of certainty. In these cases, the dysmenorrhoea is mainly due to constriction at the external os, and the pain is chiefly referred to the lower parts of the pelvis.

It was the examination of many of these cases that led me to conclude that, in a large proportion, the fluid sucked up did not pass the internal os, but was by constriction there prevented from passing beyond. I have been met by the statement that there are no special circular

fibres here forcibly to close the opening. All we notice are merely a few fibres which here decussate. I do not in any measure question the anatomical fact. But I am certain it is not a pathological fact. Like muscle everywhere when frequently taxed, it becomes hypertrophied, and then it acts distinctly as a sphincter. I have verified this over and over by the use and retention of caoutchouc intra-uterine pessaries, where at this point there has been left a very distinct circular impression. And more than this, such constrictions may under disease take place elsewhere within the uterine cavity, especially in certain forms of version or flexion, as these tubes prove. This is possibly sometimes the seat of local ulceration, a state of things being here produced which is analogous to fissure of the rectum; as, when touched with the sound, not only is the pain intense, but blood follows it use.

Certain it is, however, that constriction does occur at the internal os, and here we have the explanation of the intense pain sometimes experienced by women. As you pass the sound through the internal os you at once provoke a spasm, which continues for a time, and not unfrequently you find your sound comes out bloody, exactly as it does in some cases of stricture of the male urethra, so forcible has been the local resistance. It may be that there may also exist at such parts slight ulceration.

2. Sometimes there is not such a complete closure or resistance at the internal os, or the cervical cavity is so full, and dilated with mucus, that the fluid, not being expelled downwards, is forced up into the upper uterine cavity of the uterus, and we have the second variety of tenacious gonorrhoeal uterine leucorrhoea. Sooner or later this result follows, and gradually but completely the uterine cavity becomes filled with fluid. The symptoms now are altogether different. They are, in a few words, those of greater and higher local uneasiness: sometimes phenomena of spurious pregnancy, followed often by symptoms not unlike those of miscarriage; but I shall again refer to them. Exacerbation of pain recurs not only at the onset of menstruation, but at other times, when the contained fluid, whether catamenial during menstruation, or mucus during the interval, is forcibly expelled by a powerful uterine contraction which overcomes all before it, and relief follows. Fortunately, the disease does not always extend beyond. But sometimes it does, and then the case is one of very serious import, at best one of confirmed invalidism. This constitutes the third variety, where the Fallopian tubes become inflamed, and even perimetritis may occur. In the worst cases, we may have those results insisted upon by Noeggerath, when a few drops of the inflammatory secretion of the tube escape, possibly by a contraction of the tube giving rise to perimetritis, and sometimes rapid and fatal acute peritonitis. Fortunately, in this country at least, this unhappy complication is not common. It cannot be said, at least in Great Britain, if it can be elsewhere, that all our young married ladies are diseased by their husbands, so that young ladies are afraid to be married, because they know that all their married acquaintances were made ill directly and never again recovered.

The dysmenorrhoea in these cases is very severe, accompanied with general uterine pain, tenderness reaching high up, and very aggravated.

Let us now distinguish how far from symptoms we may diagnose these three different varieties. I have already spoken generally of the general symptoms. We have considerable assistance, as I have shown in my paper read before the Obstetrical Society (*Transactions*, vol. xii., 136) on Fundal Endometritis, by the special localisation of the pain which is influenced by the nerve-distribution. In the cervical variety, the pain is referred to the lower part of the sacrum, the lower part of the pelvis, where there will be heavy dull pain, sometimes reaching as high as the groins, but not higher. The vagina also, especially at the upper part, feels sore, so that connection becomes sometimes very painful, or, if pressure be made with the finger on the cervix, it gives pain. Once become chronic, however, all these symptoms are greatly diminished in intensity. In the second variety, we have pain extending higher up, more marked just above the pelvis and groin, markedly in the groins, and extending down the thighs, generally the left. Occasionally it extends, as in ordinary cases of fatal endometritis, up to the waist, in the region of the great abdominal ganglion, and over both ovaries, specially the left. In the third variety, the symptoms are those of perimetritis or peritonitis, which need no special description, except that I may remark that I have noticed in several of those milder or more chronic forms, where neither perimetritis or peritonitis existed, that, on pushing the finger high up on either side of the uterus, or with the index finger placed there, making pressure from the abdomen, I produced intense pain and a sickening sensation even in those cases where there was no enlarged ovary, although in some I have noticed these organs also enlarged and very painful.

So much for the pain. But, in the second variety, it often occurred that sudden relief was obtained, at least for a time, by a forcible ex-

pulsion of the uterine contents by a sort of labour-pain. In these cases, also, except where the disease had lasted many years, and sensation, as if it had worn itself out, was diminished, intense dysmenorrhœa was present, and the pains extended higher in the abdomen, according as cervix, fundus, or tubes were affected. I should remark that the breasts not only swell and become somewhat uncomfortable in these cases, as is commonly observed during menstruation, but become exceedingly painful, constituting mastodynia, which even persists after the period, and occasionally gives rise to hypertrophy of the organ. In these cases, the second variety is always present.

Treatment.—For a long time, I was greatly puzzled with these cases. If I cured them for a time, they were sure to recur. It is so even now with a few cases, and especially with those which include the third variety. The principles of treatment indicated here are threefold; first, local antiphlogistic measures and other general agents to relieve the local congestion or inflammation; second, free exit to all contained irritable fluids, and the prevention of the suction upwards of the same; third, local appliances to correct the diseased action of the mucous membranes, and to keep the cavities patent. It is my conviction that the cases are very few and far between, which will yield unless these three measures be combined; and even in ordinary cases of leucorrhœa of an uterine origin, where the tenacious mucus does not exist, the same treatment is most efficacious.

First, of the local antiphlogistic measures and other general agents to relieve the local congestion or inflammation, blood-letting by means of leeches applied to the cervix uteri is both safe and effective. It is, in fact, a *sine quâ non*, the backbone of success, and much to be preferred, in my estimation, to the lancet. The uterus in these cases is more or less hardened. Fibrinous deposit has, in measure, taken place in its parenchyma, and blood will not flow, though the cervix be pricked heroically and extensively. The hysterotome, or cutting the os on both sides from within, if a knife were used at all, limiting the cut to the cervical cavity, was the best way of doing it. But leeches are to be preferred. The very suction of the leeches brings down the blood, favours the downward course; and, when they fall off, the oozing of blood continues. In a plethoric woman (six leeches at a time), the leeching may be repeated half a dozen times at least. It is the best preservative against subsequent inflammatory complications. If there be also much abdominal pain, then leeches may also be applied on the abdomen; but here I think blisters, or iodine paint applied to the belly, and frequent saline purgatives with anodynes, and alterative doses of mercury, are the best adjuncts.

The patient thus prepared, we are in a position to put in operation the second mode of treatment, viz., to give a free exit to all contained irritable fluids, and to prevent the further upward suction of the same. This, after all, is one of the first principles of surgery. If matter be cooped up in any cavity, we must let it out. If the external os be small, and its action valvular, as before explained, it must be cut through. Mere dilatation, without a bougie or intra-uterine pessary, at best can only have a temporary effect. Nor have I ever seen the slightest danger occur from cutting the external os in a patient previously prepared by the measures before indicated. A pair of scissors, a bistoury, or Dr. Barnes's instrument, is sufficient. Precisely as when we cut a fissure in the anus, the parts are at rest. No more suction can take place upwards, and a free exit is given to all contents. We have, in fact, one abscess with a free external opening. The cervical cavity can now be locally treated by local agents, and its diseased action cured. A number of these are in daily use. A small stick of nitrate of silver may be advantageously left in the cavity, which will often correct and change the acid secretion, and recovery may follow. Another agent is pure carbolic acid, placed on a piece of wire previously covered with cotton-wool, and afterwards dipped in crystals of iodoform. This last is very successful, and, moreover, relieves pain. I have sometimes used iodine paint, as advised by Dr. Wynn Williams, made by mixing iodine, iodide of potassium, water, and spirit, in equal parts; but I have not found in my practice anything as a local agent so successful as the iodoform and carbolic acid conjoined.

When, however, we have to treat the second variety of this disease, we tread upon more dangerous ground. It should be stated unequivocally that, if local remedial measures, such as the hysterotome and intra-uterine pessaries, be employed before full and effective antiphlogistic regimen has been premised, inflammatory complications of serious character, and death by septicæmia, may follow. If this regimen, however, have been observed, it is comparatively safe to cut the internal os by the hysterotome, or dilate by a sea-tangle or sponge-tent. The morbidly contracting decussator fibres of the internal os must be overcome. If we cut, it is wise to let the patient bleed awhile. If the bleeding seem too profuse, then it is wise to introduce a small piece of sea-tangle; but one important caution should be remembered. It should not

be straight; it should have the exact curve of the uterus. To attempt to put a straight one in mars and injures the cut position, and is favourable to the development not only of severe pain, but of inflammation. For this purpose I invariably use sea-tangle of various curvatures; or if I use a sponge tent, I pass through it a piece of steel wire, which I then bend to the curve required. Sometimes, by pulling down the uterus a little way, the tangle or tent is more easily introduced. But the uterus should not be pulled down far or violently, for peritonitis may be the result. Be it tangle or tent which is used, another precaution is necessary. Surround either by a little cotton-wool, and dip it in a solution of glycerine and iodine. This is an antiseptic agent which prevents subsequent poisoning.

Sometimes, however, notwithstanding every care, the pain produced is so great, that neither tent or tangle can be borne. We must then proceed another way. If the pain and bleeding persist, inject into the vagina water as hot as the patient can bear. This almost invariably arrests them both. If the bleeding persist, then I plug the vagina only. An anodyne suppository helps the patient, if used in addition. Within forty-eight hours, all plugs being removed, I then insert into the uterus a small taper, such as I show you; it is covered with cotton, shaped to the cavity, dipped then in carbolic acid, introduced, and left *in utero* for about twelve hours. It is seldom that this process need be repeated. The uterine tenderness generally disappears, and a large sound can be introduced without pain. The case may be left then, and will often do well; but I prefer using an intra-uterine pessary, one of the various forms I now show you, and which are for the most part well known to the profession. I have kept in the caoutchouc ones I show you for a year; the combined Hodge's and intra-uterine pessaries which I described at Bath before the Association, for six or eight months. The mucous membrane then assumes a healthy character. The catamenia are copious and painless often from the very first, generally by the third subsequent catamenial period. The dysmenorrhœa and the tenacious uterine leucorrhœa alike disappear.

Lastly, as regards the third variety; in the more acute forms, the antiphlogistic treatment should be fully and heroically carried out at the onset, if we be fortunate to see the case early. Local leeching to the cervix and over the abdomen, followed by blisters, are here indicated; but even general bleeding should not be feared if there be much pain. Calomel and opium in half-grain doses should be given every three hours; and five minims of tincture of aconite, two drachms of liquor ammoniac acetatis, for every two hours, till temperature and fever abate. This treatment may prove effective. More often, however, the disease assumes a chronic form.

I have noticed that, in cases where the early symptoms have been of this serious import, once the chronic symptoms have occurred, the treatment recommended for the second variety has altogether cured the disease; possibly by ensuring a free exit of the contents, possibly because the intra-uterine pessary, if *in situ*, precluded the influence of atmospheric pressure or suction upwards; possibly because an intra-uterine pessary always favours a copious flow of catamenia, and thus relieves all local congestion. And what is more agreeable to the sufferer, the matrimonial alliance, which had hitherto proved an occasion of sorrow by the disease produced, has passed into one of joy through the birth of a child.

Dr. EDIS (London), whilst admitting that intra-uterine stems were permissible in certain cases of dysmenorrhœa, thought the young practitioner could not be too careful in employing them. The cases needed to be selected, and the patients submitted to preparatory treatment, before the insertion of a stem was thought of. Pelvic peritonitis and pelvic cellulitis not unfrequently resulted from the injudicious employment of stems; and, unless the patients were carefully watched during the time they were wearing them, there was always a certain amount of risk, not to say danger.

Mr. DEWAR (London) had found the pessaries suggested and exhibited by Dr. Routh very useful, but difficult of introduction.

Dr. BANTOCK (London) was of opinion that no one ought to undertake the introduction of an intra-uterine pessary without having, as it were, served an apprenticeship to gynecological manipulations.

Dr. WALLACE (Liverpool) said that, in the great majority of cases, a simple Hodge's pessary was sufficient to keep an intra-uterine stem in position, without special apparatus for fixing the stem. He had tried various means for reducing the tendency to cellulitis, and considered that, on the whole, the hot vaginal douche was the most satisfactory.

Dr. ROUTH, in reply, said he did not underrate either the difficulty of introduction, or the risk, without previous preparation of the patient, of setting up inflammatory mischief. In every case, he considered it his duty to submit the patient to suitable preliminary treatment before adjusting a pessary within the uterus.

DYSMENORRHOEA AS A CAUSE OF HYSTERO-EPILEPSY.

Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By JOHN DEWAR, L.R.C.P.Ed.,

Surgeon for Diseases of Women and Children to the Chelsea, Brompton, and Belgrave Dispensary.

WHAT is meant by hystero-epilepsy? As yet authors are not agreed. Charcot says it is "hysteria, solely and always present, taking on it the semblance of epilepsy—epilepsy being present only in the external manifestation, but not substantially existent;" in other words, epileptiform hysteria. But so little is at present known of the true nature of epilepsy, that one must be guided to a great extent by "external manifestation" in forming an opinion as to whether epilepsy be really present or not. For this reason, Charcot's definition appears to me unsatisfactory. Others regard hystero-epilepsy as simple epilepsy followed by hysteria; two separate affections, each distinct and independent. This occurrence is quite possible, but this should not be called hystero-epilepsy. Others regard it as a combination of hysteria and epilepsy, half hysteria and half epilepsy, a mixture of the two, a hybrid as it has been called. What I understand by hystero-epilepsy is epilepsy unmistakably present, but having an uterine or ovario-uterine origin.

The majority of the published cases of so-called hystero-epilepsy in France or America I think we would regard as severe cases of hysteria only. In Richer's typical cases, the epileptoid stage only lasts a few seconds, and is at once followed by wild hysterical convulsions. It is confusing and non-scientific to call hysteria, of however aggravated a character, by the name of hystero-epilepsy, when in reality there is no epilepsy in it. It would be best to drop the word epilepsy altogether and call the disease grand, or major hysteria, confining the term hystero-epilepsy to cases with marked epilepsy, combined or not with hysteria, but having an uterine or ovarian origin.

We know that epilepsy may arise from different causes—from the scarlet-fever poison, from dyspepsia, from local irritation, as worms, irritation from a tooth, a splinter of wood under the thumb-nail (Greenhow), and lastly the ovary. The uterus may also be added. It is in its connection with the last two, and because of its peculiar development, that epilepsy becomes hystero-epilepsy (from *hysteria*, the womb). And if the term were kept in this connection, I think it would simplify matters. Dr. Barnes and others have written on ovarian epilepsy, and it is in connection with the ovary that Charcot and Richer describe hystero-epilepsy; but the uterus is ignored altogether. Dr. Graily Hewitt, I believe, was the first to draw attention to flexions of the uterus as a common cause of convulsions, though he does not speak of them as epileptic in character. But I do not know of any one who regards dysmenorrhœa as a cause of epilepsy or hystero-epilepsy. The most recent works on epilepsy only casually hint at that disease first making its appearance in young girls with disturbed menstruation. Dr. Gowers, in his recent excellent work on epilepsy, refers in a single sentence to "retarded or absent menstruation" as an exciting cause, adding "the difficulty in determining the exact causal relationship between the two conditions is very great." Why the difficulty should be greater in this than in any other kind of peripheral irritation, I fail to see. Although Dr. Gowers does not recognise dysmenorrhœa or other abnormal condition of the uterus or its appendages as a cause of epilepsy, yet, when speaking of the statistics of the disease, he says that, "at infancy and puberty the excess of females (over males who suffer) is very great." Why it is so at infancy is not very clear, though, according to Dr. Gowers, heredity has something to do with it; but heredity affects both sexes more equally at puberty. This leaves menstruation and its troubles responsible for the great increase—one third more. After menstruation has ceased, males are more often afflicted with epilepsy than females.

The following I regard as a case of pure hystero-epilepsy. Mrs. P., aged 34, was of average height and rather spare build. There was no "nervous history" in herself or family. She had no convulsions when a child. She said that, shortly after marriage, she had three miscarriages, occurring within a few months of each other, and each time about three months gone. Since then, she had had more or less dysmenorrhœa, with scanty discharge. Her first fit commenced in July 1881, when she had three fits in one night. She had no more for ten days; then she had several. They then came on more and more frequently up to the time when I saw her in October, three months after her

first attack. I cannot describe the character of the earlier fits, whether they had more of the hysterical or of the epileptic in them; her friends say they were similar to what I saw, only less severe. Those which I saw were characteristic enough, some of them of great severity. They were preceded by an abdominal aura, immediately followed by loss of consciousness, tonic contraction of limbs, succeeded in a few seconds or minutes by clonic convulsions, especially of the right side. The fists were closed, the features contorted, with some foaming of the mouth, but no biting of the tongue. In some of the fits, there was slight opisthotonos. I have seen one fit succeed another every ten minutes, and before consciousness was restored; so that for an hour or more she was in the *status epilepticus*. A whiff of chloroform relieved the convulsions very quickly, but did not prevent their return. Strong doses of bromide of potassium and chloral kept them under. One day she must have had as many as thirty, and it was during the menstrual period that they occurred so frequently.

There was a history of a fall about twenty feet two years previously, for which she was admitted into St. George's Hospital; but no bad symptoms followed. When the fits began, she was told by a medical man that they were due to a tumour on the brain, resulting from the fall. But, judging from her symptoms, and from the fits becoming worse at her periods, that they were uterine, I examined her. There was no displacement of the uterus; the cervix was natural to the touch, only with a slight tapering; the os was small. On introducing the sound, the internal os offered more than usual obstruction. The depth of canal was normal.

On November 19th, the patient being put under chloroform, I introduced a double-bladed hysterotome up to, but not through, the internal os; and made a double incision. I then put in a small tangletent. Next day, the vaginal portion of the tent was moderately swollen; but traction on the string would not make it come away. Thinking the uterus was only grasping it tightly, I gave her some chloroform; but even then I had to use considerable force with polypus-forceps before I could get it away. The tent presented an hour-glass appearance, or like the cork from a wine-bottle, constricted in the middle by the internal os. The constricted portion was only double the diameter of an ordinary uterine sound, the ends being at least double that size. Forty-eight hours afterwards, a sharp attack of pelvi-peritonitis set in, which lasted a week; then she gradually recovered. She has had no more fits, the dysmenorrhœa having also quite disappeared; and she is now in good health. On April 5th, nearly five months after the operation, she had menorrhagia for three weeks, but no pain. Tincture of hamamelis checked it.

There are several points of interest in this case.

The fits had all the characters of epilepsy, except biting the tongue. This is no doubt an important symptom, but still not an invariable accompaniment of epilepsy. And though there was foaming of the mouth, it was not so marked as in most epilepsies. Again, the slight tendency to opisthotonos is a characteristic of hysteria, and not of epilepsy. But, on the other hand, the loss of consciousness, the tonic succeeded by the clonic spasms, the absence of the so-called co-ordinate movements (throwing about the hands and arms, the purposeful struggling, requiring half a dozen to hold the patient down), the sudden onset and short duration of the fits, the appearance of the patient, etc., are all characteristic of epilepsy. There was no violent or noisy about the patient, but a good deal of helplessness and exhaustion. Pressure on the left ovary, though painful, did not bring on a fit, nor cut one short. I did not take the temperature, as I have said to rise in epileptics, but not in hysteria. The day after the fits, she complained of exhaustion and headache. She had no delusions, no globus hystericus. On the whole, then, the epileptic symptoms predominated.

There is no doubt as to the origin of the convulsions. Epilepsy due to centric or cerebral disease is a much more serious disease than that which is brought about by peripheral irritation; though the latter, when of long standing, may end in confirmed epilepsy. The removal of the cause. In my patient, the uterus alone was at fault, the cervical stenosis producing dysmenorrhœa, and the dysmenorrhœa the fits. This is evident from the great exacerbation of the fits at menstruation; and the complete removal both of the fits and dysmenorrhœa by opening up the canal. The unyielding cartilaginous condition of the internal os is shown by the appearance of the tent. I think it would have been better to cut through the internal os in this case, though that is not usually recommended. It might have saved the inflammatory attack.

I have at present under treatment three other cases somewhat similar to one almost purely epileptic, of two years' standing, where the intelligence is beginning to suffer. In this case, there is intellect, with dysmenorrhœa. Since wearing a Thomas's pessary, has had only one fit. The other

Hystero-Epileptie, ou Grande Hysterie, pour le Dr.

is also a case of antelexion, with dysmenorrhœa, the fits being epileptiform and slight. The third patient had antelexion, with dysmenorrhœa, with nine months of exaggerated hysteria, eclampsia, etc., but no epilepsy. An intra-uterine stem cured this woman. But it would occupy too much time to enter into these now.

Dr. BANTOCK (London) confirmed Mr. Dewar's observations that in many of the cases, of which Mr. Dewar's case was an example, relief was often quickly afforded by incision of the cervix, which he considered preferable to dilatation by means of sponge-tents.

Dr. THOMAS DUTTON (Sidlesham) wished to know if the ordinary treatment for epilepsy had been tried and failed. If so, he considered that they were cases of hysteria due to irritation of the uterus.

Dr. GRIGG (London) thought it was a mistake to call these cases epilepsy; they are instances of hysterical convulsions due to reflex irritation, to which any lowering of the general health conduces.

Dr. NESFIELD (Manchester) thought there were undoubtedly cases on the borderland between the two disorders, not unfrequently seen in children, and even in boys.

Mr. DEWAR, in reply, held that his case deserved to be called hysterio-epilepsy, more than those of Charcot and others, where there were absolutely no symptoms of epilepsy. Bromide of potassium relieved, but did not cure, his case. There was an unmistakable element of epilepsy, and, as the cause of the disorder was uterine, he considered the name he had given it justifiable. Biting the tongue was not a *sine quâ non* in epilepsy, which might be peripheral as well as central.

A SUCCESSFUL CASE OF TRANSFUSION OF BLOOD AFTER SEVERE POST PARTUM HÆMORRHAGE.

Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By WILLIAM WALTER, M.A., M.D. Trin. Coll. Dubl., Surgeon (and late Obstetric Surgeon) to St. Mary's Hospital and the Manchester and Salford Lying-in Hospital.

THE case which I wish to bring before the notice of the Association is one of transfusion of defibrinated blood, for intense collapse following *post partum* hæmorrhage; and it presents a good example of the benefit that may follow this operation, even when apparently there seems but little probability of a successful issue.

On June 8th, 1881, Mr. Saberton of Ardwick was sent for to attend a patient (Mrs. S.), aged 22, in her second confinement. On reaching the house, he discovered that the child had been born and the placenta expelled at least ten minutes previously, and that the labour had not extended over more than a couple of hours. The condition of the patient was most critical; she lay in a pool of blood, her face deadly pale, and the pulse scarcely to be felt. Her abdomen was distended with an enlarged uterus, that reached almost to the ensiform cartilage. Not a moment was lost in firmly grasping the fundus uteri, and in resorting to the ordinary means of checking hæmorrhage, including the free administration of ergot; but no contraction ensued until the hand had been introduced into the interior of the uterus, and the clots which filled the uterus thoroughly removed; and these, when lifted into the chamber-utensil containing the placenta, completely filled that vessel. The uterine contraction was soon followed by dilatation, with a return of the hæmorrhage; and for an hour contractions and dilatations followed one another at short intervals, with repeated recurrence of hæmorrhage. During this time, pressure over the fundus was maintained, and occasionally the hand was reinserted into the cavity of the uterus, and the organ manipulated bimanually.

Mr. Saberton was now assisted by his partner, Mr. Gwatkin; and in the course of another half hour the hæmorrhage ceased, and the uterus remained firmly contracted. Notwithstanding this, the patient showed no signs of coming out of her collapsed condition; and both gentlemen saw that, if it were possible to save her life, it could only be by transfusion of blood. For this purpose I was sent for, and reached the house two hours after the labour, and half an hour after the arrest of the hæmorrhage.

I found the patient lying still and unconscious; her face and lips were blanched; her eyes had assumed that dull and lifeless appearance which only death, or its near approach, can produce. Respiration was scarcely perceptible, and the pulse could only at intervals be felt; her extremities were cold and clammy, but the uterus was firmly contracted. It is needless to say I had no hesitation in concurring with the opinion already expressed as to the necessity for transfusion, and placed in readiness Dr. Macdonnell's transfusion-apparatus. The husband of the patient cheerfully consented to supply the necessary blood, but her mother begged that she might be the donor; and to this request

we acceded, as the condition of her health was extremely good. The mother's age was forty-two; and it is worthy of record that her next menstrual period, which should have occurred two days later, did not on that occasion appear.

Whilst Mr. Gwatkin and I were performing venesection on the mother in an adjoining room, and before we had time to collect more than four ounces of blood, Mr. Saberton acquainted us that the patient was apparently lifeless. Accordingly, Mr. Gwatkin took charge of the defibrination, and I hurried back to the patient's bed-room to prepare her arm for the reception of the blood. The difficulty one had to contend with in finding a vein was very great, but at last one came into view; and, the skin over it being divided by transfixion at right angles to the course of the vessel, a probe was readily passed underneath the vein, so as to isolate it from the surrounding tissues. A small opening was now made in its walls, and the silver nozzle of the tube was introduced a short distance into its interior. The blood was now allowed to flow along the tube until it appeared at the opening in the side of the nozzle, whereby one knew that no air existed in the tube. The nozzle was then introduced further into the vein until the opening in its side was completely hidden from view; and the patient's arm, together with the apparatus, were elevated, in the hope that the blood would then be forced along by gravitation; but such was not the case, and it was necessary to aid in its propulsion by repeatedly compressing the dilated portion of the tube.

In from ten to twelve minutes, all the blood (nearly four ounces) was injected; and the patient's arm being bound up, we anxiously watched the results of the transfusion. Almost immediately, respiration became distinctly visible and audible, without the occurrence of any dyspnoea; the pulse at the same time returned to the wrist; and, in the course of a quarter of an hour, the insensibility gave way to consciousness, and she was able to recognise her friends. Her convalescence was steady and uncomplicated; and, within a month, she was able to walk out of doors.

In conclusion, I may remark how generally it happens that, in the cases of *post partum* hæmorrhage which would be most benefited by transfusion of blood, a transfusion-apparatus is not procurable until too late to be of service to the patient; and I cannot too strongly recommend a glass pipette with tube, such as the one I now produce (which is Macdonnell's apparatus made of portable form), should be constantly carried in the obstetric bag for sudden emergencies.

THE NON-REGISTRATION OF STILL-BIRTHS.—A very instructive case, in which the Solicitor to the Medical Defence Association prosecuted to conviction a person who had procured the burial of an illegitimate child by means of a forged certificate, in which the child was untruly stated to have been still-born, shows what a loop-hole is left to evil disposed persons for making away with their offspring, by the law, as it now stands, not requiring the registration of still-births, but merely the presentation of some sort of certificate by the undertaker to the cemetery authorities. In this case, the father of the child was summoned before Mr. Barstow at Clerkenwell, and charged with having wilfully forged a false certificate under the Births and Deaths Registration Act; also with having made a false declaration, and having unlawfully procured the burial of the body of the deceased child by means of such false declaration. To the first two charges the prisoner pleaded guilty, and the third was ultimately withdrawn. Mr. Pridham, for the prosecution, stated that the deceased was the illegitimate child of the defendant, and had been born on July 1st, a medical man being in attendance at the confinement. The child having died, the defendant, on July 3rd, handed to the undertaker what purported to be a certificate signed by a medical man (not the medical attendant) in the following terms:—"I certify that I have attended Mrs. Smith, and that the child was still-born. Given under my hand, Dr. Clift." The superintendent of the cemetery to which the body was taken, noticing the informal nature of the certificate, forwarded it to the Registrar-General, and as a result the body was exhumed and an inquest held, when it appeared that Dr. Clift had not attended the mother, and that the certificate was, as the defendant admitted, a forgery. Mr. Barstow inflicted a penalty of £5, or one month's imprisonment, on each of the two charges. The fines were not paid, and the defendant was therefore removed in custody. The forgery was so clumsy that it is hard to see how anyone could have been deceived by it; but, had the forger been less ambitious, and merely aimed at producing a fictitious certificate by an ignorant midwife, he would probably have succeeded in getting rid of the body of the child without any further trouble. It is not pleasant to think what facilities this state of things affords for wrong-doing to unprincipled persons, and the present case strengthens the argument in favour of the registration of still-births, which might very well be made compulsory concurrently with the better education and registration of midwives.

REMARKS

ON THE

CONNECTION BETWEEN DISEASE OF THE
EAR AND GENERAL MEDICINE.*Being an Introduction to a Discussion in the Section of Otology at the Annual Meeting of the British Medical Association in Worcester, August 1882.*

By GEORGE P. FIELD, M.R.C.S.,

Aural Surgeon and Lecturer on Aural Surgery at St. Mary's Hospital.

THE subject that I have the honour of bringing before you to-day, is the relation of diseases of the ear to the affections of the human frame in general. There was a time when Pandora's box sufficed to hold all the ills that could afflict mankind; but as the world has grown older those ills have not been backward in development; and the numerous varieties, subspecies, and species of disease that have arisen, could not now be contained in anything of small dimensions, still less within the compass of what I shall here have time to offer you.

So, at the outset, I have to confess that the title of my paper is inclusive of far more than I can pretend to accomplish; but I trust I shall be able to introduce to your notice, and to promote discussion upon, certain of the most important considerations in connection with our subject. Toynbee, my predecessor at St. Mary's, my late master Hinton, and a host of other workers at home and abroad, have striven and have done much to extend our knowledge of aural therapeutics; and still we see evidences of the necessity for further research. Otologists may, I think, lay claim to have done their part of late years in the relief of human suffering; for continued experience in the observation of the various phases of aural disease has afforded them the opportunity of gaining special aptitude in interpreting the same, and in comprehending their relation to other pathological conditions. I am convinced that a man may, with advantage, devote his life-time to the study and treatment of affections of the ear exclusively, if he fit himself for his undertaking by a thorough grounding in the science as well as in the art of his profession.

The truly practical otologist brings to bear upon his study, an acquaintance with the pathology of the body as a whole; and it is because he clearly perceives that there can be no special aural pathology, that often he is able to discern in some disorder of the ear, which to many might appear to be of little moment, a symptom of grave disease in other organs.

I cannot, therefore, but regard the subjects appointed for consideration, at this our jubilee meeting, as singularly well chosen. I purpose to begin my paper with an enumeration of those maladies, mostly of every day occurrence, which are directly to be attributed to aural disease. The time at my disposal will permit only a bare outline of most of the facts I would commend to your notice; but the important subject of the relation of ear-disease to certain lesions of the brain and lungs I hope to be able to illustrate, by the histories of a few cases that have recently been under my care.

In classifying the diseases of the ear in relation to general medicine, I shall begin with those affecting the external auditory meatus. A plug of cerumen may occasion, not only vomiting and coughing, from irritation of the auricular branch of the pneumogastric, but ulceration and perforation of the membrana tympani, and intense pain and other symptoms. I have known several cases of persistent cough, for the relief of which residence in a warm climate was recommended, which at once ceased on the removal of impacted wax from the ears. Dr. Fergus lately informed me that three cases of persistent and alarming cough, quite unaffected by ordinary remedies, which he was called upon to treat in the Marlborough School, were, he found, entirely due to this cause.

One of my patients, after the accumulation of wax in his ears for a certain time, suffers acute pain in the head, which is immediately relieved by the clearing of the meatus. A few years since, a severe attack of pain compelled him to seek the assistance of the doctor of the Italian town in which he was staying, who charged him a fee of twenty guineas for the successful removal from his ear, under chloroform, of what that gentleman was pleased to call "a black tumour."

Doubtless we have all had experience, not so much of the evils arising from the presence of foreign bodies in the auditory canal, as of those caused by the ill-considered use of instruments for their removal. It would seem, and I think many of my hearers must be able to corroborate my statement, that some practitioners, without resorting to the use of the speculum to ascertain that there really is a foreign body in

the ear, will accept the testimony of a child's friends that something has been lodged therein, and will doggedly set to work for hours to discover and extract it, oftentimes causing considerable damage to the patient.

We see, then, that both troublesome cough and intense pain in the head, not to mention other troubles, may be entirely due to abnormal conditions of the meatus. But chronic inflammation and erysipelas may each occasion narrowing of the external meatus, the latter sometimes extending thence with great rapidity, and endangering life.

Dr. Cassells, in an admirable paper, has pointed out how atmospheric contamination by sewer-gas may produce ear-disease; and we all, I am sure, have met with many instances of aural furunculus, and acute inflammation of the middle ear, which, in accordance with the germ-theory of disease, are to be traced either to effluvia from defective drains, or to more direct contagion. It is an ascertained fact that working amongst decomposing organic substances, as in rag-factories, may give rise to aural furunculus, which, it has been shown (by Lowenberg), may occur in a mild epidemic form. I might relate details of several cases in point which have occurred in my own practice. Thus, two gentlemen, living a few doors from each other, in houses improperly drained, were almost simultaneously attacked with ear-disease; and, in two separate families which I attended for five cases of otorrhoea, the cause of the evil was simply sewer-gas.

Again, in my own house, this year, I discovered defective drainage to be the origin of ear-mischief in two children, and severe septic pneumonia in a third child. If, indeed, sewer-gas affects the laryngeal mucous membrane as it apparently affects the tonsil, the extension of septic disease along the Eustachian tube to the tympanic cavity is a matter readily comprehensible. Allow me further to illustrate the subject in hand, by the recountal of a case which I saw in consultation with Mr. Cripps Lawrence.

Miss H. B., aged 30, on May 6th, 1882, was seized with earache, which, as it increased, became accompanied by tenderness on pressure in front of the tragus and over the right mastoid process. Three leeches were applied for a few minutes, and then removed at the wish of a relative. Fomentations relieved the pain, and a discharge took place from the external meatus. Still there was a good deal of pain; and the next day, when I first saw the patient, I advocated the use of small conical pledgets of absorbent cotton-wool, moistened with water and covered with finely powdered boracic acid. When the temperature had reached the normal, she left town for the Isle of Wight, and quickly regained her health. It proved, upon investigation (at my suggestion) that the sanitary arrangements of the house in which the patient had been living were eminently defective. In the same house, but a few days previously, there had been two deaths, the patient's sister having succumbed to septic pneumonia of only four days' duration, and a servant, almost simultaneously, to acute hepatitis, eventuating in peritonitis and congestion of patches of lung-tissue.

I think that I have now said sufficient respecting defective drainage to show that not only pneumonia and typhoid and other fevers, but also disease of the ear (productive of serious consequences), may be due to it.

Hæmorrhage from the ears is a symptom which may point to various diseases, as purpura, malignant small-pox, yellow fever, and suppression of menstruation.

Pus, pent up by osseous tumours, or by polypii in the meatus, is a common cause of severe headache, and may bring about very grave conditions. Of the truth of this fact, we have an example in the following case. A man, sent to me from among his out-patients by my late colleague Dr. Farquharson, was suffering from violent headache, which, before he came to the hospital, had been treated as neuralgia. The patient had spent all his savings in the purchase of vast quantities of quinine and other drugs, but without relief from his pain, which, however, speedily ceased when, by removing a large polypus, I had evacuated a considerable amount of pent up pus.

In ordinary cases of otorrhoea, where the pus is not confined by any external obstruction, headache may yet be a troublesome complication; and, in not a few instances, I believe it, in common with loss of appetite, fœtor of breath, digestive disturbances, and general malaise, to be due to the fact that the pus, finding its way to the pharynx, is perpetually being swallowed.

Otitis interna, I am persuaded, is yearly the primary cause of many deaths, especially among children, which a *post mortem* examination reveals to have been too hastily certified as due simply to suppurative meningitis.

Acute inflammation of the drumhead and tympanum, together or separately, may produce serious complications; for instance, facial paralysis.

An illustrative case was one to which I was called some weeks since.

The patient, a young lady in the country, when at a cricket match, had caught cold in her left ear, which became very painful, and discharged pus for some days. One morning, when she seemed to be on the road to recovery, her medical attendant discovered that she had an outward squint of the left eye, with double vision and slight facial paralysis. I was then asked to see her. On examination, I found the membrana tympani very red and tumid; and, although there was now no complaint of pain, the patient's pulse was quick, and her temperature a little above the normal. An incision which I made in the membrane gave exit to a considerable quantity of blood. Further relief was afforded by leeching the following day, and the patient soon afterwards recovered. In this case, the functions of the facial nerve had no doubt been impaired, either by slight effusion of blood into its arachnoid sheath, or by extension of inflammation to the aqueduct of Fallopius.

Acute inflammation of the tympanum may lead to numerous complications, of which the most troublesome to the aurist is the chronic discharge which is likely to follow acute catarrh. Discharge from the ear is frequently neglected; and, as I have already pointed out, may lead to disturbance of the general health, owing to the swallowing of pus. I have seen many a miserable-looking, sickly, dyspeptic, and stunted child recover health and strength and spirits, on the employment of local, in addition to constitutional, treatment for its otorrhoea. It is true that some patients are cured solely by attention to cleanliness, and by resort to tonics and fresh air; but the majority require the adoption of some further means of combating their otorrhoea, which, unless arrested, may lead to serious consequences: for do we not see cases of polypus, caries of the temporal bone, meningitis, gangrene of the lung, and other ills—a direct result of such neglect?

It is impossible, in the time at my command, for me to deal at length with any one form of ear-disease; but I may briefly allude to the subject of mastoid abscess, in the treatment of which there is still much to be desired. The severe cases of abscess of the brain, of which one hears, would, I am quite sure, be far less numerous, were mastoid disease treated by early operative measures. In two cases out of fifty of perforation of the mastoid bone, lately put on record by Schwaltze (*Boston Medical Journal*, June 8th, 1882), there was extensive necrosis, but no external manifestation of its existence; although, in one of the patients, the outer table of the skull had been eaten through. That nearly all these cases recovered, can only have been due to the promptness with which they were subjected to operative treatment. At the London Fever Hospital, my colleague (Mr. A. J. Pepper) has lately communicated to me the following very interesting case of mastoid abscess.

J. A., aged 22, was admitted at the London Fever Hospital, April 24th, 1882, for measles. On May 3rd, she had pain in the right ear, for which she was leeches three times (3rd, 4th, and 18th). On the 4th, there was a purulent discharge, and swelling and tenderness over the mastoid. On the 26th, the swelling had much increased; she had severe and constant headache, and a dazed expression, but no facial paralysis. Having trephined over the mastoid, and let out a few drops of pus, Mr. Pepper proceeded to carefully break open the cells with a director—thus setting free successive drops, as if from a honeycomb. Outside the mastoid, there was no pus. After the insertion of a drainage-tube, the wound was dressed with carbolic lint; subsequently, it was kept open by means of a little ball of wire, placed within the mastoid and secured in position by a loop over the ear. The immediate effect of the operation was to remove the earache; and, by July 27th, the discharge had ceased, the wound had healed, and the patient went out well, the hearing almost unimpaired.

The next case which I wish to read illustrates several important points.

J. L., domestic servant, was admitted to St. Mary's Hospital, June 22nd, 1882. From the age of eleven, she had suffered from discharge from the ears, latterly with febrile symptoms. There was oedema of the left neck, and the course of the left internal jugular vein was marked by hardness and tenderness. There was a small mucous polypus in the left meatus, and both membranes were perforated. The temperature varied from 100° to 103° Fahr., and the entry of air over the left back was deficient. On the 23rd, I removed the polypus, and applied leeches. The temperature varied; she became very weak, and died on the 29th. At the *post mortem* examination on July 1st, a decolorised adherent clot was found in the left lateral sinus, extending thence to the superior vena cava. There was dead bone over an area of one-sixth of an inch in diameter in the wall of the groove, and the tympanum contained caseous debris and a small sequestrum, composed chiefly of its roof. Necrosis had taken place around the left external semicircular canal and the cochlea, and the right tympanum yielded muco-pus. The right pleural cavity contained offensive pus, which had caused collapse of the lung; and there was commencing pleurisy at the base of the left lung, in the lower lobe of which were two or three gangrenous spots.

The probable sequence of events in this case was: (1) chronic disease of the left tympanum; (2) inflammation of the right ear (possibly sympathetic); (3) inflammation extending from the necrosed bone to the left lateral sinus, followed by thrombosis in it and the left internal jugular, with hectic fever from absorption of septic matter by the blood; (4) breaking down of the clot, causing pulmonary embolism, gangrene of the lung, and septic empyema. No symptoms of brain-disease were observed during life; and it is interesting that, as late as thirty-six hours before death, no sign of the empyema was detectable. It appears likely that, had the temporal sequestrum been detected and removed before the onset of phlebitis, death might have been averted.

Here we have a case of death from disease of the lung, ensuing on what, I dare say, at first appeared to be a harmless discharge from the ear. In the next two cases, we find the same result (death) from a like cause, but other organs being affected. The first is an instance of purulent cerebro-spinal meningitis after otorrhoea.

A. L., aged 19, was admitted on April 15th, 1881. He was a well nourished man of good family history, and had enjoyed excellent health till three years ago, when he suffered from otorrhoea for some months; it gave him no trouble till January 1881, when he suffered for five weeks from enteric fever. On his recovery, his hearing was much worse, and he had slight discharge also in the left ear. This ceased about three weeks prior to admission, when he began to have severe headache and photophobia. On admission, the pain was chiefly along the spine. His face was anxious; his tongue dry and brown; his abdomen tender. He lay with the head retracted, the legs semiflexed, and attempts to straighten them caused great pain in the back. The optic discs were swollen, deep pink in colour; the arteries were small; no exudation. Pulse 64. The urine was of specific gravity 1022. Morphia injections were required frequently for relief of the pain. On April 22nd, he had a rigor at 9 A.M., very severe, lasting about an hour, followed by repeated attacks of pain in the spine and legs. At 4.40 he was delirious, and crying out; pulse 96, temperature 104.2. On the 23rd, pulse 126. There was slight internal strabismus of the right eye. On the 24th, he was delirious, shivering occasionally, and twitching his hands very much; and there was ptosis on the right side, and the squint was more marked. There was no facial paralysis. Sordes appeared on the lips, and he died comatose on April 27th.

At the *post mortem* examination, the brain weighed fifty-one ounces. The base was covered with a thick layer of lymph, which extended along the Sylvian fissures, and surrounded the middle meningeal arteries. Here and there on the hemispheres were localised patches of suppuration, entirely meningeal. The vertebral column was healthy. The spinal cord was bathed in pus. The cervical enlargement and the lumbar were of normal consistence; but in the dorsal region it was appreciably softened and much congested, though no hæmorrhages were present. The left tympanum contained inspissated pus, and the membrane was perforated; but there was no necrosis of the bones, and no apparent track of extension of inflammation.

In this case, the ear-disease, which was originally of slight intensity, appears to have been lighted up by the attack of enteric fever. Meningitis is a very rare complication of enteric fever, and in this case there was a distinct interval of apparent good health between the illness and the onset of the cerebro-spinal symptoms. During this period, the discharge from the ear continued, and, when it ceased, the patient began to suffer from headache and pain in the back. Though no actual continuity of disease was made out at the necropsy, there can be little doubt that the otitis was the immediate cause of the meningitis.

The insidiousness with which cerebellar abscess may be produced by ear-disease is well shown in the case of S. T., a hospital out-patient, who came to me on March 23rd, 1822, complaining of the return of an otorrhoea, which had troubled him some years previously. After little more than a week's treatment, he suddenly died, having presented no symptoms besides the discharge, except slight pain behind the left ear. The *post mortem* examination manifested the presence of yellowish puro-lymph beneath the arachnoid, most abundant over the left temporo-sphenoidal lobe, and an abscess-cavity about the size of a walnut, filled with pus, between the left lateral lobe of the cerebellum and the dura mater of the temporal bone. The temporal bone was much necrosed; and a vein in its roof, filled with blackish soft clot, was observed to pass directly into the diseased cerebellum.

Just a few words on a totally different subject before I close my address. I wish to direct your attention to the ravages which acquired syphilis may commit upon the ear, as shown in a case which I have latterly had the opportunity of observing. I need not remind you that impairment or loss of hearing is much more commonly the result of the congenital than of the acquired disease. J. McC. was an out-patient under my care on June 2nd, but was admitted as an in-

patient on June 5th, 1882. He gave a history of syphilis six years previously, followed in two years by violent pain in the head during six months, and, about Christmas 1881, by temporary deafness in the left ear. Seven weeks before admission, he began to suffer from deafness, which, in a fortnight, became absolute, and was accompanied by fits described as being of an epileptiform character. There was right facial paralysis, with numbness in the right fourth and fifth fingers, to which pain extended from the right mastoid region; the grasp of the right hand was also impaired. The sense of smell was absent, though pungent odours were perceived, and excited sneezing. The patient complained of a sensation as if his legs were giving way under him. He was given iodide of potassium, gradually increased up to three grains four times a day. The facial paralysis subsided under this treatment, but the deafness still remains.

We have here a history and train of symptoms indicative of syphilitic disease (pachymeningitis) becoming apparently localised in the posterior fossa of the skull, and affecting the two auditory nerves. The paresis of the right hand points to damage in the cortical arm-centre; and, though extension of the disease has been checked by treatment, the results of injury to nerve-cells and fibres still persist.

A question on which I should like the opinion of the Section, is the degree of efficacy of large doses of iodide of potassium in syphilitic diseases of the internal ear. I cannot at present say much in their favour; but one case of some interest under my care, now taking a drachm thrice daily, was at one time absolutely deaf, and is at length beginning to hear slightly with one ear.

There are many other subjects which I might with propriety have introduced into this paper; for example, malignant disease, the relation of othematoma to insanity, deaf-mutism, deafness with chronic interstitial keratitis from syphilis, the various other affections of the ear connected with syphilis, gout, albuminuria, diabetes, cerebral tumours, and bilious attacks, and a host of nervous disorders, such as deafness from pregnancy, from concussion—as in artillerymen and boiler-makers—and from sudden nervous shocks, as on the reception of distressing news; also auditory vertigo and tinnitus aurium. But some of them, no doubt, will be discussed during the carrying out of the second half of our programme.*

THE CONNECTION BETWEEN DISEASES OF THE EAR AND GENERAL MEDICINE.

Read in the Section of Otology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By LENNON BROWNE, F.R.C.S.Ed.,

Senior Surgeon to the Central Throat and Ear Hospital.

ALTHOUGH I was one of those who signed the memorial for a Section of Otology, I am not at all sure that we, as specialists, are acting for the best by separating ourselves from the general body of our professional brethren, and that each class may not lose by our isolation. However that may be, there can be no doubt that the authorities administering the affairs of this Section have done very wisely in suggesting as the first subject for consideration, after our formation, one which at once implies that the otologist of to-day desires to take by no means a narrow view of his subject, but recognises that it is but a branch of the one great tree of general medicine and surgery; and if our attention should tend, as I think it will, to show that a large number of ear-diseases are, even if unconnected with constitutional diseases, less amenable to general than to local measures, we shall at any rate have demonstrated that we have carefully considered the connection between them as well as in its more special aspect. Moreover, such a connection is undoubtedly required; for not even in the *Principles of Medicine* of Wale or Toulme, much less in modern textbooks, is the influence of the general health on ear-disease more than alluded to. Harvey alone, a practitioner of considerable repute with his patients, wrote and insisted on the importance of this matter both from a diagnostic and a therapeutic point of view.

In examining into the question now under discussion, it may be well to first draw attention to a few points which are always taken into consideration by the general practitioner. They are sex, age, occupation, temperament, and family predisposition.

As to sex, I have a list of patients applying at the hospital with which I am connected, to the extent of some thousands, and also through my private note-books, containing particulars of some few hundreds; and I find that ear-disease of all kinds occurs in excess in the female sex, and in the proportion of about one-eighth of the total.

* The discussion on this paper will be found on the next page.

may be capable of correction, as are all statistics, and of many explanations; but I give the fact, *quantum valeat*, and it appears to be not without interest. As to age, I do not think much information can here be gained. A large proportion of cases of ear-disease are of a suppurative character, and they occur, for the most part, in childhood, in connection, first, with a strumous diathesis, and then as a sequel of various exanthemata—mumps, whooping-cough, or other diseases of childhood. A large number of cases of Eustachian obstruction, or I might rather say of rarification of the air in the tympanic cavity, occur in childhood; but puberty also brings to both sexes an access of many cases of ear-disease. Adolescence, with thoughtless exposure to injurious atmospheric conditions, and other hygienic faults, has also its influence, and in the case of women, amenorrhoea, dysmenorrhoea, menorrhagia, child-bearing, and over-lactation, on the etiology of ear-disease; and so as life goes on, overwork or overplay causing anæmia; over-feeding and little exercise causing congestion; the change of life in women, and the decline of life in both, all act as factors in producing deafness and other symptoms of auditory derangement. Nor do I think we can say that occupation largely influences ear-disease. It occurs in those who stay at home, and in those who travel; to the student and to the athlete, to the careful as to the reckless, to the married and unmarried.

In temperament, without having taken notes on this point, I am inclined to the belief that ear-disease, especially in its most common form of progressive non-suppurative catarrh, is more common in those of fair complexion and lymphatic temperament, than in those known as of the bilio-sanguineous disposition; but I make this statement merely as suggestive, not as dogmatic. Family predisposition has been long recognised as an important factor in the production of ear-disease, but its knowledge has been, in my opinion, greatly misused; for instead of saying, as we commonly hear taught, "It is of no use trying to do anything in this case, for there is deafness in the family", we should, on the other hand, urge that it is just on this account that early treatment should be the more vigorously adopted, with a view of achieving what is but too often, alas! the limit of our skill—an arrest of onward progress of disease towards complete deafness, even where we cannot actually regain a measure of lost hearing power. All present will have had cases with very well defined evidence of family predisposition, but I would ask to be allowed to quote one from my own practice; first, because it is of some historic interest, as illustrating how infirmities are quite as often inherited as excellences; and, secondly, to show that not every case of deafness occurring in a deaf family is necessarily an incurable case, or necessarily, indeed, of that nature which has been generally associated with hereditary deafness.

I was consulted, early in 1880, by Mrs. S. S., aged 28, on account of deafness, which had supervened on an attack of measles and of scarlet fever, the first nine years, the second eight years, previously. The deafness was noticed only after the second illness. There had never been any discharge from the ears. She had been married three years and a half, and had two children, with a result of an increase of deafness after each confinement. The patient was of fair complexion, and pale, of feeble circulation, and subject to rheumatism, with constipation, heartburn, and flatulence. It would be out of place to describe all the local symptoms and appearances; but it may be stated that the tuning-fork was heard best on the vertex, that the vibrations could be perceived until cessation on the right side, and with only slightly diminished normal duration on the left, nor was there other evidence of nerve-impairment. The maternal grandfather and grandmother of this lady were first cousins, and respectively nephew and niece of the first President of the Royal Academy. They had four children: one son was deaf; and four daughters, three of whom, including the mother of my patient, were also deaf. I may here say that I saw and examined this lady—the mother—and that there was decided dulness of auditory nerve-sensibility, but no symptoms of what we now recognise as auditory nerve-deafness. My patient was one of ten, three of whom died in infancy. Two brothers and two sisters—that is, five in all of the surviving seven—were deaf; and in each the first appearance of deafness had occurred after scarlatina, which had attacked them at various ages, between the age of five and twenty years. In no case had there been suppuration, or, at least, perforation. This lady was improved somewhat by treatment of her general health, and by persevering inflation, but retrograded at her next confinement, and lapsed into apathy. One sister—of dark complexion, by-the-by—had evident nerve-impairment, and was extremely deaf. In another, fair, stout, and lymphatic, the deafness was due to thickening of membrane, made worse by frequent attacks of otitis media. She improved greatly under treatment. Both brothers had extremely chronic middle ear deafness, and both improved, one very markedly, under treatment. In all, the moral effect of the family failing had a very depressing

influence. In the words of my first patient, it was "the only legacy they had received from Sir Joshua Reynolds." This account will not be without interest if, as it did to me, it teaches us that heredity, although it may predispose to disease, need not necessarily induce disease; and I should fail if I did not draw attention to the possible additional factor in this case, of intermarriage of first cousins, and to state that the two brothers unaffected in this family had not had the scarlet fever when the others were so attacked. I am, for my own part, inclined to think that analysis of other family histories, apparently equally adverse, would be attended with the same deductions as I have here suggested. There are, however, many undoubted cases indicating what may be termed a strictly deaf inheritance.

Having thus touched on a few general points of inquiry, I will ask you to examine into the influence of certain specific diseases upon aural affections; but I would entreat you to look at this question from a general, and not a special, point of view.

First, as to syphilis; it is undoubted that syphilis does play an important factor in the production of aural disease; but does it do so in as large a proportion as in diseases of the eye or throat for example? Some of the members attending this Section are connected with hospitals treating under one roof affections of the eye, ear, and throat. My own knowledge of the former was somewhat extensive in years gone by, when I was working with the late Mr. Zachariah Lawrence, and during a period of many years, in which I assisted Mr. White Cooper at all his operations; while for a lengthened period I have had equal opportunities of witnessing diseases of both the throat and the ear. My experience leads me to give an opinion that, while an ophthalmia, an iritis, or a keratitis of syphilitic origin is more common than an otorrhoea, a myringitis, or an otitis of the same nature, extension of pharyngeal or faucial syphilis of a secondary character along the Eustachian tube is decidedly uncommon. Condylomata of the ear are even more rare; and, as regards tertiary disease, although I willingly concede that a syphilitic infection may often be at the origin of, or render much more intense, a chronic deafness, I believe pure tertiary disease affecting the labyrinth to be less rare in proportion than other tertiary syphilitic nerve-affections. On this question, however, I am open to information and correction from general physicians, and those who are specially engaged in the study of nervous diseases. It may be worth while in this connection to point out that in general locomotor ataxy, whether due to syphilis or not, the ear is seldom affected. The same remark applies to general paralysis, to which I gave special attention in its relation to the throat and ear at the request of Dr. Crichton Browne, when he was superintendent of the West Riding Asylum.

Next, as to cancer of the ear; I have seen but two cases, and I know that both of them have been seen by nearly every other aurist in London. The ear is confessedly more free from this scourge, both in its primary and its secondary forms, than any other part.

Tubercle—I mean in its acute form, as in phthisis—has never come under my notice as affecting the ear; and I am not prepared to admit that an otorrhoea occurring in a tuberculous patient necessarily partakes of the specific character. I can quite understand that such a discharge would be very intractable. I have seen five cases of tuberculous ulceration of the pharynx and mouth; in none has it extended along the Eustachian tube. Pain in the ear is, of course, a common symptom of tubercular disease, and of cancer when affecting the throat, but is only here mentioned lest I should be accused of ignoring the connection.

Tubercle, in the form of struma, affecting the middle ear, and leading either to thickening of mucous or of glandular tissue and obstruction of the Eustachian tube or to suppuration of the tympanic cavity and perforation of the membrane, is common enough; and I shall not expect to be contradicted if I make the not original observation, that a scrofulous or strumous diathesis is the chief fact in the ear-disease of children, and that such a constitutional state is very frequently a predisponent in many cases of which an exanthem is the exciting cause.

Diphtheria again, if we may call that a specific disease, rarely extends along the Eustachian tube, and gives rise to otorrhoea. One such case has come under my notice, however, only in the last week. Still more rarely is there auditory impairment due to *nervo-muscular* disease as a sequel, the analogues in eye and throat being so common, that they are expected as the regular outcome of a severe attack. Nor does erysipelas, typhus, or small-pox affect the ear—I mean its middle and internal portions—so commonly as it does the throat and larynx. Finally, cardiac or renal affections are seldom complicated with ear-disease.

One word as to a special auditory disease known as Meniere's. I think a certain proportion of the cases are undoubtedly syphilitic; others are due to either epileptic or apoplectic causes, but I venture to prophesy that with increased observation, idiopathic auditory vertigo will become more and more rare.

I find that my cases of ear-disease may be classified as follows:—Suppurative, with or without polypi, 37 per cent.; non-suppurative, including hypertrophic forms, mucous accumulations, and so called Eustachian obstruction, 37 per cent.; cerumen, 20 per cent. (cerumen, however, let me mention, I look on in almost all cases only as a symptom, although its simple removal often effects so marked an improvement that it is regarded by many as a cause); eczema, 4 per cent.; furuncles, 1 per cent.; auditory nerve deafness, 1 per cent. Now we find that, after we have eliminated the one case per cent. of nerve deafness, and a proportion of the suppurative cases as sequelae of exanthemata, the remainder are all due to disorder of secretion. What is the constitutional state that gives rise to this disorder? Is it paralysis of a special cervical ganglion, or is it a general want of vaso-motor control? If the cause be vaso-motor, and I were asked to localise the seat of the inhibition, I would place it, if not at the brain, at the solar plexus, rather than at the inferior cervical, which is, as I suggest, but a junction or branch station, not the point of primary departure or one of first importance. That a large number of deaf patients are the subjects of imperfect vaso-motor control, must be conceded. Some are anæmic, some are hyperæmic, some nervously excitable, some lethargic; but, to go further, is not the condition of the general state of many of these cases similar to that of the gouty-rheumatic subject? It is very difficult to define tersely either gout or rheumatism. I would prefer to say "and" than "or", so allied are the two states in my mind from a practical point of view. But perhaps we shall agree that the prominent characteristic of both is an arrest of healthy secretion and its perversion, so as to effect deposit in various healthy tissues, this condition being alike influenced by climate and weather, by overwork, and by mental causes—sometimes one, sometimes the other, often by all. Is not this the general state of our chronic deaf patient, and does not the anatomical structure of the middle ear, with its mucous-lined cavity of narrow space, its minute ossicles with many joints, acted on by small but important muscles, and in relation to so delicate a part as the inner ear, suggest at once why the ear should be so often affected by gouty-rheumatic causes, and with affections of a gouty-rheumatic character? One further suggestion. How far does this description admit of being applied to the condition known as catarrhal? Whatever your answer to these inquiries, do not they suggest that our attention should be always directed most carefully to the *prime vie*, diet, exercise, and hygiene? Unhappily, when we have done all this, are we not bound to confess that general treatment, however rational, will do nothing unless active local measures are employed; and, seeing how hopeless are the former, and how beneficial are the latter, may we not claim exoneration if, in these busy days of many topical contrivances, requiring much time, education, and trouble to employ, we sometimes give more attention to the ear and less to the general health than some of our professional brethren might think to be due? And may we not, on the same ground, urge them to study and pursue appropriate local means, in the certain hope that they will thereby gain a larger measure of success than by internal drugging?

Dr. CRESSWELL BABER (Brighton) had not found any permanent benefit from iodide of potassium in cases of congenital syphilitic nerve-deafness, although sometimes the hearing improved somewhat temporarily. He had found that vapours, applied by Valsalva's method, appeared to be harmful in two cases of syphilitic nerve-deafness. He alluded to rheumatism as a cause of non-purulent disease of the middle ear, and to a rheumatic family history he had observed in some of these cases. In addition to the hereditary character of chronic non-suppurative disease of the middle ear, which was well known, he thought he had seen evidence of heredity in chronic purulent disease of the tympanum. He also referred to extensive destruction of the membrana tympani occurring in the course of phthisis.

Dr. URBAN PRITCHARD (London) said that it was, to him, very astounding that ear-disease should be so rarely caused by syphilitic pharyngitis. As regards what was called hereditary deafness, if inherited syphilis of the internal ear and sclerosis of the middle ear were excepted, it would be found, he thought, that it was the pharyngeal affection which was hereditary, and not the deafness itself. Thus, it was very common to find a whole family affected with pharyngeal catarrh, but only one or two deaf, because the Eustachian tubes had escaped in the others.

Mr. A. A. NAPPER (Cranleigh) said that his daughter, aged 6 years, was very deaf; and this deafness he considered to be due entirely to hereditary mischief, as her mother was slightly deaf, and her mother's father and mother and grandfather also were deaf. In the child's case, there was no throat-mischief, and her general health was very good. Mr. Napper's eldest boy was also occasionally deaf.

Dr. WOAKES (London) said that, on the question of the treatment of

acquired syphilis, his experience was decidedly in favour of the use of iodide of potassium; but the principle of its success depended upon its being pushed rapidly to large doses, thirty to sixty grains two or three times daily. He thought that the influence of heredity was much overrated. The deafness was more likely to be due to the unnoticed effect of exanthema in early life on the ears.

Dr. BARR (Glasgow), referring to hereditary influence in ear-disease, said that he believed that hereditary tendency was a marked factor in the causation of nearly all diseases of the ear. Probably the most hereditary aural disease was the so-called sclerotic form of middle ear-disease, when the naso-pharyngeal mucous membrane was less involved than in most of the other diseases of the ear. According to Dr. Barr's experience of hospital patients suffering from aural affections, there was a great preponderance of the male sex over the female; this was to be expected from the greater exposure of the male sex to causes which brought on catarrhal affections. The symptoms of certain affections of the ear very often simulated diseases of other organs of the body. There was probably no mistake more common than for an acute inflammatory process in the middle ear to be taken for a meningitis, especially in children. Dr. Barr related a marked case in illustration of this mistake.

Mr. R. ELLIS (Newcastle-on-Tyne) observed that in the hospital to which he was attached one thousand cases of ear-disease came under observation yearly, and the proportion was about three females to one male. The combination of tubercle and otorrhoea must of course be rare, as had been observed by Mr. Lennox Browne; but still they did occur together. He had this summer seen a young gentleman, who suffered from enlarged cervical and inguinal glands, together with otorrhoea in both ears. The otorrhoea went on *pari passu* with tubercular disease of the lungs, and he died within three months with cavities in the lungs and otorrhoea.

Dr. C. WARDEN (Birmingham) corroborated Mr. Field's remark that aural furunculosis was frequently caused by bad air and sewer-gas. Hereditary causes were very common, also strumous. He believed that cancer of the ear was not so uncommon as was stated. He regarded it an act of folly to grope about the meatus, instead of using the simple syringe.

Dr. MCBRIDE (Edinburgh) considered that there was a form of ear-disease due to syphilis, which had not received sufficient attention. It consisted of deafness, shown only by means of the tuning-fork to be due to disease of the middle ear. The tympanic membranes might be perfectly normal in appearance. This form of ear-disease only differed from an ordinary case of sclerosis in the greater rapidity of its advent. Dr. McBride then called attention to the observations of Wendt on diphtheria. He had met with cases of otorrhoea due to this disease, which were most obstinate. In tubercle, two forms of ear-disease had been met with and described: suppurative and cheesy, recently observed by Buck. In renal disease, especially the cirrhotic, hæmorrhages might take place into the tympanum, and lead finally to suppuration.

Mr. T. MARK HOVELL (London) mentioned the case of a medical man, who stated that during early adult life he was subject to catarrh, accompanied by deafness, which passed off as usual after a few days, but he never found his hearing otherwise affected. About ten years ago, he ate some fish, which was not fresh, for dinner, and the following morning on waking found that he was "absolutely deaf". His hearing partially returned after a few days. Since that time, he had found that any error in diet was followed by increased deafness. Mr. Hovell asked if anyone present had met with a similar case.

Mr. PURVES (President of the Section) was certain that the papers read would, from their many-sidedness, give to the practitioner who read them some information, and probably lead him to seek special advice where he would formerly have trusted to his skill in general medicine. He was, however, somewhat surprised to find no mention of anæmia, lactation, tabes dorsalis, fright, or embolism, as causes of aural disease. As regards the use of iodide of potassium, he considered it useful in the acute stages of acquired syphilis, but had seen little benefit from it in the tertiary stages when nervous tissue had been involved, and none in affections of the nerve in the congenital form. As to the question of heredity, Mr. Purves could not agree with Dr. Wankes or Dr. Pritchard. He had no hesitation in saying that there were hereditary affections causing impairment of the nervous structures directly, as well as impairment of function through mucous membrane change. This was, in his mind, proved by the frequent combination of an affection of the retina—retinitis pigmentosa—with a degeneration of the acoustic nerve, the combination being found not uncommonly in the children of consanguineous parents. There were cases in which there was undoubtedly a congenital affection of two sensory nerves, the one determinable to the observer by examination of both function and structure, the other by the functional disturbance only. Examination

of the institutions for the deaf and dumb would certainly give examples of such. Of the liability to aural disease of one sex above another, he was not aware, except as regards nervous affection influencing the accommodation of the ear, to which females were, he believed, liable at the time of commencing menstruation, during pregnancy, lactation, and from nervous shock. In phthisis, he had seen perforations of the membrana tympani of a most obstinate character, with extensive destruction. In aural affections arising during diphtheria, there was always the difficulty of limiting the part due to the mucous membrane affection, and that due to the nervous, the accommodative part. Till cases were observed in which the membranes of the tubes and cavities were free from the affection, and yet there was loss of hearing, we could not speak definitely as to its causing accommodative loss.

Mr. FIELD, in reply, said he was pleased to find that most of the speakers thought highly of the efficacy of large doses of iodide of potassium in diseases of the internal ear from acquired syphilis, although he must admit he had not met with great success from the administration of such doses of the drug. In some patients, he had noticed that large doses, such as a drachm three times a day, had produced a very feeble action of the heart; so much so, that sometimes he had been unable to prescribe it. In congenital syphilis of the ear, he thought it was of no use. With regard to the question that had arisen as to the relative proportion of males and females affected with ear-troubles, he believed that more women attended hospital practice, probably because they were able to get away more readily than men during out-patient hours. He thought that aural diseases were hereditary in a great degree; and, contrary also to the opinion of several speakers, he had seen a very severe form of incurable ear-disease, with loss of the membrana tympani, in patients suffering from phthisis. He was glad that Dr. Warden supported his view with regard to sewer-gas and aural furunculosis, etc. Most of the cases they had discussed showed the great importance of local combined with constitutional treatment in nearly all forms of aural disease.

A PROPOSED SUBSTITUTE FOR CARBOLIC SPRAY IN ANTISEPTIC SURGERY.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association, August 1882.

By A. W. MAYO ROBSON, F.R.C.S. ENG.,

Lecturer on Pathology in the Leeds School of Medicine.

THE purpose of the present paper is to give the results of some experiments, which have extended over a period of two years, and which were undertaken in the hope of bringing before the notice of the profession a substitute for the carbolic spray, now used in antiseptic surgery.

Most, if not all, surgeons acknowledge the advantage of the Listerian method of dressing wounds; and nearly all are equally unanimous in asserting that the spray, hitherto a necessity, is both inconvenient and dangerous. The surgeon has his vision obstructed, "especially it wearing spectacles", and his sense of touch impaired. He, moreover, has the serious discomfort of living, during a considerable portion of his time, in an atmosphere too much resembling a Scotch mist. There are many slighter inconveniences to patient, assistants, and surgeon, which are so well known, that it is quite unnecessary for me to mention them; but these are trifling when compared with the dangers to the patient attending the use of the spray, especially in abdominal surgery.

That the risks of poisoning are not fanciful has, I think, been abundantly proved by Dr. Keith and other operators, who have been led to abandon the spray in ovariectomy. I believe I have myself seen death caused in more than one case of abdominal section, by chilling of the viscera and by carbolic poisoning.

About two years ago, an apparatus was advertised which created a current of air by means of a fan set in motion by clockwork, the air being forced through layers of gauze, moistened with 1 in 40 carbolic solution. About the same time, I had an apparatus made, which created a current by means of bellows, and sucked the air through a series of wash-bottles filled with 1 in 10 carbolic solution. From some experiments I made at the time with sterilised flasks, I came to the conclusion that, although the carbolic atmosphere was pure or aseptic, it was not antiseptic.

It then occurred to me that, if one could saturate the air with some volatile antiseptic, such as eucalyptol, cajuput, or peppermint, a really antiseptic air might be obtained, which, by being diffused in a room,

or blown on a wound, might answer the same purposes as the spray, without having its disadvantages. I was prevented by other work from following out my idea until last September, when I made the following experiments.

The first and most essential point to be proved was, whether or not air impregnated with the vapour of volatile antiseptics is really antiseptic. To ascertain this, I sterilised a number of flasks of hay-infusion, by boiling for fifteen minutes, capping with cotton-wool, and continuing the boiling for five minutes longer; after which, to prove their freedom from life, they were placed in an incubator, and kept at a temperature of 100° Fahr. for two days. Having obtained some large wide-mouthed glass jars, capable of holding several gallons, I poured into one series about an ounce of eucalyptus oil, and into another the same amount of cajuput oil, so as to have a thin layer of fluid covering the bottom of the jar. Into these jars, the sterilised flasks, previously freed from their cotton covering, were inserted; being suspended by means of thread from a bar placed across the mouth of the receiver. The transference and opening of the flasks were rapidly performed under carbolic spray; but when they were once in the jars, there was nothing to interfere with the entrance and exit of the ordinary atmospheric air. After a varying period of exposure of from two to twenty-two hours, the flasks were recapped with cotton and again transferred to the incubator, in doing which, the usual precautions were adopted; and, in addition, the cotton which had to come immediately over the flask was just damped with a little 1 in 40 carbolic solution, to avoid the contact of germs. After being in the incubator for two days, they were put aside, to be examined at leisure.

No change occurred in the flasks through keeping, the hay-infusion looking bright and transparent throughout. There was a slight sediment in all, both in those simply sterilised and in those subjected to the action of eucalyptus and cajuput; but in no case was there a formation of scum on the surface of the fluid. In contrast to this, some flasks that had been simply exposed to the air, and then covered with cotton-wool, began to appear opaque, and scum over within a few hours.

In order that the report might be free from bias, I asked Mr. Abbott, an experienced microscopist and botanist, to examine the solution microscopically for me, which he kindly did, giving his opinion before I examined the slides.

The following are a few examples.

1. Hay-infusion, sterilised August 18th, placed in incubator for two days; exposed to eucalyptus-air for two hours on 22nd; then placed in incubator again for two days. Examined September 7th, and found to be free from living organisms, but to contain very few of what appeared to be dead micrococci in the slight sediment.

2. Sterilised August 18th; incubator till 20th; eucalyptus-air for thirteen hours; incubator till 23rd. Examined September 7th under $\frac{1}{2}$ objective, and found free from living organisms.

3. Sterilised August 20th; incubator till 22nd; cajuput-air for twenty-two hours on 23rd; incubator for two days. September 7th, $\frac{1}{2}$ objective revealed a few still rods and micrococci, which only showed the Brownian movement, but apparently no living organisms.

Numerous flasks, acted on in a similar manner to the above, were examined with like results, except in one case, where living bacteria and micrococci were found. In this example, the usual precautions had been adopted: it failed from some cause.

The experiments related so far, in my opinion, to prove that, in the vapour of eucalyptus, cajuput, and other volatile fluids, we have powerful antiseptics, which, at the ordinary temperature of the atmosphere, may so saturate the air as to kill all infective particles; perhaps not only bacteria and micrococci, but also the germs of fevers and other infectious diseases.

I have experimented in a similar manner with terebene, and have obtained good results; but, as eucalyptol is abundant, cheap, and not unpleasant, it has been selected for further tests.

In my microscope-room, which is an attic at the top of the house, and in which there are numerous organic particles, rendering the air anything but pure, I exposed flasks, prepared as above, to the vapour of eucalyptol, by scattering it on the floor, half an hour before removing the plugs of cotton from the sterilised vessels. The hay-infusions, exposed for periods varying from one to twenty-four hours to this atmosphere, for the most part remained free from germs, after being placed in the incubator; but, as the results were not always the same, I cannot vouch for this method being reliable to sufficiently purify the air for an antiseptic operation.

Hence I was led to devise the machine which I now show you, in which the air is first passed through a cylinder containing cotton-wool, which Pasteur has proved to be sufficient to free it from germs; but, as this would only be a pure, and not an antiseptic air, it is then passed

through two cylinders containing pumice-stone, over which about an ounce of eucalyptol has been poured. Thus it emerges as a pure air, loaded with invisible particles of an antiseptic, which seems to be capable of destroying any vestiges of germ-life which may have been drawn in from the surrounding atmosphere: it is directed over the desired spot by means of five coralline nozzles, which act on a ball and socket-joint, capable of being fixed in a certain direction by a screw. The bellows were obtained from Mr. Fletcher of Warrington, and give a continuous current at a considerable pressure. Messrs. Meyer and Meltzer make the entire machine. The following cases from my own practice and the practices of other surgeons will illustrate the use of the apparatus.

CASE I.—Mr. G., after suffering for three weeks with onychia, called to consult me, with inflamed and suppurating axillary glands. On April 27th, I opened the abscess under eucalyptus-air, getting out about two ounces of pus. I put in a drainage-tube, and dressed the wound with salicylic silk. The instrument and hands were dipped in 1 in 40 carbolic solution; but the wound itself was neither syringed nor sponged with carbolic solution. On April 29th, the matter had perforated the dressing, which was changed, and the drainage-tube removed. On May 1st, the wound was dressed in the same way. There was thin fluid on the dressings, but no pus. There was no redness round the point of incision; and the discharges throughout were quite sweet and free from bacteria, as proved by microscopic examination. On May 4th, the wound was healed. Before the incision, the temperature was 100° to 101° for several days, but never above normal after the opening was made.

CASE II.—Mrs. G. had been confined three weeks. She had previously caught cold, and had a gathered breast, which was intensely painful and very much enlarged. On April 29th, I opened the breast under the eucalyptus-air, and dressed with salicylic silk. On May 1st, the drainage-tube was removed. She had no pain since the operation, and felt quite well. The discharge was aseptic, and there was no redness round the wound. On May 5th, the dressings were removed. The wound was healed.

CASE III.—Miss C. had an aneurysm by anastomosis of the scalp, which was removed under eucalyptus-air on May 1st. On May 4th, the dressings were changed. The wound had run an aseptic course throughout.

CASE IV was one of strumous disease of the finger with abscess, which was opened freely on April 27th. On April 29th, it was dressed. There was little discharge; the wound was aseptic and free from organisms. On May 3rd, it was healed.

CASE V.—Miss P., suffering from chronic pyæmia following caries of ribs, had a parotid abscess. On May 1st, the abscess was opened under the eucalyptus-air, and an ounce of pus let out. It was dressed once a week for several weeks, and ran an aseptic course. No pus was seen after the first dressing, and the small amount of fluid showed no trace of bacteria.

CASE VI.—Mr. L. was the subject of large varicocele, which he was anxious to have radically cured. On July 10th, the operation of cutting down on the veins, ligaturing them at the external abdominal ring and at the testicle, and then cutting the varicocele away, was done under the antiseptic air. A drainage-tube was inserted, and salicylic wool-dressing applied. The wound was dressed on the 11th, 13th, and 15th; its course was aseptic, and it healed on the latter date.

Mr. T. Pridgin Teale removed a return growth of scirrhus of the breast on April 27th, under the eucalyptus-air. Mr. Ward, House-Surgeon of Leeds Hospital, who kindly reported the case to me, said that the wound pursued a strictly aseptic course until it was healed. In this example, it is only fair to say that the wound was wiped over with a carbolic sponge before being closed up; which however, is the course usually adopted when the carbolic spray is used.

Mr. Teale has also kindly adopted the eucalyptus-atmosphere in other cases, one of which was a large fatty tumour of the side; and in this example no carbolic acid was allowed to come into contact with the wound. The wound remained aseptic and the temperature normal throughout.

Dr. Clouston has been good enough to allow the eucalyptus-air to be used in four cases of empyema. He tells me that the course in all the cases was aseptic; and in one of these examples the dressings were examined, and found to be free from organisms.

Mr. Spencer Wells, who kindly used my first crude machine, sent me the following account of an operation.

"June 9th. I amputated a breast under your eucalyptus-vapour, put in a drainage-tube, used sutures to unite the skin up to the tube, and dressed it with salicylic wool. I did not touch it for three days; then removed the tubes under the eucalyptus-vapour; put on more

eighteen hours; but, with the usual native stupidity, he did not seek assistance until the pain grew unbearable. In this case, I was most fortunately situated in being able to have the benefit of a consultation with so eminent a surgeon as Surgeon-General W. A. Mackinnon, C.B., Army Medical Department, who was then on his way to Malta from Hong Kong. The patient was at once placed in a hot bath, and gentle taxis applied for a few minutes, but, as we anticipated, without success. The symptoms becoming more urgent, he was placed under the influence of chloroform, and the taxis again unsuccessfully applied. Everything being ready, the operation was commenced without delay.

The usual incision was made over the neck of the sac, and the soft parts carefully dissected down to the peritoneum. The seat of stricture was then felt for, and discovered by Surgeon-General Mackinnon to be near the internal ring, and was carefully divided by him. At this stage, it was quite evident that the constriction external to the sac was not the sole cause of strangulation, but that it was in a great measure due to the neck of the sac itself, and the condition of its contents. This being the case, it was clear that the only chance to effect safe reduction was by opening the sac, and satisfying ourselves as to the condition of its contents. On opening the sac, we found that it contained about two feet of intestine. There was a good deal of serous effusion into the sac; the bowel was enormously distended with flatus, greatly congested, and in some places of a deep purple colour—though the natural glistening aspect of the surface was still to be observed. So greatly was the bowel distended, that reduction by gentle manipulation could not be effected. Such being the case, Surgeon-General Mackinnon suggested puncturing the peritoneal coat of the intestine with a capillary trocar. This proved very effectual, and the entire hernia was easily returned. The operation was then completed, and the wound carefully brought together by sutures. Carbolised silk was used for the deeper ones, and for tying one or two vessels; silver wire for the external wound. A compress of several layers of lint, saturated with carbolic lotion, was then applied, and over that a layer of cotton-wool—the whole being kept *in situ* by a spica bandage. The patient was then removed to a cabin that I previously had prepared for him. I administered a full dose of opium, which procured him some sound sleep. At six o'clock that evening, his temperature was 100° Fahr., and he said that he felt quite easy and free from pain.

I may mention here that the temperature of the cabin in which he was averaged between 86° and 90°. This high temperature was due to having the ports shut, as we were going against a head sea. He passed a quiet night, complained of very little pain, and slept a good deal.

Space will not permit me to give an account in detail of the progress of this case towards convalescence. Suffice it to say, that he made a wonderfully rapid recovery. On one occasion only did his temperature exceed 100° Fahr., this increase occurring on the fifth day after the operation, and then it only reached 100.5°. With this slight rise in temperature, there was also a sudden increase in the abdominal pains. As, up to this, there had been no indication of any discharge from the wound, the dressings had not been disturbed. These unfavourable symptoms now coming on, we thought it advisable to satisfy ourselves as to the state of the wound: we therefore removed the dressings, and were very pleased to find that primary union had taken place—there not being the slightest trace of any purulent discharge. The silver sutures were then removed, and the carbolic dressings renewed. Hot turpentine stupes were applied to the abdomen, and a full dose of opium administered. By these means the pain was soon allayed, and that evening his temperature was down to normal. The next morning, there was a decided improvement in all the symptoms, and our fears of peritonitis were quite allayed. Up to this, there had been no action of the bowels; but now he felt that a motion would make him feel easier. A small dose of castor-oil was administered, which acted in a couple of hours, and had a very beneficial effect.

We arrived at Point de Galle that evening; and the next morning I had him carefully removed to the Civil Hospital, to complete his convalescence, which was now fairly established. Surgeon-General Mackinnon had a letter afterwards from the colonial surgeon at Galle, informing him that the patient had been discharged from hospital in three weeks, perfectly cured; and he was of opinion that a radical cure had been effected.

On my return to Galle, about three months afterwards, I heard that he had resumed his old work as a coal-trimmer on board one of the Peninsular and Oriental ships.

My object in making this case public is twofold. 1. The enormous size of the hernia, the amount of surgical interference that was necessary under the circumstances, and the unusual rapidity of the recovery, were remarkable. 2. I think it is a striking example of the unsusceptibility to inflammatory changes that exists in the negro and Indian races; and which, I fancy, is in a great measure due to the un-

stimulating nature of their dietary. I could mention several other cases in which wounds in these men have healed with a rapidity that surprised me, especially as circumstances rendered it impossible properly to carry out antiseptic measures.

In conclusion, I must express my thanks to Surgeon-General Mackinnon, for his kind and valuable assistance in the operation; and it is only fair to say, that the success achieved in this case was in a great measure due to his skill.

A CASE OF PORRO'S OPERATION: RECOVERY.

By T. SAVAGE, M.D., M.R.C.P. Lond., F.R.C.S. Eng.,

Senior Surgeon to the Birmingham Hospital for Women; Consulting Obstetric Surgeon to the Kidderminster Infirmary.

DR. CLEMENT DUKES of Rugby sent for me on July 12th, 1882, to see with him a patient whom he had been attending, and had seen a few hours previously in consultation with Dr. Heslop of Birmingham. The case was an urgent one, and it was considered that it would be necessary to give some relief of a surgical nature, and that without much delay. The following are the notes which I took at the time. Mrs. H., aged 25, was married on January 4th, 1882. Her catamenial history before marriage was normal; she had three periods after marriage, the last one ending on March 18th. Soon after this, she had vomiting and constipation.

She first consulted Dr. Dukes on June 30th, having pain on lying down, and a slight blood-discharge. He examined her the next day, and found a tumour on the right side of the abdomen, of pyramidal shape, and most prominent between the umbilicus and the iliac crest. It was very hard, dull on percussion, and non-fluctuant. It extended also well over into the left side. Neither the patient nor her husband had noticed any enlargement until shortly after menstruation had ceased in March; and they then thought it was to be attributed to pregnancy. She had had no rigor, nor rise in temperature, but had been a good deal troubled with painful micturition.

When I saw her, I found the condition as above described. Her face was flushed; temperature normal; pulse 108. The tongue was white (aphthous?). She had been taking morphia for the pain, which had been very severe, and was increasing in intensity. She had no rest nor sleep, and for some days had been almost constantly vomiting. Her face had the aspect of much suffering, and she was becoming thinner daily. The tumour was very hard, and rose to the level of the umbilicus. It was very prominent on the right side, having almost the appearance of an abscess that wanted to be opened. It was dull and non-fluctuant. It gradually flattened over on to the left side. The prominent part of the tumour was very tender indeed, especially on its right side. Both flanks were resonant; and the tension of the abdominal wall was most extreme. Through the vagina, the cervix was felt very high up on the left, soft, and a little open. On the right side, through the vaginal roof, the swelling projected downwards, and was felt to be in direct relation with the abdominal tumour; and it was quite immovable. The uterus appeared to be quite distinct from the tumour; there was a sulcus between it and the cervix, and pressure from above did not affect the cervix.

In considering the diagnosis, hæmatocele and pelvic abscess were excluded; but it seemed likely that it might be an extra-uterine gestation, a myoma, or an ovarian tumour with the addition of intra-uterine gestation. It was quite clear that relief of some kind must be afforded to the patient without delay; and one of two courses seemed open for that purpose. The first was, to induce abortion; this would relieve the tension, and therefore the pain, though only to a very slight extent, not enough to be of much service, and would still leave the tumour, the cause of the trouble, untouched. The operation itself would also not be unattended with risk. The second course would be to make an exploratory incision, with a view, if possible, of removing the tumour. After taking into account the hardness and the rapid growth of the swelling, as well as the intense pain of the last fortnight, the inability to take food, and the emaciation, it was agreed to recommend an abdominal section, to which both the patient and her husband assented, after having had explained to them the objects and risks of the operation.

On the following morning therefore, Dr. Dukes giving ether, I made an incision nine inches long, the upper portion extending nearly two inches above the umbilicus. The tumour was found to be a large solid fibro-myoma growing out, and forming part of the right side of the uterus. The cavity of the uterus was found to contain a fetus, and was pushed upwards and to the left. The right ovary and Fallopian tube were in front of the tumour, and almost black from compression between it and the abdominal wall.

It was thought that it would be safer and easier to remove the whole mass, which was accordingly done, rather than attempt removal of the tumour alone. The stump was secured by a wire clamp, and its serous outer surface was attached by silk to the abdominal wound. Two thick silk ligatures were also tied round the stump for security. Very little blood was lost, and much care was taken to prevent any from being left behind the bladder, or on the vaginal roof, which appeared to be considerably dragged upwards by the clamped stump. A glass drainage-tube was inserted just above the stump, and perchloride of iron was applied to the end of the stump. After the operation, which lasted about an hour and a half, the finger passed into the vagina detected the cervix high up, but otherwise normal, showing that the wire had encircled the uterus at about the level of the inner os, and had not included any of the vaginal roof with danger to the ureters. Only about four ounces of ether were administered. The mass removed weighed nearly 9 lbs., and contained the fetus with membranes intact. The recovery after this formidable operation was uninterrupted, and is very largely to be attributed to the care and skilful treatment of Dr. Dukes who had the sole charge of the patient after the operation. She may now (August 25th) be said to be quite well. The breasts secreted milk on the fourth day. The clamp came away on the twenty-first day.

This is the second time that Porro's operation has been successfully performed in this country, so far as I have been able to learn. The first case was, very curiously, done by Mr. Knowsley Thornton at the Samaritan Hospital the day before this one (*see BRITISH MEDICAL JOURNAL*, July 22nd); and it seems to me that it ought to be more generally successful than the records from abroad show it to have been. Dr. Alexander Simpson's compiled table shows recoveries 41.6 per cent., and deaths 58.3 per cent.; and in Italy, where it has been done 38 times, the deaths were 24, or 63 per cent., and the recoveries 14, or 37 per cent. Experience and observation up to the present time incline me to think that the extraperitoneal method of treating the stump will be found to be the best, more frequently than the intraperitoneal.

PRELIMINARY IRIDECTOMY IN EXTRACTION OF CATARACT.*

By FRANK H. HODGES, F.R.C.S. Edin.,
Ophthalmic Surgeon to the Leicester Infirmary.

ON my appointment as Ophthalmic Surgeon to the Leicester Infirmary, five years ago, I sought the advice of Mr. Critchett and Dr. Snellen of Utrecht, as to the safest method of extracting cataract. Both were emphatically in favour of performing an iridectomy some weeks prior to the extraction; Mr. Critchett remarking, "If my eternal salvation depended upon the success of a single case of cataract, I would do a preliminary iridectomy;" and Dr. Snellen, "Were I to operate on my own father I should do a preliminary iridectomy." Dr. Snellen further informed me that his custom was to tell his patients that the usual operation at one sitting (Graefe's method) was a very successful procedure, but that dividing the operation by doing an iridectomy first, and extracting the cataract later on, was somewhat safer, though necessarily the cure was a little delayed; then leaving the choice of operation to the patient.

With regard to the interval that should elapse between the iridectomy and the extraction, Dr. Snellen's rule was "not before six weeks, preferably eight." I have hitherto maintained the latter interval, though I think the rule that my friend, Mr. Priestley Smith, adopts, of doing the extraction as soon as any vascularity in the region of the iridectomy wound has subsided, is perhaps better than any arbitrary fixed interval.

Of the comparative advantages of this method of extraction, if any, over the more usual methods, I have no personal experience, having during the last five years performed preliminary iridectomy in all cases of extraction of senile cataract. Experience of it, however, leads me to claim several conspicuous advantages; and of these I would place first, "absence of hæmorrhage from the iris at the time of the extraction." In my first case in private practice, the subject of which was a gouty old lady, on division of the iris the anterior chamber filled with blood, which occupied six weeks in absorption. A sharp attack of gout came on four days after the iridectomy, but fortunately did not affect the eye. At the extraction eight weeks later, another attack of gout occurred, and this time the iris became involved, but yielded promptly to leeches and atropine, with colchicum internally. The old lady made an excellent recovery, and can now read No. 1 fluently. The cataract had a small hard nucleus with abundant soft cortical substance, which I

could not completely remove, and I believe that the preliminary iridectomy turned the scale from failure to success; for, had the complication of hæmorrhage in a chamber with cortical substance been added to the existing one of gouty iritis, it is highly probable the eye would have been lost.

Besides the greater safety to the eye from the absence of blood in the anterior chamber, it is a manifest advantage to the operator not to have the parts obscured in the important stages of laceration of the capsule and extraction of the cataract. Another advantage of dividing the operation is the experience gained at the first as to how the anæsthetic is borne. My practice is to always to give an anæsthetic for the iridectomy, ether or ethidene bichloride for patients under sixty, and chloroform for those over[†]; and then, if this be badly borne, or cause much after-sickness, for the extraction either to give no anæsthetic or substitute another. Of the minor advantages, I would instance the tranquillity of mind with which a patient awaits the extraction after a painless iridectomy followed by the usual rapid recovery. I have had several patients, who prior to the iridectomy were dreadfully nervous about it, or more usually the anæsthetic; who, upon suffering no inconvenience from the anæsthetic nor pain from the iridectomy, submitted calmly to the subsequent extraction. Again, cataract not unfrequently happens to people in excellent health, who have never been laid up for a day, and to whom confinement is necessarily irksome. The little preparatory training which they get for the iridectomy stands them in good stead for the all-important extraction, and accustoms them to the new sensation of having the eyes bandaged, and of lying on only one side or the back, and to the maintenance of perfect quiet. These latter may seem trifles, but success in eye-surgery often depends upon scrupulous attention to many minor points of detail.

CLINICAL MEMORANDA.

NOTE ON THE AURICULAR PULSATION OF MITRAL STENOSIS.

AS I finish the perusal of Dr. Balfour's paper in the current number of the *BRITISH MEDICAL JOURNAL* for August 12th, and the discussion thereupon, which took place at the late annual meeting, I am moved to write, while the subject is in memory, to say that I am quite in accord with the views enunciated by Dr. Broadbent, that any pulsation on the chest-wall, and tracings derived therefrom, can hardly own an auricular source. I say this upon the strength of a good deal of observation. Dr. Balfour's writings on this as on all subjects, interesting and pregnant as they ever are, arrested my attention long ago, as also did Dr. Gibson's paper and tracings when they were first published; and, so far as opportunity has offered since that time, I have taken occasion to ascertain in the deadhouse the relations existing between the left auricular appendix and left auricle at the surface, in cases of mitral constriction; and, though I have seen many cases where the auricle and the auricular appendix have been dilated, neither has ever come so near to the surface as to make it at all probable, to my mind, that any pulsation could be appreciable enough to record upon the chest-wall. I have never seen even the most dilated left appendix which was not a considerable depth below the surface; and, discounting the dead for the living position, I still am more than in doubt. On the other hand, three or four cases have occurred in which, during life, a marked pulsation has been observed in the second left interspace, and in all, it has been adequately explained by the existence at the necropsy of a much dilated pulmonary artery. Dilatation of the pulmonary artery is a condition which occurs under diverse circumstances, and it is not uncommon. Its not unfrequent occurrence disposes, I think, of Dr. Balfour's objections to the basic murmur being of pulmonary origin, viz., that there is no possible cause of murmur in the pulmonary artery which is not equally operative at the aortic orifice, or indeed more so. Given high tension in both systemic and pulmonary circulation, I believe the pulmonary artery dilates readily, and the aorta much less so.

I should be sorry to think that the existence of curable dilatation of the left ventricle in chlorosis, so ably maintained by Dr. Balfour, was in any way endangered by a disbelief in the auricular impulse; but, whether it be so or not, I am of opinion that the pulsation observed in some of these cases, and the *bruit* heard in many are probably due to waves in a dilated pulmonary artery, the dilatation being consequent upon mitral regurgitation, and to the resulting obstruction to the pulmonary circulation.

JAMES F. GOODHART, M.D., F.R.C.P.,
Assistant Physician to Guy's Hospital.

* Read before the Annual Meeting of the Medical Branch.

[†] In deference to the opinion of Mr. Jonathan Hutchinson that, for patients over sixty, chloroform is the safest anæsthetic.

A CASE OF HELMINTHIASIS SOMEWHAT RESEMBLING TYPHOID FEVER.

E. C., aged sixty-five, widow, a weakly delicate woman, was admitted into St. Mary Abbott's Infirmary, Kensington, on December 13th, 1881. She stated that she had always been the subject from her childhood of bilious headaches; that she had a severe attack of pleurisy twenty years ago, but otherwise had enjoyed good health. Her present illness commenced seven days before admission. She complained during that time of a continual feeling of sickness, accompanied with loss of appetite and dull frontal headache. Her bowels had not been relaxed. On examination there was found to be general abdominal tenderness; no gurgling. The patient was in a very low apathetic condition; it was with great difficulty that she could be persuaded to take nourishment at all, she stating that food made her feel sick. There was also slight dulness at the base of the right lung.

On December 19th the abdominal tenderness was more marked; there were three roseolar spots on the anterior abdominal wall; the tongue was coated with a thick whitish-brown fur. On December 25th, whilst taking some food, she suddenly felt as if something were choking her, put her finger into her mouth and drew out a round worm. On examination this was found to be a male of *Ascaris lumbricoides*, eight inches long. A strong purgative was given in the evening, but no more worms were evacuated. The patient made a rapid recovery.

REMARKS.—The temperature was not unlike that of a case of typhoid fever in the early stage. It was as follows:—December 17th, evening 100°; 18th, morning 99.3°, evening 100.1°; 19th, morning 100°, evening 102°; 20th, morning 100.2°, evening 102°; 21st, morning 100°, evening 102°; 22nd, morning 99°, evening 100°; 23rd, morning 98.8°, evening 100°; 24th, morning 98°, evening 100°; 25th, morning 97.8°, evening 98.3°; 26th, morning 97°, evening 98.9°; 27th, morning 97.4°, evening 98.8°. She had also all the other symptoms with the exception of diarrhoea. The case is also remarkable for the rare exit of the worm, viz., by the mouth.

J. M. ATKINSON, M.B., London.

INTUSSUSCEPTION IN AN INFANT CURED BY INJECTIONS OF WARM WATER UNDER CHLOROFORM.

ON August 17th, I was called to see a little girl aged 3 months, whom I found suffering from intussusception. During the previous day, and up till near noon on that day, the child had appeared as usual. It then had a motion of an unnatural colour, accompanied with much wind, and began to cry as if in pain. The mother had not noticed any lump in the abdomen when washing her child earlier in the morning. About half an hour later, she was alarmed by the child's beginning to pass blood *per anum*. The child's condition had by that time changed, for she became extremely pallid, would not take the breast or take notice, but lay still, with the eyes partly closed, only occasionally drawing up the legs, and crying.

When I saw the child, about four o'clock, I found the conditions above described, with the addition of a tumour in the abdomen, lying transversely on each side of the umbilicus, but situated mainly below it. I could feel nothing of the intussusception *per anum*. There must have been a good deal of bleeding from the gut, as blood came away pretty freely on examination. Later on, in the evening, Dr. Hinton, my partner, saw the case with me. Getting the child fully under chloroform, and keeping it so, we proceeded to inject warm water, with one of Maw's double-action syringes, using an adult rectal tube, introduced as far as it would go without force. At first, we kept the child on its back; but, towards the end of the operation, the hips were held at a higher level than the shoulders. Nearly sixteen ounces were injected, and the abdomen, of course, became fully distended. On withdrawing the tube, a portion of the water came away, but the abdomen remained distended with the rest. The tumour now could only be felt in the right side of the abdomen. A little later, the child passed more water *per anum*, but no motion, and vomited some watery fluid.

The next morning, I found that the child had taken the breast a little, but had kept nothing down. Some of the vomited matter on its clothing was bile-stained. The tumour was now to the left of the umbilicus, and coils of intestine could be distinguished in the upper part of the abdomen. The mother thought that there had been a little motion in the napkins. About 3 P.M., I put the child again under chloroform; but this time had only the assistance of an intelligent woman. As soon as I brought the child under chloroform, I got my assistant to take the shoulders and legs, and hold it almost vertically, with the head lowest, while I proceeded to inject warm water with a Higginson's syringe. I found myself now under difficulties; for as soon as I could begin operations, the child would begin to come to; the first effect of which would be to force the water out again. However, I suc-

ceeded twice in getting about four syringefuls in at a time, or about eight ounces. I should say that, with one of the first rejections, yellow motion came away. When I desisted, I felt for the tumour, but could only find a small knot in the situation of the ascending colon.

On calling on the third morning, I found a great improvement in the child's condition. It had taken the breast during the night, and had kept it down, and seemed quite itself again. There was very frequent action of the bowels during this day; and, twice in the evening, a little blood and some shreds were passed. No trace of the tumour could be felt. Since this, the child has gone on well.

J. M. HOBSON, M.D., Croydon.

SURGICAL MEMORANDA.

POSITION IN THE TREATMENT OF DISEASE.

SOME years ago, I was called to a case of strangulated femoral hernia, of some days' standing. After failing to reduce by the ordinary means, I had the patient's head over the bed (which was high), on the floor, working with my hand at the tumour at the same time. She encouraged me to continue the taxis, saying she felt the bowel returning. Whilst in this position, she had a severe attack of stercoraceous vomiting. After this, the symptoms subsided, and she made rapid recovery.

THOMAS E. JONES, M.R.C.S., L.R.C.P.

Llanrwst, August 21st, 1882.

REPORTS

OF MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

QUEEN'S HOSPITAL, BIRMINGHAM.

AORTIC DISEASE: ALBUMINURIA.

(Under the care of Dr. HUNT.)

[Reported by Mr. LESLIE PHILLIPS, House-Physician.]

W. D., aged 28, a railway goods-porter, had rheumatic fever when ten years old, and again four years ago, since when he had been ailing. He was in the Queen's Hospital in 1881, with double aortic *bruit* and oedema of the legs. He had been breathless for some months. He was admitted on April 18th, 1882, with breathlessness and swelling of legs. Ten days before admission, he noticed that he passed a small quantity of high coloured urine. He had suffered from anginal attacks, heart-pain, and orthopnoea.

On admission, he had a flushed face; his legs were swollen. The swelling subsided in a day or two. There was visible pulsation of the carotids. In the heart's region, there was a largely diffused visible impulse, extending as far as the umbilicus. Cardiac dullness extended upwards to the upper border of the third rib, outwards to the posterior axillary line, downwards to the sixth space in the nipple-line; its widest transverse diameter was eight inches. There was obvious bulging of the præcordia, and the left chest measured three-quarters of an inch more than the right. There was a loud double murmur at the mid-sternum, of maximum intensity over the pulmonary area. A systolic murmur was heard in the mitral area. The heart's action was pretty regular, occasionally intermitting. A doubtful friction-sound was heard near the nipple. Pulse 80, collapsing. There was no pulsation in the retinal vessels. The aortic systolic murmur was heard over all the upper anterior chest and neck, in the course of the vessels as far as the face, and also in the brachial vessels as far as the elbows. On sitting upon the bed, one felt the vibration transmitted on each systole of the heart. The sphygmogram showed a sharp upstroke, and sudden downfall of the liver; the downstroke being nearly parallel to the percussion-stroke, with only a trace of the dicrotic notch. He passed twenty ounces of acid urine, of specific gravity 1024, containing one-sixteenth of the column of albumen, and granular casts. Liver-dullness was normal. Under treatment by digitalis and cream of tartar, the urine became alkaline, larger quantities were excreted, and his symptoms subsided.

April 26th. Although the physical signs of cardiac disorder were strongly marked, he had, strangely, few symptoms. As he lay in bed, he complained of nothing. By his own desire, he left the hospital on May 4th.

He was readmitted on June 17th, extremely ill, with urgent dyspnoea, great restlessness, cold and blue extremities, cyanosed face, orthopnoea, continual vomiting, and diarrhoea. The urine contained half a column of albumen. Ammonia, ether, digitalis, brandy, milk, beef-tea, were alike vomited. Ether given subcutaneously did not ease. Enemata of

brandy and beef-tea were not retained. The abstraction of six ounces of blood from the arm produced faintness and no good effect. A quarter of a grain of pilocarpine given subcutaneously caused diaphoresis, but vomiting continued.

June 18th. Ice only was given by the mouth. The hypodermic injection of one-twelfth of a grain of morphia was quickly followed by quiet light sleep. The effect of the morphia was striking; the extreme restlessness at once gave place to quietude, the anxiety to peaceful dosing, vomiting and diarrhoea ceased. This effect lasted eighteen hours.

On the morning of the 19th, one-twenty-fourth of a grain of morphia produced similar good effects. He became restless again towards evening, and died suddenly.

Necropsy. June 20th.—The heart weighed forty-seven ounces, consisting chiefly of the left portion of the viscus, hypertrophied. The cavities were dilated; the mitral valves were thick and small in comparison with the auriculo-ventricular orifice, evidently allowing regurgitation. The segments of the aortic valve were hard, calcareous, with projecting sharp masses. The muscular tissue was not soft. The pericardium was universally adherent. The lungs were adherent and edematous. The kidneys weighed fourteen ounces; they were pale, large, and fatty.

REMARKS BY DR. HUNT.—Excessive hypertrophy of the heart, such as this, is rare; and it will be interesting to inquire into the cause. For this purpose, I have collected seven other cases recorded in the medical journals, and which I have given below. Of these eight cases of "bovine" heart, only one exceeded thirty years, and he, a negro, lived to forty-two; thus it would seem that the condition is a progressive one. Occupation, a fertile source of cardiac disease, cannot be said to have had much influence; of the five cases in which it is named, in two only was it laborious, the other three were sedentary. As to previous history, rheumatism, past or present, had attacked six of them, including one where the disease is not actually recorded, but may from old pericardiac mischief be inferred; to the two remaining cases, no previous history is given. Of the morbid anatomy, there was adherent pericardium in four; recent pericarditis in two. Valvular disease was present in all, except one—an enormous heart, weighing four pounds six ounces, exhibited at the New York Pathological Society, in which the anatomical characters and previous history are wanting. The effects of adherent pericardium upon the heart are not uniform; and although it leads to hypertrophy in one-half or two-thirds of its cases, its influence in this respect is not great; valvular disease is much more powerful to that end, and the two combined would doubtless contribute much in this respect; but the frequency of adherent pericardium and valvular disease as a pathological condition in cardiac hypertrophy and dilatation, and the rarity of the bovine heart, would suggest some additional factor in the causation of the latter. For this, I think we must look to the effects of chronic inflammation upon the muscular tissue of the heart, producing interstitial fibrous growth, and favouring development by increased vascular supply. It will be noticed that, in two of the cases here given, acute peri- and endo-carditis were present at the time of death; and that, in one of these, a lad aged 17, there had been no previous illness until a month before his death, from which it may be assumed that an augmentation of the heart to double its natural size had taken place in that short time.

Case	Occupation	Previous History	Weight	Morbid Anatomy	Reference
1	Day	Rheumatism	47	Aortic disease and adherent pericardium. Bright's disease.	Dr. Hunt, Queen's Hospital.
2				None.	<i>Medical Times and Gazette</i> , vol. xii, 1860.
3				Valvular disease adherent pericardium.	
4	Negro.	Rheumatism	46	Acute peri- and endo-carditis.	Pathological Society of London.
5					Pathological Society of London.
6					Pathological Society of London.
7					Pathological Society of London.
8					Pathological Society of London.

REPORTS OF SOCIETIES.

CAMBRIDGE MEDICAL SOCIETY.

FRIDAY, AUGUST 4TH, 1882.

G. M. HUMPHRY, M.D., F.R.S., President, in the Chair.

Hæmorrhage into the Arachnoid Cavity.—Dr. BACON brought forward a case of hæmorrhage into the arachnoid cavity, in the person of a female eighty-seven years of age, and exhibited the specimen. The patient was suffering from senile dementia, but was quiet, and apparently in good health. One day she became faint, and was helped to a sofa, but had no fall or injury. She became rapidly unconscious, and was at once seen by the medical officer. She never recovered consciousness; had contracted pupils; and died thirty hours afterwards. At the necropsy, the brain weighed 41 ounces. Over the left hemisphere, on removing the dura mater, was found a layer of coagulated blood, in a semi-organised condition. There was a similar layer of currant-jelly appearance over the left half of the base of the skull, extending over the right orbital plate. The cerebrum itself was apparently healthy, and the ventricles contained only a small amount of serum. No ruptured vessel could be discovered, and there was no fracture of the skull, or sign of external injury. Dr. Bacon considered that there had been a former hæmorrhage, and that the recent one had proved fatal in accordance with the symptoms related. He mentioned, in connection with the subject, two cases published by Dr. J. W. Ogle, in the *Journal of Medical Science* (1865), of arachnoid cysts, occurring in general paralysis; and a paper on the same subject by Dr. Wilks, in vol. xi of the same journal.—Dr. PAGET had seen a case of a similar nature, in which the symptoms lasted a few days.

Gall-stones Discharged Through an Abscess in the Right Groin.—Mr. WHERRY related the case of a woman, under his care, who had an obscure swelling in the right inguinal region. An exploratory puncture discovered pus too thick to flow through the cannula; but a free incision let out thick pus, and over a hundred gall-stones. The finger passed into the wound in the direction of the gall-bladder. A large drainage-tube was then tied in the opening, through which gall-stones still passed. There was no bile, and no faecal odour. The patient was for several years subject to attacks like ague. One year ago, she first noticed in the right side of the abdomen a swelling, which enlarged painlessly; her bowels were regular, and she had no jaundice. Two months later, the swelling appeared (from her description) to burst inside her; and she was immediately seized with violent cramp-like pains in the right lumbar and iliac regions. The swelling diminished; and she had now attacks of vomiting of dark fluid, every five minutes for five days, and during this time she ate nothing; but when the vomiting ceased, she had a ravenous appetite, and was able to walk about. Altogether, she had five similar attacks of vomiting, lasting from three to five days each, followed by several weeks of health. Mr. Wherry said that he thought there must have been an abscess near the fundus of the gall-bladder, into which the gall-stones were discharged after adhesions in the neighbourhood; that, as there was no jaundice and no pain, the inflammation was limited to the gall-bladder and its duct. No bile came through the external wound, and the patient had a prospect of complete recovery.—Dr. PAGET mentioned the case of a lady he had seen, some years ago, in a desperate state of illness, when there was great pain and tension of the abdomen; and, when an incision was made, no fewer than one hundred and sixty gall-stones came out, though not all at once. In this case, the patient recovered and lived for years. He referred also to another case, in which the patient passed a large stone, but died from cancer of the liver.

Recovery from Traumatic Tetanus.—Mr. SHEILD related the case of a lad who had recently been treated in the hospital for tetanus, and recovered. A healthy country lad, aged 17, was admitted on May 30th. He was suffering from an extensive lacerated contused wound, on the flexor aspect of the left forearm, the result of the explosion of a gun. The superficial muscles were extensively disintegrated; the radial artery was torn away, but the main nerves had escaped injury, and the ulnar artery was intact. The wound was treated by poultices and carbolic oil; and all went well until June 17th, when symptoms of tetanus set in, with slight stiffness about the muscles of the jaws, and of the neck. On June 18th, these symptoms had become more pronounced; well-marked trismus was present, with epigastric pains. By June 23rd, the disease was fully developed. Several attempts were made to treat the muscles of the back, but without success; the trismus was still present, and the trachea was kept open by the tracheotomy tube, and the patient died on June 27th. The post-mortem examination showed that the disease was in its full stage, and that the trismus was due to spasm of the muscles of the back and neck. The trachea was found to be in good condition, and the lungs were healthy. The cutaneous surface was produced. From June 23rd to July 12th,

the symptoms were very severe. Marked opisthotonos was observed, and the patient became rather emaciated. On July 10th, the disease was on the wane. Gradually the spasms grew less severe; the bowels acted naturally, and the appetite improved; while the patient was walking about the ward, with his wound nearly healed, and all tetanic symptoms were gone. Throughout the whole case, the temperature was, for the most part, above normal—presenting curious diurnal variations. On several occasions, it reached the height of 104° and 105° . The pulse was quick and weak, and varied slightly with the temperature. The treatment adopted depended chiefly upon feeding and nursing. Plenty of good milk and eggs, with port-wine and brandy, were frequently administered both by day and night, and fortunately swallowed and retained by the patient. Hypodermic injections of morphia were administered every evening, and caused relief and some snatches of sleep. The bowels were relieved by enemata; and, during their peristaltic action, the patient seemed to have his sufferings increased; but, after the evacuation, the pains were alleviated. He smoked tobacco twice, and this gave him some relief from the accumulation of mucus in the fauces.—Dr. HUMPHRY believed tetanus to be a passing malady, depending, probably, like small-pox, scarlet fever, and others, upon some blood-poisoning—like them being amenable to no known curative treatment, but running a certain course and subsiding, provided it did not kill the patient. Of the rapidly progressing cases, very few survived; whereas in those which came on more tardily, and more particularly in those in which the patient continued to be able to take food, a favourable result might not unfrequently be obtained. The disease was attended with much wasting and exhaustion, sometimes with high temperature; and the most important feature in treatment was to give nourishment, which must generally be in a fluid form, milk, eggs, beef-tea, wine, etc., as much as the patient can take. While food could be swallowed, there was hope; and it must be urged upon the patient. Sedatives—such as morphia hypodermically injected, tobacco, etc.—came in as adjuncts in more severe cases; but reliance should be placed on the feeding, with attention to the bowels, it being commonly necessary to give aperients. In some cases he had found tobacco, smoked or administered in a mild form, to have a soothing effect. He had kept patients persistently under the influence of chloroform without any benefit. The maintenance of strength by nourishment, so as to enable the patient to tide over the attack, was the great thing to be aimed at.

Cystic Disease of the Chorion.—Dr. INGLE exhibited a specimen of cystic disease of the chorion. The fœtus was probably eight weeks old, though stated to be five months. There was considerable hæmorrhage between the expulsion of the fœtus and that of the placenta. Dr. Ingle observed that in such cases the diseased state of the chorion might cause the death of the fœtus, though the ovum might be retained for some time longer. The special feature in this case was the abrupt termination of the umbilical cord at the amnion, while at another point of this membrane the vessels passed through to the chorion; and this point seemed to be the spot where the placenta originated.—Dr. GROVE said that in a case, under his care, of threatened abortion for ten days, there had been a sudden expulsion of a placental mass of this character, accompanied with great loss of blood. He also mentioned another case, in which the foetal movements had ceased about the fifth month; but the patient had not been delivered till the ninth month. The fœtus was shrivelled; but the placenta was apparently healthy.

REVIEWS AND NOTICES.

KOUMISS OR FERMENTED MARE'S MILK. By GEORGE L. CARRICK, M.D. Blackwoods.

FERMENTED mare's milk, as an article of diet, has probably been in use among the nomad tribes of Central and Western Asia from time immemorial. The earliest European travellers, such as William de Rubruquis and Marco Polo, make some allusion to it. But it was not till the latter part of the eighteenth century that its remedial value was recognised by John Grieve, a Scotch surgeon in the Russian army, who contributed an account of its mode of manufacture, with observations on its use in medicine, to the *Transactions of the Royal Society of Edinburgh* for 1788. His paper, however, does not seem to have attracted much attention in this country or elsewhere; and the credit of establishing the claims of koumiss to a high place among nutrient and analeptic remedies belongs to those Russian physicians who, within the last twenty-five years, have set up regular institutions in the neighbourhood of Samara (on the river Volga), in which patients may have the advantages of koumiss-drinking without the unavoidable drawbacks in-

cidental to sharing the domestic life of a Tartar family. The results of the koumiss treatment have been so successful that, at the present time, a large number of persons—mostly Russians—resort to the Eastern steppes every summer for the purpose of submitting themselves to it, undeterred by the fatigue and expense entailed by the long journey.

The information about koumiss hitherto accessible to English readers has been of a very inadequate and fragmentary kind. Fermented cow's milk has for some years been sold in London under the name of koumiss, and numerous cases have been published in which the employment of this beverage has proved beneficial. But, excellent as this preparation undoubtedly is, its chemical composition and effects are by no means identical with those of true koumiss. It has been suggested—and the suggestion is a sensible one—that the term galazyne or galactozyme should be applied to fermented cow's milk, reserving koumiss for the product obtained by fermenting that of the mare.

Dr. CARRICK, physician to the British Embassy at St. Petersburg, and who at one time held the post of clinical assistant at the Brompton Hospital, has succeeded in producing the most complete account of the subject to be found in any language—save, possibly, the Russian. At once readable, and strictly scientific in spirit, his work may serve as a model of how a monograph on a question of therapeutics ought to be written. His familiarity with Russian has enabled him to utilise the valuable, but for the most part scattered, material existing in that language.

He has repeatedly visited the steppes; he has made himself thoroughly acquainted with the methods of preparing and administering koumiss; he gives precise details of the cases that have come under his observation; finally, he is on his guard against the enthusiasm natural to a man writing about a subject on which he has bestowed much time and attention. The favourable conclusions at which he has arrived are expressed with such studied moderation, and the grounds on which they are based are so fully stated, that they leave a decided impression even on a sceptical reader.

After giving a full account of the chemistry of mare's milk, and the changes which it undergoes during fermentation, the food and pasturage of the mares, the breed employed for milking purposes, and the mode of preparing the koumiss, he proceeds to discuss its physiological action. Its influence on digestion and nutrition, on the circulatory and nervous systems, and on the urinary secretion, are successively described. The next chapter is devoted to its therapeutic action. Evidence is adduced to show its value in gastric catarrh of old standing with extreme emaciation, in obstinate chlorosis, in various chronic intestinal disorders, in scurvy, scrofula, and constitutional syphilis. While advocating its use in chronic albuminuria, diabetes, and some forms of heart-disease, the author admits that more clinical evidence is wanted before a final judgment concerning its efficacy in these maladies can be arrived at.

Lastly, he enters at length into the important question of the value of koumiss in the treatment of pulmonary phthisis. The evidence on this point comes under three heads. These are, first, the official reports of the Russian Army Medical Department on consumptive soldiers subjected to the koumiss-treatment in government sanatoria; secondly, a group of cases followed up by Dr. Polubensky; thirdly, twenty-five cases observed during the last ten years by the author himself, concerning which ample details are given. One of these is especially interesting as an instance of recovery from tubercular ulceration of the larynx. The personal experience of Professors Ovsyanikof, Lesshaft, and Manassein, all of whom recovered from well marked phthisis in the steppes, is also of great value.

The author does not ascribe the beneficial results of the treatment to the koumiss alone. He recognises the adjuvant action of the steppe climate, the constant exercise on horseback, the freedom from the ordinary worries of town life. But when all these factors have had justice done to them, there is a large residue of benefit which can only be ascribed to the systematic employment of koumiss. Much, of course, depends on the manner in which the beverage is prepared and administered; on practical points of this kind, the author takes pains to give the fullest information. He strongly advises phthisical patients—even from England—to undergo the treatment on the spot. His words are: "Is the phthisical invalid, then, it may be inquired, year after year to repair to the steppes with the object of arresting his malady, or perhaps of only warding off the inevitable end? As that is his only, or at any rate his best chance, I would reply without hesitation, Yes."

The description of the steppe, with which the chapter concludes, is well calculated to attract those who do not fear a long journey and an unknown tongue. The great plains, inundated with sunlight, refreshed by breezes impregnated with the aroma of rich grasses, the novelty of a life passed almost entirely in the open air, and amid surroundings

of a wholly unaccustomed kind, will doubtless tempt a few of the adventurous spirits who even now do not hesitate to undertake long sea-voyages in quest of health, or to spend winters in the desolate valleys of the high Alps.

LEPROSY IN BRITISH GUIANA. By JOHN D. HILLIS, F.R.C.S., M.R.I.A., Medical Superintendent of the General Leper Asylum, British Guiana. London: Churchill. 1881.

THE author of this valuable work modestly states in his preface that it is principally intended for the use of practitioners in the West Indies; but he would have been justified in appealing to a more widely spread circle of professional readers. He has, in fact, produced a standard book, containing in a well digested form all the information which has been obtained regarding the pathology, etiology, and treatment of leprosy up to the present time. The volume is enriched by twenty lithographic plates, coloured and plain, from original drawings and photographs of patients, and engravings from camera-lucida drawings of pathological specimens by Mr. Noble Smith, with explanatory remarks regarding the latter by Mr. Abraham. Of the merit of the plates it is impossible to speak too highly, and they greatly enhance the importance of the work. We cordially recommend the book to the attention of pathologists, and more especially to medical men practising in countries where leprosy prevails.

Recent investigations regarding the bacillus which has been found in leprosy tissues necessarily increase the interest which has always been taken in the alleged hereditary tendency of the disease, and as regards its supposed contagious qualities. Much information regarding these important questions is given by Mr. HILLIS, who has extracted it from various sources, and enlarged it by the valuable results of his own experience. In his own practice, he found that in 139 patients there were 31 in whom a history of hereditary tendency was made out. He reports 38 cases which seemed examples of apparently direct contagion, and 52 others regarding whom there was evidence that they had either lived amongst, or been in contact with, lepers. To use the author's words, "We have 92 cases out of 139, or 67.17 per cent., in which contact, more or less prolonged, of the unhealthy with the healthy, is given as the most probable factor in the propagation of the disease among them."

With regard to the specific treatment of leprosy, the author states that the only medicines from which he has derived any benefit are the gurgun and chaulmoogra oils; and of these two, the evidence tells most in favour of the former. At the leper asylum at Mahaica only gurgun oil is now used, after a fair trial of nearly every other recorded remedy. Mr. Hillis commenced the treatment of leprosy with the drug in March 1877, and records have been kept of all the cases so treated. These reports justify him in asserting of gurgun oil that, given a suitable case, the disease can be arrested by it. In a few cases thus treated there has been no return of the disease for over two years.

THE STUDENT'S HANDBOOK OF THE PRACTICE OF MEDICINE, DESIGNED FOR THE USE OF STUDENTS PREPARING FOR EXAMINATIONS. By H. AUBREY HUSBAND, M.B., etc. Third Edition. Edinburgh: E. and S. Livingstone.

It is always a difficult task to review a systematic treatise on medicine, as, knowing how dreary the task of compilation must be, we feel unwilling to complain of omissions and inaccuracies. But this difficulty is increased when the works come to us in the philanthropic guise of cram-books, or, to use our author's expression, "designed for the use of students preparing for examination."

With reference to cram-books generally, we may say that they are not altogether deserving of the sweeping condemnation they often meet with from reviewers. The fact that the subject of this notice has gone through two editions, points to their fulfilling a want. Medicine is a subject which the student is imbibing on all hands during his medical curriculum, and especially he learns much in the wards, the *post mortem* room, and the lecture-theatre. It is to be hoped, too, that even if not a reading man, he reads one of the instructive and interesting books on clinical medicine such as Trousseau, Gairdner, or Chambers. If he have done this, it is very possible that he may obtain great assistance by the use of a well compiled and thoroughly digested synopsis of the subject just before going up for examination.

Dr. HUSBAND's book is in many respects calculated to serve this purpose. It contains numerous tabular arrangements to aid the memory, and the subjects are well paragraphed and clearly headed; but it is by no means perfect. There are so many contradictory statements, due no doubt to admitted differences of opinion, but which

make the text somewhat difficult to follow, especially where they are given in the shape of very short quotations. There are many statements which cannot be called correct. For example, it is not correct to say that the "greater number of choreic patients have had an attack of acute rheumatism, and some amount of heart-affection as well," or that in diabetes "the kidneys are large, and are not unlike in appearance to the large white kidneys of Bright's disease," or that, "as a rule, general dropsy depends upon hydræmia," or that myocarditis is "an extremely rare affection." There is some curious Latin in the prescriptions at the end, which are written at length apparently as examples. We find *aquam rosam*, *misturam amygdalam*, *omni nocti*; *caryophyllum* spelt with an *i*, *aurantii* with one *i*; *aquam chloroformum*. These are errors of some importance in a book like this, although, from the same word being elsewhere written correctly, they are probably only printer's errors.

NOTES ON BOOKS.

Sanitary Houses, and How to Select One. By F. A. BOND, M.B. (London: Kegan Paul, Trench, and Co. 1882.)—This is an useful work. In every one of the sixty pages of which the pamphlet is composed, sterling facts and sound conclusions stand out; and the only fault that it has is that it is too cursory. The author very wisely advises his readers not to allow the owner of a property to dissuade him from opening up and examining the underground drains; that is to say, not to be content with the affirmation that they are all right, and have been already inspected. He also explains the soil upon which a house should be built, the dampness which should be overcome, the treatment of the walls, and the drainage generally, as well as giving excellent hints concerning the water-supply. We notice one very practical remark; and that is a recommendation not to go too near a drain with a naked light when it is opened up for the first time, lest there might be any gas which would induce an explosion. We have known men to be seriously hurt upon opening up floors during overtime hours at night, when they have come upon unexplored cesspools, of which no one was cognisant; and we have also seen an accident happen in broad daylight where a lighted match was used by a workman thoughtlessly, despite of a warning which he had received. We cordially recommend the book to medical students; but, before it can become a text-book, the subject must be treated in a detailed scientific manner. As it is, the book will serve to call attention to the vital importance of the subject.

Remarks on Climate in relation to Organic Nature. By Surgeon-General C. A. GORDON, M.D., C.B., Honorary Physician to Her Majesty the Queen.—It is impossible in the brief time allowed to a person reading a paper even to briefly consider the extensive subject above mentioned; still, there is a great deal of useful information collected in this pamphlet. After a few preliminary remarks, Dr. Gordon gives a definition of climate, showing that not only the meteorological elements, but the soil and surroundings, have to be taken into consideration. There is nothing new in the definition; but it is as well to remember that the climate of a locality depends on other causes than meteorological phenomena. Dr. Gordon especially mentions the alterations that have occurred in the climate of parts of India, Persia, Greece, and in the vicinity of the Pyrenees, by cutting down the old forests; whilst in parts of America the climate has been much improved by the same cause. He then considers the effects of climate on vegetable life, giving instances of the great alterations produced by removal to other climates. He then mentions the changes in animal life, and asks if "these phenomena are so many of a series all due to evolution?" but is of opinion that no satisfactory answer can be at present given to this query. Referring to varying meteorological conditions, and to seasonal changes, and their effects on animal life, he notices the occurrence of plagues of locusts and other insects; of splenic apoplexy amongst cattle; of fevers, cholera, and other diseases of man, which are periodically or only occasionally prevalent in connection with the climate of different localities. He then notices the prevalent diseases of England, and their times of maximum and minimum fatality, and concludes by touching upon the subject of the acclimatisation of man. Under this heading, he points out that, although the phenomena of organic existence in man and creation generally are to a great extent determined by climatic, seasonal, and other conditions incidental to particular localities, yet man has, within certain limits, the power of modifying the effects of these conditions in his own person. As especial proof of this, he mentions the fact of the white Jews at Cochín, who fled from Syria, and have inhabited the spot since A.D. 70, and yet remain as pure in race as when they left their native land.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 2ND, 1882.

THE CAMPAIGN IN EGYPT: CLIMATE OF ALEXANDRIA AND CAIRO.

ONE of the most dangerous enemies to be encountered in Egypt is the climate. The Meteorological Society of Austria has recently published the results of a series of observations made under its auspices at Alexandria and elsewhere, during a period of seven years, commencing in 1875; they afford useful information on the climate of Lower Egypt. (*Meteorologische Beobachtungen über sechzehn Stationen in Oesterreich, und drei Stationen (Alexandria, Beirut, and Sulina) in Ausland.* Wien, 1875-1882.) The observations were taken at nine o'clock in the morning, and nine in the evening. They close with the end of last May. We avail ourselves of an abstract in the *Revue des Sciences*.

The climate of Alexandria is characterised by the equality of atmospheric pressure, a character which is reproduced from year to year. This pressure reaches its maximum (30.15 inches) in January, and its minimum (29.84 inches) in July, a difference of 0.31 inch. At Cairo, the difference between the barometric pressure in winter and that in summer is a little greater = 0.32 inch; this is due to the lower pressure observed during summer in the latter city. The lowering of pressure, more and more marked during the summer, in proportion as we advance into the interior, is an important element in the meteorology of Lower Egypt, in respect to the changing of winds which are the consequences of it. During the three winter months, south-east, south, and south-west winds have been found to prevail in the morning during twenty-seven days; north-west, north, and north-east, during twenty-eight days. During the three summer months, there have been no south winds; north-west, north, and north-east, have blown for seventy-nine days. In a general way, the direction of the winds is south and north in winter, north in summer, north and east in spring and during the months of October and November. The preponderance of east winds is, at this period of the year, a general characteristic of the climatology of a large part of the Levant. In autumn, the east winds are accompanied by a higher temperature.

In the afternoon, the wind blows at all seasons from some point of the north, except in winter, when west wind is observed sixteen times against north wind thirty times. In the hottest months, the wind blows always from the north. It is stronger in the afternoon than in the morning. Thus the morning observations give forty-eight calm days during the year, while those in the afternoon only give eighteen. For seven months, from May to October, two days of calm were observed in the afternoon, and thirty in the morning.

By the side of these changes in the direction of the winds, it is interesting to study the hygrometric state of the air. The minimum point, 66, was observed in the winter; but as the wind turns to the north, the humidity gradually rises, and it reaches its maximum, 76, in July. The air reaches, therefore, its maximum of saturation in summer; this is also the period when the sky is clearest. Thus the mean of cloudy weather in winter indicates that four-tenths of the sky was overcast, while in summer it only indicates a proportion of one-tenth. The relation between the humidity of the air and the purity of the

atmosphere is a characteristic of the climate of Alexandria. Thus the heat produced by the direct rays of the sun is much less intense than the clearness of the sky and the latitude would give reason to suppose.

The mean annual temperature is 68.5° Fahr.; the minimum temperature, 57.5°, was observed in January; the maximum temperature, 78.8°, in August. The coldest day in January (54° Fahr.) was noted in 1880, and the hottest, 61.16°, in 1881, a difference of 7.16° Fahr. Such differences are not observed during the summer months. Thus the coolest temperature in August was 77.35° in 1876, and the hottest, 79°, in 1880, a difference of only 1.65°.

At Cairo the differences of temperature are much greater. The daily elevation is sensibly greater than at Alexandria. The mean temperature of January is 54°; that of August 84.4°. In respect to the monthly variations from year to year, the mean of January was 50° in 1880, and 59° in 1881; that of August 80.6° in 1876, and 90.7° in 1877. The differences of temperature were, therefore, respectively for the two seasons 9° and 10.1°. At Alexandria, the mean quantity of rain which fell during the year was 7.87 inches in 44 days. The greatest quantity of rain which fell in one year was 10.75 inches in 1866; the least was 3.42 inches in 1879. The heaviest rainfall was in January, when the mean was 1.95 inches. In February it was 1.45 inches; in March, 0.7 inch; in April, 0.15 inch; in May and in September, 0.02 inch; in June, July, and August there was no rain; in October the rainfall was 0.57 inch; in November it was 1.5 inches; December alone 1.7 inches. It is rare for rain to fall continuously in great abundance. During the seven and a half years that these observations lasted, the quantity of rain which fell was only 0.98 inch on thirteen occasions. On October 7th, 1866, nearly three inches of rain fell. There were only nine days of storm in the whole seven years, and only eight days on which thunder and lightning were observed.

The following peculiarities in the annual course of temperature deserve notice. The mean temperature of June is 74.5° Fahr., of July 77.36°, of August 78.8°, of September 77.54°, of October 74.3°. Thus, it will be seen, September is hotter than July, and October almost as hot as June. This peculiarity is the more striking, when only the maximum temperatures of each day are examined. The following are the mean and maximal temperatures week by week from July 1st to October 27th. It will be remarked that the highest temperatures were observed at the end of September and in the first half of October; that the highest temperature observed (102.9° Fahr.) was that of October 11th, 1877; and that the highest weekly mean temperatures, that of the last week of August (83.6°) was almost equalled by that of the first week of October.

1876-81.	Temperature.	
	Mean. Degrees.	Maximum. Degrees.
July 1st to 7th	80.24	86.16
„ 8th to 14th	80.6	83.84
„ 15th to 21st	81.5	86.18
„ 22nd to 28th.....	81.68	88
„ 29th to August 4th	81.78	86.1
August 5th to 11th.....	81.86	87
„ 12th to 18th.....	82.18	86.1
„ 19th to 25th.....	82	97.16
„ 26th to September 1st	83.3	90
September 2nd to 8th	82.4	95
„ 9th to 15th	83.3	94
„ 16th to 22nd.....	82.4	88
„ 23rd to 29th.....	83.3	97.88
„ 30th to October 6th.....	83.3	97.88
October 7th to 13th	82.0	103.1
„ 14th to 20th	79.7	87.26
„ 21st to 27th	79.16	83.84

It must be noted, also, that up to the middle of October the temperature is almost as high as in July, but that after this period it falls rapidly. This is not a fact peculiar to the years during which these observations were carried on, for it is found constantly every year; it is observed also in the temperature of Jerusalem and of other cities of the East. From May to September inclusive no rain falls. The precise

date at which the rainy season commences varies a good deal from year to year. The following is the date, in each of the seven years observed, of the first day on which more than one-tenth of an inch of rain fell: on November 4th, 1875, 0.18 inch; on October 7th, 1876, nearly 3 inches; on October 16th, 1877, 0.22 inch; on November 29th, 1878, 0.9 inch; on December 20th, 1879, 0.27 inch; on September 15th, 1880, 0.15 inch. After this rain on September 15th, it rained for the second time on November 27th, 1880 (0.14 inch); for the third time on November 15th, 1881 (0.32 inch). Setting aside the little rain of 1880, the end of the dry season would be, at the earliest, October 7th; at the latest, December 20th; on an average, November 12th.

On advancing from the Mediterranean into the interior, the climate changes rapidly. Rain becomes more and more rare and ceases completely, the air becomes drier, the sky clearer, the heat of the sun greater, the nights colder, and the daily rise of temperature more considerable. At Cairo, the total quantity of water which falls is quite insignificant. Occasionally, however, there are abundant rains. Thus on January 10th, 1870, there fell 1.02 inches of rain, and on May 3rd of the same year 0.67 inch. This year, 1882, from January to May, the quantity of rain which fell reached 1.15 inches, of which 0.8 inch fell between one and seven o'clock in the evening of April 1st.

The temperature in Cairo rose as high as 112.64° Fahr. on June 5th, 1872; 113.18° on May 25th, 1873; 116.42° on May 20th, 1869. The highest temperature which has been observed in Alexandria was 103.1°. During September and October, the mean temperature of the two cities is almost the same, with a difference, however, which must not be lost sight of: at Cairo, the days are much hotter and the nights much colder than at Alexandria. It is necessary, therefore, to take great precautions during the night, and avoid the chills which are the cause of diarrhoea and other fatal diseases in armies campaigning in a climate such as that of Egypt.

PHASES OF PHARMACY.

THE relations of pharmacists to medical practitioners are sufficiently close to give practical interest to the enunciation, by one of the most enlightened members of the pharmaceutical body, of his views on the relations of pharmacy to the State and to the medical profession. Professor Attfield has the advantage of being a representative of the highest development of the pharmaceutical chemist; and, moreover, of representing him on the professorial rather than on the commercial side. He possesses all the educational advantages to which the ideal pharmaceutical chemist can aspire, and is himself what he wishes all his fellows to be, at least as much a chemist as a compounder of drugs, and more general in his relations with the scientific classes and the world at large than the pharmacist and chemist of to-day can claim to be.

With all that Professor Attfield claims of botanical and chemical learning for his clients—for it is in this sense, rather than as one of them, that he represents the body over whom he presides—he will find many to sympathise, and some to help. British pharmacy is not, we fancy, so near the type of intelligent research and well developed scientific ardour as the pharmacy of France and Germany. How much of our progress in extracting active principles, in preparing new alkaloids, or researches into old is due to the British chemist and druggist? Hanbury, Mawson, and Deane, are names not without parallel in the ranks of living pharmacists. But, notwithstanding the fact that London is the centre of the commerce in drugs, and that our world-covering colonies and ubiquitous commerce bring rich freights of strange drugs, and rare specimens of vegetable products, it would not be easy to show such activity in London as is comparable to such as that of Merck in Darmstadt, or to satisfy the impartial observer that the British pharmacist exceeds in just degree his brothers in France and Germany in extent, activity, and exactness of inquiry in his own proper field of work. To such exhortation, as befits a president and patriot, Professor Attfield was therefore well advised to lean; it may be hoped that his words will have fallen upon willing ears. The funds of the Pharmaceutical Society are ample, and the liberal encouragement of research along these

purer paths of pharmaceutical progress would strengthen its claims to be heard when pleading for that increase of power, and multiplication of monopolies, which all chartered bodies seem by nature to crave, and by social conditions with increasing success to claim.

In treading this ground, however, Dr. Attfield must have felt his footsteps less secure. He walks with less ease, and will find fewer to follow him. The views which he expresses are those which have been stated recently by persons of some authority among pharmacists. He urged the necessity of further restrictions on the sale of poisons, and of so amending the Pharmacy Act as to prevent the sale of drugs by unqualified persons. The only way, he said, in which the welfare of the public, so far as it was affected by drugs, could be provided for, and harm to the public, as far as it might come from drugs, be provided against, was not only to enact that druggists must be qualified, but that drugs must not be sold by unqualified persons. This was already enacted for a certain small number of drugs, named in a schedule to the Pharmacy Act of 1868, and deemed poisons. So far so good. But all drugs were, more or less, poisons. The sale of all drugs should be thus restricted. If there were any substances sometimes used as drugs, but so harmless, and so generally used for other purposes, that to restrict their sale would be inconvenient to the public, let such drugs alone be scheduled as those which might be sold by unqualified persons. A Pharmacy Act which provided for the qualification of vendors of drugs, but contained no clause preventing the sale of drugs by unqualified persons, was incomplete; and if our own Pharmacy Acts were thus incomplete, the sooner they were rendered complete by an extended Pharmacy Act, the better for the State, the pharmacist, and the public.

It may, however, pertinently be pointed out in the first place, that the Pharmaceutical Society has already the duty of watching the Poisons Act, and recommending any extension of the schedules, a function which it has lately been called upon by the Home Secretary to exercise. It is, however, apparently more inclined to impose shackles upon others than to consent to fetter in any degree the members of its own body. It has, we believe, reported against any additional precautions against abuse of the sale of poisons by "qualified pharmacists;" while, on the other hand, Professor Attfield recommends that the word poisons should be made practically co-extensive in its meaning with the word drug, and that the State should create an exclusive monopoly for the registered chemist and druggist. It may be pointed out that this is more than is done in similar lines for the medical profession. The false assumption of titles is prohibited in the one as in the other, and much more effectively for the "chemist," "druggist," and "pharmaceutical chemist" than for the medical man, in whose case the claim to registration only and the scientific designations are protected, designations of common parlance being left dangerously open.

It would, apparently, not suit the views of Dr. Attfield's clients that this should be otherwise; or that the poaching propensities of the pharmacist should be obstructed by the protection of medical practitioners to a like extent to that which pharmacists now enjoy without feeling content.

He would protect counter-practice, while he would put a bar on co-operative distribution of drugs. The usual platitudes are introduced of prudent limitation of the amount of medical practice in which chemists and druggists should "indulge." The druggists' recommendation of simple remedies is to be "founded on that knowledge and experience which comes of much pharmaceutical familiarity with remedies," and on "common sense and perception in all that relates to drugs." There is here a suggestive looseness of phraseology, and a semi-ironical confusion of meaning. The pharmacist's familiarity with drugs is limited to their pharmaceutical ideas of their solubility, combinations, and incompatibilities; of flavours, properties, and activities, he is bound to know something, and may know much; of the diagnosis, interpretation, and forecasting of the states of diseases to which they are applicable, he knows as a pharmacist nothing; and as to what he thinks he

knows, as a matter of "common sense and perception," he would be a wiser and far less dangerous person if he knew enough to tell him that his knowledge is more dangerous than other people's ignorance. The gimlet-eye which across the counter penetrates the secrets of his customer's ailments, which can at a glance distinguish "sore-throat" from scarlet fever, "a rash" from measles, a "shivering cold" from incipient typhoid, is the peculiar and disastrous possession of the chemist whom Dr. Attfield cautions while he encourages him. It is the common curse of poor neighbourhoods, and the fertile cause of misery to the deluded bread-winner, whose ignorance leads him to place just that reliance on the "common sense and perception" of the half-educated pretender, which so often costs him and his family dear, and makes his home the scene of disaster and the centre of infection. Stern reprobation of a practice, deceitful in its pretences and dangerous in its consequences, would better have become the president of such a conference, and would better harmonise with the high attainments, technical skill, and scientific capacity of the orator. It may be doubted whether it would not better support even the narrowest and most selfish interests of the pharmaceutical body. It is curious to note how, to the mind of those publicists who view these subjects from the rigidly economical view of some other school of wider thought, the suggestions of an encroaching monopoly, such as are apparent in Professor Attfield's address, open quite an opposite current of thought to that on which he is embarked, and lead to quite different conclusions. One of the ablest organs of this school comments thus upon the oration:

"The address of Professor Attfield to the Pharmaceutical Conference, though at first sight uninteresting, discloses a side of the social problem of to-day which will have to be solved practically sooner or later. The existence of higher branches of professions can only be justified now-a-days on economical principles. With the increase of knowledge, the lower branch is capable of performing all but the very best work of the higher, from which alone it is debarred by artificial restrictions. The patent-medicine vendors have impinged on the druggists, and the druggists now wish to intrude on the domain of the doctors, just as accountants and house-agents are invading the domain of the solicitor, and the latter of the junior barrister. Every man's hand is against his fellow's in the competition of life, and year by year seems to point out that the solution ought not to be delayed, and that the principles of free trade ought to be extended to professions. But that is a revolution the full effect of which has been only imperfectly realised, even by those who demand it."

It is not the first time that a vaulting ambition has threatened to overleap itself; and it may be well for the pharmacists to be warned that in coveting counter-practice they are asking for what may prove to be a fatal accession, since there are those ready to ask—if druggists may prescribe, why may not grocers sell drugs?

USELESS KNOWLEDGE.

It was characteristic of the man—of his patience, of his comprehensiveness, of his insight, and of the modesty that invariably accompanies these qualities of mind—that even at an after-dinner speech Sir James Paget should deliver the pregnant remarks on useless knowledge which we printed on Aug. 19th. The burden of his speech was exactly what might have been expected of the distinguished author of the *Surgical Pathology*, the thesis maintained by all patient inquirers into the course of natural phenomena, but yet often forgotten by the run of common minds: that knowledge must be pursued for its own sake, and apart altogether from any hope of its being applied to utilitarian purposes. Thinkers of all kinds, poets, philosophers, and scientific men, have from time to time raised their voice in the same cause. Even an age in which discoveries in such mysterious domains as those of heat, light, electricity, energy, and vitality have been seized upon by practical minds and applied to utilitarian purposes, is compelled to admit the cogency of the contention. Such an age probably requires to be reminded of its truth, in proportion to the very adaptation to daily life that is made of what appear to be abstract pursuits, and in proportion to the contempt which transcendental inquiries receive from some narrow-minded scientists. The honest pursuit of any line of inquiry,

indeed, may be called utilitarian, inasmuch as it expands the mind of the student, and tends to make him feel his weakness and even impotence in presence of the vastness and strength of nature. But this result, again, while the few have no need to be reminded of it, has not commended itself to the many as an object particularly worth striving after; and in any case the conscious effort to attain it would to some extent lower the dignity of the end reached. Probably no idea is more frequently forced upon the attention of the investigator of nature, than that harmony of all its parts which deeper inquiry is constantly eliciting.

In its philosophical aspect, it is probable that this inference has not received the attention it merits. But however this may be, examples are not wanting (as in the nature of things they could not be wanting) of studies long looked upon as simply curious, or amusing, or even futile, being found to have important practical results. The most striking instance of this, as it is also the best known, is the use to which the purely speculative inquiries of the ancient mathematicians into the properties of the conic section were put in their modern application to the motions of the heavenly bodies. With this kind of instance in our minds, we need never fear lest any inquiry, however far removed from the interests of daily life it may appear, must necessarily be without practical application; and therefore we need not perpetrate the audacity of condemning it on this ground alone. Schleiden and Schwann, when they stated their theory of the cell-structure of organisation, now some half a century ago, could not foresee the uses to which Virchow would apply it not many years after; while the practical application of the last thinker's views to therapeutics cannot yet be predicted by any living scientific man. And even the last great thinker whose remains have just been consigned to Westminster Abbey, and with whose name the idea of evolution is most emphatically associated, even he himself could not foresee the revolution to be effected in the near future of medicine by the application of the evolution-theory to the study of disease.

It is here that another point made by the speaker, in his few and brief remarks, presses itself on our attention. The first requisite, not only for the establishment of a new view, but even for the trustworthy description of that portion of nature with which we are immediately concerned, is accuracy, first, of observation, and next of statement. "With our increased means of publishing," says Sir James Paget, "the publishing of error is quite as easy as the publishing of exact truth; and everything published has to be scrutinised with the most exact care, for the error that may be mingled with it." The members of the medical profession are, we believe, becoming more and more alive to the paramount necessity for accuracy of description; but it is well that, in public as well as private circles, the necessity should be emphasised. We would commend a study of this short speech to those who occasionally tell us that medical descriptions are too detailed.

Of the application of the words of Sir James to what may be called the grosser forms of utilitarianism, we hope we need not say much to the medical profession. Medicine ought not to be pursued merely as a means of making a livelihood, albeit the labourer is worthy of his hire. We are at least certain that discoveries made for the express purpose of filling the pockets of the discoverers will always betray their mean origin somewhere to him who takes the pains to sift them; and while we believe that the true prosecution of the science of medicine for its own sake will not fail of attracting its natural reward, we yet trust that the number of those who enter its portals from motives of personal aggrandisement will remain infinitesimally small.

GENERAL GORDON AND THE MEDICAL DEPARTMENT OF THE CAPE COLONIAL FORCE.

INTELLIGENCE has just reached us from the Cape of Good Hope that has caused us extreme surprise. Most of our readers are aware that the Colonial Government have called to their assistance in the government of Basutoland General Gordon, R.E., well known as the famous commander of the "ever victorious army," and for the military genius

he displayed in the suppression of the Taeping rebellion. This officer subsequently served the Government of Egypt as Governor of the Soudan; and, in defiance of a most unhealthy climate, which carried off all, or nearly all, his European assistants, he devoted all his energy, military knowledge, and administrative skill to the suppression of the slave-trade. It is beside our purpose to discuss the question of his success in this arduous and, as regards the Government he served, thankless undertaking. General Gordon subsequently went to India with the Marquis of Ripon, as private secretary. All the world remembers that he held that office in India for about ten days, and the remarkable letter which he published giving his reasons for resigning this appointment astonished all but those intimately acquainted with the mental peculiarities of this distinguished man. On his return to this country, General Gordon, after a ten days' residence in Bombay, made known his opinion that all the officials in India might be divided into two classes—"fools and knaves!" This is not the place to discuss this sweeping judgment, which is only calculated to raise a smile on the part of those who have the slightest knowledge of the administration of India—perhaps the ablest, certainly the purest, in the world. It is one of General Gordon's opinions that everyone who serves the State is overpaid. Despising money himself, having the simplest tastes, declining in every place and on all occasions to enter into society, or to hold social intercourse with his kind, other than the transaction of necessary business requires, and having neither wife nor child, his wants are few, and it is with him a fixed opinion that, as he is, so should all the world be. On this opinion he consistently acts, refusing invariably to accept the full remuneration of the office he holds. From the Government of China, to which he rendered such priceless service, he accepted only the pay of a captain of Engineers; from the Khedive of Egypt less than a third of the remuneration enjoyed by his predecessor; and in his present position he has acted on the same principle.

Without some knowledge of the above facts, it would be difficult to understand what follows. As soon as General Gordon was appointed to the office he now holds, he proceeded to carry out his opinions, announcing that this office was superfluous, that the other was overpaid, and so on. The Cape Government has on its frontier troublesome neighbours, and within its border some native tribes lately at war with the colonists. A colonial force was embodied for the protection of the colony, and to this was attached a Medical Department, with, of course, a chief. One of General Gordon's "reforms" was to pronounce a chief of the Medical Department to be a superfluity, and he accordingly advised the Colonial Government to suppress this officer, and to leave this important department of the military organisation without a head. It appears that Dr. Hartley, the medical superintendent of the colonial forces, as soon as he heard that such was the recommendation of the General, at once retired, and the colonial forces have now a Medical Department without a head. This recommendation, coming from an officer of General Gordon's military capacity and experience, has caused, as well it might, extreme surprise in the colony, where the services of the late chief of the Medical Department were well known and highly appreciated. We are not informed how the General proposes to provide for the duties lately so well discharged by Dr. Hartley. General Gordon is a very religious man, and it is a part of his religion to believe in his own infallibility, and we have no doubt he believes in his own capacity to direct the medical service of the force under his command without advice or assistance. Now, we have a high respect for General Gordon, but we do not think him infallible. We venture to remind him, and those who in this matter act on his advice, that there is no royal road to matters of military medical knowledge and administration. Soldiers as great as he is have tried their hands at it, and the result has been—as it always will be—failure; and we all know what failure in this particular means—it means suffering and death to hundreds and thousands of sick and wounded soldiers.

WE are glad to hear that His Royal Highness the Duke of Albany is recovering from his indisposition, and will probably be able to take his projected yachting trip in the course of a few days.

AN inquiry, ordered by the Local Government Board, is being held at Norwich respecting the deaths of several children, which are alleged to have been caused by erysipelas following vaccination.

FROM an official document just issued, it appears that in England and Wales last year there were held 27,466 coroners' inquests, and in the preceding year 26,588.

AT the last meeting of the Bangor Local Board, it was stated that no fresh cases of typhoid fever had been reported, and that there was every reason to believe that the disease was abating. The schools in the town are still closed.

THE library and museum of the Royal College of Surgeons of England will be closed from this day (Friday) until Monday, October 2nd. The museum may remain closed a little longer, owing to the extensive repairs.

AMONG the grants of the British Association, voted on Wednesday, are the following: Professor Ray Lankester, table at the Zoological Station at Naples, £80; Dr. Pye-Smith, Scottish Zoological Station, £25; Dr. Pye-Smith, Influence of Bodily Exercise on the Elimination of Nitrogen, £30.

THERE has been a very satisfactory progress in the vaccine operations in Coorg during 1881. Improvement is exhibited both in the number of operations, which rose from 3,808 to 4,887, and in the percentage of successful cases, which was 90.11—the highest on record—against 88.5 in the previous year.

A TELEGRAM from St. Petersburg reports that the Siberian plague is manifesting itself in an unusually widespread and alarming manner. Reports of its appearance have been received from the most widely separated quarters of European Russia, and a case of death from the pestilence is announced from Odessa.

THE meeting of the Social Science Association, which will be held in Nottingham during the week from September 20th to 27th, will be the twenty-fifth anniversary. It will be presided over by Mr. G. W. Hastings, M.P., who was one of the founders, and the first secretary, of the Association.

IN the Health Department, three special questions have been put down for discussion; viz., 1. How does the employment of mothers in mills and manufactures influence infant mortality, and ought any, and if so what, restrictions to be placed on such employment? 2. What reforms are desirable in the administration of hospitals? 3. What are the advantages of a system of notification of infectious diseases, and what are the best means of carrying the same into execution?

IT may be expected that the discussion on the last named of these subjects will be an animated one; there being a considerable divergence of opinion between some of the leading members of the Association and a large section of the medical profession. The result of the recent discussion of the subject at Worcester will probably not be without its influence.

LORD and LADY BRABAZON have presented the London Ambulance Service with a horse ambulance carriage, to be placed at the Police-station at Carter Street, Lambeth, for the benefit of persons in that neighbourhood suffering from injury and non-infectious illness. An-

other carriage, the gift of Mr. J. H. Crossman, will shortly be placed at Stoke Newington Police-station.

THE war authorities, after an examination by the Medical Department, have dispatched in the *Irthington* a first instalment of Gilbert's patent refrigerators, manufactured by the Patent Improved "Dry Cold Air" Refrigerating Company. These refrigerators have been specially provided with patent carbon blocks, thus rendering the water filtered by the carbon perfectly pure and wholesome.

At the meeting of the British Association for the Advancement of Science, Dr. Spencer Cobbold read a paper in the Section of Zoology and Botany, "On the Injurious Parasites of Egypt in Relation to Water Drinking." Egypt, he said, swarmed with parasites not known to occur in any other part of the world, and this necessitated great care in selecting drinking water.

We learn with extreme regret that the publication of the *Bulletin* of the United States National Board of Health has been suspended for lack of funds. The *Bulletin* was done so well, and the information it gave so complete and interesting, that it is to be hoped some vigorous efforts for its resuscitation will be made before its merits are clean forgotten by those having control of the purse-strings.

CHOLERA IN SIAM.

DURING the latter part of the summer of 1881, Siam was visited with a severe epidemic of cholera. It commenced up country, but, travelling southward, left no part of the kingdom unvisited; while at Bangkok itself the deaths, European and native, averaged for a considerable period a hundred a day. On the setting in of the autumn rains the violence of the epidemic subsided; but the disease has remained epidemic, though in a sporadic form, ever since.

CHOLERA IN THE PHILIPPINES.

OFFICIAL dispatches have been received at Madrid from the Philippine Islands confirming the increase of cholera, and causing great alarm. Hitherto only natives had been attacked, but the deaths of several Europeans are now reported. Four thousand natives have died from cholera in a single province. The epidemic is, however, believed to be now decreasing. The Government have adopted most stringent measures regarding vessels arriving at Spanish ports from the East.

AMPUTATION AT THE HIP-JOINT.

A SECOND case of amputation at the hip-joint has been performed at the South Devon Hospital within the last month. The first case, by Mr. Paul Swain, for exhausting suppuration of the limb, is quite convalescent. The second, by Mr. Square, for rapidly growing malignant tumour of the shaft of the femur, in a man aged 19, is progressing favourably towards recovery. In both cases, Davy's lever was used to control the artery with success.

TYPHOID FEVER IN PARIS.

THE weekly returns of mortality issued by the Parisian municipality show that a serious outbreak of typhoid fever has declared itself in the French capital, and has for some time past been assuming more alarming proportions. The progress of the epidemic may be inferred from the fact that the total number of deaths in Paris in the thirty-third week of this year numbered 1,100, against 986 in the most unfavourable of the four preceding weeks, and that out of that number 106 are attributed to typhoid fever, against 47 during the preceding week. On August 13th, there were 637 persons suffering from typhoid fever in the hospitals alone.

NEW INFIRMARY FOR STRATFORD-ON-AVON.

At the annual meeting of the governors of the Stratford-on-Avon Infirmary, held on August 28th, Dr. Kingsley, senior physician,

announced that through the munificent generosity of a family, whose name he was not then at liberty to mention, he offered to the governors a building site, free from all charges, upon which to erect a new infirmary, and a donation of £6,000, in the form of a cash deposit at the bank to the credit of the committee, for the purpose of furthering the completion of their new buildings. This liberal offer was most gratefully accepted. The building site, which is nearly four acres in extent, is admirably suited for the purpose proposed.

A NEW PHARMACOPEIA FOR GREECE.

THE *Pharmaceutical Journal* learns from an esteemed correspondent, Professor Xavier Landerer of Athens, that a Commission has just been entrusted by the Government with the task of elaborating a new Greek Pharmacopœia. The first official Greek Pharmacopœia made its appearance in the year 1837, and was compiled by John Bourous, Xavier Landerer, and Josef Sartorios. In 1868, this work was reprinted, with an appendix, by Professor Landerer, describing the more recent remedies, and containing an etymological dictionary of names of botanical, zoological, and mineral substances, and a list of antidotes. This work is still in common use throughout Greece, as well as in Asia Minor, and also to some extent in Constantinople; but, in Turkey, Dorvault's *L'Officine* is the work usually consulted.

THE NOTIFICATION OF INFECTIOUS DISEASES.

DR. SPOTTISWOODE CAMERON gives, in his last report, a very satisfactory report of the working of the clause of the Huddersfield local Act, requiring the compulsory notification of infectious disease. He observes that the public are coming to look upon the reporting of infectious disease as the natural order of things; and, though there have been a few instances where notice has not been sent, these have been the exception instead of the rule. Medical men say they find less difficulty about reporting cases, when the responsibility of deciding whether the isolation is sufficient is shifted from their shoulders to those of the health-officer. Householders make fewer objections to the reporting of such cases, when they see that the law applies to the rich and poor alike, and that the reporting does not of itself necessitate the removal of the patient.

NURSES FOR EGYPT.

THE Secretary of State for War has written to Viscountess Strangford, conveying his concurrence in the scheme of the St. John Ambulance Association for the Relief of the Sick and Distressed Egyptians, and stating that the principal medical officer in Egypt will be requested to afford to Lady Strangford all the assistance which the medical staff might be in a position to render. The Khedive, we are informed, has accepted with pleasure the proposal to send out a detachment of lady nurses, and has ordered £250 worth of surgical instruments and hospital stores to be immediately sent from London to Alexandria. A correspondent in Alexandria, who has taken much trouble in the matter, recommends that the nurses should bring with them a handy mechanic, with a few tools, to make such things as wire-splints from telegraph wires, cradles, swings, etc., as skilled labour is at present not to be obtained in Alexandria. For their personal use and comfort, the nurses should also have mosquito-nets, carbolic soap, and plenty of toilet-powder.

CRIMINAL HEREDITY.

MOST readers are acquainted with the history of "Margaret, the Mother of Criminals", as she has been called, who was born in a village on the Hudson river, in the northern part of the State of New York, about one hundred years ago. Dr. Elisha Harris, of the city of New York, is authority for the following statement, which is the result of his personal inquiries.

"Margaret was a pauper child, left adrift in one of the villages on the upper Hudson, about ninety years ago. There was no almshouse in the place, and she was made a subject of out-door relief, receiving

occasionally food and clothing from the town officials, but was never educated nor sheltered in a proper home. She became the mother of a long race of criminals and paupers, which has cursed the county ever since. The county records show two hundred of her descendants have been criminals. In one generation of her unhappy line, there are twenty children, of whom seventeen lived to maturity. Nine served terms aggregating fifty years in the State Prison for high crimes, and all the others were frequent inmates of gaols and almshouses. It is said that of the six hundred and twenty-three descendants of this out-cast girl, two hundred committed crimes which brought them upon the court records, and most of the others were idiots, drunkards, lunatics, paupers, or prostitutes. The cost to the county of this race of criminals and paupers is estimated as at least 100,000 dollars, taking no account of the damage they inflicted upon property, and the suffering and degradation they caused in others."

THE EPIDEMIC OF VARIOLA AT WEDNESBURY.

IN his report, dated August 28th, to the local board, the medical officer of health for Wednesbury, Mr. Garman, stated that five deaths from small-pox had been recorded during the previous fortnight. He still considered the disease to be increasing in numbers and severity. Within the last fortnight, fifty-one fresh cases had been reported to him by the medical practitioners of the town and district; all the cases occurred within the parish of Wednesbury; and, of the fifty-one patients, twenty were paupers. The end of the sixth month of the epidemic had now been reached, and the number of cases of variola had so far increased that, including convalescents, he had had sixty cases under his personal observation during the past two weeks. Revaccination was being pressed. The tent hospital was progressing towards completion, and he was anxious for the time to come when it could be used for the isolation and relief of patients. We learn that the new cases of small-pox arising within the parish of Wednesbury now number at least one hundred a month. We are greatly surprised that the local sanitary authorities have not yet, after the epidemic has lasted six months, and when it is undoubtedly spreading, provided the only completely efficient means for stamping out the disease, namely, an isolation hospital for the early separation of cases as they arise.

A MUSEUM OF HYGIENE.

WE have received the following circular, issued by the Navy Department of the United States, which we have pleasure in publishing. The object for which this museum is founded is one of interest and importance.

"Navy Department, Bureau of Medicine and Surgery, Washington, January 10th, 1882.—The Surgeon-General of the Navy has established a Museum of Hygiene connected with this bureau, which the American Public Health Association has made its permanent central repository. It is intended that it shall exhibit the present state and future progress of the nation in all departments of hygiene, and to carry out this important scheme the co-operation of physicians, engineers, architects, builders, manufacturers, inventors, and others interested in sanitary matters, is not only desirable, but indispensable. Contributions of articles, appliances, models, drawings, etc., illustrating improvements in food, water-supply, bedding, clothing, marine architecture, house and hospital construction and furniture; apparatus for heating, illumination, ventilation, and removal of excreta and refuse; culinary, laundry, and bath facilities; appliances for physical culture and exercise; and whatever else tends to the preservation of health and the prevention of disease, are therefore solicited.

"Contributions should be sent to the address of the Surgeon-General of the Navy. Loans and depositors will, in every case, be duly credited on the descriptive labels of their exhibits.—PHILIP S. WALES, Surgeon-General, U.S. Navy."

EMIGRATION FROM LIVERPOOL.

DR. BLAXALL, one of the medical inspectors of the Local Government Board, accompanied by Captain Wilson, representing the Board of Trade, held, at Liverpool, last week, an inquiry into the system of emigration from that port. Several persons attended, connected with the corporation and shipping interest, and also in connection with the boarding-houses where the emigrants are principally lodged on their

arrival here. The inspector stated that the object of his visit was to inquire with regard to certain sanitary questions connected with emigration, and as to the circumstances in which emigrants passing through the port of Liverpool were placed before sailing. He was likewise instructed to inquire as to the provision made for the isolation and treatment of sick persons arriving from infected places on the Continent or in the United Kingdom; and, further, as to the sanitary arrangements and supervision of the lodging-houses into which emigrants were received, and the means taken with respect to infectious diseases occurring therein. It was intended that the inquiry should be directed to an investigation of the sanitary conditions under which these people were placed; and special account would be taken of their vaccination and revaccination. After some of the gentlemen who attended had given evidence, a conference was held on the subject set down for investigation; and the proceedings, which did not last more than an hour, then closed. It was understood that the inspector will shortly present a report on the result of his visit.

MANUAL OF THE SOCIAL SCIENCE ASSOCIATION.

THE approach of the twenty-fifth anniversary of the Social Science Association has induced the Secretary, Mr. J. Clifford-Smith, to compile a very interesting manual, giving a narrative of the origin and history of the Association, and of the principal work which it has done in the several departments. Copious references to the volumes of *Transactions* and *Sessional Proceedings* are given throughout. Under the head Public Health, is given a summary of the proceedings of the Association with regard to the following subjects: Public Health Acts; Adulteration of Food; Quarantine; Registration of Births and Deaths; Indian Army Sanitary Commission; Hospitals; Health of Merchant Seamen; Loss of Life at Sea; Cholera; Artisans' Dwellings; Mines; State Medicine; Baby-Farming and Registration of Nurses; Water-Supply; Habitual Drunkards; Pollution of Rivers; Inspection of Lodging-Houses and Hotels; Compulsory Notification of Infectious Diseases; Canal and River Population; Adjustment of Areas; Building By-Laws; Provident Dispensaries; and Smoke Abatement. Those who wish to obtain a concise view of what the Association has been doing during the twenty-five years of its existence, cannot do better than procure this manual. It can be obtained on application to Mr. Clifford-Smith at the office of the Association, Adam Street, Adelphi. The book contains photographs of the founders of the Association—Lord Brougham and Mr. George Hastings, M.P.

TYPHUS FEVER IN LIVERPOOL.

AT a recent weekly meeting of the Liverpool Health Committee, Dr. J. Stopford Taylor, the medical officer, presented a report with reference to the spread of typhus fever in a street near the Stanley Dock. The street contains a number of narrow courts of back-to-back houses, incapable of thorough ventilation, and the thoroughfare is very unhealthy, though running close down to the docks and the broad river Mersey. Dr. Taylor reports the inhabitants to be poor, their houses crowded and dirty, and the atmosphere fetid. Occasional outbreaks of infectious disease were not unfrequent in the street, but prompt measures generally stamped it out, as in the first cases this year, which were removed by the sanitary authority on February 24th and March 9th. Nothing more was heard of the disease until May 25th, when the parish authorities reported the removal of four cases from No. 34 house to the workhouse hospital. It was ascertained that a girl had been ill for some time, and freely visited by neighbours; and, it was not until three other members of the family had been attacked, that she was removed. Since that time, the disease had spread. In reply to the chairman, Dr. Taylor said that so far this year the cases of typhus in the city numbered 1,203, with 291 deaths, against 1,207 cases and 292 deaths during the whole of last year; 256 deaths in 1880; and 248 deaths in 1879. He added, that this is the period of the year when typhus is ordinarily least prevalent in Liverpool, and that, as the autumn and winter advanced, the disease would increase.

HYGIENE OF THE ELECTRIC LIGHT.

DR. SIEMENS, in his able address at the British Association, justly lays stress on the hygienic advantages of the electric light. He considers that the principal argument in its favour is furnished by its immunity from products of combustion, which not only heat the lighted apartments, but substitute carbonic acid and deleterious sulphur compounds for the oxygen upon which respiration depends. The electric light is white instead of yellow, and thus enables us to see pictures, furniture, and flowers as by daylight; it supports growing plants instead of poisoning them; and by its means we can carry on photography and many other industries at night as well as during the day. The objection frequently urged against the electric light, that it depends upon the continuous motion of steam or gas engines, which are liable to accidental stoppage, has been removed by the introduction into practical use of the secondary battery. This, although not embodying a new conception, has lately been greatly improved in power and constancy by Planté, Faure, Volckmar, Sellon, and others, and promises to accomplish for electricity what the gas-holder has done for the supply of gas and the accumulator for hydraulic transmission of power. It can no longer be a matter of reasonable doubt that electric lighting will take its place as a public illuminant, and that, even though its cost should be found greater than that of gas, it will be preferred for the lighting of drawing-rooms and dining-rooms, theatres and concert-rooms, museums, churches, warehouses, show-rooms, printing establishments and factories, and also the cabins and engine-rooms of passenger steamers. The extreme brightness of the luminous parts is, however, dazzling and unpleasant.

HOW INFECTIOUS DISEASE IS PROPAGATED.

ATTENTION to sanitary engineering is a very important part of public hygiene, but carelessness of the principles of individual and family hygiene, and the careless and reckless neglect of necessary precautions, will render mechanical sanitation of small avail. At the Ashford Petty Sessions, a draper of Folkestone was charged with wilfully exposing a domestic servant in the public streets while she was suffering from an infectious disease—to wit, scarlet fever. It appeared that on Monday, July 3rd, the girl went into the defendant's service at Folkestone from Ashford. During the week she became unwell, and on Wednesday she complained to her mistress of having a bad sore-throat. Her mistress gave her some camphor and sugar for it. The girl's throat, however, grew worse, and on Saturday she became delirious. On Sunday morning, the master, who had sat up with her all night, but who had not called in a medical man, walked with her through the streets of Folkestone to the railway station, and brought her in a compartment of a railway carriage, in which there were seven other persons, to Ashford, and she walked with him through several streets to the house of an uncle, with whom he left her. The medical officer of health, Mr. Coke, to whom the uncle at once took her, testified that the girl was suffering from a severe attack of scarlet fever, and had the eruption fully developed. He had her immediately placed in the sanatorium. The defence was that the defendant was not aware of the nature of the disease, as proved by the girl having been allowed to nurse a child of his on the day before. The case was dismissed. Thus there is little encouragement for the Ashford Local Board to enforce the law, and the companions of the draper in the railway carriage find little compassion. It may be hoped they have not suffered.

DEATH FROM CHLOROFORM.

AN inquiry was held by Dr. Danford Thomas, coroner for Central Middlesex, on Saturday, at University College Hospital, as to the death of Mr. Henry Edward Stimson, aged 33, a retired licensed victualler, who had expired during an operation for cancer under the influence of chloroform. The court was attended by a considerable number of medical men and students. Mrs. Stimson, the widow of deceased, said that he had for some time past been suffering from disease of the kidneys, from which he had partially recovered. He had

subsequently suffered from cancer of the tongue, for which he was an out-patient at the hospital, where he was informed an operation was absolutely necessary. He went into the hospital for this purpose, and, on August 23rd, she was informed that he had died while undergoing the operation under the influence of chloroform. Mr. Edward Maudsley, resident surgeon of the hospital, said the deceased was admitted on August 22nd, to undergo an operation for cancer of the tongue. Previously to the operation, the deceased was informed that it would be necessary to administer chloroform, and made no objection. He was thoroughly examined, and nothing was discovered to show that its administration would be dangerous. He took the chloroform very well, but in three or four minutes he turned blue, and pulsation ceased. Restoratives were administered, but without effect. A *post mortem* examination disclosed that the kidneys were much diseased, and the liver also, but the heart so slightly that the disease could not be detected during life. Death had resulted from the effects of the chloroform. In reply to a juror, the witness said he could not say that he considered ether a less dangerous anæsthetic than chloroform. He did not consider chloroform at all dangerous. It would have been impossible for life to have been prolonged without the operation; and the operation could not have been performed without the administration of an anæsthetic. Did not consider ether a proper agent in operations in the mouth or throat. It was quite impossible to ascertain the condition of the deceased's heart prior to the operation. After considerable discussion, the jury returned a verdict of "Death by misadventure".

THE SMOKE NUISANCE.

DR. SIEMENS, who is peculiarly fitted to discuss this subject, leans strongly to the conclusion that it is in the utilisation of gaseous fuel, and the crude coal in our fireplaces, that the most complete solution lies. He says this week:

"Regarding the importance of the gas-supply as it exists at present, we find from a Government return that the capital invested in gasworks in England, other than those of local authorities, amounts to £30,000,000: in these, 4,281,048 tons of coal are converted annually, producing 43,000 million cubic feet of gas, and about 2,800,000 tons of coke; whereas the total amount of coal annually converted in the United Kingdom may be estimated at 9,000,000 tons, and the by-products therefrom at 500,000 tons of tar, 1,000,000 tons of ammonia liquor, and 4,000,000 tons of coke, according to the returns kindly furnished me by the managers of many of the gasworks and corporations. To these may be added, say, 120,000 tons of sulphur, which up to the present time is a waste product. Taking the coal used, 9,000,000 tons, at 12s., equal £5,400,000, the by-products at gasworks exceed in value the coal used by very nearly £3,000,000. In using raw coal for heating purposes, these valuable products are not only absolutely lost to us, but in their stead we are favoured with those semi-gaseous by-products in the atmosphere too well known to the denizens of London and other large towns as smoke. Professor Roberts has calculated that the soot in the pall hanging over London on a winter's day amounts to fifty tons; and that the carbonic oxide, a poisonous compound, resulting from the imperfect combustion of coal, may be taken as at least five times that amount. The fine dust resulting from the imperfect combustion of coal is mainly instrumental in the formation of fog; each particle of solid matter attracting to itself aqueous vapour; these globules of fog are rendered particularly tenacious and disagreeable by the presence of tar-vapour, another result of imperfect combustion of raw fuel, which might be turned to much better account at the dye-works. The most effectual remedy would result from a general recognition of the fact that, wherever smoke is produced, fuel is being consumed wastefully, and that all our calorific effects, from the largest down to the domestic fire, can be realised as completely and more economically, without allowing any of the fuel employed to reach the atmosphere unburnt. This most desirable result may be effected by the use of gas for all heating purposes with or without the addition of coke or anthracite."

THE LONDON BAKEHOUSES.

DR. C. MEYMOTT TIDY, the medical officer of health for Islington, in his annual report of the sanitary condition of the parish, makes reference to the extract from the report of Her Majesty's Chief Inspector of

Factories and Workshops, upon London bakehouses, which recently went the round of the newspapers, and in which the condition of the bakehouses was alleged to be most unsatisfactory. He states that he directed an inspection to be made of the bakehouses in Islington, with a view to ascertain their present condition under the new *régime*, as contrasted with their condition in the beginning of the year 1879, when they were first taken under the supervision of Her Majesty's inspectors. In March 1879, when the bakehouses were last previously inspected by the vestry sanitary officers, in one instance only was any accumulation of refuse found under the troughs, and there were no other sanitary defects observed at that time. As a result of the inspection just made, in forty-five instances accumulations of refuse were found under the troughs, and twenty-five inlets to drains were untrapped, besides other defects. From this, it would seem that his anticipations of three years since had been realised, for there were certainly signs of much neglect, which nothing but constant supervision would remedy. Dr. Tidy says: "The change was evidently a step in the wrong direction, for what was wanted then, and what is still wanted, was not centralisation, but registration, which should have been left in the hands of the local sanitary authority; for this it is which would alone absolutely prevent the use of unfit places as bakehouses, as it would also prevent the improper construction of places intended for this purpose. In my opinion, the Bakehouses Regulation Act, 1863, should not have been revoked, but it should rather have been amended in the direction now indicated, in which case, I am sure that the result would have been most salutary and beneficial. I know it is the fashion to decry the vestries of the metropolis, and that their powers have been sometimes curtailed, owing partly to this fashion, and partly to the centralising tendencies of our present legislation; but, in the case of bakehouses, there is no doubt that centralisation has produced very decidedly bad results." It is much to be regretted that such a step should have been taken without first ascertaining what the vestries were doing, and their opinion as to the proposed change, or what other course they could recommend by way of improvement by the Legislature.

THE PROCESS OF SECRETION.

IN his address at the British Association, in the Section of Biology, Professor Arthur Gamgee paid a just tribute to the life and works of Darwin and of Balfour. In treating of the growth of our knowledge of the process of secretion in the animal kingdom, which was the leading topic of his address, the President first stated the views of the ancients, and he then dealt in succession with the researches of Johannes Muller, John Goodsir, Bowman, Carl Ludwig, Schiff, Eckhardt, Claude Bernard, and Heidenhain. Finally, he arrived at the following general conclusions.

"The complicated studies of which I have attempted to give you a brief sketch, have led to our forming certain clear general conceptions in reference to the process of secretion. They have brought into greater prominence the dignity, if I may use the expression, of the individual cell. The process of secretion appears as the result of the combined work of a large number of these units. Each, after the manner of an independent organism, uses oxygen, forms carbonic acid, evolves heat, and derives its nutriment from the medium in which it lives, and performs chemical operations of which the results only are imperfectly known to us, and which depend upon peculiar endowments of the cell protoplasm, of which the causes are hidden from us. So long as the protoplasm is living, the gland cell retains its power of discharging its functions, and in many cases does so, so long as the intercellular liquid furnishes it with the materials required. In some cases, however, the gland-cells are specially sensitive to a variation in the composition of the nutrient liquid, certain constituents of which appear to stimulate the protoplasm to increased activity. In the higher animals the cells, particularly in certain glands, are in relation to nerves which, when stimulated, affect in a remarkable manner the transformation of their protoplasm, leading to an increased consumption of oxygen, an increased production of carbonic acid, an increased evolution of heat, and an increased production of those matters which the cell eliminates and which constitute its secretion. This historical survey of the growth of our knowledge of the process of secretion exhibits the characteristic features of biological advancement. Comparative anatomy has been the foundation of obser-

vation of facts and physical experiment, the road to physiological research. At various stages the value of hypotheses has been well illustrated, and, whenever they have had to make way for the broader and truer interpretations suggested by the accumulation of facts and the greater precision of observation, it has been demonstrated that the process of observation is not one of simple sight, but of complex ratiocination."

DEATH-CERTIFICATES.

A CASE, in which a medical man at the east-end of London is stated to have withheld the usual certificate of the cause of death on account of the non-payment of a small amount owing to him for attendance on the deceased, has led to some very severe remarks by the coroner, and to much comment in the daily press. From the evidence given at the inquest, it appeared that the deceased child, aged two and a half years, was taken into Victoria Park by Elizabeth Newley, who wheeled it about in a perambulator, and treated it to some sweets. The child becoming ill, Newley, who was not the mother of the child, took it to the London Hospital, and afterwards to its grandmother, by whom it appears to have been taken or sent to Mr. Beswick, who also subsequently visited it. The child having died, Mr. Beswick made, by the coroner's order, a necropsy, and found, it is stated, that death had been caused by some sudden shock or fall. A report to that effect had got abroad, but the woman Newley denied that she had let the child fall; and a suggestion was then made that it had had a tumble on the pavement the previous day. The coroner was about to sum up the case, when a juryman remarked that Mr. Beswick, although he had stated that he believed death to have been caused by violence, was prepared to have given a certificate, and would have given one, but that the woman was not provided with his fee of two shillings for attendance on the child. This was denied by Mr. Beswick; but, an adjournment having taken place, a witness was produced, who proved that Mr. Beswick reached his certificate-book, and had actually commenced to write out the certificate, when he found out that the woman had no money. He then told her to go and get some, and she returned to his surgery twice, but, being wretchedly poor, could not raise the money, and he then refused to give the certificate. The deputy coroner (Mr. George Collier) said the most painful part of the inquiry was that relating to the certificate. It might have been that the medical man had some doubt whether the death of the child arose from a fall, from the effects of the sun's rays, or from natural causes; but he could not but think that the real cause of the refusal lay in the money not being forthcoming. As Mr. Beswick had no legal or moral right to refuse the certificate, it would be for the jury to say whether he had acted properly in that refusal. He feared that this case was one of the dispensary class, where very low fees were taken; and, while dispensaries were no doubt good in their way, they were open to and did produce grave abuses. There was no doubt a great many patients were treated; and it became a grave question, whether it did not pay medical men better to get a great number of small fees, and grant certificates, than to get their guinea for attending an inquest. At many of these dispensaries, they put in unqualified men, and, if all went right, the medical man pocketed a handsome percentage; while, if anything went wrong, he came forward and gave a certificate. *If certificates were to be given or withheld at the discretion of the medical man, he need not say that there was no security for human life; and, in these days of secret poisoning, any one might be hurried out of life at the bidding of his neighbour.* It will be seen that the coroner travelled over a wide range of subjects: the right of Mr. Beswick to withhold a certificate in this particular case; the abuses of the so-called dispensaries; the employment of unqualified assistants; and the improper granting of certificates. With many of his remarks we fully agree, though some of them seem particularly inappropriate to the case which was under consideration; and they appear to have so confused the jury as to have made them lose sight of the main facts deposed to, and bring in a verdict of "death from sunstroke", in direct opposition to the medical evidence. The passage which we have placed in italics, however, seems to us as nearly as possible the reverse of the truth. It would be far more true

to say, that, if medical men were *not* to exercise discretion in giving or withholding death-certificates, there would be no security, so far as the system of registration goes, for human life. At the same time, we are quite clear, that the fact of his attendance having been or not having been paid for, ought not to influence a medical man either to give or refuse a certificate.

HEALTH OF THE PRIMATE.

We published on the 18th of last March a report upon the health of the Primate, which indicated a serious departure from a healthy state of body. We understand that his Grace returned from his residence near to Bordighera, very much improved by the dry air and sun-light of the Italian sky. He soon became engrossed in the work of the session, and was constant in his attendance upon two Commissions, and in the House of Lords, in spite of the general weakness and shortness of breath, which was immediately induced by exertion. An insufficiency of the aortic valves manifested itself, soon followed by mitral defect, which, however, was only brought out by muscular exertion, such as by speaking or walking. This defect was not accompanied by any murmur when at perfect rest, and was compensated by the hypertrophy, which soon corrected it. Two months since, a gouty thrombosis, such as has occasionally arisen before, made its appearance in the left leg, but his Grace was able to continue his duties, and to proceed to Osborne on August 7th to confirm the young princes. This he effected on the 8th, and returned to Addington Park on the 9th; and, when visited on the 11th by his medical attendant, Dr. Alfred Carpenter, he was found to be suffering from a slight pain in the left side, great oppression of breathing, considerable dulness over a large part of the base of the left lung, with slight expectoration of bloody mucus. The breath-sounds were quite rough, but distinct on the left side. Respiration was mainly abdominal, 40 per minute; pulse 96; temperature 99.2°. A slight amount of small crepitation developed in the right lung two days afterwards, which was ushered in by a rigor and immediate rise of temperature. The Archbishop was quite unwilling to keep his bed, until the rigor, followed by profuse sweating and great prostration, gave him no choice; he continued to transact the business which always presses upon the Primate until the 23rd, quite unwilling that any one should be inconvenienced by his state of health; on the 23rd, however, the collapse was so complete that he was obliged to give in, and remain in bed. The temperature soon ran high, his breathing was much oppressed, and thirst great; but cough was all but absent. There was also considerable hyperæsthesia all over the body. He was placed on a water-bed on the 25th, with manifest benefit, and greatly increased comfort, and in three days the hyperæsthesia departed after a profuse perspiration. He was visited on the 25th by Sir W. Jenner. During the last few days, the breathing has continued to vary between 36 and 40, the pulse between 88 and 108. The temperature, sometimes normal in the morning, has arisen every day to 100° or 101°, the urine is plentiful, and slightly albuminous; but the Archbishop is drowsy and sleeps much, whilst the mucous membrane of the mouth and throat is dry and sore. The bowels perform their duty every day in a proper manner, and food, of a slight nutritious but unstimulating character, is taken regularly and in good quantity. He is cheerful, and free from anxiety as to the result. There have been occasional tremors in the arm, which was paralysed fourteen years ago, but no cerebral disturbance. His Grace does not expect to recover. The diagnosis is thrombosis in the left lung to a considerable extent, with slight pneumonia on the right side; congestion of the kidney of a gouty character, with increase in the hypertrophy of the heart, which arose after his Grace's attack of pericarditis many years ago, when he was Head-master of Rugby School. The ability which his Grace has evinced during the time he has been Primate, notwithstanding his bodily ailment, is remarkable.

METEOROLOGICAL RELATIONS OF SUMMER DIARRHŒA.

DR. S. C. BUSEY, of Washington, District of Columbia, in the *Bulletin of the Philosophical Society of Washington*, contributes an interesting

study on this subject, which is now being systematically investigated by the Medical Department of the Local Government Board, under the direction of Dr. Ballard. An analysis of the mortality statistics of the summer diarrhœal diseases leads him to the following conclusions.

1. Diarrhœal diseases are far more destructive to infants than to adults.
2. They prevail almost exclusively during the warmest months of the year.
3. They are more prevalent in the region of this country north of the north line of the Gulf States, and east of the Rocky Mountains. The first two conclusions are universally admitted; the third is not so generally recognised. Two additional propositions are suggested.

1. These diseases occur in groups, when the cases rapidly multiply during successive days for a week or fortnight, followed by an interval during which few or no cases occur.
2. These groups correspond with waves of continuous high temperature during day and night, which spread, at shorter or longer intervals during the summer months, over the northern climatic belt of the United States, lasting from three to fourteen days, and varying in intensity at different times and in different years. The first of these propositions cannot be established, because of the absence of statistical data relating to the beginning of the initial symptoms of the diseases; the second is proven by data supplied by the Signal Service Bureau. A comparison of these data with the mortality statistics gives the following results.

1. July is the hottest and sickliest month of the year, most conducive to bowel-affections, and most fatal to children under five years of age.
2. The epidemics of bowel-affections of children, incident to the summer season, have their beginning nearly simultaneously with the first exacerbation of heat, which usually occurs in the latter half of June; and the maximum daily mortalities more frequently correspond with the maximum temperatures, which occur in periods of three or more days, at longer or shorter intervals during the summer months.
3. With the usual lowering of temperature and absence of excessive heat periods, which occur after the middle of August, the daily mortality declines.
4. The detrimental influence of summer temperature is intensified by sudden and acute elevations and falls.
5. Children under one year of age are most numerous and seriously affected. Heat exhibits its deleterious influence in another and very important relation. It is one of the many conditions which, in conjunction, make up a season. A comparison of the statistics of the weekly mortality from diarrhœal diseases in the principal cities of the country, grouped according to latitude, will exhibit the gradual increase of these diseases with the gradual advance of the summer solstice northward until it reaches its maximum, during the period when all the elements which complete the season of summer are in their fullest activity; also a gradual decline with the return of the winter season. The total movement of the wind is, perhaps, a more important influence than is generally believed. A comparison of the mortality data with the records of the monthly measurement of the wind, supplied by the Signal Service Bureau for the years 1875, 1876, 1877, 1878, 1879, and 1880, gives these results.

1. July is the month of the greatest mortality and least movement of the wind.
2. The nearer the monthly movements of the wind approach uniformity, the less the mortality for summer diarrhœa.
3. Equality of climate corresponds with uniformity of and moderate or small movements of wind, and small mortalities.
4. Wide ranges of temperature correspond with large movements of wind, and high mortalities from diarrhœal diseases.
5. Weekly mortalities from diarrhœal disease increase correspondingly with advance of the summer solstice northward, increasing with greater range of temperature, and larger and more fluctuating movements of wind. Relative saturation of the air bears no constant relation to mortalities. Moisture in relative excess to the heat of an impure and stagnant atmosphere is the condition which supplies the most satisfactory explanation of its detrimental influence.

EXHIBITION OF DOMESTIC APPLIANCES.—The second yearly exhibition of domestic appliances was opened last week at the Agricultural Hall, and will remain open till September 7th. It contains a varied and interesting collection of articles, including some novelties. No prizes are offered, the inducement to exhibitors being publicity.

SCOTLAND.

THE Council of Dundee University College have unanimously elected Mr. William Peterson of Oxford to the office of Principal of the College; and arrangements have been made for proceeding with the appointment of the other professors, with the view of the opening of the college at as early a date as possible.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending August 19th, it appears that the death-rate in the eight principal towns of Scotland was 20.7 per 1000 of estimated population. This rate is 2.9 above that for the corresponding week of last year, and 0.6 above that for the previous week of the present year. The lowest mortality was recorded in Perth, viz., 17.2 per 1000; and the highest in Paisley, viz., 32.1 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 5.6 per 1000, or 0.6 above the rate for the previous week. Diarrhoea and other bowel complaints continue to be the most fatal epidemic diseases. Acute diseases of the chest caused 73 deaths, or 2 more than the number registered during the previous week. The mean temperature was 59.9°, being 1.5° below that of the week immediately preceding, but 5.6° above that of the corresponding week of last year.

HEALTH OF GLASGOW.

THE report of the medical officer of health, for the fortnight ending August 19th, shows that there were 419 deaths registered, representing a death-rate of 21 per 1000 living. There were 93 deaths from pulmonary diseases, which gives a death-rate of 5 per 1000 living, and constitutes 22 per cent. of the total deaths. The fortnight has been characterised by a very marked diminution in the number of deaths from diseases of the lungs; while fatal diarrhoea has not increased, and the general health has improved, as evidenced by the decrease in the number of deaths from miscellaneous causes. The deaths from pulmonary diseases have not been so few since the autumn of 1879. Of the 45 deaths from diarrhoeal disease, 38 were children, whose average age was only ten months. This incidence of diarrhoea upon infancy, and the improvement in the general conditions of health of the aged, has raised the proportions of the deaths below five years to fully 51 per cent. of the total mortality. In the course of his fortnightly report, the medical officer gives some valuable suggestions as to the precautions that should be adopted in works where white-lead is manufactured, so as to prevent lead-poisoning. He points out that the essence of all precautions is cleanliness, but admits that the real difficulty lies in getting the workers to adhere to the rules laid down. The suggestion he offers is, that those offending against the rules should be punished by fine or dismissal; for the condition of body induced by lead-poisoning is such a dreadful one, and so often adds to the burdens of the community, by taking life or depriving of sight, that no pains should be spared to prevent its occurrence.

UNIVERSITY OF ABERDEEN: RESIGNATION OF PROFESSOR PIRRIE.

At a meeting of the University Court, held last week, a letter from Dr. Pirrie, Professor of Surgery, was read—asking to be allowed, on the ground of age and infirmity, to retire from the Chair of Surgery. The Court agreed to recommend to Her Majesty in Council to permit Dr. Pirrie to retire, and that he be granted a full retiring allowance. The Court expressed its sense of the pre-eminent services which Dr. Pirrie has rendered to the University of Aberdeen, both as a teacher and as an active member of the Senatus. Dr. Pirrie has been actively engaged as a teacher for more than half a century—fifty-two years—during eleven of which he taught anatomy, while during the remainder he has held the Chair of Surgery. In the resignation of Professor Pirrie, Aberdeen has lost its most extensively known professor, and one of its best and most enthusiastic teachers. Many generations of stu-

dents will look back to the time when they listened to the words of wisdom of Dr. Pirrie, than whom no teacher was ever more zealous or more devotedly attached to his work. Throughout his whole career as a teacher, his object was to make his teaching demonstrative; and no effort was ever spared to bring his lectures, and, above all, his display of surgical apparatus, up to the very latest date. As a teacher of surgery, we believe that it would be difficult to find Dr. Pirrie's equal. We are glad, however, to be able to state that, although unequal to the duties of another session's work, the veteran Professor of Surgery is still in fairly good health; and we trust that he may long be spared to enjoy his well-won leisure. We may recall to mind the fact, that Aberdeen owes the foundation of the Sir Erasmus Wilson Chair of Pathology to the instrumentality of Dr. Pirrie. The patronage of the chair of Surgery is vested in the Crown. As yet, we have heard of only one intending applicant—Dr. Alexander Ogston. Now that the Aberdeen School has such an efficient staff of teachers, we trust that the new professor will be selected entirely on his merits as a teacher, and his eminence as a surgeon. The field is so large, and the emoluments so satisfactory, that any one appointed to the chair ought to devote himself to pure surgery.

HEALTH OF THE PRINCIPAL SCOTCH TOWNS.

IN the eight chief Scotch towns during the month of July, there were registered the deaths of 2,192 persons, of whom 1,156 were males, and 1,036 females; making due allowance for increase of population, this is 166 under the average for the same month during the preceding ten years. The respective death-rates were, per 1,000 of the population, in Edinburgh and Perth, 18; in Aberdeen and Leith, 19; in Dundee, 20; in Glasgow and Greenock, 23; and in Paisley, 29. Forty-six per cent. of the entire mortality, numbering 1,000, was of children under five years of age, and the respective percentages of such deaths were: Edinburgh, 37; Paisley, 38; Aberdeen, 39; Perth, 42; Glasgow, 48; Dundee, 49; Greenock, 50; and Leith, no less than 59. Zymotic diseases contributed 18.7 per cent. of the total mortality; in Dundee, Leith, and Perth, however, this rate was markedly exceeded; thus 13 per cent. of the deaths in Dundee, and 12 per cent. in Leith, were due to measles alone. Whooping-cough caused 75 deaths, measles 60, scarlet fever 28, diphtheria 20, croup 9, dysentery 4, cholera (?) 4, and small-pox 1. Of 36 deaths from fever, 5 were registered as typhus, 29 as enteric fever, and 2 as simple continued fever; in Perth, 8.9 per cent. of all the deaths was due to fever. Apoplexy caused 49 deaths, paralysis 43, cardiac diseases 104, hydrocephalus 04, and premature birth debility 49 deaths. Phthisis pulmonalis contributed 271 deaths, or 12.4 per cent. of all; while inflammatory affections of the respiratory organs, other than those before mentioned, caused 16.7 per cent. of the entire mortality. Of 73 deaths due to violent causes, 4 were suicidal. Eight individuals (3 males, and 5 females) were over 90 years of age at their death, the oldest being 102 years. There were registered, during July, the births of 1,886 male, and 1,747 female, children. As to the meteorological conditions during the month, the mean barometric pressure was less by 0.198 inch, and its monthly range greater by 0.363 inch; the mean temperature was less by 0.2°, and its daily range less by 0.4°; the mean humidity was less by 2; the rain-depth in inches greater by 1.85 inch, and the number of days of rain greater by 9; and the wind-pressure greater by 0.13 lb. than the average of the same month during the preceding 25 years. The chief characteristic of July, therefore, was its rainfall, which was only exceeded in 1858 and 1867; while the wind-pressure was also notable. The highest mean temperature, 59.2°, was at Dundee; the lowest, 57.8°, was at Edinburgh. The greatest depth of rain, 7.34, was, of course, at Greenock.

MAGNIFICENT SEA-VENTILATING INFIRMARY. SIR ERASMUS WILSON has handed over to the governors of this infirmary the key of the magnificent new wing, to be named the Erasmus Wilson wing, which he has built at an estimated cost of over £30,000. The wing includes two large day-rooms, and four dormitories, each to contain 10 beds, with a swimming bath capable of containing 15,000 gallons of sea-water.

IRELAND.

DURING the June quarter, 21 deaths from small-pox were registered in Belfast, against 53 in the preceding three months; two in Waterford, but none in any of the other districts. Measles caused 25 deaths, scarlet fever 18, fever 110, and whooping-cough 18.

SMALL-POX IN BELFAST.

ABOUT a dozen cases are still under treatment in the Belfast Union Hospital, but the mortality for some weeks past has been very slight indeed. The present epidemic commenced in May of last year; and, up to August 1st, 1882, there were 547 cases admitted into the hospital for contagious diseases. Of these, 181 died, showing a mortality of 14.8 per cent.

BELFAST ROYAL HOSPITAL.

ON the recommendation of the medical and surgical staff, and the special committee appointed by the Board, it was decided to establish two new departments in the hospital—one for the treatment of diseases of women, and the other for diseases of the eye and ear, subject to confirmation by the Board of Management. At the quarterly meeting of the Board, held last Monday, a resolution to establish these departments was proposed; but an amendment that the question be adjourned until the annual meeting was carried by a majority of two.

A MORGUE FOR QUEENSTOWN.

THE question of who is responsible for the erection of a morgue at Queenstown has for some time exercised the attention of the Town Commissioners of Queenstown, and the guardians of the Cork Union. Both believed it was the duty of the other partly to erect a structure so absolutely necessary; but at last it has been decided, we understand, that the Cork Poor-law Guardians, being the port nuisance authority, are solely responsible in the matter. The subject will at once be brought under the notice of the Chief Secretary for Ireland, so that its establishment may no longer be delayed.

QUEEN'S COLLEGE, GALWAY.

THE President, in his annual report, draws attention to the steady progress the College has shown since its foundation in 1849-50. In that year, the number of students was 68; in ten years afterwards, they increased to 118; in 1869-70, to 138; in 1879-80, to 180; and last session to 201. Since last report was issued, the Queen's University has ceased to exist; and the Queen's Colleges, which had previously been united as independent but integral parts of the University, have been dissociated, and retain no bond of connection but mutual goodwill. The career of the Queen's University is now a matter of history; and the President remarks that it is a record of a measure of good work achieved in the face of many difficulties, and of a continuous and healthy growth to a vigorous maturity. It has been asserted that students are attached to the Colleges by the rewards in the shape of scholarships which are bestowed liberally; but the truth is that the entire sum placed at the disposal of each College for prizes to undergraduates is £1,180. Of this sum, £100 is distributed at the end of each session in book premiums; the remaining £1,080 is divided into scholarships and exhibitions, varying in amount from £25 to about £15, and which, with the exception of scholarships in arts of the second year, are tenable for one year only. The success of the Medical School was well sustained in the past session. The students attending lectures numbered 122, being the largest number yet reached. The rapid development of medical sciences, especially in the biological department, has demanded such an enlargement and improvement of scientific apparatus as will enable the teaching to keep pace with the progress of discovery. The laboratories and museums, it is satisfactory to learn, are furnished with all fitting appliances to meet the requirements of advanced education, and to maintain the reputation which the Medical School now enjoys for its efficiency in practical as well as theoretical instruction.

MARCHING POWER OF THE BRITISH TROOPS.

At the present moment, when the marching powers of the British troops seem likely to be severely taxed under the disadvantageous conditions of a hot climate and sandy soil, a retrospective analysis of the great march from Cabul to Candahar, compared with some other forced marches, is of much interest. Such a study is furnished by Surgeon-General Crawford in a special report to the Army Medical Department, which is marked by great care and ability.

The facts of the Cabul and Candahar march are stated as follows.

"The march had of course to be conducted without a base of operations or communications of any kind, through a hostile country, towards a definite point (Candahar). For the details and all arrangements connected with this march, reference must be made to Deputy Surgeon-General Hanbury's special report thereon; it must suffice, in this place, to touch on a few of its more salient points. The march commenced on August 9th. Ghazni, a distance of 97½ miles, in which the Zamburak Pass (7,000 feet) and the Sher-i-Daban Pass (9,000 feet) were crossed, was reached on the 15th August. For this part of the march, an average distance of 13½ miles was covered daily. The remaining distance of 134½ miles was covered in eight days, or 16½ miles daily. Ten thousand one hundred and forty-eight troops, 8,143 native followers and 11,224 animals, including cavalry horses, composed the column; the daily supplies for all these were drawn from the country after arrival in camp. Food was distributed and cooked with fuel (difficultly procurable and brought in from a distance) during the eight days' march from Ghazni to Khelat-i-Ghilzai. The longest marches on any one day were 20 miles, from Ghazni to Zerghalta, and 21 miles from Mukur to Panjak.

"*En passant*, it may be interesting to refer here to some other marches recorded. General Crawford marched with the 43rd, 52d, and 95th Regiments of Foot to reinforce Sir A. Wellesley, at the battle of Talavera in July 1809; the brigade marched 62 miles in 26 hours, carrying arms, ammunition, and pack—in all, a weight of between 50 and 60 pounds per man. In the late Franco-German war, very long and difficult marches were performed by the Germans. Dr. Roth,† who served as chief medical officer with the Saxon army, mentions that the 18th division marched, from October 29th to November 17th, 55½ German miles, which is equal to 260 English miles, in nine days, nearly 18 miles a day; while on December 16th and 17th, in the various manoeuvres about Orleans, they marched 54 English miles. They were very heavily accoutred, and the roads were bad. A company of a regiment of Chasseurs of MacMahon's army, after being on grand guard, without shelter or fire, during the rainy night of August 5th-6th, started at 3 in the morning to rejoin its regiment in retreat on Neiderbronn, after the battle of Weissenburg. It arrived at this village at 3.30 in the afternoon, and started again for Phalsbourg at 6 o'clock. The road was across the hills and along forest tracks, which were very difficult for troops. It arrived at Phalsbourg at 8.30 in the evening of the next day. The men had, therefore, marched part of the night of August 5th-6th, the day of the 6th, the night of the 6th-7th, and the day of the 7th till 8.30 P.M. The halts were eight minutes every hour, from 3.30 to 6, one hour in the night of the 6th-7th, and 2½ hours on the 7th; altogether, including the halts, the march lasted 41½ hours, and the men must have been actually on their feet about 30 hours, in addition to the guard duty on the night before the march. The exact distance is not known, but, considering the extreme difficulty of that rugged mountain country and the bad weather, this is, perhaps, the most toilsome march on record.‡

"To return to the Cabul and Candahar march. In addition to the daily ration, a tin of pea-soup was issued to every two British soldiers daily from August 18th, which was commonly taken before the march commenced; lime-juice was regularly issued. Extra rum was issued three times during the march to all British and native spirit-drinkers, and an extra ration of meat to those who did not drink rum, with a meat ration for all followers whenever sheep could be obtained.

"In July 1880, there were in the field in Afghanistan two separate *corps d'armée* with distinct bases of operation, the one dependent on the Punjab, the other on Sind and Bombay—the Northern and the Southern Afghanistan field force respectively. The objects of these two forces were quite separate and distinct, and they formed perfectly independent commands. At Cabul, steps had been taken for evacuation of the country, and by the middle of August the last of the brigade was to

* Army Medical Department Report for 1879, page 313, Appendix, Medical Diary of the March of the Field Force of Lieut.-General Sir F. Roberts, V.C., G.C.B., from Cabul to Candahar.

† *Deutsche Vierteljahrsschrift für öffentl. Gesundh.*, vol. 3, 1871, page 62.

‡ Army Medical Department Report for 1870, vol. xii, page 248 Appendix, Dr Parkes's Report on Hygiene for 1871.

leave Cabul. The force of 18,000 men was to return to India on two lines—one portion by Kuram, the other by the Khyber; and at this date the sick were in motion towards Peshawar, and stores, etc., had been, or were being, despatched to the base. On July 28th, the news of General Burrows's defeat reached Cabul by telegraph. The orders for the march of a force from Cabul with the object of relieving Candahar were received on August 3rd. The troops were in a good state of health, in high fettle, and had undergone a long training in the field. The constitution of the force, its equipment, and all other arrangements, were practically matters decided on locally. The force consisted of an infantry division of three brigades of four battalions each (viz., one British and three Native battalions), a brigade of cavalry consisting of four regiments (one British and three Native regiments), and an artillery command of three batteries of mountain artillery."

PROFESSOR ATTFIELD ON THE RELATION OF PHARMACY TO THE STATE.

THE nineteenth annual meeting of the British Pharmaceutical Conference was opened at Southampton on Tuesday, August 22nd. The President, Professor JOHN ATTFIELD, F.R.S., dealt with the subject of the Relation of Pharmacy to the State, in an inaugural address of marked ability, and in a manner which gives to his observations much interest for medical readers.

He said that, in every country, pharmacy had high duties to perform towards the State; and exhaustive research, careful manufacture, and thorough distribution were the means by which those duties were fulfilled. The question he propounded was, whether pharmacy was performing those duties with the maximum of efficiency. This depended on the answer to several other questions, all vital to the health and the happiness of society. The better the individual pharmacist performed the duties the public required of him, the greater would be his personal success. The highest self-interest was found in the forgetting of self.

The subject divided itself into three branches—the collection, the preparation, and the distribution of drugs. In the growing of drugs, pharmacy employed thousands of workers in all countries; and, in the exercise of her demands for new remedial agents, she looked to the original researches and discoveries of the traveller, the botanist, the zoologist, the mineralogist, the scientific chemist. Her followers themselves largely conducted original research and discovery; they also fostered research and discovery by banding themselves into societies, associations, and conferences, for the initiation of original pharmaceutical research, for the payment of expenses incurred in research, and for the free publication of its results. The preparation and manipulation of raw drugs, and the manufacture of compounded drugs, was the most special duty of pharmacy. From the plant, animal, or mineral which observation or more minute research had shown to have medicinal value, pharmacy must carefully, step by step, and constantly testing progress, eliminate what was valueless, until she was able to say that a simple aqueous infusion or decoction contained all the activity of the raw material. Sometimes the active matter was only removable by a spirituous fluid in the form of a "tincture"; sometimes, by boiling, was concentrated into a solid or "extract". In other cases, after much labour, the active principles of the crude drug were obtained in the form of such an alkaloid as quinine, such a substance as salicin, such a body as citric acid, such a salt as cream of tartar. But, whatever the method, the properties of the active principle sought to be extracted must be ascertained, in order that its presence may at any time be testified, or its purity demonstrated; and that, in distribution to the public, no attempt should be made to mix together antagonistic or incompatible drugs.

To accomplish this work, either all or some of the followers of pharmacy must possess extensive knowledge. They must have sufficient mental training to enable them intelligently to study the scientific books they would have to master, and to comprehend the principles on which their work was based. They must have some knowledge of botany, as well as of animal and mineral products, or they would not be able to judge of the raw materials with which they would have to deal; some knowledge of the natural forces and mechanics, or they would not be able to convert the raw drugs into preparations having the maximum of medicinal activity and convenience of form or shape, with the minimum of unpleasant flavour, odour, and appearance; and a considerable knowledge of chemistry, to enable them to judge of the qualitative character of many drugs, and the quantitative character of most, the purity of the chemical substances which they purchased, the state of activity of preparations that had been long in stock, the compatibility or incompatibility of the components of mixtures they were called upon to prepare. A very large amount of such professional and commercial knowledge

must be forthcoming somehow and somewhere from the pharmaceutical body for pharmacists rightly to do their duty to the State, as elaborators, or manufacturers, or compounders of drugs.

The work of distribution was performed by several classes of agents. There was first the manufacturer, who was responsible for the purity and efficiency of the drug which he distributed; next, the druggist, who, though he was compelled to trust to the manufacturer for the purity of his drugs, supplied the widespread demand for drugs which existed in the suburbs of large towns and the country. Thirdly, there was the general medical practitioner who, in outlying districts remote from druggists' shops, dispensed drugs to his patients. Fourthly, to some extent the distribution was effected by grocers, drapers, and others, who in some districts supplied the want of chemists. Lastly, there was the so-called "patent" medicines largely used in the present day. In Great Britain there were 13,000 registered "chemists and druggists"—although it was not known how many of these were qualified by examination or otherwise for their duties. There are 23,000 registered medical practitioners in Great Britain and Ireland; but it was not ascertained how many of these were direct distributors of medicine. The amount of drugs sold by non-pharmaceutical vendors was unknown. Patent medicine stamp duty realised, in the year ending March 31st, 1881, nearly £140,000, representing a consumption of at least a million by the public. But as many proprietary medicines paid no duty, the extent of drug distribution under this head was not ascertainable, although it was known to be very considerable.

Did the condition of pharmacy thus described admit of improvement? If so, in what direction? There would be differences of opinion on that question, especially as regard different States. He would confine his remarks on the relation of pharmacy to the State to the British standpoint. With the exception of the cinchona tree and the poppy, for the production respectively of quinine and morphia, little had been done for the cultivation of drug-producing trees and shrubs. Why should not drug farms be more generally established, even in Great Britain? Was land required? Many food farms were being thrown out of cultivation in this country. Would not farming other than food farming be likely to be remunerative? Flower-farming and fruit-farming were among the most lucrative callings in these islands. Could not some pharmaceutical body emulate the Royal Agricultural Society with its Woburn experimental farm? Might not we hope that a Lawes would arise in pharmacy, who, founding a Rothamstead, would pioneer us towards the successful scientific cultivation of most of the medicinal plants.

The area of pharmaceutical research, in the largest sense of that term, including improved modes of collecting as well as of investigating drugs, could be extended by the State, by societies, and by individuals. But State aid to research of any kind was almost necessarily accompanied by State control, and some people were impatient of control, and did their duties to their calling and to the public with the maximum of efficiency in an atmosphere of freedom. State aid in carrying on research in pharmacy would probably be less effective than internal effort, hence improvement in pharmaceutical research by such aid was scarcely to be expected. Internal effort to improve and extend pharmaceutical research might come from societies and from individuals. And already in Great Britain the Pharmaceutical Society and the Pharmaceutical Conference had given good aid to research, especially in affording opportunities for individuals in pharmacy to bring their researches before their fellow pharmacists, to publish researches without expense, and, in the case of the Conference to carry on researches at diminished expense. But any really comprehensive scheme of aid to research by societies, as societies, needed far more ample funds than those at the disposal of the bodies just named; and the source of such funds was not obvious so long as two-thirds of the pharmacists of the country stood aloof from the other third in all matters pertaining to the general pharmaceutical welfare, withholding even that small annual subscription which, contributed by the many, would do so much good in many directions being accomplished. In respect of individual research, the labours of Deane, Merson, and Squire, were unsurpassed in any country. The institution of compulsory examinations had also been attended by excellent results. But the hope that these examinations would give an impetus to original investigation had scarcely been realised, and much more was still required in the prosecution of those branches of original research which would extend the number and definiteness of drugs and develop the maximum activity of medicinal plants.

It was an important question whether the State was better served by a large number of distributors of elaborated drugs, who were simply supplied by the wholesale manufacturers, or by a smaller number each making his own preparations. In the latter case, the number would be smaller, because greater skill would be required, and consequently

higher remuneration, and the higher the remuneration the smaller the number that can be supported by the community. The tendency nowadays was for the retail druggist to rely more and more on the wholesale manufacturer. By so doing, he was neglecting what ought to be his own cherished art, and entering into a competition with other traders in which he was little likely to succeed. The cry of "drugs for the druggist" was a good and wise cry, but only when founded on the druggist's knowledge of drugs, and on his personal guarantee of their efficiency—a guarantee which could only be founded on his having either made or tested all, or practically all, of his preparations. The differentiation between trading retail druggists and manufacturing retail druggists was already going on. Afterwards, there would be another. Some day, what remained of the trading retail druggist's trade in drugs would flow away from him to the counter of the manufacturing retail druggist, even though the latter charged higher prices; for, in proportion as purchasers found they could not judge for themselves, they would go to those who could judge for them. Then, if the trader had cultivated other trades, he would have them to fall back upon. Fortunately, in the long run, the fittest must survive—the fittest tradesman who was only a tradesman, and the fittest pharmacist who was a tradesman and a professional man too. Let the pharmacist master the principles of his art. Let him practically learn how, by the aid of chemistry and botany, to test the quality of most of the articles he worked with, and how to manufacture what could not be tested.

Broadly, as a matter of self-interest and sound policy, the preparation of medicinal compounds by a few druggists only, and their mere distribution by the many, was a practice to be deprecated. The medical practitioner, also, would prefer to purchase his drugs from the local druggist, upon whose knowledge and skill he could rely, to procuring his drugs from a distant wholesale manufacturer of whom he knew nothing. He would even probably go one step further, and give up dispensing altogether, thereby conferring a double boon upon the druggist.

Into the question of improvements in the elaboration of particular drugs he would not enter; first, because it was dealt with in the list of subjects for research annually issued by the British Pharmaceutical Conference: secondly, because the spirit of emulation would not permit it to pass out of sight; and, thirdly, because it would be unwise to dwarf the importance of the main question just considered. As far as possible, the distribution of drugs should be effected only by properly qualified druggists. No doubt, in sparsely populated districts, the mere distributor would have to be employed. But the main end to be obtained was a personal guarantee of the purity and efficiency of the drugs purchased; and recourse ought only to be had to the non-pharmaceutical distributor when reference is easy to the wholesale vendor from whom he purchased them. Distribution by retail vendors other than druggists ought to be discouraged as much as possible, because the element of skill and personal guarantee was totally absent. With non-pharmaceutical vendors of drugs must be classed co-operative stores, which were merely distributing agencies, and unable to command the services of skilled pharmacists.

Proprietary preparations and patent medicines were not the unmixed evils which they were sometimes represented to be. They supplied the demand for simple remedies—a demand which really lay outside medical practice. They might not be the best means of supplying that demand. No doubt it would be better for the qualified pharmacist to make such remedies himself. But he was discouraged from doing so. With what result? In no country was traffic in secret remedies more rife. It was, of course, wrong for the pharmacist to meddle with pathology, attempting to diagnose while knowing nothing about the human frame. But, whenever and wherever a druggist was free to sell a patent medicine, he surely should be free to sell and be able to sell a simple remedy prepared by himself, by the aid of that special pharmaceutical knowledge and skill which are the guarantee that he is something more than a mere drug distributor. The inability to recommend remedies, characteristic of the mere seller of drugs, and the professional jealousy which would stop a qualified pharmacist from recommending them, have probably done more to foster the present enormous demand for secret remedies than all other causes put together. The reduction of what was sometimes termed the patent medicine evil would probably be effected, chiefly, by that gradual extension of pharmaceutical knowledge among our future pharmacists which would enable them to supply from their own shelves simple remedies for those tiresome minor maladies for which the public were now driven to patent medicines.

For improvement in drug distribution, therefore, we might reasonably look in two directions. First, in the distribution of drugs being limited, in the main, sooner or later, and of course without injuring anyone, to druggists, such druggists being compounders as well as dis-

tributors of the drugs with which they dealt. That would be brought about internally by education, externally by legislation; internally by the carrying out of that policy to which pharmacists might now be said to be committed, and which might be summed up in the words "sound and thorough compulsory pharmaceutical education;" externally by appropriate legislative enactments. Improvement would result, secondly, in our having in the place of secret remedies, which were prescribed by persons at a distance, who were irresponsible, the open recommendation of simple remedies by pharmacists who had made the components themselves, and who could guarantee their trustworthiness. That, too, would be brought about gradually by improved pharmaceutical education, and by that only. It would be unwise to provide for pharmacists any modified medical education. Let there be no pretence of professional medical treatment mixed up with pharmacy. Let the druggist's recommendation of simple remedies be founded on that knowledge and experience which comes of much pharmaceutical familiarity with remedies, and on that common sense and perception in all that pertains to drugs, with which a properly and specially educated pharmacist might be credited. Indeed, any trespassing on the purely medical domain would necessarily, sooner or later, involve commensurate punishment.

Legislation with respect to pharmacy was in a very unsatisfactory state. It was to the interests both of the public and the druggist that the sale of poisons should be restricted. But more was required. The State should take care, not only that druggists should be qualified, but should impose a penalty on their sale by unqualified persons. It was no answer to plead the maxim "Caveat emptor", inasmuch as the ordinary purchaser was no judge of the quality of drugs, as he was of other articles. The purchaser was protected by the Pharmacy Act of 1868 as to certain drugs mentioned in the schedule and deemed poisons. But all drugs were more or less poisons; and those drugs alone ought to be scheduled which might safely be sold by unqualified persons. He would add a few words with respect to the title "chemist and druggist". The English pharmacist was a "chemist and druggist". But he not only had a very inadequate professional knowledge of chemistry, but he was not even a general trading chemist. He had abandoned the sale of alkalies and delicate acids, vegetable dyes and colouring matters, photographic and other chemicals, and chemical apparatus generally, to traders who dare not call themselves chemists. He had already shown his deficiencies in pharmacy proper. Thus it was no wonder that the calling of "chemists and druggists" was declining in this country; and that a great deal of the work of the pharmacist was gone, never to return. But a vast amount of new work had taken the place of the old. Chemistry was progressing with a rapidity unexampled in the annals of man's avocations. The trade in the materials and apparatus for the study and the practice of chemistry by amateurs, professional men, and manufacturers, was extending year by year. Would trading "chemists" allow this chemist's trade to slip through their hands? At no previous period in the history of this country had the subject of the purity of food, drink, drugs, and all other things, occupied so much attention as at present. Never was there a greater demand on the part of the public, not for direct analysis, at the request of ordinary purchasers, by officials under the Acts relating to adulteration—that Parliamentary scheme (Act of 1875, section 12) had entirely failed—but for the personal guarantees of vendors that articles sold were what they professed to be. Who so well able to give this guarantee as the "chemist and druggist", who was a chemist as well as a druggist? Such a chemist would extend his trade over the whole commercial area of chemistry, as well as draw to himself those pharmaceutical streams now flowing in channels uncontrolled by pharmacists. There was also minor professional work to be done by the "chemist" in such directions as those already indicated—work chiefly qualitative, and for which the chemist and druggist would, perhaps, only receive silver fees, but for which he would be remunerated over and over again in the confidence reposed in him by his customers, and by the medical practitioners of the neighbourhood, and in the *prestige* and status it would win for him. Much good might be done by organisation. Without it, the duties of chemists and druggists to the State would only be performed in an incomplete and haphazard manner. Such organisation existed already as regarded about one-third of the chemists and druggists in the country. Were the advantages of union brought home to every pharmacist—which might easily be done now there was a complete register—they would nearly all combine to form one great national society: a result which would tend no less to the advantage of the pharmacists themselves than to that of the community at large.

SULPHURIC ether is said to have the property of modifying the very persistent and unpleasant odour of oil of turpentine in mixtures.

THE EGYPTIAN EXPEDITION.

NOTES FROM ALEXANDRIA.

A SPECIAL CORRESPONDENT writes from Alexandria on August 18th: The heads of the Egyptian medical department have just been aroused to the fact, that soon they may be called upon to provide for the care of sick and wounded Egyptian soldiers, and that not a single preparation for it has yet been made. They have a native hospital at Alexandria, with a medical staff, but no trained nurses, the nursing being done by ordinary native workmen, no surgical appliances, no material for surgical dressings, nor comforts of any description for sick or wounded. Their stores, such as they are, of medical and surgical supplies, are in Cairo, the road to which is barred by the rebel camp. The native staff of doctors and attendants of the hospital deserted it after the bombardment to join the ranks of Arabi, taking with them what few rude and rusty instruments and appliances the hospital possessed, leaving behind them the patients who could not be moved—who remained for three days, as you already know, without medical or other attendance, and almost without food. The work of organising a staff was set about by Dr. Salem Pasha, who [appointed Dr. Dutrieux, oculist to the hospital, to take temporary charge as surgeon-in-chief, and four native doctors for the medical service. These still continue to carry on the medical service, but under the greatest difficulties, with no proper nursing staff, no appliances nor medical comforts, and no available funds to procure them.

Knowing how the Khedive has always shown a great interest in the hospitals of the country, his first act after the bombardment being to call and inquire personally after the safety of the Sisters of the Deaconesses' Hospital, I took occasion, at an interview with him a few days ago, to represent to him the necessity of providing for the reception of wounded Egyptian soldiers, and suggested that a properly trained nursing staff should be at once sent for from Europe, as well as all material necessary for the exceptional nature of the work which will have to be done, a suggestion which his Highness most readily accepted and took immediate steps to carry out. A staff of properly trained lady nurses is to be obtained from London, who, if they come, will, I hope, inaugurate a new era in the nursing of native Egyptian hospitals. They will arrive, unfortunately, rather late in the day, as appearances seem to point to some important military operations being near; but in the European hospitals of the town, which are well furnished and equipped, there will be accommodation for a very large number of wounded. Of European hospitals, there are, the Deaconesses' Hospital, under the medical care of Drs. Mackie, Murison, and Kulp, and nursed by deaconesses of Kaiserwerth; the General European Hospital, Drs. Ardouin and Massa, nursed by the Roman Catholic Sisters of St. Vincent de Paul; and the Greek Hospital, Drs. Zancaroli and Kartulis, nursing superintendent—Mrs. Nicolas. The medical staff of both the Egyptian and European hospitals will be largely supplemented, if required, by medical men of the town, and by medical men from the interior of Egypt and Cairo, who have been driven to take refuge in Alexandria, all of whom are ready to give their services.

The water-supply from the Mahmoudieh Canal still holds out, and the quality of it continues to be tolerably good. Since means have been adopted by the Sanitary Commission and the Director of the Water Company to clear it, it has been much less disagreeable both in taste and in appearance. The means adopted have been to put into the small canal, from which the water is pumped into the filter-beds, a quantity of ferric alum, and into the filtered water in the reservoir supplying the town, permanganate of potash. The troops encamped at Ramleh get a supply of water from wells in the desert. Most of those in town are supplied with condensed water, or, if they use water of the Mahmoudieh Canal, have it well boiled.

Within the last few days, the autumn damp has begun to make itself felt by causing continuous and profuse perspiration on the least exertion, exposing one to catch "summer colds" and sudden chills. Though the temperature has not increased, the heat is much more oppressive, and several cases of syncope occurred this morning in some of the regiments which were marched from Ramleh to town. The thermometer continues steadily at 81°-82°, with a very slight fall at night. Troops still continue to arrive in large numbers, and are being landed in very good condition. I am informed by the medical officers that the health of those already here continues to be very satisfactory. Many of the medical staff have had great experience of campaigning in hot and unhealthy climates, and every means will be employed to ensure the health of their men during their sojourn in Egypt.

The members of the Central Sanitary Commission still continue to pursue energetically the work of improving the hygienic state of the town; and the improvement they have effected, under such difficult circumstances, is little short of a marvel to those who remember the

state of the town a few days after the bombardment; and it is doing only justice to the members of the Commission to remark that they have given their services gratuitously, the finances of the Egyptian Government being in such a disorganised condition, that all the money received by the Commission is required for labour. It is to be hoped that the European governments will not allow to pass unnoticed the services of the members of the Commission, who have worked so well and so willingly, and overcome such exceptional difficulties to ensure the health of the population, European and native. But rewards come slowly to the medical profession. Its honour and its reward is its work.

THE MEDICAL REPORT OF THE EIRA EXPEDITION.

THE following is the report of Mr. W. H. Neale, the medical officer to the Eira Expedition.

"In drawing up a report on the health of the men engaged in the above expedition, I am happy to say that a few words only are necessary to give an account of any illness which occurred during the fourteen months we were absent from England. On August 21st, 1881, twenty-five men were thrown on Cape Flora, with scarcely meat enough for two months. A house was built of stones and turf, and covered with sails. Ventilation was easily secured, our only door being a piece of canvas, hung at the inner end of the porch. Several holes were cut in the roof, through which old provision-tins were put; a lid was fitted to each tin, so that the ventilators could be shut when it snowed heavily, or the frost was too severe to keep them open.

"Our food for ten months was procured by hunting, and consisted of walrus, bears, and looms. The meat was cut up into small pieces and boiled for about three hours. We had three meals a day, and about twelve pounds of vegetables were divided among the three meals every day. Every day from October to May 1st, each man had a quarter of a pound of flour made into a 'dough-boy' for dinner.

"Whenever it was possible, the blood was saved when a bear was shot; a pint of it put into the dinner-pan made the soup beautifully rich.

"The effect of living on the meat of the country was (I am certain), that there was not the slightest symptom of scurvy among us. When the daylight returned, instead of everyone looking pale and anemic, it was a surprise to all old wintering hands to see everyone with rosy cheeks.

"No limejuice was saved, but one-fifth gill of rum per man was served out every day from October 1st to May 1st.

"I must for the present defer expressing any opinion as to the relative value of lime-juice or rum in the prevention of scurvy.

"No severe cases of frostbite occurred, and cases of sickness were rare. Several cases of minor surgery came under my care, and, as a rule, the smallest wound took a long time to heal. One man had bronchitis followed by pleurisy, which kept him in bed three weeks; another had bronchitis rather severely for about a fortnight. In the spring, nearly everyone was affected with snow-blindness in a mild form. The eyes ran with water, and in many cases were much inflamed, with severe shooting pains over the frontal regions. As a rule, no case had to stay indoors more than forty-eight hours; no one sustained any permanent injury to their sight.

"Unfortunately, we had two invalids during the whole winter, and I regret to say they are still on my hands. Both cases got worse during the winter, owing to the cold, and not from the food we lived on. One invalid was the mate, who sustained a wound on the right forearm in July 1881. He never mentioned it to anybody for some time, and seldom redressed the wound, until eczema (to which he was predisposed) set in; then he came and asked to have it dressed.

"Our other invalid was the second mate, who had a bad lip before we left Peterhead: it never showed signs of healing; when the frost set in, it gradually became worse.

"Considering the manner in which we lived, the almost inactive state in which we were compelled to pass the winter, and the healthy condition of everyone when we were rescued, it ought to be a great source of encouragement to following expeditions to winter in Franz Josef Land, and to live on the meat of the country.

THE METROPOLITAN SEWAGE RESERVOIRS.—The Metropolitan Board of Works have decided to postpone the enlargement of their sewage reservoirs at the Crystal Palace and Croydon, which it was proposed to increase in order to prevent the overflow of the London sewage on the flood tide. The postponement has been ordered in deference to the Royal Commission now sitting to inquire into the pollution of the River Thames.

FIFTIETH ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

PROCEEDINGS OF SECTIONS.—CONTINUED.

SECTION E.—ANATOMY AND PHYSIOLOGY.

Wednesday, August 9th.

PROFESSOR HUMPHRY, President, opened the Section with an address, which was published at page 269 of the *BRITISH MEDICAL JOURNAL* for August 12th.

Dr. MATTHEW HAY (Edinburgh) read a paper on the Origin and Distribution of the Cane-Sugar Ferment in Animals. Dr. Haycraft and Mr. Shuter took part in the discussion which followed.

Dr. McVAIL (Glasgow) read a paper in which he described two improved forms of Anapneographs that he had devised. In Bergeon's anapneograph, and in one that he had himself constructed some years ago, the writing lever was carried by the momentum of its return journey some distance beyond its position when at rest, and the expiratory part of the tracing was erroneously augmented. By employing two valves, one for inspiration and the other for expiration, each with a writing lever attached, this error was obviated. He further gave a short account of the results he had obtained in health and disease by the employment of the anapneograph. Various objections were urged against the accuracy of the instruments by Drs. Hoggan, Haycraft, Hay, and Mr. Shuter, especially as to the actions of the two valves. Dr. McVail thanked the Section, and replied to the objections which had been raised.

Mr. C. B. LOCKWOOD (London) read a paper on Abnormalities of the Cæcum and Colon, with reference to Development. A discussion followed, in which the President, Dr. Hay, Dr. Cathcart, Mr. Symington, Mr. Shuter, and Mr. Bowlby, took part.

Mr. W. S. RICHMOND showed specimens of Abnormalities of the Urino-genital Organs. In one, there were apparently four ureters emerging from the hilum of the kidney. Professor Humphry and Mr. Lockwood made some remarks.

Mr. L. STRETTON (Kidderminster) described a case in which there were five Bifid Dorsal Spines in the Human Subject.

Thursday, August 10th.

The Chair was taken by the President, Professor Humphry.

Mr. HENRY MORRIS (London) read a paper on the Ligamentum Teres, and its Use in Man and other Animals. Professor Humphry, Mr. Shuter, Mr. J. F. Knott, and Mr. Morris, took part in the discussion.

Mr. MAYO ROBSON (Leeds) showed specimens of Brain hardened and prepared by Giacomini's process, which he explained. Dr. Humphry, Dr. Hoggan, Dr. Haycraft, and Mr. Symington, took part in the discussion which followed.

Mr. C. B. KEETLEY (London) read a paper on the Actual Use of the Cervical Ligaments of the Knee-joint. The President made some remarks.

Dr. G. HOGGAN (London) read a paper on the Functions, Characters, and Positions, of the Ultimate Nerve-Terminations in the Skin and Hairs. The President, Dr. Haycraft, and Dr. Hoggan took part in the subsequent discussion.

Mr. ROGER WILLIAMS (London) read a paper on Contraction of the Stomach. Remarks were made by Professor Humphry, to which Mr. Williams replied.

Dr. MATTHEW HAY (Edinburgh) read a paper on the Absorption of Salts from the Alimentary Canal.

Mr. SYMINGTON (Edinburgh) read a paper on the Valvular Arrangements in connection with the Cranial Venous Circulation.

Mr. C. W. CATHCART (Edinburgh) read papers on the Movements of the Arm on the Trunk, and on the Movements of the Ulna in Pronation and Supination.

Friday, August 11th.

Dr. DE PIETRA SANTA (Paris) made a contribution on the Study of the Gastric Juice.

Dr. G. HOGGAN (London) read a paper, with microscopic demonstrations, on the Functions of the Lymphatics as deduced from the Anatomy of their Radicles.

Mr. GASKELL read a paper on the Innervation of the Heart.

Dr. BRAILEY (London) read a paper on some Points in the Anatomy of the Ciliary Body.

Mr. E. A. SCHÄFER (London) read a paper on the alleged Digestive Capabilities of the White Blood-Corpuscle.

Mr. BRUCE CLARKE (London) read a paper on Congenital Deformities of the Diaphragm.

Mr. J. F. KNOTT read a paper on the Normal and Abnormal Anatomy of the Aortic Arch in Man.

The following papers were also put down for reading on this day:—

Mr. W. K. PARKER, F.R.S.: On the Visceral Arches of the Mammalia.

Mr. JAMES SHUTER: On the use of the living subject in Anatomical Teaching.

Mr. T. COOKE: On the Continuation of the Intrinsic Muscles of the Tongue in Man, with Extrinsic Muscles (accompanied with Dissection).

Dr. J. G. GARSON: The Effect of Artificial Distention of the Rectum on the other Pelvic Viscera.

Mr. A. A. BOWLBY: On the Development of the Mammary Gland (with microscopical specimens).

Mr. CATHCART showed enlarged Plaster Models of the Carpus and Tarsus, modelled under his direction by Mr. Fenwick, Anatomical Modeller, Glasgow; also illustrations of Cutaneous Distribution in the form of Plaster, Cuts of the Head and Trunk, having the various areas of nerve-distribution indicated by different colours; Metal Injections of the Bronchus and Alveoli of the Fœtal Lung, and of the Renal Arteries; as well as a simple form of Rotatory Stand for Demonstrating Heavy Specimens.

SECTION F.—PATHOLOGY.

Wednesday, August 9th.

The President, Dr. HUGHLINGS JACKSON, F.R.S., delivered an Address, which was published at page 305 of the *BRITISH MEDICAL JOURNAL* for August 19th.

Dr. STEPHEN MACKENZIE (London), in the place of Dr. D. J. Hamilton of Aberdeen, introduced a discussion on the Pathology of Diabetes, in which Dr. Pavy, Dr. Saundby, Dr. Shingleton Smith, Dr. W. Webb, and Dr. Mackenzie took part.

Dr. SAUNDBY (Birmingham) read a paper on Changes in the Sympathetic in Bright's Disease.

Dr. HUGHLINGS JACKSON read a paper by Dr. GOWERS (London), explanatory of Microscopic Sections of Diseased Spinal Cord.

Dr. W. B. HADDEN (London) showed the following specimens. 1. Section of the Spinal Cord from a case of Disseminated Sclerosis, showing degeneration in the antero-lateral and posterior columns. 2. Sclerosis of the Posterior Column, from a case of Locomotor Ataxy. 3. Sclerosis of the Left Anterior Pyramid of the Medulla Oblongata, from a case of Hemiplegia with late rigidity. 4. Symmetrical Area of Degeneration, external to the Anterior Grey Matter of the Medulla Oblongata.

Thursday, August 10th.

Mr. JONATHAN HUTCHINSON (London) introduced a debate on the Etiology of Tumours, in which Sir James Paget, Dr. Thin, Mr. Butlin, and Dr. Coupland took part.

Mr. BUTLIN (London) gave a Microscopic Demonstration of some of the Forms of Tumour.

Dr. STEPHEN MACKENZIE (London), showed specimens of Urine, from a case of Paroxysmal Hæmoglobinuria.

Dr. THIN (London) showed specimens of Trichophyton Tonsurans, on which Dr. Hoggan made some remarks.

Mr. R. WILLIAMS (London) read a paper on Sarcoma of the Bladder.

Friday, August 11th.

Dr. SANGSTER (London) read a paper on Rodent Ulcer, on which Dr. Thin made some remarks.

Dr. HERON gave a Demonstration of Ehrlich's Method for the Detection of the Tubercle-Bacillus.

Dr. H. GIBBES (London) gave a Demonstration of a Simple Method for the Detection of the Bacillus of Tubercle.

Dr. STEPHEN MACKENZIE exhibited a Cultivation of the Bacilli of Tubercle prepared by Dr. Koch of Berlin, and explained the process employed by Koch.

SECTION G.—OPHTHALMOLOGY.

Wednesday, August 9th.

The President, Mr. VOSE SOLOMON, delivered an address, which was published at page 271 of the *JOURNAL* for August 12th.

Dr. EDWYN ANDREWS (Shrewsbury) opened a discussion on the Extraction of Senile Cataract in its Capsule; in which Mr. Anderson Critchett, Mr. Solomon, Mr. Nettleship, Mr. Folker, Dr. H. Bell Taylor, Mr. Cowell, Mr. Priestley Smith, and Mr. C. Macnamara, took part.

Mr. G. COWELL (London) read a paper on certain Modifications of Von Gräfe's Operation for Extraction of Cataract. Dr. Andrew and Mr. Anderson Critchett took part in the discussion which followed.

Mr. SIMON SNELL (Sheffield) read a paper on Extraction of Cataract by a Shallow Lower Flap; with particulars of 120 operations.

Dr. BELL TAYLOR (Nottingham) read a paper on the Use of Eserine as a Preliminary to Extraction in Cases of Cataract; and showed four patients.

Thursday, August 10th.

Mr. ANDERSON CRITCHETT (London) read a paper on the Operative Treatment of Congenital Cataract. Mr. Cowell, Mr. Nettleship, and Mr. Frederick Mason, took part in the discussion which followed.

Dr. A. H. BENSON (Dublin) read a paper on the Treatment of Partial Trichiasis by means of Electrolysis. Dr. Andrew made remarks.

Dr. BENSON also read Brief Notes of Rare Ophthalmic Cases.

Mr. NETTLESHIP (London) described a Case of Optic Neuritis, followed by a persistent Flow of Fluid from the Nostrils.

Mr. PRIESTLEY SMITH (Birmingham) described two cases of Atrophy of the Optic Nerves, with continuous dropping of fluid (cerebro-spinal?) from the Nostril. He also showed a Registering Perimeter.

Mr. NETTLESHIP (London) opened a discussion on the following subject: To what extent do the signs derived from the Examination of the Eye and its Appendages contribute to the Localisation of Central Nervous Diseases? Dr. Andrew, Dr. Hughlings Jackson, and Mr. Priestley Smith, took part in the debate.

Mr. H. E. JULER (London) read a paper on the Application of Retinoscopy to the Diagnosis and Treatment of Errors of Refraction.

Dr. EDWYN ANDREW (Shrewsbury) read a paper on Dislocation of the Lens, with remarks on the old Operation of Couching.

Dr. BELL TAYLOR (Nottingham) read a paper on the Transplantation of Skin *en masse* in the Treatment of Ectropion and other Deformities of the Eyelids.

Mr. BENSON (Dublin) showed the following drawings. 1. Primary Lupus of the Conjunctiva (two cases in four drawings). 2. Rupture of the Choroid without Rupture of the External Tunics of the Eye (Traumatic) (two cases). 3. Double Coloboma of the Choroid (Congenital) (two drawings). 4. Double Coloboma of the Choroid, and of the Optic Nerve Sheath (Congenital) (two drawings). 5. Embolism of the Central Artery of the Retina, modified by the presence of a Cilio-retinal Vessel (two drawings).

Mr. BENSON also showed several Ocular Tumours (mounted in glycerine jelly), from the collection of Mr. J. B. Story of Dublin. 1. Melanotic Sarcoma of Choroid, with Infiltration of Optic Nerve (male, aged 21). 2. Alveolar Sarcoma (?) of Ciliary Body. (Female, aged 34; symptoms of six years' duration. Patient died subsequently in an "Incurable" Hospital with some hundreds of carcinomatous (?) tumours scattered over the whole surface of the body.) 3. Melano-Sarcoma of Anterior Part of Choroid. (Female, aged 33; history of injury six years previously; brother died of "tumour of base of the brain.") 4. Melanotic Sarcoma (?) (Male, aged 76.) 5. Glioma. (Female, aged 2 or 3 years (?).

SECTION II.—OTOLOGY.

Wednesday, August 9th.

Mr. LAIDLAW PURVES, the President, delivered an address, which was published at page 273 of the JOURNAL for August 12th.

Letters of apology were read from Professor Von Troeltsch (Würzburg), Professor Barckhardt-Merian (Basle), Professor Moos (Heidelberg), Dr. Hedinger (Stuttgart), Dr. Bonnafont (Paris), Dr. Weber-Liel (Berlin), Dr. C. F. Blake (Boston), Dr. A. H. Buck (New York), Dr. Sexton (New York), Dr. St. John Roosa (Newport), Sir James Paget (London), Dr. Russell (Birmingham), Professor Granger Stewart (Edinburgh), Dr. Brakenridge (Edinburgh), Dr. Byrom Bramwell (Edinburgh), Dr. Cumberbatch (London), Dr. Morrison, Dr. Sinclair (Dundee), Dr. Macdonald (Bristol), and Dr. Alcock.

Mr. GEORGE P. FIELD (London) opened a discussion on the Connection between Diseases of the Ear and General Medicines.

Dr. LAIDLAW PURVES (London) read a paper on the same subject; and a discussion followed, in which Dr. Cresswell Baber, Dr. Urban Pritchard, Mr. A. A. Napper, Dr. Woakes, Dr. Barr, Mr. R. Ellis, Dr. C. Warden, Dr. McBride, Mr. T. M. Hovell, Mr. Purves, and Dr. Field took part.

The papers of Mr. Field and Mr. Browne, with the discussion, are published in the present number of the JOURNAL.

Thursday, August 10th.

Dr. WOAKES (London) and Dr. P. McBRIDE (Edinburgh) read

papers on Auditory Vertigo. A discussion followed, in which Mr. Ellis, Dr. Hudson, Dr. Baber, Dr. Barr, Dr. Woakes, Dr. Pritchard, Dr. Pierce, and Dr. McBride took part. A letter from Dr. Weber-Liel of Berlin was read, in which he called attention to the use of suction applied to the membrana tympani as a means of diagnosing auditory vertigo.

Dr. C. WARDEN (Birmingham) read a paper on Polypus of the Ear, on which remarks were made by Dr. Pierce, Dr. Woakes, and Dr. Kirk Duncannon.

Dr. URBAN PRITCHARD (London) read a paper on the Use of Mineral Acids in the Treatment of Caries, Necrosis, and Exostosis of the Ear. A discussion followed, in which Dr. Kirk Duncannon and Dr. Pierce took part.

Dr. T. BARR (Glasgow) read a paper on the Use of the Galvanic Caustery in Diseases of the Ear.

Dr. BABER (Brighton) showed a Waistcoat Pocket Reflector and Set of Specula.

Dr. URBAN PRITCHARD showed a Convenient Form of Audiphone.

Dr. WARD COUSINS (Southsea) showed his Ear-Protectors.

Dr. WOAKES then proposed a vote of thanks to the President.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL:

NOTICE OF QUARTERLY MEETINGS FOR 1882: ELECTION OF MEMBERS.

A MEETING of the Committee of Council will be held on Wednesday, October 18th. Gentlemen desirous of becoming members of the Association must send in their forms of application for election to the General Secretary not later than 21 days before the meeting—viz., September 27th, in accordance with the regulation for the election of members passed at the meeting of the Committee of Council of October 12th, 1881.

August 31st, 1882.

FRANCIS FOWKE, General Secretary.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST AND WEST KENT DISTRICTS.—A conjoint meeting of the above Districts will be held at Folkestone, under the presidency of R. L. Bowles, M.D., F.R.C.P., on Thursday, September 28th, at 3 P.M.—A. H. B. HALLOWES, Maidstone, 1, Whitehall Road, Canterbury, Honorary Secretaries.—August 29th, 1882.

SOUTH MIDLAND BRANCH.—The autumnal meeting will be held at Kettering on Thursday, September 28th. Gentlemen desirous of reading papers, or of showing specimens, are requested to communicate at their earliest convenience with the Honorary Secretary.—G. F. KIRBY SMITH, Honorary Secretary, Northampton.

SOUTH WEST BRANCH.—The autumnal meeting will be held at Exeter on Thursday, September 28th. Gentlemen desirous of reading papers, or of showing specimens, are requested to communicate at their earliest convenience with the Honorary Secretary.—G. F. KIRBY SMITH, Honorary Secretary, Northampton.

EAST ANGLIAN BRANCH.—President, W. M. Crowfoot, Esq., M.B.—The autumnal meeting will be held at Norwich on Thursday, September 28th, at 3 P.M. Gentlemen desirous of reading papers, or of showing specimens, are requested to communicate at their earliest convenience with the Honorary Secretary.—G. F. KIRBY SMITH, Honorary Secretary, Northampton.

Nor

with the Secretary
Lyons.—August

in Street, Belfast.

CORRESPONDENCE.

THE REPORT OF THE MEDICAL REFORM COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION.

SIR,—I have just read the report of our Medical Reform Committee in the JOURNAL of to-day's date, and, as a member of the British Medical Association, protest against its adoption by those of our members who may be present at our annual meeting next week. I object, because of its untruthfulness, to the statement that I would not co-operate with our Association; but it is true that I determined not to identify myself with the reprehensible idleness and silly tall talk of our Reform Committee.

I protest against the work of other Associations and persons being appropriated by the Reform Committee, and palmed off upon the credibility of our members as its own work, as has been done by this Committee. I protest against the members of our Association being assured by this Committee that the investigation of the Royal Commission was of an exhaustive character, when it is well enough known to those familiar with the proceedings of the Commission that the evidence of many competent witnesses was not accepted.

Again, I protest against our members being assured by this Committee that the Royal Commission has reported in favour of medical reform as advocated by the profession, and, at the same time, maintain that it has reported, not only directly against that reform, but in favour of much that would be detrimental to the interests of the profession, and especially to the interests of the general practitioners thereof.

I maintain, and challenge a statement to the contrary, that, for the past twelve years at least, the Reform Committee has had no programme of its own; that for all this time it has followed in the trail of other reformers, and has merely adopted the Bills of other Associations and persons; and that, in now asking our Branch Councils to memorialise the Privy Council to bring in a Bill founded upon the report of the Royal Commission, it is abandoning ignominiously, with the single exception of direct representation, any principle for which the profession has laboured for many years past.—I am, sir, your obedient servant.

R. H. S. CARPENTER.

August 5th, 1882.

THE PROPOSED AMENDMENT OF BY-LAW 12.

SIR,—The echoes of the late annual meeting at Worcester have scarcely begun to die away, before some corrections of the reports of its agenda are called for.

In reference to my motion, it is said at page 276 (August 12th) of the Council: "They are, however, unable to understand the necessity for such an alteration of the by-law, and believe there would be a difficulty in carrying out an arrangement for which there is no known precedent." As to the "necessity", opinions may differ; but the discussion and the motion carried at the final general meeting, on the Friday morning, carries with it some significance. As to the "difficulty", I can see none. In what does it consist? Then as to "precedent". The latter part of the sentence would give the casual reader the impression that I wished something to be done which was novel, and against the constitution of the Association. Yet, if the reader will turn to "The Articles of Association of the British Medical Association"—in other words, the original and fundamental laws of our Association—he will find:

"OFFICERS.

"28. There shall be the following officers of the Association, viz., a *President of the Association*, a *President-elect*, Vice-Presidents, a *President of Council*, a *Treasurer*, an *Editor of the Journal*, and a *Secretary*, who respectively shall be designated or elected, and *hold office for such period*, and have and enjoy such duties, powers, and privileges, and as to the Editor of the Journal and Secretary receive such emoluments, as shall be determined from time to time by the Association in general meeting." The italics are mine.

Now already, to the best of my belief, the term of office of the President, and with it that of the President-elect, has been fixed at one year; that of the President of Council at three years. If these do not constitute a "precedent" for determining the tenure of office of another officer, then the English language has no meaning.

Whether by-law 12 would be amended by fixing an extreme limit to the tenure of office by the Editor, or it should remain as it stands at present, is a matter for the Association "in general meeting" to determine, not the Council. My desire all along has been to induce the Association to act deliberately in the matter, not to dismiss it with eager haste. It is no mere personal matter betwixt myself and the present editor, but a matter of broad policy, which I must bring for-

ward again "in general meeting" at Liverpool (the earliest time possible according to by-law 43), for the verdict of the members collectively; no matter whether the present editor holds the office then, or some one else is in the saddle.

Whatever the verdict may be is a matter of little moment to me personally; my aim has been, and is, to give the Association an opportunity of declaring its will on a matter left unsettled, but now ripe, or at least ripening, for decision. We will see what a year will bring forth! By next year, the motion will have had that consideration given to it which is to be desired. My vanity is not so egregious as to ask the members of the Association to adopt my views on the subject; my object was and is to ascertain its views, which can only be done by a formal vote.

Perhaps I may be permitted to add a word of explanation as to my non-appearance at the first general meeting on Tuesday evening. My letter to the Committee of Council asking for postponement to a later meeting was read by them on Tuesday afternoon; but no intimation of their resolution not to alter their agenda (and that therefore my motion, if not discussed on Tuesday, could not come on at all) was communicated to me; or, if it was, it failed to reach me. I was therefore in ignorance of that fact until I saw it in the Daily Journal of Thursday, August 10th, and in such ignorance I appeared at the general meeting on Wednesday morning to tender an explanation, which was cut short summarily (see BRITISH MEDICAL JOURNAL, August 12th, page 278), and which I now tender to the Association—viz., it did not seem to me desirable to ask the members to decide by vote a matter which they had not had time to previously discuss among themselves, and which would come more fitly near the close rather than at the commencement of the meeting.

The matter is certainly not yet a part of the "dead past"; and I shall, if all be well, be in my place to propose it next year (when called upon) without fail.—I remain, etc.,

August 21st, 1882.

J. MILNER FOTHERGILL, M.D.

* * Dr. Fothergill's observations are not in any sense "corrections." They are "arguments" in favour of a proposal which he ought to have been in his place to propose at the time appointed for the discussion of the motion, of which he had given formal notice. The time at which the discussion would be taken had been officially notified to him, and, as he was not present to support his motion, it could only lapse. Dr. Fothergill was in Worcester at the time his motion was called on, and, according to all rules of public business, should have been ready to support it. It was not possible to communicate with him before the meeting on Tuesday, as his address in Worcester was not known.—C. G. WHEELHOUSE, President of Council.

NOTIFICATION OF INFECTIOUS DISEASE.

SIR,—Dr. Seaton, Medical Officer of Health for Nottingham, writing on this subject in your last issue, says:

"If I understand Dr. Mahomed's resolution aright, the proposal" (adopted by the meeting of the British Medical Association at Worcester) "is, that the sanitary authorities should be empowered to require every householder to notify...and no more....I have heard this idea expressed before, but have never known it to be definitely formulated."

For a definite formulation of this idea, I beg to refer Dr. Seaton to the Bill introduced last session into the House of Commons by Mr. Meldon, M.P., on behalf of the Irish Medical Association and the Dublin Branch of the British Medical Association, of which Bill I have the pleasure to send him and you copies.

I submit that it is the only measure which promises to effect notification without putting the physician in a false position; and I would urge its general adoption as a means of resolving the existing contention between sanitarians and the profession.

The Bill proposes—

a. To make the custodian of the patient, primarily, solely responsible to notify. He shall find out the nature of the disease in any way he pleases (through the family doctor, if he has one—through the parish doctor, if he has not); but he must cause notification to be made *per alium aut per se*, and shall be answerable to the sanitary authority if he omits to do so.

b. But he may use the doctor as his agent if the doctor pleases; and, in that case, the entire responsibility and penalty shifts at once to the doctor's shoulders, who undertakes to notify, and receives the fee.

Let me point out how this system would work. The child of A. falls sick. Thereupon, he sends for the doctor. Why? Because he knows that, whether he does so or not, he himself *must* notify—that he will not escape sanitary inconveniences by excluding the doctor, but that, on the contrary, the doctor can save him much trouble and publicity by notifying for him. The physician visits, diagnoses the disease, informs A. of its nature, and of his (A.'s) responsibility to notify.

This the physician does, without hesitation, because he is not thereby adding in the least to his patient's troubles, or involving him in any sanitary inconveniences which do not already rest on him.

With the notification fee in view (supposing him to have no other incentive), the doctor informs A. that he is willing to relieve him of all trouble of notification. I anticipate that in nine cases out of ten A. accepts thankfully the relief; whereupon, the doctor fills up his notification-form, hands one part as a voucher to A., posts a second part to the sanitary authority, and keeps the block as his own record.

But suppose A.—fearful of sanitation or negligent of his duties—does not send for the doctor. The nature of the disease is discovered by the sanitary authority either by registration of death or otherwise, and A. is prosecuted. He can have no defence. No question can arise which will require the doctor to go into the witness-box to prove that he did or did not hand A. a notification-certificate. If the "voucher" be not forthcoming, A. is at once convicted and punished. On the other hand, suppose the doctor undertakes to notify, but neglects to do so, A. is questioned or prosecuted as before. He produces his "voucher"; the doctor is at once made amenable, and cannot plead doubts as to the nature of the disease, because he has already pinned himself to it on the face of the "voucher".

I submit that this system would meet every possible contingency. It would afford no inducement to A. to exclude the doctor, nor any inducement to the doctor to conceal from A. the nature of the disease. It would not make the physician the server of a process in the sick-room (unless when asked to undertake notification), nor the agent of the sanitary authority for the infliction of sanitary inconveniences. Lastly, it would not call the doctor (as the "indirect" method of notification does) to appear as witness against his patient's custodian in the police-court.

You will observe that I do not argue this question as a matter of medical feelings or interests, though I fully appreciate this aspect of the matter. I insist that, in the public interest, compulsory notification by the physician should be resisted, because it must cause—and I assert has caused—concealment of disease; because (with this object in view) it must cause, and has caused, the exclusion of the physician until the patient is dying; because (for these reasons) it must cause, and has caused, rather an increase than a diminution in the zymotic mortality of those towns to which it has been applied.—Yours, etc.,

ARCHIBALD H. JACOB, M.D. Dub., F.R.C.S.I.,
One of the Executive of the Irish Medical Association.

512.—If medical men are to be compelled to notify the outbreak of infectious disease, the odium and responsibility of failing to diagnose cases, to say the least, extremely doubtful, but which further development may prove infectious or otherwise, will devolve and fall heavily and undeservedly on the profession. All doubtful cases should, as a matter of precaution, be assumed to be infectious, and isolated in a "doubtful ward." The patient would not be transferred into the infectious ward until proved to be tainted. On the other hand, a doubtful case, which proves harmless, would have the advantage of escaping the infection.

Are we to understand that it is proposed that our already heavy clerical work is to be increased by having to notify every case of infection and a register of each? To my mind, notifying a decided outbreak should be deemed sufficient; and this duty should devolve equally on school authorities and householders, whether it be considered necessary that we should do so or not. How terribly harassed any individual member of our profession would feel, when intimidated for not at once recognising a case of very doubtful yet incipient infectious disease, and fined on account of the failure.—Yours obediently,
Pershore, August 26th, 1882. SAMUEL W. SMITH.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

DISTRICT MEDICAL RELIEF IN THE UNION OF MANCHESTER.

CONSEQUENT on the death of the late Mr. Dean, until lately medical officer of No. 2 District of the Manchester Union, the guardians appointed a committee to take the subject of medical relief into consideration, and to recommend to the board the arrangements which appeared to them to be advisable. At the last meeting of the board their recommendations were brought up, and formed the subject of a very lengthened discussion. To make the subject clear to our readers, we must state that, up to the date of Mr. Dean's death, this union, for district

medical relief purposes, was distributed as follows: No. 1 A., population 22,034, Mr. T. Price, stipend £170; No. 1 B., population 15,227, Mr. Mann, stipend £170; No. 2, the late Mr. Dean, population 47,951, stipend £220; No. 3, population 63,547, Mr. Meacham, £200; the aggregate area being 1,577 acres, the gross population being 148,799, and the total expenditure on district medical relief being £760, from which used to be deducted the cost of providing and the dispensing of all medicines, which the medical officers had to furnish.

It was now proposed to appoint Mr. Price, medical officer of sub-district No. 1 A., to the vacancy caused by the death of Mr. Dean, and to join his district to that of Mr. Mann, the holder of No. 1 B., leaving Mr. Meacham's district intact, thereby making the three medical districts conterminous with the relieving officers' districts.

In formally moving the adoption of the report, the chairman said he did so unwillingly, as he objected to the amount of salaries proposed, and therefore he should not vote for it. The proposition was as follows: To give Mr. Price £30 additional, a similar amount to Mr. Mann, and to augment the stipend of Mr. Meacham by a like grant, whereby a saving of about £160 would be (so it was imagined) saved. In the course of the discussion which ensued, it came out that the cost of district medical relief, in this highly pauperised union, has been successively reduced from £1,020 to £760, at which it stood at the time of Mr. Dean's death, and that this further reduction would bring the total down to £630, if this scheme should be ultimately adopted.

After much discussion, it was arranged that the combination of districts should be carried out; and, as the salaries could not be modified without notice, the chairman submitted a resolution, which he proposed to move, that Mr. Mann's salary be increased from £170 to £200, that Mr. Price's be raised by a like amount, and that Mr. Meacham should have a grant of £30 additional.

Now, what does this scheme amount to? For a gross sum of £630, from which has to be deducted the cost of drugs and their dispensing, the guardians of the union imagine that the sick wants of their mass of pauper poor can be efficiently dealt with. We protest against the arrangement; and give it as our opinion, derived from an extensive examination of the question, that it cannot be honestly done. In the first place, the population of each district, notably that of Mr. Meacham's, is in flagrant violation of the general orders of the Local Government Board, which limits the population in an urban district to 15,000 persons, though here and there a larger population has been sanctioned. These districts and these obligations will inevitably lead to a perfunctory performance of duty, or to a wholesale recommendation of the great majority of sick cases as fit and proper persons for the workhouse, where the cost of their entire maintenance, and the total destruction of independence, will infallibly lead to a vast augmentation of the cost of pauperism.

If the guardians of this union really desire the well-doing of their sick, let them, before deciding to adopt their chairman's resolution, ascertain how the dispensary system of medical relief works in those districts and unions where it has been introduced—such as Birmingham, Southampton, and Oxford, and the metropolitan unions; and let them not be deterred by the dread of first outlay, seeing that, where the system has been fairly carried out, a very considerable reduction in the cost of pauperism has resulted.

FEVER IN ACCRINGTON.

DR. MILNE, the medical officer of health for this borough, reports increased prevalence of scarlatina and measles during last month, compared with the corresponding month of last year. There were fifty-six registered deaths during the month, a death-rate of 21 per 1,000; whereas in the corresponding month of last year it was 16.46. The deaths from zymotic disease were at the rate of 9.3 per 1,000, to 3.8 of the corresponding period of last year. The borough is never, it appears, quite free of scarlatina. Dr. Milne attributes the prevalence of the disease mainly to the extreme difficulty of isolating infected persons in the dwellings of the operatives, and "the almost criminal indifference with which children and others are allowed to go from infected households to school, to the mill, and in other ways to come in contact with their fellows." Dr. Milne recommends the closing of the schools, thorough disinfection, isolation until complete recovery be medically certified, and the cessation of the practice, peculiar to some women, of "picking about" from house to house where sickness exists. He also recommends that the fewest possible number of persons should attend the burial of infected bodies, and that these should be interred as quickly as possible. Finally, he recommends regular periodical examination of the water-supply; not, of course, omitting general sanitary cleanliness.

THE BRIDGWATER BOARD OF GUARDIANS AND MR. R. AXFORD.

At a recent meeting of the guardians of this union, Mr. E. Barham, pursuant to notice, moved that a superannuation allowance should be granted to Mr. R. Axford, Workhouse and District Medical Officer, who, after holding office for thirty-eight years, had been compelled to resign his appointment owing to ill-health. In the course of a singularly able and eloquent speech, Mr. Barham drew attention to the grounds on which the power to grant superannuation allowances had been conceded by the legislature, and eulogised the public services of Mr. Axford during his lengthened tenure of office, concluding by moving that an allowance of £79 be granted him, that being two-thirds of his salary and extras. The resolution was supported by the Rev. W. J. Fitzgerald, but was opposed by Mr. E. Harden, who, in the fancied interests of the poor ratepayers, urged that nothing should be granted. This proposition was supported by Mr. Waltham, who followed in the same strain. Thereupon an amendment on the original proposition was brought forward, limiting the grant to £25 only. After this, a third amendment was brought up, making the allowance £40 *per annum*. After several divisions had been taken, the proposition that £25 only should be granted, was carried by a majority of one, fifteen guardians voting for £40, sixteen for £25, and three that nothing should be given; in the final and concluding division, fifteen voted for £40, and twenty that it should be only £25, which was the amendment eventually adopted.

Whilst congratulating Mr. Axford on the very high opinion formed of his public services by the board he has served so ably and so long, we cannot but express our regret that the majority of the guardians could not see their way to concede a more liberal superannuation allowance. As it is, the amount is so low, as to be almost insulting; still it is an advance on the treatment accorded to Mr. Jennings, of the Malmesbury Union, who, after a service extending over forty-two years, was, on his resignation, refused superannuation altogether, one of the guardians who was present, absolutely going the length of moving, "that Mr. Jennings be offered an order for the house."

We should hope that the grant of a minimum allowance in Mr. Axford's case, and the total refusal in that of Mr. Jennings, may lead the Poor-law medical service to a more vigorous and determined effort in the direction of making superannuation allowance compulsory.

WHAT IS UNWHOLESOME MEAT?

SIR.—I wish, through the medium of your columns, to ask the opinion of medical officers of health on the following case. A cow, which had been previously ailing, gives birth to a calf, and on the following day is slaughtered. The meat is dressed and brought into market. I am consulted as to the flesh being fit for human consumption; and finding on examination that it is soft, flabby, and dark in colour, with an alkaline reaction to litmus paper, and taking into consideration that the cow had been under veterinary treatment for several days, had had physic administered to it, and had been killed so soon after parturition, I condemned the meat. Acting on my advice, the board of health institute an action against the butcher, and the case is heard before the magistrates, who, after a long inquiry, find the meat not unfit for human food. Was I justified in condemning the meat? The magistrates by their verdict say I was not; but as this may be made a test case, I should like the opinion of any of my medical brethren who may feel interested in the matter, and who may be qualified to speak on the subject.

I should perhaps mention that a practitioner from a neighbouring town gave evidence on the opposite side, and gave it strongly as his opinion that such meat should not be condemned. He had not seen the meat.

I should like to know, seeing that all authorities on the subject were entirely disregarded, what are the circumstances under which meat ought to be condemned and destroyed as unfit for human food.—I am, yours truly,

MEDICAL OFFICER OF HEALTH.

POOR-LAW MEDICAL RELIEF AND EXTRA MEDICAL FEES.

SIR.—In your able *résumé* of my address at the annual meeting of the Poor-law Medical Officers' Association at Worcester, your reporter has omitted a point which I raised thereat, as to which I should like to make an observation. It refers to the subject of extra medical fees. I perfectly remember that, for a few years after the introduction of the new Poor Law in 1834, no such extra fees were granted. Influenced by the fact that the salaries were very low, an agitation was commenced, which led to the Poor-law Commissioners of that day issuing a general order, directing that for certain operations and accidents a certain fee should be paid. This indirect attempt to amend the position of the Poor-law medical officer was met by a counter move on the part of boards of guardians, who universally decided to cut down the stipends so as to meet the sum which it was supposed would be realised from the said extras. Thus, my father's salary was cut down from £63 to £45, and the extras he afterwards yearly obtained did not bring his stipend up to the original amount, so that he was a loser by the arrangement. Since that day, everlasting squabbles have taken place between boards of guardians and their medical officers as to the payment of these fees, and the shabbiest attempts have been made by boards of guardians to evade paying, even where they have been clearly due; or instructions have been given to relieving officers not to grant orders in cases involving fees, or to take steps to send all such cases to the voluntary hospitals, thereby avoiding out-relief and the fees also. By these procedures, Poor-law medical officers have been really worse off than if the question of extra fees had never been mooted.

My proposition was, that the extra fees should be commuted in a fixed payment, to be added to the stipend, save and except cases of midwifery and the certification of lunatics.—I am, sir, yours,

JOSEPH ROGERS.

NOTIFICATION OF INFECTIOUS DISEASES.

SIR,—May I say a word in support of the position that there can be no justice in requiring the medical attendant to notify to the authorities all cases of infectious disease which may occur in his practice? Surely it would be a gross imposition to require that every medical attendant should give notice of all infectious cases. Unless the State is prepared to compensate the medical man for any loss he may incur by giving the required information, I do not see how such a demand upon him can be justified. Why should any man be required to offend his patient to his own detriment for the general good?

As it would not be possible to arrange any scheme of compensation for probable loss of practice, it seems to me that the only alternative is, that the householder should be required to give to the local authorities notice that there is infectious disease in his house; and it might be required that the medical attendant should inform the householder of the nature of the case, and of the necessity of giving information. For the purpose of evidence, this might be done by a registered letter.—I remain, dear sir, yours truly,

GEORGE D. BROWN.

Ealing, August 21st, 1882.

ALCOHOL IN WORKHOUSES.

SIR.—One of the principal causes of the decreased amount of alcohol used in the metropolitan workhouses is undoubtedly due to the better classification of the in-door poor; in the year 1869, no London workhouse had any separate infirmary, and consequently the total expense in alcohol was charged to the whole workhouse, and not charged to the sick only. Again, in the year 1869, very few, if any, of the London workhouses had an adequate staff of paid nurses; there was usually one paid nurse by day, and one by night, and the work was done by pauper wardmen and wardswomen, who were remunerated by the medical officer prescribing for them so much beer per day, and sometimes so much gin or brandy. I know of one workhouse where there were over ninety helpers thus remunerated for their trouble. Again, when a patient died, the pauper helper used almost always to expect three or four ounces of stimulants for laying the body out; and I remember well the disturbance I caused when, as assistant medical officer, during the absence of the senior one, I refused to sign for some brandy as a reward to a pauper for laying out a body.

Now, all this is changed. Since 1869, one by one the several metropolitan parishes have erected separate infirmaries, under medical administration, for the treatment of the sick poor; paid nurses are employed, and pauper labour is being reduced to a minimum—perhaps it might be abolished altogether with advantage; and our Poor-law infirmaries are equal, and in some respects superior, to the general hospitals. Thus it arises that so much less alcohol is now given in workhouses than in 1869; and the greater part of that which is now ordered in workhouses, although under the medical officer's signature, is really given, not as a necessity to enable the individual to do his work, but as a reward to those paupers who make themselves useful, such as bakers, carpenters, painters, etc., the medical officer thus becoming a sort of paymaster. This abuse is one which has grown slowly; and I would suggest to those medical officers who find a long beer list to sign every week, that they should adopt the practice I now follow, of refusing to put down any fresh names, so that in time the list will die out.

I am at a loss to understand where the writer of the article in your JOURNAL got his information; for the master of the Lambeth Workhouse informs me that the cost of brandy and wine in the workhouse does not amount to more than from twenty to thirty shillings *per annum*, but that the amount for beer is about £40 to £45 a year, thus making about £50 in all, and not under £10, as stated; and the whole of this beer is given as a reward for work done, and not for medical reasons at all.

The figures quoted in the article clearly show that the writer has little knowledge of Poor-law administration, as the figures are extensively confused, and different workhouse infirmaries almost hopelessly jumbled together.—Yours faithfully,

ROBERT H. LLOYD, M.D., Medical Officer.

Lambeth Workhouse, August 5th, 1882.

MILITARY AND NAVAL MEDICAL SERVICES.

BEARER-COMPANIES.

The daily papers mention that it is intended to augment the Army Hospital Corps by the formation of two additional bearer-companies, the men employed for the purpose being selected from the Army Reserve. A reference to the medical regulations for the army shows that the number of men required for an army corps in the field is about 600, or, including the established proportion of field hospitals at the base of operations or along the line of communication, 1,106 non-commissioned officers and men. The entire strength of the Army Hospital Corps in the British army on home service is stated not to exceed 1,500 men. Having in view the requirements of the army corps now serving in Egypt, together with those of the Convalescent Hospital at Cyprus, and including the number of men employed in the various troopships and hospital ships, it will be seen that nearly the entire available resources of this branch of the service are absorbed in the Egyptian expedition alone. It would accordingly appear that the home stations must have been almost denuded of their regular staff, to the detriment of the public interests and to the great inconvenience of those who are charged with the care of the sick. The present seems a suitable opportunity for pressing upon the authorities the urgent necessity which exists for largely augmenting the Army Hospital Corps. The strength of this useful body of men should be raised to at least double that at which it has been maintained.

BEARER COMPANIES FOR EGYPT.

ON Friday, August 11th, No. 2 Bearer Company embarked on board the *City of Paris*, en route to Egypt. Surgeon-Major O'Dwyer (in

medical charge), Surgeon-Major Walker, Surgeons Vacy Ash, B. B. Connolly, P. B. Connolly, Harding, Lafan, and Farmour were the medical officers, Quartermaster O'Connor acting as paymaster. There were also 143 rank and file of the Army Hospital Corps, composed mostly of army reserve men. For the previous three or four days these men had been undergoing a hurried course of instruction in the special duties to be performed by a bearer company in the field—duties that require such special training as to necessitate the presence of a large staff of instructors at Aldershot. If such importance is attached to this system, it hardly seems fair to send the men into active service while they are totally ignorant, or almost totally ignorant, of its duties. And this is not all, for we understand that many of the officers have not been so specially instructed. No fewer than three of the medical officers in No. 1 and one in No. 2 Company had not gone through the course of instruction at Aldershot, and another officer in No. 2 Company failed to obtain a certificate after passing through this course. Yet these officers were put into these responsible positions, and others that had received the special instruction were detailed for other and less important duties.

At first No. 2 Bearer Company was detailed to proceed in the *Texas*, and half the officers attached to proceed in the *City of Paris*. At the last moment all this was changed, and the company was embarked on board the *City of Paris* with all its officers except one, who was ordered to proceed in medical charge of troops on board the *Texas*, the surgeon-major previously detailed for that duty having been recalled by telegraph.

The hospital accommodation on board these troopships is described as being satisfactory. In some cases it has been knocked together in a rough way; but cubic space and ventilation has been well looked after by Brigade-Surgeon Hungerford, the medical officer superintending the embarkation of troops at Portsmouth.

THE only British officer killed in the recent engagement at Kassassin was Surgeon-Major J. A. Shaw, Army Medical Department. He was a Graduate in Medicine of Queen's University, Ireland. He entered the army as assistant-surgeon in 1863, became surgeon in 1873, and surgeon-major in 1876.

OBITUARY.

RICHARD GILES, M.D. EDIN., M.R.C.P. LOND.

ON August 8th, the above member of the Association passed away, at his residence at Torquay, to which place he had been forced to retire owing to bronchitis and diseased heart, after thirty-five years' devotion to the duties of a very extensive practice, radiating from Oxford into the adjacent counties. The natural gifts of their possessor enabled Dr. Giles to have the full benefit of an excellent education, professional and otherwise. After the usual apprenticeship, which was with Mr. Lupton, of Tame, and on which he always looked back with pleasure and gratitude as the foundation of his knowledge, he graduated at Edinburgh in 1841; and, after taking his degree, he passed two years in Paris and Germany. He eventually settled at Oxford, the place of his birth, where he immediately obtained a large practice. From the first to the last he maintained an exceptionally large circle of patients of the highest class, as well as the poor, to whom he was always the kind friend. Dr. Giles was most persevering and industrious, genial, and most kind, entirely free from humbug, an enthusiastic admirer and collector of articles of art and *virtu*. He was devoted to horticulture and fond of animals; he carried on a small farm three miles from Oxford. Dr. Giles caught a severe cold during the last Paris Exhibition, and had been failing ever since. He was therefore compelled to relinquish practice last autumn and retire to Torquay. There seemed every hope that the improvement following the change would be maintained, as the redema consequent on defect of the valves of the heart was relieved; but at last he passed away without suffering through failure of vital power.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates of graduation, on Thursday, August 24th, 1882:

M. J. ...
W. ...
W. ...
W. ...
Y. ...

The following gentleman also on the same day passed the Primary Professional Examination.

London, John E., King's College, London.

At the recent examination for the Prizes in Materia Medica and Pharmaceutical Chemistry, given annually to medical students by the Society of Apothecaries, the successful candidates were—

1. John Barker Smith, of St. Thomas's Hospital—the Gold Medal.
2. Thomas Henry Williams, of the Middlesex Hospital—the Silver Medal and Books.

MEDICAL VACANCIES.

The following vacancies are announced:—

CANCER HOSPITAL, LONDON AND BROMPTON (FREE).—Resident House-Surgeon. Salary, seventy-five guineas per annum. Applications by September 2nd.

CHICHESTER INFIRMARY.—House-Surgeon and Secretary. Applications to the Secretary by September 9th.

DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL, Leicester Square, W.C.—Demonstrator of Contour and Cohesive Fillings. Salary, £50 per annum. Applications by September 29th.

DORE UNION.—Medical Officer. Salary, £70 per annum. Applications by September 5th.

DOWNPATRICK DISTRICT LUNATIC ASYLUM.—Assistant to Resident Medical Superintendent. Applicants must be unmarried, be doubly qualified, and possess a diploma in midwifery. Salary, £100 per annum, with furnished apartments, fuel, light, washing, first-class rations, and attendance. Election on September 2nd.

DOWNPATRICK UNION.—Medical Officer for Portaferry Dispensary District. Salary, £100 per annum, with £15 yearly as Medical Officer of Health, registration, and vaccination fees. Election on September 20th.

HORTON INFIRMARY, Banbury.—Resident House-Surgeon. Salary, £60 per annum. Applications to Mr. C. H. Davids, 18, Marlborough Road, Banbury, by September 2nd.

KENT COUNTY OPHTHALMIC HOSPITAL, Maidstone.—House-Surgeon. Salary, £100 per annum. Applications by September 15th.

MITCHELSTOWN UNION, Kildorrery Dispensary District.—Medical Officer. Salary, £100 per annum, and £15 as Medical Officer of Health. Applications by September 13th.

NORTHLEACH UNION.—Medical Officer for the No. 2 District. Salary, £57 10s. per annum. Applications by September 14th.

NORTHLEACH UNION.—Medical Officer of Health. Salary, £100 per annum. Applications by September 12th.

QUEEN'S COLLEGE, CORK.—Chair of Natural History. Candidates to forward testimonials, on or before September 20th, to the Under Secretary, Dublin Castle.

ROCHDALE INFIRMARY.—House-Surgeon. Salary, £30 per annum. Applications to J. Rushworth, Honorary Secretary.

ROYAL INFIRMARY OF EDINBURGH.—Pathologist. Applications to Mr. Peter Bell by September 30th.

ROYAL UNITED HOSPITAL, Bath.—House-Surgeon. Salary, £60 per annum. Applications by September 14th.

ST. GEORGE'S, HANOVER SQUARE, PROVIDENT DISPENSARY. Mount Street.—Resident Medical Officer. Salary and allowance for last year, £214 4s. 3d. Applications to Mr. J. H. Leach, Secretary, by September 30th.

UNIVERSITY OF ABERDEEN.—Six Examiners in Medicine. Salary, £30 per annum. Applications to Robert Walker, Secretary.

WESTERN DISPENSARY, Rochester Row, Westminster.—Consulting Accoucheur. Applications by September 10th to Mr. Henry S. Higg, Secretary.

WINCHOMB UNION.—Medical Officer for the Vale District. Salary, £65 per annum. Applications by September 22nd.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.—House-Surgeon. Salary, £70 per annum. Applications by September 20th.

MEDICAL APPOINTMENTS.

BALDWIN, T. A., M.B., appointed Medical Officer of Health to the Dunmow Rural Sanitary Authority.

BARLING, G. H., M.B., appointed Resident Surgical Officer to the General Hospital, Birmingham, vice H. C. L. M. B.

BEST, E., L.R.C.S.I., appointed Apothecary to the Kilkenny County Infirmary.

BOLTON, J. A., L.R.C.S.I., appointed Resident Medical Officer to the Leicester United Friendly Societies' Medical Association, vice A. Grandison, M.B., resigned.

BOND, J. W., M.D., appointed Resident Medical Officer to the General Hospital, Birmingham, vice H. Malet, M.D., resigned.

COATES, William, M.R.C.S.E., appointed Resident Accoucheur to the London Hospital, vice J. H. C. L. M. B.

HODGSON, G. G., M.R.C.S., appointed Medical Officer to H.M. Post-Office, Liverpool, Bootle Division.

HOLLIS, E., M.D., appointed House-Surgeon to the Bradford Infirmary, Yorkshire.

MURIEL, C., L.R.C.P., appointed Resident Medical Officer to the Guest Hospital, Dudley, vice R. Walford, M.R.C.S., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGE.

Dr. ...
M.D. ...
W. ...

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....	Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopaedic, 2 P.M.
TUESDAY.....	Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 2 P.M.
WEDNESDAY..	St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopaedic, 10 A.M.
THURSDAY....	St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.
FRIDAY.....	King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.
SATURDAY....	St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.	Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin M. Th.; Dental, M. W. F., 9.30.
GUY'S.	Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.
KING'S COLLEGE.	Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.
LONDON.	Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.
MIDDLESEX.	Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.
ST. BARTHOLOMEW'S.	Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 12.30; Orthopaedic, F., 12.30; Dental, Tu. F., 9.
ST. GEORGE'S.	Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopaedic, W., 2; Dental, Tu. S., 9; Th., 1.
ST. MARY'S.	Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., Tu. F., 2; Eye, Tu. F., 9.15; Ear, M. Th., 2; Skin, Tu. Th., 1.30; Throat, M. Th., 1.45; Dental, W. S., 9.30.
ST. THOMAS'S.	Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.
UNIVERSITY COLLEGE.	Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. T., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15. Throat, Th., 2.30; Dental, W., 10.3.
WESTMINSTER.	Medical and Surgical daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with Duplicate Copies.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED

SUGGESTION FOR A SICK FUND.

SIR,—Mr. Boys' suggestion is a most admirable one, and it deserves the attention of the profession generally. As he very correctly says, we all of us at times are subjected to the hardship of being compelled to work when unfitted by ill health, and not only are our present sufferings increased, but convalescence is greatly prolonged. Is not this, then, a matter of sufficient importance to engage the attention of the British Medical Association? To whom can it more rightly belong? There, with its Branches, is already at hand the machinery both for collecting the subscriptions and distributing the benefits of such a fund.

With regard to the amount of subscription, I do not for one moment suppose that the subscription, £2 2s. a year, proposed by Mr. Boys, would produce sufficient to pay sick members £10 per week; for, if we take the average age of our members to be thirty-five years, the average annual expectation of sickness for members of that age would be about one week; and this would (if realised) consume the whole fund, and leave a debt. But a subscription of £2 2s. would, I think, yield a sufficient income to pay £3 3s. a week for a *locum tenens* for sick members; and this would be a very great benefit.

We have occasionally in connection with our Branches surpluses; and why should not these surpluses be added to the sick fund? But over and above all these small Branch surpluses, our great Association is yearly laying by and investing a large sum of money. There is now invested a very considerable sum, and it is yearly growing larger. Should this accretion continue, at no very distant day will come the consideration: What is to be done with this money? Surely, what better thing can be done with it than devoting a portion to this great and useful work?—I am, yours faithfully,

Long Sutton, August 23rd, 1882.

J. W. MEASURES, M.R.C.S.E.

THE LATE ANNUAL MEETING.—When writing of the excursions, we omitted to mention that Dr. and Mrs. Tibbitts of Warwick kept open house, entertaining all visitors on their return from Stratford-on-Avon and Kenilworth; and on the following day, Dr. Thursfield, Physician to the Leamington Infirmary, entertained at a banquet in his house several of those members of the Association who remained to take a more extended view of the beautiful neighbourhood.

SIR,—Will any of your correspondents inform me of a machine to take the weight of patients, specially suitable for a consulting-room?—Yours truly,

Waterloo, Liverpool, August 24th, 1882.

J. MATTHEWS, L.R.C.P.

THE DEATH-RATE OF EDINBURGH.

SIR,—In the number of the JOURNAL for January 7th, 1882, your "Edinburgh Correspondent" gave the following as the mortalities per 1,000 for that city during the six years 1876 to 1881 inclusive: 19.51, 20.86, 21.53, 19.06, 21.05, 20.06. These figures give an average annual mortality of 20.24 per 1,000 for the four years before the acquisition of compulsory notification, and 20.55 per 1,000 for the two years since. As this reported rise in the general mortality of the city did not seem to me to be the best proof of the "entire success" claimed by Dr. Littlejohn in the Public Medicine Section for the Edinburgh Act, I asked him, at the general meeting on the day following—the 11th instant—if the figures which showed such a result were correct. He categorically denied that they were so. Will your "Edinburgh Correspondent" inform us whence he obtained the figures, of which the correctness has been thus openly impugned, and whether he agrees with Dr. Littlejohn that they are not correct?—I am, sir, yours faithfully,

Liverpool, August 12th, 1882.

WILLIAM CARTER.

MR. WILLIAMS.—Mr. W. H. R. Skey, the common crier to the City of London, is a son of the late Mr. F. C. Skey, a former President of the College of Surgeons. The salary attached to the office is £325 per annum. Dr. W. S. Saunders, the Medical Officer and Food Analyst to the City, receives a salary of £800 per annum. Mr. G. B. Childs is surgeon to the City Police, at a salary of £600 per annum.

ACNE.

SIR,—In spite of the numerous letters which have appeared in your JOURNAL, I have not read one which, in my opinion, hints at the true cause of this disease. I can speak from personal experience. I suffered from acne for nine years, during which time I tried, I believe, every known remedy without the slightest effect, and only hit by chance on what proved (at least in my case) the true one. I found that, by abstaining totally from beef, and also at the commencement of the treatment from mutton, and living upon fish, pork, and vegetables, the pimples rapidly disappeared. I continued this for six months, and at the end of that time my face, which had for so long a time never been free from pimples, presented a perfectly clear appearance. I continued this treatment for this period in order if possible to prevent their recurrence; for, in a couple of months, the pimples had entirely disappeared, though the marks still remained.

In order to prove the above, I may state that even now, if I indulge too long in juicy beef, that is to say, for a month or two, I am liable to get a slight eruption, but it disappears on my returning to a diet of fish, pork, or mutton. My conclusion, therefore, is that the state of the blood, particularly in certain young subjects, is liable to get out of order by the introduction of the juice of rich meat, particularly beef, and that this state of affairs is not caused, but favoured, by the depressing emotions.—I am, sir, yours, etc.,

E. C.

P.S.—I have tried the above treatment on several people, and invariably with success.

AN OLD MEMBER.—There are 16,140 members of the Royal College of Surgeons making, with 1,210 Fellows, a total of 17,350.

ON THE EXTERNAL APPLICATION OF IODINE IN ERYSIPELAS.

SIR,—Thirty years ago, I read a paper bearing the above title to a local association of young medical men. I inclose you a reprint of the same, from the *Medical Times and Gazette* of December 11th, 1852, where it was published. I therein trace the first introduction of the use of iodine in erysipelas to the late Dr. John Davies of Hertford. In 1843, he published a second edition of a valuable little book, entitled *Selections in Pathology and Surgery, etc.* (Longman and Co.), which I fancy was written chiefly with the object of directing attention to the value of the external use of iodine in divers inflammations—erysipelas amongst the number.

I may add that I at one time made extensive and very successful use of the remedy, but of late years I have been unable to procure iodine, the fumes of which do not greatly irritate the conjunctiva when applied over even a comparatively small surface of the body. I should be glad to get the old-fashioned drug.—Yours, etc.,

HUGH NORRIS.

South Petherton, Somerset, August 28th, 1882.

A FIRST YEARS' STUDENT.—Registration at the Royal College of Surgeons has been abolished some years. Write to Mr. Miller, the Registrar, at the General Medical Council Office, 299, Oxford Street.

REGULATIONS OF THE GENERAL MEDICAL COUNCIL AND MEDICAL LICENSING BODIES.

SESSION 1882-83.

RECOMMENDATIONS OF THE GENERAL MEDICAL COUNCIL ON EDUCATION AND EXAMINATION.

PRELIMINARY EXAMINATION.—1. No person is allowed to be registered as a medical student unless he shall have previously passed a preliminary examination in the subjects of general education as hereinafter provided.—2. The Executive Committee is to prepare and issue from time to time a list of examining bodies, whose examinations fulfil the conditions of the Medical Council as regards general education.—3. Testimonials of proficiency granted by educational bodies, according to the subjoined list, are accepted; the Council reserving the right to add to or take from the list. (A Degree in Arts of any University of the United Kingdom, or of the Colonies, or of such other Universities as may be specially recognised from time to time by the Medical Council, is considered a sufficient testimonial of proficiency.) I. *Universities of the United Kingdom.* Oxford: Responsions; Moderations.—Cambridge: Previous Examination; Higher Local Examinations; Junior Local Examinations, Certificate to include Latin and Mathematics, and also one of the following optional subjects, viz., Greek, French, German, Natural Philosophy, including the Elements of Statics and Hydrostatics.—Durham: Examination for Students at end of first year; Registration Examination for Medical Students.—Oxford, Cambridge, and Durham: Examination for Degrees in Arts; Senior Local Examinations, Certificates to include Latin and Mathematics.—Oxford and Durham: Junior Local Examinations, Certificate to include Latin and Mathematics; and also one of the following optional subjects, viz., Greek, French, German, Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics.—Oxford and Cambridge Schools' Examination Board.* Certificate to include Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations; Geometry, including the first two books of Euclid; Latin, including Translation and Grammar; and one of the following optional subjects: Greek, French, German, Mechanical Division of Natural Philosophy.—London: Matriculation Examination; Preliminary Scientific (M.B.) Examination; Examination for a Degree in Arts or Science.—Aberdeen, Edinburgh, Glasgow, and St. Andrew's: Examination for a Degree in Arts; Preliminary Examination for Graduation in Medicine or Surgery; Local Examiners (honours certificates at Aberdeen and St. Andrew's; senior and junior certificates at Edinburgh; senior certificate at Glasgow); Certificates in each case to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of the following optional subjects: Greek, French, German, Natural Philosophy.—Edinburgh: Preliminary Examination for Graduation in Science.—Dublin: Public Entrance Examination; Examination for a Degree in Arts.—Queen's University (Ireland): Local Examinations for Men and Women; Certificates to include all the subjects required by the General Medical Council, as set forth in Examination 4; Entrance or Matriculation Examination; Previous Examination for B.A. Degree; Examination for a Degree in Arts. II. *Other bodies named in Schedule (A) to the Medical Act.*—Society of Apothecaries in London: Examination in Arts.—Royal Colleges of Physicians and Surgeons of Edinburgh: Preliminary Examination in General Education, conducted by a Board appointed by these Colleges combined.—Faculty of Physicians and Surgeons of Glasgow: and Apothecaries Hall of Ireland: Preliminary Examination in General Education.—Royal College of Surgeons in Ireland: Preliminary Examination; Certificate to include Mathematics.—III. *Examining Bodies, in the United Kingdom, not included in Schedule (A) to the Medical Act.*—Royal College of Preceptors: Examination for a First or Second Class Certificate; provided that, in the case of the latter, the candidate has passed in the First or Second Division, and has taken Algebra, Euclid, Latin, and a Modern Language.—The Examiners for Commissions and Appointments in Her Majesty's Service, Military, Naval, and Civil: Certificate including all the subjects required by the General Medical

Council. IV. *Indian, Colonial, and Foreign Universities, and Colleges.*—Universities of Calcutta, Madras, and Bombay: Entrance Examination; Certificate to include Latin.—Universities of McGill College, Montreal; Bishop's College, Montreal; Toronto: Trinity College, Toronto; Queen's College, Kingston; Victoria College, Upper Canada; Fredericton, New Brunswick; Halifax, Nova Scotia; Melbourne; Sydney; Adelaide: Medical College, Halifax, Nova Scotia; Michigan College of Medicine: Matriculation Examination.—Ceylon Medical College: Preliminary Examination (primary class).—University of Manitoba: Previous Examination.—University of King's College, Nova Scotia: Matriculation Examination; Responsions.—University of Otago: Preliminary Examination.—University of Cape of Good Hope: Matriculation Examination: Examination for a Degree in Arts.—University of New Zealand: Entrance Examination.—Codrington College, Barbadoes: English Certificate for Students of two years' standing, and Latin Certificate, or "Testamur".—Tasmanian Council of Education: Examination for the Degree of Associate of Arts, Certificate to include Latin and Mathematics.—Christ's College, Canterbury, New Zealand: Voluntary Examinations, Certificates to include all the subjects required by the General Medical Council.—Germany and other Continental Countries: Gymnasial Abiturienten Examen in Germany, and corresponding entrance examinations to the Universities in other continental countries.—4. No person will be allowed to be registered as a Medical Student unless he shall have previously passed a Preliminary Examination in: 1. English Language, including Grammar and Composition;* 2. English History; 3. Modern Geography; 4. Latin, including Translation from the original and Grammar; 5. Elements of Mathematics, comprising (a) Arithmetic—including Vulgar and Decimal Fractions; (b) Algebra—including Simple Equations; (c) Geometry—including the first two books of Euclid or the subjects thereof; 6. Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics;† 7. One of the following optional subjects: (a) Greek; (b) French; (c) German; (d) Italian; (e) any other modern language; (f) Logic; (g) Botany; (h) Elementary Chemistry.‡ 5. It is desirable that the examination in general education be left to the Universities and such other bodies engaged in general education and examination as may from time to time be approved by this Council.—6. It is recommended to the various licensing bodies to instruct their examiners in professional subjects to report to them any cases in which decided ignorance in the subjects of general education has been displayed by the candidates, with the name of the board or boards before which the preliminary examinations have been passed; and the licensing bodies are requested to transmit such reports to the Registrar of the General Medical Council.

REGISTRATION OF MEDICAL STUDENTS.—7. Every medical student shall be registered in the manner hereinafter prescribed by the General Medical Council.—8. No medical student shall be registered until he has passed a preliminary examination, as required by the General Medical Council,§ and has produced evidence that he has commenced medical study.—9. The commencement of the course of professional study recognised by any of the qualifying bodies shall not be reckoned as dating earlier than fifteen days before the date of registration.—10. The registration of medical students shall be placed under the charge of the Branch Registrars.—11. Each of the Branch Registrars shall keep a register of medical students, according to a form indicating the name; the preliminary examination, with date thereof; the date of registration, and the place and date of commencement of medical study, as certified by a master, or a teacher, or an official in a medical school or hospital.—12. Every person desirous of being registered as a medical student shall apply to the Branch Registrar of the division of the United Kingdom in which he is residing, according to a form which may be had on application to the several qualifying bodies, medical schools, and hospitals; and shall produce or forward to the Branch Registrar a certificate of his having passed a preliminary examination,

* The General Medical Council will not consider any Examination in English sufficient that does not fully test the ability of the candidate.—1. To write sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition; 2. To write correctly from dictation; 3. To explain the grammatical construction of sentences; 4. To point out the grammatical errors in sentences ungrammatically composed, and to explain their nature; 5. To give the derivation and definition of English words in common use.

† This subject may be passed either as Preliminary, or before, or at the first Professional Examination.

‡ The examination in General Education conducted by Universities will be accepted as heretofore; but if in any of these examinations the subjects of Elementary Mechanics of Solids and Fluids be not included, a knowledge of these subjects will be required at a subsequent Examination.

§ Exception may be made in the case of a Student from any Indian, Colonial, or Foreign University or College, who shall have passed the Matriculation or other equivalent Examination of his University or College, provided such examination fairly represents a standard of general education equivalent to that required in this country.

* The English is provided for by the following resolution of the Executive Committee:—"That, as every candidate for the certificate of the Oxford and Cambridge Schools' Examination Board is required to answer questions in such a manner as to satisfy the examiners that he has an adequate knowledge of English grammar and orthography, this shall be held as conforming to the requirements of the Medical Council in reference to English language."

as required by the General Medical Council, and evidence that he has commenced medical study.*—13. The Branch Registrar shall enter the applicant's name and other particulars in the *Students' Register*, and shall give him a certificate of such registration.—14. Each of the Branch Registrars shall supply to the several qualifying bodies, medical schools, and hospitals, in that part of the United Kingdom of which he is Registrar, a sufficient number of blank forms of application for the registration of medical students.—15. The several Branch Councils—and in England the Executive Committee, if its meeting be more convenient and the case be urgent—shall have power to admit special exceptions to the foregoing regulations as to registration, for reasons which shall appear to them satisfactory.—16. A copy of the *Medical Students' Register*, prepared by each of the Branch Registrars, shall be transmitted, on or before the 31st of December in each year, to the Registrar of the General Council, who shall, as soon as possible thereafter, prepare and print, under the direction of the Executive Committee, an alphabetical list of all students registered in the preceding year, and supply a copy of such authorised list to each of the bodies enumerated in Schedule (A) to the Medical Acts, and through the Branch Registrars to each of the several medical schools and hospitals.—17. The several qualifying bodies are recommended not to admit to the final examination for a qualification under the Medical Acts, any candidate (not exempted from registration) whose name has not been entered in the *Medical Students' Register* at least forty-five months previously. In the case of candidates from other than schools of the United Kingdom, the Branch Councils shall have power to admit exceptions to this recommendation.—18. The Branch Councils are desired to take means to make these regulations known at the various medical schools.

AGE FOR LICENCE TO PRACTISE, ETC.—19. The age of twenty-one shall be the earliest age at which a candidate shall obtain a licence to practice, and the age shall in all instances be duly certified.—20. No licence shall be obtained at an earlier period than after the expiration of forty-five months subsequent to the registration of the candidate as a medical student.†

PROFESSIONAL EDUCATION.—21. The course of professional study required for a licence shall occupy at least four years, of which at least three winter and two summer sessions shall be passed at any school recognised by any of the licensing bodies mentioned in Schedule (A) of the Medical Act.—22. No teaching or licensing body should insist on the student taking more than one course of lectures on any one subject.—23. The following are the subjects, without a knowledge of which no candidate should be allowed to obtain a qualification entitling him to be registered: 1. Chemistry, including a knowledge of the Principles of Chemistry, and of those details of the science which bear on the study of Medicine, and Chemical Physics, meaning thereby Heat, Light, and Electricity; 2. Anatomy; 3. Physiology; 4. Materia Medica and Pharmacy; 5. Pathology, including Morbid Anatomy; 6. Medicine, including Medical Anatomy, Clinical Medicine, and Therapeutics; 7. Surgery, including Surgical Anatomy and Clinical Surgery; 8. Midwifery; 9. Forensic Medicine.—24. The Council will view with approbation any encouragement held out by the licensing bodies to students to prosecute the study of the natural sciences before they engage in studies of a strictly professional character.—25. A certificate shall be required by each licensing body from every candidate for its degree, diploma, or licence to practise medicine or surgery, that he

has studied vaccination under a competent and recognised teacher; that he has himself performed the operation successfully under the teacher's inspection; that he is familiar with the different stages of the vaccine vesicle, and with the methods of preserving lymph; and that he is thoroughly informed in every necessary part of the subject.—26. Such a certificate should be received by any licensing body only from an institution where the appointed teacher of vaccination is recognised by the Local Government Board.

PROFESSIONAL EXAMINATION.—27. The different licensing bodies, whether singly or in combination, should frame their examinations so as to secure that the knowledge of every practitioner whose name appears on the *Register* shall have been tested in all the subjects of professional education which the Council has determined to be essential; viz.: (as in Recommendation 23),—28. There should be in future three professional examinations.—29. The professional examinations should be arranged in two divisions; the first division to embrace the more elementary subjects. The first division may be completed at or before the close of the second year of professional study; but the second division not till the expiration of two years after the passing of the first division, nor before the completion of the fourth year of study. The examinations, and the subjects included in each, shall be such, and in such order, as may insure, so far as possible, a due continuity and sequence of study.—30. The first division of the examinations should include the following subjects: 1. Chemistry and Chemical Physics; 2. Anatomy; 3. Physiology; 4. Materia Medica and Pharmacy. The second division should include the following subjects: 1. Pathology, including Morbid Anatomy; 2. Medicine, including Medical Anatomy, Clinical Medicine and Therapeutics; 3. Surgery, including Surgical Anatomy and Clinical Surgery; 4. Midwifery; 5. Forensic Medicine.

—31. An examination in the earlier subjects of professional study should take place before the end of the first year of professional study.—32. The professional examinations should be conducted both in writing and orally; and they should be practical in all branches in which they admit of being so.—33. Not less than two examiners should take part in every oral and clinical examination.—34. The questions to be answered in writing should be submitted to the whole body of examinees for consideration, and revision, if desirable, before being proposed to the candidates.—35. The written answers should be submitted to more than one of the examiners.—36. Excellence in one or more subjects should not be allowed to compensate for failure in others.—37. The professional examination should be held by the several licensing bodies, except in special cases, at stated periods, to be publicly notified.—38. No University of the United Kingdom should confer any degree in medicine or surgery, whether that of bachelor, doctor, or master, upon candidates who have not graduated in Arts, or passed all the examinations required for the Bachelorship in Arts, or passed, after due course of education, examinations such as are *bona fide* academically equivalent to those required for a degree in Arts.—39. As a general rule, none of the higher degrees or qualifications in medicine or surgery should be conferred on persons who have not shown evidence of higher professional attainments.—40. In the examinations on several of the subjects of the curriculum—such, for example as chemistry, including chemical physics, physiology, and materia medica—the licensing bodies should limit and define by schedule the extent of examination.—41. In no case should the examination of a candidate by any of the licensing bodies in any subject be conducted wholly by the lecturer or teacher in that subject in the school in which the candidate has been educated.—42. Observation with the microscope should form part of the examinations of candidates for a licence.—43. Candidates for the final professional examinations should be required to give evidence that they have had opportunities of practical study, with care of patients, as pupil, assistant, clinical clerk, or dresser, in hospital, dispensary, or elsewhere.—44. In examinations in anatomy, candidates should understand that they may be called upon to perform actual dissections; and candidates in examinations in surgery should understand that they may be called upon to perform one or more operations on the dead subject.

—45. Returns from the licensing bodies enumerated in Schedule (A) of the Medical Act (1858) should be made during the month of January in each year, to the General Medical Council, stating the number of the candidates who have passed their first as well as their second and third examinations, and the number of those who have been rejected at the first and second and third examinations respectively; and the Registrar should forward a sufficient number of forms, with a notice for their being returned in due time.—46. The Registrar should be requested to furnish, during the month of January in each year, according to a certain form, a statement of the nature of the examinations—whether written, *mixed*, or practical (one or all of the three)—and of the number of candidates for their licences, showing the respective numbers passed and rejected.

* This certificate should be signed by the Registrar, and apply to the registration of a student in Medicine, in conformity with the Regulations of the

General Medical Council. The Registrar should also certify that the student has commenced medical study; Applicant's signature;

Attest: I hereby certify that Mr _____

will be held to include any registered at the time. The certificate of examination mentioned in

in the month of January, a statement of the last preceding calendar year, in

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

MEMBERS.

ALL persons who have been admitted before February 16th, 1859, Licentiates of the College, shall be entitled to be admitted Members of the College, provided that they have, since their admission as Licentiates, obeyed the By-laws, and accept such membership, and engage henceforth to obey the By-laws and Regulations of the College.

Any Extra-Licentiate who shall have produced testimonials as to character satisfactory to the Censors, and shall have assured the said Censors that he is not engaged in the practice of Pharmacy, and who shall engage henceforth to obey the By-Laws and Regulations, may be proposed to the College to be admitted a member of the College. The fee for admission is £5 5s.

Every candidate for the membership of the College must furnish proof that he has attained the age of twenty-five years, and must produce a testimonial from a Fellow or Member of the College, satisfactory to the Censors' Board, to the effect that, as regards moral character and conduct, he is a fit and proper person to be admitted a member of the College.

No candidate shall be admitted to examination who is engaged in trade; or who dispenses medicine, or makes any engagement with a Chemist or any other person for the supply of medicines; or who practises Medicine or Surgery in partnership, by deed or otherwise, so long as that partnership continues; or who refuses to make known, when so required by the President and Censors, the nature and composition of any remedy he uses.

Every candidate for the membership shall satisfy the Censors' Board, by examination or otherwise, of the sufficiency of his general education.

Any candidate who has already obtained the degree of Doctor or Bachelor of Medicine at an University in the United Kingdom, in India, or a British Colony, or who shall have obtained a Foreign Qualification entitling him to practise Medicine or Surgery in the country where such qualification has been conferred, wherein the Courses of Study, and the Examinations to be undergone previously to graduation shall have been adjudged by the Censors' Board to be satisfactory, shall, if the Censors shall think fit, be admitted to the Pass Examination. The nature and extent of this examination shall, in the case of each candidate, be determined by the Censors' Board.

Pass Examination for Membership.—The Pass Examination shall be conducted as follows:—Thursday: From 2 to 6, by written questions on Medical Anatomy, and on the Principles of Medicine. Friday: From 2 to 6, by written questions on the Practice of Medicine, including the Principles of Public Health, and on Psychological Medicine. Saturday or Monday: The candidate's practical knowledge will be tested, either at the College or in the Medical Wards of an Hospital. Tuesday and Wednesday: By Examination *visà voce*. This examination will commence on the last Thursday but one in January, April, July and October.

Any candidate who has attained the age of forty years and who can produce testimonials as to his moral character and conduct, his general and professional acquirements, and that he has improved the art or extended the Science of Medicine, or has at least distinguished himself highly as a medical practitioner, shall submit such testimonials to the Censors' Board, who may, if they see fit, submit them to the Fellows at a general meeting, and it shall be determined by the votes of the Fellows present, or of the majority of them, taken by ballot, whether the candidate shall be admitted to examination.

The fee to be paid for examination for membership shall be £6 6s., and such examination fee shall be reckoned as part of the fee for admission as a member, in the event of the candidate satisfying the Censors' Board of his competency.

Every candidate (except those holding the qualifications above mentioned, or above forty years of age) shall produce proof of his having passed the examinations required for the Licence of the College.

If the Censors' Board doubt the sufficiency of the certificates and testimonials produced by any candidate, or his fitness for admission to examination, they may submit the case to a general meeting of the Fellows.

Every candidate (except in cases specially exempted as above) shall give proof of his acquirements by written answers to questions, and shall also be examined *visà voce*.

Every candidate approved by the Censors' Board shall be proposed, at the next general meeting of Fellows, as qualified to become a member of the College; and if the majority of the Fellows present shall consent, he shall, on engaging to obey the By-laws and Regulations, be admitted a member of the College.

The fee to be paid for admission as a member of the College shall be £31 10s., except when the candidate for membership is a Licentiate of

the College, in which case the fee for admission as a member will be £15 15s.

Any candidate not approved by the Censors' Board shall not (except by special permission of the College) be readmitted to examination until after the lapse of a year.

Every candidate is required to give fourteen days' notice in writing to the Registrar of the College of his intention to present himself for examination, at the same time transmitting—1. Such diplomas or other evidence of his general education as he may possess; 2. Such Medical and Surgical Qualifications as he may have obtained, unless such qualifications are registered in the *Medical Register*; 3. Proof that he has attained the age of twenty-five years; and 4. A testimonial from a Fellow or Member of the College.

LICENTIATES.

The licence of the College is a qualification to practise Medicine, Surgery, and Midwifery. The regulations here given (for synopsis, see pp. 454 and 455) are applicable to candidates who shall have commenced their professional studies after March 25th, 1880.

Of the forty-five months of professional study, one winter and two summer sessions may be passed in either of the following ways: 1. Attending the practice of a hospital, infirmary, or other institution, recognised by the College; 2. Receiving instruction as the pupil of a legally qualified practitioner, having opportunities of imparting a practical knowledge of Medicine, Surgery, or Midwifery; 3. Attending lectures on any of the required subjects of professional study at a recognised place of instruction. Professional studies commenced *before* registration, except in the cases of Chemistry, Materia Medica, Botany, and Pharmacy, will not be recognised.

Certificates required: First Examination.—Evidence of having been registered as a Medical Student by the General Medical Council; and of having received instruction in Chemistry, including Chemical Physics (*i.e.*, Heat, Light, and Electricity), in Practical Chemistry, in Materia Medica, in Botany, and in Practical Pharmacy.

Second Examination.—Evidence of having passed the first examination; of having completed, after registration as a student, eighteen months of professional study at a recognised school or schools; and of instruction in Anatomy and Physiology (*see Table*).

Third Examination.—Evidence of being twenty-one years of age; of moral character; of having passed the second examination; of having been engaged in professional study not less than forty-five months (*see Table*); and of instruction in the remaining subjects of study mentioned in the Tables.

The systematic practical instruction in Medicine, Surgery, and Obstetric Medicine comprises practical details—such as: 1. The application of anatomical facts to the investigation of disease; 2. The methods of examining various organs in order to detect the evidence of disease or the effects of accidents; 3. The employment of instruments used in diagnosis and treatment; 4. The examination of normal and diseased structures, whether recent or in a museum; 5. The chemical examination of morbid products; 6. Operations on the dead body; 7. *Post mortem* examinations.

No metropolitan hospital is recognised which contains less than 150, and no provincial or colonial hospital which contains less than 100 patients. A three months' course of clinical instruction in the wards of a recognised Lunatic Hospital or Asylum, may be substituted for the same period in the medical wards of a General Hospital.

Exemptions.—Any candidate who shall produce satisfactory evidence of having passed an examination in any of the subjects of the first examination, or an examination in Anatomy and Physiology as required for a degree in medicine or surgery, at an university in the United Kingdom, in India, or in a British Colony; or an examination in Anatomy and Physiology conducted by either of the Royal Colleges of Surgeons in the United Kingdom or by the Faculty of Physicians and Surgeons of Glasgow, will be exempt from re-examination in the respective subjects. Any candidate who shall have obtained a Degree in Surgery at an University in the United Kingdom, or who shall have passed the Examination in Surgery conducted by a Royal College of Surgeons of the United Kingdom, or the Faculty of Physicians and Surgeons of Glasgow, after a course of study and an examination satisfactory to the College, will be exempt from re-examination on Surgical Anatomy and Pathology, and on the Principles and Practice of Surgery. Any candidate who shall have obtained a Foreign Qualification which entitles him to practise Medicine or Surgery in the country where such qualification has been conferred, after a course of study and an examination equivalent to those required by the regulations of the College, shall, on production of satisfactory evidence as to age, moral character, and proficiency in vaccination, be admissible to the Pass Examination, and shall be exempt from re-examination on such sub-

TABULAR VIEW OF THE REGULATIONS OF THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, AND OF THE SOCIETY OF APOTHECARIES IN LONDON.

A REQUISITE FOR A DEGREE OF GENERAL EDUCATION BEFORE COMMENCEMENT OF PROFESSIONAL STUDY.	ROYAL COLLEGE OF PHYSICIANS OF LONDON.		ROYAL COLLEGE OF SURGEONS OF ENGLAND.		SOCIETY OF APOTHECARIES IN LONDON.	
	REQUIREMENTS.	REGULATIONS.	REQUIREMENTS.	REGULATIONS.	REQUIREMENTS.	REGULATIONS.
GENERAL EDUCATION.	Twenty-five. Certificate of Registration by the General Medical Council.	Twenty-five. Certificate of Registration by the General Medical Council.	Twenty-five. Certificate of Registration by the General Medical Council.	Twenty-five. Certificate of Registration by the General Medical Council.	Twenty-five. Certificate of Registration by the General Medical Council.	Twenty-five. Certificate of Registration by the General Medical Council.
DEGREE OF PROFESSIONAL STUDY.	Forty-five months; at least three winters and two summers at a recognised school or schools.	Six years; or members, two years in addition to the certificate for the diploma of member.	Six years; or members, two years in addition to the certificate for the diploma of member.	Six years; or members, two years in addition to the certificate for the diploma of member.	Four years; or not less than four winter and four summer sessions.	Four years; or not less than three winter and two summer sessions at a school or hospital.
COURSE OF LESSONS, ETC., REQUIRED.	A course of Anatomy; dissections 12 months.	Lectures during two winters; dissections three winters.	Lectures during two winters; dissections three winters.	Lectures during two winters; dissections three winters.	Lectures, two winters; dissections, two winters.	First two winter sessions.
Anatomy and Dissection.	Physiology and Practical Physiology, each one course.	Lectures one winter; & Practical Physiology, another session.	Lectures one winter; & Practical Physiology, another session.	Lectures one winter; & Practical Physiology, another session.	Lectures, one winter; Practical Physiology, another session.	First two winter sessions.
Chemistry.	Instructions; time not specified.	One course.	One course.	One course.	One course.	First winter session.
Physics.	One course; demonstrations in practical room during clinical study.	Three months.	Three months.	Three months.	Three months.	First summer session.
Mathematics.	One course.	Not required.	Not required.	Not required.	Not required.	Three months.
Practical Anatomy.	Nine months.	Lectures, three months; demonstrations, three winters and two summer sessions.	Lectures, three months; demonstrations, three winters and two summer sessions.	Lectures, three months; demonstrations, three winters and two summer sessions.	Lectures, three months; demonstrations, three winters and two summer sessions.	First winter and summer sessions.
Medicine.	One course.	One winter and one summer session.	One winter and one summer session.	One winter and one summer session.	One course.	Second winter session.
Clinical Medicine.	Nine months.	Two winter and two summer sessions. Observation and examination of patients for three months.	Two winter and two summer sessions. Observation and examination of patients for three months.	Two winter and two summer sessions. Observation and examination of patients for three months.	Two winter and two summer sessions. Observation and examination of patients for three months.	Third winter session.
Surgery.	Required.	One course; not less than twenty labours.	One course; not less than twenty labours.	One course; not less than twenty labours.	One course; not less than twenty labours.	One course after second year.
Clinical Surgery.	Three months.	Not stated.	Not stated.	Not stated.	Not stated.	Not required.
Physiology.	One course.	Surgical practice, four winters and four summer sessions; medical practice, one winter and one summer.	Surgical practice, four winters and four summer sessions; medical practice, one winter and one summer.	Surgical practice, four winters and four summer sessions; medical practice, one winter and one summer.	Surgical practice, four winters and four summer sessions; medical practice, one winter and one summer.	Not required.
Medical Jurisprudence.	Medical and surgical practice, three winters and two summer sessions.	One course.	One course.	One course.	One course.	Second summer session; twenty cases of labour.
Pharmacology.	Clinical clerk, six months; dresser, six months.	One course.	One course.	One course.	One course.	Not stated.
Pharmaceutical Science.	Systematic Practical Instruction in Medicine, Surgery, and Obstetric Medicine. Instruction and proficiency in Vaccination. Moral character.	Instruction and proficiency in Vaccination. Comparative Anatomy, one course. Operations on Dead Body.	Instruction and proficiency in Vaccination. Comparative Anatomy, one course. Operations on Dead Body.	Instruction and proficiency in Vaccination. Comparative Anatomy, one course. Operations on Dead Body.	Instruction and proficiency in Vaccination. Comparative Anatomy, one course. Operations on Dead Body.	Second summer session. Medical practice, beginning with second winter session to end of period of study.
Pharmaceutical Chemistry.	Having been examined at examinations. Instruction in Vaccination (not less than twenty cases). Moral conduct.	Instruction and proficiency in Vaccination.	Instruction and proficiency in Vaccination.	Instruction and proficiency in Vaccination.	Instruction and proficiency in Vaccination.	Clinical clerk, six weeks at least.

NUMBER OF EXAMINATIONS FIRST EXAMINATION; WHEN IT MAY BE PASSED; SUBJECTS.	THREE.	TWO.	TWO.	TWO.
SECOND EXAMINATION; AT WHAT PERIOD IT MAY BE PASSED; SUBJECTS.	After registration as a student; Chemistry and Chemical Physics; Medical Botany and Pharmacy; and Osteology. After eighteen months of study subsequent to registration as a medical student; Anatomy and Physiology.	After third winter session; in Anatomy and Physiology. After six years of professional study; in Surgery, including Surgical Anatomy and Pathology, Medicine, and Midwifery (Medicine and Midwifery not required if passed for the membership, nor from candidates holding approved diplomas, degrees, or licenses, or from those intending to obtain a qualification in Medicine and Midwifery; the diploma of the College is not issued until proof of having passed the required examination is produced).	After second winter session; Anatomy and Physiology. After end of fourth year of professional education; in Surgical Anatomy, Surgery, Medicine, and Midwifery.	After second winter session; Physicians' Prescriptions & Pharmacy, Anatomy and Physiology, General & Practical Chemistry, Botany, Materia Medica and Histology. At end of medical studies, in Medicine, Pathology, Therapeutics, Midwifery and Diseases of Women and Children, Forensic Medicine, Toxicology and Microscopical Pathology.
THIRD EXAMINATION; AT WHAT PERIOD IT MAY BE PASSED; SUBJECTS.	After forty-five months of study; two years after second examination; Medical and Surgical Anatomy and Pathology; Principles and Practice of Medicine and Therapeutics, and of Surgery; Midwifery and Diseases of Women. (Forensic Medicine, Public Health, and Therapeutics are included.) £5 5s. for admission to each examination. Candidate rejected at any examination must pay additional £3 3s. before readmission to examination. Fee for Licence, £15 15s.	At first examination, members £5 5s.; non-members £10 10s., £5 5s. returned if rejected. At second examination, member, £10 10s. (above charge for stamps); if not a member, £21 (over and above charges for stamps). In each case, £10 10s. is retained in case of rejection.	£22; £5 5s. at first examination; after failure at this examination, candidate must pay an additional £3 3s. before being again admitted. At Pass Examination, £5 5s. retained on each failure.	Certificate of qualification to practise, £6 6s.; half retained in case of rejection, and accounted for at subsequent examination. First examination, £3 3s., retained in case of rejection and accounted for subsequently.
REJECTED CANDIDATES	After rejection at first or second examination, not again admitted until end of three months; after third examination, not till end of six months.	After rejection at first examination, candidates not again admitted for six months; after second examination, not till end of one year, unless Court of Examiners shall otherwise determine.	After rejection at primary examination, three or six months; after rejection at second examination, six months or longer.	After rejection at first examination, candidate cannot be again admitted till after three calendar months; after examination for licence, not till after six calendar months.
CANDIDATES (1) EXEMPTED FROM CERTAIN PORTIONS OF THE EXAMINATIONS, OR (2) ADMITTED UNDER SPECIAL REGULATIONS.	(1) Candidates who have elsewhere passed examinations in the subjects of the first and second examinations; who have obtained Degrees in Surgery at a recognised University; who have passed an examination in Surgery at a College of Surgeons; who have obtained foreign qualifications entitling them to practise Medicine or Surgery.	(2) Members are admitted to first examination at any time after receiving diploma; to second examination at any subsequent time, if engaged not less than six years in study (or practice) of profession; in case of graduates in Arts of a recognised University, five years.	(2) a. Candidates who have studied in Scotland or in Ireland, or at recognised Foreign or Colonial Universities; b. members or licentiates of the other Colleges of Surgeons; and Graduates in Medicine or Surgery of a recognised University, admitted to professional examination on production of the necessary certificates or diplomas.	Graduates in Medicine of British Universities; licentiates and members of Colleges of Physicians and Surgeons of the United Kingdom or of Apothecaries' Hall in Ireland; candidates who have passed the first professional examination of other boards; candidates appointed before August 1st, 1858, or who commenced hospital attendance on or before October 1st, 1861.

jects as shall in each case be considered by the Censors' Board to be unnecessary.

The examinations will commence in January, April, July, and October, unless otherwise appointed.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

DIPLOMA OF MEMBER.

FOR synopsis of Regulations, see pages 454 and 455.

1. *Preliminary General Education and Examination.*—Candidates are required, before the commencement of their professional education, to pass a Preliminary Examination recognised by the General Medical Council, and to obtain a certificate of having been registered by the General Medical Council. In the case of any Colonial, Indian, or Foreign student not registered by the General Medical Council, the conditions of admission to the professional examination for the diploma will be determined by the Council of the College.

II. *Professional Education.*—The following are recognised modes of commencing professional education:—1. Attendance on the practice of a Hospital, or other public institution recognised by this College. 2. Instruction as the pupil of a legally qualified surgeon, holding the appointment of Surgeon to a Hospital, General Dispensary, or Union Workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council. 3. Attendance on lectures on Anatomy, Physiology, or Chemistry, by lecturers recognised by this College.

a. By the Practical Course of General Anatomy and Physiology, it is meant that the learners themselves shall, individually, be engaged in the necessary experiments, manipulations, etc.; but it is not intended that the learners shall perform vivisections.

b. The certificates of attendance on Lectures must include evidence that the student has attended the practical instructions and examinations of his teacher in each course.

c. The Course of Practical Surgery is intended to embrace instruction in which each pupil shall be exercised in practical details, such as in the application of anatomical facts to Surgery, on the living person or on the dead body; the methods of proceeding and the manipulations necessary in order to detect the effects of diseases or accidents on the living person or on the dead body; the performance, where practicable, of the operations of Surgery on the dead body; the use of surgical apparatus; the examination of diseased structures, as illustrated in the contents of a museum of Morbid Anatomy and otherwise.

d. The course of lectures on Chemistry is not required in the case of a candidate who shall have passed a satisfactory examination in this subject in his preliminary examination.

e. The certificate of instruction in Vaccination must be such as will qualify its holder to contract as a Public Vaccinator under the Regulations at the time in force of the Local Government Board.

III. *Certificates, etc.*—Certificates of attendance upon the practice of a recognised Provincial or Colonial Hospital unconnected with, or not in convenient proximity to, a recognised Medical School, will not be received for more than one Winter and one Summer Session of the Hospital Attendance required by the Regulations of this College; and in such cases Clinical Lectures will not be necessary, but a Certificate of having acted as Dresser for at least six months will be required.

IV. *Professional Examinations.*—The First or Primary Examination is partly written and partly demonstrative. The Second or Pass Examination is partly written, partly oral, and partly on the practical use of surgical apparatus and the practical examination of patients. A candidate, having entered his name for either the Primary or the Pass Examination, who shall fail to attend the meeting of the Court for which he shall have received a card, cannot present himself for examination within three months afterwards.

Candidates can claim exemption from examination in Medicine and Midwifery under the following conditions; viz.:

1. The production by the candidate of a Degree, Diploma, or Licence in Medicine and Midwifery, entitling him to register under the Medical Act of 1858, or a Degree, Diploma, or Licence in Medicine and Midwifery of a Colonial or Foreign University approved by the Council of the College.

2. A declaration by the candidate, prior to his admission to the Final Examination for Membership or Fellowship, that it is his intention to obtain either of the Qualifications in Medicine and Midwifery mentioned in the foregoing paragraph, in which case the Diploma of the College will not be issued to him until he shall produce either the said Medical Qualification or proof of having passed the several examinations entitling him to receive the same.

Candidates commencing their professional education on or after October 1st, 1882, will not be admitted to the Second or

Pass Examination until after the expiration of two years from the date of their passing the Primary Examination, except in the following cases, viz.: 1. When a candidate, before presenting himself for the Primary Examination, shall possess a recognised Degree or Diploma in Medicine or Surgery, or shall have completed the curriculum of professional education for the Diploma. 2. In the case of a candidate who, being desirous of obtaining the Fellowship, shall fail to present himself for the Primary Examination for the Membership at the end of his second year of professional study, but who shall pass at the end of his third winter session the Primary Examination for the Fellowship; it being required in such case that not less than one year of attendance on the Surgical Practice of a recognised Hospital shall intervene between the date of his passing the Primary Examination for the Fellowship and the date of his presenting himself for the Second or Pass Examination for the Diploma of Member. 3. In the case of a candidate who, having commenced his professional studies by attendance on the practice of a recognised provincial or colonial hospital, and having completed a year of such attendance, shall fail to pass the Primary Examination at the end of his second winter session of attendance at a recognised Medical School; provided that in his case not less than one year shall elapse between the date of his passing the Primary Examination and the date of his presenting himself for the Second or Pass Examination for the Diploma of Member. 4. When a candidate, owing to illness, duly certified by one or more of the teachers of his Medical School, shall be prevented from presenting himself for the Primary Examination on the completion of his second year of professional study. 5. And in the case of a candidate who, from some unforeseen circumstances, shall fail to present himself for the Primary Examination on the completion of his second year of professional study; it being left to the Court of Examiners to determine whether in such case the candidate shall or shall not be required to comply with the regulation.

"*Referred*" Candidates.—A candidate referred on the Primary Examination is required, prior to his admission to re-examination, to produce a certificate that he has pursued, to the satisfaction of his teachers, his Anatomical and Physiological Studies in a recognised Medical School during not less than three months subsequently to the date of his reference. A candidate referred upon the Primary Examination, who shall not obtain more than half of the total minimum number of marks, is not readmitted to examination until after the elapse of six months, and is then required to produce a certificate of the performance of Dissections during not less than three months, and of having pursued, to the satisfaction of his teachers, his Anatomical and Physiological Studies in a recognised Medical School during six months subsequently to the date of his reference. A candidate referred on the Pass Examination is required, unless the Court of Examiners shall otherwise determine, to produce, prior to his admission to re-examination, a certificate of at least six months' further attendance on the Surgical Practice of a recognised Hospital, together with Lectures on Clinical Surgery, subsequently to the date of his reference. A candidate, referred on the Pass Examination, who shall have exhibited such extreme ignorance in the Examination as, in the opinion of the Court of Examiners, to render it desirable that he should be referred for a longer period than six months, is required, before his admission to re-examination, to produce a certificate of having attended the Surgical Practice and Clinical Lectures on Surgery of a recognised Hospital for a further period of nine or twelve months, as the Court shall determine.

The candidates under the special regulations referred to in the table at page 455 are admitted to examination on producing, a, the several certificates required for the degrees or diplomas in the respective countries; b, the diploma, licence, or degree of the College or University; together with, in each case, a certificate of instruction and proficiency in Vaccination, and satisfactory evidence of having been occupied, after passing the Preliminary Examination, at least four years, or during four Winter and four Summer Sessions, in the acquirement of professional knowledge.

DIPLOMA OF FELLOW.

For synopsis of Regulations, see pages 454 and 455.

The paragraphs marked a, b, c, d, e, in the Regulations for the Membership, are also applicable to the Fellowship.

SOCIETY OF APOTHECARIES, LONDON.

FOR synopsis of Regulations, see pages 454 and 455.

Examination in Arts.—Examinations in the subject of preliminary education will be held at the Hall of the Society in 1883, on January 11th, 12th, and 13th; April 5th, 6th, and 7th; and September 13th,

14th, and 15th. Candidates will be examined in the following branches, and no candidate will be approved unless he show a competent knowledge of each branch:—1. The English Language; 2. English History; 3. Modern Geography; 4. The Latin Language; 5. Mathematics; 6. Elementary Mechanics; 7. Elementary Chemistry. One of the following subjects, at the option of the candidate: (a) Greek; (b) French; (c) German.* Candidates who pass are arranged in two classes; the first in order of merit, the second in alphabetical order. Candidates must pay the fee (One Guinea) at least one week before the examination.† Certificates in Arts granted by any of the bodies whose certificates are recognised by the Medical Council will be accepted as equivalent to having passed the above examination.

Professional Examinations.—The Court meets every Wednesday and Thursday; and candidates are required to attend at 4.30 P.M. Every candidate intending to offer himself for examination must give seven days' notice, and must at the same time deposit all the required testimonials, with the fee, at the office of the beadle, where attendance is given every day, except Sunday, from 10 to 4 o'clock; Saturdays, 10 to 2.

Modified Examinations.—1. All Graduates in Medicine of British Universities will be admitted to a clinical and general examination in the practice of Medicine, Pathology, and Midwifery. 2. Licentiates of the Royal College of Physicians of London or of Edinburgh; of the Royal Colleges of Physicians and Surgeons, Edinburgh; of the King and Queen's College of Physicians, Ireland; of the Faculty of Physicians and Surgeons, Glasgow; and of the Apothecaries' Hall, Dublin, will be admitted to a *vivâ voce* and clinical examination in the Practice of Medicine, Pathology, Midwifery, Forensic Medicine, and Toxicology. 3. Any candidate who has passed his first examination for the Licence of the King and Queen's College of Physicians in Ireland, or for the joint Licence of the Colleges of Physicians and Surgeons of Edinburgh, the single Licence of the College of Surgeons of Edinburgh, or the Licence of the Faculty of Physicians and Surgeons of Glasgow; the first professional examination for the Degree of M.B., or Master in Surgery, in the Universities of Oxford, Cambridge, Durham, or London; or the second part of the professional examination for the Degree of M.B., or Master in Surgery, in the Universities of Edinburgh, Aberdeen, St. Andrew's, and Glasgow; or the second examination for medical and surgical degrees in the Irish Universities; or for the Membership of the Royal College of Surgeons of England and the Licence of the Royal College of Physicians, taken together; or the first examination for the Licence of the Apothecaries' Company, Dublin; or the first and second examinations of the Royal College of Physicians of London, will be admitted to a single examination in *Materia Medica* and Anatomy (to those candidates who have not undergone an examination in those subjects), Practice of Medicine (including Clinical Medicine), Pathology, Therapeutics, Midwifery, Forensic Medicine, and Toxicology, which examination will be partly written and partly *vivâ voce*. 4. Members of the Royal College of Surgeons, England; Licentiates of the Royal College of Surgeons, Edinburgh; and Licentiates of the Royal College of Surgeons, Ireland; and all candidates who have passed the first Anatomical ex-

amination of the Royal College of Surgeons, London; the Royal College of Surgeons, Edinburgh; and the Royal College of Surgeons, Ireland, will have to undergo the two examinations, but are only exempt from writing on Anatomy and Physiology in their first examinations.

UNIVERSITY OF OXFORD.

DEGREES IN MEDICINE.

EVERY student must reside either in one of the Colleges or Halls, or in a Licensed Lodging-House, for three years. During these three years, he has to pass two examinations in Arts and one in either Mathematics, Natural Science, or Law and Modern History; when, if he obtain a first, second, or third class, he can take his B.A. degree; if he do not gain such honours, he has to pass a third examination in *Literis Humanioribus*. A student deciding to graduate in Medicine must, after passing the requisite examination for the degree of B.A., spend eight terms (two years) in study prior to a scientific examination for the degree of Bachelor of Medicine, unless he shall have taken a first or second class in the natural science school, when he may go in at the first opportunity for the first M.B. examination. Two years after passing this examination, and after four years of professional and scientific study, he may go in for the second or practical examination for the M.B. degree. These four years of medical study may be spent either in or out of Oxford, in an approved medical school. Each examination is conducted partly in writing and partly *vivâ voce*, and part of each is practical. The subjects of the first examination are Human Anatomy and Physiology, Comparative Anatomy and Physiology to a certain extent, and those parts of Mechanical Philosophy, Botany, and Chemistry which illustrate Medicine; those of the second examination are the Theory and Practice of Medicine (including Diseases of Women and Children), *Materia Medica*, Therapeutics, Pathology, the Principles of Surgery and Midwifery, Medical Jurisprudence, and General Hygiene. Every candidate at the second examination is examined in two of the ancient authors, Hippocrates, Aretæus, Galen, and Celsus; or in one of these and in some modern author approved by the Regius Professor (such as Morgagni, Sydenham, or Boerhaave).

For the Degree of Doctor in Medicine, a dissertation has to be publicly read three years after taking the M.B. Degree.

The medical examinations take place annually in Michaelmas Term. Scholarships of about the value of £75 are obtainable at Christ Church, Magdalen, and other Colleges, by competitive examination in natural science. Each year, a Radcliffe Travelling Fellowship is competed for by anyone who, having taken a first class at any of the Public Examinations of the University, or having obtained some University Prize or Scholarship open to general competition, proposes to graduate in Medicine. The Travelling Fellows receive £200 a year for three years, half this period being spent in study abroad.

UNIVERSITY OF CAMBRIDGE.

BACHELOR OF MEDICINE.

A STUDENT proceeding to this degree must—1. Reside in the University two-thirds of each of nine terms; 2. Pass the previous examination (both classical and mathematical); 3. Pursue medical study for five years, unless he have obtained honours in the Mathematical, Classical, Moral Sciences, or Natural Sciences Tripos, in which case four years only are required.

There are three examinations for the Degree of Bachelor of Medicine. They are partly in writing, partly oral, and partly practical, and include chemical analysis, the recognition and description of specimens (healthy, morbid, and microscopical), dissections, and the examination of patients. They take place twice annually, commencing on the Thursday following the first Monday in December; and in the Easter Term, on the Thursday next but one preceding the general admission to the B.A. degree.

The subjects of the first examination are—1. Chemistry and other branches of Physics; 2. Botany. The student may present himself for this examination at any time after he has passed the previous examination. He is required to produce certificates of having diligently attended one course of lectures on Chemistry, including manipulations, and one course on Botany.

The subjects of the second examination are—1. Elements of Comparative Anatomy; 2. Human Anatomy and Physiology; 3. Pharmacy and Pharmaceutical Chemistry. Before presenting himself for this examination, the student must have completed two years of medical study; he must have attended hospital practice during one year, must have practised dissection during one session, and must have diligently attended a course of lectures on each of the subjects of examination.

* The following will be the subjects of examination. 1. English Language: including Grammar and Composition; writing Sentences in correct English upon a given theme; Writing correctly from Dictation; explaining the Construction of Sentences; pointing out the Grammatical Errors in Sentences ungrammatically expressed; giving the Derivation and Definition of Words in common use. 2. English History: from the accession of Henry VII to that of James I. 3. Modern Geography: including the Elements of Physical Geography. 4. Latin: including Translations from the Original, and Grammar: January—Cæsar's *Commentaries*, Books IV and V; April—Virgil, *Georgics*, Book IV; September—Cicero, *De Senectute*. 5. Mathematics: Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations; the first two Books of Euclid, or the subjects thereof (Euclid's Axioms will be required, and no proof of any proposition will be admitted which assumes the proof of anything not proved in preceding propositions in Euclid). 6. Elementary Mechanics: of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics. (The candidate is allowed to pass this subject either as preliminary, or before, or at the first Professional Examination.) 7. (a) Greek: Xenophon, *Cyropædia*, Book V; Grammatical Questions. (b) French: Prosper Mérimée, *Colomba*; Translation from English into French; Grammatical Questions. (c) German: Goethe, *Egmont*; English into German; Grammatical Questions. (d) Elementary Chemistry: Inorganic. Candidates will be examined only in the optional subject of which they shall have given notice. The Examiners recommend the study of one of the following: English—Angus's, Adams's, or Mason's *Grammar*, and Earle's *Philology*. English History—Bright's *History of England*, and Green's *Short History of the English People*. Mechanics—Wormell's or Newth's *Natural Philosophy* or Girdlestone's *Mechanics*. Chemistry—Roscoe's *Elementary Chemistry*.

† The following form of notice must be copied and written in full by the candidate, in the presence of a magistrate, clergyman, or registered medical practitioner. I (name in full), residing at (address), intend to present myself for the Preliminary Examination in Arts, at the Apothecaries' Hall, London, on the _____, and that I intend to take _____ as my optional subject. Signature _____ The above has been written and signed in my presence, by the abovenamed candidate, with whom I am personally acquainted. Signed, A. B.; Address, X. Date _____

The subjects of the third examination are—1. Pathology and the Practice of Physic (two papers); 2. Clinical Medicine; 3. Midwifery; 4. Principles of Surgery; 5. Medical Jurisprudence. Before presenting himself for this examination, the candidate must have completed the course of medical study, must have attended the medical practice of a recognised hospital during three years, and the surgical practice during one year at least, and must produce certificates of having attended one course of lectures on each of the following subjects: 1. Pathological Anatomy; 2. The Physiological and Therapeutical Action of Remedies; 3. Principles and Practice of Physic; 4. Clinical Medicine; 5. Clinical Surgery; 6. Medical Jurisprudence; 7. Midwifery; 8. Of having attended ten cases of Midwifery; 9. Of having acquired proficiency in Vaccination; 10. And of having been Clinical Clerk for six months at least at a recognised hospital; or of having, subsequently to the completion of his attendance on hospital practice, attended to practical medicine, with special charge of patients, in a hospital, dispensary, or parochial union, under superintendence of a qualified practitioner, unless he himself be duly qualified.

After these examinations have been passed, an Act must be kept in the Schools in the following manner. The Professor of Physic assigns the day and hour for keeping the Act, of which public notice has to be given eight days before. The candidate reads a thesis, composed by himself, on some subject approved by the professor; the professor brings forward arguments or objections for the candidate to answer, and examines him *viva voce*, as well on questions connected with his thesis as on other subjects in the faculty of a more general nature.

DOCTOR OF MEDICINE.

This degree may be taken by a Bachelor of Medicine in the ninth term after his inauguration (this occurs on the commencement day next following the admission to the degree). He is required to produce certificates of having been engaged five years in medical study, to keep an Act similar to that for M.B., and to write a short extempore essay on a subject of his choice) of four topics relating severally to Physiology, Pathology, Practice of Medicine, and State Medicine.

A Master of Arts may proceed to the degree of M.D. in the twelfth term after his inauguration as M.A. without having taken the degree of M.B. He must pass the three examinations for M.B., and keep the Act and write the extempore essay for the M.D. degree. He must produce certificates of having been engaged five years in medical study, and the same certificates of attendance on lectures and hospital practice as are required of the candidate for the degree of M.B.

MASTER IN SURGERY.

The subjects of the examination for this degree are—1. Surgical Anatomy; 2. Pathology and the Principles and Practice of Surgery; 3. Clinical Surgery.

Before admission to this examination, the candidate must have passed all the examinations for the degree of M.B., and must produce certificates of having attended the surgical practice of a hospital for three years, of having been house-surgeon or dresser for six months, and of having attended—1. A second course of lectures on Human Anatomy; 2. One course of lectures on the Principles and Practice of Surgery; 3. Lectures on Clinical Surgery during one year; 4. Of having practised Dissections during a second season.

The examination takes place at the same times as those for M.B., and in the same manner. The candidate is required to perform operations on the dead body, and to examine patients in the hospital.

A notice is published early in the Michaelmas and Easter Terms, stating when the examinations for Medical and Surgical degrees commence, and the date when candidates are required to send to the Regius Professor of Physic notice of their intention to offer themselves for examination and the necessary certificates.

Candidates pay three guineas to the Registry of the University on giving notice of their intention to offer themselves for his first examination. They pay the same sum before the second examination.

Notwithstanding the range of subjects in the first examination, and the subjects in the second examination, also schedules of the regulations, certificates, and a list of the Schools of Medicine recognised by the University, may be obtained, on application, from Mr. Barclay, at the Anatomical Museum.

UNIVERSITY OF LONDON.

The following examinations will be held in the University of London in 1883.

Preliminary Scientific Examination: Monday, July 17th.

Intermediate Examination in Medicine: Monday, July 31st.

The Certificate must be from one of the vaccinators authorised by the Government.

Bachelor of Medicine (M.B.): Monday, November 6th.

Bachelor of Surgery (B.S.): Tuesday, December 5th.

Master in Surgery (M.S.) and Doctor of Medicine (M.D.): Monday, December 4th.

Subjects relating to Public Health: Monday, December 11th.

The certificates in each case must be transmitted to the Registrar at least fourteen days before the commencement of the examination.

The fee for each examination is Five Pounds.* If a candidate withdraws, or fail to pass either of the examinations, the fee is not returned; but he is admitted without further payment to two subsequent preliminary scientific, intermediate, M.B. or B.S. examinations, or to one subsequent M.S. or M.D. examination, provided that he give notice to the Registrar at least fourteen days before the commencement of the examination.†

BACHELOR OF MEDICINE.

Every candidate for the degree of Bachelor of Medicine is required—1. To have passed the Matriculation Examination; 2. To have passed the Preliminary Scientific Examination; 3. To have been engaged in his professional studies during four years subsequently to matriculation or graduation in Arts, in one or more of the medical institutions or schools recognised by this University; one year, at least, of the four to have been spent in one or more of the recognised institutions or schools in the United Kingdom; 4. To pass two examinations in Medicine.

Preliminary Scientific Examination.—Candidates are strongly recommended by the Senate to pass the Preliminary Scientific Examination before commencing their regular medical studies. For the Preliminary Scientific Examination, candidates are examined in Inorganic Chemistry; Experimental Physics; Botany and Vegetable Physiology; Zoology. They must show a competent knowledge in all the subjects.‡

Intermediate Examination in Medicine.—The candidate must have passed the Preliminary Scientific Examination at least one year previously, and must produce certificates—1. Of having completed his nineteenth year; 2. Of having been a student during two years at one or more of the medical institutions or schools recognised by this University; and of having attended a course of lectures on each of three of the following subjects: Descriptive and Surgical Anatomy, Physiology and Histology, Pathological Anatomy, Materia Medica and Pharmacology, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Obstetric Medicine and Diseases peculiar to Women and Infants, Surgery, Medicine; 3. Of having dissected during two winter sessions; 4. Of having attended a course of Practical Chemistry; 5. Of having attended to Practical Pharmacy, and having acquired a practical knowledge of the preparation of medicines. Candidates are examined in Anatomy, Physiology and Histology, Materia Medica and Pharmaceutical Chemistry, Organic Chemistry. Candidates must show a competent knowledge in all the subjects. The examinations are conducted by printed papers and *viva voce* interrogation, by demonstration from preparations and specimens, and by dissections.

Examinations for Honours.—Any candidate who has passed the examination in all its subjects at one time may be examined for Honours in—1. Anatomy; 2. Materia Medica and Pharmaceutical Chemistry; 3. Organic Chemistry; 4. Physiology and Histology. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself most in each of the first and fourth divisions receives an exhibition of £40 *per annum*, and in each of the others £30 *per annum*, for the next two years, payable in quarterly instalments; provided that, on receiving each instalment, he declare his intention of presenting

For the degree of Doctor of Medicine, the fee to be Ten Pounds to the Registrar, and the fee to be Five Pounds to the Registrar, shall not be returned.

The fee for each examination is Five Pounds, and the fee for each examination is Five Pounds.

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himself at the M.B. examination within three academical years from the time of passing the intermediate examination in Medicine. Under the same circumstances, the first and second candidates in subjects 1 and 4, and the first candidate in subjects 2 and 3, receive each a gold medal of the value of five pounds.

M.B. Examination.—No candidate is admitted to this examination within two academical years of the time of his passing the intermediate examination, nor without certificates:—1. Of having passed the intermediate examination in medicine; 2. Of having subsequently attended a course of lectures on each of two of the subjects for which he had not presented certificates at the intermediate examination; 3. Of having conducted at least twenty labours;† 4 and 5. Of having attended the Surgical and the Medical Practice of a recognised Hospital or Hospitals during two years, with Clinical Instruction and Lectures on Clinical Surgery and Clinical Medicine;‡ 6. Of having, after having attended Surgical and Medical Hospital Practice for at least twelve months subsequently to passing the intermediate examination in Medicine, attended to Practical Medicine, Surgery, and Midwifery, with special charge of patients, in a Hospital, Infirmary, Dispensary, or Parochial Union, during six months—such attendance not to be counted as part of the hospital practice prescribed in 4 and 5; 7. Of having acquired proficiency in Vaccination.§ The candidate must also produce a certificate of moral character from a teacher in the last school or institution at which he has studied, as far as the teacher's opportunity of knowledge has extended. Candidates are examined in General Pathology, General Therapeutics, and Hygiene, Surgery, Medicine, Obstetric Medicine, and Forensic Medicine. The examinations include questions in Surgical and Medical Anatomy, Pathological Anatomy, and Pathological Chemistry. The examinations are conducted by printed papers and *visu voce* interrogations; by practical examinations in obstetric preparations and apparatus; by examination, and report on cases, of medical patients in the wards of a hospital; demonstrations from specimens and preparations. Candidates are expected to write prescriptions in Latin, without abbreviations.

Bachelors of Medicine of the University of London have no right, as such, to assume the title of Doctor of Medicine.

Examination for Honours.—Any candidate who has passed the M.B. examination may be examined for Honours in—1. Medicine; 2. Obstetric Medicine; and 3. Forensic Medicine. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most in Medicine receives £50 *per annum* for the next two years, with the style of University Scholar in Medicine; and the candidates who distinguish themselves the most in Obstetric Medicine and in Forensic Medicine receive each £30 *per annum* for the next two years, with the style of University Scholar in Obstetric Medicine and in Forensic Medicine respectively. The first and second candidates in each of the preceding subjects each receive a gold medal of the value of five pounds.

BACHELOR OF SURGERY.

The candidates must produce certificates—1. Of having passed the examination for the degree of Bachelor of Medicine in this University; 2. Of having attended a course of instruction in Operative Surgery, and of having operated on the dead subject. The examinations are conducted by printed papers on Surgical Anatomy and Surgical Operations; by examination, and report on cases, of surgical patients; by performance of operations upon the dead subject; by application of surgical apparatus; and by *visu voce* interrogation.

Examination for Honours.—Any candidate who has passed the B.S. examination may be examined for Honours in Surgery. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most receives £50 *per annum* for the next two years, with the style of University Scholar in Surgery; and the first and second candidates each receive a gold medal of the value of five pounds.

* Any candidate for the M.B. Examination who has passed the Intermediate Examination in Medicine under the former regulations, is required to have also passed the Examination in Physiology at some previous Intermediate Examination in Medicine carried on under the present regulations; at which examination he is not allowed to compete for honours.

† Certificates will be received from any legally qualified practitioner.

‡ The student's attendance on the Surgical and on the Medical Hospital Practice specified in Regulations 4 and 5, may commence at any date after his passing the Preliminary Scientific Examination, and may be comprised either within the same or within different years; provided that in every case his attendance on Hospital Practice be continued for at least eighteen months subsequently to his passing the Intermediate Examination in Medicine. Attendance during three months in the wards of a Lunatic Asylum recognised by the University, with clinical instruction, may be substituted for a like period of attendance on medical hospital practice.

§ Certificates on this subject will be received only from the authorised vaccinators appointed by the Privy Council.

MASTER IN SURGERY.

The candidate must produce certificates—1. Of having taken the degree of Bachelor of Surgery* in this University; 2. Of having attended subsequently—(a) to Clinical or Practical Surgery during two years in a hospital or medical institution recognised by this University; (b) or to Clinical or Practical Surgery during one year in a recognised hospital or medical institution, and of having been engaged during three years in the practice of his profession; (c) or of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Surgery in this University.† 3. Of moral character, signed by two persons of respectability. The examination is conducted by means of printed papers and *visu voce* interrogation; and the candidates are examined in Logic and Psychology,‡ and in Surgery. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most receives a gold medal of the value of twenty pounds.

DOCTOR OF MEDICINE.

The candidate must produce certificates analogous to those required for candidates for the degree of Master in Surgery, but having special relation to Medicine. The examination is conducted by printed papers and *visu voce* interrogations; and candidates are examined in Logic and Psychology, and in Medicine. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most receives a gold medal of the value of twenty pounds.

UNIVERSITY OF DURHAM.

THERE are two Licences and three Degrees conferred; viz., a Licence in Medicine and a Licence in Surgery, and the Degrees of Bachelor of Medicine, Master in Surgery, and Doctor of Medicine. A certificate of proficiency in Sanitary Science is also awarded.

The regulations for the licence and degree of Bachelor, so far as regards the course of study, the subjects of each examination, and the certificates required, are similar; but the candidate for a degree must produce evidence of general education in addition to that implied in the certificate of registration as a medical student.

The examinations for the licences and degrees above named are conducted at the College of Medicine, and in the Infirmary, at Newcastle-on-Tyne. Candidates are examined—(1) by printed papers of questions, (2) practically, (3) *visu voce*. Every candidate who intends to present himself for any of the above-named examinations must give at least twenty-eight days' notice to the Registrar of the College, and must at the same time send the fee, £5, and the necessary certificates. If, after payment of the fee, a candidate withdraw his name, or fail to present himself at the examination, or fail to pass it, he shall not receive back the fee, but shall be allowed to enter for one subsequent examination of the same kind without the payment of any additional fee.§

BACHELOR OF MEDICINE.

The course of attendance on Lectures and Hospital Practice required is the same as that required by the Royal College of Surgeons of England, together with the following additional courses: Botany and Therapeutics, each three months; Public Health and Medicine, each six months; Medical Hospital Practice and Clinical Lectures on Medicine, each one winter and one summer session.

For this Degree there are two Professional Examinations, the first being held in October and April, the second in June and December. The first will commence on October 9th, 1882, and April 23rd, 1883; and the second on December 4th, 1882, and June 18th, 1883. The subjects of the First Examination are Anatomy, Physiology, Chemistry, and Botany. The candidate must produce the following certificates: 1. Of registration in the books of the General Medical Council as a medical student; 2. Of (a) Graduation in Arts at one of the following Universities, viz., Oxford, Cambridge, Durham, Dublin, London,

* Candidates who have obtained the degree of Bachelor of Medicine previously to 1866, will be admitted to the examination for the degree of Master in Surgery without having taken the degree of Bachelor of Surgery; and their attendance on surgical practice required by Regulation 2, may commence from the date of the M.B. Degree.

† One year of attendance on Clinical or Practical Surgery, or two years of practice, will be dispensed with in the case of those candidates who at the B.S. Examination have been placed in the first division.

‡ Any candidate who has taken the degree either of M.D., B.A., or B.Sc., in this University (provided that Mental and Moral Science was one branch of his examination), is exempted from this part of the examination; and any candidate who has passed the M.E. Examination, may at any subsequent M.S. Examination present himself for Logic and Psychology alone, if he so prefer; thereby gaining exemption, if he should pass, from examination in that subject when he presents himself to be examined for the degree of Master in Surgery.—An analogous exemption is allowed in the case of candidates for the degree of M.D.

§ There are special regulations in the case of practitioners of fifteen years' standing. See next page.

as a visiting assistant to a registered practitioner. He must also have attended at least six cases of labour under the superintendence of a qualified medical practitioner, and have studied vaccination under a competent and recognised teacher. He must have passed the Preliminary Examination in Literature and Science,* and had his name inscribed in the General Medical Council's *Register of Medical Students*, previously to the commencement of his medical studies. Masters and Bachelors of Arts of any British or foreign university, whose course of study may be approved of by the College, will be exempted from the preliminary examination; also those who have passed the examination of the national educational bodies, or of any of the licensing boards recognised by the Medical Act.

The Professional Examination will be divided into two parts: 1. Anatomy, Physiology, Chemistry; 2. Materia Medica and Pharmacy, Pathology and Pathological Anatomy, Practice of Medicine, Surgery, Midwifery, Medical Jurisprudence, Clinical Medicine. No candidate will be admitted to the first examination until the end of the second winter session, or to the second until he has completed four years of professional study. The preliminary examination will be held on October 14th, 16th, and 17th, 1882; April 10th, 11th, and 12th, and July 6th, 7th, and 9th, 1883. The first professional examinations on October 11th, 1882; January 10th, April 18th, July 18th, and October 10th, 1883. The second professional examination will be held on the Thursdays and Fridays following the first professional examination.

Candidates who have passed the first professional examination before a qualifying body (provided it be as extensive as that required by this College) will be at once admitted to the second examination.

No candidate is admissible to examination who has been rejected by any other licensing board within the previous three months. Every candidate must sign a declaration that he has not been rejected within this period.

The Fee for the Licence is £15 15s. A candidate for the first professional examination pays £6 6s., and for the second or final £9 9s.; but, if exempted from the first professional examination, he must, before appearing for the final, pay the whole fee of £15 15s. If a candidate be unsuccessful at the first professional examination, £3 3s.; and at the second or final £4 4s. will be retained. This regulation will also apply in cases in which the candidate may have been previously rejected.

Candidates may be admitted to special examination by bringing forward satisfactory reasons, and paying an extra fee of £5 5s. Should the candidate be unsuccessful, £11 11s. will be returned to him.

FELLOWSHIP AND MEMBERSHIP.

No one can be elected a Fellow of the College until he has been at least one year a Member, and has attained the age of twenty-five years.

Any Licentiate of a College of Physicians, or Graduate of a British or Irish University, with whose knowledge of Medical and General Science the College may be satisfied, may be admitted a Member of the College, provided he shall have attained the age of twenty-four years.

Every motion for the election of a Fellow or Member shall be made at a quarterly meeting of Fellows by one of the Fellows present, and seconded by another; and this motion shall be determined by ballot at the next quarterly meeting—a majority of three-fourths being necessary to carry it in the affirmative.

Every candidate for the membership (except such as are admissible under the provisions for candidates above forty years of age) must pass an examination: (1) On the Principles and Practice of Medicine, including Therapeutics; (2) On one of the following subjects, to be selected by the candidate: (a) Pathology, including Morbid Anatomy; (b) Medical Jurisprudence and Public Health; (c) Midwifery and the Diseases of Women; (d) Psychological Medicine.

Application for the membership must be made through the Secretary, who will transmit to the candidate a copy of the Regulations and Plan of Examination, together with a Form of Petition. The candidate must return the petition duly filled up to the Secretary, and shall at the same time transmit testimonials of recent date from well known members of the profession, certifying as to his professional and social standing. If satisfied as to the eligibility of the candidate, the Council authorise his examination by the Board of Examiners. If the report of the Examiners be satisfactory, the Council report the same to the College at the next quarterly meeting, when a motion may be made for the election of such candidate to the Membership of the College.

* For the subjects, see note to regulations for double qualification.

If any candidate who has attained the age of forty years, and has been a Registered Practitioner for not less than ten years, produce testimonials showing that he has been distinguished for his scientific attainments, or eminence as a Medical Practitioner, the Council may, if they see fit, exempt him from the whole or any part of the prescribed examination.

The dates of the Examinations for the year ending July 31st, 1883, shall be October 10th and 11th, January 9th and 10th, April 10th and 11th, and July 10th and 11th; but application must be made to the Secretary not less than one month previous to the date of the Examination at which the candidate proposes to appear.

Fees.—The fee to be paid by a Member shall be £31 10s. A Licentiate who has obtained the Licence prior to the 1st of August, 1876, when raised to the rank of Member, pays £21; a Licentiate obtaining the Licence subsequent to that date, when raised to the rank of Member, pays £15 15s. When a member is raised to the rank of Fellow, he pays £31 10s., exclusive of stamp-duty (£25). All candidates for Fellowship or Membership must lodge their fees and the amount of stamp-duty payable with the Treasurer previously to presenting their petitions.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

REGULATIONS FOR CANDIDATES FOR THE DIPLOMA.

THE regulations regarding schools of medicine, preliminary examination, and professional study and examination, are similar to those for the double qualification (see below), except that the third course of Medicine is not required. The first professional examinations will be held on October 17th, 1882; January 23rd, March 27th, April 17th, and July 17th, 1883. The second examination takes place immediately after the conclusion of the first.

At the second examination, the student, in furnishing the statement of his professional study, must, if he have been an apprentice, insert the name of his master, the date of his indenture, and the length of time for which he was bound. If he have been apprenticed to a Fellow of the College, he must also produce his discharged indenture.

Recent Dissections, Anatomical Specimens, and articles of the *Materia Medica* are employed in the examinations; and all candidates are required to write out formulæ of prescriptions, and are subjected to a practical examination in the Surgical Hospital.

The Fees are: for the first examination, £6 6s.; for the second, £9 9s. At the first examination, £3 3s., and at the second £5 5s., will be returned to unsuccessful candidates.

Candidates who have passed the first examination in Anatomy, Physiology, and Chemistry, at any of the Licensing Boards recognised by the Medical Act, will be admissible to the second Professional Examination under the same conditions as are described in the regulations for the double qualification. The fee will be £15 15s.; and unsuccessful candidates will receive back £11 11s.

Candidates desirous of special examinations on other days than those fixed, must prepare a case to be submitted to the consideration of the authorities of the College. They must produce certificates of the whole of the prescribed course of study, and of having passed the preliminary examination, and must state the earliest and the latest days within which they can present themselves. The fees are as follows: viz., £20 for first and second examinations, of which £12 will be returned to candidates remitted on the first examination; but no part of the money will be repaid to candidates who, having passed the first, are unsuccessful in the second examination; £17 for second examination. Of this, no part will be returned to the candidate, if unsuccessful.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.

DOUBLE QUALIFICATION IN MEDICINE AND SURGERY.

THE examination for this qualification is conducted by a Board, in which each College is represented, for examination in the branches common to both Medicine and Surgery; but the College of Physicians takes exclusive charge of the examination in Medicine, and the College of Surgeons of the examination in Surgery. Students passing that examination are enabled to register two qualifications: Licentiate of the Royal College of Physicians of Edinburgh, and Licentiate of the Royal College of Surgeons of Edinburgh.

Every candidate must have followed his course of study in an University, or in an established School of Medicine, or in a Provincial School specially recognised by the Colleges of Physicians and of Surgeons of that division of the United Kingdom in which it is situate.

Under the title of Established School of Medicine are comprehended the medical schools of those cities of Great Britain and Ireland in which Diplomas in Medicine or Surgery are granted, and such Colonial and Foreign Schools as are similarly circumstanced in the countries in which they exist.

Preliminary Examination in General Education.—All candidates for the Diplomas of the Colleges must have passed the complete examination in General Education,* and have had their names inscribed in the General Medical Council's Register of Medical Students at the commencement of their professional studies. Certificates of having passed the examinations in General Education, conducted by certain other educational bodies, will be accepted. Each candidate who intends to undergo the preliminary examination must give in his name to the officer of either College not less than two days before the day of examination. He must pay a fee of Ten Shillings. If unsuccessful, he must pay Five Shillings for each subsequent examination.

Professional Education.—1. Candidates must have been engaged during forty-five months after the preliminary examination in professional study, including not less than four winter sessions, or three winter and two summer sessions, attendance at a recognised medical school. 2. The candidate must have attended the following courses of lectures: Anatomy, two courses† of six months each, and Practical Anatomy, twelve months; or Anatomy, one course of six months, and Practical Anatomy, eighteen months; Physiology, not less than fifty lectures; Chemistry, Practice of Medicine, Clinical Medicine,‡ Medicine (a third course, either Practice or Clinical, at option),‡ Principles and Practice of Surgery, Clinical Surgery,‡ Surgery (a third course, either Principles and Practice or Clinical Surgery, at option),‡ each six months; Practical or Analytical Chemistry, Materia Medica, Midwifery and Diseases of Women and Children, Medical Jurisprudence, and Pathological Anatomy,§ each three months. 3. He must also produce certificates:—*a.* Of having attended at least six cases of labour under the superintendence of a registered medical practitioner. *b.* Of having attended, for three months, instruction in Practical Pharmacy. The teacher signing the certificate must be a Member of the Pharmaceutical Society of Great Britain, or a chemist or druggist recognised by either College on special application, or the superintendent of the laboratory of a public hospital or dispensary, or a registered practitioner who dispenses medicine to his own patients. *c.* Of having attended, for twenty-four months, a public general hospital containing, on an average, at least eighty patients. *d.* Of having attended, for six months, the practice of a public dispensary specially recognised by either College; or of having been engaged for six months as assistant to a registered practitioner. *e.* Of having been instructed in vaccination; the teacher signing the certificate must be a registered practitioner. It is strongly recommended to students to avail themselves of opportunities of attending lectures on Ophthalmic and Mental Diseases, also on Natural History and Comparative Anatomy; and of obtaining practical instruction in the use of the Microscope.

Professional Examination.—1. Candidates for the double qualification are subjected to two professional examinations. 2. Opportunities for both examinations are presented six times in each year. On each occasion, the candidates write answers to questions; and are examined orally on the days immediately succeeding. 3. Unsuccessful candidates are remitted to their studies for not less than three months. 4. The first examination embraces Anatomy, Physiology, and Chemistry; and takes place not sooner than the end of the second winter

session. 5. Candidates must apply to the Inspector of Certificates on or before the Friday preceding the day of examination; and must produce certificates of attendance on those courses of lectures which have reference to the subjects of the examination, and evidence of having passed the preliminary examination.* 6. The sum of £8 8s. must be paid to the Inspector of Certificates for this examination not later than 9 A.M. of the Saturday preceding it. This sum will be considered as paid to account for the entire fee of £21 payable for the two Diplomas. 7. In the case of a candidate being unsuccessful at this examination, £5 5s. will be returned to him. 8. The second examination embraces Medicine, Surgery and Surgical Anatomy, Midwifery, Pathological Anatomy, Materia Medica and Pharmacy, and Medical Jurisprudence; and takes place after the termination of the winter session of the last year of study, at least forty-five months after the examination in general education. 9. Application for examination must be made to the Inspector of Certificates not later than the Monday previous to the day of examination. 10. Every candidate must produce—*a.* Satisfactory evidence of having attained the age of twenty-one years; *b.* A certificate of having passed the preliminary examination, unless this certificate have been already seen by the Inspector; *c.* A certificate of registration in the books of the General Medical Council; *d.* A certificate of having passed the first professional examination; *e.* The certificate mentioned under Professional Education, Sections 2 and 3 (above); *f.* A tabular statement (for which a printed form will be furnished), exhibiting the whole of his professional education, and distinguishing the classes, hospitals, dispensaries, and schools attended during each session. 11. The fee for this examination is £12 12s., which must be lodged with the Inspector not later than 9 A.M. of the Tuesday preceding the examination. 12. On the production of the above documents, and after receiving the fees, the Inspector gives the candidate a letter authorising the examiners to take him on trial. 13. In case of a candidate being unsuccessful at this examination, £8 8s. will be returned to him. 14. Candidates who have passed the first professional examination in Anatomy, Physiology, and Chemistry, at any of the Licensing Boards recognised by the Medical Act, will be admissible to the second professional examination on producing certificates of the whole course of study prescribed, of having passed their preliminary and first professional examinations, and of having been registered as students. If any of the three subjects of the first examination have been omitted, the candidate will have to undergo an examination on the omitted subjects; and none of the subjects of the second examination will be omitted. The fee payable by such candidates is £21, and unsuccessful candidates will receive back £16 16s. 15. In addition to the written and oral examinations, all candidates are admitted to practical Clinical Examinations in Medicine and Surgery. 16. No candidate is admissible to examination who has been rejected by any other Licensing Board within the preceding three months.

Communications from candidates must be addressed to Mr. Joseph Bell, 20, Melville Street, Edinburgh.

The following will be the periods of examination for the Double Qualification for the year 1882-83. *Preliminary Examination in General Education*, October 14th, 16th, and 17th, 1882; April 10th, 11th, and 12th; July 6th, 7th, and 9th; and October 13th, 15th, and 16th, 1883. *First Professional Examinations*.—Tuesdays, October 24th, 1882; January 30th, April 3rd and 4th, July 10th and 24th, 1882. *Second Professional Examinations*.—These will take place immediately after the conclusion of the first professional examinations. In no case will they be begun on an earlier day than the Thursday of any period.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

REGULATIONS FOR THE DIPLOMA.

THE regulations respecting the Curriculum of Professional Study, and the Fees, are similar to those of the Royal College of Surgeons of Edinburgh.

Preliminary Examinations in General Literature will be held on October 20th, 1882, and March 30th, June 29th, September 7th, and

three months each, if

The three months' course must consist of not fewer than fifty lectures

received, as it is worth nothing till paid by the bank; from it is drawn

October 19th, 1883.* The Fee is Ten Shillings. Candidates will be furnished, on application to the Secretary, with a form of application, which they must fill up and transmit to him at least four days before the examination.

The First Professional Examinations take place on October 18th, 1882, and January 9th, April 6th, July 18th, and October 17th, 1883; the Second Professional Examinations on October 23rd, 1882, and January 15th, April 10th, July 23rd, and October 2nd, 1883. Applications for admission to the first examination must be made four days, and to the second examination a week, before the respective examinations.

Students are strongly recommended to avail themselves of opportunities of studying Ophthalmic and Mental Diseases, Natural History, Comparative Anatomy, and Practical Physiology, in addition to what is required in the Curriculum.

The examinations are conducted partly in writing and partly orally. Recent Dissections, Anatomical Specimens, the Microscope, Physiological Apparatus, Chemical Tests, Surgical and Obstetrical Instruments and Apparatus, Articles of the Materia Medica, Pathological Specimens, and Toxicological Tests and Specimens, may be employed. Candidates are also subjected, at the second examination, to a Practical Clinical Examination at the Hospital, and may be examined practically in Operative Surgery.

Candidates who have passed the examination in Anatomy, Physiology, and Chemistry, before any of the licensing bodies enumerated in Schedule (A) of the Medical Act, on complying with the Regulations in other respects, are admitted to the second professional examination, under the conditions described in the regulations for the double qualification of the Colleges of Physicians and Surgeons in Edinburgh. Graduates and Licentiates in Medicine of other bodies are exempt from examination in Medicine and Materia Medica.

The Fee for the diploma is £15 15s.; £6 6s. is paid at the first examination, of which £3 3s. is retained in case of rejection; and £9 9s. for the second examination, of which £4 4s. is retained if the candidate be rejected.

A candidate, on showing a sufficient reason, may be admitted to examination on a day specially arranged, on paying an extra fee of £5 5s.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

DOUBLE QUALIFICATION IN MEDICINE AND IN SURGERY.

THE Faculty of Physicians and Surgeons of Glasgow, and the Royal College of Physicians of Edinburgh, conjointly grant their Diplomas after one series of examinations before a Board of Examiners in which each body is represented. The regulations as to the curriculum of study, and the fees, are similar to those for the conjoined examinations of the Royal Colleges of Physicians and Surgeons of Edinburgh. The first examinations will be held on October 18th, 1882, and January 9th, April 6th, July 18th, and October 17th, 1883; the second examinations on October 26th, 1882, and January 18th, April 16th, July 26th, and October 26th, 1883.

UNIVERSITIES OF EDINBURGH, GLASGOW, ABERDEEN, AND ST. ANDREW'S.

REGULATIONS RESPECTING DEGREES IN MEDICINE.

[THE Regulations of these Universities are nearly similar. We therefore give but one statement, noticing points of difference when necessary.]

* The examinations will embrace the following subjects:—1. English Language, including Writing to Dictation, Grammar, Analysis of Sentences and Derivations and Meaning of Common Words, and Composition? History of England, (for 1882, 1603 to 1688; for 1883, 1688 to 1820); Geography of the British Isles. 2. Latin: Translation in 1882, from Cæsar, *De Bello Gallico*, Book IV; and Virgil, *Æneid*, Book VI; in 1883, Cicero, *De Senectute*, and Virgil, *Georgics*, Book I. Translation from an author not presented; Questions in Grammar; an Exercise in rendering English correctly into Latin, the Latin words being in part supplied. 3. Arithmetic, to Vulgar and Decimal Fractions inclusive; 4. Algebra, including Simple Equations. 5. Geometry: First two Books of Euclid (questions will be given on the third Book of Euclid, but the answering of them will be optional). 6. Elementary Mechanics of Solids and Fluids (this subject may be passed either as preliminary, or before or at the first professional examination). 7. One of the following subjects at the option of the candidate. a. Greek: in 1882, Xenophon's *Anabasis*, Book III; in 1883, Xenophon's *Memorabilia*, Book I; St. Mark's Gospel. b. French: in 1882, Molière, *Le Misanthrope*; in 1883, Molière, *Les Femmes Savantes*. c. German: in 1882, Schiller's *Wilhelm Tell*; in 1883, Schiller, *Geschichte des dreissigjährigen Kriegs*, Erster Theil, Buch I, II. In the English, Latin, Greek, French, and German papers, special stress will be laid on accurate grammatical knowledge. Translations of English into Greek, French, and German, will be required from candidates examined in these languages.

Three Medical Degrees are conferred by each University: viz., Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.). The Degree of C.M. is conferred only on those who at the same time obtain the Degree of Bachelor of Medicine.

Preliminary Education.—The preliminary branches of extraprofessional education are English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics; and candidates must also pass an examination in at least two of the following subjects: Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philosophy.* The examinations on both classes of subjects take place before the commencement of medical study.†

* The Universities of Glasgow and St. Andrew's, include Natural History. In Edinburgh, Natural History is included in the first professional examination.

† As far as possible—Aberdeen.—At Glasgow, the examination in the second class must take place previously to the first professional examination.

‡ In Edinburgh, examinations on these subjects will be held on October 3rd, 4th, 5th, and 6th, 1882, and March 13th, 14th, 15th, and 16th, 1883. 1. English: Writing a passage from dictation; Composition, with correction of sentences of bad English; Grammar, with analysis of sentences and derivation and definition of some common English words; History and Geography. 2. Latin: For October 1882 and March 1883, Livy, Book V; for October 1883 and March 1884, Livy, Book XXI; an easy passage from a Latin prose author, and a single passage of English (translated from a Latin author) to be re-translated into Latin, the more difficult Latin words being given. 3. Arithmetic: The Common Rules, including Vulgar and Decimal Fractions. 4. Elements of Mathematics: Euclid, Books I, II, and III; or Wilson's *Elementary Geometry*, Books I, II, and III; and the Elementary Rules of Algebra, including Simple Equations. A knowledge of Geometry alone or of Algebra alone will not be sufficient. 5. Elements of Dynamics (Mechanics): Elementary Kinematics, Statics, Kinetics, and Hydrostatics; Text-books: Blaikie's *Elements of Dynamics*. At least two of the following subjects. 1. Greek: For October 1882 and March 1883, Xenophon, *Anabasis*, Book IV. For October 1883 and March 1884, Plato, *Apologia Socratis*. 2. French: For October 1882 and March 1883, Voltaire, *Siècle de Louis XIV.* Chaps. XVIII and XXIII. For October 1883 and March 1884, Souvestre, *Un Philosophe sous les Toits*, i-ix. 3. German: For October 1882 and March 1883, Lessing, *Minna von Barnhelm*; for October 1883 and March 1884, Chamisso, *Peter Schlemihl's wunderbare Geschichte*. 4. Higher Mathematics: Geometry, Euclid, Books I to IV, Book VI, and the Propositions of XI, usually given in the modern editions, or Wilson's *Elementary Geometry*, Books I, II, III, and V, and Wilson's *Solid Geometry and Conic Sections*, Book IV, Sections 1 and 2; Algebra, Elementary Trigonometry and Conic Sections, Wilson's *Solid Geometry and Conic Sections*, Book V. 5. Natural Philosophy: Balfour Stewart's *Elementary Physics*. 6. Logic: Jevons's *Elementary Lessons in Logic*, or Fraser's *Selections from Berkeley*, 2nd edition, pp. 143–249. 7. Moral Philosophy: For October 1882 until March 1884, Butler's *Ethical Theory, Sermons* 1, 2, 3, and Calderwood's *Handbook*, pp. 143, 77–97, and 123–152. In Latin, Greek, French, and German, questions in Grammar will be set, and passages to be translated from English.

In Glasgow, examinations will take place on October 11th, 12th, 13th, and 14th, 1882; and on March 28th, 29th, 30th, and 31st, 1883. **First or Elementary Part:** The candidate must pass in all the subjects of this division before registration by the Branch Registrar of the General Council. 1. English: Writing correctly a passage to dictation; Composition of a short Essay on a given theme; Questions in Grammar, with analysis of sentences and the derivation and meaning of some common English words; English History from 1603 to 1688; Geography of the British Isles. 2. Latin, Virgil, *Æneid*, Book II; Sallust, *De Bello Jugurthino*, chap. 1 to L.—Translations of passages from authors not prescribed, and of English passages into Latin, the principal Latin words being supplied; Questions in Grammar and Construction. 3. Arithmetic: The Common Rules, including Vulgar and Decimal Fractions. 4. Elements of Mathematics: Euclid, Books I, II, and III; Algebra, as far as Simple Equations. 5. Elements of Dynamics (Mechanics): Elementary Kinematics, Statics, Kinetics, and Hydrostatics. Text-books: Bottomley's *Dynamics* (Collins's series); Blaikie's *Elements of Dynamics*. (For Registration, any subject in the second part may be substituted for Mechanics, in which case Mechanics must be passed before the first professional examination.) **Second Part:** The candidate must pass in at least two of the following subjects, to be selected by himself, before he can be admitted to the first professional examination. 1. Greek: Xenophon, *Memorabilia*, Book I, and the Gospel according to St. John; Translations of passages from Greek authors not prescribed, and of English passages into Greek—the principal Greek words supplied; Questions in Grammar. 2. French: Montesquieu, *Considérations sur les Causes de la Grandeur des Romains et de leur Décadence*—Translations and Exercises. 3. German: Schiller's *Maria Stuart*—Translations and Exercises. 4. Higher Mathematics: Euclid, Books I to VI; Algebra, including Quadratic Equations, and the Rudiments of Trigonometry. 5. Natural Philosophy: Such a knowledge of the principles as may be obtained from Bottomley's *Handbook* and Balfour Stewart's *Elementary Lessons in Physics*. 6. Logic: Jevons's *Elementary Lessons in Logic*. 7. Moral Philosophy: Dr. Fleming's *Manual*, Part I. A Certificate of having passed, at the examinations for the Degree of M.A. or B.Sc., in English, Latin, Mathematics, Natural Philosophy, Greek, Logic, or Moral Philosophy, will be accepted instead of examination in these subjects.

At Aberdeen, the Preliminary Examination in General Education will take place on October 24th and 25th.—**Part I.** The Examination on the following subjects takes place prior to the commencement of the Medical Curriculum. 1. English: Composition, Grammar, and Writing to Dictation. 2. Latin: Cæsar, *De Bello Gallico*, Book I; Virgil, *Æneid*, Book III; Grammatical Questions. 3. Arithmetic: The Common Rules, Vulgar and Decimal Fractions, and Proportion. 4. Elements of Mathematics: The First Three Books of Euclid; Algebra: As far as and inclusive of Simple Equations. 5. Elements of Mechanics: Hamblin Smith's *Elementary Statics*, and Hamblin Smith's *Elementary Hydrostatics*, Chap. 1.—**Part II. Additional Subjects**, on two of which, at the option of candidates, a further examination has to be undergone, before Admission to the First Professional Examination for the Degrees of M.B. and C.M. 1. Greek: Xenophon, *Anabasis*, Book II, with Grammatical Questions. 2. French: Voltaire, *Histoire de Pierre le Grand*. 3. German: Schiller, *Wilhelm Tell*. 4. Higher Mathematics: Euclid, Books I to VI inclusive; Plane Trigonometry; Solution of Triangles; Quadratic Equations; Binomial Theorem; Logarithms. 5. Natural Philosophy: (Balfour Stewart's *Elementary Physics* recommended). 6. Natural History: General Classification of the Animal Kingdom; Characters and

ST. ANDREW'S: 1. Chemistry, Botany, Elementary Anatomy, and *Materia Medica*; 2. Advanced Anatomy, Zoology with Comparative Anatomy, Physiology, and Surgery; 3. Practice of Medicine, Clinical Medicine, Clinical Surgery, Midwifery, General Pathology, and Medical Jurisprudence.

At both these Universities, the examination in the first division of subjects cannot be passed before the end of the second year (except that at Aberdeen the examination in Botany and Natural History may be passed at the examination term preceding the winter session); the examination in the second division cannot be passed before the end of the third year; and that in the third division not before the end of the fourth year. Candidates may be admitted to examination on the first two divisions at the end of the third year, or to the three examinations at the end of the fourth year.

A rejected candidate is not again admitted to examination at either of the Universities unless he shall have completed another year of medical study, or such portion of a year as may be prescribed by the examiners.

The professional examinations will be held at the following times: *Aberdeen*—April and July, directly after the close of the session. *Edinburgh*—First Examination, October 12th and 13th, 1882, and April 2nd and 3rd, 1883; Second Examination, April 6th and 7th, 1883; Clinical Examination, May 3rd, 1883; Final Examination, June 2nd and 3rd, 1883. *Glasgow*—First, Second, and Third Examinations, beginning on October 16th, 1882, and April 6th, 1883; Fourth Examination, Clinical, June 8th, 1883; Written, July 10th, 1883.

DEGREE OF DOCTOR OF MEDICINE.

The Degree of Doctor of Medicine may be conferred on any candidate who has obtained the Degree of Bachelor of Medicine, and is of the age of twenty-four years, and has been engaged, subsequently to having received the Degree of Bachelor of Medicine, for at least two years in attendance on a Hospital, or in the Military or Naval Medical Service, or in Medical and Surgical Practice. The candidate must be a Graduate in Arts, or must, before or at the time of obtaining his Degree of Bachelor of Medicine,* or thereafter, have passed a satisfactory examination in Greek, and in Logic or Moral Philosophy, and in one at least of the other optional subjects of the examination in general education (see pages 463 and 464). At Aberdeen, Edinburgh, and Glasgow, he must submit to the Medical Faculty a thesis composed by himself, and which shall be approved by the Faculty, on any branch of knowledge comprised in the professional examinations for the degree of Bachelor of Medicine, which he may have made a subject of study after having received that degree.†

Candidates who commenced their medical studies in Edinburgh before February 4th, 1861, in Aberdeen before the first Tuesday in November 1861, and in Glasgow before October 1st, 1861, are entitled to be examined for the Degree of Doctor of Medicine, under the regulations then in force in each University respectively. At Edinburgh, candidates settled for a period of years in foreign parts, who have complied with all the regulations for the Degree of M.D. (under the new statutes), but who cannot appear personally to receive the degree, may, on satisfying the Senatus to that effect, by production of sufficient official testimonials, have the degree conferred on them in absence.

The Degree of Doctor of Medicine may be conferred by the University of St. Andrew's on any Registered Medical Practitioner above the age of forty years, whose professional position and experiences are such as, in the estimation of the University, to entitle him to that Degree, and who shall, on examination, satisfy the Medical Examiner of the sufficiency of his professional knowledge, provided always that such degrees shall not be conferred on more than ten in any one year. The candidate must produce a certificate of age, and three certificates from medical men of acknowledged reputation as to his professional position and experience. The examination is conducted in writing and *visà voce* on *Materia Medica* and General Therapeutics, Medical Jurisprudence, Practice of Medicine and Pathology, Surgery, and Midwifery and Diseases of Women and Children.

The *Graduation Fees* in each of the Universities are—for the Degree of M.B., three examinations, each £5 5s. = £15 15s.; for the Degree

of C.M., £5 5s. additional; for the Degree of M.D., £5 5s. additional to that for M.B., together with Government stamp duty (£10).

The fee for graduating under the old Regulations in Edinburgh is £25. At St. Andrew's, the fee for the Degree of M.D. under the Section relative to Registered Medical Practitioners is 50 guineas; if the candidate fail to pass, £10 10s. (which is to be paid before the examination) is retained. Stamp duty is included in both cases.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

STATED Examinations for the Licences of the College in Medicine and Midwifery are held in the week following the first Friday in each month, except August and September.

LICENCE IN MEDICINE.

Every candidate for the licence of the College to practise Medicine must produce satisfactory evidence—1. Of character, from a Fellow of the College, or from two registered practitioners. 2. Of having passed an examination in general education, held by some one of the examining bodies recognised by the General Medical Council. 3. Of having been engaged during a period of four years in the study of Medicine. 4. Of having attended courses of lectures on the following subjects, at schools recognised by the College; Practical Anatomy, two courses; Physiology or Institutes of Medicine, Chemistry, Practical Chemistry, *Materia Medica*, Medical Jurisprudence, Practice of Medicine and Pathology, Surgery, and Midwifery—each one course. 5. Of having attended for twenty-seven months a recognised Medico-Chirurgical Hospital, in which clinical lectures and clinical instruction in Medicine are given; the attendance not to be for more than nine months in any one year, viz., six winter and three summer months; and of having, for not less than three months, studied Fever in a recognised Clinical Hospital, containing fever wards, and of having recorded, from daily personal observation, at least five cases of fever, to the satisfaction of the attending Clinical Physician. [This by-law will not be compulsory in the case of candidates who commenced their hospital attendance before October 1879. Candidates who commenced their hospital studies between September 1876, and October 1879, must furnish evidence either of having, during nine months of their hospital attendances, studied in a hospital containing fever wards, or of having conformed with the by-law referring to five fever cases.] 6. Of having attended Practical Midwifery and Diseases of Women for six months at a Lying-in Hospital or Maternity recognised by the College; or, where such hospital attendance cannot have been obtained during the course of study, of having been engaged in Practical Midwifery under the supervision of a registered practitioner holding public appointments; in either case, not less than twenty labour-cases must have been actually attended. 7. Of having lodged the admission fee in the Royal Bank of Ireland to the credit of the College. Every candidate who commenced the study of Medicine on or after October 1st, 1879, must furnish evidence of having been engaged in the practical study of Vaccination.

Examinations.—The professional examination is divided into two parts: 1. Anatomy, Physiology, Chemistry, and *Materia Medica*; 2. Practice of Medicine, Clinical Medicine, Pathology, Medical Jurisprudence, Midwifery, Hygiene, and Therapeutics. Candidates may be examined in the subjects of the first part at the termination of the second year of study, on producing the certificates in these subjects, or in all the subjects of their education, on the completion of their medical studies. No candidate can be examined in all the subjects of the first and second parts in the same month. The examinations are conducted by printed papers, orally, and at the bedside.

Exempted Cases.—Candidates qualified as follows are required to undergo the second part only of the professional examination, viz.: 1. Graduates in Medicine of any University in the United Kingdom, or of any Foreign University approved by the College; 2. Fellows, Members or Licentiates of the Royal College of Physicians of London or Edinburgh; 3. Graduates or Licentiates in Surgery; 4. Candidates who, having completed the curriculum laid down above, shall have passed the previous professional examination or examinations of any of the licensing medical authorities in the United Kingdom. Candidates thus qualified, as specified in Sections 1, 2, and 3, must fill up a schedule and present their registration certificate (or their medical or surgical qualification), as well as certificates of character, of practical midwifery, and of attendance on a clinical hospital which receives cases of fever. Candidates whose case is met by Section 4 must produce, in addition to the certificates required from candidates for the licence, a certificate from the licensing medical authority to the effect that such previous professional examination has been successfully passed.

Any registered practitioner of five years' standing may be admitted to

* Or within three years thereafter.—*St. Andrew's*.

† No Thesis will be approved by the Medical Faculty which does not contain either the results of original observations in Practical Medicine, Surgery, Midwifery, or some of the sciences embraced in the curriculum for the Bachelor's Degree; or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise reference to the publications quoted, so that due verification may be facilitated.—*Edinburgh*. There is a similar regulation in the University of Glasgow.

examination for the licence of the College, on producing his certificate of registration, with satisfactory reference, and is exempted from the examination by printed questions.

Unsuccessful candidates may be admitted to re-examination after not less than two months.

LICENCE IN MIDWIFERY.

Candidates for the licence in midwifery, who are not licentiates in medicine, may be admitted to examination on the following qualifications: 1. The degree or licence in medicine or surgery from any University or College of Physicians or Surgeons in the United Kingdom; 2. Testimonials as to character; 3. Certificates of having attended (a) a course of lectures on midwifery in a school recognised by the College; (b) practical midwifery and diseases of women, as in Section 6th of the regulations for the Licence in Medicine.

Candidates who are licentiates in medicine of the College, or who have passed the examination for such licence, may be admitted to examination for the licence in midwifery on lodging their fees and signifying their wish to the registrar a week at least before such examination.

Registered practitioners of five years' standing are admitted to examination for the licence in midwifery on producing their certificate of registration with satisfactory reference, and are exempted from the examination by printed questions.

Fees.—The fees are—For the licence to practise medicine, £15 15s., which may be divided as follows: viz., examination at the termination of the first period of study, £5 5s.; final examination, £10 10s. Examination for the licence to practise midwifery, £3 3s. Examination for the licences in medicine and midwifery, if obtained within a month, to be lodged in one sum, £16 16s. Special examination for the licence to practise medicine, £21; for the licence to practise midwifery, £5 5s. The admission fee, less the sum paid to the examiners, is returned to any candidate rejected at any of the College examinations.

MEMBERSHIP.

Every candidate for the Membership of the College (not admitted before December 12th, 1878), is required to produce satisfactory evidence—1. Of having attained the age of twenty-five years. 2. Of being a Licentiate of this College for three years at least, computed from the day on which he shall have subscribed his name on admission as a Licentiate; or a Licentiate of one year's standing, who shall be a Graduate of Arts of an University in the United Kingdom at the time of his obtaining the licence; or a Licentiate of one year's standing, who shall be a registered practitioner of seven years' standing at the time of his obtaining the licence. 3. Of having attended courses of practical instruction in Ophthalmology and Histology. 4. Of having held during at least six months the office of resident physician or resident medical pupil, or of having acted during the same period as medical clinical clerk, in a recognised hospital; or of having been in medical charge for at least twelve months of a public institution for the treatment of the sick. 5. He must also produce a testimonial of moral character and professional conduct from a Fellow or Member of the College, or from a Fellow of one of the Colleges of Physicians of London or Edinburgh. 6. He must not be engaged in trade, nor must he compound or dispense medicines except in cases of extreme urgency; nor must he practise medicine or surgery in partnership.

The examinations are held quarterly. Every candidate must pass an examination in Pathology; Medical Anatomy; Histology; Medical Chemistry; Principles of Public Health, including Climatology and Meteorology; Psychology; Forensic Medicine; and Clinical Medicine. The fee for the examination is £21. The examinations are held in January, April, July, and October.

Candidates who were admitted Licentiates of the College before December 12th, 1878, may be admitted Members of the College, under the following conditions. They shall comply with Clauses 1, 2, 5, and 6, as above stated. 2. They shall satisfy the College that they have attended the necessary practical instruction in the College. Should the College be satisfied that they have complied with the above conditions, they may be admitted Members without fee or examination, on taking the declaration required of Members. Should the candidate wish to obtain the parchment diploma of Membership, he shall pay

ROYAL COLLEGE OF SURGEONS IN IRELAND.

LETTERS TESTIMONIAL (LICENCE).

THE following regulations are applicable to students who commence their study after May 1st, 1882.

Every candidate for the Letters Testimonial of the College must produce evidence—*a.* Of having, before entering on medical studies, passed the Preliminary Examination of the College, or an equivalent examination in general education, recognised by the General Medical Council; and *b.* Of having been registered by that Council as a student in medicine.

The College recognises as the commencement of professional study:—1. Attendance on the practise of a hospital, or other public institution recognised by the College for that purpose; or, 2. Instruction as pupil of a legally qualified surgeon, holding the appointment of surgeon to a hospital, general dispensary, or union workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council; or, 3. Attendance on lectures on Anatomy, Physiology, or Chemistry, by lectures recognised by this College.

The Letters Testimonial of the College will not be granted to any candidate at an earlier period than forty-five months subsequent to his registration as a medical student; nor to any one who has not attained the age of twenty-one years.

Registered Pupils of the College.—Any student desiring to be registered as a pupil in the College books shall, if the Council think fit, be so registered on payment of a registration fee of £5 5s., for which credit will be given subsequently in his examination fee. No student can be admitted as a candidate to any examination for the Letters Testimonial, until he shall have been enrolled as a registered pupil, and passed the Preliminary Examination. Registered pupils of the College are admitted to the Preliminary Examination, but are not entitled to re-examination without further fee. They are permitted to study each week-day in the Museum, and to read in the Library; also to attend the lectures on Comparative Anatomy, and to obtain a certificate for such attendance, without payment of any fee.

Examinations.—Every candidate must pass a Preliminary Examination and four Professional Examinations. Candidates who possess a Diploma or Degree in either Medicine or Surgery recognised by this College, or who have passed an examination in these subjects, considered by the Council to be equivalent to examinations required by these regulations, may be exempted from the necessity of compliance with this rule, on such terms as the Council may deem expedient. Candidates must return their names to the Registrar of the College, and lodge their fees and certificates, at least one week before the day specified for examinations. Each candidate shall have a number assigned to him, by which alone he shall be recognised during the examination.

The Preliminary Examinations are held on the third Wednesdays in January, April, July, and October in each year.

Professional Examinations.—The First, Second, and Third Professional Examinations shall be held in July and October of each year. Should the student fail to pass in July, he may present himself at the examination held in October. The examination of each year must be passed before a new session can be entered on, but, in special cases, it shall be in the discretion of the Council of the College to permit the student to commence a new year of study, and subsequently present himself for a re-examination.

First Professional Examination.—Candidates must, before admission to the First Professional Examination, produce evidence of having passed the Preliminary Examination, and of having been registered as medical students, and of having been engaged in study for at least nine months subsequent to registration. Candidates are recommended to attend a course of lectures on Practical Anatomy, and one on Chemistry, before the First Professional Examination. The examination will include:—

1. English: Written in his own hand, with his name subscribed and duly attested.
2. French: Fénélon's 7
3. German: Schell
4. Italian: Tell

1. Physics (if not passed at the Preliminary Examination); 2. The Elements of Chemistry; 3. Botany; 4. Anatomy (Human Osteology); 5. Practical Pharmacy (Elementary). The candidates shall be examined in numerical order, one day by printed questions, and the next day orally.

Second Professional Examination.—Candidates must, before admission to the Second Professional Examination, produce evidence of having passed the First Professional Examination; also certificates of having subsequently attended: Medico-Chirurgical Hospital, nine months; winter courses of Practical Anatomy, with Demonstrations and Dissections; Physiology; Surgery; Chemistry (unless attended in the first year); and summer courses (three months) of Practical Chemistry; Practical Physiology; and Materia Medica. Candidates shall be examined in: 1. Anatomy (Bones, Joints, Muscles, and Topographical Anatomy of the Viscera of the Chest, Abdomen, and Pelvis); 2. Histology; and the Physiology of the Circulatory, Respiratory, and Digestive Systems; 3. Surgery (the Signs, Terminations, and Treatment of Inflammation; Wounds; Hæmorrhage; Burns and Scalds; Ulcers; Bandaging); 4. Chemistry; 5. Materia Medica. The candidates shall be examined in numerical order; the first day orally, and the second on dissections and histology. Each candidate will be required to dissect a region allotted to him; half an hour, at least, being allowed for this purpose. He will be examined on the anatomy of that part, and may also be examined on regions dissected by other candidates.

Third Professional Examination.—Candidates must produce evidence of having passed the Second Examination; also certificates of having subsequently attended a Medico-Chirurgical Hospital; nine months as an extern pupil, or six months as a resident pupil; winter courses of Demonstrations and Dissections; Practical Anatomy (unless attended in the first year); Surgery; and Medicine; and a three months' summer course of Medical Jurisprudence. Candidates will be examined in: 1. Anatomy; 2. Physiology; 3. Surgery (not including Operative, Clinical, and Ophthalmic Surgery). Candidates will be examined in numerical order; the first day by printed questions, the second day orally. On the third day, each candidate will be required to make a dissection of a region allotted to him. He shall be examined on the anatomy of that part, and may also be examined on regions dissected by other candidates.

The Fourth Professional Examination will be held in July and October, and in the following April. Candidates must produce evidence of having passed the Third Professional Examination; also certificates of having subsequently attended a Medico-Chirurgical Hospital, nine months as extern pupil (or six months as resident pupil, unless a certificate to that effect has been accepted in the third year); winter courses of Dissections and Demonstrations, and of Midwifery; of having attended a Midwifery Hospital, or Maternity, for six months, and of having been present at thirty labours; of Clinical Ophthalmology, three months; of Operative Surgery (between April 1st and October 1st); and of Practical Instruction in Vaccination. Candidates will be examined in: 1. Surgery—Clinical, Ophthalmic, and Operative, with Surgical Anatomy; 2. Medicine; 3. Midwifery and Diseases of Women; 4. Medical Jurisprudence. The candidates will be examined in numerical order, and the examination will occupy four days. On the first day it will be by written questions, and on the second oral. On the third day, the examination will be clinical. The candidates must attend at the College on the morning of the examination, and draw from a ballot-box the name of the hospitals in which they are to be examined; but no candidate shall be examined in a hospital at which he was in attendance during the session preceding his admission to examination. Each candidate will be required to make a diagnosis in, at least, two surgical cases, examining the patients in the presence of the Examiners. He will be questioned upon these cases, and upon others, if necessary. He must also take notes of another case, to test his accuracy in case taking. He will be required to bandage, adjust some surgical appliance, or perform some clinical surgical duty. On the fourth day, there will be an examination in Operative Surgery. Each candidate will perform a major and a minor operation, the names of which he will draw by ballot. He will be questioned upon these, and on surgical instruments and appliances, and on the relative anatomy of the parts implicated in the operations performed by himself or other candidates.

Rejected Candidates.—No candidate shall present himself for examination on the second or following days who has not satisfied his examiners upon the previous days; but all candidates who have passed any of these days' examinations shall get credit for the same. Rejected candidates, when presenting themselves upon a subsequent occasion, will not again be examined in the subjects in which they have passed.

Fees.—For the Preliminary Examination, registered pupils of the College pay no fees; non-registered pupils pay £1 1s. All registered candidates pay a further fee of £1 1s. for re-examination. For each

of the Professional Examinations, the fee is £5 5s., no part of which will be returned on rejection. Registered candidates will be admitted to re-examination on paying an additional sum of £2 2s.

FELLOWSHIP.

A candidate is admitted to examination for the Fellowship if he have laid before the Council—(a) a receipt showing that he has lodged in the Bank of Ireland the fees as hereafter stated; also (b) a certificate that he is twenty-five years of age; (c) a certificate of general good conduct during his professional education, to be signed by two or more Fellows of the College; (d) certificates of attendance on the courses of lectures required for Letters Testimonial, together with one course of lectures on Comparative Anatomy, and one course of lectures on Natural Philosophy; also (e) a Thesis on some medical subject, or Clinical Reports, with observations, of six or more Medical or Surgical cases, taken by himself. He must also produce certificates that he has been engaged in the acquisition of professional knowledge for not less than six years, during three of which he must have studied in one or more of the Schools and Hospitals recognised by the Council. He may have studied for the other three years in any School or Schools of the United Kingdom which shall be approved by the Council, or in any foreign School of repute. The candidate must also have been House-Surgeon or Dresser in a recognised hospital.

Licentiate of the College, who may not be able to show that they have followed the course of study specified in the preceding regulations, may, at the expiration of ten years from the date of their diploma, be admitted to the examination required for the Fellowship, provided they produce such evidence as shall be satisfactory to the Council that they have conducted themselves honourably in the practice of their profession.

Examinations for the Fellowship shall be held from time to time as the Council may direct. Candidates are arranged in five grades.

Grade I.—Candidates possessing no qualification are examined on at least three days; the first two of which are devoted to the examination for the Letters Testimonial of the College; the third to additional subjects required for the Fellowship. Candidates who do not pass the first two days' examination shall not be allowed to proceed to the third, but those who do pass shall be entitled to receive the Letters Testimonial of the College, although they may not have passed the third day's examination. No credit will be given, on a subsequent occasion, for passing a part only of either examination. The examination on the first day is written and oral in Anatomy, Physiology, and Histology, and Chemistry and Materia Medica, with Dissections; second day, clinical, in Surgery and Ophthalmic Surgery; written in Surgery, Medicine, Medical Jurisprudence, and Prescriptions; oral in Surgery and Medicine; and operations; third day, clinical in Surgery, written in Pathology and Comparative Anatomy, and oral in Surgery and Pathology, Comparative Anatomy, Histology and Physiology, and Therapeutics. The fees are: registration, £5 5s.; special licence examination, £5 5s.; letters testimonial, £21; additional for fellowship, urban, £31 10s.; rural, £21. The fees for registration and special licence examination are retained in case of rejection.

Grade II.—Licentiate of the College of less than ten years' standing are examined in one day orally in Anatomy, Comparative Anatomy, and Histology and Pathology, with Dissections; on the second day, clinically, and by written and oral examination, in Surgery, and orally in Pathology and Practice of Medicine and Therapeutics; they also perform operations on the dead subject. The fee is: for urban practitioners, £31 10s.; rural, £21; £10 10s. being retained in case of rejection.

Grade III.—Candidates of less than ten years' standing, possessing qualifications in surgery of other bodies, which the Council shall consider satisfactory, are, if admitted to examination, examined according to Grade II. The fees are the same.

Grade IV.—Licentiate of the College of more than ten years' standing are examined on the first day, orally, in Surgical Anatomy; and perform Operations on the dead subject. On the second day they are examined clinically in Surgery and Medicine, and a Written Examination in Surgery, and are examined orally in Theory and Practice of Surgery, and in Morbid Anatomy. The fees are as in Grade II.

Grade V.—Candidates of more than ten years' standing, possessing qualifications in surgery of other bodies are, if admitted to examination, examined according to Grade IV.

Candidates may present themselves for examination in any grade junior to that under which they are classed, but shall pay the fees of the senior grade.

Lectures in each course.

Medical Jurisprudence; Institutes of Medicine (Pathology and Hygiene). The fee for the *Licent ad Examinandum* is £5; for the Degree of M.B., £11.

Members of the Royal College of Physicians or Surgeons of Dublin, London, or Edinburgh, who are Graduates in Arts of Oxford, Cambridge, or Dublin, are admissible to the Examination for M.B. They must first take the B.A. Degree *ad eundem*.

DOCTOR IN MEDICINE.

A Doctor in Medicine must be a Bachelor in Medicine of three years' standing, or have been qualified to take the Degree of Bachelor in Medicine for three years. He must also read a Thesis publicly before the Regius Professor of Physic, or must undergo an examination before the Regius Professor of Physic. The total amount of fees for this degree is £13.

BACHELOR IN SURGERY.

A Bachelor in Surgery must be a Bachelor in Arts, and have spent four years in the study of Surgery and Anatomy. He must have passed the M.B. examination before presenting himself at the B.Ch. examination, having previously completed the prescribed curriculum of study. The Curriculum of study comprises the following, in addition to the complete Course for the Degree of Bachelor in Medicine: Operative Surgery and Ophthalmic Surgery, each one course; Dissections, two courses. Candidates are required to perform surgical operations on the dead subject, and are examined in Bandaging and Minor Surgery, and in Surgical Pathology. Fee for the *Licent ad Examinandum*, £5; for the Degree of Bachelor in Surgery, £5.

MASTER IN SURGERY.

A Master in Surgery must be a Bachelor in Surgery of three years' standing, or have been qualified to take the Degree of Bachelor in Surgery for three years; and must read a Thesis publicly before the Regius Professor of Surgery, or undergo an examination before the Regius Professor. Fee for the Degree of Master in Surgery, £11.

MASTER IN OBSTETRIC SCIENCE.

A Master in Obstetric Science must have passed the M.B. and B.Ch. Examinations, and produce certificates of having attended; 1. One winter course in Midwifery; 2. Six months' practice in a recognised Lying-in Hospital or Maternity; 3. A summer course of Obstetric Medicine and Surgery; 4. Two months' practice in the Cowpock Institution. Existing Graduates in Medicine, of the standing of M.D., may present themselves for examination without producing certificates of attending 3. and 4. Fee for the Degree of Master in Obstetric Science, £5.

UNIVERSITY LICENCES.

Candidates for the Licences in Medicine, Surgery, or Obstetric Science, must be matriculated in Medicine, and must have completed two years in Arts and four years in Medical Studies.

Licentiate in Medicine.—The Medical course and examination necessary for the Licence in Medicine are the same as for the Degree of M.B. A Licentiate in Medicine, on completing his Course in Arts, and proceeding to the Degree of B.A., may become a Bachelor in Medicine, on paying the degree fees, without further examination in Medicine.

Licentiate in Surgery.—The surgical course and examination are the same as for the Degree of Bachelor in Surgery.

Licentiate in Obstetric Science.—The course of study and examination are the same as for the Degree in Obstetric Science.

Fee for the *Licent ad Examinandum* in Medicine or Surgery, £5; for the Licence in each of the three cases, £5.

ROYAL UNIVERSITY OF IRELAND.

DEGREE OF BACHELOR OF MEDICINE.

CANDIDATES must, in addition to attending the lectures and complying with the other conditions prescribed, pass the following examinations: The Matriculation Examination; the First University Examination; the First Examination in Medicine; the Second Examination in Medicine; the Degree Examination.

A medical student from one of the Queen's Colleges, the Queen's University, or any other institution approved by the Senate, matriculated therein before the 1st of October 1881, who has completed at least one year of the medical curriculum in any of the said institutions, shall be exempted from passing the First Examination in Arts.

The course of medical studies extends over at least four years, and is divided into periods of at least two years each.

The first period comprises attendance on the following courses: Chemistry, one course of at least six months; Practical Chemistry, at least three months; Botany (with Herbarisation) and Zoology; Anatomy and Physiology; Practical Anatomy; Materia Medica.

The second period comprises attendance on the following courses: Anatomy and Physiology (including Histology); Practical Anatomy; Theory and Practice of Surgery; Midwifery and Diseases of Women, a Six months' course; Theory and Practice of Medicine; Medical Jurisprudence.

Candidates must also attend, in the first period, during a winter session of six months, the Practice and Clinical Lectures at a Medico-Chirurgical Hospital (recognised by the Senate), containing at least sixty beds; and, during the second period, six months at a recognised Midwifery Hospital or at a Midwifery Dispensary, at either of which Clinical Instruction in Midwifery and Diseases of Women and Children is given; the certificate in each case stating that the candidate has attended at least twenty labours; also, the Practice of a recognised Medico-Chirurgical Hospital during eighteen months, including either three winter sessions of six months each, or two winter sessions of six months each and two summer sessions of three months each.

Candidates will be also required, before presenting themselves for the Degree Examination, to produce certificates: 1. Of personal attendance on fever cases; 2. Of having compounded medicine under an apothecary or pharmaceutical chemist for at least three months; 3. Of having received practical instruction in Vaccination; 4. Of having attended a course of lectures (not less than twenty-five), and clinical instruction on Mental diseases.

The Senate further recommend that students should avail themselves of opportunities of attendance on lectures on Diseases of the Eye, Ear, and other special departments.

First Examination in Medicine.—Students are admitted to this examination after one academical year from their matriculation. They may pass this examination at the same time as the First University Examination. Candidates must give notice, in writing, to the Secretaries, of their intention to present themselves, and must pay the prescribed fee of £1, at least one month previous to the examination, and must, at the same time, produce satisfactory evidence of having completed the prescribed courses of study.

The subjects of this examination shall be: Zoology,* Botany,† and a Modern Language. Candidates who have passed in a Modern Language at the ordinary First University Examination are exempt from presenting this subject.

Second Examination in Medicine.—Students will be admitted to this examination after one academical year from the time of passing the First Examination in Medicine, provided they have completed the first period of the course of medical studies.

The subjects for this examination will be: Anatomy; Physiology; Materia Medica, and Chemistry.

Examination for the Degree of M.B.—Students will be admitted to this examination after one academical year from the time of passing the Second Examination in Medicine, provided they have completed the second period of the course of medical studies.

The subjects for this examination will be: Anatomy and Physiology; Surgery; Midwifery and Diseases of Women and Children; Theory and Practice of Medicine; and Medical Jurisprudence.

DEGREE OF DOCTOR OF MEDICINE.

Candidates may be admitted to this Degree after two academical years from the time of obtaining the Degree of M.B. All persons who were students in Medicine in the Queen's University at the date of its dissolution are entitled to obtain the Degree of M.D., upon passing the examination for the M.B. Degree.

Candidates must, when they give notice of their intention to present themselves, produce a certificate of having been, for at least two years, engaged in Hospital or Private Medical or Surgical Practice, or in the Military or Naval Medical Service.

Every candidate will be examined at the bedside, and required to diagnose at least six cases, medical and surgical, and prescribe treat-

* The examination in Zoology will consist of questions on the Anatomy and Classification either of the Vertebrate or Invertebrate Animals—the selection to be made by the candidates at the time of examination. They are recommended to read Huxley's Manuals of the *Anatomy of Vertebrate and Invertebrate Animals*.

† The examination in Botany will comprise the general principles of the Structure and Classification of Plants. Candidates may use as text-books Oliver's *Lessons in Elementary Botany*, and Thome's *Structural and Physiological Botany*. They will be expected to possess a practical acquaintance with the following natural orders, viz: Rannunculaceæ, Cruciferae, Leguminosæ, Rosaceæ, Umbelliferae, Compositæ, Scrophularinæ, Solanaceæ, Boraginæ, Labiata, Euphorbiaceæ, Cupuliferæ, Coniferae, Aroidæ, Orchideæ, Liliaceæ, and Graminæ, in addition to what they may learn from Oliver's *Lessons* as to the structure of these and other orders described in Part II of that work. Candidates must be able to distinguish the orders named from the principal allied orders.

ment; to write detailed reports on at least two cases to be selected by the examiners, and to discuss all the questions arising thereon. Every candidate must submit to the Medical Examiners a Thesis certified by him (or her) to have been composed by himself (or herself). No Thesis shall be approved which does not contain some original or personal observations in Practical Medicine, Surgery, Midwifery, or in some of the Sciences embraced in the curriculum; or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise references to the publications quoted.

Candidates who have been settled for two years in the Colonies or Foreign Countries, may, upon furnishing papers on medical subjects written by them, or official reports dealing with subjects of Medical Science, with evidence of the papers or reports being their own original composition, have the Degree conferred on them in absence.

For three years, the Senate may, in the case of medical students who, previously to their Matriculation in the University, have received a Medical and Arts Education in Institutions approved by the Senate, give such students credit for the Education in Arts, if they shall be found proficient in the subjects of the Medical Course of the University. The Senate may also allow candidates who have gone through a complete course in Arts and Medicine in a recognised Institution, to present themselves for the Examination for the Degree of M.B.

DEGREE OF MASTER IN SURGERY (M.Ch.)

This Degree will be conferred only on Graduates in Medicine of the University.

The examination for this Degree comprises the Theory and Practice of Surgery, including Operative and Clinical Surgery.

DIPLOMA IN OBSTETRICS.

This Diploma is conferred only on Graduates in Medicine of the University.

The examination comprises the Theory and Practice of Midwifery, and the use of Obstetrical Instruments and Appliances.

Candidates must give notice in writing to the Secretaries, at least one month before each examination, of their intention to present themselves. They must at the same time produce evidence of having completed the required courses of study, and pay the prescribed fees, viz.:

First Examination in Medicine and Second Examination in Medicine, each £1.

Examination for the Degree of M.B., £3.

Examination for the Degrees of M.D. and M.Ch., each £5.

Examination for the Diploma in Obstetrics, £2.

Exhibitions.—The following Exhibitions are awarded: At the First Examination in Medicine, two First Class at £30, and two Second Class at £15; at the Second Examination in Medicine, two First Class at £40, and three Second Class at £20; at the M.B. Degree Examination, two First Class at £50, and three Second Class at £25. An Exhibition will not be awarded to any candidate at the First Examination in Medicine, if a longer interval than three academical years shall have elapsed from the time of Matriculation; nor at the Second Examination in Medicine if a longer interval than two academical years shall have elapsed from the time of passing the First Examination in Medicine; or at the M.B. Degree Examination if a longer interval than three academical years shall have elapsed from the time of passing the First Examination in Medicine.

Prizes.—A sum of £95 may be placed annually at the disposal of the Examiners in Medicine, to be awarded in Prizes for superior answering in special subjects at their discretion.

NOTES CONCERNING THE HOSPITALS AND MEDICAL SCHOOLS IN LONDON.

In addition to the Tables of the Classes, hours of attendance, and fees, given at pages 472-75, we subjoin the points of most interest in the Programmes issued by the several Medical Schools. At each hospital, clinical instruction in Medicine, Surgery, and Midwifery, is given in the wards and in the out-patient department; and also in various special departments, as stated in the tables at pages 472-73 and in the subjoined notes. All hospital appointments, except where otherwise specified, are made without extra fee.

ST. BARTHOLOMEW'S HOSPITAL.—The Hospital contains 710 beds; viz., 227 for medical cases, 252 for surgical cases, and 31 for cases of the eye, ear, nose, and throat, and for syphilis cases; which are at the Conventual Hospital at the Hospital. Out-patients are admitted into both the medical and surgical wards.

Museums, etc.—The Anatomical Museum, and the Museums of Materia Medica and of Botany, are open to students daily from 10 A.M. to 4 P.M. The Library is open every day from 9 to 5, except one week of the Christmas vacation and one month in the long vacation.

College.—Students attending the hospital or medical school are admitted to residence on the recommendation of a medical officer of the hospital; and such recommendation may be obtained by commencing students on adducing satisfactory evidence of good moral character. The entrance fee is £2 2s.; and a deposit of £3 3s. is required, which will be returned to the student on leaving the College, subject to deduction of whole or part for wilful damage of furniture. Resident students are expected to dine in the hall every day.

Special Departments, etc.—Surgical consultations are held on Thursdays at 1.30. Medical casualty patients are attended by the Junior Assistant Physician, the Casualty Physicians (Dr. Kidd, Dr. Nall, and Dr. Tooth), and the House-Physician; the surgical casualty patients, by the Junior Assistant-Surgeons and the House-Surgeons and Dressers. In addition to the courses mentioned at page 472-73, Dr. Matthews Duncan teaches Practical Gynaecology in the Wards for Diseases of Women, on Tuesdays, Thursdays, and Saturdays, at 2 P.M. The Demonstrator of Morbid Anatomy gives a detailed demonstration at 11 on Fridays, winter and summer. The Ophthalmic Wards are visited at 1.30 on Tuesdays and Thursdays by Mr. Power, and at 2 on Mondays, Thursdays, and Saturdays, by Mr. Vernon; the ophthalmic out-patients are seen at 2 o'clock on Tuesdays and Thursdays by Mr. Power, and at 2.30 on Tuesdays and Saturdays by Mr. Vernon. Mr. Vernon gives Ophthalmic Demonstrations at 2 P.M. on Wednesdays in the winter session. Mr. Walsham sees orthopaedic cases at 2.30 on Mondays, and Mr. Butlin patients with diseases of the larynx at 2.30 on Fridays. Demonstrations of Operative Surgery are given by Mr. Butlin and Mr. Walsham throughout the year.

Appointments.—Four House-Physicians and ten House-Surgeons (who must be qualified to practise), and a Senior and a Junior Assistant Chloroformist, are appointed annually. A Resident Midwifery Assistant and an Ophthalmic House-Surgeon are appointed every six months. Each of these officers receives a salary of £25 a year, except the Senior Assistant Chloroformist, who receives £50. All, except the five Junior House-Surgeons, are provided with rooms. The Clinical Clerks to the medical in-patients, and the Clerks to the Physician-Accoucheur, are chosen from the most diligent students. Dressers to the surgical in-patients and the surgical casualty department are selected to the number of forty in each year from the students (of the first year) who pass the best examination in the subjects of the first year. Other in-patient dresserships may be obtained by payment of the usual fees (see p. 474). There are also clerks and dressers to the Assistant-Physicians and Assistant-Surgeons in the general and special departments.

Exhibitions, Scholarships, and Prizes.—Two Open Scholarships in Science, value of each £130, tenable for one year, to be competed for on September 27th. For one of the scholarships, candidates must be under twenty; for the other, under twenty-five years of age. The subjects are Physics, Chemistry (theoretical and practical), Botany, Zoology, and Physiology. No candidate may take more than four subjects. The successful candidates must enter at St. Bartholomew's Hospital in the October succeeding the examination. Jeaffreson Exhibition: £50; examination on September 27th; subjects, Latin, Mathematics, and any two of the following languages—Greek, French, German. Candidates for the Open Scholarships and the Jeaffreson Exhibition must not have entered to the hospital practice of any metropolitan medical school. Preliminary Scientific Exhibition, £50, for one year, on October 20th, for students of less than six months' standing; holder of Open Scholarship not eligible; subjects, Physics, Chemistry (theoretical and practical), Botany, and Zoology. Three Junior Scholarships, of the value of £50, £30, and £20, after the general examination in first year's subjects at the end of the winter and summer sessions. Treasurer's Prize for Practical Anatomy, junior. *Second Year:* Foster Prize for Practical Anatomy, senior. Harvey Prize for Practical Physiology. *Second or Third Year:* Senior Scholarship, value £50, in Anatomy, Physiology, and Chemistry. Wix Prize, value £50, in Anatomy and his Friends. Hichens Prize: subject, Bishop Butler's *Anatomy*. *Third or Fourth Year:* Lawrence Scholarship and Gold Medal, value £42; subjects, Medicine, Surgery, and Midwifery. Two Brackenbury Scholarships in Medicine and Surgery. Candidates for the Lawrence and Brackenbury Scholarships may not compete before the end of the third winter session, nor later than the beginning of the fifth winter session in the hospital. Bentley Prize, for the best report of not less than twelve medical or twelve surgical cases occurring in the hospital during the previous year. The Kirkes Gold Medal for Clinical Medi-

cine, open to students of not less than two or not more than four years' standing.

Examinations.—Students preparing for their examinations are arranged in classes, and examined by the lecturers, demonstrators, and tutors. All students of the first year are examined at the close of the first winter and first summer sessions. Classes are held to prepare candidates for the examinations of the University of London.

The Abernethian Society, composed of the teachers and students of the hospital, meets every Thursday at 8 P.M. during the winter. The Abernethian Reading Room is for the exclusive use of members of the Society.

Communications regarding the Hospital and Medical College must be addressed to Dr. Norman Moore, the Warden of the College, St. Bartholomew's Hospital.

CHARING CROSS HOSPITAL.—The hospital contains 180 beds, of which some are set apart for Diseases of Women and of Children.

The Library is open daily from 10 A.M. to 4 P.M., except on Saturdays, when it is closed at 1 P.M. **The Museum** is open from 10 to 4.

Special Courses.—Matriculated students are admitted to the practice of the Royal Westminster Ophthalmic Hospital (50 beds). Clinical instruction in the Diseases of Children is given at 1.30 P.M. on Wednesday and Saturday by Dr. Lubbock.—Dr. Lubbock will give a course of Practical Medicine on Mondays and Thursdays, at 3, during the winter.—Instruction in case-taking is given by the Registrars.—Mr. Woodhouse Braine and Mr. G. H. Bailey give instruction in the administration of Anæsthetics in the operating theatre every Thursday. Practical instruction in Operative and Minor Surgery is given by Mr. Bloxam; and in Surgical Pathology by Mr. Morgan.

Appointments.—A Medical and a Surgical Registrar, each with a salary of £40 a year, are appointed. Resident Medical, Surgical, and Obstetrical Officers, Assistant Medical and Surgical Officers, are appointed by competitive examination for six months. Clinical Clerks and Surgeons' Dressers and Pathological Assistants are appointed for four months. Each Student must hold an In-Patient Clerkship and an In-Patient Dressership, after the first professional examination, in order to obtain certificates of hospital attendance. Students may serve as assistant to the Dental Surgeon for three months.

Scholarships, Medals, and Prizes.—Two Entrance Scholarships, value £30 and £20, tenable for one year, awarded in October, after examination in English, Latin, French and German, and Mathematics, with either Chemistry, Mechanics, German, or French. Intending candidates must give notice before September 21st. The Llewellyn Scholarship of £25, open to all matriculated students who have just completed their second year; examination in Descriptive and Surgical Anatomy, Physiology, Materia Medica, Medicine, Surgery, Midwifery. The Golding Scholarship, £15 a year, open to all matriculated students who have just completed their first year; subjects of examination, Descriptive Anatomy, Physiology, Materia Medica, and Chemistry. The Pereira Prize of £5, to matriculated students who have completed the third year, for the best clinical reports of cases in the hospital (medical and surgical in alternate years). The Governors' Clinical Gold Medal; examination on subjects of clinical lectures during the session, and on medical and surgical cases in the hospital. Silver and Bronze Medals and Certificates of Honour in all the classes.

Examinations.—Classes are held to prepare students for the Preliminary Scientific Examination of the University of London, and the Primary Fellowship Examination of the Royal College of Surgeons.

Residence.—Arrangements have been made with several members of the hospital staff to receive resident pupils.

Information may be had of the Dean, Mr. Francis Hird; or the Sub-Dean, Dr. J. Mitchell Bruce.

ST. GEORGE'S HOSPITAL.—The Hospital contains 351 beds, of which 205 are devoted to surgical, and 146 to medical, cases. There are special wards for cases of diseases of the eye and diseases of women. Children are received into the women's wards.

The Library and Reading Room and the Museum are open daily.

Special Subjects.—Orthopædic out-patients are seen by Mr. Bennett every Wednesday at 2. Dr. Whipple sees patients with Diseases of the Throat on Thursdays at 1.30, and gives instruction in the use of the laryngoscope, etc. Dr. Ewart will give a course of demonstrations on Physiological Chemistry on Monday at 2, and on Wednesday and Friday at 10, during the winter session. Mr. Turner will give demonstrations in Osteology daily (except Wednesday and Friday at 10). A course of demonstrations in Histology will be given by Mr. F. Compton. A course of Practical Medicine (including note-taking, consultation, etc.) will be given by Dr. Whipham to students of the second

summer session. Mr. Dent gives a course of Practical Surgery (including minor surgery, bandaging, case-taking, etc.) for second years' students, and Mr. Turner a course of Operative Surgery for third years' students; both at 3 P.M. on Mondays, Wednesdays, and Fridays in the summer. Dr. Champneys holds a class of Practical Midwifery in the winter and summer sessions.

Hospital Appointments.—House-Physicians, House-Surgeons, an Assistant House-Physician, and an Assistant House-Surgeon, are appointed, half-yearly, from among the perpetual pupils.* The House-Physicians and House-Surgeons are appointed by the Weekly Board on the nomination of the Medical School Committee; they hold office for twelve months, and reside and board in the hospital free of expense. They must each deposit 50 guineas with the Treasurer, which will be returned on the expiration of their term of office, if they have satisfactorily performed their duties. An Obstetric Assistant is appointed annually; he must be a legally qualified practitioner. He resides and boards in the hospital, and receives a yearly salary of £100. A Curator of the Pathological Museum, a Medical and a Surgical Registrar, and a Demonstrator of Anatomy are appointed annually from among the senior pupils, each with a salary of £50. A Microscopical Pathologist and an Ophthalmic Registrar are appointed annually, each with a salary of £25. Two Assistant Medical Registrars are appointed every six months by competition. This office must be held before competing for that of Assistant House-Physician. An Assistant Surgical Registrar is also appointed; this office must be held, alternately with that of Ophthalmic Assistant, before competing for the office of Assistant House-Surgeon. A Senior Assistant Demonstrator is appointed at a salary of £20. The pupils of the hospital are placed under the superintendence of the physicians and surgeons in rotation, and have charge of cases as Clerks and Dressers.

Exhibitions and Prizes.—The William Brown Exhibitions: 1. £100 per annum for two years, open to perpetual pupils of the hospital under the age of 25, who have become entitled to be registered under the Medical Act within two years previously; examinations in July; subjects, Medicine, Midwifery, and Surgery, including Ophthalmic Surgery. 2. £40 per annum for three years, to perpetual pupils of the third and fourth winter sessions. Brackenbury Prizes in Medicine and in Surgery (value of each £32 5s. 11½d.), open to all pupils who have not completed the fourth year on April 30th; examinations in May. Sir Charles Clarke's Prize (value £6 5s. 9d.) for good conduct; awarded at end of summer session. The Thompson Silver Medal (value £4 11s. 6d.) and the Treasurer's Prize (value £10 10s.) at close of winter session, for proficiency in the clinical examination of three Medical and three Surgical cases (including one case of Obstetric Medicine and one of Ophthalmic Surgery). Sir Benjamin Brodie's Clinical Prize in Surgery (value £6) for the best report (with notes) of not more than twelve surgical cases in the hospital during the preceding twelve months. Dr. Acland's Clinical Prize in Medicine (value £5) for the best record of not more than twelve cases of disease in the hospital during the preceding twelve months. (The Clinical Prizes are open to fourth year's students. Reports must be sent in on or before May 1st.) The Henry Charles Johnson Memorial Prize (value £10 10s.) for Practical Anatomy. The Pollock Prize in Physiology (value £18 12s. 6d.). These two prizes are for second year's students. General Proficiency Prizes, £10 10s., for students of each year: first year, Anatomy, Practical Physiology, Botany, and Physiological Chemistry; second year: Anatomy, Physiology, Chemistry, and Materia Medica; third year, Medicine, Surgery, Pathology, and Midwifery.

The Medical Society meets once a week at the hospital during the winter session.

Further Information may be obtained from Dr. Wadham, the Dean of the School; or from any of the Lecturers; or from the Resident Medical Officer at the Hospital.

GUY'S HOSPITAL.—The hospital contains 695 beds. There are 50 beds for ophthalmic and 26 for obstetric cases. Children are received into the female wards.

Museums, etc.—The Museums of Human Anatomy, Comparative Anatomy (above 2,000 specimens), Pathological Anatomy (above 5,000 specimens), and Materia Medica are open to the students. The Library

[Continued on page 476.]

* The physicians' perpetual pupils are alone eligible for the office of House-Physician, and the surgeons' perpetual pupils for the office of House-Surgeon. All pupils of the hospital may become candidates for the offices of Medical and Surgical Registrar, Obstetric Assistant, Curator of the Museum, and Demonstrator of Anatomy. They are also entitled to attendance on the Maternity Department, and the practice of Ophthalmic, Aural, and Dental Surgery, without additional fee.

For further particulars regarding each Hospital and Medical School, see pp. 471 and 476 et seq.

LONDON HOSPITAL.	ST. MARY'S HOSPITAL.	MIDDLESEX HOSPITAL.	ST. THOMAS'S HOSPITAL.	UNIVERSITY COLLEGE AND HOSPITAL.	WESTMINSTER HOSPITAL.
Dr. A. Clark.. M. Th., 2 Dr. Down.. Tu. F., 2 Dr. H. Jackson.. M. Th., 2 Dr. Sutton.. M. Th., 2 Dr. Fenwick.. Tu. F., 2 Dr. S. Mackenzie.. Tu. F., 2; (o.p.) W. S., 1, 30 Dr. Sansom.. W. 2; (o.p.) M. Th. Dr. Turner.. W. S., 10; (o.p.) Tu. F., 1, 30 Dr. G. Smith.. Tu. F., 2; (o.p.) W. S., 1, 30 Dr. Warner.. M., 1, 30; Th., 10, 30; (o.p.) Tu. F., 1, 30 Dr. Ralfe.. M. Th. 1, 30 Dr. Palfrey.. M. 1, 30, Th., 3, 30 Dr. Herman.. Th., 2; (o.p.) W. S., 1, 30 Dr. S. Mackenzie.. Th., 9 Mr. Hutchinson.. M. Th., 2 Mr. Couper.. W. S., 1, 30 Mr. Rivington.. Tu. F., 2 Mr. Adams.. Tu. F., 2 Mr. Tay.. M. Th., 2 Mr. McCarthy (o.p.) Tu. F., 1, 30 Mr. Reeves.. Tu. S., 1, 30 Mr. Treves.. M. Th., 1, 30 Mr. C. Mansell-Moullin	Dr. H. Jones.. M. Th., 1, 45 Dr. Sieveking.. Tu. F., 1, 45 Dr. Broadbent.. W. 1, 45; S, 9 Dr. Cheadle.. Tu. F., 1 Dr. Shepherd.. M. Th. 1 Dr. Lees.. W. S., 1 — Dr. Meadows.. Tu. F., 9, 30 Dr. Wiltshire.. Tu. F., 1, 30 Dr. Cheadle.. W. S. 1, 30; Th, 3 Mr. Walton.. W. S., 1, 45 Mr. Norton.. M. Th., 1, 45 Mr. Owen.. Tu. F., 1, 45 Mr. Page.. Tu. F., 1 Mr. Pye.. M. Th. Mr. Pepper.. W. S. } out-p. — Mr. A. Critchett.. Tu. F., 9 Mr. Field.. M. Th., 2 Mr. H. Hayward.. W. S., 9, 30 The Physicians	Dr. Cayley.... M. W. F., 1, 30 Dr. Coupland.. Tu. Th., 1, 30; S., 9, 30 Dr. D. Powell.. M. W. S., 1, 30 — Dr. Finlay.. Tu., 10; F., 2; (o.p.) M. Th., 9 Dr. Fowler.. Tu., 3, 30; F., 9 Dr. Biss.. W., 9; S., 3-30 — Dr. H. Davis.. Tu. F., 1, 30 Dr. Edis.. W. S., 1, 30 Dr. R. Liveing.. F., 4 Mr. Hulke.. M. Th., 1, 30 Mr. Lawson.. M. Th., 1, 30 Mr. Morris.. Tu. F., 1, 30 Cancer.. Th., 1, 30 — Mr. A. Clark.. M. Th., 1 Mr. Lyell.. Tu. F., 1 — Mr. Lang.. (o.p.) W. S., 9; (in-p.) 10 Mr. Hensman.. Tu., 9 Mr. Turner and Mr. Bennett The Physicians.. F., 3	Dr. Bristowe.. Tu. F., 2 Dr. Stone.. M. Th., 2 Dr. Ord.. M. Th., 2 Dr. J. Harley.. Tu. F., 2 — Dr. Payne.. Tu. F., 12, 30 Dr. Sharkey.. M. Th., 12, 30 Dr. Gulliver.. W. S., 12, 30 — Dr. Gervis... M. Th., 2 Dr. Cory.. W., 1, 30; S., 12, 30 Dr. Payne.. Th., 12, 30 Mr. S. Jones.. Tu. F., 2 Mr. Croft.. M. Th., 2 Sir W. Mac Cormac.. M. Th., 2 Mr. Mason.. Tu. F., 2 — Mr. MacKellar, M. Th., 12, 30 Mr. Clutton.. Tu. F., 12, 30 Mr. Anderson.. W. S., 12, 30 — Mr. Nettleship.. M. Th., 9; M. W. Th. F., 1, 30; Tu., 4 Mr. Clutton, M., 12, 30 { F. 10 Mr. Elliott & Mr. Ranger, Tu. The Physicians.. weekly	Dr. Wilson Fox Dr. Ringer Dr. C. Bastian Dr. F. T. Roberts } atrop e pue 1 — Dr. Gowers Dr. Poore Dr. T. Barlow — Dr. Graily Hewitt Dr. J. Williams — Dr. Crocker.. Tu. & S., 1, 30 Mr. Marshall Mr. Berkeley Hill } 1 and 2 Mr. C. Heath } daily. — Mr. Marcus Beck Mr. A. E. Barker Mr. R. J. Godlee — Mr. Streatfield and Mr. Tweedy.. M. W. F., 2 Mr. Barker.. S., 1, 30 Mr. Ibbetson.. W., 10, 30 Dr. W. Fox (Holme prof.), Dr. Ringer, Dr. Bastian, Dr. Roberts, Dr. Gowers, and Dr. Barlow Mr. Marshall, Mr. Hill, Mr. Heath (Holme prof.), Mr. Beck, Mr. Barker Dr. G. Hewitt.. fortnightly	Dr. Fincham.. M. Th., 1, 30 Dr. Sturges.. W. S., 1, 30 Dr. Allchin.. Tu. F., 1, 30 — Dr. Donkin.. W. S., 1, 30 Dr. Hall.. M. Th., 1, 30 Dr. A. H. Bennett, Tu. F. 1, 30 — Dr. Potter.. Tu. F., 2 Dr. Grigg.. W. S., 1, 30 — Dr. Allchin.. W., 1, 30 Mr. Cowell.. M. Th., 1, 30 Mr. Davy.. Tu. F., 1, 30 Mr. Macnamara.. W., 1, 30 S., 1 — Mr. T. Cooke.. M. Th., 1, 30 Mr. Bond.. Tu. F., 1, 30 Mr. A. P. Gould.. W. S., 1, 30 — Mr. Cowell.. M. Th., 2, 30 — Mr. Keene.. Tu. F., 9 Mr. Walker.. W. S., 9, 15 Dr. Fincham.. Th. (Sum.) Dr. Sturges.. W. (aft. Xmas) Dr. Allchin.. F. (bef. Xmas)
The Surgeons	The Surgeons	The Surgeons.. Tu., 3	The Surgeons.. weekly; Mr. Croft, special course, W., 9	Mr. Marshall, Mr. Hill, Mr. Heath (Holme prof.), Mr. Beck, Mr. Barker Dr. G. Hewitt.. fortnightly	Mr. Cowell.. Th. (aft. Xmas) Mr. Davy.. F. (Sum.) Mr. Macnamara.. W. (bf. Xms) Dr. Potter.. F. (Sum.)
Dr. Palfrey (Win.) and F. in mon.; (Sum.) alt. Tu., 2, 30 Wednesday, Thursday, and Saturday, 2	Dr. A. Meadows Wednesday.. 1, 30; Eye, Tu. F., 9	Dr. Hall Davis.. Tu., 10; Dr. Edis (sum.), W. S., 1, 30 Wednesday, 1; Saturday, 2	Dr. Gervis Wednesday and Saturday, 1, 30; Eye, Friday, 2	Dr. Sanderson and Mr. Schäfer.. daily, exc. S., 10 Mr. Thane.. daily, exc. S., 12 Mr. Godlee, Dr. Silcock, and Mr. Pollard, 8 to 5; Sat., 8 to 4 Dr. Williamson.. daily, exc. S., 11; (exerc.) Tu. W. Th. F. 9 Dr. Ringer.. Tu. W. Th. F., 9	Dr. Allchin and Mr. North M. W. F., 4 Mr. Gould.. Tu. W. Th. F., S., 9; also Sum., Tu., 9 Mr. Black.. M., 9, 30 to 1; other days, 10 to 1 Dr. Dupré.. W. Th. F., 3 Dr. Fincham & Dr. Sturges M. W. Th., 3
Mr. McCarthy.. M. Th. S., 9 Mr. Rivington.. M., 3; Tu. W. F., 9, 10 Mr. Treves & Demonstrators .. 10 to 5, excepting Sat. aft. Dr. Tidy.. M. W. F., 10, 30 Fr. S. Mackenzie.. M. W. F., 4 Mr. J. E. Adams.. Tu. Th., 4; S., 10 Dr. Prosser James.. Tu. Th., F., 3 Dr. F. Warner.. M. W. F., 12 Dr. Palfrey.. M. W. F., 9 Mr. Rodgers and Dr. Tidy .. daily, exc. S. Dr. Tidy.. M. W. F., 9 Dr. Mansell-Moullin.. Tu., Th., 10 Mr. McCarthy (Win.).. M. Th. S., 9; (Sum.) Tu. Th., 11	Mr. Pye.. M. Th. F., 12 Mr. Owen.. M. Tu. Th. F., 9 Daily, 9 to 5 Dr. Wright.. M. Th., 10; W. S., 9 Dr. Broadbent and Dr. Cheadle.. M. Tu., 3 Mr. Norton and Mr. Page.. M. Tu. Th., 4 Dr. Lees.. Tu. W. F. S., 12 Rev. J. M. Crombie.. M. W. F., 11 Dr. Meadows and Dr. Wiltshire.. Tu. W. Th. F., 9 Dr. Randall.. M. Tu. Th., 10 Dr. Wright.. W. F. S., 9; organic, W. F., 10 Mr. St. G. Mivart (Sum.) .. W. Th., 10 (Vacant)	Mr. Lowne.. M. W. F., 9 Mr. Hensman.. M. Th., 4, 30; Tu. F., 4 Mr. Hensman, Mr. Sutton, and Mr. Crago.. daily, 9 to 4 Mr. Foster.. M. Th., 3, 30; W. F., 3 Dr. Cayley.. Tu. Th. S., 9 Mr. Morris.. M. W. Th., 3, 30 Dr. Thorowgood.. M. W. F., 4 Dr. Biss.. M. Th. F., 10 Dr. Hall Davis.. Tu. Th., S., 9 Dr. Finlay.. M. W. F., 9 Mr. Foster.. M. W. F., 3 Mr. Hensman (Sum.).. Tu. Th., 4 Mr. Lowne (Sum.).. M. W. Th., 9 Dr. Coupland (Win.).. M. Th., 4, 30; S., 12 Mr. H. Case (Sum.).. Th., 12 Dr. Finlay (Sum.) Mr. A. Clark (Win.).. M. Th., 3, 30; W., 3; Oper. Surg., April Mr. Lang (clin.).. W. S., 3	Dr. Bristowe.. Tu. F., 2 Dr. Stone.. M. Th., 2 Dr. Ord.. M. Th., 2 Dr. J. Harley.. Tu. F., 2 — Dr. Payne.. Tu. F., 12, 30 Dr. Sharkey.. M. Th., 12, 30 Dr. Gulliver.. W. S., 12, 30 — Dr. Gervis.. M. Tu. Th. F., 4 Mr. Clutton and Dr. Cory.. Tu. Th. S., 9 Dr. Bernays.. M. Th. F., 10 Dr. Bristowe and Dr. Ord to Dec. 31, M. Th. F., 4; after Jan. 1, M. Th. F., 9 Mr. Jones & Sir W. MacCor- mac.. to Dec. 31, M. Th. F., or after Jan. 1, M. Th. F., 4 Dr. Stone.. M. W. F., 9 Mr. A. W. Bennett... Tu. W. S., 10 Dr. Gervis.. M. Tu. Th. F., 4 Mr. Clutton and Dr. Cory.. Tu. Th. S., 9 Dr. Bernays.. M. Th. F., 10 Mr. Stewart (Sum.)... M. Th., 12 Dr. T. D. Acland (Sum.).. Tu. W. F., 12, 30 Dr. Payne & Dr. Sharkey.. S., 11, 30; Demonst., Dr. Shar- key & Dr. Haddon, daily, 2 Dr. H. Rayner (Sum).. F., 12 Dr. A. Carpenter (Sum.).. W., 4 Mr. Mason and Mr. Mac- Kellar (Win.).... S., 9; (Sum.) Tu. F., 4 Mr. Nettleship (Sum.), Tu, 9	Mr. Marshall.. Tu. W. F., 4 Dr. F. T. Roberts.. M., 9; Tu. W. Th. F., 10 Mr. Oliver.. daily, exc. S., 8 A.M. Dr. Graily Hewitt and Dr. J. Williams.. Tu. W. F. S., 9 Dr. Poore.. Tu. W. Th. F., 10 Dr. Williamson (Jun), Tu. W. Th. F., 11; (sen.) M. W. S., 10 Mr. Lankester (Win. and Sum.).. M. Tu. W. Th. F., 1 Dr. Sanderson and Mr. Schäfer (Sum.).. daily, exc. S., 1, 30; Hist., Tu. W. Th., 12 Dr. Bastian (Sum.).. M. S., 10; Th. F., 4; Pract., and Mr. Barker (Surg.) Jan. Feb. March, M. Th., 4 — Dr. Corfield (Sum.).. Tu. Th., 4 Mr. Hill (Oct. Nov. Dec.) .. M. Th., 4; Mr. Beck (Win. and Sum.) Mr. Tweedy (Sum.), M. W., 4; (clin.) Mr. Streatfield & Mr. Tweedy Mr. Ibbetson (Jan.-Mar.).. M. Th., 4 — — Dr. Crocker.. (clin. lect. alt. weeks) Mr. W. Pearce or Mr. Sumne	
Dr. Sutton (Sum.).. Th., 4 Dr. Woakes (Sum.).. Th., 4 — Mr. Barrett (Sum.) — Mr. Adams (Sum.) — Mr. Reeves and Mr. J. E. Adams (Sum.) — Mr. Adams (Sum.) — Mr. Barrett (Sum.) — Dr. Woakes (Sum.).. Th., 4 — 					

TABLE OF FEES FOR HOSPITAL ATTENDANCE AND LECTURES.

(The letter "s" denotes single course; "p", perpetual or unlimited attendance.)

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entry as full students, the Preliminary Scientific Examination of the University of London. Graduates of any Indian, Canadian, or other Colonial or American University or Medical College, may be admitted to three months' Dressership and Perpetual Hospital Practice for £10 10s.—The fees for Hospital Practice include Clerks' and Dresserships for one-half the term; not exceeding 6 months' Clerkship and 6 months' Dressership. Maternity Department, one year, £4 4s.; including midwifery Lectures, £6 6s. Perpetual Fee for Lectures or Hospital Practice alone, £52 10s. Diseases of Throat and Aural Surgery, each, s. £2 2s.; two years, £3 3s. Extra for use of Apparatus, etc., in Practical Physiology, £1 1s. The Subscription to the Library, and the fees for Practical Pharmacy and Apparatus in Practical Chemistry, are also extra.

ST. MARY'S HOSPITAL.—Entrance Fees for unlimited attendance on Hospital Practice and Lectures (including one course of Practical Chemistry), £135 ss. in instalments of £12 10s. in one sum. Students who have kept a portion of the course of Medical Study elsewhere, are admitted as Perpetual Pupils at a reduction. Students who have not entered to the Anatomical and Physiological Classes can dissect on the payment of £4 4s. for each session. Inorganic Practical Chemistry is included in the General Fee. Aural Surgery, Diseases of Skin, each £2 rs. 6d. Practical Pharmacy, 12 months, £10 10s.

MIDDLESEX HOSPITAL.—The composition fee includes all the lectures required by the London licensing boards, one course of Practical Chemistry and two courses of Dissections, the use of the Library, and the instruction of the Tutor. Additional fees must be paid after the fourth year. Members of English Universities who have completed one year of medical study in University are admitted to all lectures and

hospital practice required (except Practical Chemistry, and including only one course of dissections), for £55 on entrance, or instalments of £40, £20, and £5 at the beginning of each year; separate fees being required after the third year. Qualified Practitioners are admitted to six months' Hospital Practice on payment of £3 3s.; perpetual, £10 10s. Occasional pupils entering to the Hospital Practice pay a registration fee of £1 6s. Anatomy, including Dissection, s. £10 10s.; p. £14 14s.

St. THOMAS'S HOSPITAL. Perpetual Fee, for students entering in second year, \$85 in one sum; and for third year, \$25; for students entering in third year, \$55 in one sum; and for the next year, \$20. Qualified Medical Practitioners are admitted to Hospital Practice and Lectures on payment of \$12 ros. for unlimited attendance. Practical Pharmacy is not included in the perpetual fee. Students dissecting or attending Operative Surgery pay for the parts they use. Midwifery Practice, \$5 ss.; Obstetric Demonstrations, \$3 3s.; Ophthalmic Practice, \$2 2s.; Operative Surgery (voluntary class), \$5 ss.; Operations on Eye (voluntary class), \$2 2s., or, if with Operative Surgery, \$1 1s. Pathological Anatomy, \$6 6ss., with ros. 6d. (extra) for apparatus, etc. Experimental Physics, s. \$4 4s.; *ib.* \$5

UNIVERSITY COLLEGE.—The Composition Fee admits to perpetual attendance on Hospital Practice and Lectures on Anatomy, Physiology, Chemistry, Surgery, Medicine, and Midwifery, and three years' Practical Anatomy; and to one course each of Botany, Materia Medica, Practical Chemistry, Practical Physiology, Medical Jurisprudence, Pathological Anatomy, Practical Surgery, and Pharmacy. Additional, for perpetual attendance on Botany, £1 1s. 6d.; on Materia Medica, Medical Jurisprudence, and Pathological Anatomy, £1 1s. each; Practical Anatomy,

[Continued on next page.]

is open to the students daily from 9.30 A.M. to 5.30 P.M., except on Saturdays, when it is closed at 4 P.M.

Special Courses.—The Dissecting-room is open at stated periods during the summer; and students who desire to dissect in September have facilities for doing so. Students are allowed to visit Bethlem

each additional year, £1 1s.; second course of Practical Physiology, £2 2s.; of Practical Chemistry, £3 3s.; of Practical Surgery, £4 4s.; Physiology: Elementary General Anatomy and Physiology, £2 2s.; Histology, £4 4s.; Physiology, £6 6s.; Embryology (Lectures), £3 3s.; (Practical) £3 3s.; Advanced Practical Physiology, £4 4s., and 10s. for materials, etc.; Laboratory fees (winter), first month, £2 2s.; each succeeding month, £1 1s.; additional for materials. *Zoology and Comparative Anatomy*: General Course, s. £6 6s.; p. £8 8s.; advanced Practical Course (in summer), £3 3s. Shorter Practical Courses: winter and summer, each £4 4s., and 5s. for Specimens; Longer Practical Course, winter, £7 7s.; winter and summer, £12 12s.; animals charged for separately. Advanced Practical Course (summer) £4 4s. Separate Laboratory Work (winter and summer) per month, two days a-week, £2 2s.; three days, £3 3s.; every day, £4 4s. Elementary Biology, £8 8s., and 5s. for Specimens; lectures in summer, £2 2s. extra.—*Chemistry*, Half Course, £4 4s.; Organic Course alone, £2 2s.; Exercise Class, £2 2s.—*Anatomy*: Lectures and Practical Anatomy, Course, £11 11s.; Perpetual Lectures and three years' Practical Anatomy, £16 16s.—*Pathological Anatomy*: Practical Course, £2 2s.—*Hygiene and Public Health*: Laboratory Instruction (exclusive of materials) three months, £10 10s.; one month, £4 4s. Special Practical Course, £12 12s.; in each case exclusive of materials.

WESTMINSTER HOSPITAL.—The payments include all extras except parts for dissection. A fee of £4 4s. is charged for every session after the fourth winter, in addition to special fees. Students who have completed a year of study elsewhere pay £72 on entrance, or two instalments of £37 16s. each, or three payments of £30, £20, and £20. Students who have completed their Anatomical and Physiological Studies, can enter to hospital practice and lectures on practical subjects by paying £60 on entrance, or two instalments of £31 10s. each. These payments do not include Lectures on Experimental Physics or Comparative Anatomy, nor the special course of Operative Surgery. Graduates of Medicine of Colonial and Foreign Universities are admitted to Hospital Practice and Lectures on payment of £12 12s. Experimental Physics, one course, £3 3s.; each subsequent course, £2 2s. Anatomy and Elementary Anatomy in summer, each course £2 2s. Minor Surgery and Bandaging, £1 1s. Diseases of Skin, £1 1s. Aural Surgery, £1 1s. Obstetric, Ophthalmic, Aural, Skin, or Dental Clinical Departments, 3 months, £3 3s.; 6 months, £5 5s. General students may attend additional courses of lectures on all subjects except Histology and Practical Chemistry, for a second course of which a half-fee is charged. Special Clinical Departments, and Lectures on Psychological Medicine, Ophthalmic, Aural, and Dental Surgery, Diseases of Skin, and Comparative Anatomy, are free to general students, unless a special certificate is required.

QUEEN'S COLLEGE, BIRMINGHAM.—Students who have paid the composition fee, and desire to repeat attendance in any class beyond the ordinary requirements of the examining bodies, can do so on payment of half the stated fee for each class. A fee of £1 1s. is charged for apparatus in the Practical Physiology and Chemistry Classes. Each student also deposits £2 as "caution money", the balance of which is returned when he has passed a final examination. Every dissecting student pays a fee of £1 10s. at the beginning of each winter session.

BRISTOL MEDICAL SCHOOL.—Students of Anatomy or Physiology pay a Medical Tutor Fee of £2 2s. per annum; this (for 2 years) is included in the Composition Fee. Students not belonging to the Anatomical Class may dissect on paying £3 3s. each session, besides Tutor's fee.—*Royal Infirmary*: Entrance fee, £2 2s.; and £1 1s. per annum to Library; Clinical Clerk, 6 months, £5 5s.; 1 year, £8 8s.; Dresser, each 6 months, £5 5s.; Obstetric Clerk, each 3 months, £3 3s. *General Hospital*: Extra fee for clerk or dresser, £5 5s. for six months; for obstetric clerk, £10 10s. for 12 months.

THE UNIVERSITY OF LONDON.—Students who have paid the composition fee, and desire to repeat attendance in any class beyond the ordinary requirements of the examining bodies, can do so on payment of half the stated fee for each class. A fee of £1 1s. is charged for apparatus in the Practical Physiology and Chemistry Classes. Each student also deposits £2 as "caution money", the balance of which is returned when he has passed a final examination. Every dissecting student pays a fee of £1 10s. at the beginning of each winter session.

THE UNIVERSITY OF MANCHESTER.—Students who have paid the composition fee, and desire to repeat attendance in any class beyond the ordinary requirements of the examining bodies, can do so on payment of half the stated fee for each class. A fee of £1 1s. is charged for apparatus in the Practical Physiology and Chemistry Classes. Each student also deposits £2 as "caution money", the balance of which is returned when he has passed a final examination. Every dissecting student pays a fee of £1 10s. at the beginning of each winter session.

THE UNIVERSITY OF GLoucester.—Students who have paid the composition fee, and desire to repeat attendance in any class beyond the ordinary requirements of the examining bodies, can do so on payment of half the stated fee for each class. A fee of £1 1s. is charged for apparatus in the Practical Physiology and Chemistry Classes. Each student also deposits £2 as "caution money", the balance of which is returned when he has passed a final examination. Every dissecting student pays a fee of £1 10s. at the beginning of each winter session.

THE UNIVERSITY OF LEEDS.—Students who have paid the composition fee, and desire to repeat attendance in any class beyond the ordinary requirements of the examining bodies, can do so on payment of half the stated fee for each class. A fee of £1 1s. is charged for apparatus in the Practical Physiology and Chemistry Classes. Each student also deposits £2 as "caution money", the balance of which is returned when he has passed a final examination. Every dissecting student pays a fee of £1 10s. at the beginning of each winter session.

THE UNIVERSITY OF SHEFFIELD.—Students who have paid the composition fee, and desire to repeat attendance in any class beyond the ordinary requirements of the examining bodies, can do so on payment of half the stated fee for each class. A fee of £1 1s. is charged for apparatus in the Practical Physiology and Chemistry Classes. Each student also deposits £2 as "caution money", the balance of which is returned when he has passed a final examination. Every dissecting student pays a fee of £1 10s. at the beginning of each winter session.

Hospital on fixed days in the summer; and gentlemen can enter as extern students for three months by arrangement with Dr. Savage. A course of Lectures on Experimental Physics is given by Mr. Reinold at 11 on Mondays and Wednesdays during the winter session.—Mr. Symonds gives a course of practical demonstrations in Morbid Histology.—Mr. Clement Lucas gives a course of demonstrations of Practical Surgery (including Minor Surgery and Surgical Pathology) in the winter; and in summer a course of Operative Surgery, at 4 P.M. on Mondays, Wednesdays, and Fridays.—Mr. Jacobson will hold a surgical class daily before each pass examination of the Royal College of Surgeons. Ophthalmic out-patients are seen at 1 P.M. by Mr. Higgins on Tuesdays, and on Tuesdays and Fridays by Dr. Brailey; in-patients on Tuesdays and Fridays by Mr. Higgins, and on Wednesdays and Fridays by Dr. Brailey.—Dr. Galabin gives courses of practical instruction in Midwifery and Diseases of Women.

Appointments.—All appointments are given according to the respective merits of the candidates. The numbers appointed annually are as follows: 6 House-Physicians, for six months; 6 House-Surgeons, six months; 12 Obstetric Residents, two months; 24 Surgeons' Dressers, six months; 18 Clinical Assistants, three months; 18 Dressers in the Eye Wards, four months; 24 *Post Mortem* Clerks, two months; 24 Obstetric Out-Patient Clerks, six weeks; 32 Assistant Physicians' Clerks, three months; 12 Dental Surgeons' Dressers, two months; 12 Aural Surgeons' Dressers, two months; 64 Medical Clinical Clerks, three months; 72 or more Assistant-Surgeons' Dressers, and a similar numbers of Dressers in the Surgery, three months; 12 Obstetric Ward Clerks, three months; 80 Surgical Clinical Clerks, three months; 32 Assistant-Surgeons' Clerks, three months; 60 Extern Obstetric Attendants, one month; also Clerks in the Room for applying Electricity. A special honorary certificate is given to every gentleman who has diligently performed the duties of not less than three of the various offices; and special certificates are given to those who have attended one hundred cases of midwifery.

Scholarships and Prizes.—Two Entrance Scholarships, each 125 guineas, to be competed for on September 25th, 26th, and 27th: one in Arts,* and one in Science.† Candidates must be under twenty-five years of age, and must not compete for both Scholarships. Notice must be given before September 22nd. The successful candidates must enter into the Hospital in the October immediately following. *First Year*: At the end of summer session, two prizes of £50 and £25; subjects, Anatomy of Bones, Ligaments, and Muscles, Physiology, Materia Medica, Chemistry (including Practical Chemistry), and Botany or Comparative Anatomy. *Second Year*: At end of summer session, Prizes of £25 and £10; subjects, Anatomy and Physiology (including Practical Physiology). At end of winter session, the Michael Harris Prize of £10 for Human Anatomy (including Minute Anatomy); the Sands Cox Scholarship (every third year, next in 1883), value £15, tenable for three years; subjects, Physiology (including Physiological Physics), Histology, and Physiological Chemistry. *Third Year*: At end of summer session, two prizes of £25 and £10; subjects, Medical Anatomy and Methods of Diagnosis, Surgical Anatomy and Diagnosis, Operative and Minor Surgery, Midwifery, and Therapeutics. *Fourth Year*: At end of summer session, two prizes of £25 and £10, in Medicine, Surgery, Diseases of Women, and Medical Jurisprudence. *Fourth and Fifth Years*: Treasurer's Gold Medals in Medicine and Surgery. Gurney Hoare Prize of £25, for best reports of three Medical and three Surgical cases, with commentaries; Beaney Prize of 30 guineas in Pathology. Honorary certificates are given to those candidates who pass creditable examinations.

The Registrars and the Demonstrators of Anatomy and Chemistry assist the pupils in their studies. Classes for the preparation of candidates for the Examinations of the University of London are held.

The Pupils' Physical Society meet on alternate Sundays, at 7.30 P.M. Two prizes of £10 and £5 will be awarded for the best papers read during the session. Two prizes, value £5 each, will be given for the best essays on selected subjects. A prize of £5 is also given to the member who has most distinguished himself in the debates.

Several of the Lecturers have vacancies for Resident Private Pupils. Information may be obtained from the Dean, Dr. F. Taylor, at the hospital.

KING'S COLLEGE AND HOSPITAL.—*The Hospital* contains 170 beds in use.

The Museums of Anatomy, Materia Medica, Natural History, etc., are open daily from 10 till 4. *The Medical Library* is open daily.

Special Courses.—Special clinical instruction is given on Tuesday, Thursday, and Friday, by the Assistant-Physicians. Instruction is given in the Diseases of Women and Children; and in Throat-Diseases (with Laryngoscopic Demonstrations), by Dr. Curnow, every Tuesday at 2. Demonstrations and Practical Instruction in Morbid Anatomy are given in the *Post Mortem Theatre*. Special Instruction is given in Medical Chemistry and the Microscope by the Physicians.

Appointments.—Resident Medical Officers, Clinical Clerks, and Dressers are chosen by examination from matriculated students,* who are pupils at the hospital.

Scholarships and Prizes.—Two Warneford Scholarships, for the encouragement of previous education,† each £25 per annum, for three years; and one Warneford Scholarship of £25 per annum at the close of the winter session, for two years, for third year resident medical students. Medical Scholarships given yearly to matriculated students—one of £40 for two years, open to students of the third and fourth year; one of £30 for one year, to students of the second and third year; three of £20 for one year, to students of the first year. Daniell Scholarship, open to students who have worked in the laboratory six months, £20 per annum for two years. Two Sambrooke Registrarships, of the annual value of £50 each, open to matriculated students who have filled any of the higher appointments at the hospital. Two Sambrooke Exhibitions, one £60 and one £40, open to all matriculated students at the commencement of their course of study.‡ Any student who joined in the previous summer may compete. Two Science Exhibitions, given by the Clothworkers' Company, one of £50 and one of £25 per annum, each tenable two years, for proficiency in any four of the following subjects: Mathematics, Mechanics, Physics, Chemistry, Botany, Geology, Mineralogy, and Zoology; open to all candidates under 19 on October 1st, 1882. Inglis Scholarships: two annually, £50 each, for proficiency in Modern History and English Literature. Leathes' Prizes: Interest of £300 applied in purchase of a Bible and Prayer-Book, as annual prizes to two matriculated medical students. Warneford Prizes: £40 in medals and books, to two matriculated medical students. Class Prizes: Books of the value of £3, and certificates of honour, are awarded annually for proficiency in each of the several subjects taught in the classes. Two Medical Clinical Prizes, one of £3 for the winter session, and the other of £2 for the summer session; and two Surgical Clinical Prizes of £3 each for the winter session. Todd Medical Clinical Prize: Bronze Medal

* Matriculated students are those who receive their entire medical education at King's College, and those who, after having received a portion of their medical education at other Schools, come to King's College to complete their studies. They have the privilege of filling the various hospital offices; and of becoming candidates for the Scholarships, for the Sambrooke Registrarships, and for the endowed prizes. Occasional Students, who enter no particular classes, on payment of the prescribed fees, have the privilege of competing for Class Prizes and Certificates.

† Candidates for these three Scholarships must be matriculated students of the Medical Department, and perpetual pupils of the Hospital. Their first Winter Session must commence in October 1882. The examination will be in the following subjects. 1. Divinity: The Books of Joshua and Judges; The Gospel according to St. John; The Church Catechism. 2. English Language and Literature. Shakespeare, *As You Like It*; History—The History of England from 1660 to 1714. 3. Latin: Livy, Book II. 4. Mathematics, Arithmetic; the ordinary rules, with Vulgar and Decimal Fractions; Algebra, as far as and including Quadratic Equations; Euclid, Book I. Book II (except props. 8, 9, 10), Book III. 5. Greek: Homer, *Iliad*, Book XVIII. 6. French: Guizot, *Cornéille et son Temps* (Part II). 7. German: Schiller, *Wilhelm Tell*. 8. Chemistry: Miller's *Inorganic Chemistry* (in Longman's Series of Text-Books on Science). 9. Natural Philosophy: Deschanel's *Natural Philosophy*, translated by Professor Everett, Part I and Part IV. 10. Botany: Bentley's *Manual of Botany*, third edition, to page 203, together with chapters on the General Principles of Classification, and Diagnosis of Ranunculaceæ, Rosaceæ, Compositæ, Labiatæ, Scrofulariaceæ, and Liliaceæ. Subjects 1, 2, 3, 4, are compulsory; candidates may also select one subject out of 5, 6, and 7, and another either out of 5, 6, 7, or out of 8, 9, 10.—The examination will begin on September 29th, at 10 A.M.

‡ The following are the subjects of examination: a. Compulsory: 1. An English Essay. 2. Mathematics: Arithmetic: The Ordinary Rules; Vulgar and Decimal Fractions; Extraction of the Square Root; Algebra: Addition, Subtraction, Multiplication, and Division of Algebraical Quantities; Proportion; Arithmetical and Geometrical Progression; Simple Equation; Geometry: The first four books of Euclid or the subjects thereof. 3. Any two languages other than English. In Latin, Greek, French, and German are taken; the books are the same as for the Warneford Scholarships. b. Optional: 1. Elementary Physics (as for Preliminary Science Examination of the University of London, omitting Optics and Acoustics). 2. Inorganic Chemistry. 3. Botany. 4. Zoology. A candidate may take up any one or more of these optional subjects, but he must gain half marks in each of those which he takes up. The examination will begin at 10 A.M. on Friday, September 29th. Names of candidates and subjects chosen for examination must be sent to the Secretary of the College, on a form to be obtained in the office, before 2 P.M. on September 27th.

and Books, value £4 4s. Jelf Medal, to the candidate at the senior scholarship examination who is second in order of merit. Tanner Prize, value £10, for proficiency in Diseases of Women and Children, and in Obstetrics. Carter Prize: Gold Medal and Books, value £15, for proficiency in Botany. The Carter, Stephen, Trench, and McCaul Prizes are open to students of the medical department.

The Medical Tutor assists, by instruction and examination, all students in the subjects of the first winter and summer sessions, as well as those preparing for the Preliminary Scientific Examination of the University of London. Classes are held for the latter examination.

Associates of King's College.—At the end of each winter session, the professors recommend to the Council the names of medical students to be elected associates.

Residence.—Rooms are provided within the College for a limited number of matriculated students under the supervision of the Censor. The cost of the academical year varies from £50 to £60.

The Medical Society meets on Thursdays, at 8.30 P.M.

The Dean of the Medical Department, or the Subdean, attends daily, Saturday excepted, at King's College, from 11 A.M. to 1 P.M., for the purpose of seeing students and their friends. Any letter addressed to the Dean during the vacation will receive early attention.

LONDON HOSPITAL.—*The Hospital* contains about 800 beds, approximately thus allotted: Accidents and surgical cases, 334; medical cases, 300; diseases of women, 26; children under seven years of age, 68; ophthalmic cases, 12; out-door wards, 60.

Museums, etc.—The Anatomical and Pathological Museum, the Materia Medica Museum, and the Library are open daily.

Special Courses.—Students desirous of obtaining a practical knowledge of Mental Diseases can attend, without additional fee, the practice of Mr. Millar, at the Bethnal House Asylum, every Wednesday from 10 to 12. Dr. Morell Mackenzie gives a course of lectures on Diseases of the Throat, at 4 P.M. on Wednesdays in May and June. Mr. H. A. Reeves gives a course of Practical Surgery (bandaging, etc.) in the winter session; and Mr. J. E. Adams a course of Operative Surgery in the summer session. Dr. Herman gives instruction in Diseases of Women, at 1.30, on Wednesdays and Saturdays. Mr. T. Mark Hovell is Junior Surgeon to the Aural department.

Appointments.—Five House-Physicians, five House-Surgeons, and a Resident Accoucheur, are appointed every six months, renewable for two further periods of three months each. The house-physicians and resident accoucheur must possess a medical or surgical degree or diploma, and the house-surgeons a surgical diploma. Clinical Clerks, Surgical Dressers, and Clinical Obstetric Clerks are appointed for three months. They must have passed the first College of Surgeons, or an equivalent examination. Every student must act as Clinical Clerk for six weeks in the medical out-patient department, after passing the first College of Surgeons examination. Maternity pupils must have passed the primary examination of the College of Surgeons, or an equivalent examination. Two reside in the hospital every week. Each student must attend at least twenty cases of Midwifery; those who have attended one hundred are entitled to a special certificate. Four Dressers reside and board in the hospital every week. Every student must act as Dresser in the Surgical out-patient department for at least three months after the end of the first winter session. Three Clinical Assistants are appointed every three months for the Medical out-patients, and are eligible for re-election. Each receives a salary at the rate of £80 per annum. An unpaid Clinical Assistant is appointed in the Ophthalmic department. A Medical Registrar and a Surgical Registrar are appointed annually; each receives £100. Every student must act as *Post mortem* Clerk for three months. A Dental Assistant, Prosector of Anatomy, and Dressers in the Ophthalmic and Aural departments are also appointed. Full pupils, and those who, having commenced elsewhere, pay the general fee to the hospital and college, at or before the beginning of the second winter, are eligible for appointments. The holders of resident appointments are provided with rooms and board.

Scholarships and Prizes.—Nine scholarships will be offered for competition. 1 and 2. Two Entrance Scholarships, value £60 and £40; examination on September 25th, 26th, and 27th; subjects: Physics, Botany, Zoology, and Inorganic Chemistry. Successful candidates must forthwith become pupils of the hospital and school. 3 and 4. Two Buxton scholarships, value £30 and £20; examination on September 23th, 29th, and 30th.* 5. A Scholarship at the end of the

* The subjects are:—1. English, including Writing from Dictation; English Grammar, and the Composition of a short Essay. 2. Arithmetic. No Candidate will be passed who does not show a competent knowledge of the first four rules, simple and compound, of Vulgar Fractions, and of Decimals. 3. Algebra to Simple Equations inclusive. 4. The first four Books of Euclid. 5. Translation of a passage

summer session, value £20, to a first year's student; subjects: Human Anatomy and Physiology. 6. A Scholarship, value £25, to a first or second year's student, at the end of the winter session; subjects: Anatomy, Physiology, and Chemistry. 7, 8, 9. Hospital Scholarships, value each £20, for proficiency and zeal in Clinical Medicine, Surgery, and Obstetrics. The Letheby Prize, value £30, for Chemistry; open to all full students from the end of the second session to the end of the fourth year. The Duckworth Nelson Prize, value £10, awarded biennially; open to all students who have not completed their education; subjects: Practical Medicine and Surgery. Prizes of the aggregate value of £60 to the most meritorious of the Dressers in the out-patient rooms. Special certificates to those gentlemen who have faithfully performed their duties in the hospital, and to those who have distinguished themselves at the examinations.

Special attention is paid to the preparation of students for the examinations of the Colleges of Physicians and Surgeons, the Apothecaries' Hall, and the University of London.

The Medical Society meets for the reading and discussion of papers at 7.30 P.M. on alternate Wednesdays during the winter session.

Information may be obtained from the Warden, Mr. Munro Scott, at the College.

ST. MARY'S HOSPITAL.—The Hospital contains 200 beds; 94 medical and 106 surgical. Two wards are appropriated to Diseases of Children, and one to those of Women; there are also beds for ophthalmic cases.

The Reading Rooms and Library are open daily. The Museum is open daily to students. It contains about 3,000 specimens of healthy and morbid anatomy. There are also a Materia Medica Department and a collection of specimens illustrative of Comparative Anatomy. A Histological Room is open daily.

Clinical Demonstrations on Diseases of the Skin and of the Throat are given.—The students are carefully trained to the use of the Microscope. Mr. Pepper gives a course of Operative and Practical Surgery at 12 on Mondays and Thursdays during the winter.

Appointments.—Three Resident Medical Officers are appointed for twelve months, and an Obstetric Officer for six months; all live free of expense in the hospital. A Resident Registrar is appointed annually and may be re-elected. All students must act as clinical clerks and dressers for six months after passing the Primary Examinations. Students of the third year are appointed to assist the Physicians and Surgeons in charge of the out-patients for four months each. A Demonstrator of Anatomy is appointed at a salary of £70, and a junior demonstrator at £50 a year. Two Prosectors are appointed annually; each receives a certificate and £5.

Scholarships and Prizes.—Two Scholarships in Natural Science, tenable for three years; one of £75 the first year, £50 the second year, and £25 the third year; subjects, Inorganic Chemistry and Experimental Physics, with either Botany and Vegetable Physiology, or Zoology; and another, value £65 the first year, £40 the second year, and £20 the third year, for special excellence in either of the above-named subjects. There will be a practical examination in each subject. The examination will take place on October 2nd and following days. Every candidate must have matriculated at an university, or pledge himself to do so within twelve months; or must have passed an examination qualifying him to register as a medical student. The successful candidates must enter as perpetual pupils of the hospital, and proceed to a degree in Medicine or in Surgery. Scholarship in Anatomy, value £20, tenable for one year, to students who have completed the second or third winter session; subjects, Anatomy, Physiology, and Histology. Scholarship in Pathological Anatomy; value £40, tenable for one year, open to students who have completed the third winter session. The holder of this scholarship will be styled Assistant-Curator, and will assist the Pathologist. First Year: Winter Session: Prize of £4 4s. in Anatomy and Histology; one of £2 2s. in Chemistry. Summer Session: Prizes, value £2 2s. each, in Comparative Anatomy, Materia Medica, Botany, and Inorganic Practical Chemistry. Second Year: Winter: Prize of £4 4s. for Anatomy and General Physiology. Summer: Prizes, value £2 2s. each, for Midwifery and Medical Jurisprudence. Third Year: Winter: Prize of £2 2s. each for Medicine and Surgery, and of £2 2s. each for Pathology and Operative Surgery. Third and Fourth Years: At end of the winter session, prizes of £3 3s. each to the Clinical Clerk, and to the In-patient's Dresser, who

kept the best records of cases, and have discharged their duties in the most satisfactory manner, for the usual term, during the previous twelve months. Rolleston Prize in Biology: Book or Books of the value of about £5; open to students of not less than one year's standing; subject, the Principles of Construction of Animals and Plants.

The Medical Tutor assists the students in preparing for their final examination, testing their knowledge by the preparations in the museum, specimens from the dead-house, and other means at his disposal.

The Medical Society meets on alternate Wednesday evenings, during the winter session, at 8 P.M.

Further information may be obtained from Dr. Shepherd, Dean of the School.

MIDDLESEX HOSPITAL.—The Hospital contains upwards of 300 beds, of which 135 are devoted to surgical, and 120 to medical, cases. There are 33 beds for cases of cancer; also wards for cases of uterine disease and of syphilis, and beds for cases of diseases of the eye.

The Museum is open to students daily from 9 to 5. It contains above 5,000 specimens.—The Library and Reading Room are open to all general students from 9 to 5; on Saturday from 9 to 2.

Special Subjects.—Mr. Morris sees out-patient cancer cases at 1.30 on Thursdays. Practical Instruction in Mental Diseases is given at the Leazesden Asylum. A Class for Practical-Surgery is held in the winter session. Mr. Andrew Clark will commence a course of Practical Instruction in Operative Surgery in April. Each student will personally perform all the operations.

Appointments, etc.—Nine resident appointments are open annually to competition among pupils of the Hospital. The officers are appointed by the Weekly Board on the recommendation of the Medical Committee, and reside and board in the Hospital free of expense. Two House-Surgeons are appointed in June and December. The Senior House-Surgeon must have a legal surgical qualification. The Junior House-Surgeon is eligible for appointment as Senior House-Surgeon if he have performed his duties satisfactorily. Each House-Surgeon pays £21 on appointment; but a Junior House-Surgeon pays no fee on promotion. Six Resident Physicians'-Assistants are appointed from time to time for six months. They must have a legal medical qualification, or hold a Broderip Scholarship. Each pays £10 10s. on appointment. A Resident Obstetric Physicians'-Assistant (qualified to practice) is appointed for six months. He pays £10 10s. Non-resident Physicians'-Assistants are appointed in the out-patient department. Clinical Clerks and Dressers are appointed for six months. An Obstetric Physician's Clerk and Ophthalmic Dressers are appointed. The appointments are so arranged that every student may take both a clerkship and a dressership. Each student must be an out-patient clerk or an out-patient dresser, before being eligible to an in-patient clerkship or dressership.

Scholarships and Prizes.—Two Entrance Scholarships, value £25 and £20, tenable for two years,* open to all gentlemen commencing their medical studies at the hospital in October 1882. The successful candidates must become general pupils of the school. Science Scholarship, value £50, open to all students who have not completed a year of study at a metropolitan school of medicine, or more than a year at an university or provincial school. The successful candidate must become a general student of the school. The subjects of examination are: Inorganic Chemistry, Botany, and Vegetable Physiology, Zoology, and Experimental Physics, as in the Preliminary Scientific Examination of the University of London; examination on September 29th and following days. John Murray Scholarship and Gold Medal, open to competition in May 1883 among students in actual attendance who have entered since April 16th, 1879; subjects, Medicine, Surgery, and Obstetrics—written *vis-à-vis* at bedside. Exhibition, value £10 10s., at end of first winter session; subjects, Osteology, Elementary Anatomy, and Physiology. Two Broderip Scholarships, value £30 and £20, tenable for two years, to students who have completed the third or fourth year, for reports or comments on selected medical and surgical cases. The

Governors' Prize, value £21, to the student who, at the end of the third winter session, not obtaining a Broderip Scholarship, shall have been most diligent in the wards, and shall pass the best examination in Clinical Medicine and Surgery, and Practical Pathology. Prizes and Certificates of Honour are given in each class.

Tutors.—Mr. Lyell and the Demonstrators assist all general students of the hospital, especially those who are preparing for primary examination before the licensing boards. Special classes are held for the Preliminary Scientific Examination of the University of London.

The Students' Medical Society meets in the Board Room of the Hospital once a fortnight during the winter session. A prize is given to the reader of the best paper during the session, and also to the student who has exhibited the best pathological specimens.

Information may be obtained from Mr. Andrew Clark, the Dean; from Dr. Cayley, Treasurer of the College; from any of the Lecturers; or from the Resident Medical Officer at the Hospital.

ST. THOMAS'S HOSPITAL.—*The Hospital* contains 572 beds, of which about 180 are appropriated to ordinary medical, and 230 to ordinary surgical cases. There are also special wards for diseases of women, diseases of the eye, venereal affections, children under six years of age, and (in a separate block) infectious diseases.

Museum, etc.—Students have access to the Library, and to the Museums of Human Anatomy, of Comparative Anatomy, of Materia Medica, of Botany, and of Chemistry and Mineralogy, and to the Laboratories of Practical Physiology and Practical Chemistry.

Special Subjects.—A course of Lectures on Physics and Natural Philosophy is given by Dr. Stone at 12 A.M. on Saturdays in the winter. Physiological Demonstrations are given at 11.30 A.M. on Wednesdays and Fridays in the winter session; and Demonstrations of Pathological Anatomy at 2 P.M. daily. Dr. Cory sees children's cases at 1.30 on Wednesdays and 12.30 on Saturdays. Out-patients with diseases of the throat are seen by Dr. Semon at 12.30 on Tuesdays and Fridays. Mr. Mason and Mr. McKellar give instruction in Practical and Manipulative Surgery.

Appointments.—Two resident and one non-resident House-Physicians, an Assistant House-Physician, two House-Surgeons, an Assistant House-Surgeon, and a Resident Accoucheur, are selected from gentlemen who have obtained their professional diplomas; they hold office for three or six months. An Ophthalmic Clinical Assistant is appointed for six months, with a salary at the rate of £50 *per annum*. Clinical Clerks and Dressers are selected each year, to the number of at least one hundred for in-patients, and eighty to one hundred for out-patients. Obstetric Clerks are from time to time appointed; also Assistants in the Physiological Laboratory in the Dissecting-room, Prosectors, and Assistants to the Demonstrator of Pathological Anatomy. All students have the opportunity of being engaged in the performance of practical duties in connection with the Medical, Surgical, Obstetrical, Ophthalmic, and Pathological Departments of the Hospital. The House-Physicians, House-Surgeons, the Resident Accoucheur, and Dressers and Obstetric Clerks, are provided with rooms and commons. The Ophthalmic Assistant has board, but not residence. Two Hospital Registrars are appointed, at an annual salary of £100.

Scholarships and Prizes.—Two Open Scholarships in Natural Science, value £100 and £60, open to students who have passed a Preliminary examination in Arts; subjects, Physics, Chemistry, and either Botany or Zoology; examinations on October 4th, 5th, and 6th. Successful candidates must become students of the hospital. The William Tite Scholarship, £30, to the student highest on the first-class list at the examination at the end of the first winter session. The Musgrove Scholarship, value £42 *per annum* for two years, biennially, to the student highest in the first-class list at the end of the second winter session. A College Scholarship of same value, alternately with the Musgrove Scholarship. College Prizes each winter for first and second years' students, of £20 and £10 each winter; and for third year's students, of £20, £15, and £10; and £15 and £10 each of three summers. The Cheselden Medal, annually, to a fourth year's student, for Surgery and Surgical Anatomy. The Mead Medal, annually, to a fourth year's student, after practical examination in Medicine, Pathology, and Hygiene. The Treasurer's Gold Medal, annually, at end of fourth winter session, for general proficiency and good conduct. The Grainger Testimonial Prize, value £20, biennially, to students of from three to six years' standing, for a Physiological Essay. The Solly Medal, with a Prize in money, every two years, for Reports of Surgical Cases, to a third, fourth, fifth, or sixth year's student.

University of London.—Classes in the subjects required for the Matriculation Examination are held in October and March, for the Preliminary Scientific Examination from October to July, and for the first M.B. Examination are held from January to July.

The Medical and Physical Society meets on alternate Thursdays at 7.30 P.M. Three prizes, with certificates, are annually awarded to the authors of the best papers written by second, third and fourth year's students respectively.

Further information may be obtained from Dr. Gillespie, the Medical Secretary, at the Hospital.

UNIVERSITY COLLEGE AND HOSPITAL.—The Hospital contains over 200 beds available for clinical instruction and study. In addition to the Physicians' and Surgeons' Wards, there are special Wards for Diseases of Women, for Children's Diseases, for Ophthalmic affections, and for Skin-disorders. In connection with the Skin department, there is a complete system of medicated baths.

Libraries, Museums, etc.—The General and Medical Libraries, the Museums of Anatomy and Pathology, of Comparative Anatomy, of Materia Medica and Chemistry, of Geology, and of Natural Philosophy, and the Parkes Museum of Hygiene, are open daily. There are also a Chemical, a Physiological, a Zoological, and a Hygienic Laboratory, where instruction is given under the superintendence of the Professors.

Practical Instruction.—Dr. Wilson Fox, Holme Professor of Clinical Medicine, delivers Clinical Lectures every Tuesday and Thursday at 2, and trains the pupils in the practical study of disease. Lectures are also given by Dr. Ringer, Dr. Bastian, and Dr. Roberts. Dr. Gowers, Assistant Professor of Clinical Medicine, gives instruction and demonstration on Physical Examination, on the Diagnosis of the Diseases of the Heart and Blood-vessels, and on the Modes of Investigation of Diseases of the Nervous System; and Dr. Barlow, Assistant Teacher of Clinical Medicine, instructs in the Examination of the Lungs and of the Urine. Lectures are given every Monday at 2 by Mr. Christopher Heath, the Holme Professor of Clinical Surgery; once a fortnight or oftener by Mr. Marshall and Mr. Berkeley Hill. Mr. Erichsen and Sir Henry Thompson, Emeritus Professors of Clinical Surgery, will deliver short courses during the session. The Holme Professor will hold a Clinical Examination every Friday at 3. Mr. Marcus Beck and Mr. Barker, the Assistant-Professors of Clinical Surgery, will hold examinations, and instruct students in the observation and examination of patients. Dr. Poore attends on Thursdays at 1.30 to see patients with throat-diseases, and to give instruction in the use of the Laryngoscope. A class for the study of Practical Gynaecology meets twice a week under the direction of Dr. John Williams. Mr. Clover gives instruction in the use of anaesthetics. A course of Practical Surgery is given during the winter. It consists of three divisions: 1. The use of Surgical Apparatus, etc., by Mr. Berkeley Hill, Dr. Silcock, and Dr. Pollard, on Mondays and Thursdays, at 4, in October, November, and December. 2. Operative Surgery, by Mr. Beck, during the latter part of the session. 3. Demonstrations of Surgical Preparations, by Mr. Barker, on Mondays and Thursdays at 4, in January, February, and March. Mr. Beck also gives in the summer a course of Operative Surgery intended for candidates for the public services, for the surgical degrees of the University of London, and the Fellowship of the Royal College of Surgeons. A practical course of instruction in Pathological Anatomy is given in January, February, and March.

Biological Courses.—Elaborate courses of instruction are given in this College in the class of Physiology, by the Jodrell Professor, Dr. Burdon Sanderson, and the Assistant-Professor, Mr. Schäfer, and assistants; and in the course of Comparative Anatomy and Zoology, by Mr. Ray Lankester, Jodrell Professor, and assistants. *A. Physiology.* 1. The General Course of Physiology is divided into three parts: *a.* Elementary General Anatomy and Physiology; lectures or demonstrations on Tuesdays and Thursdays at 10, during part of the winter session; *b.* Lectures on Histology, Tuesdays, Wednesdays, and Thursdays, and occasionally Mondays, at 12, in summer; *c.* Lectures on Physiology, on Mondays, Wednesdays, and Fridays at 10, in winter session. 2. An advanced course of Lectures in Embryology on Mondays and Wednesdays, at 2 P.M., commencing in January; a practical class will also be held. 3. A course of Practical Instruction for the Intermediate M.B. Honours and B.Sc. Examinations of the University of London, after Christmas; also in Summer. 4. Practical Physiology and Histology (including the use of the Microscope) and Chemical Physiology, daily except Saturday, in summer, from 1.30 to 3. 5. Persons desirous of engaging in original investigations may be admitted to the Laboratory as workers; instruction in special branches of Histology may also be obtained in the Laboratory. *B. Comparative Anatomy and Zoology.* 1. The General Course of Lectures is given on Tuesday, Wednesday, and Thursday, at 1 P.M., during the winter and summer sessions. 2. Practical Courses are given as follows: *a.* Shorter courses, for examination of certain types of animals; *b.* Longer courses, in which additional types are examined—both in winter and in summer; *c.* Advanced

practical courses, in summer. Students will be admitted to dissect in the Zootomical Laboratory at any time in the winter or summer sessions.

Offices.—Eight House-Physicians, six House-Surgeons, four Obstetric Assistants, Out-patient Physicians and Surgeons' Assistants, Clinical Clerks, Surgeons' Dressers, and Ophthalmic Surgeons' Assistants, are selected from among the pupils. The House-Physicians, the House-Surgeons, and the Obstetric Assistants, reside in the hospital, paying for their board.

Scholarships, etc.—Three Entrance Exhibitions, value £100, £60, and £40 *per annum*, to gentlemen who are about to commence their first winter's attendance: Subjects, Chemistry, Physics, Botany, and Zoology. The examination will take place on September 27th and 28th. Notice of intention to compete must be given on or before September 26th. The Atkinson-Morley Surgical Scholarship, £45, tenable for three years, for proficiency in Surgery. The Sharpey Physiological Scholarship, annual value about £105. The Filliter Exhibition of £30, annually in July, for proficiency in Pathological Anatomy. Dr. Fellowes' Clinical Medals, one Gold and one Silver, with Certificates of Honour, at the end of each winter and each summer session. The Liston Gold Medal, with Certificates of Honour at the end of the winter session, for reports and observations on the surgical cases in the hospital. The Alexander Bruce Gold Medal, for proficiency in Pathology and Surgery. The Cluff Memorial Prize, every second year, to the most proficient in Anatomy, Physiology, and Chemistry: next award in 1883. An Atchison Scholarship, value about £55, tenable for two years, annually after the winter session, for general proficiency. Morris Bursary of £25 a year, tenable for two years. Gold and Silver Medals or other Prizes, as well as Certificates of Honour, after competitive examinations in the classes. Prizes to the value of £10 in the class of Hygiene.

Private Instruction.—Gentlemen may obtain assistance in their studies within the College, on application to the respective Professors.

The Medical Society meets fortnightly to discuss subjects connected with the study of medicine, and for the exhibition of microscopical specimens.

Residence of Students.—Several gentlemen connected with the College receive students to reside with them; and, in the office of the College, there is kept a register of persons who receive boarders.

Information respecting the College may be obtained from the Dean, Mr. Berkeley Hill; the Vice-Dean, Mr. Thane; or the Secretary, Mr. Talfourd Ely.

WESTMINSTER HOSPITAL.—The Hospital contains upwards of 200 beds. There are separate departments for Diseases of the Eye, Ear, Skin, Teeth, and Throat, for Diseases of Women, and for Orthopaedic Practice.

Museums, etc.—The Anatomical Museum is constantly open to the students. A cabinet containing a valuable collection of microscopical preparations, chiefly histological, has been presented to the Museum. There are also a Pathological Museum and a Materia Medica Museum. The Library is open daily from 9 to 5.

Special Subjects.—In addition to the practice of the Hospital, general students may attend, without further fee, Mr. Cowell's practice at the Royal Westminster Ophthalmic Hospital. Instruction in the physical examination of the Chest is given by Dr. Donkin, and in the use of the Laryngoscope by Dr. De Havilland Hall. Mr. R. Davy gives demonstrations in Orthopaedic subjects. A course of Practical Surgery is given by Mr. Davy in three divisions: 1. October to December, Surgical Anatomy and Diagnosis and Use of Apparatus; 2. January to March, Examination of Pathological Specimens, the Use of the Ophthalmoscope, Laryngoscope, etc.; 3. May to July, Surgical Instruments; Operations on the Dead Subject. In the summer, a second meeting of the class will be held weekly for instruction in minor surgery.

Appointments.—A Curator of the Museum and Pathologist is appointed annually, with a salary of £52 10s.; and a Medical and a Surgical Lecturer, each with a salary of £40. Two House-Physicians, a House-Surgeon, and a Resident Obstetric Assistant are appointed for each year, after examination, and are provided with rooms and commons. The Senior House-Physician, who is also Chloroformist, receives in addition £21. An Assistant House-Surgeon is appointed from among the senior students; he is provided with commons at the hospital. Clinical Assistants to the Assistant-Physicians and Assistant-Surgeons, and a Resident Assistant in charge of all out-patients, are appointed from students of the fourth year. Every student must perform the duties of an out-patient for three months during the first year; and afterwards hold the office of in-patient Dresser and Clinical Clerk for periods of three months.

Scholarships and Prizes.—The Fence and Houldsworth Entrance Scholarship, each £40 a year for two years; and two Entrance Scholarships, value £20, tenable for two years.* Exhibition in Anatomy, Physiology, and Chemistry, value £10 10s., tenable for one year for first year's men. A Prize of £2 2s. by Mr. A. P. Gould, to the first year's student who takes the first place in the Examination in Anatomy at the end of the first summer session. The President's Scholarship in Anatomy, Histology, and Physiology, value £21, to student of second year (to be styled Assistant Demonstrator). After end of fourth winter, Prizes of £5 each (books or instruments), in Clinical Medicine and Clinical Surgery. Frederic Bird Medal and Prize, value £15, to students who have completed their fourth winter; subjects of examination: Medicine, Midwifery, Diseases of Women and Children, and Pathology. Chadwick Prize for General Proficiency, £21 (books or instruments), to the most meritorious student or students of any year not exceeding the fifth; subjects of examination: Anatomy, Physiology, Histology, Medicine, Surgery, and Midwifery. In most of the Classes, Special Prizes are given by the Lecturers; and Certificates of Honour are awarded in each Class.

Two Tutors assist and guide the students in their work, and hold Senior and Junior Classes. Each student must attend at least three hours' tutorial instruction each week. Classes are held for the Preliminary Scientific Examination of the University of London.

Communications respecting the Medical School should be addressed to Dr. Allechin, the Dean of the School, from whom all particulars may be obtained. Information may also be obtained from any of the Lecturers, or from the Secretary at the hospital.

SCHOOL OF ANATOMY, PHYSIOLOGY, AND SURGERY.—The School meets the requirements of two distinct classes of students: *i.e.*, 1. Advanced students and qualified practitioners, who may wish either to extend their knowledge of the foregoing subjects, or to recall to mind what they once knew and have since forgotten; 2. Beginners entering upon their medical duties by a short term of apprenticeship with a general practitioner. For the former, rapid advanced classes, complete in three months, but still thoroughly practical, are provided; and for the latter, more elementary classes of six months' duration, also thoroughly practical.

The Operations of Surgery are all performed on the dead body by the students.

The dissecting-room is open daily from 10 A.M. to 6 P.M. The Demonstrators attend four hours daily.

Fees.—Anatomy and Physiology: For Primary Membership Examination of Royal College of Surgeons, three months, £4 4s.; six months, £5 5s. For Primary Fellowship Examination (with Comparative Anatomy), six months, £5 5s. Surgery: For Second Membership Examination of Royal College of Surgeons, three months, £5 5s.; six months, £8 8s.; for Second Fellowship Examination, six months, £8 8s.

LONDON SCHOOL OF MEDICINE FOR WOMEN.—The Winter Session will commence on October 2nd. Intending students are requested to apply to the Dean for a form of application for admission. No student will be admitted to the study of Medicine who has not completed her eighteenth year.

The following courses of lectures are delivered at this school: Anatomy and Practical Anatomy, by Mr. Otley and Mr. Leahy; Physiology, by Mr. Schafer; Chemistry, by Mr. Heaton; Botany, by Dr. P. H. Stokoe; Materia Medica, by Dr. Samuel West; Practice of Medicine, by Mrs. Garrett-Anderson, M.D., and Dr. H. Donkin; Midwifery, by Dr. Ford Anderson; Diseases of Women, by Dr. Louisa Atkins; Forensic Medicine, by Dr. Dupré and Mr. T. Bond; Surgery, by Mr. Norton; Ophthalmic Surgery, by Mr. Critchett and Mr. James Adams; Pathology, by Dr. W. A. Sturge; Hygiene, by Dr. Sophia Jex-Blake and Dr. Edith Pechey; Mental Pathology, by Dr. Sankey;

Comparative Anatomy or Zoology and Biology, by Dr. Murie; Experimental Physics, by Mr. Neison; Clinical Medicine (Royal Free Hospital), by Dr. Cockle and Dr. Baxter; Clinical Surgery (Royal Free Hospital), by Mr. Gant and Mr. Rose.

Clinical Instruction is given at the Royal Free Hospital. *Physicians*: Dr. Cockle and Dr. Buchanan Baxter; *Assistant-Physician*: Dr. Samuel West; *Surgeons*: Mr. Gant and Mr. W. Rose; *Assistant-Surgeon*: Mr. Shuter; *Physician for Diseases of Women*: Dr. W. Hayes; *Ophthalmic Surgeon*: Mr. Grosvenor Mackinley; *Pathological Demonstrator*: Dr. S. West.

The hospital teaching includes instruction in Minor Surgery and use of Surgical Appliances, Auscultation and Percussion, etc.; daily Clinical instruction in the out-patients' departments and the in-patients' wards, attendance at the Cliniques for the Diseases of Women and for Ophthalmic Surgery, bi-weekly Pathological Demonstrations and Lectures on Clinical Medicine and Clinical Surgery, and a tutorial class for senior students. Students are appointed to the posts of Clinical Clerks, Surgical Dressers, and Pathological Registrar without further fee.

Fees.—The fee for the ordinary curriculum of non-Clinical Lectures is £80 in one sum, or in instalments, £40 for the first year, £30 for the second, and £15 for the third. The courses of Lectures included in this fee are two each of Anatomy, Practical Anatomy, and Practice of Medicine; and one each of Practical Physiology, Chemistry, Practical Chemistry, Materia Medica, Surgery, Pathology, Midwifery, Diseases of Women, and Forensic Medicine. Lectures on Botany, Hygiene, Mental Pathology, Ophthalmic Surgery, and Zoology will be given whenever a sufficient number of students to form a class present themselves. Any student having paid either of the compounding fees is, on a further payment of £6 6s., entitled to attend additional courses of the classes mentioned above. Materials for the practical classes are charged extra when additional courses are taken. The fee for separate classes is £8 8s. for each subject in winter, and £5 5s. in summer, and £2 2s. for each subsequent course; for each course of lectures on Mental Pathology, Ophthalmic Surgery, and Hygiene, £2 2s. The fee for hospital instruction, including Clinical Lectures, is £20 for the first year, and £15 for each subsequent year. No student is admitted to the Hospital for less than one year.

Scholarship, etc.—A Competitive Examination will be held on September 26th and 27th, when an Entrance Scholarship, value £30, will be awarded to the candidate who obtains the highest number of marks.* All candidates must have passed a Preliminary Examination in Arts recognised by the General Medical Council.

The successful candidate will be required to enter on a full course of medical study at the School. Should no candidate fully satisfy the Examiners, the Scholarship will not be awarded. Prizes and certificates are given in each class.

Examinations are held in each Class; and attendance upon these is required from all students. A record of the attendance of all students is kept. Every student is required to attend not less than two-thirds of the lectures.

Besides the above, students and practitioners are admitted to attend the practice of several of the general and special hospitals and infirmaries; among which are the following. Information may be obtained on application to the secretaries of the respective institutions.

Great Northern Hospital, Caledonian Road.
Seamen's Hospital, Greenwich.
West London Hospital, Hammersmith Road.
City of London Hospital for Diseases of the Chest, Victoria Park.
Hospital for Consumption and Diseases of the Chest, Brompton;
fees, three months, £3 3s.; six months, £5 5s.
Hospital for Sick Children, Great Ormond Street.
Belgrave Hospital for Children, Cumberland Street.
Evelina Hospital for Sick Children, Southwark Bridge Road.
Victoria Hospital for Children, Queen's Road, Chelsea.
East London Children's Hospital, Shadwell.
Royal Infirmary for Children and Women, Waterloo Bridge Road.
Samaritan Hospital for Women and Children, Lower Seymour Street.
Chelsea Hospital for Women, King's Road.
Hospital for Women, Soho Square.
British Lying-in Hospital, Endell Street.

* The following are the subjects of examination. 1. English, comprising Dictation, Grammar, Analysis and Composition, with Definitions and Derivations of Words. 2. Latin: Livy: Book II, caps. 1 to xi; Grammar; Translation of easy passages into Latin and English. 3. Arithmetic, including Decimals. 4. Elements of Mathematics: Euclid, Books I and II; Algebra; Simple Equations. 5. Elementary Physics; Balfour Stewart's *Lessons in Elementary Physics*, to end of chapter v.

Queen Charlotte's Lying-in Hospital, Marylebone Road; fees, six weeks, £10 10s.; three months, £15 15s., exclusive of board and lodging.

City of London Lying-in Hospital, City Road.
London Fever Hospital, Liverpool Road.

Royal London Ophthalmic Hospital, Moorfields; fees, six months, £3 3s.; perpetual, £5 5s.

Royal Westminster Orthopaedic Hospital, King William Street.

National Hospital for the Paralysed and Epileptic, Queen Square.

Central London Throat and Ear Hospital; fee, three months, £2 2s.; six months, £3 3s.

NOTES CONCERNING THE PROVINCIAL HOSPITALS AND MEDICAL SCHOOLS.

BIRMINGHAM.—**QUEEN'S COLLEGE.**—The classes of Physiology, Histological and Practical Physiology, Chemistry, Practical Chemistry, and Botany, are held in Mason Science College.

Clinical Lectures and Lectures in special departments are given in the General Hospital and the Queen's Hospital, which have a total of upwards of 400 beds. Practical instruction is given in the use of the microscope, laryngoscope, and ophthalmoscope, and surgical appliances; also in case-taking and bandaging, with minor surgery and prescribing. Students must attend each hospital alternately for six months, as directed by the Clinical Board.

Appointments.—*General Hospital*: Resident Medical and Resident Surgical Assistant, two Resident Dressers, tenable for six months. *Queen's Hospital*: Resident Obstetric Assistant, tenable for six months; Resident Dresser, tenable for three months.

Prizes.—The Sands Cox Prize, value £20, annually, to students who have completed their curriculum, after examination in Medicine, Surgery, and Midwifery. Candidates must produce certificates of good conduct from the Warden. Two Ingleby Scholarships, after examination in Obstetric Medicine and Surgery and the Diseases of Women and Children; open to students who have completed the second year. One or more Sydenham Scholarships, £31 10s. each, awarded annually; limited to orphan sons (not exceeding 23 years of age) of legally qualified medical men. One or more Queen's Scholarships, value £31 10s. each, awarded annually after examination; limited to sons (not more than 20 years of age) of legally qualified medical practitioners. The Sydenham and Queen's Scholarships are open to students entering at the College, and are each tenable for three years. Preference in each case is given to sons of former pupils of the College. Applications must be made on or before September 15th in each year. Medals and Certificates of Honour, annually, in each class after examination. Two Senior Medical and two Senior Surgical Clinical Prizes (third and fourth years), value in each department £5 5s.; two Junior Medical and two Junior Surgical Prizes (first and second years), value £3 3s.; Midwifery Prize (third and fourth years), £4 4s.

The Medical Tutor holds classes for Junior students.

Further particulars may be obtained by application to the Rev. the Warden, at the College, or 54, Islington Row, Edgbaston; to Dr. Carter, 51, Newhall Street; to Dr. Malins, 8, Old Square; or to Dr. Hinds, 10, Easy Row, Birmingham.

BRISTOL MEDICAL SCHOOL, AFFILIATED TO UNIVERSITY COLLEGE, BRISTOL.—Clinical instruction is given at the Royal Infirmary and the General Hospital. The Royal Infirmary contains 264 beds; it has a large children's ward, wards for eye cases and other special purposes, and two wards apart from the main building for cases requiring isolation. The General Hospital contains 154 beds; it has a children's ward, and private and isolated wards. The Infirmary and the Hospital each contain a Library and a Museum. Demonstrations and instruction in Diseases of the Eye and the Use of the Ophthalmoscope are given at the Royal Infirmary by Mr. A. W. Prichard on Thursdays at 11, and Mr. Cross on Saturdays at 10.30; and in Diseases of the Throat and Ear, including the Use of the Laryngoscope, etc., on Tuesdays at 11, by Mr. Harsant; instruction in the Diseases of Women is given at the Royal Infirmary by Mr. Greig Smith on Wednesdays at 11, and at the General Hospital by Dr. Lawrence on Mondays and Thursdays at 2. A course of Operative Surgery and Surgical Pathology is given by Mr. Keall on Tuesdays, Wednesdays, and Fridays, at 10 A.M. during the summer; each student performs operations on the dead body. On Tuesdays, Thursdays, and Fridays, at

* The subjects of examination are: Latin: Virgil, *Aeneid*, Book I. Greek: Homer, *Iliad*, Book I. French: Souvestre, *Un Philosophe sous les Toits*. German: Schiller's *Wilhelm Tell*. Mathematics, Arithmetic, Algebra to the end of Progressions, and First two Books of Euclid; Chemistry of the Metalloids; Human Osteology.

For further information, writing to: *Harold and Muriel School, c/o A. N. and S. S.*

9 A.M., Mr. A. W. Prichard gives instruction in Practical Surgery, including surgical diagnosis, the use of apparatus, etc. Mr. D. Davies gives a course of lectures on Hygiene in the Medical School.

Appointments.—*Royal Infirmary*: Students are appointed to Dresserships after the first year of study. Resident Dressers are appointed in weekly rotation. Clinical Clerks are appointed in the third and fourth years of study. A Pathological Clerk is appointed every four months. Obstetric Clerks are appointed from students who have attended lectures on Midwifery and entered to the Surgical Practice. *General Hospital*: Clinical Clerks, Dressers, and Obstetric Clerks are appointed. The Dressers reside in the hospital in rotation, free of expense.—Resident pupils are received at the hospital.

Prizes.—Prizes and Certificates of Honour are awarded after examination in the subjects of each year. In awarding the prizes for Practical and Operative Surgery, the marks obtained in the two courses are added together. Certificates alone are given for Comparative Anatomy and Hygiene.—*Royal Infirmary*: Supple's Medical Prize, and Supple's Surgical Prize, each a gold medal value £5 5s. and about £7 7s. in money, awarded after examination in Medicine and in Surgery respectively. Clarke's Prize (interest of £500) to the most successful student of the third year in the Medical School, if he have attended the Royal Infirmary. Tibbitts Memorial Prize (interest of £315), annually, for proficiency in Practical Surgery. Crosby Leonard Prize (interest of £300) to third year's surgical students, for best written report of ten surgical cases (excluding those taken for the Supple Prize). A prize of £3 3s. to the Pathological Clerk, if he have performed his duties satisfactorily.—*General Hospital*: Martyn Memorial Entrance Scholarship, £20, at beginning of winter session, after examination in subjects of general education. Clarke Surgical Scholarship, £15, annually. Sanders Scholarship (interest of £500); and Lady Haberfield Prize (interest of £1,000 annually); each after examination in Medicine, Surgery, and Diseases of Women. The Martyn Memorial Scholarship and the Lady Haberfield Prize, when not awarded, are available for the remuneration of a Museum Curator, appointed from among the students after competitive examination.

The Medical Tutor assists students in their practical Anatomical and Physiological studies.

Further particulars respecting the Infirmary may be known on application to Mr. F. R. Cross; respecting the Hospital, on application to Dr. Harrison. Information regarding the Medical School will be afforded by the Honorary Secretary, Dr. E. Markham Skerrett.

LEEDS SCHOOL OF MEDICINE.—There are Anatomical, Pathological, Chemical, Botanical, and Materia Medica Museums. The Library is open to students. The Museum of the Literary and Philosophical Society is open to students at a nominal charge.

Mr. McGill lectures on Anatomy at 2 P.M.; and Mr. Horsfall on Physiology, in January, February, and March, on Mondays, Wednesdays, and Fridays, at 3 P.M. The lectures in Chemistry and Botany are given at the Yorkshire College, and those in Zoology and Comparative Anatomy at the Philosophical Hall.

Clinical Instruction, etc.—The General Infirmary has 300 beds. Clinical Lectures are delivered by the Physicians and Surgeons, and classes meet in the wards for practical instruction. Courses of Practical Physiology are held. The Systematic and the Practical courses of Surgery are delivered in alternate winter sessions. Demonstrations of Eye and Ear Diseases, and instruction in the use of the Ophthalmoscope, are given. The West Riding Lunatic Asylum at Wakefield is open for the study of Mental Diseases, and a course of lectures is given by Dr. Major during the summer; the systematic lectures being given at the school, and the clinical at the Asylum, in alternate weeks. Students can also attend the practice of the Leeds Public Dispensary and the Fever Hospital. There are several resident appointments at these institutions.

Hospital Appointments.—Every student must hold the offices of Clinical Clerk and Dresser. A House-Physician and a House-Surgeon are elected from time to time. There are also four Resident Assistant Dressers and Clinical Clerks in the Infirmary; two are selected from the senior students every six months. They hold office for one year, and are provided with apartments and board free of charge.

Prizes.—The Hardwick Clinical Prize, value £10, is given annually for the best reports of medical cases, and the Surgeons' Clinical Prizes of £8, £5, and £3, for the best reports of surgical cases, during the winter session. These prizes are open to students who have completed the first year. The Thorp Scholarship in Forensic Medicine (£10) at the close of each summer session. At the close of each session, Silver and Bronze Medals, Books, and Certificates of Honour, are awarded according to merit.

UNIVERSITY COLLEGE, LIVERPOOL: ROYAL INFIRMARY SCHOOL OF MEDICINE.—There are a Museum containing specimens of Morbid and Comparative Anatomy, a collection of Wax Models, and a collection of Materia Medica, a Library, and a Reading Room.

Instruction.—Clinical lectures are given weekly at the Royal Infirmary, which contains nearly 300 beds; the Lock Hospital adjoining contains 60 beds. Medical and Surgical Tutors attend in the wards from 10 to 12 daily. Dr. Glynn gives practical instruction in Clinical Medicine and the Methods of Physical Diagnosis at 11.15 on Tuesdays during the winter. Besides a winter course of Practical Surgery, a course of Operative Surgery is given in the summer for candidates for the Fellowship of the Royal College of Surgeons, and the degree of Bachelor of Surgery of the University of London. Dr. Gee lectures on Diseases of Children. Students of Midwifery attend the practice of the Ladies' Charity and Lying-in Hospital on payment of a fee of £2 2s. The dissecting-room will be open during the summer. In May, a series of twelve lectures on the Cranial Nerves, and afterwards a course of twenty-four demonstrations on Surgical Anatomy will be given. There will also be a tutorial class of osteology and an examining class in the summer. Dr. Lodge will give a complete course of Physics, beginning in October and ending in June. Mr. F. T. Paul will give a course of Practical Pathological Histology once a week during the summer.

Appointments.—*Royal Infirmary*: Two House-Physicians and three House-Surgeons are appointed for six months after (if there be more applicants than vacancies) competitive examination. Candidates must have a legal qualification. Three Clinical Clerks for each Physician, three or more Dressers for each Surgeon, and two Clerks to the Thornton Wards for Diseases of Women, are appointed for three months in October, January, and May. *Post Mortem* Clerks are appointed for six weeks. All students must perform this duty before the Schedule for the final examination is signed.

Exhibitions and Prizes.—Roger Lyon Jones Scholarships (each £21 for two years): one, as an entrance scholarship to the applicant who shall have taken the highest position in the Honours Division at a Matriculation Examination of the University of London in the same year, or (failing such candidate) at the Preliminary Scientific M.B. Examination. Another, of the same value, to be awarded by competition in the last week of September. The successful candidates must become composition ticket holders of the School and attend the classes in a satisfactory manner. Another of the Scholarships to a student who has completed two years in July after examination in Anatomy, Physiology, Chemistry, Botany, Materia Medica, and Practical Chemistry, on condition of his remaining a pupil of the School. Derby Exhibition of £16, awarded after examination; open to third and fourth years' students. Gold Medal for Anatomy and Physiology, presented by Mr. Torr, M.P., for second year's students; and one, also for Anatomy and Physiology, presented by Dr. J. Bligh, for students of the first year. Medals and Certificates of Honour for groups of subjects: viz., second year, Advanced Anatomy and Physiology; first year, Elementary Anatomy and Physiology, and Chemistry, in first and second winter sessions. Silver Medal and Certificates in Medicine, Surgery, Pathology, Midwifery, Botany, Materia Medica, Practical Chemistry, and Medical Jurisprudence (including Toxicology). Two prizes, and certificates, for Midwifery, by the lecturer on that subject. Two prizes for the best sets of Microscopical Preparations made in the Physiological Laboratory during the winter.

The *Debating Society* meets eight or ten times during the winter session on Saturday evenings, for the reading and discussion of papers. Prizes are given for the best papers, and for the best collection of clinical reports.

Communications should be addressed to the Dean, Dr. Caton.

OWENS COLLEGE (MANCHESTER ROYAL) SCHOOL OF MEDICINE.—Museums of Human and Comparative Anatomy and of Materia Medica, and Psychological and Chemical Laboratories, are connected with the College.

In the College, the following courses (in addition to those mentioned in the table, are given in the summer: Diseases of Children, by Dr. H. Ashby (W. and F., 3 P.M.); Mental Diseases, by Mr. G. W. Mould (Tu. and Th., 4 P.M.); Practical Morbid Histology, by Dr. Dreschfeld (Th. and S. 8.45 A.M.); Hygiene, by Dr. A. Ransome (Tu. and F., 2 P.M., June and July); and Embryology (lectures and laboratory work), by Dr. A. M. Marshall (M., W. and F., 1.30 P.M.); Comparative Osteology (M., W. F., 11.30). Mr. Thomas Jones gives a course of Practical and Operative Surgery (Tu. and Th., 1 P.M.) in the winter, and a special course of Operative Surgery (M. 4 P.M.) in the summer. Mr. A. Young gives a course of Surgical Pathology in

pital; Northampton General Infirmary; Nottingham General Hospital; Radcliffe Infirmary, Oxford; Salisbury General Infirmary; Salop Infirmary; Staffordshire General Infirmary; North Staffordshire Infirmary; Wolverhampton and Staffordshire General Hospital; Sussex County Hospital; Worcester Infirmary.

NOTES ON THE MEDICAL SCHOOLS AND HOSPITALS IN SCOTLAND.

UNIVERSITY OF ABERDEEN.—Practical Toxicology, Dr. F. Ogston, jun. (sum.). Fee to each class, £3 3s., except Anatomical Demonstrations, £2 2s.; Practical Midwifery and Practical Pharmacy, and Pathological Anatomy, with Demonstrations, each £2 2s.; Practical Ophthalmology and Practical Toxicology, each £1 1s. Matriculation fee, both sessions, £1; summer session alone, 10s.

ROYAL INFIRMARY, ABERDEEN.—Perpetual fee, £6; or first year, £3 10s.; second year, £3. Clinical Medicine and Clinical Surgery, each £3 3s. The General Dispensary and the Lying-in, Vaccine, and Eye Institutions are open daily. Clinical instruction is given in the Royal Lunatic Asylum for three months in the year.

UNIVERSITY OF EDINBURGH.—Minimum expenses for Lectures and Hospital Practice, with Examinations, £107 18s.: or: first summer, £9 8s.; first winter, £18 17s.; second summer, £8 8s.; second winter, £15 14s.; third summer, £3 3s.; third winter, £18 17s.; fourth summer, £6 6s.; fourth winter, £16 15s.; final examination, £10 10s.: Sessional Fee for Materia Medica, Chemistry, Surgery, Institutes of Medicine, Midwifery, Clinical Surgery (winter), Clinical Medicine (winter), Anatomy, Practice of Physic, Pathology, Botany (with Garden Fee of 5s.), Natural History, Medical Jurisprudence, each £4 4s.; Practical Anatomy, Practical Physiology, Practical Chemistry, Practical Pathology, Clinical Medicine (summer), Clinical Surgery (summer), Operative Surgery, Mental Diseases, Practical Materia Medica and Pharmacy, £3 3s.; Anatomical Demonstrations, Obstetric and Gynecological Operations, Organic Chemistry (advanced), Practical Natural History, Vegetable Histology, each £2 2s.; Practical Midwifery, £1 4s.; Vaccination, £1 1s. The fee for a second course of any lectures is £3 3s.; any subsequent course is free. For a perpetual ticket at the beginning of the first course, the fee is £6 6s. Every student, before entering with any Professor, must produce a matriculation-ticket for the ensuing session, for which a fee of £1 is paid at the beginning of each winter session. Students first entering in the summer session pay a fee of 10s.—The Library is open every lawful day during the winter session, from 10 A.M. till 4 P.M.; on Saturdays, till 1 P.M.

The following means are afforded for practical instruction, in addition to those mentioned in the table at page 486: Morbid Anatomy and Practical Pathology, by Dr. Woodhead, under the superintendence of Dr. Greenfield; Tutorial Class of Clinical Medicine, in the Royal Infirmary, by the Clinical Tutor, Dr. Murdoch Brown, under the superintendence of the Clinical Professor; Tutorial Class of Clinical Surgery, by the Clinical Tutor, Mr. Cotterill, under the superintendence of the Clinical Professor; Operative Surgery, Bandaging, and Surgical Appliances, under the superintendence of the Professor of Surgery; Obstetric Operations, by Dr. Simpson and Dr. Barbour; Chemistry (advanced class), by Dr. Crum Brown; Practical Instruction in Mental Diseases at Morningside Asylum, by Dr. Clouston, on Mondays, Wednesdays, and Fridays, at 3. The Anatomical Museum, under the superintendence of Mr. Turner; Chemical Laboratories, under Dr. Crum Brown and Assistants; Physiological Laboratory, under Dr. Rutherford and Assistants; Physical Laboratory, under Mr. Tait; Natural History Museum, under the superintendence of Dr. Cossar Ewart; Medical Jurisprudence Laboratory, under the superintendence of Dr. MacLagan and Dr. J. A. Gray; Royal Botanic Garden, Herbarium and Museum, under the superintendence of Dr. Dickson; Materia Medica Museum and Laboratory, under the superintendence of Dr. Fraser and Dr. M. Hay, are open to students.

Fellowships, etc.—Falconer Memorial Fellowship, for the encouragement of the study of Palæontology and Geology, value £100, tenable for two years, open to Graduates in Science or Medicine of the University of not more than three years' standing. Syme Surgical Fellowship, value about £100, tenable for two years, open to Bachelors of Medicine of not more than three years' standing, who shall present the best Thesis on a Surgical subject, giving evidence of original research or practical talent. Leckie-Mastier Fellowship, annual proceeds of £2,000, tenable three years, open to Bachelors of Medicine of not more than three years' standing; next award in November 1882. Sibbald

Scholarship, £40, tenable for three years; subjects: Chemistry, Botany, and Natural History; next competition in October 1883. Hope Prize Scholarship, about £30. Thomson Scholarship, value £40, in October 1882; subjects: Botany, Zoology, and Elementary Mechanics. Six Vans Dunlop Scholarships, each about £100, tenable for three years; one, in March 1884, for highest marks at Preliminary Examinations; one, in July 1884, for highest marks (not less than 60 per cent) in first year's subjects—Botany, Zoology, Chemistry, and Anatomy; one, in March 1884, for highest marks (as above) in Physiology and Surgery; three (one annually in April) at end of third winter, for highest marks at a special examination on Anatomy, Physiology, Materia Medica, and Pathology. Vans Dunlop Scholarships in Chemistry and Clinical Pharmacy, and in Natural History, including Botany and Geology, each £100, tenable for three years. Coldstream Memorial Medical Missionary Scholarship, proceeds of at least £400, tenable for four years. Buchanan Scholarship, annual proceeds of £1,000, yearly, for proficiency in Midwifery and Gynaecology. Murchison Memorial Scholarship, annual proceeds of about £1,000; alternately in Edinburgh and London; next competition in Edinburgh in 1883. Abercromby Bursary of £20, for four years, to students who have been brought up in Heriot's Hospital. Two Sibbald Bursaries, value £30 each. Eight Thomson Bursaries, value £25 each, tenable four years, in March and October, at Preliminary Examination in the subjects of General Education. Four Grierson Bursaries, each £20 *per annum*; in the absence of certain preferential candidates, open to competition: one to the student who shall pass the best examination in the subjects of Preliminary Education; one open to student commencing the second winter session; after examination in Chemistry, Botany, and Natural History; one to student commencing the third winter session, after examination in Anatomy and Physiology; one to student commencing the fourth winter session, after examination in Materia Medica and Pathology. Tyndall Bruce Bursary, £25, to students at end of third winter session; subjects of examination, Materia Medica and Pathology. Two Dr. John Aitken Carlyle's Medical Bursaries, £25 each, for one year, for proficiency in ordinary class-examinations: one to a first year's student, in Anatomy and Chemistry; one to a second year's student, in Anatomy and Physiology. Two Mackenzie Bursaries, proceeds of £1,000, annually to students in junior and senior classes of Practical Anatomy, for industry and skill. Competitors for the Bursaries must have studied the subjects of examination at the University of Edinburgh. Gold medals are given on graduation to Doctors of Medicine whose theses are deemed worthy. Ettles Medical Prize, value about £40, to the most distinguished Graduate in Medicine of the year. Beane Prize, value about £40, to the candidate for degrees of M.B. and C.M., who shall obtain most marks in Anatomy, Surgery, and Clinical Surgery. Hope Chemistry Prize, value £100, open to all students of the University not more than twenty-five years of age, who have worked for eight months, or for two summer sessions, in the chemical laboratory. Neil Arnott Prize, about £40, to the candidate who, having been a medical student of the University during either a summer or a winter session, shall pass with the greatest distinction the ordinary examination in Natural Philosophy for the degree of M.A. The successful candidate must continue a medical student of this University during the winter session. Ellis Prize: accumulated proceeds of about £500, every three years, for an Essay or Treatise in some subject of Animal or Vegetable Physiology. Goodsir Memorial Prize, £60, awarded triennially. Wightman Prize, to student of class of Clinical Medicine for best report and commentary on cases treated in the wards. Cameron Prize, income of £2,000, yearly, to the members of the medical profession who shall have made the most valuable addition to Practical Therapeutics during the preceding year.

EDINBURGH ROYAL INFIRMARY.—Fees: one month, £1 6s.; three months, £2 2s.; six months, £4 4s.; one year, £6 6s.; perpetual, £12. Separate payments, amounting to £12 12s., entitle to a perpetual ticket. Clinical Medicine and Clinical Surgery, each £4 4s. for the course in winter, and £3 3s. in summer. Resident Physicians and Resident Surgeons are appointed; they live in the house for six months free of charge. Candidates must be registered as legally qualified practitioners. Non-resident Clinical Clerks are appointed. Each surgeon appoints from four to nine Dressers for six months. Assistants in the Pathological Department are appointed by the Pathologist. Instruction is given in special departments.

SCHOOL OF MEDICINE, EDINBURGH.—In the table at page 486, the lecturers marked *a.* give their instruction in Surgeons' Hall; *b.* at Minto House; *c.* at 20, Marshall Street; *d.* at Park Place. The following courses of instruction are given in addition to those mentioned at page 486: Tutorial Classes of Physical Diagnosis and of Practical

Surgery at the Royal Infirmary; Diseases of the Ear, Dr. Kirk Duncanson, lectures, Fridays 4 (winter), and Thursdays and Fridays, 11 (summer), clinical instruction: Mondays, Thursdays, and Saturdays, 12 (winter and summer); and Dr. P. McBride, Mondays and Thursdays, 4 (summer), Diseases of the Eye; Dr. J. Robertson, Clinical instruction Monday, and Thursdays, 7 P.M. (winter and summer); Vaccination, six weeks' courses in winter and summer, Dr. Husband; Diseases of Children, Dr. J. Andrew and Dr. J. Carmichael; clinical instruction through year at the Children's Hospital, lectures in summer on Mondays and Thursdays, by Dr. Andrew at 10, and by Dr. Carmichael, at 9; Practical Medicine and Diagnosis, Dr. Byrom Bramwell, daily, 9 (summer); Practical Midwifery, with clinical instruction, in February, March, and April, Dr. A. Macdonald, at 5; Practical Gynecology, with clinical instruction, Dr. Halliday Croom, at 5 (winter), also in summer; Practical Midwifery, with clinical instruction, Dr. C. Bell, throughout year, and Dr. Keiller (summer); Practical Midwifery and Clinical Gynecology, Dr. P. Young, Fridays, at 1 (summer and winter); Practical Gynecology, Dr. D. B. Hart, 5 (winter); Diseases of the Skin, Dr. A. Jamieson, Tuesday, Thursday, and Friday, 3 (summer); Insanity, with practical instruction, Dr. Batty Tukey, Monday and Thursday, at 2 (summer); Dr. Littlejohn and Mr. Aubrey Husband Lecture on Public Health in conjunction with Medical Jurisprudence. Mr. Geddes and Mr. Beddard give instructions in Practical Natural History, at Minto House; Mr. Daniel gives a course of Medical Physics at Minto House, at 3 P.M.

Fees.—For a first course of lectures, £3 5s.; for a second, £2 4s.; perpetual, £5 5s. To those who have already attended a first course in Edinburgh, the perpetual fee is £2 4s. Practical Anatomy (six months), £3 3s.; Anatomical Demonstrations, £2 2s.; perpetual, £4 4s.; Practical Anatomy with Demonstrations, £4 4s.; Practical Chemistry, £3 3s.; Analytical Chemistry, £2 a month, £5 for three months, or £10 for six months; Practical Materia Medica (including Practical Pharmacy), Diseases of the Eye, Diseases of the Ear, Diseases of Children, and Diseases of the Skin, each £2 2s.; Practical Physics, £3 3s.; Practical Zoology, £2 12s. 6d.; Vaccination, £1 1s. Summer courses of Clinical Surgery and Clinical Medicine, each £2 4s.; Practical Anatomy, including Demonstrations, Operative Surgery, and Medical Anatomy and Physical Diagnosis, each £2 2s.; Insanity, £1 1s. The minimum cost of education in this school for the double qualification of the Royal Colleges of Physicians and Surgeons of Edinburgh, including the examination fee, is £95, payable by yearly instalments; for the single diploma of either Physician or Surgeon, including the examination fee, £85.

Practical instruction in various subjects may also be obtained on payment of moderate fees at the Sick Children's Hospital, Royal Public Dispensary and New Town Dispensary, Royal Maternity Hospital, and the Edinburgh Eye Infirmary.

UNIVERSITY OF GLASGOW.—Fees, each course, £3 3s., except Anatomy in summer and Instruction in Insanity, and Operative Surgery, each £2 2s., and Lectures on the Eye, £1 1s. In most of the courses for which £3 3s. is charged, the fee for a second session is £2 2s.; for a third session, £1 1s.

The Chemical Laboratory is open from 10 A.M. to 4 P.M. (fee £10 10s. in winter and £5 5s. in summer); the Physiological Laboratory from 9 A.M. to 4 P.M., winter and summer; and the Botanical Laboratory from 9 A.M. to 4 P.M. in summer (fee £2 2s.). Demonstrations in the Botanical Garden are given in summer.

GLASGOW.—ANDERSON'S COLLEGE.—The following courses are given in addition to those at p. 486. In winter, Senior Anatomy, Dr. Buchanan, 4 P.M.; in summer, Osteology, Dr. Buchanan, as may be arranged; Public Health, Dr. Christie, 1 P.M.; Aural Surgery, Dr. Barr, Thursday, 3 P.M.; Practical Medical Chemistry, Mr. Dittmar, Tuesday, Wednesday, and Thursday, 4 P.M. The Chemical Laboratory is open daily from 10 to 5. Students of the College are admitted to the practice of the Ophthalmic Institution on payment of a matriculation fee of 5s.

Fees.—Each course of lectures (except Anatomy), first session, £2 2s.; second session, £1 1s.; afterwards free. Anatomy (including Dissecting-room), first session, £4 4s.; second session, £4 4s.; third session and perpetual, £1 1s.; summer (including Practical Anatomy), £1 1s.; Osteology, £1 1s. Students who have attended classes at other schools will be admitted to such classes as they may have attended elsewhere at reduced fees. Fees for all the Lectures and Hospital Practice required of candidates for the diplomas of Physician and Surgeon, £48.

Scholarships, etc.—A Medical Scholarship of £10, tenable for two years, to be competed for in November by students entering on their

second winter. The Kerr Bursary, value £12, tenable for three years; open to students of the junior Anatomy class. Prizes of £5 in classes of junior Anatomy and of Chemistry.

A Dispensary is connected with Anderson's College. Students have the privilege of visiting and treating patients at their own homes, being assisted by a specially appointed qualified practitioner.

GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE.—In addition to the subjects mentioned in the table at page 486, lectures are given in the summer on Aural Surgery, by Dr. Johnston Macfie at 4 on Thursdays, and on Mental Diseases by Dr. A. Robertson at 12 noon. The City Parochial Asylum under his charge is free to students of this school.

Fees.—For each course, first session, £2 2s.; second session and perpetual, £1 1s. Students who have attended a first course elsewhere can enter on the second course on payment of £1 1s. Anatomy: first winter session, £4 4s.; summer session, £1 11s. 6d.; second winter session, £4 4s.; afterwards, for Lectures and Practical Anatomy, £1 1s. per session. Lectures on Diseases of the Ear, £1 1s.; with Clinique to those who are not students of the hospital, £2 2s. Clinique on Dental Surgery free to students of the hospital; to others, £5 one year; perpetual, £10. Lectures on Diseases of the Eye, £1 1s.

GLASGOW WESTERN MEDICAL SCHOOL.—This school is situated near the Western Infirmary, where students obtain their hospital practice and clinical lectures. The class-rooms have been newly arranged and enlarged. The attention of students is directed to the facilities for the study of Practical Anatomy and Operative Surgery, the supply of subjects being practically unlimited. The Dissecting-rooms are open for work from the beginning of October till the end of July.

The lectures qualify for the University of Glasgow, the Faculty of Physicians and Surgeons of Glasgow, and the other Corporations.

Fees.—For each course of Lectures, first session, £2 2s.; second session, £1 1s. Students who have attended a first course elsewhere pay £1 1s. Anatomy, including Practical Anatomy, £4 4s.; summer session, £1 11s. 6d.

GLASGOW ROYAL INFIRMARY.—The number of beds is 532; 214 for medical and 318 for surgical cases. There are wards for the treatment of Diseases of Women, and of Venereal Diseases in Males. Dr. Eben Watson sees cases of Diseases of the Throat at the Dispensary at 10 A.M. on Tuesdays and Fridays. Dr. Macfie attends cases of Disease of the Ear at 3.30 on Thursdays and Saturdays. Courses of Clinical Medicine and Surgery are given by the Physicians and Surgeons, and *post mortem* examinations are conducted by the Pathologist. Operations on Wednesdays and Saturdays at 9.

Appointments.—Five Physicians' and five Surgeons' Assistants are boarded and lodged in the hospital at the rate of £25 *per annum*. These appointments can be held for twelve months, and are open to students who have passed all their examinations except the last, or to gentlemen who have a qualification in Medicine or Surgery. Clinical Clerks and Dressers are selected from the students without additional fee.

Fees for Hospital Practice and Clinical Lectures: first year, £10 10s.; second year, £10 10s.; afterwards free: for six months, £6 6s.; three months, £4 4s. To perpetual students of other hospitals where the perpetual fee is equal to that at the Infirmary, £2 2s. for six months, £3 3s. for one year. For Vaccination certificate, £1 1s.

GLASGOW WESTERN INFIRMARY.—Each course of clinical instruction extends over three months. Three courses are given in each year. No student must attend the same clinical teacher for more than two courses consecutively.

Fees, first year, £10 10s., giving privilege of admission and three courses of Clinical Instruction. A second year's payment of £10 10s. in addition, or the payment of fees to the amount of £21, confers a life privilege of admission to the Infirmary and clinical instruction. Hospital attendance and clinical instruction for six months, £7 7s.; three months, £4 4s. Students having a perpetual ticket for any other hospital pay £3 3s. for a year, or £2 2s. for six months.

There is an out-door Obstetrical Department in connection with the Infirmary; fee, £1 1s.

GLASGOW LYING-IN HOSPITAL.*—This hospital contains twenty-four beds for in-patients. The students (granted when necessary by one of the accoucheurs) attend the women who are delivered at their own homes. Fees for six months, £1 1s.

GLASGOW EYE INFIRMARY.†—Fee, six months, £2 2s.; three months, £1 1s.

* Consulting Physician, Dr. Leishman; Consulting Surgeon, Dr. G. Buchanan; Physicians-Accoucheur, Dr. Hugh Miller and Dr. S. Swan; Assistant-Physician, Dr. W. J. Brock; Out-door Physicians, Dr. J. Dunlop, Dr. J. Mour, Dr. I. F. Gilmour, Dr. W. Muir, Dr. A. Sloan, and Dr. H. B. Wilson.

† Consulting Surgeon, Dr. G. Buchanan; Surgeons, Dr. T. Reid, Dr. T. S. Meigham, Mr. H. L. Clark; Assistant-Surgeons, Mr. J. C. Renton, Mr. D. N. Knox, Dr. J. Macfie.

1. ALL natural-born subjects of His Majesty between twenty-two and twenty-eight years of age at the date of the examination, and of sound bodily health, may be candidates. They may be married or unmarried. They must possess a Diploma in Surgery, or a licence to practise it, as well as a Degree in Medicine, or a licence to practise it in Great Britain or Ireland. 2. The candidate must subscribe and send in to the Military Secretary, India Office, Westminster, so as to reach that address at least a fortnight before the date fixed for the examination, a declaration, stating his readiness to engage for the service and to proceed to duty immediately on being gazetted; also that he labours under no mental nor constitutional disease; nor any imperfection or disability that can interfere with the most efficient discharge of the duties of a medical officer. A schedule of the degrees or licences possessed by the candidate, with the sources and dates thereof, must be appended. 3. This declaration must be accompanied by the following documents: *a.* Proof of age, either by extract from the register of the parish in which the candidate was born, or, where such extract is unavailable, by his own declaration (pursuant to the Act 5 and 6 Will. 4, c. 62), form of which can be obtained at the India Office. A certificate of baptism which does not afford proof of age will be useless; *b.* A certificate of moral character from a magistrate or a minister of his religious denomination to which the candidate belongs, who has personally known him for at least the two years preceding the date of the application; *c.* A certificate of registration, in accordance with the Medical Act of 1858, of the degrees, diplomas, and licences possessed by the candidate. 4. The physical fitness of candidates will be determined previous to examination by a Board of Medical Officers, who are required to certify that the candidate's vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. A moderate degree of myopia would not be considered a disqualification, provided it did not necessitate the use of glasses during the performance of operations, and that no organic disease of the eyes existed. Every candidate must also be free from organic disease of other organs, and from constitutional weakness, or other disability likely to unfit him for military service in India. 5. On producing the foregoing qualifications, the candidate will be examined by the Examining Board in the following compulsory subjects, and the highest number of marks attainable will be distributed as follows: *a.* Anatomy and Physiology, 1,000 marks; *b.* Surgery, 1,000; *c.* Medicine, including Therapeutics, the Diseases of Women and Children, 1,000; *d.* Chemistry and Pharmacy, and a Practical Knowledge of Drugs, 100. The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside. 6. The eligibility of each candidate for the Indian Medical Service will be determined by the result of the examinations in these subjects only. 7. Candidates who desire it will be examined in French, German,

and Hindustani, Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to *Materia Medica*. [Candidates desiring to be examined in any of these subjects must state the same in the declaration.] 8. The number of marks gained in these subjects will be added to the total number of marks obtained in the obligatory part of the examinations by candidates who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of modern languages and natural sciences. 9. The maximum number of marks allotted to the voluntary subjects will be as follows: French, German, and Hindustani (150 each), 450 marks; Natural Science, 300. 10. The subjects for this part of the examination will be taken from the following books: *Animal Kingdom*, by W. S. Dallas, F.L.S.; *Outlines of the Structure and Functions of the Animal Kingdom*, by Rymer Jones; or *Cours Élémentaire d'Histoire Naturelle*, par Milne Edwards; *Lindley's School Botany*, *Lindley's Medical and Economic Botany*, *Hensley's Elementary Course of Botany*; *Elements of Natural Philosophy*, by Golding Bird and C. Brooks; *Physical Geography*, by Mrs. Somerville. 11. The Examiners in London will prepare a list in order of merit, with the marks affixed in the different subjects, to be transmitted to the Director-General and communicated to the Professors of the Army Medical School. If any candidate is found to be deficient in any particular subject, this shall be stated, in order that he may receive special instruction on the point at Netley. 12. After passing their preliminary examination, candidates will be required to attend one entire course of Practical Instruction at the Army Medical School, before being admitted to examination for a commission, on—1. Hygiene; 2. Clinical and Military Medicine; 3. Clinical and Military Surgery; 4. Pathology of Diseases and Injuries incident to Military Service. These courses are to be of not less than four months' duration; but candidates who have already gone through a course at Netley as candidates for the Army or Navy Medical Service may, if thought desirable, be exempted from attending the School a second time. 13. During the period of his residence at the Army Medical School, each candidate will receive an allowance of eight shillings *per diem*, with quarters, or, when quarters are not provided, with the usual lodging and fuel and light allowances of subalterns, to cover all costs of maintenance; and he will be required to provide himself with uniform (*viz.*, the regulation undress uniform of a surgeon of the British service, but without the sword). 14. All candidates will be required to conform to such rules of discipline as the Senate may from time to time enact. 15. At the conclusion of the course, candidates will be required to pass an examination on the subjects taught in the School. The examination will be conducted by the Professors of the School. The Director-General, or any medical officer deputed by him, may be present and take part in the examination. If the candidate give satisfactory evidence of being qualified for the practical duties of an Army Medical Officer, he will be eligible for a commission as surgeon. 16. The position of the candidates on the list of surgeons will be determined by the combined results of the preliminary and of the final examinations; and, so far as the requirements of the service will permit, they will have the choice of Presidency in India, according to their position in that list. The examinations for admissions to the Indian Medical Service will usually take place twice a year—*viz.*, in February and in August.

NAVAL MEDICAL SERVICE.

1. EVERY Candidate for admission into the Medical Department of the Royal Navy must be not under 21 nor over 28 years of age on the day that he presents himself for examination. He must produce a certificate from the District Registrar of the date of his birth; or, in default, a declaration made before a magistrate, from one of his parents or other near relative, stating the date of birth. He must also produce a certificate of moral character, signed by a clergyman or a magistrate, to whom he has been for some years personally known, or by the President or senior Professor of the College at which he was educated. 2. He must be registered, under the Medical Act in force at the time of his appointment, as possessing two diplomas or licences recognised by the General Council, one to practise Medicine and the other Surgery in Great Britain and Ireland. 3. He must be free from organic disease, and will be required to make a declaration that he labours under no mental or constitutional disease or weakness, or any other imperfection or disability that can interfere with the most efficient discharge of the duties of a Medical Officer in any climate. His physical fitness will be determined by a Board of Medical Officers, who are to certify that his vision comes up to the required standard, which will be ascertained by the use of Snellen's Test-Types. He must also declare his readiness to engage for general service at home or abroad as required. 4. Candidates will be examined by the Examining Board in the fol-

lowing subjects:—Anatomy and Physiology; Surgery; Medicine, including Therapeutics and the Diseases of Women and Children; Chemistry and Pharmacy, and a practical knowledge of Drugs. (The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the Application of Surgical Apparatus, and the examination of Medical and Surgical patients at the bedside.) The eligibility of each Candidate will be determined by the result of the examinations in these subjects only. Candidates who desire it will be examined in Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to *Materia Medica*, also in French and German; and their position on the list of successful competitors will be improved by the number of marks gained in Natural Science and Modern Languages. 5. Every Candidate, immediately after passing this examination, will receive a Commission as a Surgeon in the Royal Navy, and will undergo a course of practical instruction in Naval Hygiene, etc., at Haslar Hospital.

PUBLIC HEALTH OR STATE MEDICINE.

SUBJOINED are the regulations of the Examining Bodies which grant degrees or certificates in Public Health or State Medicine.

UNIVERSITY OF CAMBRIDGE.—Any person whose name is on the *Medical Register* of the United Kingdom may present himself for examination, provided he be in his twenty-fourth year at least when he presents himself for the first part of the examination, and have attained twenty-four years of age before he presents himself for the second part.

Part I comprises Physics and Chemistry; the Principles of Chemistry, and methods of analysis, with especial reference to analyses of air and water; application of the microscope; the laws of heat, and the principles of pneumatics, hydrostatics, and hydraulics, with especial reference to ventilation, water-supply, drainage; construction of dwellings, disposal of sewage and refuse, and sanitary engineering in general.

Part II will comprise laws of the realm relating to public health; sanitary statistics; origin, propagation, pathology, and prevention of epidemic and infectious diseases; effects of overcrowding, vitiated air, impure water, and bad or insufficient food; unhealthy occupations and the diseases to which they give rise; water-supply and drainage in reference to health; nuisances injurious to health; distribution of diseases within the United Kingdom, and effects of soil, season, and climate.

The examination in both parts will be oral and practical as well as in writing. Candidates may present themselves for either part separately, or for both together.

Every candidate must pay a fee of £4 4s. before admission to *each* part of the examination.

Every candidate who has passed both parts of the examination to the satisfaction of the examiners will receive a certificate testifying to his competent knowledge of what is required for the duties of a Medical Officer of Health.

The next examination will begin on October 4th. Candidates (whose names must be on the *Medical Register* of the United Kingdom) should send their names to Professor Liveing, Cambridge, before September 28th.

The following suggestions have been drawn up as some guide to candidates preparing for the examination: *Part 1.* Candidates will be expected to understand the application of the general laws of Chemistry to such cases as occur in the practice of an Officer of Health, but will not be expected to show an acquaintance with those details of Chemistry which have no direct bearing on sanitary questions. No importance will be attached to the use of any particular chemical notation. It is not expected that Officers of Health will in general be able to act as public analysts, but that they will know the methods of analysis, and be able to interpret correctly the results of professional analysts. The kinds of applications of the several sciences of which the candidates are expected to show a competent knowledge will be best understood by a perusal of *Parke's Manual of Practical Hygiene*. In the actual analysis of water and air, candidates will not be expected to make complete quantitative analyses, but to know how to apply ordinary chemical methods for the detection and discrimination of mineral and organic substances in the samples. *Part 2.* Candidates will be expected to show an acquaintance with the sanitary laws in force in England; but if any candidate has information respecting alternative laws in force in the metropolis or in Scotland or in Ireland, opportunity will be given him, alternatively, of showing his acquaintance with such laws. The rest of Part 2, besides the subjects expressly mentioned, is to be understood as including those of Vaccination, Disinfectants, the

management of outbreaks of Infectious Diseases, with the construction of Hospitals, temporary or permanent; Endemic Diseases; Birth-rates and Death-rates; the qualities and suitability of various Waters used for domestic purposes; the inspection of factories, mines, workshops, and common lodging-houses.

UNIVERSITY OF LONDON.—A special examination is held once in every year in subjects relating to Public Health, and commences on the second Monday in December. No candidate is admitted to this examination unless he have passed the second examination for the degree of Bachelor of Medicine in this University at least one year previously, nor unless he have given notice of his intention to the registrar at least two calendar months before the commencement of the examination. The fee for the examination is £5, which must be previously paid to the registrar. If, after payment of his fee, a candidate withdraw his name, or fail to present himself at the examination, or fail to pass it, the fee is not returned to him; but he may enter for any one subsequent examination without the payment of any additional fee, provided that he give notice to the registrar at least one calendar month before the commencement of the examination. Candidates are examined in the following subjects: 1. *Chemistry and Microscopy*, as regards the examination of air, water, and food; 2. *Meteorology*, as regards general knowledge of meteorological conditions, and the reading and correction of instruments; 3. *Geology*, as regards general knowledge of rocks, their conformation and chemical composition, and their relation to underground water, and to drainage and sources of water supply; 4. *Physics and Sanitary Apparatus*; the laws of heat, mechanics, pneumatics, hydrostatics, and hydraulics, in relation to the construction of dwellings, and to warming, ventilation, drainage, and water-supply, and to apparatus for these and other sanitary uses; the reading of plans, sections, scales, etc., in regard of sanitary constructions and appliances; 5. *Vital Statistics*, as regards the methods employed for determining the health of a community; birth-rate; death-rate; disease-rate; life-tables; duration and extent of life; present amount of mortality at the various ages, and its causes, in different classes and communities; practical statistics of armies, navies, civil professions, asylums, hospitals, dispensaries, lying-in establishments, prisons, in-door and out-door paupers, friendly societies, sick-clubs, medical and surgical practice, towns; 6. *Hygiene*, including the causation and prevention of disease. Reference shall be had to such matters as the following: parentage; temperament; morbid diatheses; congenital diseases and malformations; effects of close interbreeding; special natures at particular periods of life; physical regimen of different ages; earth and climate, and changes of season; dampness of soil; malaria; conditions of healthy nourishment; conditions of healthy lodgment; conditions of healthy activity; hygiene of particular establishments and particular classes of population; disease as distributed in England; particular diseases, as regards their incidence and preventability; processes of contagion in infectious diseases; disinfectants, and establishments for disinfection; quarantine; hospitals for infectious disease; conveyance of the sick; vaccination; prostitution; diseases of domestic animals in relation to the health of man; rabies; diseases of the vegetable kingdom, and failures of vegetable crops in relation to the health of man; famine-diseases; poisons in manufacture, and commercial and domestic use; 7. *Sanitary Law*, as regards the Public Health Act, 1875; the Vaccination Acts; the Rivers Pollution Prevention Act; the Sale of Food and Drugs Act; the Artisans' and Labourers' Dwellings Improvement Act, 1875; the Acts regulating the Medical Profession and the Practice of Pharmacy; the Acts relating to Factories and Workplaces, and to the Detention and Care of Lunatics. The examination is written and practical, and extends over four days. Candidates are not approved by the examiners unless they have shown a competent knowledge in all the principal subjects. The examination is held in the principal hall of the University of London, and the successful candidates are announced in the following manner: The names of the successful candidates are printed in alphabetical order in the *Lancet*, and the names of those who have distinguished themselves the most receives a certificate under the seal of the University. A certificate is delivered at the public examination.

UNIVERSITY OF DURHAM.—Degrees of proficiency in Sanitary Science are granted under the following regulations. 1. The candidate must be a registered medical practitioner. 2. He must have attended one course of Lectures on Public Health at the University of Durham College of Medicine, Newcastle-on-Tyne, during one winter session.

3. He must pass an examination in the following subjects: *a. Physics*—Laws of light, heat, hydrodynamics, and pneumatics; *b. Chemistry*—As applied to the detection of noxious gases and atmospheric impurities, analysis of air and water; *c. Sanitary Legislation*—Knowledge of the Acts of Parliament in force for the preservation and protection of health; *d. Vital Statistics*—Rates of births, deaths, and marriages; the methods of calculation, classification, and tabulation of returns of sickness and mortality; data and conclusions deducible therefrom; *e. Meteorology, Climatology, and Geographical Distribution of Diseases in the United Kingdom*; *f. Sanitary Medicine*, more especially in relation to epidemic, endemic, epizootic, and communicable diseases; diseases attributable to heat, cold, or damp, insufficiency or impurity of air, food, or drink; habitation, occupation, over-exertion, intemperance, heredity; preventive measures, vaccination, isolation, disinfection; the regulation of noxious and offensive manufactures and trades; the removal of nuisances; *g. Practical Hygiene*, in reference to site, materials, construction, lighting, ventilation, warmth, dryness, water-supply, and refuse-disposal of dwellings, schools, hospitals, and other buildings of public and private resort; action with respect to nuisances and outbreaks of disease; other duties of a medical officer of health.—The examination is by written papers, practical, and *visu voce*. In the practical examination, the candidate is required: 1. To report upon the condition of some actual locality; 2. To analyse liquids and gases; 3. To explain the construction and the uses of instruments employed in meteorology; 4. To make microscopic examinations. The fee is £5 5s. The next examination will commence on October 9th, 1882, and April 3rd, 1883.

B. Certificate of Proficiency in Sanitary Science for Medical Officers of Health.—The candidate must have obtained a registrable qualification before January 1st, 1878, and must have acted as a medical officer of health for five years. He must not be under thirty years of age. He must pass the same examination as particularised under the heading A., and must write an essay upon some practical sanitary subject, and be examined upon the essay and upon other sanitary questions. The fee is £10 10s.

UNIVERSITY OF EDINBURGH.—This University gives the degrees of Bachelor and Doctor of Science in Public Health, under the following conditions. *Bachelor of Science.*—1. The candidate must be a graduate in Medicine of a British University, or of such Colonial, Indian, or Foreign University as may be specially recognised by the University Court. 2. He must be matriculated for the year in which he appears for examination. 3. If the candidate have not passed an *annus medius* in the University of Edinburgh, he must, before presenting himself for examination, have attended in the University at least two courses of instruction, scientific or professional, bearing on the subjects of the examination. 4. There are two examinations for the degree of Bachelor of Science in the department of Public Health. A candidate who has passed the first examination may proceed to the second at the next period fixed for this, or at any subsequent examination. 5. The candidate must produce evidence that, either during his medical studies or subsequently, he has attended a course of lectures in which instruction was given on Public Health; and that he has studied Analytical Chemistry practically for three months with a recognised teacher. 6. The examinations are written, oral, and practical, and are conducted by University examiners selected by the University Court. 7. The subject of the examination for the degree of Bachelor of Science in the department of Public Health are as follows.

First Examination.—1. *Chemistry*—Analysis of air, detection of gaseous emanations and other impurities in the atmosphere; analysis of waters for domestic use, and determination of the nature and amount of their mineral and organic constituents; detection, chemical and microscopical, of adulteration in articles of food and drink, and in drugs; practical examination, including at least two analytical researches. 2. *Physics*—Hydraulics and hydrostatics, in reference to water-supply, drainage, and sewerage; pneumatics, in relation to warming and ventilation; meteorology, and methods of making meteorological observations; mensuration, in reference to the plans and sections of public and private buildings, mines, waterworks, and sewers. The candidate must make figured sketches for models, and have a knowledge of mechanical drawing. 3. *Sanitary Legislation*—Knowledge of the leading Sanitary Acts of Parliament. 4. *Vital Statistics*—Knowledge of statistical methods, and data in reference to population, births, marriages, and deaths. An oral examination, and an examination in practical chemistry in the laboratory, will take place a few days after the written examination.

Second Examination.—1. *Medicine*—Origin, nature, and propagation of epidemic and contagious diseases; prevention of contagion and infection; endemic diseases, and the geographical distribution of dis-

ease. 2. *Sanitary Medicine*—Origin, nature, and propagation of epidemic and contagious diseases; prevention of contagion and infection; endemic diseases, and the geographical distribution of disease. 3. *Sanitary Legislation*—Knowledge of the leading Sanitary Acts of Parliament. 4. *Vital Statistics*—Knowledge of statistical methods, and data in reference to population, births, marriages, and deaths. An oral examination, and an examination in practical chemistry in the laboratory, will take place a few days after the written examination.

Third Examination.—1. *Medicine*—Origin, nature, and propagation of epidemic and contagious diseases; prevention of contagion and infection; endemic diseases, and the geographical distribution of disease. 2. *Sanitary Medicine*—Origin, nature, and propagation of epidemic and contagious diseases; prevention of contagion and infection; endemic diseases, and the geographical distribution of disease. 3. *Sanitary Legislation*—Knowledge of the leading Sanitary Acts of Parliament. 4. *Vital Statistics*—Knowledge of statistical methods, and data in reference to population, births, marriages, and deaths. An oral examination, and an examination in practical chemistry in the laboratory, will take place a few days after the written examination.

Fourth Examination.—1. *Medicine*—Origin, nature, and propagation of epidemic and contagious diseases; prevention of contagion and infection; endemic diseases, and the geographical distribution of dis-

ease; insalubrious trades; overcrowding; epizootics, including pathological changes. 2. *Practical Sanitation*—Duties of a health-officer in reference to water-supply; insalubrious dwellings and public buildings; removal and disposal of sewage and other refuse and impurities; cemeteries, nuisances from manufactories, etc.; bad or insufficient supplies of food; outbreaks of zymotic diseases; quarantine; disinfectants and deodorisers; construction of permanent and temporary hospitals.

The first examinations will take place on April 2nd, 3rd, and 4th, 1883; the second on April 9th. Candidates must give notice and pay the fee on or before March 1st.

Doctor of Science.—A Bachelor of Science in the Department of Public Health may, after the lapse of one year, proceed to the degree of Doctor in the same department, on producing evidence that he has been engaged in practical sanitation since he received the degree of Bachelor of Science, and on producing a thesis on some subject embraced in the department of Public Health. Every such thesis must be certified by the candidate to have been composed by himself, and must be approved of by the Examiners. The candidate for the degree of D.Sc. must lodge his thesis with the Dean of the Medical Faculty on or before January 31st in the year in which he proposes to graduate. No thesis will be approved which does not contain either the results of original observations on some subject embraced in the examination for B.Sc., or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise references to the publications quoted.

The fees for the degrees in Science in the Department of Public Health are: for each examination for B.Sc. in Public Health, £5 5s.; for the degree of D.Sc. in Public Health, £5 5s. Every candidate must, before graduation, pay a regulation fee of £1 1s. The degrees in Science are conferred at the graduation ceremonial in April. The following are recommended as books to be studied in preparation for the above examination:—Parkes, E., *Practical Hygiene*; Wilson, George, *Handbook of Hygiene*; Smith, Edw., *Manual for Public Officers of Health*, and *Handbook for Inspectors of Nuisances*; Michael, Corfield, and Wanklyn, *Manual of Public Health*, edited by E. Hart; Eassie, *Healthy Houses*; Latham, Baldwin, *Sanitary Engineering*; Law, Henry, *Rudiments of Civil Engineering*; Monro, George, *The Public Health (Scotland) Act*; Buchan, Alex., *Introductory Text-Book of Meteorology*.

UNIVERSITY OF GLASGOW.—A special examination will be held once in every year in subjects relating to Public Health, and will commence on the second Tuesday in April. This examination will consist of two divisions; and candidates may enter to one or both of these, provided that no candidate shall be admitted to examination in the second division who has not already passed the first. All candidates must be registered medical practitioners. Candidates must produce evidence that, either during their medical studies or subsequently, they have attended a course of lectures in which special instruction was given on Public Health; and that they have attended a course of Analytical Chemistry specially bearing upon the subjects of examination, given by recognised teachers. Candidates who have not passed an *annus medicus* in the University of Glasgow must, before presenting themselves for examination, have attended as matriculated students in this University at least two courses of instruction, scientific or professional, bearing on the subjects of the examinations. The examinations are written, oral, and practical.

The fee for each division of this examination is £4 4s. The candidate must give notice to the Assistant-Clerk of Senate, and pay the required fee, at least one calendar month previous to the examination. If, after payment of the fee, a candidate withdraw his name, or fail to present himself at the examination, or fail to pass it, the fee is not returned to him; but he may enter for any one subsequent examination without the payment of an additional fee.

The examination embraces the following subjects:—*1st Division.*—*Physics*—Pneumatics, hydrostatics, hydraulics. *Chemistry*—Analysis of air, water, and food. *Meteorology*—Climate, topographical and seasonal: its influence in relation to health and disease. *Geographical Distribution of Diseases.* *2nd Division.*—*State Medicine*—Duties of health-officer; ventilation; food and its adulterations; water and water-supply; sewage and drainage; construction of hospitals, public buildings, and dwellings; overcrowding; manufactories; insalubrious trades; cemeteries; nuisances; quarantine; disinfectants and deodorisers; outbreaks of zymotic diseases. *Sanitary Law*—Knowledge of leading Sanitary Acts of Parliament. *Vital Statistics.*

The following are recommended as books for study:—E. Parkes, *Practical Hygiene*; George Wilson, *Handbook of Hygiene*; A. H.

Hassall, *Food and its Adulterations*; Lardner and Loewy, *Hydrostatics and Pneumatics.*

A course of lectures on Public Health is delivered in the University during the winter session.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.—The Royal College of Physicians of Edinburgh grants a certificate of qualification in Public Health under the following regulations.

Candidates must be already on the *Medical Register*, and possess a qualification in Medicine. They are not required to attend any special course of instruction; but their attention is directed particularly to courses of lectures on State Medicine, and to the practice of Analytical Chemistry. There are two examinations, which are written, oral, and practical. Rejected candidates are not admitted for re-examination till after the expiry of six months.

Examinations.—The first examination embraces—*a. Physics*: especially pneumatics, hydrostatics, hydraulics, and engineering, in relation to sanitary operations, including a knowledge of architectural and other plans, sections, etc.; *b. Chemistry*: especially analysis of air, water, food, including the biology of putrefaction and allied processes; *c. Meteorology*: including climate, topographical and seasonal influences in relation to health and disease.

The second examination embraces—*a. Epidemiology and Endemiology*: including the corresponding departments in the diseases of animals and plants—contagious diseases—diseases of periods of life, professions, trades, seasons, and climates; *b. Practical Hygiene*: duties of a health-officer; food; water-supply; sewerage and drainage; construction of hospitals, public buildings, dwellings; manufactories; cemeteries; nuisances; *c. Sanitary Law and Vital Statistics.*

Meetings for both examinations are held annually in April and October. The first examination is held on the second Tuesday of the month; the second examination on the immediately succeeding Thursday. Each occupies two days. Candidates may enter for both examinations in the same week, or for one only. The examinations must be passed in their order, first and second. Candidates must appear for the second examination not later than twelve months after having passed the first. A candidate remitted at his second examination may come up again after a further period of six months; but, if he then fail to pass, he must undergo the first as well as the second examination before obtaining the certificate.

The fees must be paid at least a week before the day of examination. The fee for the first examination is £3 3s.; for the second examination, £3 3s.; and for receiving the certificate, £4 4s. Candidates forfeit the fee for the examination which they have been unsuccessful in passing. If a candidate who has presented himself for both examinations fail to pass the first, he is not allowed to present himself for the second, and his fee for the second is returned to him.

UNIVERSITY OF DUBLIN.—Doctors of Medicine or Graduates in Medicine and Surgery who wish to obtain from the University a certificate of qualification in State Medicine, can do so on passing an examination in a limited course of the following subjects:—1. Law; 2. Engineering; 3. Morbid Anatomy; 4. Vital and Sanitary Statistics; 5. Chemistry; 6. Meteorology; 7. Medical Jurisprudence; 8. Hygiene. Candidates are required to send in their names to the Medical Registrar at least a week before the first day of examination.

ROYAL UNIVERSITY IN IRELAND.—This University grants a Diploma in Sanitary Science. It is conferred only on Graduates of Medicine of the University. Candidates must give notice in writing to the Secretaries of their intention to present themselves, and must pay the prescribed fee of £2 at least one month previous to the examination.

The Examination embraces the following subjects: *Climate*—A general knowledge of meteorological conditions; the reading and correction of Instruments, and tabulating the results of meteorological observations. *Chemistry*—Constitution of the atmosphere; pure and impure waters; food. *Geology*—The character and structure of rocks, with reference to water-supply and drainage. *Physics*—Laws of heat; mechanics, pneumatics, hydrostatics, and hydraulics, or sanitary engineering. The construction of dwellings, barracks, hospitals, schools, factories, etc., in accordance with the principles of warming, ventilation, drainage, water-supply, etc. *Vital Statistics—Hygiene*, including the causation and prevention of disease; sanitary law. The examination in Chemistry shall include a practical part on the chemical and microscopical examination of air, water, food, poisonous substances used in manufactures, etc. The examination in Physics shall embrace the reading of plans, sections, scales, etc., in connection with buildings, sanitary constructions, etc.

The fee for the diploma is £2.

DENTAL SURGERY.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND grants a diploma in Dental Surgery under the following regulations.

Candidates must produce Certificates: 1. Of being twenty-one years of age. 2. Of having been engaged during four years in the acquirement of professional knowledge. 3. Of having attended not less than one of each of the following Courses of Lectures: Anatomy, Physiology, Surgery, Medicine, Chemistry, and Materia Medica. 4. Of having attended a Second Winter Course of Lectures on Anatomy, or a course of not less than twenty Lectures on the Anatomy of the Head and Neck. 5. Of having performed Dissection during not less than nine months. 6. Of having completed a Course of Chemical Manipulation. 7. Of having attended, at a Hospital or Hospitals in the United Kingdom, Surgery and Clinical Lectures on Surgery during two Winter Sessions. 8. Of having attended two Courses of Lectures upon each of the following subjects: Dental Anatomy and Physiology (Human and Comparative), Dental Surgery, Dental Mechanics, and one Course on Metallurgy. 9. Of having been engaged, during not less than three years, in acquiring a practical familiarity with the details of Mechanical Dentistry, under the instruction of a competent practitioner. 10. Of having attended at a Dental Hospital, or in the dental department of a General Hospital, the Practice of Dental Surgery during two years. The courses of instruction and hospital practice must be by lecturers or in institutions recognised by the College.

All candidates who commence their Professional Education on or after July 22nd, 1878, must, in addition to the certificates enumerated above, produce a certificate of having, prior to such commencement, passed a Preliminary Examination in General Knowledge recognised by the General Medical Council.

Candidates who were in Practice as Dentists, or who had commenced their Education as Dentists prior to September, 1859, and who are unable to produce the certificates required by the foregoing regulations, must furnish the Board of Examiners with a Certificate of Moral and Professional character, signed by two members of the College, together with answers to certain inquiries. In the case of candidates practising in, or educated in, Scotland or Ireland, the certificate of moral and professional character may be signed by two licentiates of the Royal College of Surgeons of Edinburgh, or of the Faculty of Physicians and Surgeons of Glasgow, or of the Royal College of Surgeons in Ireland.

The Examination is partly written and partly oral. The written examination comprises General Anatomy and Physiology, and General Pathology and Surgery, with especial reference to Dental Practice. The oral practical examination comprises the several subjects included in the curriculum of professional education, and is conducted by the use of preparations, casts, drawings, etc. Members of the College, in the written examination, have to answer only those questions set by the Section of the Board consisting of persons skilled in Dental Surgery; and in the oral examination are examined only by that Section. A rejected candidate is not admitted to re-examination within six months, unless the Board otherwise determine. Examinations are held in February, June, and October. The fee for the Diploma is £10 10s., over and above any stamp duty.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—The Examinations are written and oral, and consist of two separate sittings. Candidates must apply to the Secretary of the College on or before the Saturday preceding the ordinary examination, and must produce all the required certificates. Examinations for the Dental Diploma will be held as follows: first examination, October 17th, 1882; January 23rd, March 27th, April 17th, July 17th, 1883; and the second after the conclusion of the first examination.

Candidates who commenced their professional education on or after August 1st, 1878, must produce evidence of having attained the age of twenty-one years, and of having passed the Preliminary Examination in General Education required for the ordinary Licence in Surgery, or an equivalent examination. They must also produce certificates of having been engaged during four years in the acquirement of professional knowledge, and of having been during that period, or at some time previous to their examination, engaged for not less than three years in the acquirement of a practical knowledge of Mechanical Dentistry with a competent practitioner.

The candidates for the ordinary and other courses of instruction must have been attended at a recognised medical school or schools: Anatomy, one winter course; Dissection and Demonstration, nine months; or Dissection and Demonstration, and Anatomy of Head and Neck, one course of twenty lectures; Chemistry, one course of not less than fifty lectures; Chemistry, Surgery, Medicine, each one winter course; Materia Medica,

and Practical Chemistry and Metallurgy, each one course of three months; Clinical Instruction in Surgery at a recognised Hospital, one course of six months, or two courses of three months; also the following special courses by recognised teachers: Dental Anatomy and Physiology, Dental Surgery and Pathology, Dental Mechanics, one course of each; two years' attendance at a Dental Hospital, or the dental department of a General Hospital.

Licentiates of the College, or registered medical practitioners, must produce certificates of attendance on the special subjects only, and are examined in these only.

Anatomy, Chemistry (with Metallurgy), and Physiology, will form the subjects of the first Examination; Surgery, Medicine, Materia Medica, and Dental Anatomy and Physiology, Dental Surgery and Pathology, and Dental Mechanics, those of the second.

The fee is £10 10s. Each candidate, for the first Examination, must pay to the Secretary of the College £4 4s. not later than 9 A.M. of the Saturday preceding the Examinations; and, if the candidate be unsuccessful, £2 2s. are returned to him. Each candidate for the second Examination must pay £6 6s. not later than 9 A.M. of the Tuesday preceding the Examination; and, if he be unsuccessful, £3 3s. will be returned to him. No unsuccessful candidate will be remitted for less than three months.

Examination sine Curriculo.—Candidates who were in practice before the first day of August 1878, or those not in practice but who had commenced their apprenticeship as Dentists before the first day of August 1875, and who are unable to furnish the Board of Examiners with the certificates of lectures and hospital attendance required by the foregoing regulations, must produce: 1. A certificate of moral and professional character, signed by two registered medical practitioners, together with the full name, age, and address of the candidate. 2. The date of commencing practice or apprenticeship as a Dentist, and whether, if in practice, such practice has been carried on in conjunction with any other business, and, if so, with what business. 3. Whether he has any degree or diploma in Medicine or Surgery, and, if so, from what College or University, or other body, and at what time it was obtained. 4. The particulars of professional education. The President's Council shall determine whether the candidate is entitled to be admitted to Examination; and such Examination shall, with the exception of the Preliminary Examination, and the exemption in favour of registered medical practitioners, as before explained, be passed on the same subjects and in the same manner as is required for other candidates, and will confer the same privileges.

Every candidate, before being admitted as a Licentiate, must subscribe a declaration engaging not to advertise or pursue any other unprofessional mode of attracting practice.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The regulation as to certificates, curriculum, number of examinations, fees and examinations *sine curriculo*, are in effect similar to those of the Royal College of Surgeons of Edinburgh. A special course of Metallurgy is required, unless included in Practical Chemistry. Examinations will be held on October 11th, November 2nd, and January 23rd, April 2nd, and July 16th, 1883.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The Dental Board of Examiners consists of three Fellows of the College, three Registered Dentists, and the President, Vice-President, or other Member of the Council of the College (summoned in rotation).

Examinations are held at such times as the Council may direct. Every candidate must lodge with the Registrar of the College, at least a fortnight previous to Examination, the following certificates. 1. Of having attained the age of twenty-one years; 2. Of having been engaged during four years in the acquirement of professional knowledge; 3. From two Fellows or Licentiates of any College of Surgeons in the United Kingdom, and from two Dentists of repute, testifying that the candidate is of good character; 4. Of having passed the Examination in Preliminary Education of one of the Examining Bodies recognised by the General Medical Council; 5. Of having lodged in the Bank of Ireland, to the credit of the College, the fee of £10 10s., half of which shall be returned to any candidate, if rejected; and no candidate can present himself for re-examination for six months; 6. Of having attended in a recognised school one course each of lectures on Anatomy and Physiology, Surgery, Chemistry, Practical Chemistry and Metallurgy, and Materia Medica; and two courses each of Dissections with Demonstrations, and Dental Surgery, including Dental Mechanics; 7. Of having attended General Hospital Practice for two winter sessions, and the dental department of a General Hospital, or a Special Dental Hospital, for a further period of nine months; 8. Of having been engaged during at least three years in acquiring a practical knowledge of Dentistry, under the instruction of a Registered Licentiate in Dentistry.

The Examinations are partly written and partly oral; preparations, microscopes, and other appliances being used. Licentiates in Surgery, or Fellows of any College in the United Kingdom, and Graduates in Surgery of any University recognised by this College, are examined only in subjects special to Dentistry.

Every successful candidate, previously to receiving the Licence, shall declare that he will not advertise, or pursue any other unbecoming mode of attracting business, so long as he holds the Licence in Dentistry of the College.

The following provision is made for instruction in Dental Surgery:

NATIONAL DENTAL HOSPITAL AND COLLEGE.—Consulting Physicians: Dr. B. W. Richardson and Dr. W. H. Broadbent. Consulting Surgeons: Mr. Spencer Wells, Mr. Erichsen, and Mr. Christopher Heath. Consulting Dental Surgeon: Mr. J. Merryweather. Dental Surgeons: Mr. F. H. Weiss, Mr. G. Hammond, Mr. G. A. Williams, Mr. A. F. Canton, Mr. T. Gaddes, Mr. H. Rose. Assistant Dental Surgeons: Mr. W. Weiss, Mr. H. S. Bradshaw, Mr. A. Smith, Mr. D. Curnock, Mr. W. R. Humby. Lecturers: Dental Anatomy and Physiology: Mr. T. Gaddes; Dental Surgery and Pathology: Mr. W. Weiss; Dental Mechanics: Mr. H. Rose; Dental Metallurgy: Mr. A. Tribe; Elements of Histology: Mr. T. Gades; Demonstrator of Dental Mechanics: Mr. Humby; Deformities of the Mouth: Mr. Oakley Coles; Art and Literature: Rev. H. R. Belcher, M.A.

Clinical Lectures and Demonstrations are given from time to time.

Dresserships in the extraction-room are held for three months by six senior and six junior students of the hospital.

Prizes.—Five Prizes in Medals are open for competition at the end of each course of lectures required. Certificates of Honour are given in each class. The Rymer Medal for General Proficiency, value £5, with books or instruments, is awarded annually to the most meritorious student.

Fees.—General fee for Special Lectures required by the curriculum of the Royal College of Surgeons of England, £12 12s. For the Two Years' Hospital Practice required, £12 12s. Total fee for the Special Lectures and Hospital Practice required, £25 4s. Single courses: Dental Anatomy and Physiology, Dental Surgery and Pathology, and Dental Mechanics, each, one course, £2 12s. 6d.; two courses, £4 4s.; Dental Metallurgy, one course, £2 3s.; two courses, £5 5s.; Operative Dental Surgery and Deformities of the Mouth, each £2 2s.; Elements of Histology and Demonstration of Dental Mechanics, each £1 1s.; Art and Literature class, £3 3s.; Hospital Practice, to Registered Practitioners, six months, £7 7s.; twelve months, £9 9s.

Information respecting the Hospital Practice and the College may be obtained from the Dean, Mr. Gaddes, at the hospital, Great Portland Street.

DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL.—Lectures are given at this School, in the winter, on Mechanical Dentistry, by Dr. Walker, at 7 P.M. on Wednesdays, and on Metallurgy, by Mr. Huntingdon, at 12, on Tuesdays; in the summer, on Dental Surgery and Pathology, by Mr. A. Coleman, at 8 A.M. on Tuesdays and Fridays; on Dental Anatomy and Physiology (Human and Comparative), by Mr. C. S. Tomes, at 8 A.M. on Wednesdays and Saturdays.

The staff of the Dental Hospital of London consists of Consulting Physician: Sir Thomas Watson, Bart., M.D. Consulting Surgeon: Mr. Christopher Heath. Consulting Dental Surgeons: Mr. S. Cartwright; Mr. John Tomes. Dental Surgeons: Mr. Hepburn; Dr. Medwin; Mr. Gregson; Mr. S. J. Hutchinson; Mr. Moon; Mr. A. Hill. Assistant Dental Surgeons: Mr. F. Canton; Mr. A. S. Underwood; Mr. Truman; Mr. R. Woodhouse; Mr. Storer Bennett; Mr. G. Parkinson.

The Saunders Scholarship of £20 *per annum*, and Prizes, are open for competition.

Fee for two years' hospital practice or lectures, each £15 15s. Fees for lectures and practice, £31 10s. Additional fees for a General Hospital for the two years to fulfil the requirements of the curriculum vary from £40 to £50.

Further particulars may be obtained on application to the Dean, Mr. T. F. K. Underwood, at his residence, 11, Bedford Square, W.C.; or at the Hospital.

QUEEN'S COLLEGE, BIRMINGHAM.—The teaching of Dentistry is undertaken by the Queen's College, acting in association with the Birmingham Dental Hospital and the Birmingham Clinical Board, so that students may fully qualify themselves for the dental diploma of the Royal College of Surgeons. The Dental Hospital is situated near the College, and is open daily (Sundays excepted).

Lectures on the special subjects are delivered as follows: Dental Anatomy and Physiology, by Mr. F. R. Batchelor, Thursday, 5 P.M.; Dental Surgery and Pathology, Mr. T. Howkins, Friday, 5 P.M.;

Dental Mechanics, Mr. C. Sims, Wednesday, 5 P.M., in summer; Dental Metallurgy, Dr. Tilden, at the Mason College.

The Birmingham Dental Hospital is open daily at 9 A.M. The staff is constituted as follows: Consulting Physician: Dr. James Sawyer; Consulting Surgeon: Mr. James F. West; Consulting Dentists: Mr. T. R. English and Mr. Adams Parker; Dental Surgeons: Mr. C. Sims, Mr. H. B. Neale, Mr. F. R. Batchelor, and Mr. F. E. Huxley.

Clinical Demonstrations are given from time to time by the staff on cases of particular interest; also upon the preparing and filling of cavities, and other operations upon the teeth and contiguous structures.

Dresserships in the Extraction-room are held for three months by senior and junior students of the hospital.

The fee for each of the special courses in Queen's College is £4 4s.; for Dental Hospital practice, two years, £14 14s.; one year, £8 8s.; six months, £5 5s.

UNIVERSITY COLLEGE, LIVERPOOL.—The lecturers in the School of Dental Surgery in connection with this institution are as follows: Dental Surgery, Mr. E. J. M. Phillips; Dental Mechanics, Mr. R. E. Stewart; Dental Anatomy and Physiology, Mr. F. T. Paul; and Dental Metallurgy, Mr. E. J. M. Phillips. Lectures are given once or twice weekly, by arrangement. The fee for each course is £3 3s.; for a second course, £2 2s.

The curriculum in Dental Surgery includes Lectures and Demonstrations on all the subjects required for the Licence in Dental Surgery of the Royal Colleges of Surgeons of London, Edinburgh, and Dublin.

Practical instruction in Dentistry is given at the Dental Hospital in Mount Pleasant.

ANDERSON'S COLLEGE, GLASGOW.—Dental Anatomy (in summer), Dr. D. Taylor, Wednesday and Friday, 8 A.M.; Dental Surgery (in summer), Mr. J. R. Brownlie, Tuesday and Thursday, 8 A.M.; Mechanical Dentistry (winter), Mr. S. Woodhouse, Thursday, 8 P.M. Dental Practice in Dental Hospital, 8 to 10 A.M. **Fees:** Each course of lectures, £2 2s.; Hospital Practice, two years, as required for the Licence in Dental Surgery, £10 10s.

GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE.—Dr. J. C. Woodburn gives a course of Dental Surgery, at the Royal Infirmary, at 3 P.M., on Mondays, Wednesdays, and Saturdays, during the summer. The fee for the course is £2 2s.

[Further information respecting the arrangements for teaching dentistry in the medical schools will be found in preceding pages of this week's JOURNAL.]

BEQUESTS AND DONATIONS.—Mr. Asa Lees, of Ashton-under-Lyne, has bequeathed £10,000 each to the Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties, the Owens College at Manchester, and the Oldham Infirmary, and £2,000 to the Northern Counties Supplemental Hospital for Chronic and Incurable Diseases.—The Nottingham General Hospital has received £530, and the Medical Benevolent College at Epsom £500, under the will of Mr. J. N. Oldham of Bridlington Quay.—Mr. Thomas Higginbotham, of Alderley Edge, has bequeathed £300 each to the Manchester Royal Infirmary, and the Macclesfield Infirmary, and £100 to the General Hospital and Dispensary for Sick Children, Pendlebury, Manchester.—The Bradford Fever Hospital, and the Bradford Nurses' Institution, have each received £100 under the will of Mrs. Isaac Wright.—Mr. John Eyston, of Welford, has bequeathed £100 each to the General Infirmary and the General Lunatic Asylum, both at Northampton.

SEMPER'S METHOD OF MAKING ANATOMICAL PREPARATIONS.—Dr. Semper, Professor of Zoology at the University of Würzburg, has discovered a method of making anatomical preparations which assures the preservation of the several organs. He has used the method constantly for several years, and the results are said to be excellent. After the dissection is made, it is macerated from one to five days according to its proportions in weak chromic acid (1 to 2 per 100), it is then washed; and treated with weak alcohol (30 per 100), adding alcohol of gradually increased strength. The preparation is then placed in strong alcohol from one to seven or eight days, afterward in absolute alcohol, and finally it is left to macerate in turpentine until it is thoroughly soaked. The preparation is then spread out and allowed to dry by contact with the air, it thus becomes perfectly white; the different organs can be coloured by using the best oil colours. When the preparations have been thoroughly dried after their maceration in turpentine, they reassume to a great extent their natural colouring, if they be immersed in a mixture composed of equal parts of a saturated solution of white sugar and glycerine.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st.

Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 9TH, 1882.

THE STUDY OF PATHOLOGY.

ONE of the most distinguished of living specialists, Dr. Hughlings Jackson, did good service when, in his Address delivered in the Section of Pathology at the recent annual meeting of the Association, he pointed out the absolute necessity of carrying on the study of disease of any part of the system side by side with the study of anatomy and physiology. The advice is good, and the time for it well chosen. As men advance in life, no doubt, this is the kind of reflection they are most frequently driven to make; and therefore the advice was, perhaps, not absolutely required by those who have made a deep and comprehensive study of any speciality. But young men (to whom the speaker mainly addressed himself) are, it seems to us, in danger too often of forgetting the universal aspects of specialism, and the impossibility there is in dealing properly with any branch of study without a simultaneous study of allied departments. The medical man, indeed, who has a true love for his work, cannot fail very soon to acknowledge that he is more or less hampered in his efforts towards perfection by his ignorance of physical, chemical, and scientific facts, and by what damps his ardour even more than ignorance—forgetfulness at the critical moment of what he had previously acquired—and by the loss of time necessary to re-familiarise himself with studies calculated to throw light upon the object of his pursuit. Some specialists, it seems to us, treat their particular departments in too narrow a way. Poorly grounded in the fundamentals of their professional knowledge, they hope by special attention to some branch to make up for carelessness in previous study. It is well if they learn in time that the study of the specialty has itself to be begun *de novo*, and that the only sound way to do this is to master, by prolonged and repeated investigation, the groundwork which has been before neglected. But the best advice which can be given to those who aspire to master a speciality is exactly what is implied in this address—that the specialist should be a generalist first, and a specialist afterwards. We should think contemptuously of a shipbuilder who should devote himself to repairing the decks of vessels without having first seen how decks were attached to the sides and bulwarks of the ship, or of the weaver who should confine his attention to one square in the pattern of a carpet and overlook its relations to the whole; and so the specialist who really understands the management of the heart, or the kidneys, or the nervous system, or the arteries, must have first carefully inquired into the relations which these parts have to the whole organism—that is, into the anatomy and physiology of the body in general. This again resolves itself into a study of organisation in general—that is, comparative anatomy and physiology, which in turn lead on to comparative pathology, a field as yet totally untilled. The specialist, therefore, must rise to the special through the general, if he really wish to be what he professes; and it would, therefore, appear that a specialism which begins as such cannot be so valuable as one that gradually finds its way into a particular groove by the accumulation from general directions of a special experience. The same remarks hold even more emphatically of the treatment of general diseases of special organs; for how can a man treat gout or rheumatism of the heart, or how can he even recognise it,

except through the study of these affections in general? It is for these reasons that specialists of the best sort have always added to the sum total of general knowledge; as, for instance, Dr. Charcot, and others whose names will readily occur to our readers.

In order to the attainment of the accuracy in diagnosis, without which treatment is useless, or even worse, Dr. Jackson recommends the obtaining, wherever practicable, of *post mortem* examinations. His thesis is *post mortem*, *post mortem*, and more *post mortem*, like the famous advice of Danton in other circumstances. Unfortunately, it is not always possible to follow the advice, and it seems as if it were daily becoming more difficult to do so. But, there can be no doubt that there is nothing so instructive to the physician as the condition of affairs revealed at the *post mortem* examination. As Dr. Jackson says well: "Such an examination never flatters us;" and, if the examination reveal an error in diagnosis, the rap on the knuckles must do us good, if it lead to more patience and greater carefulness for the future. As only those who are really interested in their work will take the trouble to obtain *post mortem* examinations, there can be no doubt that greater patience and carefulness will be their result. To find a lesion opposed to what one expected may be disconcerting, but cannot fail to be instructive to a painstaking investigator; while to find nothing sufficient to account for death may be equally so, by bringing him face to face with his own ignorance. None but the least informed will imagine that such an issue is equivalent to saying, that there was actually no sufficient cause at work; and especially in that obscure nervous department, which Dr. Jackson himself cultivates so successfully, would such an inference be foolish. The lesion, it is true, may not in such a case be in the nervous tissue itself. Probably, no remark made in the address is so suggestive as this: that, in nervous diseases, it is oftener other tissues that are at fault than the nervous matter itself. Comparative or evolutionary anatomy may probably throw some light on this fact. The nervous system is the last formed as we ascend in the organic scale. When formed, it is the last to be perfected; but, when perfected, it rules over the rest of the organism with an undisputed sway. Its cell-elements being formed by those of other tissues, it is plain they must be dependent for their nutrition and growth on these others; and hence it happens that lesion of nervous matter, though of the very first importance as being a lesion of the governing mechanism, is itself oftener induced by preliminary lesion of inferior tissues, than by disease commencing in its own proper structure. But this very fact is most hopeful to the student of nervous pathology, since it suggests to him the reassuring consideration that, if he can manage to keep the lower structures (notably the vessels) free from disease, the higher nervous elements will probably look after themselves. Many an apoplexy, and many a paralysis, has been warded off in this way, and in the future much more will no doubt be done by like means. Attention to the digestive system, preventing its being overloaded, and so obviating the degeneration of vessels that succeeds their nutrition by imperfectly formed and waste-loaded blood, will have more effect in warding off nervous disorders than much special nervous therapeutics.

Dr. Jackson stands in the apparently contradictory position of mildly bantering the metaphysical tendency of mind, and of wishing that students studied metaphysics more. The contradiction is, however, only apparent; for he explains that students who study metaphysics are less metaphysical than those who do not. An inquiry into the diseases of those structures whose function is mental manifestation cannot really depreciate the importance of metaphysical inquiry; and it is a curious fact, that, coincidentally with a profounder inquiry into physical facts and sequences, there has occurred a marvellous development of metaphysical inquiry, the same men who prosecute the one studying also the other. Men find it necessary, in short, to illuminate metaphysics by physics, and physics by metaphysics. Who, for example, could be more physical than Professor Bain or Mr. Herbert Spencer, or who more metaphysical than Professor Huxley? And so long, indeed, as men seek after knowledge as children groping in the dark, feeling now an impulse within them to find out *how* things

come to be as they are, and again being impelled to find out *why* they are so, so long shall we find them studying physics on the one hand and metaphysics on the other. We would suggest as a philosophical consequence, if not a metaphysical one, of Dr. Jackson's address, that neurological medicine may be fairly asked to make a few changes in the naming of diseased states of the nervous system, which would bring them more within the domain of positive science. If *epilepsy* must still be retained because, as Dr. Jackson says, we do not know its pathology, surely *hemiplegia* and *paralysis* should now be replaced by names which indicate their real nature, since we do know in many cases what that is. Hemorrhage into the right or left *corpus striatum*, or tumour in the course of a nerve, are definite physical conditions indicative of pathological changes; while *hemiplegia*, *paralysis*, etc., are names indicative only of functional changes. *Locomotor Ataxia* has been displaced by *sclerosis*: why not *apoplexy* and *paralysis* by their corresponding pathological names? To speak logically, *locomotor ataxia* does not necessarily connote *sclerosis* of the cord, but *sclerosis* of a special part of the cord does connote *locomotor ataxia*. Hemorrhage into a *corpus striatum* connotes opposite *hemiplegia*; but *hemiplegia* does not necessarily connote hemorrhage into the opposite *corpus striatum*, nor even hemorrhage at all. Medicine will be all the sooner in the position or scientific stage when these necessary changes in names have been accomplished.

THE PROGRAMME OF MEDICAL EDUCATION AND EXAMINATION FOR 1882-83.

It may be that the present will be the last "Educational Number" of the BRITISH MEDICAL JOURNAL laid down precisely on the old lines. Before another number of the kind is called for, the legislature may have made material changes, more or less in accordance with the recommendations of the Royal Commission, on the conditions of admission to the medical profession; and we may have to announce a series of regulations of a character hitherto unknown in practical operation. In the meantime, the universities and licensing bodies issue their regulations, some as hitherto, some with modifications to which we will briefly call attention.

The Royal College of Surgeons of England has ceased to issue a special curriculum of study and examination to be followed by candidates for the membership; and provides merely a pass examination in medicine and psychology; previously to which the candidate must either hold an approved degree or other qualification in Medicine or Surgery, or be forty years of age, or have passed the examinations for the licence of the College.

The Royal College of Surgeons of England has issued regulations affecting students who commence their professional education on or after October 1st, to the effect that two years must intervene between the primary and the pass examination; except in certain conditions which will be found specified at page 436. Changes have also been made in the regulations dealing with candidates whose knowledge has been found insufficient.

The University of London has altered the title of the Examinations for the Bachelor Degree. That which was hitherto the "First M.B. Examination" is now the "Intermediate Examination in Medicine," and the "Second M.B. Examination" has become simply the "M.B. Examination." The change has, we believe, been made with the object of removing a source of confusion in regard to the title of M.B. which previously existed.

In Ireland, the Royal College of Surgeons has issued a new series of regulations for its Letters Testimonial, affecting all candidates who commence their study after May 1st of the present year. Modifications have also been made in the regulations affecting candidates for the fellowship of the College.

The Queen's University in Ireland has disappeared from the list of bodies granting qualifications in medicine, and its place is taken by the new Royal University of Ireland. An important difference between

the two new universities is, that the Royal University, following the plan of the University of Dublin and the British Universities, makes the degree of Bachelor of Medicine a necessary preliminary to that of Doctor.

CHANGES IN THE MEDICAL SCHOOLS.

THE following changes have been made since the publication of our last educational number:

At St. Bartholomew's Hospital, the number of surgeons has been increased from four to five by the promotion of Mr. Morratt Baker; and the number of Assistant-Surgeons has also been increased to five, Mr. Walsham, Mr. Harrison Cripps, and Mr. Shuter having been appointed to the office. Dr. Legg attends to cases of diseases of the skin, in place of Mr. Baker; and Mr. Lockwood has been appointed a Demonstrator of Anatomy in the room of Mr. Baker.

At Charing Cross Hospital, the vacancy in the staff of Physicians, caused by the death of Dr. Silver, has been filled by the promotion of Dr. Mitchell Bruce. Of the remaining Assistant-Physicians, Dr. Houghton and Dr. R. Smith have retired, and are succeeded by Dr. Abercrombie and Dr. Montague Lubbock, the former of whom lectures on Forensic Medicine, in place of Dr. Houghton, while the latter takes charge of the class of Practical Medicine. Mr. Boyd has been appointed an Assistant-Surgeon in place of Dr. Whitehead. In the Medical School, Mr. Wolfenden succeeds Dr. Silver as lecturer on Physiology.

At St. George's Hospital, Dr. A. W. Barclay has retired from the office of Senior Physician, and has been appointed Consulting Physician. The vacancy has been filled by the promotion of Dr. Cavafy, the Senior Assistant-Physician; and Dr. W. Ewart has been appointed Assistant-Physician. Dr. Barclay has also retired from the office of Lecturer on Medicine, which is now held by Dr. Dickenson alone. Mr. Holmes has retired from the Lectureship in Surgery; and Mr. Pick has become the colleague of Mr. Rouse in that department, being in his turn succeeded in the Lectureship on Anatomy by Mr. Bennett. Mr. G. Murray has been appointed Lecturer on Botany; Mr. Dent teaches Practical Surgery in place of Mr. Bennett; and Mr. Turner succeeds Mr. Dent as teacher of Operative Surgery. Dr. Whipham takes charge of course of Practical Medicine.

At Guy's Hospital, Dr. Mahomed has been appointed an Assistant-Physician, and Mr. Symonds an Ophthalmic Surgeon. Mr. Bader has retired from the office of Ophthalmic Surgeon; and Dr. Brailey has been associated with Mr. Higgins in this department. Mr. Lane has been appointed a demonstrator of Anatomy in place of Dr. Carrington. Dr. Wilks retires from the lectureship in Medicine, in which Dr. Moxon becomes the colleague of Dr. Pavy, being associated as Lecturer on *Materia Medica* by Dr. Frederick Taylor; the place of the latter, as Lecturer on Public Health, being taken by Mr. G. Turner. Dr. Mahomed gives pathological demonstrations in place of Mr. Jacobson.

There appear to be no changes in the medical staff at King's College.

At the London Hospital, E. W. Mansell-Moullin has been appointed Assistant-Surgeon; also lecturer on Comparative Anatomy, in place of Dr. E. B. Aveling. Dr. E. Woakes has succeeded the late Mr. Gardiner Brown as Aural Surgeon, and lecturer on Aural Surgery; and Mr. J. E. Adams teaches Ophthalmic Surgery in place of Mr. Cowper.

At St. Mary's Hospital, Mr. J. R. Lane has retired from the office of Surgeon and Lecturer on Surgery. Mr. A. T. Norton has been promoted to the office of Surgeon; and Mr. Page is associated with Mr. Norton in the lectureship on Surgery. Mr. Pepper, for some time a supernumerary, has been appointed Assistant-Surgeon, and teaches Practical Surgery in place of Mr. Page. Mr. Malcolm Morris has sole charge of the department of Diseases of the Skin.

At the Middlesex Hospital, Mr. Andrew Clark teaches Operative Surgery in place of Mr. Morris. Mr. Bennett has been appointed Dental Surgeon in conjunction with Mr. Turner.

At St. Thomas's Hospital, Dr. Gulliver has been appointed Assistant-Physician. Mr. Stewart becomes the colleague of Dr. John Harley in the lectureship on Physiology, in place of Dr. Sharkey, who joins Dr. Payne in teaching Pathology. Of this subject, also, Dr. W. B. Hadden has been appointed Demonstrator. Mr. T. D. Acland teaches Practical Physiology in place of Dr. T. C. Charles. Mr. Ballance has been appointed Demonstrator of Anatomy in place of Mr. Haslam. Dr. Semon has been appointed to take charge of the department of Diseases of the Throat.

There are no changes in University College, beyond the substitution of Dr. B. Pollard for Mr. Boyd as one of the assistant teachers of Practical Surgery.

At the Westminster Hospital, Dr. Addison takes charge of the department of Diseases of the Skin, and the lectureship thereon, in place of Mr. Bond. Mr. North has been associated with Dr. Allchin in the lectureship on Physiology, and has also been appointed teacher of Practical Physiology. Mr. Hehner joins Dr. Dupré in teaching Practical Chemistry.

At Queen's College, Birmingham, the professorships of Physiology, Chemistry, Botany, and Comparative Anatomy, have been abolished; and students receive instruction in these subjects in Sir Josiah Mason's Science College. In the General Hospital, Mr. Alfred Baker has retired from the office of Surgeon; Mr. T. F. Chavasse has been appointed Surgeon; and Mr. W. F. Haslam Assistant-Surgeon. At the Queen's Hospital, Dr. Heslop, the senior Physician, has retired; and Mr. A. F. Hawkins has been appointed a Casualty Surgeon.

In the Bristol General Hospital, Mr. Pickering has been appointed Surgeon in place of Mr. Atchley, and also takes charge of the department of Diseases of the Ear.

In the Medical Department of University College, Liverpool (Royal Infirmary School of Medicine), Dr. Herdman lectures on Comparative Anatomy in place of Dr. Dickinson. Dr. Bernard succeeds Mr. McCheane as one of the Surgeons to the Lock Hospital.

In the University of Durham College of Medicine, Dr. Bedson teaches Chemistry, theoretical and practical, in the room of the late Mr. Freire-Marreco.

In the University of Aberdeen, the new Chair of Pathology, presented and endowed by the munificence of Sir Erasmus Wilson, has been filled by the appointment of Mr. D. J. Hamilton, lately Pathologist to the Edinburgh Royal Infirmary. Dr. Pirrie has retired from the professorship of Surgery, which he has held many years. His successor in the professorship is not yet appointed; but the vacancy caused by his retirement from the office of surgeon to the infirmary has been filled by the appointment of Dr. Garden. Dr. Alleyne Nicholson, lately Professor of Natural History at St. Andrew's, has succeeded Dr. Cossar Ewart in the Chair of Natural History at Aberdeen.

In the University of Edinburgh, Mr. Chiene has succeeded the late Mr. Spence as Professor of Surgery. Dr. Cossar Ewart has been appointed Professor of Natural History in the room of the late Sir C. Wyville Thompson.

In the Edinburgh Extra-Academical School, Dr. P. H. Watson and Mr. Chiene cease to lecture on Surgery, and Dr. MacGillivray has been recognised as a Lecturer on that subject. Drs. P. Young and D. B. Hart have been added to the list of Lecturers on Obstetrics and Gynaecology, from which Dr. Angus Macdonald and Dr. Underhill have retired. Mr. G. Berry has become a Lecturer on Ophthalmic Surgery.

Dr. Balfour having retired from the office of physician to the Edinburgh Royal Infirmary, the vacancy has been filled by the promotion of Dr. Wyllie; and Dr. A. James has been appointed Assistant-Physician. Dr. A. G. Miller has been appointed Surgeon; and Mr. G. Berry Assistant Ophthalmic Surgeon.

Mr. D. Newman has succeeded the late Dr. Foulis as Lecturer on Pathology in the Glasgow Royal Infirmary School of Medicine.

A new Medical School has been formed in Glasgow, in connection with the Western Infirmary.

In the School of Physic in Dublin, Dr. William Moore has retired from the King's Professorship of Practice of Medicine, which he had

held since 1869, and Dr. J. Magee Finny has been appointed in his room. Dr. Aquilla Smith, King's Professor of Materia Medica and Pharmacy since 1864, has retired, and has been succeeded by his son, Dr. Walter G. Smith; and Dr. John R. Kirkpatrick has been appointed King's Professor of Midwifery in the room of the late Sir E. B. Sinclair.

OPENING OF THE MEDICAL SCHOOLS.

THE subjoined is a list of the Medical Schools in England and Scotland, with the date of their opening, and a statement of the ceremony, if any, which will take place on the occasion.

St. Bartholomew's Hospital—October 2nd; annual dinner of old students.

Charing Cross Hospital—October 2nd.

St. George's Hospital—October 2nd, 4 P.M.; address by Dr. Watney.

Guy's Hospital—October 2nd; *soirée* at 8.30 P.M.; distribution of medals and prizes.

King's College—October 2nd, 4 P.M.; address by Right Honourable W. H. Smith, M.P.; distribution of prizes.

London Hospital—October 2nd.

St. Mary's Hospital—October 2nd, 3.30 P.M.; address by Dr. T. K. Chambers; annual dinner in hospital board-room at 6 for 6.30 P.M., Mr. Norton in the chair.

Middlesex Hospital—October 2nd, 3 P.M.; address by Dr. R. Lyell; distribution of prizes; dinner at St. James's Hall at 6.30, Dr. W. Cayley in the chair.

St. Thomas's Hospital—October 2nd, 3 P.M.; address by Dr. Sharkey; annual dinner in Governors' Hall at 6.30.

University College—October 2nd, 4 P.M.; address by Mr. Marcus Beck.

Westminster Hospital—October 2nd, 3 P.M.; address by Dr. De Havilland Hall; distribution of prizes; annual dinner at St. James's Hall at 7 P.M.

Birmingham (Queen's College)—October 2nd; address by Dr. Rickards; presentation of prizes.

Bristol University College, Medical School—October 2nd.

Leeds School of Medicine—October 2nd, 4 P.M.; address by Mr. James Walker; distribution of prizes; annual dinner at 6 P.M.

Liverpool University College (Royal Infirmary School of Medicine)—October 2nd, 3 P.M., the Earl of Derby in the chair; address by Mr. Matthew Arnold; distribution of prizes.

Owens College (Manchester Royal) School of Medicine—October 2nd.

Sheffield School of Medicine—October 2nd.

University of Durham College of Medicine, Newcastle-on-Tyne—October 2nd, 2 P.M.; presentation of scholarship and prizes by the Right Reverend the Bishop of Newcastle; address by Dr. T. Oliver.

Aberdeen University—October 26th.

Edinburgh University—October 24th.

Edinburgh School of Medicine—October 24th.

Glasgow University—October 31st; address by Dr. Gairdner.

Glasgow, Anderson's College—October 31st, 2 P.M.; address by Dr. Christie.

Glasgow Royal Infirmary School of Medicine—November 1st.

Glasgow Western School of Medicine—November 1st, 1 P.M.; address by Dr. McVail.

THIS week's telegrams report that an epidemic of dysentery has broken out at Malmo, Sweden, and is steadily increasing and extending throughout the province.

THERE is no foundation for the unfavourable rumours recently circulated regarding the health of the Empress Augusta. These reports are believed to have arisen from the circumstance of its having been found

necessary to envelope Her Majesty's injured foot in a plaster-of-Paris bandage.

ENTERIC FEVER AT EVESHAM.

THERE has just been a sudden outbreak of typhoid fever at Evesham, Worcestershire. The origin of sixteen cases has been traced to the consumption of ginger-beer, made from water taken from a well which had been condemned by the local sanitary authority.

ARMY HOSPITAL CORPS IN EGYPT.

SIXTY more men of the Army Hospital Corps will embark on Saturday next for Egypt. Twenty-two of these will go to the hospital at Gozo. Additional nurses are also about to be despatched to the seat of war by the Duchesses of Connaught and Teck, and from the Nightingale Home.

VACCINATION IN ZULULAND.

THE *Cape Mercury* of July 19th states that the Government had King Cetewayo and his suite vaccinated, previously to their visit to England. It further records the interesting fact that, twenty years ago, when a very severe epidemic of small-pox broke out in Zululand, the late King Panda (Cetewayo's father), having heard from some traders of the remarkable power of vaccination, sent to Natal for a medical man, and had the whole nation vaccinated, including himself and Cetewayo. The result was, that the disease was soon stamped out.

NEW LUNACY ACT.

THE new Act to amend the Lunacy Regulation Acts has immediate operation, and is to be construed with the Lunacy Regulation Acts of 1853 and 1862. The Lord Chancellor is now to have power in cases whether the property does not exceed £2,000 instead of £1,000 in value, or £100 a year. By the fourth section, all Chancery lunatics are to be visited twice a year, with a proviso that every lunatic resident in a private house shall, during the two years next following inquisition, be so visited at least four times in each year.

THE BIRMINGHAM MUSICAL FESTIVAL.

THE financial results of the recent triennial Musical Festival at Birmingham, the profits of which go to the General Hospital, have been very satisfactory. The total receipts for the four days' performances amount to £15,178, and there are still some donations to come in. This result compares favourably with the festival of 1879, when the receipts were £11,729, and is larger than the yield of any preceding festival, excepting that of 1873, when the proceeds were £16,097. The expenses of the festival this year cannot be less than £10,000, leaving about £5,000 for the charity.

HOSPITAL SATURDAY.

LAST Saturday having been appointed for the ninth annual collection on behalf of the Metropolitan Hospital Saturday Fund, upwards of 1,000 ladies who had volunteered their services for the occasion, took up their stations with tables and boxes in most of the principal thoroughfares in the metropolis for the purpose of making the customary street collection. Those at the markets went on duty at an exceptionally early hour. During the time the fund has been in existence, the various medical charities in London have been benefited to the extent of upwards of £40,000, and it is anticipated that the receipts of the present collection will considerably exceed £2,000, and that the workshop collection will be greatly in excess of that in any former year.

THE BRITISH ASSOCIATION.

At the last meeting of the General Council, Captain Galton, the honorary secretary, made the following announcements, which had been confirmed by the General Committee: 1. That the Council be em-

powered to communicate with foreign scientific associations, with a view to promote the organisation of an International Scientific Congress; 2. That the Council be empowered to appoint a Committee, upon which several sections of the Association should be equally represented, for the purpose of co-operating with the Council in considering the best arrangements for securing a representative gathering of the Association at the meeting proposed to be held at Montreal.—Professor Bonney submitted the following statement of the members attending the meeting: Old life members, 178; new life members, 17; new annual members, 790; old annual members, 253; associates, 516; ladies, 189; foreign members, 21—making altogether 1,253. The receipts were £1,286.

HÆMOPHILIA.

HÆMOPHILIA is a very learned looking word, and, as it should do, it bespeaks a disease of which we know very little. The malady, which from time to time so unhappily incapacitates H.R.H. Prince Leopold, is one which most unprofessional people think to be due to some abnormal condition of the skin. A person who bleeds easily is said to have only one skin, in place of the proper number which it must puzzle many to tell. It is not, however, any such malformation, but what it is is much less certain. Such persons bleed easily from not only the skin when wounded, but from the gums and mouth, and mucous membranes. They also bruise easily, and in the same way it is probable that the troubles in the joints from which they suffer are to be explained by supposing some slight injury to the synovial membrane, and a subsequent escape of fluid to the cavity of the joint. We do not know what is the malformation or disease which predisposes to such an easy escape of the blood from its proper channels. The chemical constitution of the blood has been thought by some to be at fault, the smaller blood-vessels by others; but no chemical or microscopical investigations that have been conducted as yet have been anything but contradictory, and, therefore, have been without result. One curious fact, however, has been elicited from various observations that have been made; and this is, that it is hereditary to a marked degree, and that it is transmitted along the male much oftener than along the female line.

THE PARKES MUSEUM.

THE Council of the Parkes Museum have just acquired new premises in Margaret Street, Cavendish Square, to which the museum is to be removed from University College as soon as the alterations and additions which are now being made, under the direction of Mr. Mark H. Judge, are completed. The new museum will consist of a central hall, suitable for meetings and lectures, a library and corridors, all lighted from the top, and well suited for exhibition purposes. The meetings and lectures on sanitary and other matters connected with the health of the people, which were only occasional while the museum was at University College, will form a permanent feature of the institution when it is reopened in Margaret Street. Capt. Douglas Galton, C.B., F.R.S., presided at the last meeting of the Council, when a letter was read from Mr. Thomas Twining of Twickenham, in which he said, "Much as I regret that University College should lose the advantage of possessing a hygienic collection within its walls, I cannot but rejoice at the prospect now afforded us of developing the Parkes Museum in a central position, with all those educational devices which may unite the benefit of the people at large with that of the medical, architectural, or engineering student. The outset will necessarily involve considerable expenditure, and, with such results in view, I should think that many liberally minded friends of sanitary progress might be induced to join in meeting this extra expense." Mr. Twining concluded his letter by offering to contribute a special donation of £100 towards these expenses. In accepting the generous offer of Mr. Twining, the Council passed a vote of thanks to him for the timely help thus rendered to them. It is expected that the museum will be reopened before Christmas. In the meantime, communications

may be addressed to the Secretary and Curator, Mr. Mark H. Judge, at 8, Park Place Villas, Paddington, W.

THE VACCINATION INQUIRY AT NORWICH.

IT was doubtless in deference to local public opinion, that the Local Government Board ordered a public inquiry to be held into the circumstances attending some recent cases of illness following vaccination in the practice of Dr. Guy, the public vaccinator of Norwich. But it may be seriously doubted whether, in so doing, the Board has in the least degree helped to clear up what at best must be a very puzzling and unaccountable series of mishaps. The usual plan for the Board to adopt is, to send a medical inspector to make a minute personal inquiry into all the circumstances of cases of alleged injury from vaccination, with a view to a skilled judgment being arrived at as to their causation. It is hardly to be supposed that Dr. Airy, the medical commissioner associated with Mr. Healey in the conduct of the inquiry, has not made some separate investigations of his own into the matter; but the whole of the recent proceedings partook more of the nature of a trial of Dr. Guy for injury to the children, than anything else. Mothers were allowed, apparently without let or hindrance, to descant—as only women of the lower orders can descant—upon the various symptoms of their own and other people's babies. A "surgeon-accoucher", whose name is not in the *Medical Directory*, was called on to describe the medical appearances in certain of the cases; recriminations were indulged in by several of the witnesses; and, finally, the counsel aired their ideas on medical matters, and attempted to dogmatise from legal premises about zymotic disease and its causation. The inquiry lasted nearly a fortnight, but it has left us hardly wiser than before as to the circumstances of the erysipelas, which undoubtedly attacked certain of the children attending Dr. Guy's surgery for the purposes of vaccination. There seems to have been no attempt to marshal the dates at which the respective occurrences are stated to have taken place, nor to trace the possible relation of one case to the other. In fact, the inquiry has borne more of the character of an airing-ground for antivaccination grievances, and, as such, will be no doubt largely made use of by the industrious persons who are eager to spread any sort of story as to the injury due to vaccination. The facts elicited by the inquiry are, it must be confessed, of no etiological value whatever; and the report of Dr. Airy on the medical aspects of the inquiry must be awaited before any opinion on the subject can be properly expressed.

CHOLERA IN THE EAST.

THE merest suspicion of cholera is sufficient to set in motion the prohibitions and detentions that quarantining nations mistake for precaution. That cholera should be raging at Manila and in the Philippines, can surprise no one who is cognisant of the sanitary circumstances of the population there; but the effect of such prevalence upon European nations must be very remote. A closer and more immediate source of danger would certainly have been any serious amount of the disease at Aden; but the memorandum published by the India Office is amply reassuring on that point. The nervous alarm created early in the week by a rumoured outbreak of cholera in the Red Sea has led that office to publish the actual facts on the subject, which appear to be as follows. "The pilgrim ship *Hesperia* arrived at Aden from Bombay on the 26th July with 498 pilgrims for Mecca. The crew and pilgrims were healthy on arrival, and during the voyage there were no cholera cases. No pilgrims were allowed on shore at Aden, and the ship coaled late at night in the outer harbour. On the morning of the 27th, a fireman was attacked with cholera and died. The ship was at once sent to an anchorage four miles from other shipping, and all communications prevented. No other cases occurred before she left on August 6th for the Island of Namaran, at the south end of the Red Sea, when, in common with all other pilgrim ships, she had to perform rigid quarantine before being allowed to land her pilgrims at Jedda. There have been no cases of cholera at all at Aden since October 1881, and

the public health there is very good. It may be added, that there appears from the latest telegraphic advices to be no epidemic cholera in India. At Bombay there were only seven cholera deaths during the last fortnight; at Madras none; at Calcutta fourteen, against a quinquennial mean of twenty-one." Even the Egyptian authorities seem to have been convinced of this error in proclaiming quarantine against arrivals from the Red Sea: for it was announced, on Wednesday, that they had removed quarantine against ships coming from Bombay; and that quarantine against Aden would be discontinued, provided the proper precautions were taken against ships coming from the infected ports. The reported outbreak at Tangier may possibly be of local origin, and not of the true Asiatic type. In any event, the danger to our own shores of these outbreaks cannot be considered at the present moment sufficient to warrant the least alarm. It is improbable that, even if a case of cholera were to reach one of our ports, that it would elude the system of medical inspection that is being increasingly adopted amongst us; and our national defences against cholera, inland as well as on the seaboard, are now infinitely stronger than they were when the disease last occurred in our midst, now upwards of sixteen years ago.

HEALTH OF THE PRIMATE.

WHEN we went to press last week, we reported that the Archbishop was drowsy and slept much, and that the mucous membrane of the mouth and throat was very dry. According to the daily bulletins (which, we understand, are published by the family at the urgent request of a great number of anxious inquirers), Dr. Alfred Carpenter again requested the advice of Sir W. Jenner, on September 1st. The tendency to coma was then somewhat alarming. This symptom, however, diminished on the following day, and in great measure passed away on Sunday. Since that time, the cerebral oppression has not reappeared, and the general condition has remained about the same. The pulse has varied between 84 and 96; the temperature rising from 98.5° to 99.6°; the respirations from 32 to 38 per minute. The skin continues dry, as well as the mucous membrane of the mouth and throat. The mind is perfectly clear, but the Archbishop talks a great deal in his sleep. The tremors of the muscular system are all but absent. The bowels have been freely open. There was an attack of diarrhoea on the 5th, which was not caused by aperients. Since that date, the bowels have been rather confined. The kidneys continue to act very freely. Urine is voided nearly every hour, and amounts to about eighty ounces per twenty-four hours; specific gravity 1012 to 1014, without much colour. There is a trace of albumen with a few casts, very finely granular in appearance; there are also a few large granular corpuscles. The quantity of phosphates is considerable. The most unsatisfactory condition is the reappearance on the 7th of blood in the sputa. It is small in quantity, but the cough is not troublesome except in an occasional spasmodic manner. The immediate position whence the blood proceeds is not manifest on stethoscopic examination; but this is not carried out thoroughly because of the inability of the Archbishop to bear a sitting-up posture. The left lung has become quite pervious to air, without the intervention of minute crepitation, and is now generally resonant on percussion; and the crepitation on the right side has decreased. His Grace continues to take food without discomfort. The diet consists mainly of milk with two or three eggs daily, beef-tea, or some kind of soup, tea and sop, some minutely pounded game or chicken, and other ordinary spoon-diet. He does not object to any kind of food, but enjoys a draught of cold water better than anything else. We understand that the vitality of the family is considerable, and that Dr. Carpenter had under his care three years ago a sister of the Archbishop, who is ten years older than His Grace, who spat blood for more than a month as the result of gouty pneumonia, but who is now perfectly well. His Grace finds great comfort from his water-bed, and is quite free from bed-sore, though for nine days he was in a state of heavy drowsiness. The thrombi in the veins of the legs continue tender; and there is a small gouty swelling on the left ankle.

SCOTLAND.

WE are glad to observe that, at the last meeting of the Glasgow Town Council, it was decided to recognise the great services that have been rendered to Glasgow by Dr. Russell, the medical officer of health, by granting him an increase of salary.

THERE is reported from Stirling the death of a boy, aged four years, from eating the berries of the deadly nightshade. It seems that, while walking in the fields, he had partaken of the berries, and on reaching home he vomited and showed signs of delirium. He was removed to the infirmary, where everything was done that could be, but he died the following day.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending August 26th, it appears that the death-rate in the eight principal towns was 20.0 per 1000 of estimated population. This rate is 2.6 above that for the corresponding week of last year, but 0.7 below that for the previous week of the present year. The lowest mortality was recorded in Edinburgh, viz., 16.1 per 1000; and the highest in Paisley, viz., 28.5 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 5.8 per 1000, or 0.2 above the rate for the previous week. The mortality from diarrhoea and other bowel complaints was most marked in Glasgow, Edinburgh, and Dundee. Acute diseases of the chest caused 60 deaths, or 13 less than the number registered during the previous week. The mean temperature was 55.6°, being 4.3° below that of the week immediately preceding, but 3.2° above that of the corresponding week of last year.

THE DUTIES OF RESIDENT MEDICAL OFFICERS.

WE regret to observe in the report of the recent proceedings of the Govan Parochial Board, what seem to us very uncalled for remarks on the conduct of the Resident Medical Officer of the Merryflats Asylum. This gentleman was asked, some weeks ago, to leave his duties and to attend to an accident which had occurred outside the asylum. He stated in reply that his position did not permit his leaving the establishment to attend to outside accidents, and advised other medical aid being obtained. He does not seem to have been informed as to where the accident had happened or its nature, and we cannot but think that he was quite within his rights in so acting. It turned out afterwards that the accident was close to the institution, and was of a serious nature. Under these circumstances, we are inclined to think that the proper course would have been to have had the child carried without delay into the institution and obtained the services of the resident medical man; but we hold that that official was in no way bound to comply with the request to attend to an outside accident; and, in declining to do so, it seems to us that there are no grounds for charging him with "medical inhumanity," as some of the members of the Asylum Board have done. In close proximity to the asylum are shipbuilding yards, where accidents are of common occurrence; and if the resident medical officer at the asylum once admitted the principle that he was bound to attend to outside accidents when sent for, we fear that he would be often absent from his duties, and probably the first persons to complain would be his present directors, who have now, it seems to us, so inconsiderately and ungenerously criticised his conduct in attending first to the duties of the asylum. As we have said, we think that any blame attaches to the bystanders in not carrying the child into the institution without delay.

IRELAND.

A DEATH from small-pox was registered last week in Clonmel.

THE overcrowding which exists in lodging-houses for emigrants at

Queenstown has recently been brought under the notice of the authorities, and, in consequence, an inquiry will be held by the Board of Trade as to their sanitary condition.

DR. LEWIS C. KINCHELA is reported to have died at Kilkenny on August 27th, at an advanced age. Dr. Kinchela was a graduate in medicine of the University of Edinburgh, and held the posts of surgeon to the County Infirmary, and visiting physician to the Kilkenny District Lunatic Asylum.

LISMORE UNION.

DR. O'REILLY has sent in his resignation as medical officer of the workhouse, after fifteen years' service; and states that he did so under compulsion, and protests in the strongest manner against the injustice which has been done him. An election for his successor will take place on the 4th proximo.

BELFAST ROYAL HOSPITAL.

THE financial year ends with the month of August, and a sum of about £1,000 will be required in order to pay all the accounts due up to that date. The Board of Management have devoted considerable attention to the subject of finance, and tried in various ways to enlist a large co-operation in support of the hospital. Efforts have also been made to interest large bodies of the working classes, and deputations from the board have waited upon the workmen employed by some of the largest firms in Belfast, and have secured from them the promise of a regular contribution; and it is believed that if a suitable machinery could be obtained, it would be possible to obtain from the entire body of the working classes a cordial support of the institution. In order to carry out this idea, the Board has determined to engage a paid collector, whose entire time shall be devoted to the work of collecting funds and organising the collections of the working classes. The necessity for an additional ambulance to be used for infectious cases has long existed, but has now been supplied. At the quarterly meeting held last week, Dr. Whitla was re-elected physician, and Dr. O'Neill surgeon, to the hospital.

THE EGYPTIAN EXPEDITION.

NOTES FROM ALEXANDRIA.

[FROM A SPECIAL CORRESPONDENT.]

THERE is little change in matters of medical interest here. The chief point of interest is the continued increase of the population of the town. Refugees are returning by hundreds, notwithstanding the warning sent to Europe and Syria to prevent their return on account of the water-supply. This, with a population increasing as it has done within the last few days, will become a very serious question. The town is supplied by water from the canal now only every third day, on intervening days. One or two of the cisterns will be opened for distribution. This plan has been adopted in order that a small supply may be prolonged from the canal as long as the water remains fit for use, on account of the difficulty and labour in getting a supply from the cisterns once we are thrown upon them for it all. The canal supply remains good but is diminishing fast. In several places it is now dry, and the water commission have had to order it to be dammed at a considerable distance below Arabi's camp, on account of his soldiers having been seen in crowds using it for unclean purposes, and throwing carcasses into it. The same means of purification are still being employed, viz., ferric alum and permanganate of potash, and it really is very drinkable; I drink little else. The general health is excellent. The hospitals are nearly empty, and medical men all idle. Two new members have been added to the Water Commission by request of the Admiral in command here, viz., Surgeon-Major Giraud, sanitary physician on the staff of the general commanding here, and Dr. Mackie, surgeon to H.M.'s Consulate. The mass of the army has moved from here to the Suez Canal.

Upwards of thirty vessels, transports and men-of-war, have left Alexandria for the Canal within the last ten days. This is a great relief so far as provisions are concerned, but affects our water-supply but little, as they used condensed water when in town or on board, and at Ramleh have been supplied chiefly from old wells found in the desert.

The weather is becoming more oppressive from the damp atmosphere, though temperature is not increased, and sea-breezes still continue from the north and north-west. The breeze dies away often in the evening, making the nights hot, stuffy, and disagreeable; sleep difficult and unrefreshing. A great many cases of sunstroke are reported among the troops marching from Ismailia. Amongst the troops here and at Ramleh, the general health remains satisfactory; but they have had lately a few cases with some deaths from dysentery on shore and in the fleet. No dysentery has occurred among the civil population, and generally it does not prevail till later in the season, and is not, as a rule, very fatal.

The temporary Sanitary Commission instituted by the Khedive after the bombardment has now resigned its functions to the ordinary local sanitary inspectorate, which has been reorganised by the return of its principal members, under the presidency of Dr. Salem Pasha. The continuance of the good and practical measures adopted by the Commission is doubtful.

An appeal, of which I sent you a copy, was made by Dr. Mackie, through the local English and Arabic newspapers, to the Egyptians in Alexandria, urging them to imitate European nations, and give donations in money and kind, to enable the medical authorities to prepare for the proper treatment and comfort of Egyptian sick and wounded. Not a single response has been given, nor do they seem to think it is their business; but it has had the effect of rousing and stimulating the medical department to make the most of their limited means. Dr. Salem Pasha is now working energetically with the medical staff of the hospital to make the place in some manner inhabitable; but it yet leaves and will leave very much to be desired. The uncleanness and bad sanitation would make it a den of disease, were it not that all doors and windows can be kept continually open; so that, though surrounded by walls, the patients are almost in the open air. But this can only be in summer; in winter the weather is often boisterous, stormy, and bitterly cold, and most of the doors and windows will have to be shut. A few instruments have been found for it, and others have been ordered, which will arrive soon with a quantity of other material, but one misses sadly all little "dodges" and contrivances, the outcome of thoughtfulness, ingenuity, and resource, and the knowledge of what will give what I may call surgical comfort, and physiological and anatomical rest. Small conveniences and appliances for nursing do not exist, but much may yet be done, before great demand is made upon them; the number of wounded here being yet small.

The subject of prostitution, and its effect on our troops in town, is occupying the attention of the surgeons in charge. It is a very difficult question to deal with satisfactorily, on account of divided authority, the prostitutes belonging to every nationality, living under the protection of the representatives of their respective Governments, who are very jealous of any interference with their subjects. This political status has been one of the curses of Egypt, but, thanks to the Egyptian Government, the remedy seems farther off now than ever. It will be long now before Europeans will willingly submit to local jurisdiction, and trust to it their lives and interests. But to return to the subject of prostitution. The only present remedy, and that a very partial one, seems to be that proposed by Brigade-Surgeon Manley, V.C., to mark the houses or quarters of prostitutes and "put them out of bounds"—that is to say, punish the soldiers who are found entering them. The prostitutes in Alexandria and the whole of Egypt suffer very much from venereal diseases of all sorts; they are of a low order, and take no care to have themselves cured; and proper lock hospitals do not exist. The disease, I am told, has already been communicated to a good many of our soldiers; but I have no doubt Brigade-Surgeon Manley, with his great experience and energy, will be able to devise some means, in common action with the local authorities, to diminish the evil.

I visited, a few days ago, the various encampments at Ramleh, and found the troops in excellent spirits, and eager "for a fight". News has just been received here that a case of cholera has happened at Aden, and two cases at Kamaran, a small island in the Red Sea, on the Suez side of Aden. The cases are reported to have been from a ship from Bombay. The season is at hand when the pilgrims from the East will be making their way towards Mecca, and it will be a serious question whether our troops in Egypt are to be properly protected, should cholera show itself amongst the pilgrims. The Egyptian Maritime and Commercial Company is at present in a state of dejection and depression. Most of the principal members are absent, and many of the *ployés* who had fled from their posts have not returned, so that the ship is much undermanned, and manned with a most inferior crew. The delegates and president of the board are at continual warfare, many of them indulging in personalities, and using expressions to give vent to their feelings which are not to be

repeated here. The council, when there is a full attendance of members, would often take a prize as a first-class bear-garden.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF QUARTERLY MEETINGS FOR 1882: ELECTION OF MEMBERS.

A MEETING of the Committee of Council will be held on Wednesday, October 18th. Gentlemen desirous of becoming members of the Association must send in their forms of application for election to the General Secretary not later than 21 days before the meeting—viz., September 27th, in accordance with the regulation for the election of members passed at the meeting of the Committee of Council of October 12th, 1881.

August 31st, 1882.

FRANCIS FOWKE, *General Secretary*.

COLLECTIVE INVESTIGATION OF DISEASE.

THE following subjects are now under investigation by the Committee: Acute Rheumatism; Pneumonia; Chorea.

Cards to be filled up with particulars of cases, together with memorandum papers explaining the nature and objects of the investigations, have been prepared and distributed through the Secretaries of the Branches or of local committees.

Members who have not received them will be supplied with them on application to the Secretary of their local committee, or to myself.

Cards and memorandum papers for the investigation of Diphtheria are nearly ready, and will shortly be in the hands of the local Secretaries, who will supply them, on application, to any members having cases of this disease under their care, and willing to assist in its investigation.

F. A. MAHOMED, Secretary to the Committee.

12, St. Thomas Street, London, S.E.

BRANCH MEETINGS TO BE HELD.

SOUTH MIDLAND BRANCH.—The autumnal meeting will be held at Kettering on Thursday, September 28th. Gentlemen desirous of reading papers, or of showing specimens, are requested to communicate at their earliest convenience with the Secretary.—G. F. KIRBY SMITH, Honorary Secretary, Northampton.

NORTH OF ENGLAND BRANCH.—The autumnal meeting will be held at Durham, on Wednesday, September 20th. Gentlemen intending to read papers or to show specimens or cases are requested to communicate with the Secretary.—DAVID DRUMMOND, M.D., Honorary Secretary, Newcastle-on-Tyne.—August 22nd, 1882.

SOUTH-EASTERN BRANCH: EAST AND WEST KENT DISTRICT.—A conjoint meeting of the above Districts will be held at the Town Hall, Canterbury, on Wednesday, September 13th, at 8 p.m. The programme of the evening will consist of a paper on "The Pathology of the Heart," by Dr. T. W. H. CLARKE, and a paper on "The Pathology of the Lungs," by Dr. T. W. H. CLARKE. The evening will be closed by a vote of thanks to the speakers, and a vote of confidence in the Association.

SOUTH-EASTERN BRANCH: EAST DISTRICT.—The next meeting of the East District will be held at the Town Hall, Canterbury, on Wednesday, September 13th, at 8 p.m. The programme of the evening will consist of a paper on "The Pathology of the Heart," by Dr. T. W. H. CLARKE, and a paper on "The Pathology of the Lungs," by Dr. T. W. H. CLARKE. The evening will be closed by a vote of thanks to the speakers, and a vote of confidence in the Association.

EAST ANGLIAN BRANCH.—The next meeting of the East Anglian Branch will be held at the Town Hall, Norwich, on Wednesday, September 13th, at 8 p.m. The programme of the evening will consist of a paper on "The Pathology of the Heart," by Dr. T. W. H. CLARKE, and a paper on "The Pathology of the Lungs," by Dr. T. W. H. CLARKE. The evening will be closed by a vote of thanks to the speakers, and a vote of confidence in the Association.

at 11 A.M., for this purpose. By the kind permission of the Vicar (Rev. B. J. Armstrong), a Recital will be given by the Organist, Mr. Martin, on the New Organ, at the Parish Church of East Dereham, at 12. Members of the medical profession, whether members of the Association or not, are invited to attend the general meeting at 1.45 P.M.—W. A. ELLISTON, M.D., Ipswich; MICHAEL BEVERLEY, M.D., Norwich. Honorary Secretaries.—September 1882.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 31st, 1882.

Batt, Richard Bush Drury, 215, Camden Road, N.W.

Kirk, Thomas Deck, Crearory, Antrim, Ireland.

Serres, John James, Colchester House, Anerley.

Whitcombe, Philip Percival, Gravesend.

The following gentleman also on the same day passed the Primary Professional Examination.

Llewellyn, James Davies, London Hospital.

MEDICAL VACANCIES.

The following vacancies are announced:—

AYR NEW HOSPITAL AND DISPENSARY.—House-Surgeon to the Hospital and Surgeon to the Dispensary. Salary, £50 per annum. Applications to R. McCallum, Town Chamberlain, Ayr, by September 22nd.

BALLATER AND SURROUNDING DISTRICT.—Medical Practitioner. Salary, £35 per annum. Applications, by October 1st, to J. Rinch, Inspector of Poor.

COOKSTOWN UNION.—Medical Officer for Pomeroy Dispensary District. Salary, £100 per annum, with £20 per annum as Medical Officer of Health, registration and vaccination fees. Election on September 12th.

COUNTY ASYLUM, Whittingham, Preston.—Junior Assistant Medical Officer. Salary, £100 per annum. Applications by September 14th.

CHICHESTER INFIRMARY.—House-Surgeon and Secretary. Applications to the Secretary by September 9th.

DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL, Leicester Square, W.C.—Demonstrator of Contour and Cohesive Fillings. Salary, £50 per annum. Applications by September 29th.

DOWNPATRICK UNION.—Medical Officer for Portaferry Dispensary District. Salary, £100 per annum, with £15 yearly as Medical Officer of Health, registration, and vaccination fees. Election on September 20th.

DURSLEY UNION.—Medical Officer. Salary, £80 per annum. Applications by September 27th.

GREAT NORTHERN HOSPITAL, Caledonian Road, N.—Dispenser. Salary, £100 per annum. Applications by September 30th.

HAMSTEAD PROVIDENT DISPENSARY.—Medical Officer. Applications, by September 23rd, to the Secretary, 23, High Street, Hampstead.

KENT COUNTY OPHTHALMIC HOSPITAL, Maidstone.—House-Surgeon. Salary, £100 per annum. Applications by September 15th.

LEEDS UNION.—Medical Officer for the Township of Headingley-cum Burley. Salary, £35 per annum. Applications by September 11th.

MANCHESTER ROYAL INFIRMARY.—Resident Surgical Officer. Salary, £150 per annum. Applications by September 22nd.

MITCHELTOWN UNION, Kildorrery Dispensary District.—Medical Officer. Salary, £100 per annum, and £15 as Medical Officer of Health. Applications by September 13th.

NORTHLEACH UNION.—Medical Officer for the No. 2 District. Salary, £57 10s. per annum. Applications by September 12th.

NORTHLEACH UNION.—Medical Officer of Health. Salary, £100 per annum. Applications by September 12th.

PLYMOUTH PUBLIC DISPENSARY.—Two Physicians' Assistants. Salary, £60 per annum. Applications by September 12th.

QUEEN'S COLLEGE, CORK.—Chair of Natural History. Candidates to forward testimonials, on or before September 20th, to the Under Secretary, Dublin Castle.

RADCLIFFE INFIRMARY, Oxford.—Resident Medical Officer. Salary, £100 per annum. Applications by September 30th.

ROCHDALE INFIRMARY.—House-Surgeon. Salary, £30 per annum. Applications to J. Rushworth, Honorary Secretary.

ROYAL INFIRMARY OF EDINBURGH.—Pathologist. Applications to Mr. Peter Bell by September 30th.

ROYAL UNITED HOSPITAL, Bath.—House-Surgeon. Salary, £60 per annum. Applications by September 14th.

SALFORD UNION.—Assistant Medical Officer and Dispenser. Salary, £140 per annum. Applications by September 18th.

ST. GEORGE'S, HANOVER SQUARE, PROVIDENT DISPENSARY, 59, Mount Street.—Resident Medical Officer. Salary and allowance for last year, £214 4s. 3d. Applications to Mr. G. H. Leach, Secretary, by September 30th.

UNIVERSITY OF ABERDEEN.—Six Examiners in Medicine. Salary, £30 per annum. Applications to Robert Walker, Secretary.

WESTERN DISPENSARY, Rochester Row, Westminster.—Consulting Accoucheur. Applications by September 10th to Mr. Henry S. Bigg, Secretary.

WINCHCOMB UNION.—Medical Officer for the Vale District. Salary, £65 per annum. Applications by September 22nd.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.—House-Surgeon. Salary, £70 per annum. Applications by September 20th.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM.—Second Assistant Medical Officer. Salary, £100 per annum. Applications by September 22nd.

MEDICAL APPOINTMENTS.

SCOUGAL, Ed. Fowler, M.A., M.B., I.R.C.S.Ed., appointed Medical Officer of Health for Holme Valley Sanitary District, Holmfirth, near Huddersfield.

VISE, C., M.B., appointed House-Surgeon to the Tunbridge Wells Infirmary, *vice* J. B. Footner, F.R.C.S., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

EDWARDES.—On the 5th, at Stanley House, Bath Road, Hounslow, the wife of W. Whitfield Edwarde, M.D., of a son.

MARRIAGES.

HOWE—LE FEAX.—August 30th, at the Parish Church, Llanidloes, by the Rev. Canon Williams, Vicar, Jonas Howe, I.R.C.S.E., Castle House, Llanidloes, son of the late James Roche Howe, Esq., J.P., Glounevirane, County Cork, to Emma Elizabeth (Emmie), youngest daughter of William Le Feaux, Esq., Penralt House.

LOWTHER—DODD.—On the 31st August, at the Priory Church, Cartmel, by the Rev. W. P. Rigge, assisted by the Rev. F. H. Paley, Vicar, Richard Lowther, M.D. Edin., Mem. Brit. Med. Assoc., to Isabella, elder daughter of the late Charles Dodd, Esq., of Hexham, Northumberland.

ROWE—WHEELHOUSE.—September 7th, at the Parish Church, Leeds, by the Revd. John Gott, D.D., the Vicar, George Herbert Rowe, M.R.C.S., to Caroline Agnes, eldest daughter of C. G. Wheelhouse, F.R.C.S., President of the Council.

CONCERT AT SWANSEA.—The morning concert which Madame Adelina Patti has generously consented to give at the Albert Hall, Swansea, on September 14th, in aid of the Swansea Hospital, promises to be very successful. The tickets for the area seats are nearly all purchased at one guinea each, while those in the balcony have been all taken at one guinea and half a guinea. The committee anticipate clearing £1,000 for the institution.

BEQUESTS AND DONATIONS.—Mr. Robert Clayton Mercer, of Accrington, has bequeathed £1000 to the Victoria University, Manchester, for the foundation of a scholarship in chemistry, £500 to the Manchester Royal Infirmary, £500 to the Manchester Eye Hospital, and £500 to the Blackburn and East Lancashire Infirmary. Mr. Antonio A. Ralli, of Westbourne Terrace, Hyde Park, has bequeathed £250 to the Hospital, and £250 to the Special Hospital for the Leprous, of the Island of Scio. The Corporation of the City of London have given £105 to the British Home for Incurables. The General Infirmary, Leeds, has received £180 under the will of Miss Helen Yates, of Exeter. The Chelsea Hospital for Women has received £100 under the will of Mr. Edward Byron Noden. The New Hospital for Women has received £100 under the will of Mr. Daniel Box, of Streatham, and £50 from "S. O. S." The Marchioness of Westminster has given £30, additional, to the Royal Hospital for Women and Children.

THE TECHNICOLOGICAL, INDUSTRIAL AND SANITARY MUSEUM OF NEW SOUTH WALES.—The Colonial Government are making rapid progress with the organisation of this museum, which has now been permanently established in the Garden Palace at Sydney, the building in which the International Exhibition of 1879 was held. Arrangements are now being made for the shipment of contributions to the Museum from manufacturers in this country, which for the most part consist of sanitary appliances and articles connected with building. These contributions are being forwarded to Sydney free of cost by the Government on the recommendation of the British Committee, at the head of which is Sir Saul Samuel, the Agent-General for the Colony. This Committee have issued a circular, in which they say "the Sydney Museum occupies a similar position, and fulfils the same purposes in New South Wales as the South Kensington Museum and the Parkes Museum of Hygiene do in London. Large numbers of houses are being erected in the City of Sydney and other cities and towns of the Colony. Moreover, the authorities are paying great attention to sanitary matters, and the principal object of the Government in establishing and maintaining the museum is to provide a means whereby the Colonists may become acquainted with improved apparatus and appliances for building and domestic purposes." This museum will certainly stimulate business between the Colony and the United Kingdom. Manufacturers and others wishing to avail themselves of this opportunity of sending specimens, models, plans, books, illustrated catalogues, etc., should apply without delay to Mr. Mark H. Judge (8, Park Place Villas, Paddington), the acting member of the British Committee, for the necessary forms.

ions, require to be carefully washed with clean water before use. Only spring-water, well-water, filtered water, boiled water, and distilled water, can be pronounced as absolutely safe. Springs near human habitations are liable to become contaminated.

I believe that the observance of these rules is sufficient to ensure protection; but, since others (whose opinions are also entitled to consideration) take a different view of the mode of infection, it is desirable to state the grounds on which an additional precaution has been recommended.

It is supposed by some writers that the young *Bilharzia* gain access to their victims by perforating the skin; consequently, they would forbid bathing in rivers, canals, and open fresh waters of any kind. Sea-bathing, on the other hand, is very properly encouraged.

There is some ground for the objection raised as to bathing in fresh waters, inasmuch as the larvæ of the common fluke have been known to penetrate the skin and to develop in such situations. These instances, however, are rare, and they merely afford examples of parasitic "straying" from the usual path.

The memorandum above quoted was printed and privately issued to the Company's stations on the 29th of last March. With the managing director's approval, these recommendations are now made public.

Lastly, as regards dangers that may arise from external attacks by water-parasites, little need be said. Many still hold, and until lately I myself was of the same opinion, that the Guinea-worm or *Dracunculus* enters the human body from without. We owe it to the lamented Russian traveller, Fedschenko, to be able to state that dracunculosis requires a change of hosts, and that a species of cyclops is the intermediary crustacean bearer. There is little danger in Egypt from this source. Troops in foreign lands are now uncommonly well protected by clothing; still there are points worth mentioning, especially as, in the heat of a campaign, distress from thirst often compels the brave soldier to drink the filthiest of waters. One remark will suffice. During the invasion of Egypt by Napoleon, the French soldiers were so distressed that many of them threw themselves flat on the ground to drink at the margin of the canals. In this way, their mouths and nostrils were attacked by leeches; the species specially held responsible for these bloodthirsty assaults being that known as the *Hemopsis sanguisuga* of Savigny. These free parasites not only attacked the men, but also their horses, camels, and cattle. It has recently been related that in the expedition of 1799, the French soldiers also suffered from hæmaturia. That such was the fact there can be no doubt, and it is almost equally certain that the disorder was occasioned by the now well known *Bilharzia*. At that time, however, the parasite was entirely unknown. Thus it is both interesting and instructive to observe how modern discoveries and researches throw light upon events that have long become historic, and upon endemic diseases whose essential character was completely misunderstood at the time of their occurrence.

DREAMS.—M. G. Delaunay recently made a communication to the Paris *Société de Biologie* on our new methods of physiological investigation. Physiologists who have studied cerebral thermometry have found a relation between the temperature of the brain and that of the cranium, which is not physical but physiological. M. Delaunay, by making experiments on himself during sleep, discovered that similarly a rise in the cranial temperature induces cerebral action. According to psychologists, dreams are generally illogical and absurd; M. Delaunay, however, by covering his forehead with a layer of cotton-wool, rendered at will his dreams healthy and intelligent. The second method is based on decubitus, which, by favouring the afflux of blood into the dependent part, increases nutrition and induces action in that part. According to M. Delaunay, the dreams which people have when lying on the back are sensuous, agitated, and erotic. Those which occur when the dreamer is lying on the right side are changeable, full of exaggeration, absurd, and relate to old recollections. Those which occur when lying on the left side are intelligent, reasonable, and relate to recent occurrences. Finally, people often talk during the last-mentioned kind of dreams. The writer sums up to the effect that dreams are a legitimate subject for psychological investigation, and that dreams, intelligent or otherwise, erotic or sober, can be induced by causing variations in the cranial or clavary and the nutrition of the various regions of the brain, either by the elevation of the cranial temperature or by decubitus.

ABORTION.—A case involving some medico-legal points was recently tried in Chicago. A girl died from metro-peritonitis. A midwife was tried of causing her death by attempt to produce abortion. The autopsy showed that there had been apparently an attempt to produce abortion, but that the girl had never been pregnant.

REMARKS

HOLIDAY-MAKING AND HEALTH-RESORTS OF NORWAY.

By T. SPENCER WELLS,

President of the Royal College of Surgeons; Surgeon to the Queen's Household, etc.

WHEN medical men are planning a holiday for themselves, their families, or their patients, Norway is seldom thought of. The attractions of the Norwegian fjords have been known for several years past to the harder class of yachting men. One or more summer months have been very pleasantly passed in exploring the many branches of the Hardanger and the Sogne fjords, the valleys and fine waterfalls which are near, and the mountainous districts within easy reach of safe anchorage. Further north, the whole coast may be visited through channels almost land-locked, and reindeer and Laplanders seen in the "land of the midnight sun". Latterly, a far more numerous class than the yachtsmen have obtained almost the same advantages by means of the numerous steamers which now run from Hull and London to Christiania and Bergen, and the Norwegian steamers which ply along the coast and up the different fjords. And, with the sole disadvantage to those who suffer from sea-sickness of the forty or fifty hours' passage from Hull, it is impossible to imagine how holiday-making and the search for health could be more pleasantly combined than in a summer visit to Norway.

Those who wish to see the midnight sun would be obliged to leave England early in July. This is earlier than would suit a London practitioner; but all the southern parts of Norway can be visited with equal advantage up to the end of August, or even later. My own tour was limited from leaving London on July 25th till my return on August 28th. During these five weeks, we had only one thoroughly wet day; only two in which excursions were partially interfered with by rain; only one day and night when warm clothing was necessary or comfortable; and, although an umbrella was generally required during the warmer parts of the day as a sunshade, the heat was scarcely ever too great for comfort. Clear air and a pleasant soft refreshing breeze were the rule, not only in boats or steamers, but on the roads. Of course, some seasons are more rainy, and some hotter: but as compared with Switzerland or the Tyrol, my own experience and that of others would seem to bear out the impression that one may expect less interference with plans from weather in a Norwegian summer than elsewhere.

Then, as to accommodation; for healthy travellers who are not fastidious, this is quite sufficient. The hotels in the larger towns are good, and the steamers are comfortable. At the smaller country inns and stations visited by travellers in the carriages of the country, the arrangements are primitive, and for ladies far from convenient: but, of the many ladies whom I met at different places, I did not speak to one who did not think that these minor drawbacks were not far more than counterbalanced by the beauty of the scenery, the novel mode of life, and the many interesting events in each day's journey.

As to expense: in Norway, travelling with a party of four to six persons, about £1 a day for each person is a fair or liberal estimate for those who travel in the ordinary manner. But as all this may be learned from the guide-books of Murray, Baedeker, or Bennett—or from Mr. Cook, who has excellent arrangements for tourists in Norway—I shall content myself with thus simply pointing out a comparatively untrodden path to any who are planning a holiday; and proceed to give some little information as to some of the health-resorts in Norway. Hitherto they have been chiefly used by Norwegians themselves, with a few visitors from Sweden and Denmark or Germany. But, occasionally, an English sportsman or traveller has been glad to combine his plans with a visit to one of the sea-bathing places, hydropathic establishments, or mineral baths which are to be found both near the sea, or rather on one of the fjords, and in more mountainous districts. The most important of all these bathing-places I visited on July 7th and 8th, at Modum, about thirty English miles from Christiania. It is near the shore of the Tyrifjord, surrounded by pinewoods on the slope of mountains which extend northwards and bound a valley or gorge, along which rushes a river after a very fine precipitous fall. The hills and the sides of the stream and falls are rich in sheltered walks, and the air is very pure and invigorating. A spring known as St. Olaf's fountain is a strong chalybeate, with free carbonic acid.

This is used as a drink in all cases where iron is indicated. But a number of other bathing processes are carried out in this establishment, which was founded and is still under the direction of Dr. Thaulow and his relative Dr. Dedichen. Warm or tepid baths, with friction by birch leaves or twigs; with strong extracts or decoctions from the pine needles; with the ferruginous deposit or mud of the springs; as well as inhalations of medicated steam, are all practised here. Very perfect arrangements for carrying out all these processes have been completed by Dr. Thaulow; and I saw many patients who had found great relief in various forms of lung and throat disease, and in rheumatic, neuralgic, and paralytic conditions, after one or more visits. About three hundred patients were there at the time of my visit, living either in families in small detached cottages, or in the rooms of large villas each with many small bedrooms. A spacious dining-room, a large hall for concerts, dancing, and theatricals, with a promenade and band, complete the arrangements so well known to those who have visited the springs of France, Germany, and Belgium.

At Sandifjord there is a similar establishment, which was also founded by Dr. Thaulow, but is now under the superintendence of his son-in-law, Dr. Knutsen, where the different kinds of baths and frictions used at Modum are also to be had, with the addition of sea-bathing, and with a spring of a very strong sulphurous water much resembling that of Harrogate. A saline and sulphurous deposit, or mud, is also used here instead of the ferruginous water of St. Olaf; and there are equally good arrangements for inhalation and for the application of electricity. One quite novel appliance is a sort of local irritation or blistering by means of the sea-anemone—*medusa aurita*—which abounds in the fjord, and is a very active irritant, and is said to have proved extremely useful in a large number of rheumatic and neuralgic patients. In many cases, neuralgic pains of long duration are said to have entirely disappeared after only one application of a medusa. Dr. Thaulow first adopted this practice in 1837, after having seen a man who, when bathing, was accidentally stung by a medusa on the shoulder near the seat of neuralgia of some years' standing, and who never suffered afterwards. I made Sandifjord my head-quarters for a week, most hospitably entertained by Dr. Thaulow and Dr. Knutsen, and watched the mode of using the medusæ. An attendant holds the medusa by the upper smooth surface, which is not an irritant, and does little more than touch the parts where the irritation is required for a second or two with the under surface of the creature. The poison must be very active; for a smarting and burning sensation immediately follows; then redness and swelling, lasting for some hours; and frequently an erythema, which may not pass off for several days. Soon after the application, the patients often feel shocks, described as electric, in different parts of the body; and head-symptoms, varying in character and duration, are not uncommon.

Another class of cases in which the Sandifjord processes have proved very useful, are diseases of the nervous system due to secondary and tertiary syphilis. Every year, the number of these patients increases. The use of the sulphurous water and baths is combined, very much as at Aix-la-Chapelle, with mercurial inunctions. Dr. Knutsen told me of many very remarkable examples of the advantages of this so-called "mixed cure". Fifty such cases were treated here in the year 1881, among a total of 420; and 55 of diseases of the nervous system due to other causes. The most numerous were rheumatic patients, 178 in number.

At Laurvig, a small seaport, I also visited a very well arranged bathing establishment, superintended by Dr. Holm. The water here is also sulphurous, but much less strong than at Sandifjord. Warm sea-water baths, with friction, followed by douches of warm and cold fresh water, are systematically carried out here; and there are very well arranged inhalation-rooms for vapours and for the use of compressed air. Cases of chronic catarrh, remnants of chronic pneumonia or pleurisy, scrofulous and many chronic diseases of the skin, are treated here with great advantage. One of the special modes of treatment used both at Laurvig and Sandifjord is a saline mud called *gytje* or *gytie*, used alone or after admixture with the sulphur-water. This is used as a "mud-bath"; also by friction and poulticing.

At all these establishments, patients are very methodically treated. Each one has his number, and a form of printed directions filled up by the doctor, who attends in an office for two hours three times a day. The amount of water to be drunk at different hours; the temperature, duration, and kind of bath; the frictions, belts, or poultices; the vapours and douches, are all prescribed with care and precision. So are the amount of exercise and the diet.

There are several hydropathic establishments in Norway; but I only visited one, a large place called Grefsens Bad, about half an hour's drive from Christiania. The views of the fjord and its islands are splendid, and the bathing arrangements very complete. It might be a very convenient place to stay for any one detained in Christiania.

It would be ungrateful if I were to conclude this very hasty sketch without a word of thanks for the extreme kindness and hospitality received from my professional brethren in Norway, but especially from Professor Nicolaysen of Christiania, Dr. Thaulow of Modum, and Dr. Knutsen of Sandifjord.

BRITISH MEDICAL ASSOCIATION.

FIFTIETH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

THE SCIENTIFIC AND PRACTICAL OBJECTS OF THE REGISTRATION OF DISEASE.

Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By ARTHUR RANSOME, M.D., A.M.,

Lecturer on Public Health and Hygiene in Owens College, Manchester.

So much attention has been paid of late to what may be termed the political aspects of the subject of the notification of disease, that it may be of some service to revert for a few moments to the scientific as well as the practical objects of the registration of disease. My remarks must necessarily take the form of a survey of the course that this undertaking has followed hitherto, and its possible scope in the future; but time will not permit much more than an enumeration of the things that have been, and that may afterwards be, accomplished by its means.

To those who have not followed the history of this subject, it will be interesting to learn that probably the first complete attempt at a registration of disease was made by this Association in 1853, nearly thirty years ago, when the Association was still called the Provincial Medical and Surgical Association; and tables of prevalent disease, along with elaborate meteorological data, were given week after week by Dr. Moffat and others in the JOURNAL of that day. These returns attracted much notice at the time, and many interesting observations upon the connection between the meteorological changes and disease were made. As the records were made daily, it was even possible to note the effects of changes in the barometric pressure and in the direction of the wind. In a paper published in 1860, on the Influence of Barometric Pressure upon Hæmorrhages, I showed that the results of these returns already bore testimony to the value of even a partial registration of disease.

In 1857, the General Board of Health in London took up this question, and from 1857 to 1858 they published a carefully compiled return of disease occurring in the metropolis. These returns were also utilised by several observers of the influence of atmospheric changes upon disease; and in the year 1860 similar records were obtained in Manchester and Salford by the Sanitary Association. These weekly returns were continued for twenty years; and, in addition to being put to the above purpose, they were found to be of great service in giving timely information of the presence and course of epidemics. They now form a body of medical statistics out of which have been drawn many conclusions respecting the laws of epidemics, their periodic appearances and their causes, and the relations to them of other diseases.

In 1862, our own Association again took up the subject, and a committee for its advancement was appointed by the Lancashire and Cheshire Branch; and in 1865 this movement was spread throughout the Association by the appointment of a more general committee at the meeting in Leamington.* It was then pointed out that many valuable results might be expected to follow the establishment of a systematic registration of disease; such, for instance, as the tracing of the influence upon sickness of the varying conditions of climate and season, of prosperity and distress, of the trades and manufactures, and of many other circumstances peculiar to a district. Their bearing upon the subject of epidemics was also fully discussed.

Shortly after this date, the Royal Sanitary Commission reported favourably on the subject; and I would again earnestly call the attention of members to the terms in which they speak of both the practical and the scientific value of the registration of disease. But I will not now carry any further my history of this subject, seeing that from this point it is

* This committee consisted of Dr. Acland, Dr. Hughes Bennett, Mr. Crompton, Dr. Farr, Dr. Fleming, Dr. G. Harley, Dr. Hodgson, Dr. Handfield Jones, Mr. R. C. Browne, Dr. Morgan, Dr. W. Ogle, Dr. Philipson, Dr. A. Ransome, Dr. Stewart, Dr. Sibson, Mr. Thomas Turner, Dr. Waters, and Dr. Eason Wilkinson.

given with quite sufficient detail in the *BRITISH MEDICAL JOURNAL* for the present week (August 5th, page 236). But I have been thus particular in pointing out the mode of origin of the movement, because I am anxious to display the facts—1, that it originated in our own body; and 2, that its origin is not to be traced to any specialised department of our profession, and that the need for such a record of disease was felt by many different minds in all parts of the kingdom.

The composition of the Committee also by whom the successive reports were considered, ought to be sufficient to prove its catholic character. I shall only need to read their names as evidence of this point. Such men as Dr. Farr, Dr. Fleming of Birmingham, Dr. Gairdner of Edinburgh, Drs. Crompton and Morgan of Manchester, Dr. Rumsey of Cheltenham, Drs. Sibson and A. P. Stewart of London—I venture to say that such men as these were little likely to become the members of a clique, or to allow anything to pass with their approval that was likely in any way to be derogatory to professional dignity, or that was not for the advantage of medical science. I have, for the same reason, described the views that were put forth at different times by the promoters of this measure, in order that it may be seen that not only the interests of the public health were considered, but also the advancement of medical knowledge. Already, from the partial attempts at registration of disease that have been made in different towns, many interesting results have been derived, and the anticipations of the promoters have in no way been disappointed. They may fairly be said to advance in importance with the progress of our knowledge in other directions.

In the store of material that will be laid up for us in the records of infectious disease obtained in different towns, we may fairly hope that there will be many facts that will have a bearing upon recent researches respecting epidemics. We need to transfer to human beings Pasteur and Greenfield's observations upon the "contagium vivum" in animals, and upon the means by which its virulence may be attenuated; and we are anxiously looking for some indication of the means that can be used to protect mankind from the ravages of zymotic disease—some means that will be comparable to the inoculations now practised against animal diseases. Pasteur's observations also are of especial interest to us, with regard to the possible revival of virulence of disease-germs under certain definite conditions.

In all probability, similar accessions of power of infection are to be discovered amongst human beings; and, in the records of registered cases of infectious disease, we may fairly look for the facts which will lead us to important discoveries in the future. But I am far from undervaluing the practical utility of such a measure as the early notification of infectious disease. As was well remarked by the Royal Sanitary Commissioners: "It would keep the public, and especially the central sanitary authority, constantly aware of the state of the public health in every part of the country. In nearly all cases of epidemic and contagious diseases, time is lost before the deaths, few in comparison with the cases, begin to attract attention. In many instances, weeks have elapsed before the existence of widely prevalent and preventable diseases has become known to any efficient sanitary authority. Thus, the best opportunities have been lost, both of ascertaining the origin of epidemics, and of preventing or limiting their spread. The chances of suppressing an outbreak of disease are in direct proportion to the speed with which it becomes known to a sanitary authority; and it is only by a systematic registration of all cases, whether fatal or not, that the speediest information can be obtained."

"It may be hoped that a registration of sickness would bring to light, not only many unknown liabilities to disease in various places and amongst various classes, but some immunities, from the study of which means of improving the public health might be derived."

I am aware that the practical utility of the notification of disease has been denied by some of the more active opponents of the measure, but it is evident that the only way in which epidemics can be prevented from spreading is by prompt isolation of the first cases, and the only way in which such cases can be isolated is by obtaining early intelligence of their existence amongst a community. Notification such as is here implied has hitherto only been carried out imperfectly, and for a very limited period, in any part of the kingdom; but it will be hard to find the evidence that is forthcoming, that it has already had a most beneficial influence in reducing the rate of mortality from infectious diseases.

I will now give one instance, taken from Dr. Wallace's report in reference to the effect of the measure in Greenock, into which town it was introduced in 1876. Dr. Wallace shows clearly that, whereas, in the three quinquennial periods before 1876, the death-rate varied from 29 to 33.6 per 1,000, in the five years 1876 to 1880 the mortality was only 23.3, and the rate for 1881 was 22. Again, in

the five years preceding the introduction of the measure, the annual average of deaths from small-pox was 55, from measles 50, scarlet fever 93, typhus 29, and from enteric fever 36; but, in the following five years, these annual averages were reduced respectively to 28, 13, 28, 12, and 19. In fact, before 1876, Greenock held an unenviable position of pre-eminence amongst other Scotch towns in the death-rate from zymotic diseases. The annual percentage of deaths from these complaints to the total deaths was at Greenock 27, which rate was only equalled by Dundee, the other towns, from Perth to Glasgow, varying in their percentages from 21.6 to 25.9; but, in the five years 1877 to 1881, the average of Greenock took the lowest place, and was slightly under 14 per cent. In the case of scarlet fever, there was a great reduction in the mortality after notification, from an average of something over 5, to an average of less than 1.

I will not take up your time with further extracts, but I may say that the returns from several other towns are equally favourable to the measure; and, though I cannot ascribe all the recent reduction of epidemic disease in these towns simply to the sanitary measures that have been adopted in consequence of notification, I am convinced that a very large part of this reduction is due to these measures; and, when we remember the mortality from these disorders in England and Wales every ten years, I think we shall see good reason for welcoming any means of reducing this terrible mortality.

I have now very briefly enumerated some of the scientific and practical objects that we hope to attain by the establishment of a national system of notification of disease; and now with equal brevity I will inquire what are the objections to the scheme for notification proposed by the Registration of Disease Committee of this Association. Before I enter, however, into the essential objections to our scheme, let me say that I have no intention of attempting to defend the surreptitious manner in which clauses for carrying it out have been smuggled into certain of the local Acts. I entirely sympathise with those who object to this method of procedure, and I believe that it has done more than anything else to prejudice members of our profession against the measure. Nor do I condone the mistakes and want of judgment that in some instances may have been shown in carrying out the Acts. Such errors are incidental to most new undertakings, and they are detrimental to its efficiency; but they are in nowise inherent in the scheme itself. I believe that they would most of them be prevented by insisting upon a separation of the public health service from private practice. I will now turn to the alleged obstacles to our scheme.

1. Perhaps the most important objection to notification is the assertion that it would constitute a breach of confidence between the medical attendant and his patient. But I fail entirely to see that this objection applies to the scheme that has so far received the sanction of this Association. It is true that, for any efficient measure of notification, there must be an authoritative declaration of the nature of the disease by the medical attendant. The householder alone could give no definite and decisive opinion on this point; and if he attempted to do so without participation on the part of the medical man in charge, it would become necessary for the medical officer of health to inspect every case that was thus reported to him. I hardly think that this proceeding would be tolerated by the profession. Moreover, it is surely the duty of every medical man to make known the nature of the disease to the householder, or to the person in charge of the case; and all that would be done under the scheme in question would be to insure that this should be done in a formal and authoritative manner. That this would be no serious breach of confidence, is sufficiently shown by the fact that some of the most strenuous opponents of compulsory notification have themselves proposed that such notification should voluntarily be given by the medical attendant. In my opinion, a voluntary notification for the sake of the fee would be ten times worse than the legally authorised notification provided for by our rule. I am not by any means sure that, by a voluntary disclosure, the medical man would not lay himself open to proceedings against him in a court of law.

2. Again, it is affirmed that this measure would lead to the concealment of the true nature of the case, and that, in fact, the medical attendant would conspire with his patient to deceive the sanitary authority, in order to avoid the loss of trade or other inconveniences that would follow the announcement to the sanitary authority. Thus it is supposed that in place of checking epidemic disease, the adoption of notification would assist its spread by encouraging concealment.

I trust that there are not many who share this degrading view of the morality of the members of our profession. For my own part, I am sure that it is a libel upon them, and that the cases in which such a proceeding would take place would be rare in the extreme. But to those who gravely endorse this accusation, I would say that they greatly overrate the repugnance that will be felt to notification even on the part of tradesmen and shopkeepers. When the beneficent operation of the

measure comes to be better understood, it will be found that, instead of increasing the fear of infection, the speedy action of the authorities in bringing about isolation and disinfection will produce a feeling of confidence in the public mind, and the knowledge that premises have been thus visited will much more rapidly promote the return of trade than can be the case under present circumstances. The panic that now so frequently seizes a community, and that is so great a hindrance to commerce, will then seldom take place, and traders will seek for the authoritative declaration that their places of business are free from infection.

In conclusion, let me urge the Association to take no retrograde step in this important matter. We have seen that the plan originated within our own body, that it was considered with the greatest care by men who are deservedly regarded as amongst the foremost of the profession, and we have glanced at the benefits that the measure is likely to confer upon medical science and upon mankind. Let us, then, not do anything to impede its national adoption.

The chief functions of our profession are those of saving life and mitigating suffering. We owe our present honourable position amongst other professions, not only to our devotion to science, but also to the readiness that has ever been shown by our body to assist in the prevention of disease.

Unless we would now fall from our high repute in public estimation, and abandon the noblest traditions of our guild, we must not now stand aloof and declare that it is no business of ours to assist in limiting the ravages of epidemic disease. Nor ought we to refuse to take advantage of the means offered to us by the registration of disease for the advancement of medical knowledge. I therefore again appeal to this great Association to fight zealously in favour of the notification of disease, and in the cause of humanity and medical science.

IS THE COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES BY MEDICAL MEN PRACTICALLY USEFUL?

Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By WILLIAM CARTER, M.D., LL.B.,

Lecturer on Materia Medica in University College, Liverpool; Physician to the Royal Southern Hospital.

IN trying to answer this question, we must be very careful to distinguish between those general impressions and anticipations of benefit in which medical officers of health freely indulge, and the actual proof which, on so serious a question, we have a right to demand.

To establish this proof, two things are absolutely necessary. Firstly, those towns which have had the longest experience of compulsion must show that they, with it, have progressed sanitarily at a greater rate than other towns, equally liable with themselves to infectious disease, have progressed without it; and, secondly, that they have had no other agencies in operation adequate to produce the result, except compulsion and its necessary consequences. But, curiously, no attempt whatever has been made to establish these, the only really important points. What has been done, has been to show that the average mortality from certain infectious diseases during an arbitrarily selected number of years before the acquisition of compulsory powers—a number different for each town—has been greater than it has been during another and much smaller number since. A very little consideration ought to have convinced anyone of the worthlessness of this alleged proof. Yet Mr. Hastings, who informs us that he is one of those who holds "very strongly with experience and very little with theory", refers to it as though it practically settled the question.

Let us see what it amounts to. I will take Bolton and Huddersfield, the first of which has had absolute, and the second contingent, compulsion longer than any other towns in England, and both of which have been cited by the admirers of this system, and the former especially by Mr. Hastings, as conspicuous examples of its advantage.

The details of the plan adopted are curious, to begin with, and such as ought to excite suspicion in the mind of every reasonable man (not to say every statist). One would think that, so far as fairness could be obtained at all by a method in itself radically defective, it would have been by a comparison of the sanitary condition during an equal period before and after compulsory powers were obtained. But Bolton

compares ten years before with only five years after; Huddersfield, eight years before with five years after; while Warrington carries the absurdity to its furthest limits by comparing nineteen years before with two years after. It should be specially noted that even the shortest of these periods carries us back to a date some years antecedent to the Public Health Act of 1872, before which, as everyone who has considered this question at all knows, decade after decade passed without the slightest sanitary progress throughout the country.

Yet, accepting what must be considered as the most favourable statement possible for these towns, that which they and others specially put forward as proving their case, what do we find? Why, that Liverpool, which for many reasons is more liable to the inroad and spread of infectious disease than any other town in the kingdom, has progressed during those very years nearly half as fast again without any compulsory Act, as Bolton has with one. If you will examine the figures on the table—for which figures, and the method of employing them, I should like here to say I am indebted to Dr. Davidson of Liverpool, who first published them in one of our local papers—you

Average Annual Mortality per 1,000 Inhabitants.

	BOLTON.		LIVERPOOL.	
	1867-76 (10 Years before the Act.)	1877-81.	1867-76.	1877-81.
Small-pox	0.12	0.004	0.54	0.12
Scarlet fever	1.10	0.82	1.45	1.04
Fevers { typhus { typhoid { simple	0.57	0.33	1.15	0.57
	1.79	1.154	3.14	1.73

Populations 94,000 ... 105,000 ... 493,000 ... 535,000

will see that the average annual mortality per 1,000 from small-pox, scarlet, typhus, typhoid, and simple fevers, fell, in Bolton, from 1.79 in the first period of ten years, to 1.154 during the second period of five years; whereas in Liverpool, during the same periods, from the same diseases, it fell from 3.14 to 1.73. (I must incidentally introduce a slight correction here. Bolton's figures, though said to be carried through 1881, only went up to October of that year. In November, small-pox made its appearance, and, in spite of this Act for strangling it at its very birth, grew into an alarming epidemic. If the last two months of the year had been included, it would have made Bolton's position more unfavourable than is here represented.) But, leaving aside this, and the further fact that her population had been overestimated, and her death-rate made consequently to appear somewhat less than it really was, if Bolton had progressed as fast as Liverpool, her mortality from these diseases should have been .98 per 1,000 instead of 1.154. Yet the medical officer of health, to quote his own words, considers that "the above evidence illustrates in a striking manner the beneficial effect of the compulsory clause, and fully justifies all that has been said in its favour"; while Mr. Hastings, addressing a meeting of the Social Science Association, says, after citing these figures for Bolton: "If you will only work out in your minds what is meant by a diminution of that sort in the death-rate of a working population from zymotic diseases, from small-pox, scarlet fever, and other fevers, then you will be able to come to the conclusion as to what benefits a system of this kind confers." And if, instead of comparing Bolton's progress in these diseases with that of Liverpool, we compare it with that of the country generally, we find a similar result, viz.: Bolton, with her compulsory notification, lagging considerably behind the country generally without it. The average annual mortality per 1,000 for England from these diseases during the earlier period was 1.78. Bolton and the country then started on the race for improvement from almost exactly the same level. Yet, during the succeeding four years (the only ones for which the Registrar-General's returns admit of a comparison), the country generally had progressed so much the faster, that its average annual mortality from them had sunk to 1.047, instead of only to 1.154.

In the same way, without going into details, it can be shown that, if Liverpool had only progressed as fast as Huddersfield in these test diseases, her mortality from them during the latter period should have been 1.8 per 1,000, instead of, what as a matter of fact it is, 1.73. Where, then, is the proof alleged by Mr. Hastings and others to be afforded by these figures of the benefits of compulsory notification?

One word more here. Writing his paper in October 1881, the medical officer of health for Bolton gives credit to compulsory notification for having enabled him to prevent small-pox, which had been many times introduced, from spreading. "The small mortality", he remarks, "compared with previous years, demonstrates in a practical manner the immense saving to the community." The proof-sheets of this paper

can scarcely have been dry when small-pox once more appeared in Bolton. The result of the outbreak I did not know when this paper was written, but I have since heard, through the courtesy of the medical officer of health, that, during this year, there have been 269 cases, and 19 deaths.

A word or two on the second point that ought to be established by the towns which claim great advantages from compulsory notification, viz., the absence of other agencies adequate to explain the improvement in their health. I will merely observe that the medical officers of health of these towns give detailed accounts of exactly similar proceedings to those which have been beneficial throughout the country generally, such as the opening up of crowded thoroughfares, improved water-supply, improved methods of removal of refuse, etc.; and, as these are the agencies which can alone have done so much good in Liverpool and the country generally, does it not seem reasonable to attribute to them, and not to its compulsory notification, the limited amount of progress which Bolton has made?

I will turn now to another aspect of this question. Arguing from what seems to us to be the inevitable tendency of human nature, we believe that the exercise of the powers in question must lead to the concealment of disease; that the heads of business-houses—and especially of small businesses—dreading the notification which must follow if a medical man be called in, and which may lead to their children being forcibly removed from their homes, and their business diverted into other channels, will not summon medical aid; and that, in the absence of those precautionary measures which, by the private medical practitioner's direction, are always more or less taken, disease will spread: though it may spread under other names than those of scarlet and typhus fevers. But we shall, of course, be told that to argue from the inevitable tendencies of human nature would be to show ourselves theorists, that your practical men must have facts. To facts, therefore, we will turn; and, difficult though in the nature of things it must be to prove concealment, I think that the evidence that it does exist is overwhelming.

Firstly, let me ask your consideration of a few figures, taken from such reports of medical officers of health as have come to my hand. In Blackburn, during 1881, there were 103 notifications of scarlet fever, and 23 deaths, or 1 in every 4. In Bolton, during the fifteen months ending December 31st, 1880, there were 702 cases reported, and 112 deaths, or 1 in every 6.2. Or, turning to another disease; in Bolton, during the same period of fifteen months, there were 102 notifications of typhoid fever, and 23 deaths, or 1 in every 4.4. In Blackburn, during 1881, there were 281 notifications, and 68 deaths, or 1 in every 4.2. Now, I would ask any medical man here, whatever his practice may be—even if it be among the very lowest and poorest of the land—if he has ever known, in the most serious and fatal epidemic, such ghastly mortalities as these? The deaths from typhoid fever in Blackburn and Bolton were half as high again as at the London Fever Hospital, where, for reasons given by the late Dr. Murchison, they must always be exceptionally high. The only conclusion that seems possible from such figures as these is, either that many cases are concealed, and hence the mortality is made to appear high; or that the diseases themselves, if at all of a severe type, are fearfully fatal to the individual, where such powers as those possessed by Bolton are carried out.

But there is unexceptionable evidence of a different kind that concealment prevails. Thus, a medical officer of health for one of these towns writes: "No. 2 was a case where there were three other children in the house, but two of them were removed in the night, after I had given my certificate." From another gentleman I learned that a certain course was adopted, because parents would "wriggle out of giving notice in mild cases of scarlet fever, declaring it measles."

Here is another piece of confirmatory evidence. On July 14th, 1882, the *Liverpool Daily Post* contained an account of a poor little Warrington girl having been decoyed from the steps of her house, upon which she was sitting, and violated. When examined by a medical man, she was found to be in the desquamative stage of scarlet fever. She had never been seen by a medical man; yet she knew that she was ill, and at first refused to accompany the man on that account. View this fact in the light of the previous figures, and of the apologetic references to non-notification made by the medical officer in his last report, and see how they mutually illuminate each other, and one serious aspect of this question.

But let me add testimonies from medical men in some of these towns, who were not originally unfavourable to the powers. In reply to a friend of mine, who asked him his opinion of the Warrington Act, a medical resident of that town writes: "Theoretically, our compulsory Act is very good; but, practically, I believe it to be a snare and a delusion. The fact is, patients do not send for a medical man when they think the disease is scarlet fever, as they know the case will then

have to be reported. This notification by the medical attendant has had an injurious effect upon the good understanding and confidence which usually subsist between the medical attendant and the patient, the patient now looking upon the attendant as a kind of quasi-detective. It thus comes to happen that a great many cases are unknown either to the medical profession or to the sanitary authorities. You will, therefore, see that the Act causes pecuniary loss to the profession, and very likely life-long sequelæ are left through the patients not being treated *secundum artem*. In conclusion, I may say that the profession dislike the Act, and upbraid themselves for not having opposed its passing. And I believe the inhabitants generally consider it arbitrary and harsh in its enactments. I advise you to oppose it by all legitimate means in your power."

Another medical man, writing to myself, says that he had been favourable to the idea of the Act; but—to quote his exact words—"since experiencing the arbitrary manner in which the compulsory powers have been carried out, I have materially altered my views."

Another, also at first favourable, writing from a different town, says: "Patients are frightened at being interfered with by the authorities, and sometimes will not send for a medical man; and our orders are sometimes countermanded by the officials. The majority here are in favour of non-enforcement of medical men to report cases of infectious disease. In my opinion, the Act has been of no use. A little common sense and ordinary tact in getting the profession and the public to co-operate with the authorities would have done far more, with little trouble, less expense, and no animosity."

Another most serious aspect of this question is, that there is a constant increase in the stringency of the demands made by sanitary authorities. The ends desired not being accomplished by the powers first obtained, others of a more and more arbitrary character are sought for. To quote the words of Mr. Michael when addressing the Select Committee, "If we really had the power to carry out all that science tells us is essentially necessary for the conserving of the public health, the clauses I hold in my hand would be very much extended. They are not final." Now, mark! these milder preliminary clauses included powers for compelling medical men to notify; powers for closing public or private schools situated in any neighbourhood affected by infectious disease; powers for closing any shop whatever, and for preventing the public from entering it, whenever infectious disease should occur in its associated premises (a special exception as to entering the house being, after discussion, allowed in favour of a medical man and a clergyman); powers for compelling the removal of patients to hospital, for prohibiting the issue of books from a public library, and so on; and all this at the discretion of a single individual—the medical officer of health. Let there be no mistake about this matter. If we are to enter on this path, let us at least do it with our eyes open. Like Mr. Hastings, "I hold very strongly with experience, and very little with theory"; and, in this matter, experience will be our safest instructor. Let us see what she teaches us. Huddersfield had an Act allowing some measure of discretion to medical men, limiting the diseases to be notified, and making the maximum penalty for default £5. After two or three years' experience, she obtained another, which took away all discretion, largely extending the diseases at the will of the medical officer of health, and raised the maximum penalty to £10. Bolton had a similar limitation of the diseases to be notified. This year she also has required that they shall be extended at the will of the medical officer of health, together with other stringent additions. Notwithstanding that in Warrington the application of the powers has excited such strong feeling that, as I am informed, "the Town Council have resolved that, in cases where the patients' friends do not consent to removal to hospital, the medical officer of health is not to take action", that gentleman wishes now to apply for the right of entry into private premises. Dundee had an Act under which "the occupier of every house or place in which any of the inmates are affected with any contagious or infectious disease shall give notice thereof, at the office of the sanitary inspector, within twenty-four hours after such occupier shall have notice of the fact"; yet this year she applied for the right of entry by the medical officer of health into any house where infectious or contagious disease was suspected; the right to examine anyone in that house; the right forcibly to remove the sick to a hospital, and the sound to a place of quarantine; and the right to mark with coloured placards any infected house. This is what the science of Mr. Michael and the medical officers of health—for I venture to doubt it it deserves the name of true science—"tells them is essentially necessary for the conserving of the public health". These powers evoke antagonistic forces, with which no law is competent to cope. All the dearest and most cherished interests of human nature have become arrayed against them. The love of a poor mother for her sick child, the interest that a man has in the business from which he gains his livelihood, the feeling of honour

able confidence hitherto existing between even the poorest and meanest patient and the medical man whom he consults—all these are to be rudely violated in the name of a science which, so far as evidence of its application allows us to judge, has only served to check that steady progress towards a higher level of health which, under the wise and politic provisions of the Public Health Acts of 1872 and 1875, the country has been making during the last decade.

Dr. EWING WHITTLE (Liverpool) expressed his surprise that any person, member of Parliament or otherwise, should dare to make such a proposal as that medical men should act in the position of spies to their patients. He understood that, at Edinburgh, every medical man who took his degree was required to take an oath that he would not betray the secrets of his patients. In France, the police were sent round to make the returns, and the medical men in that country would not have submitted to such a state of things in the darkest days of French despotism. He felt convinced that the result of forcing compulsory notification on the medical man would be to bring about absolute concealment, and they would find their patients' doors shut in their faces. Many cases might be treated with careful nursing, but when cases were of a serious nature, they would be concealed to the last moment. If, as a body, they submitted to such a proposal, they would degrade the profession and lower their moral status; and he was surprised that such a measure should be accepted in any large town in the country. For his own part, he would rather take his name off the *Register*.

Dr. E. HAUGHTON (Upper Norwood) said that the physician ought to be the friend of the family, and he ought, by his conduct, to show that he deserved the confidence of his patient. Would he have this confidence if he acted as the tool of the Government? He thought everything that was needful in the way of statistics could be obtained without obliging the medical man to furnish them. He should rather say it would be a great advantage to society to have the opinion of the medical man, as a counteracting check upon the report of those who were to be invested with the authority. One of the great advantages of our administration was, that there were different paid bodies that held one another in check. There was such a thing as cooking statistics—comparing short periods with long. Dr. Carter, in his valuable paper, had shown that it was rather by the manipulation of figures than by genuine statistics that a case was made out in favour of this system of compulsory notification. He must own that he sympathised with the public to some extent. Unquestionably there had been cases of individual hardship. If a person were so unfortunate as to contract a disease which rendered him liable to infect the mass of the community, he was subject to many harsh penalties without any compensation. Every facility for co-operating with the profession ought to be placed in the way of the public. The public should be induced to feel, not that the Act pressed hard upon them, but rather that it was to their interest to give the fullest information; and it would then be given. The true reason why many things were concealed, was the doubt as to the use which would be made of the information. He thought that attention ought to be mainly directed to such measures as might be of use in combating that difficulty, because, until that was overcome, it was of no use to pass Acts of Parliament.

Mr. GEORGE BROWN (London) said that the subject was one of the highest importance to the profession at large, as, if the notification of infectious diseases were put upon the shoulders of medical men, it would entirely alter the relations of medical men to their patients. If the physician were to be converted into an amateur detective and informer, he would be regarded with suspicion by his patients, and in the majority of cases of suspected infectious disease, he would either not be called in at all, or not until after the disease had assumed such a serious aspect that his services would be of no avail. If the notification of infectious diseases were compulsory, compulsory removal would probably follow. Mr. Brown believed that, in many cases, removal meant the death of the patient, and instanced cases where a fatal result had followed the removal of a patient during the stage of pyrexia from the warm atmosphere of the sick room to the hospital, situated perhaps several miles from the residence of the patient. For his part, he believed that in most cases medical men were able to isolate their patients, and see that such precautions were taken as would prevent the spread of disease, without the assistance of local sanitary officials. He strongly objected to the medical officer of health coming between him and his patients, and would, as far as possible, do what he could to prevent it.

Dr. SLADE-KING (Ilfracombe) expressed his surprise at the objections raised to the compulsory notification of zymotic disease; he considered it only the crowning of the present sanitary edifice so carefully and gradually built up. He regretted that those who took such a violent objection should be willing with one hand to cure disease, and to open the other hand and permit its spread. He objected to penal clauses;

but he considered it as much the duty of the householder to give notice of zymotic disease as of a sanitary inspector to remove nuisances.

Dr. BOND (Gloucester) desired, before the discussion proceeded any further, to point out the extreme undesirability of mixing up the discussion of two subjects so entirely separate as the registration of disease and the compulsory notification of infectious disease. If this were done, he feared that the Section would get into a state of confusion which would lead to waste of time, and would diminish the value of any conclusion to which they might come. He would suggest that, if they desired to discuss the question of the general registration of disease—which he, for one, looked upon as an impracticable chimera—they should do so at once; but if they thought it better to confine the discussion to the compulsory notification of infectious disease, the propriety of which he fully recognised, they should leave the question of registration of disease on one side.

Mr. SYKES (Mexborough) said that the speeches heard had been scarcely worthy of the occasion. One gentleman objected to the Act on the ground that it did a great deal in the way of precaution, but nothing resulted therefrom. Could any scientific man believe that precautions could be wasted? Another objected to the Act, that it would ruin tradesmen; but what of the poor wretches who suffered from the effects of the concealment of the disease? One gentleman objected to the breach of confidence in the medical man, in one sentence, while he praised the Poor-law medical officers for giving valuable information on the subject of the diseases of their patients. Were these Poor-law medical officers guilty of breach of confidence? Were those medical men who gave voluntary information guilty of breach of confidence? Dr. Carter's figures were staggering, but they seemed to him capable of refutation. Was the landlord or the householder to be the informant? How was he to distinguish small-pox from chicken-pox, or measles from scarlatina? It was impossible; and then it was obviously necessary that, if the layman were the informant, the medical officer of health would have to visit the patient and see if the diagnosis were correct. How would medical men like the medical officer of health to call their diagnosis into question? If medical men claimed a vested interest in disease, and a property in suffering, they would lose one claim to the love and respect of their fellows. They should do their duty, unheeding results; and whether they lost patients or not, mattered nought. They would have done their duty and made good their claim to the praise and thankfulness of mankind.

Mr. DAVIES (Swansea) wished, at the outset, to deprecate very much the division of the profession into two hostile camps. He hoped the medical officer and the medical practitioner would work together to confer the greatest benefit upon the public generally. He did not sympathise with the objection to the notification of disease, that it was a breach of confidence on the part of the medical practitioner. He remembered when the medical profession protested against giving a certificate of death of a person who had suffered from syphilis.

Dr. LIVY (Bolton) said that he could easily understand the objections medical men have to notification of infectious diseases. They were all honourable men, and did not like to turn informers on their patients. But when the duty of notification was thrown upon the occupier, the medical man could not be said to be an informer; he simply made his diagnosis, and declared it to the occupier, who forwarded the certificate to the sanitary authority. Who would care to make a secret of scarlet fever or small-pox, unless there were some interest opposed to that of the public? Medical men must never forget that they were also citizens of a free country. In doing our utmost for our patients, we must not become parties to concealment where notification was the law. The duties of medical men to their patients might be quite compatible with equal devotion to the public. At present, medical men had no control over such diseases; they were simply called in to give advice which might not be taken. He did not suppose there would be any opposition as to the necessity for notification, but only as to the way in which it was carried out.

Dr. LITTLEJOHN (Edinburgh) desired to bring under the notice of the Section an account of the experiment which had been going on in Edinburgh since 1879. In that year, powers had been obtained calling upon the medical practitioner in attendance on a case of infectious disease to report it to the local authority. The system, although not a dual one, had worked remarkably well; and, after an experience of three years, he felt he was entitled to claim for this experiment a great success. About 250 medical men had loyally obeyed the provisions of the Local Act; and, whatever their prepossessions might have been, it had been found in actual practice that none of those evils which had been so forcibly pictured by previous speakers had been experienced. No complaint had reached the corporation of the sanctity of homes being violated; of the feelings of practitioners being outraged; or of the slightest damage to the delicate relationship of

doctor and patient. He knew of no body of practitioners more intelligent than those in Edinburgh, whom he had the honour to serve, or who had a keener sense of professional respect; and he could assure the Section that so powerful was the voice of medical opinion in the metropolis of Scotland, that the profession had only to speak its mind on any subject affecting its interests, and the authorities would at once obey its wishes. This success he attributed in great measure to the precautions which had been taken in working the Act, and more especially to the form of intimation which he had devised. In the form which had been adopted, and at the bottom of the slip, were the words: "No immediate attention required"; and, quoting the words of his first circular, the profession in Edinburgh were informed: "Should any reported case appear to you suitable for removal to a public hospital, or should the surroundings of the dwelling, or any circumstances connected with the patient, appear to you of sufficient importance to have the attention of the authorities directed to it, you are requested to draw your pen through the word 'No,' in the phrase at the bottom of the slip, 'No immediate attention required'." Should a notice so marked reach my office, an inspector will call and take all necessary steps under my direction. If, however, the word 'No' is allowed to stand, it will be understood that the medical practitioner considers it unnecessary or undesirable that steps of any kind should be taken in the public interest. In a fortnight, however, he will receive a notice from my office reminding him of his intimation, and of the ability and willingness of the officials to aid in fumigation and disinfection of rooms, clothing, etc." Half-a-crown was paid for each intimation; and this was expressly stated by the corporation not to be considered in the light of a fee, but as a simple acknowledgment of the service, which had been rendered by the profession to the public at large; and it had been stated by the corporation that, rather than lose the benefit of this intimation of infectious diseases, they would willingly double the honorarium. In ordinary years, the expense incurred amounted to £1,400, and this sum was defrayed from the public rates. Now, although of late years the expense of living in Edinburgh and the attendant taxes had risen considerably, not the slightest grumble had been made by any ratepayer, although all subjects of local politics were eagerly discussed among the citizens, and party feeling ran high. This was not to be wondered at, when the advantages resulting from the operations of the Act were considered. These had been brought home to the comprehension of the poorest citizen in Edinburgh. The authorities had for the first time obtained adequate control over infectious disease, by being enabled first to arrest the outbreaks of epidemic disease. During the last two years, no fewer than eight distinct outbreaks of small-pox had occurred in Edinburgh, and in five of these the disease was traced to London, where, to the disgrace of sanitation, small-pox has for some years been endemic, exposing the whole country to the imminent risk of infection. He had no hesitation in saying that, had not the first cases in these outbreaks been promptly intimated by the medical attendant, and removed to a hospital, small-pox would have prevailed in an epidemic form among their comparatively unprotected population. Another effect of the Act was, to enable the sanitary authority to control efficiently the progress of infectious disease, from the knowledge obtained of the localities of the cases, and to submit to rigorous supervision all lodging-houses and hotels. The importance of this could hardly be overestimated. The new town of Edinburgh during the summer months resembled a caravanserai or gigantic hotel. No citizens had been so vehement in their demand for the continuance of the Act as the lodging-house and hotel-keepers; and no wonder. From the secrecy formerly attending the treatment of a case of infectious disease—say, in a hotel—the patient was kept in hiding until the nature of the illness oozed out, but too late to admit of the removal of the case to a hospital, and not before the character of the hotel was ruined for the season, and a heavy pecuniary loss sustained by the unfortunate proprietor. Now all this was avoided, and the hotels and lodging-houses were no longer sources of infection to unsuspecting travellers, carrying the seeds of disease far and wide. Again, schools were prevented from becoming centres of infection. This system of intimation for the first time enabled the health-authorities to hinder scholars from infected families from attending the schools, public and private. And this boon had been thankfully acknowledged by both teachers and parents. As Consulting Medical Officer to the Local Government Board for Scotland, and as the oldest medical officer of health in the kingdom, he could not but foresee, were the intimation of infectious disease made general, and not confined to a comparatively few localities, what important services to the cause of preventive medicine would be rendered by the medical profession. 1. It must follow that all medical officers of health should be relieved from private practice. This would entail, 2. Increased remuneration to these officers, which could only be obtained by 3. Combin-

ing districts, thus having for the work of public health men who could devote their whole time to the duties of their office. 4. Hospitals of suitable dimensions must be erected. And here he might mention that one of the first lessons taught in Edinburgh by the Act was, the inadequate accommodation provided for infectious disease in this great centre of education. The corporation at once responded to the call, which could not be resisted, based as it was for the first time on reliable statistics, and purchased suitable buildings at a cost of £30,000. By means of the Act, the importance of isolating all cases of infectious disease was brought home to the general public and to the practitioner; and thus, the principles of hygiene becoming more and more widely known and acted upon, every ratepayer assisted in this great sanitary work.

Mr. HASTINGS, M.P., said he should not have ventured to offer any remarks of his own, if he had not been pointedly referred to by one of the speakers. If he had followed only his own desire, he should have sat to listen and to learn, as he was most anxious to do. He thought it due to himself to state that he chose to go by experience, and that the experience of which he spoke was not his own, but that of large communities in this country. There were thirty-one cities and boroughs in Great Britain, some of them among the largest, which had adopted the system of the notification of disease; and, in dealing with any legislative question, the soundest basis would be that of legislation which had already taken place, and the results which had followed from it. And when they were asked the question, whether they would or would not support a particular measure, it was well to ask if that measure had ever been tried; and when the reply was that it had already been tried extensively, they would naturally ask, "What do those who have tried it say about it?" Dr. Littlejohn had given his experience in Edinburgh; and there was surely no city, not only in the United Kingdom, but in the civilised world, in which the voice of the medical profession was more potent, or occupied a larger share of public opinion, than in Edinburgh. Therefore, it was worth while to ask what the medical profession of Edinburgh said of the notification of diseases. He had, two years ago, the opportunity of hearing the opinion of the medical profession in Edinburgh in the Health Section of the meeting of the Social Science Association, and of ascertaining that there was but one opinion on the subject, and that opinion was in favour of the system. Sir Robert Christison, told him that he had at the first been opposed to the system of the notification of disease, but that the result of what he had seen of the working of it had changed his mind, and he was then convinced that it was working exceedingly well, and he should never regret its introduction. Surely this was experience worth having. He sat for two or three months this year on a Committee of the House of Commons hearing evidence on this very question. Eight Bills were referred to the Committee from different places. In every one of these Bills, there were provisions for establishing a system of notification of disease. With one exception, from no single place which these Acts affected was there any petition against the clauses with regard to the notification of infectious diseases. The only exception was from Bolton, and there was a petition from Bolton praying that this clause might not pass into law; but this petition was withdrawn. If this system were so evil as they had heard to-day, or if any system of notification were so evil, why was there not more feeling against it in the towns in which it had been established, and why had not that feeling been expressed before the Select Committee of the House of Commons? They heard objections to this system from those places where the system was not in force, but none from those places where it was in force. On the contrary, they heard strong expressions in its favour. He was, therefore, justified in saying that the experience of legislation, so far as it had gone, was all on one side, and the theory and practice of the other. That was what he meant when he said he was guided by experience rather than theory. He wished to be clearly understood on one point. He was most anxious that, in any legislation which took place on this matter, not only the interest but the feelings of the medical profession should be most carefully considered. But there was one matter which should be taken into account on this point, and that was the legislature had had experience of how greatly the professional feeling might be moved on a subject of this kind, and yet after all they might be mistaken. There was a point which had already been mentioned, as to the strong opposition of the medical profession in 1837 to the passing of the Registration Act, and to the requirement that a medical attendant should certify to the cause of death. The strongest opposition was raised to that enactment, and in this Association an attempt was made to enlist its influence and power against the enactments, but the attempt failed. The Association was too wise to set itself against what was felt to be the public wish and the

public good. The Bill passed into law; and he asked, what medical man now complained of having to certify as to the cause of death, and what injury had been done since 1837 to any medical man by obeying the law? It was still possible that the same feelings might mislead the profession now as they undoubtedly misled the profession in 1837. Another point, which was not less important, was, that there was no profession and no class in this country, however distinguished, which was able, in the long run, to set its wish against the general public opinion and the general public good. The legal profession had again and again opposed law reforms in its own interests. These reforms had always been carried; and the legal profession had found out that they by no means did them the harm which they anticipated. If the British Medical Association thought it well to oppose a system of notification of disease, he ventured at least to implore it not to oppose it on the ground of any private or personal interest. If it were to be opposed, let it be opposed on the broad ground of public policy. There was no body of men who would be so respectfully listened to in the House of Commons as the medical profession. It could not be denied that to oppose every system of notification was an inherent absurdity. In whichever way it might ultimately be thought best to do it, no one would doubt that, if it were required to stop contagion, it was desirable that notification of the contagion should be communicated somehow to those who had the power and whose duty it was to stop it. The only question remained: by whom and in what way was the notification to be given? They considered, in the Select Committee, that question most carefully. They considered it with the greatest deference to what they knew to be the opinion of many members of the medical profession; and the conclusion they came to was, that they did not agree with the system of notification as it had been established in several of the towns which had obtained Acts for the purpose. The system which they had decided upon was a system of dual notification—i.e., that the duty of notifying should rest both upon the householder and on the medical attendant; and they conceived, by that provision, they would take away all possible ground for saying that the notification by the medical man could be any breach of confidence between him and his patient. He had no doubt that the notification would generally be given by the medical man, for the reason that he would be much more competent to give it, and it would be much more easy for him to do it. But, when he was able to say to his patient: "The law imposes upon one of us the duty of saying you have a case of scarlet fever in the house; you can say it if you like; but, if you wish me to save you the trouble, I am ready to do it for you;" in that case, there was no breach of confidence. He was sure that, in some way or other, compulsory legislation would be spread to the general community throughout Great Britain; and he hoped that it might be so spread, and that the provision of Parliament might be so wise, that no objection would be taken to any clause; and that the prevention of the spread of disease might be carried out with the utmost regard to the interest and feelings of the profession, and with the least possible mischief to the community.

Mr. RITCHIE (Leek) said that, in North Staffordshire, he had obtained results very similar to those described by Dr. Littlejohn. For a longer period than that mentioned by Dr. Littlejohn, they had pursued a similar plan in respect to cases of infectious diseases. The medical attendant at once communicated with the sanitary officer, and they had never had any difficulty whatever in the matter. They had had a very great reduction in all cases of infectious diseases from the plan so carried out. They had a printed paper, similar to the one referred to by Dr. Littlejohn, with a note at the bottom that, if there were no occasion for isolating the patient, the words requesting isolation were to be crossed out. The medical officer merely went to the place to supply disinfectants, or what was necessary. They had been provided with a capital fever hospital; and the medical man who had charge of the patient attended him at the hospital. There had been several remarkable instances of the prevention of the spread of disease by the quick removal of a case. They had no penal clauses.

Mr. EVERETT (Worcester) did not think there was any force in the argument on which so much stress had been laid, that professional confidence would be violated if medical men took part in notifying infectious diseases. The Legislature having decided that the interests of the public demanded that notification from medical men, patients would not have any right to expect them to disregard what, under the circumstances, would be a duty to the State. Medical men should by all means sedulously and faithfully discharge their duty to their patients; but in the interests of public health, on the very reasonable requirements of Government, they should do their duty as citizens with equal and fearless fidelity.

Mr. NELSON HARDY (London) wished to draw attention to the fact that the table exhibited by Dr. Carter had not been noticed

by the able officers of health who had spoken, and he thought that, if the meeting closed without any attempt being made to do so, the advocates of compulsory notification allowed judgment to go against them by default, and the table stood as telling against them. He had not, however, much confidence that even such a remarkable table would have much effect in convincing those who were not willing to be convinced. In March last Dr. Carter had published equally remarkable facts, which had never been replied to. The chief objections urged were these.—1. Compulsory notification would promote concealment of disease, not by the joint efforts of the medical man and the patient, but by the patient not calling in the medical man at all. 2. It would lead to antagonism between the preventive and curative branches of the medical art. 3. Many sanitary authorities were quite unprepared to deal efficiently with infectious disease when notified to them, not having proper disinfecting apparatus or hospitals for infectious diseases, though they had already power to provide these.

Dr. BROADBENT (London) said his attention had been called to this question by his having to sit on a Royal Commission to consider the question of the spread of infectious disease in the metropolis; and he thought the one thing about which they were absolutely unanimous was the necessity of early information in order to make any impression upon the disease, and that this information could only be obtained by compulsory notification in some shape. He was quite sure that some Bill for the compulsory notification of infectious disease was bound to come into operation. The question was, as to the best mode by which this result could be attained. He thought it would be greatly to be regretted if the Association were to oppose the movement. The medical profession, as a whole, were entirely in favour of some system of notification, and the objections which had been raised were not of any serious moment. With regard to the figures which had been put forward, there was the great objection that they did not extend over anything like an adequate range of time. From 1871 to 1881 was a period totally inadequate to establish anything as a matter of statistical evidence. With regard to the objection about notification leading to concealment, there was no doubt that they would have to struggle against ignorance and against prejudice; but this objection would in no way influence the great result, which would be undoubtedly a diminution of infectious disease. As to the objection of its raising ill-feeling between the medical officer of health and the medical practitioner, he regarded it as groundless. As to accommodation, when notification had come into effect, the authorities would be compelled to provide accommodation for isolation.

Dr. EDWARD WILSON (Cheltenham) deprecated any feeling of antagonism between practitioners and medical officers of health. The aims of both were alike, and any such antagonism was to be avoided. With regard to the notification of disease, the advantages had been so overwhelmingly proved, that it was sure to become law in some form or other. The fact that Dr. Carter had proved the statistics respecting Bolton to be wrong, could not be weighed against the evidence of the twenty or thirty gentlemen who were working the compulsory Acts, and who reported unanimously in respect to the benefits derived from their action. The real question was: Who is to report? In his opinion, it should be both householder and patient. This could not involve any breach of confidence. Should this involve—as a necessary consequence—provision for the cases, we should follow it to its just conclusion, and insist upon the provision of isolation hospitals. It was quite certain that no such terrors as had been conjured up by some speakers would attend the removal of patients to such institutions.

Mr. GORNALL (Warrington) wished, in the first place, to correct two statements made by Dr. Carter on the authority of a medical man resident in Warrington. The first was, that the committee he served had passed a resolution interfering with his action as medical officer; the other, that the public of Warrington were dissatisfied with his conduct in carrying out the Act. No doubt a little irritation was produced at first; but the influence of the Act was having a most beneficial influence on the public health. It was loyally supported by the profession, and the public confidence was increasing daily. In his last report, the record of the death-rate for the last twenty years was not made to compare the eighteen years before the Act came into force and the two years afterwards, because, though it might show an improved public health since remedial measures had been adopted, he was far from satisfied with the measure of success obtained; other agencies would have to be adopted at a very early date, to keep up the sanitary condition of Warrington. Dr. Carter's comparison of the number of deaths with the number of cases reported was fallacious, because one outbreak of disease might be of a more fatal character than another. To say that the removal of a case of fever or other infectious disease to the hospital

The PRESIDENT, in thanking those who had taken part in the discussion, said he hoped it would help to clear the ground a little for the meeting on this subject on the morrow.

THE TRANSMISSION OF DISEASE BY FOOD.

Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By FRANCIS VACIER, F.R.C.S.Ed.,
Medical Officer of Health, Birkenhead.

FOOD, no less than air and water, plays an important part in the production of disease. As medical officers of health, we are all familiar with cases of diarrhoea produced by food in a state of partial decomposition; and as practitioners, most of us are familiar with diseases, such as rickets, gout, and anæmia, which, although commonly regarded as the incidence of a bad habit of body and hereditary, are probably primarily due to some food-element being in excess or deficiency. Food may produce disease owing to its being diseased, as when ergotism follows a diet largely composed of ergoted rye or wheat. Production is, however, not transmission, and the diseases which there is sufficient ground for believing capable of being transmitted (sent on) by food are comparatively few. The question is, is it possible, with any approach to precision, to say what diseases are thus transmissible? I have already pointed out that food may spread disease owing to its being itself in a pathological condition, or to its serving as a culture-medium in which disease-germs are nourished and multiplied, or simply to its being a nidus in which such germs rest. The diseases capable of being transmitted by food will thus naturally fall under two classes:—1. Diseases proper to animals; and 2. Human germ-diseases. It is obvious that, while the first class of diseases can be transmitted by meat and milk only, the second class may be transmitted by almost every conceivable form of food. And I think it is equally obvious that, while only certain of the diseases proper to animals are transmissible, all human germ-diseases may be thus conveyed.

Now, of the important epizootics affecting horned cattle, or sheep, or swine, in this country, there are four which are represented at the meat-market from time to time, clandestinely or openly. These four are rinderpest, pig-typhoid, pleuropneumonia, and foot-and-mouth disease. Though many medical officers of health have grave doubts as to the wholesomeness of flesh tainted with either of these diseases, and much of such flesh is consequently seized and destroyed, no inconsiderable quantity is sold and eaten, and has been for long periods of time. You will not require me to give proofs of this. I have gone over them many times, and the evidence is familiar to most of you. You will remember, at least, the discussion there was lately in the papers when pleuropneumonic beef was openly sold in London, with the sanction of the authorities. It is the simple truth that thousands of tons of such meat have been eaten; and with this result, that it has never been alleged that one single case of rinderpest or pleuropneumonia has been communicated to a consumer. As regards pig-typhoid, several cases of the supposed spread of this disease by specifically tainted meat have been recorded; but, when these records appeared, the epizootic was supposed to be the exact counterpart of human typhoid, and the disease believed to have been communicated was not pig-typhoid, but ordinary enteric fever. Foot-and-mouth disease alone, of these four epizootics, is there warrant for regarding as communicable to man, and this by milk rather than by meat. Indeed, I do not call to mind a case in which the appearance of the disease in a human subject has been traced to ingested meat, while many have been traced to milk. This cannot be owing to there being much scruple about using the flesh of affected animals as food; and the simple explanation seems to be that, while the flesh is usually well cooked, the milk is ingested raw. There is no reason to doubt that the specific contagium is contained in the vesicles which characterise the disease, and that this specific contagium, unless sterilised by heat or otherwise, is capable of conveying to man the disease of which it is the seed. In districts where it is the rule to pass carcasses affected with this disease, it is quite usual for the meat-inspector to retain the head and feet, and any parts marked with the eruption, as the udder and portions of the intestines. Then the whole of the skin is of course removed; and the surface of the carcase, to which some have thought there is a determination of the mature contagium, is the very part which either in boiling or roasting would be subjected to the highest temperature. Milk, on the contrary, is directly contaminated. Large vesicles form on the udder, and even on the teats, which it is scarcely possible to

avoid rupturing in the process of milking, and the contents are discharged into the milk-pail. The mixture of milk and virus is imbibed raw, and within a few hours of its being drawn. If it were the custom to eat meat nearly raw, and usual to eat the head and feet of animals affected with this epizootic, doubtless there would be instances of the disease being communicated by meat as well as milk.

There is another animal disease which may certainly be transmitted by specifically infected food—i.e., anthrax, or splenic fever. Here, however, the fluid in which the contagium lives being the blood, all the tissues must be regarded as infective, the muscles markedly so. One does not hear of infection by milk, because the secretion is commonly checked or entirely arrested, and the course of the disease is rapid and fatal. Still there is at least one well authenticated case of this disease being conveyed to a human being, who drank the milk of an affected cow. Cases of infection by means of meat taken as food are not frequent, because anthrax flesh readily decomposes, and has so bad an appearance that it can only rarely be introduced into the market. That this disease is transmissible to man is unfortunately too certain, and even those who contend that it is only so by inoculation, will admit that food may come into contact with a wound in the mouth, and be the inoculating agent.

There is a third disease, of which I have long held that it may be spread to man by means of flesh of animals suffering from the disease; I refer to erysipelas. The matter hardly admits proof. Erysipelas is less specific than other diseases of its order, occupying a sort of border-land between them and simple inflammation. It may arise spontaneously, or at least without the importation of any contagium *ab extra*. It is not less common in man than in animals. For these and other reasons, the possibility of the transmission of erysipelas to man from meat must remain doubtful. Still, erysipelas is far from rare among cattle and swine; and passing under such names as dermatitis, erythema, and "soldier", is often counted but a trifling ailment, and not prejudicing the carcase for purposes of food.

Whether tubercle may be communicated to man by the ingestion of meat or milk from tuberculous animals, is the next question to be considered, and it is exceedingly difficult to get at the truth in this matter. Like erysipelas, tubercle is as common in man as in animals; and I think I may say that, like it also, it occupies an intermediate place between specific diseases and inflammation, i.e., it is even yet matter of debate whether tubercle is the result or the cause of the inflammatory processes with which it is associated. Some of you may incline to think that all uncertainty on this topic disappears in the presence of Dr. Koch's remarkable discovery. I do not think so. Dr. Koch has found specific parasites in diseased lungs, spleens, and bronchial glands of human beings, and in the lungs of tuberculous cattle: but, as the *Lancet* has very justly remarked, "it is probable that the bacilli do not get into the system, even when inhaled, unless they can develop in stagnant or morbid secretions, or unless the loss of epithelium facilitates their ingress." Dr. Koch's discovery goes far to prove that bovine and human tuberculosis are essentially the same, and that the bacilli found are the exciting cause of tubercle. There must, however, be a predisposing cause essential to the production of the disease, a pretubercular condition; otherwise it is impossible to account for the heredity of phthisis, its low degree of infectiveness, and its selection of one or more out of many subjects equally exposed. There is certainly evidence of tubercle being communicated to children fed on uncooked milk from tuberculous cows; and the evidence is perhaps not less abundant than that in support of the theory of the communicability of foot-and-mouth disease, but it is in some respects less satisfactory. In the one disease, signs of infection appear in a week or less after the ingestion of the infecting liquid, while, in the other, the disease is long latent, and the earliest signs of it are so obscure, that the cause is hard to determine—infection by milk being, in most instances, but one of many possible causes.

At least one fact seems fairly established, that milk from a tuberculous subject is infective. Calves and pigs fed on milk from tuberculous stock are almost certainly tainted. The present state of knowledge on the subject does not, I think, warrant one in asserting more than that tubercle may be transmitted by the ingestion of meat or milk from tuberculous stock, if the food be uncooked or insufficiently cooked, and the recipient be from any cause predisposed to phthisis. The whole subject of the communicability of bovine tuberculosis to man has acquired new interest since the issue of Dr. Creighton's monograph on the disease in man. This author, it will be remembered, gives an account of the pathology of certain cases of a form of tuberculosis in man, which resembled in many points the bovine disease; and he contends that the resemblance is so close, that the disease he describes must have been derived from the bovine disease, the human subjects being infected presumably by meat or milk ingested by them. The

same author thinks it likely that some of the "many things called scrofulous are manifestations in the human body of the specific bovine virus", and that "bovine tuberculosis has sometimes appeared in man in the form of typhoid fever." These, however, are at best but speculative suggestions, and only interesting as such.

The next question is as to the conveyance of diphtheria from diphtheric animals used as food. There is little doubt that the term "quinsy", as applied to animal diseases, includes several distinct conditions, and, among others, a disease bearing some resemblance to the human disease known as diphtheria. This being so, the conveyance of the disease appears exceedingly probable; and recently there has been testimony from more than one quarter of this disease being directly transmitted from animals. Thus, it must be conceded that a form of diphtheria may be communicated to the human subject by specifically infected meat or milk, if ingested raw or nearly raw.

There is yet another food-conveyed disease of animal origin—one not easy to classify. It is known rather as a meat-disease than an animal-disease. I refer to the ham-disease which caused the so-called "poisoning" at Welbeck; the pork-disease resulting in the so-called "poisoning" at Nottingham. The flesh of swine infested with a specific micro-organism is eaten, and, after an incubation-period of usually from twelve to thirty-six hours (during which there may be a little languor, nausea, or abdominal pain), there are griping, diarrhoea, and vomiting, with fever; and these symptoms may be succeeded by fatal collapse, as in cholera. On *post mortem* examination of a victim of the disease, arterioles and capillaries are found plugged with masses of bacilli. Portions of the same flesh given to animals produced, in all but a few instances, positive and remarkable results. Here, then, is meat in a pathological condition, owing to the presence in it of a certain parasite, which appears to be capable of growth and reproduction when received into the human body. Whether the bacilli or sporules found in the meat were in the living animal, or imported from some extraneous source subsequent to slaughter, is not at present known.

The only other animal diseases which can be transmitted by ingested meat are those indicated by the presence of trichina and cysticerci. Meat infested with cysticerci does not, of course, usually communicate that disease, but another—tapeworm; yet I suppose there is little doubt that it may produce cysticerci, many instances of cysticerci in man being on record.

While many human disease-germs may find their most congenial culture-ground or fluid in the various animal foods used by man, others thrive and multiply best on vegetable foods. Some such germs maintain themselves, and increase, without apparently prejudicing the foods from which they are nourished; some only in foods which are decomposing or fermenting. Again, those human disease-germs which are not matured or bred outside the body may, in the form of lasting spores, rest on foods, and be thus transmitted from subject to subject.

To sum up, then, I consider it reasonable to hold that foot-and-mouth disease and tuberculosis may be spread by milk; anthrax and diphtheria by meat, and possibly also by milk; that erysipelas, trichinosis, and the pork-bacillus disease just referred to, may be spread by meat; and that all human germ diseases (giving to the term the most extended meaning possible) may be transmitted by most foods. The number of diseases capable of transmission by food is therefore very considerable; still so many other things besides food serve as carriers of disease, that it is easy to overestimate the influence of food in this respect. Public conveyances, wearing apparel, articles of furniture, middens, and dust-bins, provide human disease-germs with as efficient resting-places, hiding-places, and breeding-places. And in respect of the transmission of specific animal diseases to man by meat or milk from infected cattle, latterly there has been a tendency to speak of this as of frequent or usual occurrence. I do not know on what warrant.

As it is, in its threefold aspect, is a real danger—one which it is not wise to ignore; and it behoves health-officers to inquire how it may be removed or diminished. The measures which I have to submit for your consideration, as best adapted to effect this, are as follows.

1. *A more intelligent, scientific, and thorough system of inspection of meat than any at present obtaining.*—In many places, the person charged with this important duty—inspecting meat—is a market policeman, a journeyman butcher, or the clerk at the public weighing-house. In a district adjoining my own, the office is discharged by a butcher. The work receives no proper supervision. It will uniformly be intrusted to a surgeon, assisted by a veterinary surgeon, or to a veterinary training.

2. *A more intelligent and scientific system of inspection of milk-producers and milk-sellers.*—The present system of inspection, under the Dairies and Milkshops Order, is not very satisfactory. Instead of appointing a number of inspectors, public health officers and other inspectors are required to visit and

spectation of milk to their other duties; premises wholly unsuitable, and neither drained nor ventilated, are suffered to be used for dairy purposes; the storing and selling of milk is allowed in all sorts of general shops, where candles, vinegar, paraffin, and not very fresh fruit and vegetables are also stored and sold; and milk is left standing on shop-counters conveniently proximate to infectious customers. Then, considering how often the worst form of contamination of milk (that leading to typhoid fever) has been traced to the deliberate addition of water to the milk, I do think that samples should from time to time be taken for analysis from all vendors in a district, and not merely from those against whom specific complaints have been lodged. In this matter, also, local authorities want a power of compulsory notification, enabling them to require all milk-sellers to notify cases of infectious diseases appearing on their premises, with authority to close such premises till the removal of the infected animal or person, and the disinfection of the premises.

3. *The thorough cooking of food, especially of all meat and milk.*—It is very remarkable that, whereas the typical contagious liquid, vaccine lymph, survives the intense cold produced by solid carbonic acid and ether (*i.e.*, a temperature of 166° Fahr. below the freezing point of water) it is killed by exposure to a temperature of 150° Fahr. Thus one has in that most simple expedient, increased temperature, a really perfect parasiticide, germicide, and contagicide. As regards clothes, etc., there may be other efficient means of disinfection. As regards food, when it is once tainted with spores, germs, or parasites, heat is the only way of rendering it innocuous. *Après* this subject, I may remind you of some very old experiments with trichinous pork, smoked in different ways, for long and short periods of time. Twenty-four hours' hot-smoking destroyed the vitality of the parasite, while seventy-two hours' cold-smoking failed to do so. Boiling, I may remark, is, as a rule, a better and safer way of cooking suspected food than either baking or roasting. In a joint baked or roasted, the centre may never have been raised to a temperature of 140° Fahr.

4. *The complete destruction of infective and condemned carcasses.*—Under the 117th Section of the Public Health Act, 1875, a justice may, on the application of a medical officer of health or inspector of nuisances, order any diseased, unsound, or unwholesome carcass to be destroyed, or disposed of so as to prevent it from being exposed for sale, or used for food of man; and under the 32nd Section of the Contagious Diseases (Animals) Act, 1878, the Privy Council may make orders for prescribing and regulating the destruction, burial, or disposal, or treatment of carcasses of animals slaughtered by order of the Privy Council or of a local authority, "or dying while diseased or suspected" (xvi), and "for prohibiting or regulating the digging up of carcasses buried" (viii). Now there is no disputing the sufficiency of these powers, and yet they certainly have not secured the destruction of diseased carcasses. When meat is seized under the Public Health Act, the owner is commonly allowed "to cut the fat off," and the rest is decently interred. Again, when diseased animals are slaughtered under the provisions of the Contagious Diseases (Animals) Act, implicit trust is placed in burial and quicklime. This is certainly not an efficient way of stamping out contagious disease in animals, or preventing its transmission to man. Fat cut off may reappear as butterine, and a carcass buried "in its skin" in quicklime may be exhumed. Indeed, I prosecuted in a case some years ago when a diseased carcass was disinterred for the purpose of being sold for food of man. There is but one efficient way of destroying diseased meat, and that is by cremation. This is most readily done at any of our gasworks, where the carcass can be cut up and packed into the retorts. The district I serve on one occasion destroyed in this manner a single seizure amounting to 59,280 lbs. in a few days, without inconveniencing the gas-works.

5. *The isolation of infected patients, especially during the period of convalescence.*—I have more than once pointed out that certain cases (bread, milk, and groceries in particular) may become charged with specific contagion, owing to shopkeepers and their assistants and apprentices returning to their work at too early a period after attacks of small-pox, scarlatina, etc. This premature return to work may, in some instances, be due to business anxiety; but it is far more frequently due to poverty—the patient really having no other alternative. What is wanted is increased hospital accommodation for infectious cases, and the adoption of a more scientific system. It is only in very few districts that the provision made for the isolation of infectious cases is equal to the demand. In most places it is so limited, that the medical officer in charge of the hospital is often obliged to make a choice between two evils, discharging a convalescent, or refusing to receive up acute cases. Then the system of charging maintenance at so much a day, naturally induces friends to withdraw patients as early as possible. Sufficient accommodation for the infectious sick, free to all, would be a great achievement. The economic estimates of sanitary boards have hitherto been in the way of this; yet, were it tried, it is not unlikely it might prove an actual saving. How-

ever, any number of infectious diseases hospitals will not supply all our needs in this respect. Convalescents become weary of their fellow-patients, weary of their surroundings, and cannot be induced to stay in an ordinary hospital as long as may be expedient. If, however, they could be drafted off into convalescent homes in the country, or at the seaside, and there remain till pronounced absolutely innocuous, free of charge, convalescents would be under no temptation to return to active work too soon, and infect, not alone food, but all things contiguous to them.

Dr. DRYSDALE (London) said that the most important part of Mr. Vacher's paper was that in which he referred to the possible communication of phthisis from the lower animals. He had been connected with a Consumption Hospital for fifteen years, but he had never seen one case of phthisis which he could regard as having been attributable to eating diseased food. He should have liked to hear Mr. Vacher express his opinion on this matter more fully; he had distinctly understood him to infer that phthisis was one of the diseases communicable from animals to man.

Dr. HAUGHTON (Norwood) wished to make a remark upon one proposition by Mr. Vacher. There were cases of compulsory isolation in which free accommodation was provided for infectious diseases; but, in addition to those cases, there were a large number of persons who were above the pauper class who could hardly be interfered with by the compulsory regulations, and who would not be taken from their homes against their wills and put into a free hospital, but who would nevertheless be very willing and anxious to avail themselves of good and proper accommodation suitable for infectious cases. With regard to the transmission of disease by milk, he thought there could be no doubt that Dr. Creighton had fully proved his case. He had met with a very large amount of professional agreement on the point that anything which was taken into the stomach and digested was not therefore certain to be conveyed into the blood; yet it must be recollected that the living cells which existed in the milk were so analogous to those which existed in the circulation of human beings, that it was quite reasonable to believe that they might be conveyed with all the properties belonging to them. He thought it highly important that the greatest possible supervision should be exercised with respect to milk, and that no milk ought to be allowed to be sold which had been taken from animals at all out of health. He believed it had been asserted that about one-fifth of all the milk sold was more or less affected with tubercle or some analogous complaint. Nevertheless, if this were not true, the existence of a much smaller proportion would justify the exercise of the strictest investigation, not only in regard to meat, but to milk.

Mr. PAGE (Redditch) said that one of the most important points of the paper, as touching already existing legislation, rendered it desirable that this Association should, if possible, take some official action in endeavouring to obtain the transference of the health-powers of the Dairy and Milkshop Act to the sanitary authorities. It was not sufficient to inspect and analyse suspected samples of milk and other food only, but that systematic inspection and analysis be required to be made, at least of milk obtained from all vendors, and that the health-powers of the Adulteration of Food and Dairy Acts be more efficiently carried out.

Dr. SMITH (Guildford) spoke of the defective way in which the provisions of the Act were at present carried out, and how incompetent the police were for dealing with the matter.

Mr. MILLICAN (Kineton) said that, in a microscopic slide which he put up from hay-infusion, he found heat had killed bacilli and bacteria. The slide was put up with Canada balsam, which, being a terebinthine product, might be generally classed under the term "antiseptic". Yet masses of micrococci which were present had disappeared after about three weeks, and the field was swarming with bacilli and bacteria, in spite of heat and antiseptics. The moral was, that conclusions as to antiseptic properties must not be applied universally, but confined to the organisms upon which the observations are formed. With regard to the burying of carcasses infected with splenic fever, etc., he recollected reading of a case where such carcasses were buried in a field. The herbage over the spot was specially luxurious, and all animals fed thereon took splenic fever. Might not the bacilli find their entrance into the fluids of the herbage, and would it not be worth while to examine for them microscopically?

Mr. VACHER, in reply, said that milk from tuberculous cows must be regarded as dangerous; but the transmission of the disease by milk was almost incapable of proof, the milk ingested by the person developing signs of phthisis being but one of many possible sources of the disease. The practical course was, to boil all milk to be used as food. A memorial, praying for further powers in dealing with milk producers

and sellers, had lately been presented to the President of the Local Government Board by the North-Western Association of Medical Officers of Health. However, it was an undoubted fact, that very few sanitary authorities availed themselves of the powers they already had in this respect. Burying in quicklime (the way of dealing with infectious carcasses enjoined by the Privy Council) was not a way of destroying the contagium, but merely of hiding it, and it might come to the surface again, as the *Bacillus anthracis* was known to have done after being buried.

THE INFLUENCE OF THE FOOD-SUPPLY ON THE DEATH-RATE.

Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association, in Worcester, August 1882.

By C. R. DRYSDALE, M.D.,

Senior Physician to the Metropolitan Free Hospital.

As a general rule, it might be laid down that we might expect before investigation, that, as human beings, like other animals, are unable to exist without a certain daily supply of food, the leading question in public health should be to see that, in all countries far advanced in civilisation, a sufficiency of good and wholesome food should be secured to all who are able to work; and that, of course, all immature persons, or infirm, or aged, all unable to give any labour in return for their food, should be fed by the labours of the rest, without too much exhausting the workers by calls upon their energies. I cannot help thinking that the main reason why our death-rate in this country has continued so comparatively high for so many years is precisely because hygienic writers have overlooked this prime desideratum of human health, and somewhat limited their efforts to obtaining (for those who had enough good food) a proper supply of water, efficient drainage, etc. It is notorious, for instance, that vast classes of the industrial population in this country are habitually underfed. Among other authorities, the late Dr. Edward Smith, in an essay on the "Food of the Labouring Classes," mentions that he found, in his inquiries among the various counties in England and Scotland, that the food of the workers in silk cost per adult only 2s. 7½d. a week; that of kid-glovers, 2s. 2½d.; that of needlewomen, 2s. 7d.; and that of stocking-weavers, 2s. 6½d. Dr. Edward Smith remarks, after citing these figures, "No class under inquiry exhibited a high degree of health." The least healthy were the kid-glovers, needlewomen, and Spitalfields weavers. The average amount of food was too little for health and strength.

We need not wonder, after reading this, to find Dr. d'Espine of Paris stating that tubercular diseases cause 68 per 1,000 of all deaths among the richer classes in France, and no fewer than 230 per 1,000 of all deaths among the poor. These diseases, we know, are very frequently the effect of bad and scanty food, especially in early life. Rickets, too, according to Jenner and many other observers, are especially prevalent among the children of the poor, whose families are so large, and the share of food to each child so scanty.

Were it not for the dearthness of meat, milk, and other albuminous articles of diet, the death-rate of London should surely now be lower than it used to be. But, with all the advances lately made in the drainage and water-supply of the metropolis, we find that the death-rate was 22.2 per 1,000 in 1856; 22.3 per 1,000 in 1876; and 23 per 1,000 in 1877; whilst in England and Wales, as Dr. Fergus remarked at the Cork meeting of the British Medical Association, the death-rate was nearly identically the same (*i.e.*, 22.35 per 1,000) in each of the decades 1841-50, 1851-60, and 1861-70. This death-rate fell a little between 1871-80, and this I attribute to the cheaper food-supplies we have obtained during the last decade, rather than to any improvement caused by new schemes of ventilation and drainage.

By "dearthness of food-supplies," I mean that a workman in this country has to work too many hours a day in order to procure enough food for himself and his family. The richer classes are those who obtain their food with a far less expenditure of energy, and who, consequently, are enabled to pay more attention to the less important parts of hygiene, such as drainage and house-room, which the busy ill-paid labourer has no time to do. It must be remembered that the death-rate of a country is not much influenced by the low rates obtaining among the richer classes. It is the health of the masses of working people that tells upon the general death-rate; hence, the condition being one of great comfort, and the climate good, the death-rate falls to a wonderful degree. In New Zealand, last year, when butchers' meat was not over twopence a pound, and bread was as cheap as in London, whilst milk and butter were also very cheap, and the earnings of an unskilled agricultural labourer were eight shillings a day for

eight hours' work, the death-rate was only 11.5 per 1,000, a rate which will probably never be improved upon in the history of public health; nay, which may, if wiser councils do not prevail among the nations than have reigned in the past, deteriorate until the rate of England and Wales, France, and other ill-fed and over-peopled states (22 per 1,000 and upwards) is reached.

In England and Wales, the death-rate among the richer classes is, indeed, most satisfactory at present. At Hampstead, for instance, a wealthy suburb of London, it is merely 12 per 1,000 annually. There are instances, however, in London itself, where, in good houses and airy districts, the death-rate is only 11.3 per 1,000; whilst, in the very same district, there are slums where the annual death-rate rises to 38 per 1,000. It was reported by the venerable Mr. Chadwick that there are particular localities in London where the death-rate continues steadily from year to year at 50 per 1,000, as it does in many parts of Dublin at present.

The only really practical and useful inquiry ever made into the London death-rate with which I am acquainted, was made in 1843, when the death-rate of the whole metropolis was 24 per 1,000. It was then found that, in Bethnal Green, near the district in which the Metropolitan Free Hospital is situated, the average age at death of the gentry, professional men, and their families, was 44; whilst that of the wage classes was only 22. Nothing can more clearly show the influence of good food, when obtainable by a moderate amount of exertion, than this. And, lest it be supposed that this was only a phenomenon seen in 1843, I may mention that Mr. Charles Ansell, junior, of the National Assurance Company of London, showed, in 1874, that the mean age among the richer classes in England and Wales in 1874 was as high as 55, and it is probable that the mean age at death among the wage-receiving classes is not over 30.

In 1873, there died in England and Wales, says Ansell, 368,179 persons under the age of 60. Had these people been as comfortable as the nobility, gentry, and professional men, he adds, only 226,040 would have died. Thus poverty, a poor diet, and its consequences, destroyed 142,139 lives in 1873 in England and Wales alone.

Our food-supplies, large as they are, are still quite inadequate to afford cheap and wholesome food to our greatly over-peopled State. In the United Kingdom, with 35,000,000 of inhabitants, we consume yearly 607,000,000 bushels of grain, of which we produce only 322,000,000 bushels, or a little more than one-half our consumption; and 1,740,000 tons of meat, of which we produce 1,090,000 tons at home; and although, for a few years to come, we may look forward to an increased supply of grain and meat, it is very doubtful whether the price of the latter will ever fall greatly, in the face of the terribly bad rates which at present exist between the population of Europe and the number of cattle, sheep, and pigs.

If public health, I contend, is ever to be a real science, it must look the food question in the face. It is absolutely necessary for us to have more cattle, sheep, and pigs, etc., in proportion to our population, if we would have a lower death-rate. How is this to be accomplished? As far as my reading tells me, there is but one way, and that is, I con-

that European Governments must in future discourage rapid birth-rates. England and Wales, for instance, with Scotland, added no less than 3,630,000 to their numbers during the decade 1871-81; and the importation of meat into the United Kingdom has risen from the value of £7,708,000, in 1870, to £26,612,000 in 1880. The United States seems to require all its own meat-supply to feed its own rapidly increasing population, so that supplies of Australasian frozen meat are the only hope of the future; and it is needless to remark that, if we have such a rapid birth-rate as we have latterly had, and such an emigration, these food-supplies will soon begin to be most inadequate.

In the words of the great English economist of this century, Mr. Stuart Mill, it will soon have to become the general opinion that "little advance can be expected in morality until the production of children is regarded in the same light as drunkenness or any other physical infirmity." In our continental States, the Government discourages rapid birth-rates, which cause a population to press so hard upon the means of subsistence, by enacting that no one is allowed to marry unless he can be proved to have a certain prospect of being able to support a family. This plan does not seem to succeed well, since in such countries as Austria, where it is maintained, it is extremely common, and infantile mortality quite shamefully high.

Perhaps a more rational way would be to discourage the producing of children by means of a system of public opinion, which would be based on the fact that a man who marries without the means of supporting a family is not only to educating their children, but also to the state. This, and this only, in my opinion, is the way to a more rational and healthy future.

Dr. WILSON (Cheltenham) called attention to the value of food in the time of epidemics. He related instances which had come under his own observation, in which a plentiful supply of good food by the clergyman or squire of the parish in the time of an epidemic, has had the best results in diminishing the epidemic.

Dr. J. SMITH (Guildford), while agreeing that the food question was one of the highest importance, thought the crowding of people together in houses was one of the greatest causes of a high death-rate.

Mr. CRESPI (Wimborne) thought the working classes should be taught the way to lay out their money to more advantage. He had found them persistently laying out their money in articles of food which were dear, and not very nutritive.

The PRESIDENT (Dr. Carpenter) said the usual custom with English cooks was to deprive the food of a great deal of its nutritive value, and he thought the lower classes required instruction in the art of cooking as well as in choosing of food.

HOUSE-SANITATION IN RURAL DISTRICTS.

Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By J. GROVES, B.A., M.D. Lond., F.G.S., Carisbrooke.

So much has been spoken and written about house-sanitation, that anything which may be said upon the subject must necessarily be in great measure a reference to facts already stated, or to views to which expression has been already given. But so long as preventable disease prevails, and while defective house-sanitation continues to be one of its most potent agents, the question will be one of engrossing interest, even though in dwelling upon it one has to repeat an oft told tale.

Notwithstanding the halting and uncertain tone of sanitary legislation and its permissive character, immense good has been effected by it, more especially in urban districts. All large cities and many towns possess building by-laws which have been approved by the Local Government Board, if not framed directly upon their model by-laws. This general adoption of building by-laws in towns renders the subject of house-sanitation in rural districts of increasingly grave importance, because speculators and others are building, and will continue to build, just beyond the boundaries of the borough areas, in order to escape the operation of the by-laws, whole districts of houses which will in a few years be included in the towns. These districts are within the jurisdiction of the rural sanitary authorities, who, unless they apply specially for urban powers—which they do not often do—are not able to interfere unless an actual nuisance be created. Moreover, within the jurisdiction of the rural sanitary authorities, considerable districts are being built over, especially along the coasts, quite free from control or sanitary regulation, save as regards the water-supply. These places are visited by invalids and by others whose powers of resistance to morbid influences are feeble. Among many with which I am acquainted I know such a place in the south of England, which is already a fashionable watering-place, and which is rapidly assuming the dimensions of a considerable town. It is unnecessary to give a detailed account of the place, some of the nuisances of which are occasionally reported to the guardians; but I will briefly describe, as typical, the sanitary arrangements of a house recently erected there, and which is destined to be let as a lodging-house. The subsoil is undrained. The ground upon which the house stands is not covered with concrete or cement, and there is no damp course in the walls, which are thin. But it is a decent, not to say picturesque-looking, villa residence. The water-closets are within the house, but the soil-pipe is neither disconnected nor ventilated. The soil-pipe is situated partly beneath the scullery-floor. It is uncemented, and within ten feet of it is a shallow surface water-well, which supplies the house with drinking-water. The overflow pipe of the soil-well passes beneath the house to a pit immediately in front of it, which is loosely lined with unmortared bricks. It will take no long time to saturate the soil beneath and around this house with sewage, and to contaminate the drinking-water. This example alone is sufficient to prove how important to the health of the community it is, that the most vigilant control should be exercised by the rural sanitary authority over the sanitary arrangements of these embryo towns and suburban districts. Not only should the rural sanitary authority possess and strictly enforce building by-laws, but an independent water-supply should be obtained as soon as practicable in such places, and after that they should be properly sewered.

What is the condition of things in rural districts proper? In them are to be found—1, country mansions and other detached dwellings which are surrounded by more or less extensive grounds; 2, farm-

houses; 3, houses of the better sort, standing in their own gardens in villages; and 4, the dwellings of the labouring population, either isolated or situated in hamlets and villages, and possessing garden ground in most cases.

Houses of the first class are usually substantially built and well situated; and, although many of them are ill-ventilated and damp, the rooms are large. They obtain their water from brick wells situated near or beneath the house. The majority of them have water-closets placed too frequently in the centre of the house. These have the old closet-pans, and are supplied from cisterns from which water is in many cases laid on to different parts of the house. The overflow-pipes pass directly into the soil-pipes or into the trough of the force-pump. The soil-pipe passes frequently within the house to a drain—commonly an old brick or stone drain—which runs beneath it, to a large uncemented cesspit or soil-well near the house, and often in dangerous proximity to the drinking-well. From this cesspit, an overflow-pipe may pass to another pit unbricked, or with bricks loosely placed, so that the liquid sewage may soak away; and, if it be near the house, the chances are that some of it finds its way to the water-well. If a pond or a stream be convenient, the house is drained into it, or the overflow from the cesspit is discharged into a ditch. Into the cesspit, all the drains in the house and about it pass usually, and much of the storm-water finds its way through them to the same receptacle, giving rise after rain to a most offensive overflow. These drains and the soil-pipes of the closets are seldom efficiently trapped, hardly ever disconnected, and never scarcely ventilated, or if ventilated, the pipe used is a very small one. Often there are servants' privies about the house and at the stables. If the house be an old one, and has been added to, the possibility is there are one or more old cesspits beneath it. Seeing that the life of an unventilated lead soil-pipe is from eight to sixteen years, it is probable that the soil-pipe leaks. Indeed, unless the drainage arrangements have been thoroughly overhauled within the past ten or fifteen years, there are very few old country houses, or modern ones either, which do not possess abominations more or less detrimental to health, and capable at any time of giving rise to fatal disease. These unsanitary horrors should be searched for and remedied before sickness occurs, and not, as is generally the case, after it has broken out. The basement should be carefully sounded for old cesspits. No drains should pass beneath a detached or semi-detached house, and all such drains should be sought for and removed. All drains should be disconnected and thoroughly well ventilated and trapped; the soil-pipe of the closet should be carried outside the building, and, being continued high above the eaves, should terminate in a funnel-shaped opening. The cesspit should be placed at a considerable distance from the house, and should be cemented inside, and clay-puddled outside. It must be well ventilated, and should not be large or more than six feet deep, so as to necessitate frequent emptying. The object to be aimed at in rural sanitary matters is frequent scavenging. The most satisfactory plan is to sweep all filth away from a house at once, and, where that cannot be done, as where there are no public sewers, to avoid all accumulations which have not been rendered innocuous.

If there be no risk of the contamination of drinking-water, drain-pipes laid loosely a foot beneath the surface may be carried beneath turf, but they must be taken up periodically, as they are liable to be choked by roots. No drinking-water should be drawn from the cistern which supplies the closet; and the overflow-pipe of the closet-cistern should discharge independently. While repairs and rectifications are going on, the process should be carefully watched and skilfully superintended, in order that defects arising from the dishonesty or ignorance of workmen, which are a terribly frequent source of disease, may be avoided. One of the greatest obstacles to the efficient draining of a house is the absolute faith which exists among work-people, and the builders who employ them, as well as among the public generally, in the efficacy of traps. No trap gives perfect security, and many of them are simply a delusion and a snare. Safety can only be obtained by a complete disconnection outside the house, and open to the air, between all discharge-pipes and the drains, a trap being placed both on the house side and the sewer side of the gully or disconnection.

Although all drains should be frequently flushed, it is most undesirable that storm-water should pass into the cesspit. The rain-water from the house should pass into a properly constructed tank, and that which falls upon the land about it should be rapidly run off through drain-pipes to a ditch or pond, or natural watercourse. All drainage should be carried through socketed glazed earthenware drain-pipes, well cemented together, and every brick drain should be abolished. The well-water should be examined from time to time, and the well be periodically cleaned out.

Light and warmth are usually secured in large country houses, but ventilation, when the windows are closed, is often defective, especially in the bedrooms. If the sleeping-room have sash-windows, air may be admitted between the upper and lower sashes by placing a piece of wood a few inches thick and as long as the window beneath the lower sash. In hospitals and workhouses, and the like, it is as well to screw the wood on, so that fresh air may be always admitted. Seeing that a third at least of one's life is passed in a sleeping-room, it is highly important that the air be kept pure by some efficient mode of ventilation.

Farmhouses for the most part have the same defects; but they more frequently have privies in the gardens or attached to the house than water-closets within it. These privies have large brick cesspits as a rule, which are scarcely ever cemented, so that sewage soaks from them, and often finds its way to the well. Every one of these cesspits should be emptied and filled in, and the space beneath the seat cemented. Some kind of pail should be used which should be frequently removed, either at the back or side, or by means of a hinged seat, and emptied at a distance from the house for future use, either in the garden or fields, the contents being covered with a few spadefuls of earth or of sifted ashes. It is not difficult to contrive an inexpensive arrangement, by means of which ashes can be thrown into the pails after use upon pulling up a plug.

The farmyard is a frequent source of pollution of drinking-water in wells and of streams. The risk of this is increased by many, especially thatched, farm-buildings being unspouted, so that the drippings from these mix with the manure of the farmyard. All farm-buildings should be spouted, and the water from them should be collected in tanks or carried away by drains. All farmyards ought to be drained into tanks, the contents of which may be pumped out and put upon the land where required. Manure-heaps should not rest against the walls of the house or outbuildings. It must not be forgotten that animals suffer from unsanitary surroundings as do human beings.

The house-drainage of farmhouses is often very defective, being carried frequently through brick drains which are neither disconnected, ventilated, nor trapped, or along brick gutters. Seeing that the washings of the dairy and the house-slops and soapsuds pass down them, and that the drinking-well may be beneath or close to the house, there is not only the risk of poisoned air entering the house, but of the drinking-water being contaminated. The drainage should be carried through glazed earthenware drain-pipes, thoroughly cemented, and bedded in cement or clay-puddle, and each drain should be disconnected and thoroughly trapped. It may be carried into a ditch at a distance from the house, or may be discharged into irrigation-channels in a field, or may pass through loosely placed ordinary drain-pipes beneath the surface of a pasture. If these drain-pipes follow the course of deep drains, the house-drainage may be thus safely disposed of.

Houses of the better sort in villages, and country villas, having only small gardens, while they possess sanitary defects similar to those of the larger houses, present greater difficulties in finding remedies for them. If they have water-closets in the houses, as many of them have, the cesspit must necessarily be placed too near the house and the water-well. The wells in villages are very liable to be contaminated. Houses are often found near the graveyard; and, if the dip of the strata happen to be favourable, the churchyard drains into the wells. If the cesspit cannot be removed to a distance from the house, it would be better to substitute earth-closets for the water-closets, if they can be got at from outside. Many of these houses have privies in the gardens with cesspits. These cesspits should be filled up, and pails used. The overflow from the cesspits and the house-drainage often pass into an open gutter by the side of the village street, to be discharged eventually into a stream, or, failing that, into a pond or foul ditch.

The question of the drainage of populous villages is a very difficult one, because, if there be no independent water-supply from which they may be frequently flushed, it is undesirable to have a system of sewers. Then, unless the sewage can be treated at its outlet, an expensive process, it should not be discharged into a river or stream. It must, therefore, be discharged on to land, and utilised by means of irrigation or subirrigation channels; or into watertight tanks, from which it must be pumped into soil-carts, to be removed and made use of on the land. Either plan ought to pay expenses, but it is doubtful if in practice it would be found to do so. While it is absolutely essential that sewers should not only be ventilated but flushed, it is desirable, if the tank-system be adopted, that the storm-water should be got rid of apart from the sewers, as it is little under control. One thing is certain: no kind of sewage should be carried by means of open gutters through a village; and, even if soapy water and house-slops pass away from the

houses through drains, they should be carried in disconnected glazed drain-pipes beneath the surface of the road. These, thoroughly ventilated by pipes carried up trees and houses, should discharge their contents into subirrigation channels beneath the surface of a meadow, and not pass directly into a stream or ditch.

Remarkable though the improvement in the condition of the labouring population in country districts has been since the beginning of this century, their dwellings, whether isolated or in villages, are not yet what they should be. Often badly placed, and built upon undrained ground, having uneven stone or brick floors, or only the bare earth, the houses are too frequently damp and unhealthy. Although a few of them are mere shanties, and some of them are simply mud huts, the majority of the older houses in many districts are substantially built of stone, which, however, is sometimes porous—so that the walls are damp after rain. The rooms in these old houses are low, and in many of them they are unceiled; but they are for the most part larger than in modern built labourers' cottages. They are ill-ventilated; but, where the windows are not fastened up, and all the cracks and crevices papered over, abundance of fresh air finds its way into them. Warmth is, however, important to the aged and to young children, especially in winter; and, unless they be very warmly clothed and substantially fed, much suffering results from draughty ventilation. The modern houses, commonly of brick, are of two classes: those built by landowners, often deservedly called model cottages; and those built to let at a low rental. These latter have frequently thin walls, through which wet penetrates, and contain only two or three small rooms. They are ill-ventilated, and the sanitary arrangements are bad.

Now, every cottage should be built upon an area which has been cemented over or covered with a bed of concrete, and the subsoil of which has been thoroughly well drained. The walls should be hollow, and should have a damp course of slates or of vitrified bricks, and the space beneath the floor should be ventilated. The floors should be of wood, and no room should measure less than ten feet in each direction. There should be at least three bedrooms, and one large living room, and a scullery or wash-house place; and the rooms, and especially the sleeping-rooms, should be well ventilated. Such a house may be built so as to yield a fair return upon its cost. In many districts, overcrowding in labourers' cottages is fearfully prevalent. Houses become dilapidated and are pulled down, and others are not built in their place. The result is, whole families are forced into one or two rooms.

The majority of labourers' cottages have garden ground, and all should have—because, even in villages, the refuse and filth have to be disposed of upon the premises for the most part. Many labourers' cottages have wells, and all new houses must be supplied with water before they can be certified for letting; but, in some districts, there are whole villages in which there is not one well. Sometimes the peasant is wholly dependent for water for all purposes upon the rain-water he can collect from the roof, often thatched, of his dwelling, when, by sinking tube-wells, water could be obtained at small cost close to his cottage. At other times, the drippings fall upon the ground from the unspouted roof, rendering the house damp. In other places a stream, polluted perhaps by the drainage of a neighbouring village or farmyard, is the only source of supply, or a stagnant pond into which a field drains, or even a ditch; or water is dipped from a spring, or from a shallow open well by the roadside.

The privies are sometimes placed at a distance from the house, but they are often close to it, and have cesspits which are either mere unbricked holes in the ground, or are lined with bricks loosely placed, so that their fluid contents may soak away, possibly beneath the house or into the water-well. All such pits should be emptied and filled up, and covered with cement or cemented flags, upon which a pail or earth-closet may stand. The pail should be emptied in a far corner of the garden, or of that of a neighbour, or into a field, and the contents covered with earth, and there allowed to remain until the manure can be used on the land. After a little experience of its value, the labourer himself will scarcely care to give it away. So with soap-suds and house-slops; if they be used for watering a row of cabbages, or even emptied at the foot of a fruit-tree, their value will soon be manifest. They may be thrown upon any unplanted plot of ground, or upon earth placed in a pit at one end of the garden, which may be subsequently used as a top-dressing. The pigstye resting against the house is by no means a rare sight; and when we consider the soakage of filth beneath the house from the pigstye and cesspit, especially after rain, and the soakage between the flags or bricks of an uneven floor, in the process of house-cleaning, it is not difficult to account for many cases of illness which the parish doctor has to treat in the homes of the peasantry. The pig is a necessity to the labourer, and cannot be got rid of; but the stye should be removed as far from the house as possible, and be frequently cleaned out.

In connection with houses of all degrees in rural districts the wash-tub and dust-hole are sources of danger, but least so in the houses of the poor, because the former is frequently emptied into the pig's trough, and the latter does not often exist. The wash-tub should be small to insure frequent emptying, and should be covered; and there should be no dust-hole, or, if there be one, it should be covered. All filth should be kept as dry as possible. The cinders after sifting should be burnt, and the ashes, if not used in the privy, should be scattered on the land every day. All other house-refuse should be burnt or carried daily to some convenient place at a distance from the dwelling.

Having pointed out some of the unsanitary conditions which obtain in connection with houses in rural districts with which I am acquainted, and having very briefly indicated the changes by which they may be met, I by no means wish it to be understood that, because I have said every rural sanitary authority should possess and rigidly enforce building by-laws, I think such changes as regards old houses can be arbitrarily enforced, or that old evils can be remedied in a day. Without building by-laws, these evils are being constantly perpetuated, and advance is rendered impossible: but no hardship is inflicted upon individuals if they know the regulations under which they build. To attempt to bring old houses into complete harmony with such by-laws, however, would hinder, by the opposition it would raise, the object in view, namely, the prevention of disease, for it would involve the destruction and rebuilding of half the houses in the country. My object has been rather to suggest a standard to which, by friendly advice and kindly influence, the rural householder or owner may be encouraged to endeavour to attain, before the deaths of wife or children have converted him to right views of house-sanitation.

SOME PECULIAR FEATURES OF A RECENT EPIDEMIC OF MEASLES IN CHELTENHAM.

Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By EDWARD T. WILSON, M.B. OXON., F.R.C.P.,
Physician to the Cheltenham General Hospital

IN the early part of the present year, the town of Cheltenham and its neighbourhood were visited by an epidemic of considerable severity. Boys and girls in the various boarding-houses were attacked in large numbers, but with slight mortality. The children of the poor, less favoured as regards sanitary conditions, suffered severely. It is, however, to some peculiar features of the epidemic, so far as it came under my own personal observation, that I would now direct attention; and I make no apology for bringing this subject before the Health Section, as it is one on which the health-officer, from his more varied experience and wider field of view, is perhaps more fitted to pass an opinion than the practitioner who is daily battling with the disease. In a wide-spread epidemic, there are many phases; and the medical officer of health enjoys unrivalled opportunities, in his contact with medical men throughout a large district, for collecting isolated facts; for comparing opinions and experiences, which otherwise might never be contrasted; and so arriving at those higher generalisations on the variations and etiology of disease which are amongst the highest aims of preventive medicine.

The cases on which the present observations will be based are fifty-seven in number: two adult female servants; eight girls residing at home; thirty girls in boarding-houses; six boys in one college boarding-house; eight boys living at home; and three boys in other boarding-houses. Of the fifty-seven cases, five boys only, and those all in one boarding-house, could be described as approaching the ordinary type of measles; and of these, one had had measles on a previous occasion. The remaining fifty-two, while preserving a well-marked similarity to one another, differed in so many particulars from the normal type of morbilli, that it seemed desirable to place the facts on record, especially as I glean from Dr. Bond's excellent report for the Gloucestershire Combined Sanitary District,* and from other sources, that the anomalies of the recent epidemic have been noticed elsewhere, and have given rise to theories as to the intimate relations of disease which deserve a candid and unbiassed examination.

1. *Incubation.*—A day boy at the college sickened on February

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...one side, it tends equally on the other to pass insensibly

4th; the rash appeared on the 6th. His two sisters, attending the ladies' college, fell ill on February 17th, and the rash appeared on the 19th, giving thirteen days from rash to rash.

A boy at a day-school developed the rash on February 28th. His sister followed with rash on March 12th.

Other cases, in which the period could not be so accurately marked, seemed to indicate an incubation-period of from twelve to fourteen days.

Prodromata.—The premonitory symptoms were in some cases very severe, though generally slight. They lasted from two to four days. There were several instances, however, in which the rash was the earliest symptom.

The existence of a marked coryza, such as is seen in measles, was exceptional. Headache, malaise, and sneezing were present. In most cases, the eyes were injected, but rarely running; and photophobia, although severe and well marked in eight cases, was generally absent.

Sore-throat was complained of in nearly every case. The tongue was usually coated, with in many cases, decidedly red edges. Raised papillae—such as are seen in scarlatina, and the vivid red tongue of that disease—were not observed. The lymphatic glands of the neck, and especially those at the back of the ear, were noticeably tender, and enlarged in nearly every case before the characteristic eruption appeared. The temperature generally did not exceed 101°.

Eruption.—The rash began, usually, on the second or third day, and, in exceptional cases, was the first symptom observed. It began on the face and neck, extending very rapidly downwards over the trunk and extremities. Small puncta, generally raised at first, made their appearance, and these on the face, chest, and arms usually coalesced, so as to form large irregular blotches, of a pinkish hue, resembling, but yet differing in shade from, the flush of scarlatina. In many cases it was impossible, while feeling with the eyes closed, to say that any eruption existed. On the trunk and limbs the eruption was, without exception, discrete, and resembling that of genuine measles, but without any crescentic arrangement on the back. It disappeared in the order of its appearance, sometimes on the third, but more generally from the fourth to the sixth day.

In one case, when the rash was very slowly developed, it assumed a livid purple hue, was lumpy to the touch, and confluent over the face, chest, and shoulders; the symptoms were very severe.

In another case, which I saw in consultation with my colleague, Mr. Bubb, a boy developed a distinct measles eruption on February 12th, which died out in three days, and was immediately succeeded, on February 15th, by a scarlatiniform rash, of a somewhat purple tint, extending uniformly over the whole body. The tongue at this time was neither coated nor red, and the throat, though slightly congested, was in no way characteristic of scarlet fever. The temperature was 104°. The boy was deaf, very lethargic, and frequently delirious. In the course of the disease, he passed through a severe attack of bronchopneumonia. Desquamation took place in large flakes (*Transactions of the International Medical Congress*, vol. iv, pp. 17-22, *et seq.*), and during a tedious convalescence, and for many weeks afterwards, he suffered from a subacute form of mania, showing itself in occasional outbursts of excitement and irritability, but more usually in a muttering conversation with imaginary persons, or constant repetition of short phrases—inability to comprehend what was said to him or to recognise those about him. There was never more than a suspicion of albumen, and he is now quite recovered. He had never suffered from either measles or scarlet fever. During the early part of his illness, he was in a room with about six or eight young boys suffering from the measles rash, and, until desquamation set in, with a boy suffering from bronchopneumonia, who had not had scarlet fever. There were twenty-six boys in the house, from eight to fourteen years of age, and presumably susceptible to scarlet fever; yet, although he went through the peeling process in the house, no case of scarlet fever occurred; and this fact must be allowed due weight in estimating the nature of this second eruption, with its subsequent desquamation.

To return from this digression; the throat was complained of in nearly every instance, and on examination the fauces and soft palate were seen to be covered with a raised and punctate eruption, which was undoubtedly the cause of a troublesome cough, which generally continued with much persistence during the first three days of the eruption.

In two cases, this irritation gave rise to laryngeal spasm, with croupy cough, which was most distressing to the patients and alarming to those about them.

The eyes, although in most cases giving no trouble, were in some much affected, with inflammation of the conjunctiva and copious discharge.

The tongue, fairly clean in general, was not unfrequently coated, with red edges.

The temperature rarely exceeded 101° Fahr., but, in the case above mentioned, in which the rash developed slowly, it reached 104.2° on the morning of the fourth day, and then quickly subsided.

Drowsiness on the second day of the eruption was noticed in four cases.

Earache occurred in three cases only.

Sickness on the second day of the eruption, and not due to the cough, was a marked feature in several cases; and constipation had to be treated in every case but two.

Desquamation in fine brawny scales was the rule, with few exceptions. There was no case of albuminous urine, with the doubtful exception already noticed, nor any instance of oedema.

Sequelae, in the form of severe bronchopneumonia, were met with in three cases, all of which recovered.

In the remaining 54, convalescence was rapid, without further complications.

In one case, the rash, which appeared on March 20th and disappeared on the 24th, with rapid recovery, reappeared on March 30th and disappeared on April 5th.

Such are briefly the symptoms which characterised the cases which came under my own observation, and it will at once be noticed how closely they conform in many respects with those of röteln or German measles, and how markedly they differ from those of ordinary measles. The short duration of the premonitory symptoms, the prominence of throat-trouble rather than coryza, the peculiar character of the eruption and its early appearance, the swollen lymphatics, the peeling, as well as the almost universal constipation, whilst they are very characteristic of röteln, are certainly unusual in an unmodified epidemic of measles. On the other hand, the symptoms, supposing them to proceed from röteln, were unusually severe for that disease, although there are not wanting instances of its occurring in a very aggravated form. Some cases brought before the Medical Congress in London last year by Dr. Cheadle (*Transactions of International Medical Congress*, vol. iv, p. 4, *et seq.*), would seem to have been of this nature, and to have resembled in many important particulars those which have just been described. On one point, however, there is the widest possible divergence. Whilst, in Dr. Cheadle's cases, a previous attack of measles proved no protection (out of 30 cases, 22 had had measles), among the inmates of two large boarding-houses during this epidemic, a previous attack of measles apparently gave absolute protection.

Of 28 girls in one house, 16 had had measles previously, and none of them took the disease; one was doubtful about measles, and took the disease. Of 11 who had not had measles, 9 were attacked, and 2 only escaped. Of 12 teachers and servants in the same house, 11 had had measles, and all escaped; one servant had not had measles, and she took the disease. In a boarding-house with 26 young boys, all under fourteen, 12 had had measles, and all escaped in this epidemic; 14 had not had measles, and of these, 12 were attacked. Of the whole 57 cases, 10 had had measles previously, and 2 had had röteln.

Röteln has of late been so generally accepted as a specific infection, distinct from scarlet-fever on the one hand, and from measles on the other, that I should hesitate to assign the cases we have been considering to that disease in the face of the evidence, which can scarcely be a coincidence, of the protective power of a previous attack of true measles. It seems more probable that we have been dealing with a modified form of morbillous disease; and this view is fortified by the fact that the cases which most nearly approached the normal type of measles were in boys attending the college where that disease was prevalent in its ordinary form, and that among the poor of the town an epidemic of measles prevailed at the same time, which although severe, did not, I am informed from many quarters, differ in any important particular from the disease as ordinarily seen. It will scarcely be contended that the specific organisms of infectious disease are exempt from the ordinary laws of development and evolution. We should rather expect that, in common with the lower forms of life, they would illustrate them in an exaggerated form, under varying conditions of soil and nutrition. And certainly my own experience of rashes, as they occur in schools, leads me to the belief that a change is even now taking place, and that, at the very time when greater precision and accuracy will be demanded for the notification of infectious disease, the old and sharply defined landmarks will be found to have faded away, to the infinite puzzle and discomfiture of those who have to certify. The difficulty is already felt in schools where sanatoria are provided, but it will be infinitely greater when a decision will be legally required in every case of rash that occurs. The newly established Investigation Committee might find an ample field for inquiry in this direction; and if the experience of those who have medical charge of

large schools throughout the country could be collected and compared, some striking facts might be elicited as to the frequent occurrence of deviations from type and transitional forms of eruptive disease.

QUARANTINE IN THEORY AND PRACTICE.

Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By FRANCIS IMLACH, M.D., Liverpool.

THE energetic protest, raised in the month of March by the British steamship companies trading with the East, against the vexatious and redtape quarantine regulations at Port Said, was followed in April by a vehement discussion of the practical value of such regulations before the Académie des Sciences of Paris. Vessels arriving from India without a single case of infectious disease on board were subjected to a needless and expensive delay of from five to fifteen days, and the Canal was blocked. The British Foreign Office sent a communication to the late Egyptian Government that Her Majesty's Government was "not prepared to acquiesce in the possible recurrence of such arbitrary and capricious acts of the International Board of Health as of late caused such enormous losses to British shipping; that they can no longer consent that an irresponsible body should have the power of making unreasonable laws which disturb the whole Eastern trade of Great Britain and uselessly impede her communications with India"; and demanded that a sanitary code should be compiled and submitted to all Governments concerned. It was impossible that France should forward a similar note. French influence preponderated in the International Sanitary Conference of Constantinople held after the cholera epidemic of 1865, and the existing regulations are the outcome of French sanitary science. The discussion was of the nature of an insurrection on the part of M. de Lesseps. He attacked not only the Suez regulations, but the whole institution of quarantine. The defence was undertaken by M. Fauvel, Inspector-General of the Sanitary Service, and formerly an active member of the Conferences of Constantinople and Vienna. While M. Fauvel alleged, for example, that in 1872, in 1877, and again in 1881, when cholera had attacked the pilgrims from Mecca, the defensive system of the Conference had prevented the extension of the disease into Europe, M. de Lesseps, on the other hand, declaimed against the "scrupules de quarantaines" concerning the transmissibility of cholera. The arguments of an authority very familiar with the vexatious practice of quarantine were met by those of an authority entirely conversant with its sanitary bearings, and perhaps even overmuch impressed with the importance of the tenets of the Conference of 1866. It is to be hoped that this discussion, together with certain other recent events, may result in an early and satisfactory revision of the Suez regulations, that heed may shortly be given to the recommendations of the Conference of Vienna rather than to those of Constantinople, and that the system of quarantine in Egypt may be wholly superseded by the system of "medical inspection" which has been successfully adopted in this country since 1873. For quarantine, though still widely enforced, is now admitted by most European States to be a mistake. It is confessedly unavailing against a disease, like small-pox, which is immediately and personally infectious; and is only directed against diseases, like yellow fever and cholera, which flourish only in special districts, and whose contagious character is doubted. While in this country so late as 1826 evasion of quarantine service was felony, without benefit of clergy, such evasion is now of daily occurrence; and, as Dr. Billings stated at the International Medical Congress in London, "neither in America nor in Europe can one draw reliable conclusions as to what is actually done at a quarantine establishment, from its printed regulations".

Of course, those who defend the present system of quarantine maintain that both yellow fever and cholera are directly contagious. For example, Inspector-General Lawson stated last year, in a paper on Yellow Fever read at the Medical Congress, that, according to his experience, the sick from a ship with a source of yellow fever in her "may be landed and treated without risk to their attendants or the population generally". And, again, "It has not been established that a vessel with a source of yellow fever in her can impart the germ of the disease to a locality on shore suitable for its development, near which she may lie, and so produce a shore epidemic". In reply, M. Fauvel held that, while this might be true for England, it was not so for France, Portugal, or Spain; and he mentioned St. Nazaire as an example. But against M. Fauvel's belief, there is an infinity of arguments. I do not know any more exhaustive investigation than that contained in the Report of the Sanitary Commission of New Orleans on the Epidemic Yellow Fever of 1853. Its conclusions, in brief, were, that the fever

originated in the city; that it was attached to the soil rather than the person; that it was not personally contagious; and that its infectious properties were only communicable in a foul or infectious atmosphere. Like results were found at Rio de Janeiro, and these remain true to this day. When yellow fever is raging there, the inhabitants of Tejeleca and of Petropolis, on the neighbouring hills, are free from it, although there is no inland quarantine. Fever-stricken inhabitants of Rio are occasionally taken to the hills, and there may die; but no outbreak is feared, and none, in fact, occurs. During the epidemic of 1850 in British Guiana, yellow fever cases in their worst forms were never separated from other patients in the hospital wards; yet, according to the Report (p. 54) of Dr. Blair, Surgeon-General of the district, neither patient nor nurse was ever infected. Again, yellow fever is endemic in Colon and Carthagena, on the Isthmus of Panama, and at St. Thomas, in the West Indies. English sailors are frequently, and sometimes fatally, attacked. Yet every week vessels of the West Indian Pacific line arrive in Liverpool from these ports, and no manner of quarantine is attempted. Sick and healthy alike proceed forthwith to their homes. Their kit is not disinfected, nor is the cargo, nor the ship. But not a single case of fresh infection has ever been known, much less an epidemic outbreak. In respect of Spain, M. Fauvel's statement is not at all borne out by the reports of Drs. Jackson and O'Halloran on yellow fever in that country. The latter, writing in 1821, says (p. 183): "Epidemics have not been known in Gibraltar since the arrival of General Don. The immunity has been ascribed to quarantine restrictions; I am more disposed to ascribe it to the services of a well-regulated corps of scavengers." As for the epidemic of 1861, at St. Nazaire, reported by M. Mélier, Inspector-General of the Sanitary Service, the evidence of contagion would probably not now be accepted as sufficient by modern sanitarians. Alleged yellow fever broke out on seven vessels in the port of St. Nazaire a few days after leaving it. The *Annie Marie* had recently arrived from Havana, laden with cases of sugar. She had had yellow fever on board, though none during the last seventeen days of her voyage. Probably, therefore, the infection spread from her. It is true, as it subsequently was with the *Hecla*, at Swansea, that her sailors who went to their homes did not infect any, nor did the labourers who discharged the cargo suffer. None of the sailors from the other vessels went on board the *Annie Marie*, except a few from one only, who stayed just a quarter of an hour on deck. But infection there must have been, and something must be done. It was proposed that the ship should be burnt, but M. Mélier thought of another plan. She was beached on the banks of the Loire, and holes were made in the hull. For eight days she lay there, alternately buried in the tide and drained again at ebb and flow. Next, she was sluiced with fifty kilogrammes of sulphate of iron dissolved in a ton of water. By this time a thick layer of mud had settled in the hold, beneath which the provisions and furniture of the vessel were buried. Labourers, primec with brandy, hooked out these with a long pole, and held them at a distance, while chlorinated water was played upon them from a fire-pump. Finally, the epidemic was stayed, and the ship was saved. But such experience is altogether exceptional; and M. Mélier admits, in his report, that it was the first time he had seen yellow fever.

So far then, goes the evidence of the inutility of the measures of quarantine against yellow fever. But the stubborn and extensive enforcement of them is still the despair of commerce; and evasion, unfortunately, is not always possible. The very Sanitary Commission of New Orleans that held it to be impossible for one man to be infected with this fever by another, also reported that, "as regards the propriety of quarantine, the Commission are unanimously of opinion that a quarantine should be established. Even if of no use as to yellow fever, it will serve to keep out other diseases equally, if not more, deleterious, etc." Even at the present day, it is strongly urged in New Orleans that all commercial intercourse with the West Indies should cease during six months of the year. If a vessel have touched at Colon or Carthagena, it must ride quarantine at St. Thomas. In 1871, there was an outbreak of yellow fever in Buenos Ayres. Since then, the Republics of Uruguay and of the Argentine Confederation profess to fear its importation from Brazil; and so vexatious have the recent quarantine restrictions become, that it has been found impossible to carry on trade between the ports of these neighbouring countries and that of Liverpool with one service of vessels. At Madeira, the Cape de Verde Islands, the Azores, and Lisbon, passengers are detained in lazarettoes of the usual description, and vessels are coaled by interdicted labourers, who cannot afterwards return amongst the inhabitants until there has been due observance of quarantine. Four years ago the *Newton*, a steam vessel from Brazil, belonging to Messrs. Lamport and Holt, was cast on the southern shore of Madeira. In order to lighten and float it off, the crew commenced to unload the vessel of its cargo of bags of coffee;

but the sanitary officials refused to allow these to be landed, and ultimately it was found necessary to abandon ship and cargo alike to the mercy of the waves. Even in the British possessions in the Mediterranean, at Gibraltar and Malta, the authorities appear to depend more upon quarantine than upon scavengers to free them from the fever. And in England, strict quarantine, that is, under the Quarantine Act of George IV, is at the present day still in force against yellow fever, and against no other fever. This enforcement is said to be only nominal, and "not really with any sanitary object, but solely with the view of relieving our maritime commerce from disabilities which would else be imposed upon it by other countries in which quarantine is regarded as an essential part of their public health administration" (Local Government Board, Seventh Annual Report, 1877-78, Memorandum 10); yet ludicrous exhibitions of authority are not altogether wanting. In 1878, a vessel arrived in Liverpool in which three deaths from yellow fever had occurred during the homeward voyage. The bodies had been buried at sea, and the bedding thrown overboard. The port sanitary officer attempted to visit the vessel, but was refused admission. The Customs authorities had been before him, and the vessel was already put in quarantine. This could not, however, go on for ever. The Customs authorities had a medical officer, but no staff or apparatus for disinfection. All they could attempt was the old-fashioned policy of simple detention. After due deliberation, the care of the vessel was handed over to the port sanitary officer, who caused it to be thoroughly disinfected, and thereafter gave *free pratique*.

But it is chiefly in reference to cholera that M. de Lesseps breaks through the traditions of French sanitary science. Perhaps his primary interest is in the commercial prosperity of the Suez Canal, rather than in the scientific bearings of quarantine. But, however that may be, he appears to have adopted views that have long been maintained in England and in India, and his experience has been considerable. He holds that the transmissibility of cholera has been greatly exaggerated by those interested in maintaining quarantine service. He says that cholera has never been introduced at Suez, or into Europe, by merchandise brought from India, and that this has been admitted by the International Sanitary Conference of Constantinople. Liverpool, Havre, and Marseilles, which receive cargoes from all the ports of India, and all the provinces of Asia, have never registered a single case of cholera which could be imputed to these arrivals. As for the pilgrims returning from Mecca, the caravan frees itself gradually of its sick in its march across the desert, and it has never imported cholera into Egypt. He would replace an useless and impotent quarantine by an effectual attempt to disinfect and destroy the dejections of the sick pilgrims. He regards putrid dejections in the soil or on movable objects as the sole cause of the propagation of cholera, and attempts to show that the disease may also have a spontaneous origin.

Certainly our experience in Liverpool bears out M. de Lesseps' statement. When we remember that cholera is endemic in Bombay and other Indian ports, and that it never occurs in Liverpool, although there is a constant service of vessels between them, we must admit either that the danger of infection is infinitely little, or that the regulations at Suez have been miraculously perfect. Our last local outbreak of 1866, which was described by Dr. Stopford Taylor at the International Medical Congress, if an importation at all, came from Rotterdam, not from India. In 1865, many cases of cholera were received into the general hospitals of London, but there was no example of fresh infection. And, if we refer to Indian evidence, we find that Dr. J. M. Cunningham, Sanitary Commissioner with the Government of India, after a careful investigation of the epidemic of 1872, denies that cholera is a contagious disease, and does not even admit the filth- or water-theory of Dr. Farr and Mr. Simon. Yet we find the tongs still held out for the bill of health; and, although there is not a sick man on board, there must be quarantine of observation; no pilot may come on board; and, as the supply of steam-launches to carry the too susceptible pilots is limited, the ship must wait its turn.

But the denial of the utility of quarantine against cholera by no means depends upon the denial of its contagiousness. The response of M. Fauvel, who still has faith in quarantine, to M. de Lesseps, who now has none, was that cholera for Europe is an exotic malady, contagious, of Indian origin. Never has it been spontaneously produced in Europe, where it has always been imported. This was the original dictum of the Conference of 1866, and was elaborately defended by M. Fauvel in the discussion at the Académie des Sciences. It may be admitted—indeed, it must be confessed, that Mr. Netten Radcliffe's recent report on the Diffusion of Cholera, and its prevalence in Europe during 1865-74, goes far towards establishing it. But, as the Quarantine Report in 1849 declares, "the question of contagion has no necessary connection with that of quarantine. The real question is, whether quarantine can prevent the extension of epidemic diseases,

whatever may be their nature, whether contagious or not. If it can, it is valuable beyond price; but if it cannot, it is a barbarous incumbrance, interrupting commerce, obstructing international intercourse, perilling life, and wasting—and worse than wasting—large sums of public money" (p. 17).

As is well known, this report, which was adopted as the basis of subsequent legislation, wholly condemned quarantine; and all more recent reports and fuller evidence have likewise condemned it. Hygiene, disinfection, and intelligent care of the sick, enforced by the system of medical inspection recommended by the Conference of Vienna in 1874, are the sole measures requisite to replace the quarantine system of the Conference of Constantinople. This is, indeed, the general opinion of British sanitarians. Yet, as we all know, our commerce is to this day seriously hampered by the unreasonable quarantine restrictions of various countries. Our modern vessels, with all their hygienic appliances, are absolutely free from infection, as all who have sailed in them will admit, even when a case of fever has been unwittingly shipped. And when, at any fever-ridden port, tongs are stretched out suspiciously for their papers, it is a commonplace and trite remark that the tongs are in the wrong hands. Our only remedy is unceasing agitation. International Medical Conferences have already helped to diffuse information, and will continue to do so. Our Government has protested when the occasion has offered. Indeed, we may say that only those most immediately interested in the abolition of quarantine—the shipowners themselves—have failed to take united action in the matter. Yet they have unequalled means of gaining and of diffusing sanitary information, for their vessels carry highly trained medical officers, who will doubtless willingly assist them when they discover that united, patient agitation will, in course of time, effect what an ill-timed Government protest would simply hinder.

TOXICOLOGICAL MEMORANDA.

POISONING BY DAPHNE MEZEREON.

ON July 14th last, a little girl, aged 2½ years, was brought to me by her father, who said that, about half an hour previously, she had eaten some red berries from a shrub in front of the house which he believed to be poisonous, and he thereupon produced some berries and leaves of the ordinary cultivated *mezereon*. The child had been sick on the road, but had not vomited much. No one knew how many berries she might have swallowed, for she had been alone for ten minutes, and her hands were full when discovered. There was nothing remarkable in her appearance except that she seemed somewhat dull and stupid. I gave her an emetic of five grains of sulphate of zinc in a little warm water, which made her very sick, but brought nothing up but a clear liquid. I then gave some ipecacuanha wine, and sent her home, with instructions for her to have a dose of castor-oil after the emetic had acted. She was again sick, with the same result as before, and they had barely reached home (a ten minutes' walk) when she suddenly became pale, and began to cry and shiver violently, and very soon became unconscious. I was hastily summoned by a messenger, saying that she was dying; and, on my arrival, I found her lying quite still and motionless, her eyes wide open, pupils fixed and dilated, face blue, scarcely any pulse perceptible, and breathing very faint and slow. I had her wrapped in a warm blanket, gave her some ammonia and brandy, and ordered a mustard poultice to be put on her chest. She could only be roused with great difficulty, and her skin seemed quite insensible to touch. She revived a little after the stimulant, and moved her legs and arms about; the pulse also became quite distinct at the wrist. The mother noticed now, for the first time, that the lips looked as though they had been burnt, and that the inside of the mouth was swollen. She remained in this condition for an hour, when she began to look about and put her hands to her chest, where the mustard had been. The pupils still remained quite indifferent to light. Two hours later, the bowels acted violently, and a copious motion was passed, containing half-digested food, something like curdled milk, and a number of small hard seeds, some of which were partly enveloped in pulp. After carefully straining a portion, I found twenty-four of these, and I believe there were fully as many more in the remainder. The child still continued drowsy, though otherwise better. I now gave a dose of castor-oil, and left. There was afterwards another evacuation, and a few more seeds were seen. She continued to improve, sleeping heavily all the following morning; and, in the evening, had apparently forgotten all about it.

The quick passage of the poison through the stomach into the intestines was, I think, unquestionably the secret of recovery in this patient. I am not aware of any case having been recorded where so large a

number of berries had been taken without a fatal result. Most writers seem to agree that very few are sufficient to cause death. Guy and Ferriar say from six to eight, and Orfila mentions a case, on the authority of Linnæus, where a young lady suffering from intermittent fever died, "spitting blood, after twelve berries had been given for the purpose of purging her" (*On Poisons*, vol. ii, p. 27, second edition). The narcotic symptoms, which were so marked a feature, are disputed by some authorities, who place daphne with the simple vegetable irritants, although Christison, in his work on *Poisons* (fourth edition, page 601), quotes one instance where, amongst several children who died with symptoms of violent vomiting and purging, one was distinctly narcotised.

WILLIAM SHAW, M.D. Edin., Maidstone.

OBSTETRIC MEMORANDA.

A DIFFICULT FORCEPS CASE, WITH A PECULIAR STRUCTURAL CONDITION OF THE UMBILICAL CORD.

ON May 10th, 1882, at about 10.30 P.M., I was summoned to assist another medical practitioner at a midwifery case about ten miles distant from my residence. On my arrival at midnight, I learned the following history of the case. The patient, a strong, muscular, well developed countrywoman, aged 33, was now ill forty-eight hours in this her sixth confinement. All her previous labours were of a most difficult nature, none of her children being born alive; delivery being effected on some occasions by the forceps, on others by the perforator. On examining, I found the os fully dilated, and the head presenting in the brim of the pelvis in the first oblique diameter. The waters had been discharged more than twelve hours. There was slight, but not very marked, narrowing of the antero-posterior diameter. The pains had ceased for some hours previously to my arrival, notwithstanding that ergot had been administered. There was no constitutional disturbance whatsoever. The necessary preparatory arrangements being completed, I proceeded to apply the long forceps (Barnes's); and with traction, extending over an hour, we succeeded in delivering the head, the appearance of which sufficiently indicated the death of the child. We imagined now all further trouble was at an end; but, to our astonishment, by no amount of the usual tactics recommended in text-books on midwifery could we succeed in extracting the body of the child. We were about opening the thorax, and eviscerating, which, under the circumstances, we felt would be a difficult matter, when we had recourse to the following novel procedure. We procured about two yards of the ordinary diaper, and this we twisted into a long narrow fold; and, having made a loop, we encircled the child's neck in it. One of us then proceeded to pull on the ends of the fold, whilst the other, with his hands on the child's head, assisted in the extraction, as well as directed the course of the forces thus applied. In a few seconds, the child's body was born. It was that of a well nourished and unusually large child. The placenta we pressed out; there was not the slightest hemorrhage, and the woman made an uninterrupted recovery. The cord presented a peculiar appearance. It was of the ordinary length, and was perfectly normal from the placenta to within five inches of its termination in the umbilicus; here it broke up into a large peculiar spongy mass, closely resembling placental structure. This mass was about the size of a large orange, and from it proceeded to the navel something less than one inch of cord of the ordinary size and appearance. I have never seen before, nor read nor heard of, such an anomalous condition of the umbilical cord. I may add that the placenta was normal in every respect.

JOHN T. DILLON, M.D., M.Ch., Medical Officer Ballyhorgan Dispensary District, The Square, Listowel.

CLINICAL MEMORANDA.

THE AURICULAR PULSATION OF MITRAL STENOSIS.

IN reference to Dr. Goodhart's communication on the subject of auricular pulsation, I hope he will believe me when I tell him that I have repeatedly seen—in cases of mitral stenosis—the dilated appendix of the left auricle winding round the pulmonary artery, and lying on the base of the heart in front. If he will look into the literature of the subject, he will see this constantly referred to as an acknowledged fact. I confess it is not so easy to prove it. The anatomical relations of the left auricle are but little spoken of in the dissecting-room, and the same vagueness in regard to detail still besets its history in the

pathological theatre. I have looked in vain in the literature of the subject, and even in my own cases, for one case described with sufficient accuracy as to the dimensions and relations of the dilated appendix of the left auricle. I inquired of the conservator of the Museum of our Royal College of Surgeons; he told me he had seen many dilated auricles, and thought he had one or more specimens in the museum, but I could not find any. And yet they are not so very uncommon. Just before the Worcester meeting, I saw a well marked case, and, as the patient died most opportunely, I hoped to be able to bring a good specimen with me, but I could not obtain a *post mortem* examination. Attention being now directed to the subject, I hope that carefully described cases will before long be recorded. It is, perhaps, my own fault, that Dr. Goodhart ascribes to me the opinion that there is "no possible cause of murmur in the pulmonary artery which is not equally operative at the aortic orifice, or indeed more so," as if it held universally. I only meant that statement to refer to what I was then speaking of, viz.: the primary stage of the hæmic murmur; and in regard to that, I think it holds good. Dr. Goodhart is, of course, aware that the pulmonary artery is only permanently dilated after many years' persistence of excessive intrapulmonary blood-pressure, and subsequently to those changes in the pulmonary capillaries which initiate brown induration of the lung. In the early stage of chlorosis, when the basic murmur first becomes audible, there is no dilatation of the pulmonary artery; the percussion of the heart is normal, or apparently so; the only thing abnormal about the pulsation, is a faintness or entire absence of the apex-beat, due, as I have already said, to commencing dilatation of the right side, not yet great enough to produce subternal pulsation. At this stage, if we place the point of our finger between the second and third ribs, where the pulmonary artery normally lies, there is no pulsation, and the position of maximum intensity of the murmur lies to the left of our finger point in the plane of the second interspace. By-and-by, when faint pulsation makes its appearance during expiration, as happens in many, if not in every case, it is felt, not close to the sternum beneath the point of the finger, but to the left of that, just in the spot where the murmur is heard loudest. If this be not the position where the apex of the appendix of the left auricle ought to lie, my anatomy is entirely at fault.

GEORGE W. BALFOUR, Edinburgh.

SURGICAL MEMORANDA.

TAPPING THE BLADDER.

IN the BRITISH MEDICAL JOURNAL of April 8th, is an instructive report by Mr. Morrison upon tapping the bladder from the perineum.

This operation can be done better and more easily through the prostatic urethra, by means of a tunnelling instrument, consisting essentially of a seton catheter, fitting closely and sliding easily within a thin steel tubular trocar, so guarded by pushing out the catheter that it cannot catch or scratch the lining of the urethra until it reaches the part to be tunneled. To operate, the instrument, with the end of the catheter protruding beyond the cutting point of the outer cannula, is introduced by the urethra till it is arrested by the enlarged prostate, when the pointed outer tube is advanced, and passes easily through the prostate into the bladder; then the catheter, inside this perforating tube, is slid forwards, and enters the bladder without possibility of failure, occluding the cutting point of the outer tube, and the urine is discharged as through an ordinary catheter. The instrument may now be tied in till the new channel is permanently established.

This trocar-catheter is a modification of the "dome-trocar," which is in very general use in America; the smallest sizes for aspiration (*vide* Roberts on *Paracentesis of the Pericardium*, page 51); the larger sizes for tapping the abdomen; the largest for use in ovariectomy (*vide* Smith's *Operative Surgery*, page 563).

SIMON FITCH, A.M., M.D., Halifax, Nova Scotia.

SCARS OF THE FACE.—This interesting branch of cosmetic surgery is treated by Dr. C. L. Bull of New York, in a reprint from the *Transactions of the Ophthalmological Society*. He says: "Persistent rubbing and kneading of scars of the face, both those due to burns and those resulting from bone caries, as preparatory to blepharoplasty, have, in a number of instances in the writer's experience, yielded most excellent results. Adhesions of scars, slight or extensive, to the subcutaneous parts, have been slowly, cautiously and painlessly detached, and a gradual absorption of the firm material in the dense part of the scar has been brought about. So considerable has been the result obtained in some cases that the writer has come to regard this gradual extension and loosening as an important part of the treatment in these cases."

REPORTS

MEDICAL AND SURGICAL PRACTICE IN THE
HOSPITALS AND ASYLUMS OF GREAT
BRITAIN AND IRELAND.

NORTH-EASTERN HOSPITAL FOR CHILDREN.

CASE OF DIPHTHERIA IN A CHILD AGED ONE YEAR AND NINE
MONTHS: TRACHEOTOMY: RECOVERY.

(Under the care of Mr. WARREN TAY.)

[Communicated by JOHN POLAND, F.R.C.S., Registrar.]

HARRIET A., aged 21 months, was admitted on January 4th, 1882, at 5 A.M. There was then considerable dyspnoea and stertor; face slightly suffused. The suprathoracic fossæ, epigastrium, and lower intercostal spaces became depressed during inspiration. This was very marked when she was first seen, in her father's arms, struggling for breath. Every now and then, there was a faint croupy cough. On examining the throat, the fauces and palate were intensely congested, and a small patch of membranous exudation was seen on the uvula. On auscultation, no *râles* were to be heard in the chest. At 6 A.M., the dyspnoea becoming intense, Mr. Warren Tay saw the child, and recommended operation. Tracheotomy was at once performed, under chloroform, by the house-surgeon, with marked relief. A quantity of membranous material was coughed up directly the silver tube was inserted. The child was placed in a steam-tent, and a spray of sulphurous acid (1 part in 3) ordered to be applied to the throat every three hours. An ounce of wine, and a mixture containing five minims of ipecacuanha wine, with chloric ether, were given. The temperature two hours after operation was 100.4°. The patient slept quietly for some hours afterwards. During the day she coughed up a quantity of mucopurulent matter through the tube, but no membrane. The temperature in the evening was 101°.

On January 5th, she had been restless all night, and sick three times, after slight attacks of coughing; in the morning, the respiration was quick, but regular, 60 per minute; the temperature was 101.6°, and at 10 P.M. it was the same.

On January 6th, in the morning, a few small pieces of membrane, with abundant muco-purulent matter, were expelled through the tube. Breathing was quiet; the temperature was 101.2° in the morning, and 101.4° in the evening. The urine (specific gravity 1028) was acid, free from albumen; a deposit contained epithelium and a few blood-corpuscles.

On January 7th, the temperature was 101.8°. The breathing became much quicker and more difficult. The tube was removed at 12 A.M., and a feather introduced into the trachea, which had the effect of causing a small piece of tough yellowish-white membrane to be expelled through the opening. The tube was replaced, and the breathing then became quiet and regular. The child was sick once during the day, after coughing, and did not take nourishment well. The temperature was 101.2° in the evening.

On the 9th, the discharge through the tube was profuse, and streaked with blood. Sulphurous spray was applied to the pharynx, and continued every four hours. A soft India-rubber tube was inserted in the evening. Morning temperature, 100.8°; evening, 100.2°. On the 10th, in the morning, the temperature was 100°. A few *râles* were heard scattered over the lungs. Breathing was very stridulous when the tube was removed for cleaning; the evening temperature was 99.6°. On the 12th, morning temperature, 98.4°; evening, 99.6°. The discharge of muco-pus through the tube was less; it contained more blood. The spray was stopped. On the 14th, the temperature was 100.2°. During the day, a few flakes of membrane were expelled through the tube, and in the evening more blood; the evening temperature was 98°. On the 18th, the temperature was 98.4°; more flakes of membrane were expelled; the tube was removed every two hours, cleaned and replaced. On the 21st, the opening was now small and contracted. There was very little discharge through the tube, which was now removed only once or twice a day on account of the difficulty of introducing it again into the opening. The breathing without the tube was greatly obstructed, and accompanied by great effort; evening temperature, 98.2°. At the bases of the lungs, behind, scattered rhonchi and *râles* were heard. On the 27th, the India-rubber tube was replaced by a vulcanite one; temperature, 101.8°; evening, 98.2°. On the 29th, the tube was removed for two hours during the day: the whole of this time the child breathed with great effort. The tube had therefore to be replaced. On February 1st, the tube was removed for one hour every alternate hour during the day, and replaced during the whole

night. On February 4th, the tube was removed for two hours at a time, with intervals of one hour. In the evening, while the tube was out of the trachea, the child became suddenly cold; respiration ceased; pulse imperceptible; it appeared almost moribund. It, however, recovered after artificial respiration had been performed for some time. A drachm of brandy every four hours was ordered. On the 7th, the tube was removed for twelve hours during the day-time, and replaced at night; the child breathed very well during the whole time. On the 8th, the tube was out again for twelve hours. At the end of that time, the child again suddenly became extremely collapsed and pulseless. The tube was immediately replaced by the house-surgeon, and the child brought round again; evening temperature, 98.4°. On February 22nd, the steam-tent was removed.

From this time up to April 2nd, the vulcanite tracheal tube was merely removed for cleansing purposes once a day. At this date, it was removed for three hours during the daytime, the breathing being easy the whole time. The upper aperture of the larynx was brushed every morning with a solution of nitrate of silver (five grains to an ounce); a little purulent discharge came through the tube only. The patient looked bright and happy, took her food well, and improved rapidly in general condition. There was no cough, and the voice was said to be very clear when the tube was removed.

On the 14th, the tube was taken out all day, and replaced at night, some stridor occurring during sleep. This was repeated each day until May 2nd, when the tube was finally removed altogether. The breathing in every way was normal, and the voice clear and distinct. The small tracheal opening closed directly.

On May 9th, she was discharged from the hospital, quite well. The patient has since been seen twice at the hospital in excellent condition.

LONDON HOSPITAL.

CASES UNDER THE CARE OF MR. JAMES ADAMS.

(From notes supplied by Mr. APPLEFORD.)

Lithotripsy after Bigelow's Method.—The patient, a youth about nine-teen years old, had been suffering from symptoms of stone for about twelve months, suffering a great deal of pain, and passing a great deal of blood and mucus. The urethra being of good size, lithotripsy was determined on; the stone was rather more than an inch in diameter, and apparently nearly circular. Its size was not sufficient to impede the manipulation of the lithotrite, but it was so hard as to occasion some anxiety lest the instrument might break. The fragments after the first crushing being found so extremely hard, the instrument was withdrawn, and a piece of steel placed within its jaws; and upon this the operator screwed up the instrument with all his force, and, finding that it was strong enough to withstand all that could be brought to bear upon it, the operation was proceeded with; and, in a little more than an hour, every fragment was washed out, except one minute piece that was passed the following day. The stone, which consisted almost entirely of oxalate of lime, weighed five drachms. There was no reaction, and the patient was practically well in four days; but he remained in hospital for a fortnight, until the urine had become normal. He was quite well when last seen, three months after operation.

Suppurating Ovarian Cyst: Removal: Death: Perforation of Rectum by Sloughing.—The patient, aged 33, single, a nurse by occupation, was admitted on January 17th, 1882. Five weeks before admission, she caught cold during a menstrual period, and had shivering fits, but continued her work until her admission into the hospital, though she was feeling ill. About a fortnight before admission, she discovered a swelling in the left iliac region. This was smooth, tense, and globular, dull on percussion, fluctuating, and about the size of a fetal head at full time. No doubt was entertained that it was an ovarian tumour, but during the few days that elapsed between the first examination and the operation, the tumour became quite resonant, was slightly increased in size, but maintained its shape; and, coincidentally with this, the temperature rose to 104° at night, falling two degrees by the morning, and the patient looked ill, and lost flesh. Ovariectomy was performed. The cyst, on being punctured, gave forth a quantity of fetid gas, and about a quart of flaky pus. The whole cyst was removed, the adhesions being very firm, especially towards the rectum. The peritoneum was thoroughly cleansed, and everything looked so complete that the wound was closed without drainage. The patient appeared to be doing well for the first twenty-four hours, but died on the third day apparently from exhaustion, though more probably from septicæmia.

At the *post mortem* examination, there were found suppurative peritonitis, suppuration along the course of the wound, and a gangrenous patch near the middle of the rectum, about the size of a shilling, which had perforated in two places. This damage to the rectum was evidently

In discussing the causes of this very serious increase of scurvy, Mr. Gray takes the opportunity of pointing out and correcting an erroneous impression which is very prevalent, especially among the seamen themselves, viz., that the Board of Trade fixes the diet-scales on board merchant ships; whereas there is actually no legal enactment on the subject, the scale of medicines and medical stores, and the issue of lime-juice, being the only points that come under its jurisdiction. In 1868, a suggested scale of diet, of an excellent character, was drawn up by Drs. Leach and Dickson, but the efforts of the Board to induce merchant shippers to agree together as to its adoption failed. All that has been since done is to allow certain owners to print their own scales of provisions in their articles of agreement, and to provide, in all other cases, in the skeleton scale printed in the articles of agreement, room for inserting other articles than salt meat, and than those required by the usual monotonous scale. The United States Government have

adopted a scale of diet, with a latitude of substitution, and with the proviso that lime-juice, as well as vinegar and other antiscorbutics, shall be regularly served within ten days after salt provisions shall have been given out to the crew, and shall continue to be served as long as the salt provisions are used. It would seem, however, that the statutory diet is rarely adhered to, and happily so, for it is not in the least antiscorbutic, there being no mention of succulent vegetables, except as a permissive exchange for flour or rice. In point of fact, the diet is considerably varied, both in the matter of preserved meat and fish, and also in fresh potatoes, which are shipped largely and issued daily.

Mr. Spooner (of Liverpool) drew up, in 1881, a model scale on a liberal antiscorbutic basis, in which provision is made for the issue of preserved meat, potatoes, and carrots, as well as pickles, raisins, and marmalade, and generally for a good and varied diet.

From an analysis of the reports and opinions of various medical officers, and the facts that have come before him, Mr. Gray has arrived at certain conclusions, which are as follows.

"1. Scurvy has been on the increase in British ships since 1873. 2. Lime-juice, of itself, will not prevent scurvy; and too much reliance is placed on it, to the neglect of varied food-scales. 3. Lime-juice, in connection with fresh or preserved meat and vegetables, may prevent scurvy. 4. The dietary scale of ships should therefore include a fair proportion of fresh and 'preserved' meats as distinguished from 'salted' meats. 5. More fresh vegetables should be carried—notably, raw potatoes. No satisfactory reason is given why fresh potatoes cannot be carried on board British ships. The allegation that they will not keep good on board-ship is clearly disproved by the fact that they do keep on board United States ships, and will keep a fair time anywhere else. 6. It is not at present desirable to insert a statutory scale of diet in the articles of agreements of crews serving on long voyages; though it may possibly be necessary hereafter, unless the shipowners themselves move in the matter."

On these conclusions a few words may be said. The evidence of the increase of scurvy appears, unfortunately, to be only too obvious; and we do not think anyone will be inclined, in the interests of the seaman, to dispute the last three conclusions, so far as the desirability of improved food-scales is concerned. But the second conclusion, with reference to lime-juice not of itself preventing scurvy, in the absence of an improved food-scale, is open to question. It is quite true that too much reliance may have been placed upon it, to the neglect of varied food-scales, but we are inclined to doubt if scurvy has ever really shown itself, even with a salt meat diet, where good lime-juice has been regularly served out in sufficient quantity. On the other hand, it is certain that a good diet of fresh meat and vegetables is a better preventive than lime-juice in any quantity. The marked effects of lime-juice in Arctic voyages, particularly in the experience of Sir A. Armstrong, are too well proved to admit of doubt. At the same time, we know that scurvy has been a disease of English seamen, probably from their monotonous scorbutic diet, for neither in the French nor the American fleet was an issue of lime-juice considered necessary in the first half of this century. Indeed, the American seaman used contemptuously to call his English brother "a lime-juicer." When, however, we remember the magical change which the introduction of lime-juice wrought in our navy at the close of the last century—a change due to it alone—it is impossible to receive Mr. Gray's conclusion without some hesitation. Indeed, it would be somewhat disastrous if the confidence in the efficacy of lime-juice were seriously shaken, although it would certainly be undesirable that too great reliance upon it should prevent men from getting a proper and fairly varied diet. As to the third conclusion, that lime-juice, in connection with fresh or preserved meat, and vegetables, may prevent scurvy, we should be inclined to propose a *varia lectio*, and for *may* read *will certainly*. If the vegetables be in anything like reasonable quantity, the lime-juice is, of course, superfluous.

In cases which are relied on as proofs of the efficacy or non-efficacy

of lime-juice, or other articles, as antiscorbutics, there is too often a want of precision in the data recorded.

It is asserted, for instance, that cases of scurvy have occurred when lime-juice was served out regularly. If any authentic cases of the kind have really occurred, where the lime-juice was good, in sufficient quantity, served out regularly, and regularly swallowed, it would be most desirable that they should be published with every detail that can be given.

It is asserted, on the other hand, that persons have lived for weeks and months without either lime-juice or vegetables, and have had no scurvy; that, for instance, in Australia, a diet of "damper" and mutton has been persisted in for a lengthened period without any bad result. It is, therefore, concluded that fresh meat is antiscorbutic. Our troops, however, in the older Kaffir wars, undoubtedly suffered from scurvy, when the supply of meat was unlimited. Even in this country, among well-to-do people, scurvy is occasionally met with in a severe form, where persons have persisted in a diet of meat and bread, without even potatoes, and with a total deprivation of other vegetables. It is not necessary to impugn the good faith of the reporters of anomalous cases, such as an absence of scurvy even when there was no vegetable food, for it may well have been that some article was obtained and consumed, which had either been forgotten, or to which little or no importance was attached. We know that the Kaffirs eat greedily the half-digested grass from the stomachs of cattle, and that even the Eskimos devour similar vegetable matter found in the inside of the reindeer. The Hudson's Bay trappers carefully preserve all sorts of berries for winter use, and mix them, as well as raisins and currants, with the pemmican on which they live so long. Yet they have been cited as instances of people living on meat alone, without getting scurvy. The case of the *Polaris*, in which the crew drifted on an iceberg for six months, is another in point, for they had nothing but pemmican, and had no scurvy. But then it was the sweet pemmican, prepared with raisins and currants, which are antiscorbutic. When the late Sir Robert Christison and Professor Syme imagined that they had cured scurvy by giving milk, it was forgotten that, in one set of cases, increased rations of potatoes had been given, and that, in the other, the patients had the "common diet of the hospital, which consisted largely of Scotch broth, with plenty of vegetables." On the other hand, starvation-diet has not produced scurvy, where the food, small as it was, has been chiefly vegetable.

It has been asserted, from time to time, that the meat of seal, walrus, or bear, is antiscorbutic, and that raw meat generally is so also. It would certainly seem as if, in some cases, this was so; and, under such circumstances, it may possibly be the lactic acid present which is the active counteracting agent. Kane apparently warded off scurvy by means of raw meat, particularly raw rats; and, in other instances, the use of seal or walrus meat seems to have been attended with good results. The recent case of the *Eira* is also one that deserves notice. For ten months, the crew lived chiefly on walrus, bears, and loons; each man had one-fifth of a gill of rum daily, but no lime-juice, and they had no scurvy. Dr. W. H. Neale, the medical officer of the expedition, proposes to discuss later on the relative antiscorbutic properties of rum and lime-juice; but, in the meantime, he seems convinced that immunity from illness, and particularly from scurvy, was obtained by eating "the meat of the country". He, however, mentions incidentally that twelve pounds of vegetables were divided among the three meals of the crew every day; and this, if correctly reported, would go a long way to account for the immunity from scurvy.

We may take it on the whole as proved (and even re-proved, as Mr. Gray remarks), that scurvy mostly occurs when a monotonous salt diet is kept up, and that its ravages are most felt by seamen debilitated, from whatever cause. Men who have been previously well fed and in sound health, whose "morale" is also good, will resist scorbutic influences longest. In the sledge expeditions in the last Arctic Expedition (Sir George Nares's), the officers suffered little or none, although exposed to the same influences as regards diet as the men. In that case,

however, Sir George Nares relied too much upon the influence of previous antiscorbutic diet, forgetting probably the depressing effect of the long dark winter that had been passed through, and quite ignoring the serious result of cutting off nearly all the antiscorbutic articles from the sledge diet.

Although we strongly believe in the efficacy of lime-juice, and feel inclined to think that the late lamentable increase of scurvy among our merchant seamen has been in all probability due to neglect of its proper use, we are yet bound to say that the necessity for lime-juice ought to be regarded in the present day as an opprobrium and a slur upon shipowners. It ought always to be available when emergency requires, but it is now so easy to provide a good, varied, and thoroughly antiscorbutic diet, that scurvy ought to have no existence. The extra expense of such diet, if any, would be fully made up in the greater efficiency of the men, not to speak of the duty of using all reasonable means to promote their health and comfort.

If the shipowners and the general public can be brought to understand that the occurrence of scurvy under ordinary circumstances is a thing to be ashamed of, and that even the necessity of resorting to lime-juice as a preventive or cure (except under extraordinary conditions) conveys something like a slur, there will soon be less supineness shown in providing good and varied food-scales for our merchant seamen. Mr. Gray hints, in his concluding paragraph, that it may be necessary for the State to interfere, if the shipowners themselves do not move in the matter; and, really, things have so changed in the present day, that the occurrence of scurvy might very well be made an offence at law, from the responsibility for which owners and masters should be bound to clear themselves, under penalties.

SANITATION IN SWISS HOTELS.

THE Hygienic Congress which has just held its meeting at Geneva might profitably have directed its attention to the sanitation of Swiss hotels, and suggested some system by which a reasonable guarantee might be afforded to the hosts of visitors who throng these establishments at this season that they are not jeopardising health while seeking recreation. No doubt, many Swiss hotels, both large and small, are above reproach in sanitary matters, having fully availed themselves of the great natural advantages which they almost invariably possess in an abundant water-supply and ample fall for drainage; but others again have certainly not adopted those precautions which modern sanitary science demands. To say nothing of houses in which the primitive privy, more or less isolated, and more or less well attended to, is still in use, hotels much resorted to might be mentioned in which cesspools, but seldom cleaned out and altogether unventilated, receive the discharges from closets and sinks, and perpetually emit foul mephitic gases which have no exit but into the house, and are distributed through its corridors and chambers. Whenever a closet is used, gusts of these gases enter the building, and at other times they may be heard bubbling up through the imperfect water-traps in use. A thoroughly satisfactory system of ventilation of drains is rare in Swiss hotels. Independent ventilating shafts are seldom seen, and only occasionally are the soil-pipes of closets carried upwards through the roof and left open at the top. The state of the walls sometimes affords unmistakable evidence of leakage and defects in the jointing of soil-pipes, and the introduction of oil of peppermint into the drains by any roving and curious sanitarian would often in all likelihood, even in establishments of good repute, reveal an astonishing number of flaws and openings for the ready ingress of noxious gases. In some hotels, the liquid sewerage is applied to the irrigation of the land, but this is not always done in a safe way. The field on which the sewerage is poured is in some cases too near the house, and in one instance a *dependance* employed when the hotel is full stands in the centre of the meadow upon which the sewerage is poured. In other cases, again, the land receiving the sewerage is on far too sharp a declivity, so that the sewerage flows over it rapidly, and trickles almost unchanged into the stream below, from which perhaps hotels

lower down in the valley derive their water-supply. In a few well conducted establishments, overflow pipes from cisterns are conducted to fountains, or are allowed to discharge themselves on the ground; but in many pretentious houses these pipes discharge directly into the drains.

Typhoid fever has unquestionably been brought home to England from Swiss hotels, and diphtheria and dysentery are not altogether unknown in them. No one practically skilled in sanitary science can sojourn in a number of them without perceiving many and grave faults; and no one, with only popular conceptions of what is right and proper in domestic sanitation, can live long in them without occasional qualms and misgivings. The effects of the Swiss atmosphere, and scenic influences, upon overstrung and jaded nervous systems, are so valuable, that no unnecessary and fictitious worries should be allowed to interfere with them; and the frequently recurring dread of typhoid fever or diphtheria is certainly a worry of the first magnitude. It is sincerely to be hoped that the proprietors of Swiss hotels will at once set their houses in order, in all sanitary respects; and so encourage that influx of visitors which is so much to their advantage. A Swiss society, on the model of our own Sanitary Protection Association, with competent inspectors, who would examine, report, and certify, when all necessary alterations had been carried out, would speedily accomplish all that is required. Those hotels that could exhibit the inspector's first-class certificate at their doorways, or advertise their possession of it, would so rise in public favour that all hotels would soon be compelled to follow suit, and obtain the necessary passport to the patronage of the discerning tourist. The Hygienic Congress has visited some of the great hotel centres on the Lake of Geneva; and it is to be hoped that it will not lost sight of this important question. A distribution, amongst hotel proprietors, of French and German translations of Mr. Pridgin Teale's admirable work on *Healthy Houses*, with its instructive illustrations, would do much to remove existing abuses.

PRISON-SURGEONS.

THE counsel frequently given, of late, to our younger brethren, to reflect before accepting appointments in the prison services, has been accepted in good faith, as was formerly similar advice with regard to the army and navy services. The immediate result is, that a number of vacancies cannot be filled.

As in the case of the other public services, we consider it but just, when making a complaint, to state what the grievances are, and to suggest a remedy.

In the first importance comes pay. Whilst in almost every department of the public service the pay has been raised, from time to time, to keep pace, to a certain extent, with the decreased value of money, that of the Prisons Medical Department has remained stationary. A considerable increase has taken place in the discipline branches. In some instances the pay has been doubled; and here it may be remarked, in parenthesis, that this increase was made in spite of the fact that the lists of candidates were overcrowded, whilst those of the Medical Department were empty. All the other civil branches were generously dealt with; but, although the medical duties have fully trebled in work and responsibility, the medical officers do not get a penny more than they did twenty years ago.

The increase in the assistant-surgeons' pay recently made is more apparent than real, as, though larger at first, the aggregate amount received during the entire average service would not show an increase.

Equal in importance to present pay comes retiring allowance. This can only be characterised as wretched in the extreme. There is no provision, as in the military services, for wives or children; service is compulsory (except through ill health) up to an age (sixty) when it is too late to commence any other walk in life; and then the highest possible retiring allowance is two-thirds of the pay—after a service of forty years.

In addition to these important considerations, the duties are in them-

selves most unattractive, monotonous, and wearisome, and the responsibility very great. The initiatory expenses also of taking up an appointment are considerable; so that, unlike most other appointments with small pay, they cannot be taken for short periods, to be relinquished at will.

Taking all these circumstances into consideration, it is obvious that the conditions of service must be made more attractive before men will enter. Some of them cannot be altered from the very nature of the duties; and therefore the question resolves itself into one of pay, present and prospective. Without fixing any definite terms, we are of opinion that surgeons entering the prison service should be put on a par with deputy-governors, as was formerly the case before the pay of the latter was nearly doubled. Medical officers, on promotion, should not receive less than £500 a year, which, by periodical increments, should reach that of the governors, with whom they share the work and responsibility, the greater part, indeed, falling to the medical man.

Considerable changes in the mode and rates of retirement are also essential. Retirement should be optional after twenty years' service, on an allowance of not less than £300 a year; increasing with length of service up to a maximum of £450 a year. Retirement should be compulsory at the age of sixty, except in the administrative department, when another five years might be allowed.

These are not extravagant demands, and we trust they will receive favourable consideration at the hands of those in authority, and thus put an end to a state of things which presses heavily on those medical men who retain their appointments, and which must affect the welfare of prisoners and convicts, and all others who receive medical attendance from the prison surgeons.

DR. STRANGE, the President of the British Medical Association, has been elected an honorary member of the Société Française d'Hygiène.

DR. LUIGI CONCATO, the celebrated Professor of Clinical Medicine at the University, Turin, is reported to have recently died.

DR. SEPTIMUS GIBBON, the Medical Officer of Health for the Holborn district, in his recently published annual report, draws distinct attention to the loss of infantile life due to constitutional syphilis. Dr. Gibbon says that this "is a leprosy which entails far worse consequences on the public health than all other preventable diseases put together."

PROFESSOR LISTER, F.R.S., will deliver the annual address at a meeting of the Medical Society of University College, at 8 P.M., on Wednesday, October 11th, in the Botanical Theatre of the College. The Museums, Library, etc., of the College will be thrown open at 7 P.M., and exhibitions of various microscopic and other specimens of interest will be given. All students and members of the profession are invited to attend. No tickets are required.

At the interim meeting of the managers of the Metropolitan Asylums Board on September 2nd, the fever returns from the various hospitals in London showed that an outbreak of scarlet fever had occurred, and the committee of chairmen of hospital committees reported "that, owing to the prevalence of scarlet fever in the metropolis, they have directed the reopening of a portion of the Deptford Hospital for the reception and treatment of fever cases."

THERE is every indication of the abatement of the epidemic of typhoid fever at Bangor. But few fresh cases have been reported since last week, when there were 300 patients under treatment, the Local Board still retaining the services of 27 trained nurses. Typhoid has also appeared in other parts of the country, and in addition to the Evesham

outbreak, the disease has shown itself at Crediton, where the sanitary authority has prohibited the re-opening of the public school of the town.

THE outbreak of scarlet fever at Accrington shows, unhappily, no signs of abatement. Since the meeting of the school managers, there have been no fewer than eight deaths, and a large number of fresh cases have come under notice. The town possesses no hospital accommodation for isolating cases of infectious diseases, and the health-officer, Dr. Milne, has strongly urged upon the authority the urgent necessity for such provision.

The St. Petersburg *Official Messenger* of September 1st announces that, by order of the Emperor, the admission of new pupils to the course of medical training for women at the Nicolai Military Hospital in this city will be discontinued after the present term. The students will, however, be allowed to conclude their courses, after which the clinical instruction for women at the hospital will be abolished. The educational appliances, library, etc., are to be handed over either to the Military Academy of Medicine, or to any establishment that may be prepared to open courses of medical instruction for women.

A NEW medical society for the western suburbs of London has recently been formed. It is to be named the West London Medico-Chirurgical Society. The following officers have been elected for the first year. *President*: Dr. Edward Hart Vinen. *Vice-Presidents*: Dr. Thudichum, Mr. B. J. Vernon, Mr. Hemming, and Mr. Frederick Lawrence. *Treasurer*: Mr. W. Bird. *Council*: Drs. Alderson, Pickett, Goddard Rogers, Sinclair Thompson, and W. Travers; Messrs. Alderton, Barnes, Lunn, Ottley, Potter, Walker, and Willing. *Secretaries*: Messrs. C. B. Keetley and F. F. Schacht.

EXTENSION OF THE WEST BROMWICH HOSPITAL.

THE new out-patient department of the West Bromwich Hospital, which has been presented to the governors of the institution by Mr. Homer Chance, a local manufacturer, was opened on September 4th. The new building is situated in the south-west corner of the grounds of the charity, close to the new wing erected last year. It contains an entrance hall or waiting room, consulting rooms, and a dispensary.

ROYAL VICTORIA HOSPITAL, NETLEY.

AT last, in order to receive the wounded as they arrive home from the seat of war, this splendid hospital is being prepared throughout to be used as a hospital. It seems superfluous to prepare a hospital to be used as a hospital, but we regret to say that for some time past the wards of this great hospital have been perverted from their proper uses, and have practically been turned into barracks, having been used as a "discharge dépôt". We can only wonder that this has so long been suffered to continue.

LECTURES TO NURSES.

LAST winter, following a plan which has been found to work satisfactorily in some metropolitan hospitals, a series of systematic lectures to nurses upon nursing the sick, organised by Dr. Sawyer, was given by the honorary officers of the charity in the Theatre of the Queen's Hospital, Birmingham. The lectures were well attended and much appreciated; at the end of the course, nurses were examined in the subjects dealt with, and certificates were awarded to successful candidates. This year the course will be extended and repeated, and a lecture will be given every Tuesday evening throughout the winter session, beginning on October 3rd. The lecturers are Dr. Sawyer, Dr. Carter, Mr. Priestley Smith, Mr. Bennett May, and Mr. Jordan Lloyd.

HOW DISEASE IS SPREAD.

A NOTEWORTHY instance of the manner in which disease may be spread is afforded by a case recently brought under the notice of the Exeter

magistrates. A woman and four other persons resided in three rooms, one room being used for living purposes and also as a laundry. In one apartment, a child was lying sick with scarlet fever, and the woman's time was divided between attending to the child and in washing the clothes she received from various families in the city. The clothes thus washed were hung out to dry in the midst of clothes from other laundries, so that every facility was offered for the easy dissemination of the infection throughout the town. The woman declined to have the child taken to the Sanatorium, but the magistrates at once ordered its removal.

THE MEDICINE-CHEST OF THE HOUSEHOLD BRIGADE.

ONE of the daily papers still repeats the incorrect statement that the Household Cavalry are in the field without medicine-chests. It is evidently unaware that regiments go on to the field only with the medicines, etc., contained in the "field-companions". The field hospital acts as a reserve store of drugs and appliances as they are wanted. The surgeon attached to each regiment is personally responsible for the "field companions". The criticism is unjust and undeserved. Never, at any former period, has the Army Medical Department been more successful and more efficient than at the present. The appliances and stores of all kinds which have been forwarded to Egypt might almost be called lavish.

THE MILITARY HOSPITAL AT GOZO.

THE excellent reports from Gozo more than justify the choice made, by the Director-General of the Army Medical Department, of the island as a military hospital. The island had been noticed by Surgeon-General Mackinnon as possessing a fine airy plateau, and as being one of the best of the Maltese Islands. Dr. Tippetts, who is in charge of the hospital, writes that the wounded are all comfortable and happy; and that the staff of nurses, under Sister King, have been of great service. Marquees are being erected on the plateau. Among the wounded at Gozo, the worst case is that of Trooper Martin, of the Life Guards, who has a wound of the foot. The men in the hospital say they were never so comfortable in their lives. This speaks well for the arrangements made by the Director-General. One of the patients at Gozo is the private of the 7th Dragoons, whose wound Surgeon-Major Shaw had just finished dressing when he was shot through the head.

OVARIOTOMY IN ITALY.

IN the *Raccoglitori Medico* of the 20th of July, Dr. Peruzzi publishes a note on the third hundred cases of ovariectomy in Italy. He shows that while nineteen years were taken up to complete the first series of 100 cases, the second only took two years and a half, and the third, twenty-three months. The third series was performed by forty-six operators, of whom twenty-eight only had one case each; seven had only two each; and Dr. Margary, of Turin, who had the largest number of cases, only eight. The result was seventy-three recoveries and twenty-six deaths. In the second hundred, there were thirty-six deaths, and in the first, sixty-one; a very satisfactory proof that, as experience has increased, mortality has diminished. Of incomplete or partial operations, during the progress of the last hundred completed operations, there were nine, with five recoveries and four deaths. Of removal of uterine tumour, classed together as supravaginal laparo-hysterotomy, there were twenty-seven cases, with only seven recoveries to twenty deaths.

LONDON BAKEHOUSES.

THE recent publication by the Chief Inspector of Factories of some sensational details about the condition of London bakehouses has led many metropolitan health-officers to refer to the subject in their periodical reports. Both Mr. Liddle of Whitechapel, and Mr. Murphy of St. Pancras, make the suggestion (which appears to be an admirable one), that bakehouses should be registered and licensed in the same way as cowsheds and slaughterhouses; and both gentlemen regard the trans-

ference of the duty of the supervision of bakehouses from the local sanitary authorities to the factory inspectors as unfortunate and retrogressive. Mr. Murphy has recommended to his vestry that a communication should be addressed to the other metropolitan sanitary authorities, with the view of ascertaining, in the first instance, how far the present position of legislation concerning bakehouses is considered satisfactory by them, and afterwards for the purpose of adopting the course that then seems best. Combined action in this matter would certainly be useful, and probably productive of good results.

STIMULANTS IN ST. PANCRAS WORKHOUSE.

THE local newspapers report at length a recent discussion on stimulants by the St. Pancras Guardians. It was stated that in 1878, with 1,749 inmates, the cost of stimulants was £1,554, but that in 1881, with 1,742 inmates, the cost had fallen to £1,204. During the twelve months ending Lady Day, 1882, there had been a further reduction to £1,004. The examples of the parishes where there had been a reduction of nine-tenths and upwards were quoted, and emphasis was laid on the remarkable facts as to the enormous decrease in St. Marylebone, brought out at the recent discussion on alcohol in the Public Medicine Section at Worcester. The discussion ended in the passing of a resolution calling the attention of the medical officer to the large alcoholic expenditure, and to the question whether so large a consumption was necessary for medical purposes. It is quite possible that no inconsiderable portion of the charge for alcohol was practically beyond the control of the medical officer.

THE GENEVA CONVENTION OF 1864.

THE text of the official correspondence between the President of the United States of America and the President of the Swiss Confederation, regarding the adhesion of the United States to the convention for the amelioration of the wounded of armies in the field, which was entered into by certain European States and signed at Geneva in 1864, is published in the last number of the *Bulletin International*. The final document, embodying the accession of the United States to the treaty, and officially signed by President Arthur and the Secretary of State for Foreign Affairs, is dated Washington, March 1st, 1882; and the interchange, signed by the President of the Swiss Confederation at Berne, bears the date of June 9th, 1882. The United States have thus joined the Convention eighteen years after it was originally framed. All the civilised Governments of the world now participate in this humane agreement. The Government of Turkey joined the Convention in the year 1865. The name of Egypt is not in the list of States that have acceded to it; though perhaps, as a dependency of Turkey, it may be considered as being included among its adherents. How far the regular troops of Egypt have carried out in practice the provisions of the Convention, remains to be seen.

VERDICT OF MANSLAUGHTER AGAINST AN UNQUALIFIED ASSISTANT.

DR. DANFORD THOMAS, the coroner for Central Middlesex, last week held an inquiry respecting the death of Richard Carroll, aged 32, a coal porter, who died on Friday, August 25th. In his evidence, Mr. Dudley Power, of Offord Road, Barnsbury, stated that he was an assistant to Mr. Kane, who had two dispensaries, one in Copenhagen Street and the other in St. James's Road, which were attended alternately by Mr. Kane and himself. He saw the deceased first on the Monday before his death, when he was suffering from alcoholism. He was not a registered practitioner, but had walked some of the hospitals in America. He had sole control over the dispensaries, as Mr. Kane was ill. The widow of the deceased stated that her husband was not addicted to drink, and certainly had not been drinking when Mr. Power first saw him. Dr. Capon, of Edgware Road, said that at the request of the coroner, he had made a *post mortem* examination, and found the brain, heart, and liver healthy. The right lung and kidney were much diseased, and death resulted from inflammation of the former

organ, accelerated by the disease of the kidney. With proper medical treatment, the deceased would most likely have recovered. A medical man ought to have had no difficulty in finding out the disease from which the deceased suffered. It was one which would not be mistaken for alcoholism. Mr. Rowntree, who assisted Dr. Capon in the necropsy, corroborated that gentleman in every particular. The jury, after a long consultation, returned as their verdict: "That deceased died from inflammation of the right lung, accelerated by improper treatment, and that Dudley Power was guilty of manslaughter."

THE BETHLEHEM HOSPITAL SCHEME FOR PAYING PATIENTS.

THE text of the scheme (signed by Mr. H. Vane, secretary of the Charity Commissioners,) for the admission of patients to the above hospital who can contribute to their support in an institution endowed for the purpose of treating poor curable lunatics, has been published. The necessity of this new departure is that the trust property does not now produce sufficient funds, the governors stating that in consequence of the recent depreciation of agricultural property in certain parts of the country, they have had to make abatements of rents to the tenants on certain of the hospital estates, and the number of applicants for free admission has fallen off, leaving some of the male wards unoccupied. The Charity Commissioners have, therefore, made the following order, by way of a scheme for the regulation and administration of the hospital.—"1. During a period of five years from the date of the order, the governors may admit into the hospital, or into the convalescent hospital connected therewith, and may provide for the maintenance and treatment therein of not more than fifty male patients, in consideration of payments to the said governors of a weekly sum not exceeding £2 2s., to cover the entire cost of the maintenance and medical treatment of each of the said male patients so admitted to the benefits of the said hospital, or of the said convalescent hospital. 2. Every patient admitted to either of the said hospitals under the provisions of this scheme shall be associated with, and shall be subject in all respects to the same treatment as, the other patients maintained for the time being in the said hospitals respectively; and shall be further subject to such rules and regulations, not being inconsistent with this order, as may be made by the governors from time to time for the admission and discharge of the said patients. 3. The period hereinbefore limited for the admission of the said patients may be extended, and the number of, and rate of payment to be made by, the said patients may be varied from time to time by the governors, with the sanction of the above board."

POISONING BY BELLADONNA BERRIES.

AN inquest was lately held at Plumstead on the body of a boy aged two years and seven months, who is supposed to have died from eating the fruit of the deadly nightshade. From the evidence, it would appear that the child, whilst playing in the garden, was suddenly seized with vomiting. He was seen by Dr. Ingledew, who found him suffering from inflammation of the stomach and intestines, "due to some irritant mineral poison." The landlady of the house said she noticed some of the children, who were playing with the deceased, come in with some flowers, and a weed which she remarked at the time was very poisonous, and threw on the fire. A wooden fence separated her back garden from that of the next house, and the weed, she believed, had been plucked through the fence, as she had no such flowers or weed in the garden. The jury visited the next garden, and Mr. Caritar, the coroner, drew their attention to some belladonna or deadly nightshade, the berries of which were green. Dr. Ingledew said he had made a *post mortem* examination, and attributed death to the deceased having eaten some of the berries. The jury returned a verdict of death from accidentally eating berries of deadly nightshade. This is a very interesting case, and death may have resulted from eating the deadly nightshade, but we doubt it. The deadly nightshade (*Atropa belladonna*), grows in many parts of Britain on a calcareous soil, but it is scarce. It is generally found in shady lanes and hedges,

in the neighbourhood of villages and ancient ruins, but is rarely met with near London. The black or garden nightshade (*Solanum nigrum*), on the other hand, is common in gardens, and is much more likely to have been the cause of death in this case than the official plant.

ROSS COTTAGE HOSPITAL.

A CORRESPONDENCE has recently passed between Dr. Siddall of Ross, and the managers of the Cottage Hospital in that town, respecting a patient named Hyde. The facts of the case are these: On June 20th, Edwin Hyde fell from the top of a load of hay, and received a severe concussion of the spine. He was seen shortly after the accident by Mr. Bramhall, who advised his removal to the Cottage Hospital. There he remained, under the care of Dr. Siddall. On July 19th, his case was considered at the usual quarterly meeting of the committee, and in accordance with Rule 26 (which says that "patients will be required to pay such sum weekly as, in the estimation of the general committee, their circumstances will permit") it was decided that, no payment having been made or guaranteed, he was not a fit case to be kept in the hospital. On the same day, the Secretary wrote to Dr. Siddall, telling him that 3s. 6d. was the sum the committee judged it right that Hyde should pay, and that, if no guarantee for this sum were forthcoming, he would be required to leave the hospital, or that his friends would be requested to remove him to the workhouse. Accordingly, on August 5th, he was removed in a cab; but as no arrangement had been made previously, there was some delay in obtaining his admission to the workhouse infirmary. Dr. Siddall complains that the committee was exceptionally strict in enforcing Rule 26 in Hyde's case; and that he himself was not consulted as to the patient's fitness for removal. As the man was likely to be permanently disabled, it was obviously impossible for the committee to retain Hyde for an indefinite length of time, in contravention of Rule 26, and so far they seem fully justified. But it is always best in such cases that the medical officer should be consulted as to when it would be safe to remove a patient, and they should have insisted upon his friends making arrangements for his reception into the workhouse infirmary previous to dismissing him.

THE CO-OPERATIVE MEDICAL ASSOCIATION (LIMITED).

UNDER this title, an association is being formed, based upon the experience of the South London Medical Aid Institute. "Recognising that its first duty was to become self-supporting, rather than strictly scientific, the South London Institute offered to all comers, unable to pay the usual doctors' fees, the best medical aid and medicines procurable, at a small co-operative charge (e.g., one shilling the first visit, and sixpence each subsequent visit; or one shilling for each doctor's attendance at home), the same system, in fact, as the co-operative stores; and, in affording them the alternative of becoming subscribing members in and out of health (e.g., by paying eightpence a month, or tenpence a month for a married couple), it gave them, in fact, far more for their money than they could obtain by payment per visit." The South London Institute has now nearly 3,000 non-subscribing patients, and 600 subscribing members. This is the model which the Co-operative Medical Association proposes to follow. So far as the provident branch is concerned, we have nothing to say against it. On the contrary, we are in favour of all such arrangements. But the non-subscribing branch appears to us liable to great abuse. In a provident dispensary, members are enrolled after due inquiry. The advantages offered are limited to a special class. But the prospectus of the Co-operative Medical Association contains no mention of any system of inquiry whatever; and we can see no guarantee that those who pay one shilling a visit may not belong to a class of persons who are well able to pay the usual charges. It seems to be an arrangement for providing cheap medical attendance for all comers, without distinction, who profess themselves unable to defray a doctor's bill. We need hardly point out that this indicates a fresh danger to the medical profession, by making an organ-

used attempt to lower their rate of remuneration. Furthermore, the prospectus of the Association asserts that "the South London Medical Aid Institute is the only dispensary, with the provident element and machinery, which has been financially successful." This statement must have been made in ignorance of the prosperous condition of the Northampton, the Battersea, and many other provident dispensaries. Indeed, it appears to us that the promoters of the Association would be acting wisely if they dropped the non-subscribing branch altogether, and cast in their lot with the Metropolitan Provident Dispensaries Association.

THE ALLEGED REFUSAL OF A CERTIFICATE OF DEATH.

AT an inquest held by Dr. Danford Thomas, on the 9th inst., a charge of a most unusual kind was brought against a member of the medical profession. It appears that an infant, which had for a short time been under the care of Dr. R. J. Lee, at the Hospital for Sick Children, Great Ormond Street, died on the 2nd inst.; the mother subsequently applied at the hospital for a certificate of the death. Dr. Lee being out of town, his assistant, Mr. C. Barry (who is duly qualified), not having seen the child, refused to give a certificate. The story told by the mother was, that Mr. Barry said that he would call at her house, and would then give a certificate if she were willing to pay him the sum of five shillings. This the woman refused to do, and the refusal was repeated upon his visiting the house. Mr. Barry thereupon gave information to the police. The coroner characterised this evidence as "a most extraordinary statement, and the first of the kind he had ever listened to." At the request of Dr. Lee, who said that the death was due to wasting disease, and that he was prepared to certify, the inquest was adjourned to allow of further inquiry. At the adjourned inquest, Mr. Barry stated that he had told the mother he would come and see the child, as he could not give a certificate without seeing it, and should require a small fee to cover his cab hire. He went accordingly, and after looking at the child, who was decomposing fast, he asked her if she would pay the fee, and she said her husband was out of work, and she could not. He then said he could not give it unless she paid the cab expenses; and if she did not do so, an inquest would have to be held. He waited in the passage, and afterwards gave information to the police. He wished to tell the jury he took his *post mortem* instruments with him, so that he could find out the cause of death. He did not ask for the five shillings for the certificate, but simply to cover the expenses of his cab fare, as he could not possibly give a certificate from only seeing the child lying in the cot. The object of his attendance at the house, he added, was to save the mother any inconvenience. The coroner observed that Mr. Barry's statement showed that the mother was mistaken in supposing that the money was demanded for the certificate, and the jury entirely acquitted the authorities of the hospital of any imputation of negligence. We think it is impossible to avoid the conclusion that Mr. Barry's conduct in this case was most injudicious. He, of course, acted quite properly in refusing to certify the cause of death of a patient he had never seen; but, as Dr. Danford Thomas pointed out, the proper course under such circumstances would have been to lay the facts before the coroner, who is always ready to advise in similar cases, and to take the responsibility of deciding whether an inquest is necessary.

POISONOUS MUSHROOMS.

THE untimely death of Mr. Dodds, an English clergyman, known for his labours among the workmen of Paris, may serve once more to draw attention to the exceeding care required in the selection of mushrooms for eating. Mr. Dodds, it appears, gathered a quantity of mushrooms in a wood; and he, his wife, and their servant, partook of them for dinner. Mr. Dodds, after some days of suffering, died with symptoms of irritant poisoning, his wife and servant narrowly escaping a similar fate. It is not possible to give any universally applicable general rules for recognising poisonous mushrooms;

but the locality in which they were in this case found might have served as a warning. The species of mushrooms which grow in woods and other damp situations are generally dangerous; most of the edible varieties inhabit open airy places, and are not found in clusters; as a rule, too, a mushroom of a dark or of a very brilliant tint ought to be avoided. Nothing short of an acquaintance with the botanical characters of the various species can be an entirely trustworthy guide; thus the *Agaricus Caesaris*, which is said to be the most palatable of mushrooms, is brilliantly coloured. No doubt, there is truth in the contention that much valuable food is rejected, when we refuse to make use of mushrooms as a habitual article of diet; but when we reflect upon the difficulty of any but a skilled observer recognising the edible forms, and upon the fact that a fungus, which in one country is wholesome, is found in another to be highly deleterious, we cannot but think it wisest to exercise the very greatest caution, and to select only those specimens which are known to belong to harmless species; of these, the most important, because the commonest in this country, is the *Agaricus campestris*, which grows wild in open commons, but is easily cultivated; and this is, no doubt, the best means of popularising it as an article of diet. For the rest, it may suffice to say that the only poisonous principle as yet obtained has been extracted from the *Amanita muscaria*, an infusion of which is used in Kamtschatka and some parts of the Russian Empire as an intoxicant. Muscarine, as this principle is called, has been found to act not only as a powerful gastro-intestinal irritant, but also as a heart-poison; it brings about death by paralysing the heart, and is in most of its properties almost completely antagonistic to atropine, the poisonous principle of the deadly night-shade; so that it was found that a rabbit, rapidly dying from muscarine, could be quickly revived by a proper dose of atropine.

METROPOLITAN PUBLIC HEALTH AREAS AND THE PROVISION OF MORTUARIES.

WE learn from a local metropolitan contemporary, that Dr. Diplock recently held an inquest on three bodies for Dr. Danford Thomas, at the Buffalo Tavern, Marylebone Road. The bodies had been all taken to the dead-house of the old Church Ward, Paddington; but, as no facilities existed for making a *post mortem* examination there, they were afterwards taken to the stoneyard at the other end of the district, where the examination was made. Then they were again reconveyed to the dead-house for the purpose of the inquiry. It further appears that the parish of Marylebone, with its 161,000 inhabitants, has no dead-house or mortuary at all; the establishment at the workhouse, which used to be put into requisition for such purposes, having been closed by the veto of the Board of Guardians, though it would appear that sometimes a body is surreptitiously taken thither and as quietly removed. In the next parish, St. Pancras, with a quarter of a million inhabitants, there is a similar absence of decent accommodation for such purposes. We learn further that, although efforts have been made to induce the Vestry of Marylebone to build a suitable mortuary, this enormously rich parish insists that it should be built at the cost of the county, whilst the county denies its liability, and so between the two nothing has been done. It is now nearly thirty years ago that the little parish of St. Anne's, Soho, with a population of barely 18,000 persons, built the first mortuary; and since that date its originator, Dr. Joseph Rogers, has frequently endeavoured to extend the principle to surrounding parishes and Board of Works districts. This has been attempted by means of deputations to the Local Government and Metropolitan Boards, but hitherto with only partial success. Dr. Rogers's suggestion to these departments was, to treat the metropolis as a whole, and to establish, under the authority of the Metropolitan Board, mortuaries, public urinals, and *places de convenance* for ladies, in all suitable localities. His very sensible and rational scheme for mitigating the social and physical evils arising from the absence of such provisions fell to the ground, owing to the indifference respectively of the Local Government Board and of the Metropolitan Board of Works, both of which bodies declined to take any

action in the matter. Possibly this, and some other social matters of pressing public interest, will be carried out when a proper municipal government is established in the metropolis.

DEATHS UNDER CHLOROFORM.

AN inquest was held by Mr. Langham at St. Bartholomew's Hospital, on the 2nd inst., on the body of James Butterworth, aged 32, who died in that institution while chloroform was being administered to him in order to permit of the reduction of a complicated fracture of the lower jaw. The deceased had received the injuries during a scuffle in which he was involved while at Barnet Fair. Mr. Ernest Clarke, house-surgeon, saw Butterworth on his admission, and found that he was suffering from multiple fracture of the jaw; a portion of the jaw was loose. To put the jaw right, an operation was necessary, and Mr. Gill administered chloroform; but the patient died before he could be operated upon. A *post mortem* examination was held, and it was found that deceased's jaw was broken in two places. The trachea contained a considerable quantity of blood; the larynx was much bruised, and in parts swollen. There was a large amount of extravasation into the muscles at the root of the tongue. Death appears to have been due to a gradual asphyxia, due primarily to the injuries and extravasations above described. The jury returned a verdict of "Manslaughter" against the man who was accused of having inflicted the injuries.—Mr. Collier, deputy-coroner for East Middlesex, held an inquest last week on the body of Mr. Francis Mellish de Putron, aged 58, builder, of Silvertown, who died under the influence of chloroform on September 4th. Mr. E. V. F. de Putron stated that the deceased was his father, and he was suffering from cancer on the tongue. He attended the London Hospital for the purpose of undergoing an operation. The father of the deceased died from cancer in the jaw. Mr. Basil W. Walker, house-surgeon at the London Hospital, stated that the deceased was admitted on August 16th suffering from cancer of the tongue, and it was decided that, with the consent of the deceased, an operation should be performed. On September 4th, chloroform was administered to him by witness, and it was not considered necessary to examine his heart. While the deceased was brought under the influence of the chloroform he struggled, which was usual with persons when it was administered. The pulse then stopped, the deceased became livid in the face, and he commenced gasping. Restoration was tried, but without effect, and the operation was not commenced. Death ensued between five and ten minutes from the time the chloroform was first administered. The cause of death was failure of the heart's action, and this opinion was confirmed by a *post mortem* examination which was afterwards held on the body. It was decided, after a consultation, that in order to save the life of the deceased, it was necessary to perform the operation. The jury then returned a verdict "That deceased died from failure of the heart's action while being brought under the influence of chloroform previously to performing an operation, and that death was caused by misadventure."

TYPHOID FEVER IN BANGOR.

THE prevalence of typhoid fever at Bangor during the last two months has excited much public attention, and has formed the subject of an investigation by order of the Local Government Board. The following are some interesting facts connected with its etiology. The presence of the disease in Bangor first came under the notice of Mr. Rees, the medical officer of health, early in July. On investigation, he found that, in addition to the cases in Bangor, the disease had appeared in Llandegai, an adjacent village, which received its water-supply from the same source as Bangor. On further investigation, it appeared that a case had occurred in the middle of June in the village of Bethesda, in a house the drainage of which was discharged into a brook which runs into the river which supplies Bangor with water, about four hundred yards above the intake. It was thus a natural conclusion that the outbreak was to be attributed to contaminated water; and Mr.

Rees accordingly recommended the sanitary authority to make a trench to carry the brook into the river below the source of the water-supply; also to cleanse the filter, and put in it new sand and gravel. The Committee, however, preferred to attribute the disease to sewer-gas, driven back by a strong east wind; and ordered vigorous flushing of the sewers, and disinfection by solution of sulphate of iron. Disinfectants were also supplied in abundance to all the houses known to be infected. Notwithstanding these measures, the fever continued to spread in Bangor and neighbouring villages, occurring in houses which received their water-supply from the Bangor main, and in the villages having no connection with the Bangor sewerage. About the end of July, an inquiry was made by Dr. Barry, one of the inspectors of the Local Government Board. The result of his investigations, we are informed, has been a confirmation of the opinion of Mr. Rees, that the water-supply was at fault. Towards the end of August, the Sanitary Committee directed the intercepting trench recommended by Mr. Rees to be made; and also, at his recommendation, directed the water to be sent into the mains unfiltered, there being reason to believe that the filter-beds were still sources of pollution.

THE FULHAM SMALL-POX HOSPITAL.

It has been the fortune, or misfortune, of Mr. W. H. Power to have been concerned, on behalf of the Medical Department of the Local Government Board, in some of the most puzzling, and therefore interesting, etiological inquiries that have been undertaken by that department. Without in the least degree undervaluing Mr. Power's exceptional power of analysis of detail, it is but fair to point out that his previously reported discoveries have not been altogether borne out by subsequent investigations; so that a doubt is engendered whether his evident striving to arrive at a definite and positive origin for every one of the epidemics he has studied may not have somewhat misled him in the very startling and unexpected result which he now announces. This is no less than that the Fulham Hospital, with all its advantages of site and construction, and with the many excellences of its administration, has, by dissemination of small-pox material through the atmosphere, given rise to an exceptional prevalence of small-pox in its neighbourhood. The report in which this remarkable theory is promulgated, has been too short a time in our hands to warrant any detailed criticism of the facts and deductions from which Mr. Power has arrived at so unlooked-for a result. This must be left for a later period; but, meanwhile, it will be interesting to give the substance of Mr. Power's very elaborate, and (it must be added) interesting report. He states that there has been in each epidemic period an excessive incidence of small-pox in houses in the neighbourhood of the hospital, as compared with more distant houses in Chelsea, Fulham, and Kensington. The percentage of houses invaded in the neighbourhood of the hospital has become gradually smaller as the distance of the houses from the hospitals has increased. This gradation has been very exact and very constant. Houses upon the chief lines of human intercourse with the hospital have not suffered more than houses going in other directions from the hospital. In point of time there has been a very marked relation between the varying use of the hospital, and the manifestations of excessive small-pox in the neighbourhood. This relation has not shown itself while the use of the hospital has been for convalescents only. The appearance of excessive small-pox in houses around the hospital has never been delayed until the hospital has become full or nearly full. It has been always most remarkable at the time when admissions to the hospital were beginning to increase rapidly. All Mr. Power's inquiries are reputed as having failed to yield any adequate explanation of the habitual peculiarity of small-pox incidence about the hospital. He falls back, therefore, on the conclusion that the machinery of the hospital administration, with inclusion of defects in that machinery, does not account for this peculiarity, and that therefore "there must have been some condition or conditions operating to produce the ob-

served distribution of small-pox around the hospital that have pertained to the hospital as such, and that have been in excess of the conditions for small-pox extension as usually recognised". Mr. Power concludes with consideration of the various atmospheric conditions of the time when infection must, whatever its source, have been conveyed (according to his theory) to the houses around the hospital, and he records certain meteorological peculiarities of that period. These, however, and his further theory that in a hospital small-pox may acquire an exalted faculty of reproducing its kind through the bringing together of many differing, while all actively endowed, varieties of the disease, are too speculative to be accepted without very careful consideration and study of similar conditions in other places than Fulham.

HOSPITALS FOR INFECTIOUS DISEASES.

We have often commented upon the apparent waste of the time of the Government medical inspectors in inquiring into minor outbreaks of disease, which a reasonably competent medical officer of health might be expected to fathom without serious difficulty. The proper function of the staff under the guidance of Dr. Buchanan is evidently that of assisting local authorities and health-officers in the performance of their duties by personal intercourse, and codification for general use of knowledge scattered in isolated places all over the country. No better example of the true line of usefulness of the medical department of the Local Government Board could be given than the able and exhaustive monograph by Dr. Ballard on Effluvium Nuisances and their Remedy, which appeared some time ago in the annual Blue-books of Dr. Seaton; or the equally exhaustive and careful report by Dr. Thorne Thorne on the Use and Influence of Hospitals for Infectious Disease, published this week as a Parliamentary Paper. The need for some such codification of our knowledge on this particular question has for several years been a very urgent one. Hardly a month passes but we receive some appeal for information as to the proper site, arrangement, warming, ventilation, or cost of an infectious hospital; and it has not heretofore been possible to refer inquirers to any satisfactory work giving such particulars. At last, this reproach has been removed from us, for Dr. Thorne's report appears, so far as we have been able to judge from a necessarily cursory study of it, to be a complete compendium of information on the subject. In the course of the inquiry, of which Dr. Thorne now publishes the outcome, about seventy hospitals in use by urban, by rural, and by port sanitary authorities, were visited; and a separate report on each, accompanied, in most cases, by plans and drawings, is given in the volume. The hospitals seem to have been of every variety of locality, size, and construction; some thoughtfully devised on a scale adapted to the needs of their districts, and reckoned by those who had provided them as among the most valuable sanitary defences of their districts; others, ill-placed, on an altogether insufficient scale or badly planned, doing duty in default of better, though of flimsy material and hurried construction. Dr. Thorne has prefaced his reports upon the several hospitals by a comprehensive report on the various subjects requiring attention in the provision of infectious hospitals generally; on questions of site and construction, of cost, of warming and ventilation, of classification and administration. He distinguishes between efficient and inefficient hospitals, and considers the reasons of success or failure in the attainment of results. He gives experience about drainage and water-supply; about ambulances, disinfecting chambers, and mortuaries. The whole forms a mass of instructive matter for the assistance of sanitary authorities and their advisers, and cannot fail to facilitate their operations for securing to their districts the very great advantage of public means of isolation.

HEALTH OF THE PRIMATE.

THE past week has proved that the vitality of the Archbishop is not exhausted. He continues to live, though with considerable emaciation on the 14th as compared with the 1st of the month. An aphthous state of mouth and throat has appeared and departed. There

has been no return of cerebral oppression, and on two or three occasions the Archbishop has transacted some absolutely necessary business. He continues to take his food without distaste, preferring milk to any other, and takes about two quarts daily. He also takes a small quantity of soup and some fruit and jelly, with an egg beaten up in a cup of tea, occasionally. The tongue is now morbidly clean, the mucous membrane being red, with tender patches at the posterior edges. The aphthae have disappeared altogether from the velum of the palate, and swallowing, which was painful for a day or two, is now quite easy. The thrombi in the legs have been absorbed. There are pityriasis-like patches upon the legs, which are occasionally irritable. The pulse has continued between 90 and 100, a beat being lost occasionally. There is no loss of power since last report. The insufficiency of the cardiac valves, which was so manifest before the feverish stage commenced, is not apparent, probably because the recumbent state is never left; as every natural relief is obtained in that posture. The expectoration has varied; it is occasionally rusty, but two or three days have elapsed without any, then it has appeared again. The cough is now and then spasmodic, and then only the face shows lividity. There is, now and then, slight bleeding from the nose. The left lung continues pervious to air, without any bronchophony; but the right, though pervious, is slightly duller in percussion; small crepitation continues, and bronchophony is manifest in the lower fourth. The number of the respirations have gradually diminished from 40 to 30 per minute. They were very markedly cerebral during the drowsy condition—inspirations taking place rapidly, then gradually becoming slow, then again increasing in frequency. This condition departed soon after the drowsy state disappeared. The kidneys continue to act freely. The urine is of specific gravity 1013. The quantity of phosphates is again normal, and only a trace of albumen remains; but there is scarcely any colour, and the urine is voided almost every hour. The temperature has continued to be between half a degree and one degree above normal. The rapid pulse, and the denuded state of the mucous membrane, are the most unsatisfactory points in the case. Sleep is not long continued, on account of the renal irritation, and the muscular system is very feeble; but there are no bed-sores, and the Archbishop's mind is perfectly clear on every point.

IRREGULAR CERTIFICATES OF DEATH.

AT the Thames Police Court, on September 2nd, before Mr. Lushington, William Henry Viner, of 123, St. George's Street, E., was charged, at the instance of the Medical Alliance Association, with the wilful forgery, on August 21st, of a certificate concerning the death of a child named Annie Niendorff. Mr. C. J. C. Pridham, solicitor to the Association, appeared for the prosecution; and Mr. Besley, barrister, for the defendant. Mr. Pridham, in opening the case, stated that it was the gravest charge of the kind in which he had ever been instructed to prosecute. It appeared that the child Niendorff fell ill about August 17th or 18th, and was taken by her mother to a medical hall and dispensary at 123, St. George's Street, which was kept by the defendant in the name of a registered practitioner named Berdoe. The child was seen there on two occasions by the defendant, who represented himself to the mother as being properly qualified, and whom the mother believed to be Mr. Berdoe, as that name appeared over the door. On the 21st August the child died, and the mother applied at the dispensary for a certificate of its death. The defendant thereupon, in the mother's presence, wrote a certificate in which he stated that he had attended the child, certifying the cause of death as pneumonia and convulsions, and signed the name of "Edward Berdoe, M.R.C.S., L.S.A., 123, St. George's Street, East," and gave the same to the child's mother. Mr. Berdoe stated that he had never seen or attended the child, nor certified the cause of death. The signature to the certificate was a forgery. In cross-examination the witness stated that he had sold the business of a chemist and druggist at one time carried on by him with his medical practice at 123, St. George's Street, to the defendant in October 1880. Since that time, his connection with the place and the defendant had

entirely ceased. He had desired the defendant, on several occasions, to remove his name, which he promised to do; and he was unaware, until informed of the fact by the solicitor for the prosecution, that his name still remained up there. The defendant had made overtures to him to attend there and see the patients, which he declined. Mr. Lushington said the defendant had committed a most serious offence. It had been suggested by the defendant's counsel that he had no power to deal with the summons. He felt some difficulty in doing so, because he was in some doubt whether he ought not to commit the defendant for trial. However, as he had not been requested to do so by the prosecution, he should impose the severest penalty he had power to inflict under the Act. He ordered the defendant to pay a fine of £10, and £5 5s. costs, or to be imprisoned for three months in default. Mr. Berdoo applied to the magistrate to order the defendant to erase his name from the premises. Mr. Lushington regretted that he had not the power to do so, and advised Mr. Berdoo to consult a solicitor. Another case of irregularity in the signing of certificates was that last week, at the Worship Street Police-court, before Mr. Bushby. Mr. Upfield, assistant to Mr. W. H. Dry of Kingsland Road, was summoned by the Medical Alliance Association for having, on the 7th of August, wilfully given a certificate of the cause of the death of Henry James Ault, purporting to be given by Mr. W. H. Dry, knowing the same to be false. Mr. Dry was also summoned by the same Association for having, on the same date, wilfully made a false declaration concerning the death of Henry James Ault. Mr. Pridham, who prosecuted, said that the defendant Upfield resided at a dispensary, 235, Kingsland Road, where he carried on the business for Mr. Dry, who was a duly qualified medical practitioner, and whose name was used in connection with it. Mrs. Ault, the mother of the deceased child, went to this dispensary, and Upfield attended the child to within a short time of its death, and to him they paid the fees which would be paid to a duly qualified medical practitioner. The child died; and Upfield, on being asked for a certificate, gave the child's father a certificate, beginning "I hereby certify that I attended Henry James Ault," stating that the child died of scarlatina and diarrhoea, and signed "W. H. Dry, M.R.C.S., L.S.A." Mr. Dry had never attended the child at all. Mr. Dry said Upfield had been his apprentice, and was now his assistant. He would honestly admit that he never saw the child, but he knew that it had been properly treated, and Upfield had consulted with him as to its treatment. He did sign the certificate, but the case had been taken out by the Medical Alliance Association simply because he was not a member. Mr. Pridham said he had prosecuted an assistant of Mr. Dry some years ago for calling himself "Dr. Dry." The offence was a serious one, for it led to falsification of the registers, and it induced patients to pay fees for advice to unqualified persons in the belief that they were duly qualified practitioners. Mr. Bushby said it did not appear that Upfield had represented himself to be a qualified practitioner; but at the same time, the Act had been deliberately broken by both defendants, and he should impose the full penalty of £10 in each case.

SCOTLAND.

TYPHUS fever still continues to exist at Greenock. In the month of July last, seven cases of that disease were reported to the health-officer. Two of the cases came from Port Glasgow, but most of the others being traceable to one that had been overlooked or not suspected. Four cases of typhus were removed during the month to the Infirmary.

HEALTH OF EDINBURGH.

DURING last week, 99 cases of zymotic diseases were intimated to the Medical Officer of Health, of which 35 were in the New Town, 57 in the Old Town, and 7 in the southern suburbs; 80 were cases of scarlet fever, and 13 of fever, 1 of diphtheria, and 5 of measles. During the week, there was only one death from zymotic disease, a case of diphtheria, which occurred in the Old Town.

THE GLASGOW DISTRICT BOARD OF LUNACY.

At the meeting of this Board on the 6th instant, the chief business under consideration was the delay that is taking place in fixing the site for the new asylum so urgently needed for the pauper lunatics of the county. There is now no small difficulty in providing for this class of cases; and, unless something is done in the way of increased accommodation for them, matters will drift into rather a serious position. It seems that the Board has now narrowed its choice of ground for a new asylum to three sites, which have yet to be visited and determined on; and, as soon as that has been done, progress can be made at once with the erection of the building.

THE FEVER EPIDEMIC AT CUPAR.

It is satisfactory to learn that the epidemic of scarlet fever at Cupar Fife is dying out, few new cases being reported, and these of a milder type. Regarding a proposal that had been made in reference to closing the public schools, the Medical Officer of Health, Dr. Whitelaw, stated in his report, that since the schools re-opened after the vacation, eighteen new cases had occurred, but of these only five had occurred in children attending school. He had made a calculation that of the children at school, 0.7 per cent. had taken fever, while of those outside, 1.2 per cent. had taken it. In the face of such a statement of fact, it was not deemed necessary to close the schools at present.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending September 2nd, it appears that the death-rate in the eight principal towns was 21.1 per 1000 of estimated population. This rate is 2.2 above that for the corresponding week of last year, and 1.1 above that for the previous week of the present year. The lowest mortality was recorded in Paisley, viz., 16.5 per 1000; and the highest in Greenock, viz., 25.2 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 5.1 per 1000, or 0.7 below the rate for the previous week. There was a considerable increase in the number of deaths from whooping-cough in Glasgow. Acute diseases of the chest caused 80 deaths, or 20 more than the number registered during the previous week. The mean temperature was 55.3°, being 0.3° below that of the week immediately preceding, but 4.0° above that of the corresponding week of last year.

CONVEYANCE OF DISEASE BY EMIGRANTS.

WE are glad to see that an inquiry is at present on foot to consider this very important matter. From time to time, instances have been brought forward of the great dangers to which seaport towns are subjected by the passage through them of large bodies of emigrants, some of whom may be suffering from infectious diseases. Dr. Russell, of Glasgow, drew special attention to the matter in several of his reports. During the past week, Dr. Littlejohn and the other members of the committee visited Glasgow, where they inspected the emigrant boarding-houses, heard the statements of Dr. Russell as to actual cases of disease among the emigrants and the dangers to the community, and received suggestions as to how to overcome the difficulty of properly regulating such houses. The committee also had interviews with the shipping companies and the local representatives of the Board of Trade. It is satisfactory to find that the inquiry is to embrace all the emigration ports of the kingdom.

THE CHAIR OF SURGERY IN ABERDEEN UNIVERSITY.

SEVERAL candidates have intimated their intention of applying for this Chair. Dr. Alexander Ogston of Aberdeen has addressed an application to the Home Secretary, with whom the appointment rests. Mr. James Cantlie, M.A. and M.B., is also a candidate. Mr. Cantlie is at present attached to Charing Cross Hospital, where he has acted with signal success as a teacher of anatomy and operative surgery for a considerable time. Both Dr. Ogston and Dr. Cantlie are graduates of the

University of Aberdeen. The names of several other gentlemen—Dr. F. M. Moir, Dr. Ogilvie Hill, and Dr. Garden—have been mentioned as probable candidates, but we are unable to state whether any or all of them intend to apply. The Aberdeen School is now so large and flourishing, that it ought to be a *sine qua non* in making the appointment that the holder of the Chair should devote himself to surgery. The Chair is one of the most important in the Medical Faculty, and we trust that the appointment will be made on the merits of the candidates, apart from all other considerations. Few subjects, in any medical school, have been so ably and so successfully taught as surgery has been in Aberdeen by Dr. Pirrie; and we trust that the Crown will select someone worthy to succeed him, and who will uphold the high reputation of the Aberdeen School of Surgery. The position is so good and so lucrative, that we are astonished that more candidates have not announced their intention to apply for the Chair. The fees are very considerable, and the teaching appliances are not excelled by those of any university in the country.

THE HEALTH OF GLASGOW.

FROM the report of the medical officer of health for the fortnight ending September 2nd, we learn that there were 417 deaths registered, representing a death-rate of 21 per 1,000 living. The number of deaths of persons below one year was 132, and of persons aged 60 years and upwards, 53. There were 111 deaths from pulmonary diseases, giving a death-rate of 6 per 1,000 living, and constituting 27 per cent. of the total deaths. The eight deaths from fever were all due to enteric fever. From the infectious diseases of children there were 33 deaths, viz., 23 from whooping-cough, 8 from scarlet fever, and 2 from measles. The fortnight has, on the whole, been marked by a slight decrease in the fatality of all the zymotic diseases, except whooping-cough. Even diarrhoea has not increased. The general health continues good, as appears from the still further decline in the number of miscellaneous deaths, which have steadily fallen from 191 in the fortnight ending August 5th to 148 in the present fortnight. Still, from this conclusion young children must be excluded. Of the 39 deaths directly due to diarrhoeal disease, 32 were children, whose average age was only 10 months. The number of cases of fever registered was 59, namely, 45 from enteric fever, 11 typhus, and 3 undefined. There were also 72 cases of scarlet fever, 27 of measles, 26 of whooping-cough, and 18 of diphtheria registered; of which 37 were removed to hospital, and the remainder supervised at home.

IRELAND.

CORK DISTRICT LUNATIC ASYLUM.

ANOTHER assistant medical officer has been applied for by the governors, on the grounds that there has been an increase of 300 patients and 20 attendants since 1871, when an assistant medical superintendent was appointed. Up to that period, an apothecary assisted the resident medical superintendent; but on the appointment of the assistant medical officer, the office of apothecary was abolished. Thus at present, when there is an average of over 900 patients and 100 staff in the asylum, the medical staff is practically the same as when 600 patients and 80 staff were in the institution.

CORK TOWN COUNCIL.

THE half-yearly presentments were considered last week by the Corporation of Cork. There was a sum of £2,695 10s. 7d. from the lunatic asylum, being the amount chargeable to the county of the city of Cork for support of lunatics from the city, which was granted. Another application was for £700 for the Fever Hospital, but the Law and Finance Committee recommended that a sum of £600 should be given, which was agreed to; an amendment that only £500 should be allowed being lost by one vote. Notice of motion has been given that, in future,

all presentments for the Cork Fever Hospital be only passed for half the number of dispensary patients treated in the hospital.

CENSUS REPORTS: PROVINCE OF LEINSTER.

THE population by the last census was 1,278,989 as compared with 1,339,451 in 1871, and 1,973,731 in 1841. During the last decade, there has been a decrease of 4.5 per cent. The returns exhibit an increase of pauperism in 1881, the numbers being 41,019, or 1 in every 31 of the population—17,512 in workhouses, and 23,507 on out-door relief; while, in 1871, the numbers were 27,932, or 15,760 in workhouses, and 12,712 receiving out-door relief.

QUEEN'S COLLEGE, CORK.

FROM the annual report we learn that at the entrance examination in October, and the two supplementary examinations, 159 candidates presented themselves, of whom 128 passed, the total number of new students being 154 as against 120 in the session preceding. The total number of students on the books of the College for the session was 402, of whom 374 were matriculated, and 28 non-matriculated. In the previous session, the total number was 327, of whom 308 were matriculated. The College, as the President points out, had thus as many students as several of the smaller German universities, and last session the number even exceeded one or two well-known ones, although it has no Faculty of Theology. The accommodation provided in the original College buildings has proved insufficient in every department, but more especially in the Chemical Laboratory. It was constructed for about thirty students, while last session the number in the Practical Chemistry Class was eighty-nine. Attention was drawn to this matter in a previous report, and to the inconvenience and injurious effect it has on the teaching of so important a branch of instruction as chemistry. Since then, the class has considerably increased, and the inconvenience become greater. Should a new laboratory be erected, the space now occupied by the present one would enable the College to provide an Engineering Model Room and Technical Museum, which is much wanted, and to enlarge the Physical Laboratory. Large additions have been made to the Anatomical and Pathological Museum, which has been well arranged by the Curator, Dr. Pearson. Some valuable additions for teaching purposes have also been made to the Natural History Museum, but it would require the outlay of a considerable sum of money to make it what it should be.

VACCINATION.—Mr. Thomas Richards, M.B., of Birmingham, has received a government grant for successful vaccination in the Edgbaston District of the King's Norton Union.

A NEW ANTIPYRETIC.—Macalline, an alkaloid obtained from the bark of the macallo, a tree which grows in Yucatan, is recommended (*New York Medical Review*) as superior to quinine in the treatment of intermittent and remittent fevers.

A FAMILY near Stratford-on-Avon have given £6,000 (anonymously at present), and promised a site of four acres, for the erection of a new building for the Stratford-on-Avon Infirmary.

BEQUESTS.—Dr. McMunn of Sligo has bequeathed £200 to the Stewart Institution for Imbeciles, £200 to the Hospital for Incurables (Donnybrook), and £200 to the Royal Medical Benevolent Fund Society of Ireland.

CENSUS REPORTS: CO. MAYO.—The population in 1871 was 244,708, and in 1881 it was 245,212, or a trifling increase of 444 during the past decade. The recipients of poor-law relief were, however, increased in comparison with 1871, the number amounting to 1,528 in 1871, and to 3,601 in 1881.

THE Marquis of Conyngham, lately deceased, has bequeathed to his "friend Mr. Edgecombe Venning, F.R.C.S., of Sloane Street", a legacy of £200, and a like sum to his resident medical attendant, Mr. Robert H. Cox.

DR. H. SLADE, retired fleet-surgeon, R.N., lately committed suicide at Bodmin, by severing some of the arteries in his right thigh.

THE EGYPTIAN EXPEDITION.

THE SANITARY CONDITION OF ALEXANDRIA.

[FROM OUR OWN CORRESPONDENT.]

THE population of Alexandria goes on increasing by immigration from Europe and the Levant, notwithstanding the proclamation of the Khedive's Ministers to prohibit it. The position of affairs is very anomalous, and its absurdity is appreciable only by those living in and knowing Egypt. The English military authorities are in possession, but the Khedive and his Ministers are allowed to govern. This may be a political necessity, which I cannot discuss; but, looked at from its medical aspect, it amounts to this, that the proclamations of the Khedive and his ministers are disregarded, the various Consular authorities find excuses for obtaining permission for their subjects to land, and within the last two days nearly a thousand fresh arrivals of Europeans have taken place; this occurs in the face of a deficient water-supply for those already here, with the probability of an outbreak of disease later on. Only the English Government, through the military authorities, can prevent such a dangerous increase of the population, until Alexandria is in a state to receive them; but the military authorities do not seem to be authorised to take any steps in the matter.

The sanitary care of the town is now also entrusted to the local sanitary board, which is without funds or means to keep even the streets clean. The Minister of the Interior has named a mixed commission of medical men, native and European, to have a consultative voice, and give their opinion in sanitary matters; but they have no executive power in their hands, and there will be a deal of talk and nothing done. I shall be astonished if this day two months I am able, in writing to you, to report that any serious sanitary work has been executed. It is a matter of general surprise that, after all the horrors and destruction, and general disorganisation, of Alexandria, that the British Government should not have kept the administration of the town in hand, and undertaken the preservation of the public health as well as public safety. The water-supply from the Mahmoudieh canal continues about the same. By supplying it to the town only once in three days, the Commissioners of "water-supply" have taught the population to economise; and the supply in the canal is, in consequence, decreasing very slowly. The health of the civil population continues so good, that the public declare all medical theories as to production of fever, diphtheria, diarrhoea, etc., from bad water, completely upset. But, though the supply is not abundant, the quality of the water, when fresh, is not bad, though, after being stored for a day or two, it is not very palatable nor refreshing. The means of storing it are wanting—people having to keep their supply in old barrels or in their baths. The difficulties in the way of obtaining water from the cisterns are so great, that few have yet availed themselves of them. There are at present stored in cisterns in Alexandria 18,000 tons of Nile water. There are, in addition, 200 wells, known throughout the town, supposed to be capable of giving 1,000 tons a day—but many of these may soon give out. The consumption at present is 1,000 tons per day, but this will soon vastly increase with such a rapidly increasing population.

The total mortality in Alexandria (civil population) for the last ten days, from August 24th to September 2nd inclusive, is 44—of which 34 are natives and 10 Europeans. The causes of death given are—typhoid fever 4, gastric fever 8, dysentery 4, diarrhoea 9, abscess of liver 1. The others are ascribed to various diseases—convulsions of children, wounds, accidents, etc.

The amount of diarrhoea and dysentery among the troops here has increased; but, with the greatest care, a certain increase was to be looked for in the autumn months, as I mentioned in a previous letter.

The reported cholera on board the ship *Despatch* from Bombay, was greatly exaggerated, and produced a slight panic here, and raised a hue and cry for quarantine. The Maritime and Quarantine Sanitary Board at once imposed quarantine, not only against arrivals from Bombay, but from Aden also; against the latter port, for no better reason than one can see, than that the first telegram announcing the fact came from Aden. I understand it is the intention of several of the European powers to revise the whole question of quarantine in the Red Sea, which, it is to be hoped, will be followed by important changes in the constitution and working of the International Maritime and Quarantine Sanitary Board of Egypt. Of the working of this powerful body, for it is really a power, I shall give you some details another time; in the meantime, I only say that its reform is urgently required.

The civil population of Alexandria at present amounts to from thirty to forty thousand, viz., twenty thousand Egyptians, and from ten to

fifteen thousand Europeans, roughly estimated, and the latter daily increasing.

The total number of deaths registered for the ten days, from the 24th August to 2nd September last year, was 273, of which 230 were natives and 43 Europeans in a population roughly estimated at two hundred and fifty thousand. The causes of death during that period were given as, gastric fever, 14; typhoid fever, 5; gastric catarrh, gastro-enteritis, 22; diarrhoea, 35; dysentery, 17; abscess of liver, 2; the others from various causes, unconnected with season or climate.

Alexandria, September 3rd, 1882.

A TELEGRAM from Alexandria, under date of September 11th, states that the number of deaths among the civil population of Alexandria, which is estimated at 40,000, is from four to five daily, about half of them being caused by fever, diarrhoea, and dysentery. This time last year the usual death-rate was about 30, in a population roughly estimated at 250,000. The quarantine imposed last week against Bombay at Aden was removed by a strong representation from the British delegates, Messrs. Melville and Mackie, the latter acting also for Sweden and Norway; but the opposition from the delegates of other powers was very great. It will be difficult in the face of such opposition to keep the Indian ports open if there should be any increase of mortality from cholera there. Shipmasters are warned to be careful to have all ships' papers in order, and to see to the sanitary condition of their vessels, especially those carrying pilgrims, in order to prevent, as far as possible, cases occurring on board, which would have greater effect with the sanitary board here than an increased mortality in India. The hospital arrangements are said to be excellent. Brigade-Surgeon Barnett has been appointed principal medical officer at Ismailia, *vice* Surgeon-General Hanbury, who has left for the front. Six nurses arrived on Friday from England, under the charge of Sister Caulfield. The wounded are progressing favourably, and all are in excellent spirits. The Egyptian wounded are being treated at the native hospital. The total number of British sick and wounded now at Ismailia are 240 men in hospital on shore, and 192 men and nine officers sick and convalescent on board the *Carthage*. Great praise is due to the Army Hospital Corps for the manner in which the work is carried out, officers and men using untiring energy and extreme care in removing the wounded.

MEDICAL REPORTS FROM ISMAILIA.

[FROM OUR OWN CORRESPONDENT.]

August 28th, 1882.

THE field-hospitals 6, 7, and 8 landed here from the hospital-ship *Carthage* on the morning of the 27th. The stores have been in process of disembarkation, and are still being brought up to the Khedive's palace, which has been occupied as a hospital. There is, as might be expected, a great apparent confusion in the working of the hospital; but the main design—viz., the care of the sick and wounded—is well and thoroughly accomplished. The work performed by the Army Hospital Corps—officers and men—has been most arduous and trying during the last four days; and, according to all evidence obtainable, has been done most successfully and creditably. Sir Garnet Wolseley has been pleased to express his entire satisfaction with the prompt and careful treatment received by the wounded in the recent actions. They were at once transferred from the field to the base hospital. On the 26th, one case of amputation was performed by Surgeon-Major Beath, in charge of 3rd field-hospital. The patient, a Lifeguardsman, had his left leg shattered by a shell. There was some difficulty in providing covering for the bone below the knee; but, as the skin of the calf of the leg was uninjured, the necessary covering was got by a long posterior flap. The man was in a very weak and depressed state, both immediately after the operation and on the following morning; but he has now rallied considerably, and the wound is apparently healing. The weather is not very favourable for such cases, being very hot during the day from 9 A.M. till 4 P.M., and the early part of the night is close and hot. Part of No. 3 field-hospital proceeds to the front at once, and half of No. 6 field-hospital will do so as soon as possible after the stores are disembarked from the *Carthage*. Some prisoners were brought here yesterday, and are employed as scavengers, under the orders of the sanitary officer. As they are fed, and paid one franc daily, they are probably in better circumstances than they ever were before.

A number of sick and wounded men have been transferred from the hospital here to the hospital-ships *Carthage* and *Euphrates*. Some of these go to Cyprus, and others to England. No wounded are sent to

Cyprus. The cases sent off are of men not likely to be fit for duty in a reasonable time—three weeks or a month.

The sanitary state of this place is carefully looked after by Surgeon-General Marston. The great difficulty appears to be a good supply of water. The water of the fresh water canal was fairly good, but the canal, being used now for traffic, in conveyance of troops, etc., is likely to cause unpleasant, if not dangerous, contamination of the water.

The men suffer from exposure to the sun, and even more from indulgence in fruit of various kinds—water-melons, etc.

[FROM ANOTHER CORRESPONDENT.]

Ismailia, September 3rd, 1882.

I was agreeably surprised on arriving here to find the climate not so bad as had been painted at home. Of course it is hot during the day, often reaching 100° in the shade; and in bell-tents, double though they are, the temperature is much above this. Still it is not a trying heat—not moist and muggy, such as is felt on the West Coast of Africa. It is a dry, bracing atmosphere, and only really trying from 1 to 4 P.M. daily. At 5, a deliciously cool breeze invariably springs up, and lasts throughout the night. And, above all, the nights are cool, in fact chilly about 3 A.M. This acts as a grand pick-me-up, enabling our men to work with a will throughout the day. I was talking to a Frenchman yesterday, and asking when the rainy season commenced. "There is no rain in Egypt," he said, "just half an hour, and it is all over." And from the scorched nature of the ground, I am inclined to believe him.

The soil is sandy, impregnated with earth so finely divided, that an impalpable dust arises from it on the slightest wind blowing over it. This sand extends in some cases to a depth of two or three feet, and makes locomotion slow and wearying. It has its advantage, however, for it acts as a sanitary agent, absorbing readily the human excrement that is deposited by the natives everywhere and anywhere, without an attempt at decency or secrecy. In fact, this sandy soil desert is our great saviour from enteric fever and dysentery. It is another application of the "dry earth" system; consequently, little or no effluvia arises from the ground. The soil is extremely prolific, "only requiring a bucket of water to make your walking-stick grow," as a naval officer remarked to me a day or two ago.

The water-supply causes much anxiety to the medical authorities here. It is highly charged with decomposing animal and vegetable matter, and so "pea-soupy" in appearance as to make one almost fear to drink it. An ordinary pocket-filter is of little use, it does not even clear it, and certainly has little effect on the dissolved impurities. So, far, however, there has been no dearth of water. The Sweet (?) Water Canal still contains a good supply; and if the general instructions as to boiling and filtering be carried out, it should not cause much sickness among the men. Diarrhoea, nevertheless, is very rife, and it would require little more to produce acute dysentery. As soon as the source of the Sweet Water Canal on the Nile is reached, we ought to have a better state of things, and this should take place within a very few weeks.

The glare from the sand is very trying at first, but the men soon become accustomed to it, and it is the exception to see a man wearing his goggles. Very few cases of ophthalmia have occurred, and these have been caused more by the sand than by the heat and glare.

The inhabitants of Ismailia, who fled on our approach and seizure of the town, are now returning, and nearly every shop is again open. Fruit is plentiful and cheap, and the bread made by the civilians excellent in quality. I wish the same could be said of the bread served out to the troops. Nearly all the commodities usually obtainable at a grocer's shop at home, and a draper's or an ironmonger's shop, can be obtained here—at a high price, of course—but not out of proportion to the advantage of being able to procure these things at the seat of war.

The Khedive's palace here, a lofty two-storeyed building, has been secured as a base hospital, and admirably suited it is for the work. The rooms are lofty and immense, and the ventilation perfect: in fact, had it been built for the purpose, it could not have been better. Here the principal medical officer has his offices; but the building and working of the establishment are under the immediate superintendence of Brigade-Surgeon Ventle. He took over charge last Sunday, and, in two days, from chaos reduced it to a workable system; and now everything goes as smoothly as possible, although, of course, there is a great deal of hard work, and no one working harder, night and day, than the medical staff. No overworking is allowed to exist, and plenty of rest and cheerful space is allotted to each man. The air in the wards is delightfully cool, and as one walks through them the only odour noticeable is that of carbolic acid. Several severe

cases are here, and some few amputations have been done, one at the shoulder-joint doing well. A sad accident occurred to a seaman on board one of the transports. By the accidental fall of a box of ammunition, he sustained a compound fracture of the left thigh, about the middle third. As the circulation was maintained in the parts below the injury, it was decided to endeavour to save the limb, and so far he is doing well. Conservative surgery seems to be generally adopted here. It will be interesting to watch the statistics of this subject. It is, doubtless, advisable to try to save a limb, but it is questionable if a man has so many chances in favour of recovery. If an operation be eventually necessary, the system is less able to bear the shock, loss, and drain than it would have been in the primary instance. Judgment, of course, is the great thing, and he does best who, weighing all cases and probabilities, is able to give the patient the advantage; if coolness and deliberation tell, the medical officer in charge now will certainly not fail of success. It seems to me a pity that some of the Netley Sisters are not sent out here, to do duty at the base. Four of the "National Aid" Sisters are doing duty on board the hospital-ship *Carthage*, and others, I believe, are to be sent to Gozo and Cyprus; but this is the place where their services would be invaluable. Within a few hours of the front, the wounded come down almost as soon as they can with safety be moved, and it is on arrival here that the sisters could be advantageously employed. Of course, they are equally useful on board-ship, and at convalescent hospitals, but the first few days after the receipt of a wound are the most trying, and it is just those days that are spent at the Base Hospital, Ismailia; and I venture to say that a sister's attention during those days would be more gratefully and thankfully appreciated, than double the amount of work done by them when the patient has become resigned to his suffering, and reconciled to his lot.

At present, the system is to make this a resting-place for the more serious cases. As soon as a man is fit to be moved, he is sent on board ship for transport to Gozo or Cyprus. All chronic cases are at once put on board-ship, and as soon as the more acute cases are fit to be moved, they are passed on. The great object is to prevent a block at the base; and, although at a push about three hundred beds can be put up, it is found to be only sufficient to accommodate the more severe and urgent cases.

No. 1 Bearer Company has been doing some good work at the front. I am told that they particularly distinguished themselves at the engagement on the 26th. They were well in the thick of it, moving the wounded, when they found themselves isolated from the troops, and threatened by the Egyptians. They laid their wounded on the ground, took their rifles and ammunition, and formed square round the stretchers, keeping the Arabs at bay till the "Blues" came to their relief. It was a noble piece of work, but cost us the life of a fine fellow—Surgeon-Major G. Shaw, of the Bearer Company. He was talking to another officer, when a bullet struck him in the mouth, passed through his skull, and laid him on the ground.

No. 2 Bearer Company has not been quite so successful. From the beginning, they have been severely handicapped: first, in the composition of the ranks of the company, which were filled with untrained men; and next by the men going in one ship, the senior officers in another, and the equipment in a third. The result was, on arrival at Ismailia, one-half only of the company could be sent to the front, and in command of a surgeon, the two surgeons-major having been landed at Alexandria. Most of the officers had to walk, and the want of transport prevented them from taking more than a few stretchers with them.

MEDICAL REPORT FROM KASSASSIN.

[FROM A SPECIAL CORRESPONDENT.]

September 3rd, 1882.

It is now fourteen days since I landed at Ismailia, but the first that I have had leisure to send you a few jottings of our doings in Egypt, and the first that I have enjoyed the comfort of a tent.

The daily papers will have given to the world the imposing scene of the fine lines of magnificent transports, each headed by one of our large ironclads, leaving Alexandria for Aboukir Bay; of our sudden departure from thence, without a shot being fired, and our midnight movement to Port Said on the 20th August, on which date all the points in the canal were seized by the blue-jackets and marines.

At noon of the 20th, three hundred men of the West Kent Regiment were transferred from the *Clarence* to H.M.'s gun vessel *Watch*, and proceeded up to Ismailia; were landed at about 11 o'clock at night, marched up to the border of the desert, and lay down by their arms, awaiting morning to dislodge a party of Arab army which was holding the railway station at Nenehe, an important station, being the junction to Suez, Ismailia, and Zagazig.

Since that date, owing to the force of circumstances, many rapid movements, and several sharp engagements with the enemy, have taken place. Troops have had to be pushed across the desert, where the eye has been deceived by the mirage—on one side showing, perhaps, a lovely stretch of sea-beach, with the blue sea coming in and rippling on the sand; on another, a sandy hillock, assuming the appearance of a castellated tower, such as one sees on the banks of the Rhine, with its towers and windows reflected in the surrounding water, which would vanish as we approached the spot, leaving only a miserable mound of dry sand to represent what appeared before so noble. Sometimes our troops have been in action in such a spot throughout the long hours, in a burning sun, without food; and at other times halted, waiting events from the scene of action at the front, and it is marvellous how well the troops have stood such exposure. True, many have fallen victims to our greatest enemy, the sun, but, on the whole, the health has kept good, notwithstanding that the burning heat by day is succeeded by a very chilly night, and the only covering many of us have had up to date has been the starry canopy of heaven. The food so far has been good and abundant, sometimes a scarcity of vegetables; but our enemy has been our friend on many occasions, as they have rapidly quitted their camp, leaving a plentiful supply of onions, which were rapidly appropriated, together with other supplies, such as tobacco; and, although the Egyptian army is not supposed to be well paid, I heard of a soldier finding £50 in sovereigns and a gold watch in a deserted camp, in which was also found three well fitted up medicine-chests, with instruments. I fear the original finders were annoyed at finding only doctor's stuff, as most of the bottles were smashed—only a pocket-case of Weiss, London, remained unbroken. Sunstroke and diarrhoea appear to be the only prevalent diseases; the latter being due to exposure, indifferent water, and irregular diet.

Our water-supply is the Fresh Water Canal, and is becoming very low, thick, and muddy; and although here and there a dead horse has been pulled out, and I have heard of other dead bodies being found, yet the water is not bad, indeed rather the reverse, when filtered, and the sediment allowed to deposit. Yet still, bad water is our difficulty, and, with the sun, will cause the greatest amount of sickness. In the camps at the front no measures have been taken to filter on a large scale, and I look on the small pocket-filter as useless. An officer commanding a regiment here asked me to try chloralum as an agent for purifying water, and the result was very gratifying. A few grains of the powder dissolved, and added to a vessel containing some gallons of thick turbid water, soon deposited all sediment, and left a clear clean-tasting water. I think it a pity that some such simple agent has not been provided for the army. Whilst everything else has been thought of, these purifying agents have been forgotten; and even such a common article as alum cannot be obtained locally. I regret to announce the death of Surgeon-Major George Shaw, who was the only officer shot dead in the late engagement here. He was engaged in the Bearer column, and was about to render assistance to a man who had been wounded, when he was struck in the temple, the bullet penetrating and lodging in the brain. He lived about three hours, in an unconscious state. Many personal friends have stood around his grave, which has been marked off and its bearings carefully taken, in order that a stone may be placed over the spot when occasion occurs. I may add, that the Army Medical Department has lost a most worthy officer; and those who stood round his grave gave evidence of their sorrow, as those who have lost not only a comrade, but a friend. In my next, I will enter into the subjects of climate, hospitals, etc., and conveyance of wounded.

SIR GARNET WOLSELEY is said to have ordered that the troops under his command should be allowed daily a triple ration of tea; and it is stated that the extra issue of tea is very acceptable to the men. A second ration of coffee is also ordered daily for every man. No more tinned meats have been sent to the seat of war, but 300 tons of other provisions have been despatched to Ismailia by the steamship *Adowa*. These include, as an exceptional article for hospital uses, a quantity of preserved tongues. The medical department has also transmitted to the hospitals a number of dry cold air refrigerators.

DEATH OF MR. JOHN A. SPENCER.—This gentleman died at his residence, Roshine Lodge, Co. Donegal, on the 2nd instant, aged 47. Mr. Spencer held the post of medical officer to a dispensary in the North of Ireland, but some years ago relinquished it and came to Dublin, where he was appointed assistant-librarian to the Royal College of Surgeons in Ireland, and a Demonstrator of Anatomy in the Carmichael Medical College. In a short time he resigned these appointments and returned to Donegal, where he died last Saturday.

UNIVERSITY OF CAMBRIDGE.

THE following is an addition to the regulations of this University, published at pages 457-58 of last week's JOURNAL.

BACHELOR OF SURGERY.

Candidates are admissible to the Examination for this degree at any time after they shall have passed the First Part of the Third Examination for the degree of Bachelor of Medicine.

Before admission to the Examination, a Candidate must produce Certificates: 1. Of having attended the Surgical Practice of a recognised Hospital during two years at least, and of having acted as Dresser or House-Surgeon for six months; 2. Of having gone through a course of instruction in practical Surgery.

The subjects of the Examination are: 1. Surgical operations and the application of Surgical apparatus; 2. The Examination of Surgical patients.

Before admission to the degree of Bachelor of Surgery, Candidates must also have passed the Second Part of the Third Examination for the M.B. degree.

COURSES OF LECTURES, ETC.

The following Courses of Lectures on Medicine, and subjects connected with it, will be delivered during the ensuing academical year.

Michaelmas Term, 1882.—Chemistry and Physics: General Course of Advanced Chemistry, by Professor Liveing, T. Th. S., 12; Physical Chemistry, by Professor Dewar, M. W. F., 12; Elementary Organic Chemistry, by Mr. Main (St. John's College), T. Th. S., 11; Metallic Elements, by Mr. Pattison Muir (Caius College), M. W. F., 10; General Principles of Chemistry (advanced), by Mr. Muir, T. Th. S., 10; Electrical Measurements, by Professor Lord Rayleigh, M. W. F., 1; Electricity and Magnetism (elementary), by Mr. Trotter (Trinity College), M. W. F., 9; Optics and Light, by Mr. Trotter (Trinity College), W. F., 11; Spectroscopy, by Professor Liveing, T. Th. S., 1.30; Practical Chemistry (University Laboratory), daily, 10 to 6; ditto (St. John's College Laboratory), daily, 10 to 5; ditto (Caius College Laboratory), daily, 10 to 4; ditto (Sidney College Laboratory), daily, 10 to 4; Practical Physics (Cavendish Laboratory), daily, 10 to 5; Demonstrations in Electricity and Magnetism (advanced) (Cavendish Laboratory), M. W. F., 10.30 to 12.30; Demonstrations in Heat (Cavendish Laboratory), T. Th. S., 10.30 to 12.30.—Botany: Elementary, chiefly Morphology, by Mr. Hicks (Sidney), M. W. F., 11; Physiology of Plants, with practical work, by Mr. Vines (Christ's), M. W. F., 12; Elementary Course, by Mr. Vines (New Museums), T. Th. S., 10.—Anatomy and Physiology: On the Evidence of Evolution in the Animal Kingdom, by Professor Newton, M. W. F., 1; *Annelida and Arthropoda*, by the Demonstrator, M. W. F., 10; Practical Morphology, Elementary Course (*Invertebrata*), M. W. F., 10; Advanced Course (*Invertebrata*), T. Th., 11; Physiology (New Museums), Elementary Course, by the Trinity Pralector (Mr. Michael Foster), T. Th. S., 9; Advanced Course, Chemical Physiology, by Mr. Lea (Caius Coll.), W. F., 11; Physiology, by Mr. Hill (Downing College), T. Th. S., 12; Anatomy and Physiology (Osteology), by Professor Humphry, T. Th. S., 1; Human Anatomy: Demonstrations by the Demonstrator, M. W. F., 12; Class in Anatomy and Physiology, suited for third-year men, by Professor Humphry, M. W., 12; Practical Anatomy in the Dissecting-room, daily, 9 to 4.—Medicine: Pharmacy and Pharmaceutical Chemistry, by Professor Latham, M. W. F., 9; General Therapeutics, by Professor Latham, T. Th. S., 9; Pathological Anatomy, by the Linacre Lecturer (Dr. Bradbury), T. Th., 9; Clinical Medicine, by Professor Paget, M. W. F., 10; Clinical Surgery, by Mr. Carver, T. Th. S., 10; Introduction to Clinical Medicine, by Mr. M'Alister, M. W. F., 9; Practical Midwifery (Gentlemen wishing to attend may apply to Dr. Ingle). Instruction in Practical Surgery, by Mr. Wherry, 1.

Lent Term, 1883.—Chemistry and Physics: General Course of Chemistry, continued, by Professor Liveing, T. Th. S., 12; Organic Chemistry, by Professor Dewar, M. W. F., 12; General Course of Chemistry, by Mr. Main (St. John's College), T. Th. S., 11; Non-Metallic Elements, by Mr. Pattison Muir (Caius College), M. W. F., 10; General Principles (advanced) continued, by Mr. Muir, T. Th. S., 10; Acoustics and Optics, by Professor Lord Rayleigh, M. W. F., 1; Physical Optics, by Mr. Trotter (Trinity College), M. W. F., 10; Physics (elementary), by Mr. Glazebrook (Trinity College), M. W. F., 9; Practical Chemistry (University Laboratory), daily, 10 to 6; ditto (St. John's College Laboratory), daily, 10 to 5; ditto (Caius College Laboratory), daily, 10 to 4; ditto (Sidney College Laboratory), daily; Practical Physics (Cavendish Laboratory), daily, 10 to 5; Demonstrations in Electricity and Magnetism (advanced) (Cavendish Laboratory), M. W. F., 10.30 to 12.30; Demonstrations in Mechanics and Heat (elementary) (Cavendish Laboratory), T. Th.

S.—Botany: Morphology and Introduction to the Classification of Flowering Plants, by Mr. Hicks (Sidney), M. W. F., 11; Anatomy of Plants, with Practical Work, by Mr. Vines (Christ's), M. W. F., 12; Elementary Course (begun), by the same (New Museums), T. Th. S., 10.—Anatomy and Physiology: Geographical Distribution of Animals, by Professor Newton, M. W. F., 1; Advanced Class, by the Demonstrator, M. W. F., 10; Practical Morphology, Elementary Course (*Vertebrata*), M. W. F., 10; Advanced Course (*Ichthyopsida*), T. Th., 11; Physiology (at the New Museums), Elementary Course (continued), by the Trinity Prælector (Mr. Michael Foster), T. Th. S., 9; Advanced Course (continued), by Mr. Lea, W. F., 11; Anatomy and Physiology (Circulatory and Respiratory Systems), by Professor Humphry, T. Th. S., 1; Human Anatomy, Class in Osteology, by the Demonstrator, M. W. F., 12; Class in Anatomy and Physiology, suited for third-year men, by Professor Humphry, M. W., 12; Practical Anatomy in the Dissecting-room, daily, 9 to 4.—Medicine: Principles and Practice of Medicine, by Professor Paget, M. F., 9; Methods of Physical Diagnosis, by Mr. M'Alister, T. Th. S., 9; Clinical Medicine, by Professor Latham, M. W. F., 10; Clinical Surgery, by Mr. G. E. Wherry, T. Th. S., 10; Practical Midwifery (Gentlemen wishing to attend may apply to Dr. Ingle). Instruction in Practical Surgery (continued), by Mr. Wherry, 1.

Easter Term, 1883—Chemistry and Physics: Elementary Course, by a Demonstrator of Chemistry, M. W. F., 12; General Course (continued), by Mr. Main (St. John's College), T. Th. S., 11; Non-Metals (continued) and Organic Chemistry (elementary), by Mr. Pattison Muir (Caius College), M. W. F., 10; General Principles (continued) and Organic Chemistry (advanced), by Mr. Muir, T. Th. S., 10; Heat, by Mr. Trotter (Trinity College), M. W. F., 10; Elementary Physics, by Mr. Glazebrook (Trinity College), M. W. F., 9; Practical Chemistry, (University Chemical Laboratory), daily, 10 to 6; do. (St. John's College Laboratory), daily, do. (Caius College Laboratory), daily, 10 to 4; do. (Sidney College Laboratory), daily; Practical Physics (Cavendish Laboratory), daily, 10 to 5; Demonstrations in Optics and Acoustics (Cavendish Laboratory), T. Th. S., 10 to 12; Demonstrations in Electricity (elementary) (Cavendish Laboratory), M. W. F., 10.30 to 12.30.—Botany: Morphology (chiefly Phanerogamic and Systematic), by Professor Babington, M. T. Th. F., 1; Morphology (chiefly Cryptogamic), with Practical Work, by Mr. Vines (Christ's College), M. W. F., 12; Elementary Course (continued) by Mr. Vines (New Museums), T. Th. S., 10; Examination Class in Elementary Botany, by Mr. Hicks (Sidney), M. F., 11.—Anatomy and Physiology: Advanced Course, by the Demonstrator of Comparative Anatomy, M. W. F., 10; Embryology of Birds and Mammals, with Practical Work, T. Th. S., 10; Elementary Biology, by the Trinity Prælector (Mr. Michael Foster), T. Th. S., 9; Physiology, by Mr. Hill (Downing College), T. Th. S., 12; Human Anatomy, Demonstrations by the Demonstrator, M. W. F.; Practical Anatomy, in the Dissecting Room.—Medicine: Principles and Practice of Medicine, by Professor Paget, M. F., 9; Clinical Medicine, by Dr. J. B. Bradbury, M. W. F., 10; Clinical Surgery, by Dr. Humphry, T. Th. S., 10; Practical Midwifery (Gentlemen wishing to attend may apply to Dr. Ingle); Instruction in Practical Surgery (continued), by Mr. Wherry, 1;

Long Vacation (July and August) 1883.—Practical Physics, in the Cavendish Laboratory; Practical Chemistry, in the University Laboratory; Course of General Chemistry, by Mr. H. T. H. Fenton; Practical Anatomy; Human Osteology; Practical Histology; Clinical Instruction at the Hospital; Instruction in Surgery, by Professor Humphry; Medical Jurisprudence, by Dr. Annington; Instruction, and Practical Midwifery, by Dr. Ingle; Instruction in Practical Surgery, by Mr. Wherry.

Medical students pursuing a Certificate of attendance in Cambridge on a course of instruction in Chemistry may attend one of the following: Either the General Course of the Prælector of Chemistry or the two courses of the Lecturer in Practical Chemistry and Lent terms; or Mr. Main's course in Chemistry and Easter terms; or Mr. Pattison Muir's course in Organic Chemistry and the course of the Prælector of Chemistry in Elementary and Advanced Organic Chemistry and Organic Chemistry in Midwifery terms. Medical students have to be prepared to attend which course they choose in any term.

The Lecturers of the University, the Dissecting rooms, and the Museum of Anatomy, are open during the vacations, as well as the Cavendish Laboratory, the University Chemical Laboratory, the University Physical Laboratory, the University Botanical Garden, the University Herbarium, the University Library, the University Museum of Natural History, the University Museum of Geology, the University Museum of Mineralogy, the University Museum of Zoology, the University Museum of Botany, the University Museum of Agriculture, the University Museum of Forestry, the University Museum of Fisheries, the University Museum of Horticulture, the University Museum of Viticulture, the University Museum of Oenology, the University Museum of Apiculture, the University Museum of Poultry, the University Museum of Swine, the University Museum of Cattle, the University Museum of Sheep, the University Museum of Pigs, the University Museum of Horses, the University Museum of Dogs, the University Museum of Cats, the University Museum of Rabbits, the University Museum of Guinea-pigs, the University Museum of Mice, the University Museum of Rats, the University Museum of Squirrels, the University Museum of Birds, the University Museum of Fishes, the University Museum of Reptiles, the University Museum of Amphibians, the University Museum of Insects, the University Museum of Molluscs, the University Museum of Arachnids, the University Museum of Crustaceans, the University Museum of Echinoderms, the University Museum of Mammals, the University Museum of Monkeys, the University Museum of Apes, the University Museum of Man.

tion, abstracts of regulations, schedules, and other papers, may be obtained from the attendant at the Anatomical Schools, Pembroke Street.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL:

NOTICE OF QUARTERLY MEETINGS FOR 1882: ELECTION OF MEMBERS.

A MEETING of the Committee of Council will be held on Wednesday, October 18th. Gentlemen desirous of becoming members of the Association must send in their forms of application for election to the General Secretary not later than 21 days before the meeting—viz., September 27th, in accordance with the regulation for the election of members passed at the meeting of the Committee of Council of October 12th, 1881.

August 31st, 1882.

FRANCIS FOWKE, *General Secretary*.

COMMITTEE OF COUNCIL.

NOTICE OF MEETING.

A MEETING of the Committee of Council will be held in the Council Room, Exeter Hall, Strand, London, on Wednesday, the 18th day of October next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary*.

161A, Strand, London, September 12th, 1882.

COLLECTIVE INVESTIGATION OF DISEASE.

THE following subjects are now under investigation by the Committee: Acute Rheumatism; Pneumonia; Chorea.

Cards to be filled up with particulars of cases, together with memorandum papers explaining the nature and objects of the investigations, have been prepared and distributed through the Secretaries of the Branches or of local committees.

Members who have not received them will be supplied with them on application to the Secretary of their local committee, or to myself.

Cards and memorandum papers for the investigation of Diphtheria are nearly ready, and will shortly be in the hands of the local Secretaries, who will supply them, on application, to any members having cases of this disease under their care, and willing to assist in its investigation.

F. A. MAHOMED, *Secretary to the Committee*.

12, St. Thomas Street, London, S.E.

BRANCH MEETINGS TO BE HELD.

South of England Branch.—The autumn meeting will be held at Kingston on Thursday, September 14th, at 8 o'clock in the evening. The subject for discussion will be "On the Pathology of the Heart." The Honorary Secretary is—G. F. KIRBY SMITH, Honorary Secretary, Northampton.—August 29th, 1882.

North of England Branch.—The autumn meeting will be held in Bishop's Cleeve, near Newcastle-on-Tyne, on Wednesday, September 13th, at 8 o'clock in the evening. The subject for discussion will be "On the Pathology of the Heart." The Honorary Secretary is—G. F. KIRBY SMITH, Honorary Secretary, Northampton.—August 29th, 1882.

London Branch.—The autumn meeting will be held at the Royal Society of Medicine, on Wednesday, September 13th, at 8 o'clock in the evening. The subject for discussion will be "On the Pathology of the Heart." The Honorary Secretary is—G. F. KIRBY SMITH, Honorary Secretary, Northampton.—August 29th, 1882.

South of England Branch.—The next meeting of the Branch will be held at the Railway Hotel, on Wednesday, September 13th, at 8 o'clock in the evening. The subject for discussion will be "On the Pathology of the Heart." The Honorary Secretary is—G. F. KIRBY SMITH, Honorary Secretary, Northampton.—August 29th, 1882.

of Lithæmia to Cardiac Prognosis and Treatment. 5. Mr. Abbott: Antiseptic Atropine and Eserine Solutions. Gentlemen desirous of contributing papers are requested to communicate with the Honorary Secretary.—T. JENNER VERRALL, Honorary Secretary, 95, Western Road, Brighton.—September 5th, 1882.

EAST ANGLIAN BRANCH.—President, W. M. Crowfoot, Esq., M.B.—The autumn meeting will be held at the Assembly Rooms, East Dereham, on Thursday, September 28th, at 1.45 P.M. The following papers have been promised. 1. H. C. Hastings, Esq. (East Dereham): Notes of a Case of Rheumatic Fever, with Observations on the past and present Treatment of the Disease. 2. James Vincent, M.D. (East Dereham): An Account of Three Cases of Total Suppression of Urine. 3. H. Mallins, M.D. (Watton): Notes of a Case of Aphasia with Right Hemiparesis, in a girl aged 12. 4. F. Bateman, M.D. (Norwich): Hystero-Epilepsy. 5. S. H. Burton, Esq. (Norwich): A Case of Scarlatina followed by Septicæmia. 6. Alan Reeve Manby, Esq. (East Rudham): The Curability of Fevers. 7. F. Haward, Esq. (Halesworth): Notes of a Case of Ovariotomy. 8. W. A. Elliston, M.D. (Ipswich): Notes of a case of Excision of the lower four inches of the circumference of Rectum. The medical men of East Dereham and neighbourhood have most hospitably invited the members of the East Anglian Branch to a *déjeuner* at the King's Arms Hotel, at 4.30 P.M.; it is requested that all who intend to accept their invitation will send in their names to Dr. Beverley, 63, St. Giles' Street, Norwich, not later than Tuesday, the 26th instant. Mr. H. B. Vincent, the Medical Officer of Health for Dereham, has kindly offered to show members over the Sewage Farm, the New System of Town Drainage, and the Waterworks. Mr. Vincent will attend at the Local Board Office at 11 A.M., for this purpose. By the kind permission of the Vicar (Rev. B. J. Armstrong), a Recital will be given by the Organist, Mr. Martin, on the New Organ, at the Parish Church of East Dereham, at 12. Members of the medical profession, whether members of the Association or not, are invited to attend the general meeting at 1.45 P.M.—W. A. ELLISTON, M.D., Ipswich; MICHAEL BEVERLEY, M.D., Norwich, Honorary Secretaries.—September 1882.

SOUTH AUSTRALIAN BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held in the Board-room of the Adelaide Hospital, on June 29th, 1882. Twelve members were present. The retiring President, Mr. C. W. T. CLINDENING, took the chair.

Apologies for non-attendance were received from Dr. W. Gosse and Mr. Way.

A letter was read, dated May 3rd, 1882, from the general secretary (Mr. Francis Fowke, London), congratulating the Branch on its continuing and increasing success, both in point of numbers and usefulness of work.

The annual report of the Council was taken as read, and adopted; as was also the financial statement of the honorary treasurer, Mr. T. W. Corbin.

Address of Retiring President.—Mr. CLINDENING, the retiring president, addressed the meeting on vacating the chair. He said that it became his duty to retire from the honourable position which he had held for the last year, and to initiate his successor, the Vice-president, in it; but, before doing so, he would return to all his most grateful acknowledgments for the unanimous support and kind consideration he had received on all occasions during his tenure of office. It had been one of high honour, but it had been also one of great usefulness and advantage to himself, inasmuch as it had brought him into conclave and friendship with the best, most eminent, and useful of the profession in that colony. He thanked the Council for their co-operation and business-like support, without which it would have been impossible to have carried on the affairs of the Branch with success. He was glad, too, that he left the Branch to his successor in a highly prosperous condition, having increased in numbers, in importance, and in public estimation; and he was sure nothing would be left undone by his successor for the advancement of its good and welfare. Many circumstances had occurred during the past year of great moment to the profession at large, principally embodied in the report, but notably (which were not referred to) the insurance conspiracy cases. There was a public outcry that the profession was disgraced and dishonoured; but the President denied most emphatically this assertion, and said that, instead of our noble profession being disgraced, dishonoured, and dragged through the mud, it withstood the shock with which it was threatened through the misconduct of two of its members. Those men, he said, disgraced themselves, and not the profession, and were reaping the penalty of their defection. It was well, not only for the profession, but also for the public at large, that these conspiracies transpired, for there was no knowing what magnitude they would have attained, or what damage and injury they might have entailed. Mr. Clindening concluded by again thanking the members, and introducing his successor.

Mr. ASILES then took the chair, expressing the pleasure it gave him to do so, and the hope that during his tenure of office the Branch would continue to prosper as it had done in the past.

Council.—The election for the Council then took place, as follows: *Vice-President*, W. Gardner, M.D.; *Treasurer*, T. W. Corbin, Esq.; *Honorary Secretary*, W. L. Cleland, M.B.; *Members of Council*, W. T. Clindening, Esq., E. Gosse, M.D., E. C. Stirling, M.D.

New Members.—The following gentlemen having made written applications for the membership of the British Medical Association and South Australian Branch, and having been duly certified as eligible, were elected—viz.: Drs. Addison and Seabrook, and Messrs. Ellison, Jay, Mann, Nickoll, Thompson, and Welchman.

Changes in Rules.—Propositions were put and carried, to the effect that members might vote for the election of officers at the annual meetings *in absentia*; and that vacancies occurring in the Council, between one annual meeting and another, should be filled up at a monthly meeting.

It was also resolved to place a short statement of how the Branch had been started at the commencement of the printed *Proceedings* for the past year, and to continue the practice in future.

CORRESPONDENCE.

DR. MILNER FOTHERGILL AND THE PROPOSED ALTERATION OF BY-LAW 12.

SIR,—In his letter, published in your issue of to-day, Dr. Milner Fothergill says, "I appeared at the general meeting on Wednesday morning to tender an explanation" (of his absence on the previous evening) "which was cut short summarily (see BRITISH MEDICAL JOURNAL, August 12th, page 278), and which I now tender to the Association....." On turning to the page referred to, Dr. Fothergill and your readers will find this passage: "The President said Dr. Fothergill could be heard, if he had any explanation to offer in regard of his absence on Tuesday, but he could not bring forward his motion." Why, then, may I ask, did not Dr. Fothergill give his explanation to me, and to the meeting, of his absence when his motion was duly called on the previous evening? Had he done so, it would have been for the meeting to decide whether such explanation was or was not sufficient, and to take action accordingly. Instead of that, Dr. Fothergill resumed his seat without a word of remonstrance. It is not, therefore, fair to me to say that "his explanation was cut short summarily." Dr. Fothergill's motion had been set down in the agenda for the Tuesday evening, with the excellent motive of getting rid of all unpleasant controversial matters before the jubilee day, Wednesday—a day which we in Worcester had determined should be as free from strife as we could make it.—Faithfully yours, W. STRANGE, M.D., President of the Association.

Worcester, September 2nd.

THE PROPOSED AMENDMENT OF BY-LAW 12.

SIR,—It is with much reluctance I again appear in your correspondence columns, but the concluding sentence of the comments by the President of Council on my letter in the JOURNAL of the 2nd instant leaves me no alternative. He says, "It was not possible to communicate with him before the meeting on Tuesday, as his address at Worcester was not known." Now, it was no fault of mine if the Council did not know where to address a communication to me, as I wrote below my signature, "15 Severn Terrace, Worcester," as legibly as I knew how; and, on my arrival there, my first inquiry was, had any note been received for me?

Whether my "corrections" were but "arguments," especially as to the question of "precedent," is a matter on which the Association must judge betwixt him and me. I desire no disrespect to the first official of our Association; but there is one's duty to oneself as well as our duty to our neighbour; and on such a matter it is most desirable to have all clear.—I am, sir, etc., J. MILNER FOTHERGILL.

September 5th, 1882.

NOTIFICATION OF INFECTIOUS DISEASES.

SIR,—In my letter which appeared in the JOURNAL of August 26th, I omitted to refer to the Infectious Diseases Notification (Ireland) Bill. The ideal scheme which I believed to be in the mind of the proposer of the resolution finally adopted at the Worcester meeting, is not identical with that which had already assumed definite shape in the Bill referred to; it, however, so closely resembles it, that I ought to have mentioned the fact; and I am obliged to Dr. Jacob of Dublin for supplying the omission. The resemblance consists in this, that, under both schemes, the physician is under no legal obligation to help in any way towards the notification of cases of infectious disease which come under his treatment—not even by the handing of a formal certificate of the nature of the disease, etc., to the householder, or informing him of his responsibility to notify. The difference consists in this, that, according to the proposed scheme of the Irish Medical Association, there would be an extra difficulty placed in the way of the medical man who

distance of, as far as I remember, two inches from its attachment to the upper fragment. The case was throughout treated strictly in accordance with the principles of antiseptic surgery.

On the next occasion that I met Mr. Amphlett, in January 1879, I handed him the notes of the case, his intention being, as he told me, to bring the case under the notice of the Clinical Society.—I am, sir, yours faithfully,

HUGH P. DUNN.

London, August 28th, 1882.

THE DALRYMPLE HOME.

SIR,—In his second annual report, the able Inspector of Inebriate Retreats strongly urges the need for the opening of the proposed Dalrymple Home for Inebriates. Though indefatigable in their efforts, the committee have received very limited pecuniary support. They, however, hope to be able to commence operations before the end of this year. The triumphant progress of temperance missions is daily recorded by the press; and it is to be hoped that the unselfishness and devotion, which ought to be the motive power of such a crusade, will be attested by liberal financial support to the projected Dalrymple Home, as an attempt at the reformation and cure of the many habitual drunkards whose whole system has become so diseased by alcohol, that absolute seclusion from temptation is essential to restore their shattered nerves, and their utterly broken down will power. Among the office-bearers of the proposed Home are the Archbishop of Canterbury, the Duke of Westminster, Lord Shaftesbury, Sir Thomas Watson, Sir Henry Thompson, Dr. Andrew Clark, and Dr. B. W. Richardson. £3,000 is still needed. Donations, and also annual subscriptions, will be thankfully received by the Chairman, Canon Duckworth; Dr. Alfred Carpenter, J.P., Croydon; and your obedient servant,

NORMAN KERR, M.D.,

Honorary Secretary, Dalrymple Home.

42, Grove Road, Regent's Park, N.W., Sept. 9th, 1882.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE TEMPERANCE HOSPITAL.

THE general movement in favour of temperance has made great progress of late years, and the London Temperance Hospital, which is an outcome of this movement, has now become quite an established institution. In March 1881, the new hospital buildings in the Hampstead Road were opened. The accommodation for in-patients is now three-fold what it was in Gower Street, and for a considerable part of the year all the beds were in use. During the last twelve months the number who came under treatment as in-patients was 351, while the number of out-patients was 1,761. The house surgeon acts as registrar, and a careful analysis is given of the various cases treated in the hospital, and of the results of treatment. "In no case during the year," says the report, "have the medical staff thought it needful to prescribe alcohol, even as a drug, and they have adhered to the non-alcoholic principle on strictly scientific grounds, and with a view to the best interests of the patients. The medical staff are not to be regarded as having entered on a novel course; they are rather treading in a path illustrated by a long and extensive accumulation of facts. Their method is precisely similar to that which other practitioners employ in the use or rejection of drugs in particular cases, while the non-alcoholic treatment is pursued in the institution in the true spirit of scientific investigation, with the conviction that scientific truth will always prove in harmony with the moral and social progress of mankind."

The board of management have been gratified by receiving an offer from the trustees of the disused burial-ground of St. James's Chapel to put it in order, and place it at the disposal of the hospital as a garden for the use of the in-patients. This will be a great advantage to the hospital.

Of course, no attempt is at present made to draw any conclusion as to the medicinal value of alcoholic drinks or medicines. For some years to come the business of the hospital must be carefully to record and classify the results of treatment.

MEDICAL MAGISTRATE.—Mr. Thomas Brooks Bumpsted, Surgeon, has been placed on the Commission of the Peace for the borough of Cambridge.

THE vacancy for a Coroner for the Southern Division of the County Armagh has been filled by the election of Mr. Small, who obtained a majority of 70 votes over his opponent, Dr. Anderson, of Newtown-hamilton.

MILITARY AND NAVAL MEDICAL SERVICES.

ARMY MEDICAL SERVICE.—The following candidates were successful for appointments as Surgeons in Her Majesty's British Medical Service at the competitive examination in London, on August 21st, 1882.

	Marks.		Marks.
1. W. G. Macpherson.....	2365	9. J. R. Stuart.....	2015
2. R. J. S. Simpson.....	2305	10. T. R. Morse.....	1975
3. F. W. Reid.....	2283	11. W. B. C. Deeble.....	1960
4. E. V. A. Phipps.....	2180	12. J. M. Prendergast.....	1935
5. V. E. Hunter.....	2160	13. R. P. Bond.....	1905
6. A. Baird.....	2155	14. J. McD. Stewart.....	1890
7. T. W. O'H. Hamilton.....	2035	15. G. T. H. Thomas.....	1870
8. D. Semple.....	2030		

INDIAN MEDICAL SERVICE.—The following is a list of the candidates for Her Majesty's Indian Medical Service who were successful at the competitive examination held at Burlington House, on August 21st, 1882, and following days. Thirty-nine candidates competed for eight appointments, and all were reported qualified.

	Marks.		Marks.
1. A. W. Leahy.....	2960	5. R. E. S. Davis.....	2340
2. W. W. Webb.....	2530	6. H. K. Fuller.....	2320
3. R. R. Weir.....	2510	7. W. H. Neilson.....	2220
4. W. H. Burke.....	2377	8. John Crimmin.....	2135

NAVAL MEDICAL DEPARTMENT.—The following is a list of the successful candidates for appointments as Surgeons in the Royal Navy at the competitive examination at Burlington House, on August 21st and following days.

	Marks.		Marks.
1. J. S. Logan.....	2060	7. J. McC. Martin.....	1850
2. R. J. Lawson.....	2030	8. J. L. Bagnall-Oakeley.....	1770
3. J. Cashin.....	2025	9. F. Woore.....	1755
4. T. Nunan.....	1980	10. W. M. Craig.....	1740
5. W. H. Norman.....	1970	11. H. S. Jackson.....	1700
6. P. E. Todd.....	1950	12. J. M. Phillips.....	1695

In addition to the above, eight other candidates were reported by the examiners as qualified.

THE ARMY MEDICAL CORPS.

SIR,—I am glad to see, by contemporary periodicals, that attention is being drawn to the unification scheme, for it was foretold that it would prove impracticable. It was forced on the army in defiance of a majority; not merely a majority of the army, but of the officers of the department itself, and the profession in civil life. It was a part and parcel of the scheme of those army reformers who were not satisfied with the regimental system; I think I may fairly add, "the good old regimental system". It may admit of improvement; it will never be annihilated. Yet all the changes "departmentalising" the army have weakened it, but none more so than the removal of the medical officers. Many medical officers have left the service in consequence of the changes; and few of them, I imagine, would care to renew their connection with the service under existing conditions. As to the Army Hospital Corps, all the trained men are required for the bearer columns, and the nursing is neglected. As far as my experience goes, there is scarcely a man or non-commissioned officer of the corps left at home to look after the sick in hospital. Is this a success? Surely it will now be seen to be necessary that the men to form the bearer columns should be soldiers, supernumerary to the fighting strength, and performing this special duty only in time of war. Attendants upon the sick require higher training, and on no pretence whatever should be employed on any other duty. Enclosing my card, I am, sir, your obedient servant,

OLD RÉGIME.

ALEXANDER PRIZE ESSAY.

SIR,—May I ask you whether the assessors have decided who is to get this prize? The essays have been under consideration eight months.—I am, etc.,

INQUIRER.

A GOOD EXAMPLE.

SIR,—Having read the articles in your issues of July 15th and August 5th, on the subject of ambulance departments in connection with volunteer regiments, I am pleased to find that the movement is gradually being adopted by provincial corps. During the present year, the hospital sergeant and two men per company (twenty-five men in all) of the 1st Volunteer Battalion, Royal Warwickshire Regiment, have been trained in stretcher drill, elementary anatomy, the first treatment of wounded, etc., and were inspected, on June 30th, by Surgeon-Major Wood, Army Medical Department, who expressed himself highly pleased with them. They have all received certificates of efficiency on Army Form E 596, together with the Geneva badge, to be worn on the right arm, as recognised regimental bearers to their respective companies. At our annual inspection in July, they marched past in rear of the battalion with open stretchers (McLure's patent new pattern), bearer company haversacks and water-bottles, the inspecting officer, Colonel Fitz-Roy, complimenting them on their smartness, and also alluding to the completeness of the arrangements of hospital tents, etc. I may add, as a caution to other corps contemplating the formation of similar departments, that classes were held last year, by a mistake, under the order of St. John of Jerusalem; but that, although twenty-seven received certificates out of twenty-nine presenting themselves, we found that, however useful they might be from a civil point of view, they were not recognised by the War Office, and so would not be allowed to join the volunteer bearer company at Windsor or elsewhere. Volunteer surgeons wishing for information on the subject should apply to Lieutenant A. McLure, Junr., L.S.R.V., the Honorary Secretary to the Volunteer Ambulance Department, Army Medical

Department, 6, Whitehall Yard, to whose courtesy we are indebted for many useful hints.—I am, sir, yours faithfully,
 EDWARD L. FRASER, Surgeon 1st V.B.R.W.R.
 7, Newhall Street, Birmingham, August 7th, 1882.

SURGEON-MAJOR Alfred Clarke has been appointed to the medical charge of the Royal Military College, Sandhurst, *vice* Deputy Surgeon-General T. Fraser retired.

SURGEON MAJOR READ, at present attached to the Canterbury garrison, has received orders to hold himself in readiness for despatch to Egypt. Surgeon-Major Robinson, of the same garrison, who had already been selected for service in the field, will embark during the present week. At several of the garrison towns, where the military surgeons have been either sent out or are ordered to Egypt for service with the troops there, local medical practitioners are being appointed to fill the places temporarily vacated.

SURGEON-MAJOR JOHN ALEXANDER SHAW, A.M.D.

THROUGH some unfortunate misapprehension of the telegram sent from the seat of war, an announcement, without foundation, that the above-named medical officer had been killed at Kassassin has been largely circulated in the daily and other journals. The mistake has arisen through the fact of two army medical officers of the name of Shaw, both holding the same rank, being now in Egypt. One, Surgeon-Major G. Shaw, to whom the telegram really referred, was one of the medical officers of the first Bearer Company, which has been recently serving in the front at Kassassin; the other, Surgeon-Major J. A. Shaw, whose name appears at the head of this notice, went out in medical charge of the second battalion of the Highland Light Infantry, and is still serving with it. In the official telegram to the War Office reporting the death of Surgeon-Major Shaw at Kassassin, no Christian name or initial letters were attached to the surname, so that neither the War Office nor the Army Medical Department could give any certain information as to which medical officer the telegram referred. It was only by a connection of Dr. J. A. Shaw, whose relatives had all been thrown into the greatest distress by the published announcement of his death, telegraphing an inquiry regarding him to a friend at Alexandria, and receiving in reply an assurance that he was then with his regiment, and perfectly well, that the error was discovered, and the anxieties which the intelligence had caused were relieved. The mistake in the present instance sufficiently indicates the necessity for extreme precision in telegraphing the names of officers and soldiers who may succumb to wounds or sickness at the seat of war.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

WHAT IS UNWHOLESOME MEAT?

SIR,—I have the honor to acknowledge the receipt of your letter of the 10th inst., and give you the following reply. The question of the sale of unwholesome meat is a very important one, and one which has of late years attracted much public attention. The evidence of the existence of such meat in the market is, however, not so clear as it once was. The health-officers may well ask the question, "What is unwholesome meat?" and the answer is, "Meat which is unfit for human consumption." This is a very broad definition, and it is not easy to give a more precise one. The health-officer is, however, entitled to require that the meat should be of a certain quality, and that it should be free from all disease and from all other causes which might render it unfit for human consumption. If the meat is found to be of a bad quality, or if it is found to be diseased, or if it is found to be otherwise unfit for human consumption, the health-officer is entitled to refuse to allow it to be sold, and to require that it should be destroyed. The health-officer is also entitled to require that the meat should be of a certain quality, and that it should be free from all disease and from all other causes which might render it unfit for human consumption. If the meat is found to be of a bad quality, or if it is found to be diseased, or if it is found to be otherwise unfit for human consumption, the health-officer is entitled to refuse to allow it to be sold, and to require that it should be destroyed.

Birkenhead, September 4th, 1882.

FRANCIS VACHER.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

VENTNOR.—The population of Ventnor rose from 4841 to 5684 in the ten years from 1871 to 1881, being an increase of 843. During the year 1881, 118 births were registered in the town, and 104 deaths. The latter figure is equivalent to a rate of 18.3 per 1,000; but as it includes the deaths of 49 strangers, not inhabitants, who were known to have come into the district with their fatal illnesses upon them, the rate for the town proper is at the satisfactorily low figure of 9.6 per 1,000. The largest item in the mortality was, as usual, phthisis, which alone accounted for 49 of the 104 deaths. All but 7 of these 49 deaths occurred amongst visitors. Two deaths happened from typhoid fever under circumstances that might with advantage have been given in greater detail, and one non-fatal case was also heard of. No death took place from any of the other zymotic diseases, except indeed a single death from diarrhoea. Dr. Woodford reports that as yet no success has attended the Local Board's efforts to establish a hospital for infectious diseases. This is to be regretted, since a health-resort like Ventnor cannot afford to be without so essential a part of efficient sanitary machinery. Ground has, however, been purchased for the erection of a mortuary. An important step has been taken in the granting of sanitary certificates to houses that have complied with the full requirements of the Local Board, and a list is given in Dr. Woodford's report of sixteen houses that have been certified. No doubt this plan will become more and more general in the town, as affording the maximum security to visitors against the well-known dangers of seaside lodgings; and we may expect that as it is better known and appreciated, the system will be extended throughout the country. The water-supply of the town continues to be of excellent quality, and a very satisfactory report is made concerning it by the public analyst of the island. In a variety of departments improvements were made during the year, and, indeed, the Ventnor authorities seem to be now thoroughly alive to the importance of making their town as hygienically perfect as possible.

SHREWSBURY.—The most remarkable feature in the death-statistics of Shrewsbury is always the mortality from enteric fever. Last year, there were eleven more deaths, the number of persons attacked being thirty-six, living in thirty-two houses. Dr. Thursfield is duly impressed with the importance of this mortality, and has, both in his annual and in special reports, devoted attention to it. He states that the thirty-two outbreaks last year represented not what could be properly described as an epidemic, but a number of distinct and isolated outbreaks, not confined to any particular portion of the year or locality of the town. It was most exceptional for the disease to spread beyond the person first attacked, and in no case did the infection directly spread to any adjacent house from the one first infected. The cause of the isolated outbreaks was traceable, as in previous years, either to direct importation, personal or by water, or revival of old germs in the house from previous attacks, perhaps years before, or to secondary causes, as when favourable local conditions admitted the passage of infection from similar sources into houses from sewer-emanations. At least, this is Dr. Thursfield's explanation of the cases. No one will deny the pains that he bestows on his work as medical officer of health, and yet it seems very unsatisfactory that the endemic prevalence of enteric fever at Shrewsbury can be traced to causes no more definite than these. Shrewsbury figures regularly in the Registrar-General's returns as suffering unduly from typhoid; and, inasmuch as the circumstances fostering the growth, if not the birth of the disease, are now thoroughly well known, it seems strange that more exact knowledge has not been attainable as to the reasons of its constant presence at Shrewsbury. There is nothing more in Dr. Thursfield's report calling for remark, except his advocacy of a mortuary and disinfecting-chamber, both of which would seem to be essentials to the proper sanitary government of such a town as Shrewsbury. The general death-rate was 17 per 1,000, which is a satisfactory decline from the average of 20.9 per 1,000 for the seven years 1874-1880.

LIVERPOOL PORT.—In common with other Port Medical Officers of Health, Dr. Stopford Taylor reports that the chief defects of vessels coming under his notice last year consisted of faulty and dirty bulkheads. Of the total number of 5,077 vessels examined, 4,657 were found in a good sanitary condition, while of the remainder 200 required their bulkheads, peaks, and cabins thoroughly cleansed and disinfected. In 124 there were faulty bulkheads, in 86 defective ventilators, and in 90 faulty closets were found. As to the general sanitary state of the vessels, those employed in the coasting trade are much better kept than formerly. The French, Spanish, Italian, and Russian ships are crowded up and lumbered up. The German, Danish, Norwegian, and Swedish are the best kept of foreign vessels, whilst

the American, as a general rule, are the cleanest afloat. The health-officer reports that there was more infectious disease during the year than usual, principally small-pox and scarlatina. Out of 41 cases discovered during the year, 15 were of the former and eight of the latter disease. Cholera was found in five cases, malarial fever in three, and measles in eight.

MERE RURAL DISTRICT.—The widespread prevalence of scarlet fever in this district during the latter part of the past year, had the unfortunate result of sending the death-rate up to 22.52 per 1,000 against 14.68 for 1880. Altogether 170 cases came under the notice of the health-officer, 16 of which terminated fatally. The origin of the outbreak was never thoroughly fathomed by Mr. Chilcot, who attributes the spread of the disease to the free communication of people with each other for "gossip and sympathy," and to overcrowding and uncleanliness. Some of the schools were closed for a short time, but the results did not come up to the health-officer's expectations. Disinfection was actively carried on during the prevalence of the epidemic, but the district possesses no adequate isolation accommodation for infectious diseases, a defect which, to some extent, must be held responsible for the dimensions which the disease assumed. The health-officer mentions, as an instance of the widespread nature of the epidemic, that he made no less than 2,730 visits, and wrote 305 certificates to satisfy heads of families, householders, etc. Measles were somewhat prevalent during the early part of the year, but of 37 cases two only proved fatal. Little attention is devoted to the sanitary condition of the district, but this, no doubt, results from the enormous amount of work thrown upon the health-officer by the scarlatina prevalence. It would appear from internal evidence that the fault is rather in the reporting than in the work itself.

ISLINGTON.—Dr. Meymott Tidy gives the birth- and death-rates, and a table or two showing the mortality at different ages and from various diseases; but of a report proper there is none. The birth- and death-rates of Islington for 1880 were 34.3 and 18.4 per 1,000. The number of deaths of children under one year of age is still "painfully large", and constitutes between one-third and one-fourth of the total mortality. As Dr. Tidy points out, this proportion is no greater than in other districts; but the death-rate of our infantile population generally is a matter that calls for the most serious and anxious consideration both of sanitarians and legislators. Children seem to be born for little else than to be buried. Dr. Tidy reiterates his opinion that no better, purer, and more wholesome water could possibly be furnished to the people than that supplied by the New River Company; and speaks of the enormous gain to the ratepayers afforded by the camp hospital for small-pox provided by the vestry. He promises a full report of the history of the recent epidemic of small-pox in the parish, which ought to be interesting and instructive.

BAILDON.—Mr. Pollard has the satisfaction of reporting, for 1881, the low death-rate of 12.8 per 1,000, which is one of the lowest ever recorded for this district. The total deaths amounted to 70, and of these, 26, or 37.1 per cent., were of children under five years of age. Although this is a considerable reduction upon previous rates, the health-officer regards the present one as far too high, though he adds that this must always be the case in those districts where the mothers are the bread-winners as much as their husbands. Scarlet fever was somewhat prevalent during the latter part of the year; but the disease was of a mild type, and only three deaths were registered. Alluding to the sanitary condition of his district, Mr. Pollard points out that he has only recently been appointed health-officer, and his knowledge, therefore, is somewhat imperfect. He found, however, on inspection, that the evils complained of in his predecessor's report still existed. One of these was the faulty condition of the outside sinks in front of most of the houses; while another, and one far more serious, was the foul state of the privies and ashpits. Both are deficient in number, and not properly emptied, many of them overflowing. In one case, the health-officer found that a privy, which served for six houses, had not been emptied for nearly three years. Mr. Pollard rightly urges upon his authority the necessity of some systematic system for the emptying of these receptacles; and the authority would do well to consider whether this could not be most efficiently done by their own officers.

SALTLEY.—There is nothing of interest in Mr. Cresswell's report for 1881, which is a plain record of business done during the year. There was a diminution both in the general death-rate and in the zymotic mortality, the former being equal to 15.11, and the latter to 1.86 per 1,000 of population. There was an "improvement" also in the infantile mortality, though a proportion of 47 per cent. to the total mortality cannot be regarded as in the least satisfactory. Zymotic diseases caused twelve deaths, phthisis nine, diseases of the chest sixteen, and heart disease five. The report contains a short *résumé* of the sanitary con-

dition of the district, from which it appears that the slaughter houses were subjected to their usual inspection and were found satisfactory. The main sewerage works seem now almost completed, and improvement should result from this and also from the adoption of by-laws, on the model of those issued by the central board. The water-supply, however, seems far from satisfactory, since out of seventeen samples of suspected water which were analysed, no less than sixteen were found to be largely contaminated with organic matter. The extension of the public supply from the Birmingham Water Works will doubtless remove this evil.

ROTHERHAM.—Whilst many improvements were effected in this town during 1880, there still remains ample scope for continued activity on the part of the health-officer and of the Town Council. Rotherham, which contains a population of about 34,404 souls, is still without a hospital for the isolation of infectious diseases, and the borough is unprovided with a mortuary. Moreover the condition of the newly added portion is far from satisfactory. It is almost impassable, and is damp and unhealthy, many of the houses being undrained, and some of the cellars even containing sewage matter, whilst the two districts of Earlswood and Moorgate are still drained into cesspools. During the past year there were 1,428 births, and 739 deaths (43 of the latter, however, were in the workhouse and in the Rotherham Hospital). The death-rate, 20.16 per 1,000, was considerably in excess of that for 1879, which only reached 17.20. The increased mortality was, Dr. Hardwicke states, due chiefly to an outbreak of scarlet-fever, and to an increase in the number of deaths from diseases of the respiratory organs; but his report contains little or no information on these subjects. Scarlet fever was responsible for 45 deaths, more than half of the total zymotic mortality (88). There was a considerable diminution in the number of deaths in public institutions, the total occurring during the year being only 45, against 82 in 1879, and an average of 66. The report also shows a diminished number of infantile deaths, the percentage of these cases to the total mortality having fallen from 10.25 in 1879 to 7.35.

SOUTHAMPTON.—Basing his calculations upon a population of 59,916, Mr. Osborne reports that the birth- and death-rates of Southampton were last year 33.69 and 19.17 per 1,000 respectively. Of the total deaths 128 were due to zymotic diseases, of which 43 were from whooping-cough, 39 from diarrhoea and dysentery, and 21 from scarlatina and dypsy. In alluding to the prevalence of scarlatina in his district, Mr. Osborne states that he found the greatest number of cases existed amongst the children of a national school, which he was unsuccessful in closing. He obtained permission, however, to disinfect the schoolrooms, a course which he thinks should be more universally adopted. Eight deaths were attributed to enteric fever, two of which were specifically stated to have been found in connection with defective sanitary arrangements. Small-pox was brought into the district during the second quarter of the year, but the immediate isolation of the sufferer in the infectious hospital prevented the disease from effecting a lodgment in the town. The health-officer draws attention to the value of the accommodation thus afforded, and adds that in addition to three cases of small-pox, six of scarlet fever, and one of chicken-pox were admitted to the hospital, all of which were discharged cured. Considerable activity appears to have been displayed in the work of sanitary inspection, and Mr. Osborne reports the abatement of many structural defects in houses, overcrowding, and many minor trade nuisances. Special inspection of the common lodging-houses was made in consequence of a representation from the Local Government Board suggesting such a course, in view of the probability of small-pox being introduced into the town by emigrants. Appended to the report on the borough is one on the tything of Portswood, which now possesses a population of 7,062 souls. During the year, there were 234 births and 106 deaths registered. Scarlatina was somewhat prevalent, but no fatal cases were recorded. Two deaths were attributed to typhoid, and three to whooping-cough. Some improvement was made in the matter of surface-drainage, but the condition of the districts still needs the continued attention of the authority.

FULHAM.—During the first quarter of the present year, the total deaths in this district represented an annual rate of 25.4 per 1,000, while that for the whole of London was as high as 28.7. In the corresponding quarter of 1880, the rate was only 23.3, and Mr. Collier attributes the present high mortality-rate to the great and sudden variations in the temperature. Of the total deaths, 225 were those of infants of 12 months and under, and 159 happened in persons over 60 years of age. An enormous increase is reported in the zymotic mortality, no less than 159 deaths being attributed to these causes, against 49 for the corresponding quarter of 1881. The increase is readily accounted for by the mortality from whooping-cough, which is held responsible for 114 deaths. During the quarter, only 8 cases of small-

being 139 more than in 1879, and 25 more than in 1880. The chief fatality was caused by measles which occurred epidemically in the last quarter of the year, when the disease prevailed to an enormous extent, causing no less than 111 deaths—more than 50 per cent. of the total zymotic mortality. In some parts of the town where the epidemic was most severely felt, Mr. Cogan secured the closing of several schools and is able to assert confidently that this course was unmistakably followed by a speedy abatement of the epidemic. The fatal cases were chiefly among children from one to five years of age, 81 such deaths being registered, while 16 were infants under one year of age. The health-officer adds that so extensive was the prevalence of the disease that, excepting the closure of the day-schools, all precautionary measures for mitigating its spread were impracticable. Scarlet fever was also present in the town; and 36 deaths were attributed to this cause, being the largest mortality experienced since 1877. Whooping-cough caused 32 deaths; but only 20 deaths happened from diarrhoea, against 147 in the previous year—a result which is attributed to the low summer temperature of 1881. Mr. Cogan has some observations on the subject of the compulsory notification of infectious disease, the successful working of which would, he thinks, be sensibly frustrated unless at the same time provision were made for the hospital treatment of infectious cases.

HOVE.—During the first quarter of the present year, four deaths were registered from small-pox here; but Dr. Kebbell is able to state that there is not now a single case of that disease in the town. The epidemic of small-pox, which has been prevalent in a part of the district since August, has been almost entirely confined to the labouring classes in the parts of the town where it first appeared; and there has not been a single death from the disease amongst the middle or upper classes, either in the neighbourhood or elsewhere. This the health-officer attributes to the care taken by the latter in efficiently protecting themselves by vaccination and re-vaccination. If, he adds, the same care could be bestowed upon the working classes, amongst whom, there is every reason to believe, vaccination is very indifferently performed, while many object to it altogether, and who, as a rule, cannot be persuaded to take any precautions to keep out of the way of infection, there is little doubt that small-pox would, before long, become a rare disease, and might perhaps be eventually eradicated altogether. The death-rate for last quarter was, unfortunately, the highest (19.0 per 1,000) yet recorded. The total deaths registered were 105; and of these, 21 were from zymotic diseases, whooping-cough accounting for 13, small-pox for 4, scarlet fever for 3, and diphtheria for one. During the quarter, a house-to-house inspection was made of some parts of the town—a practice that has been adopted in other health-resorts with excellent results.

OBITUARY.

SIR JAMES ALDERSON, M.D., D.C.L., F.R.S.

At the moment of going to press, we hear with regret of the death of the veteran physician, and ex-President of the Royal College of Physicians of London, Sir James Alderson, D.C.L., F.R.S. Sir James Alderson had attained a very advanced age, being more than octogenarian, and had for some years retired from active professional life. He filled the office of President of the College from 1867 to 1870, being knighted in 1869, and receiving the honorary degree of D.C.L. from the University of Oxford in 1870. The deceased physician was the son of Dr. John Alderson of Hull; he was Sixth Wrangler at Cambridge in 1822, and became Fellow of Pembroke College. On the opening of St. Mary's Hospital, Paddington, he was elected senior physician, and held that office for twenty years. Sir James Alderson was a man of cultivated mind, kindly disposition, and correct and courteous deportment. He was spare and erect in figure, and reserved in manner, conservative in his opinions, little disposed to scientific novelties or collegiate reforms; acute in thought, simple in diction, trustworthy in diagnosis, attentive to detail in treatment, and with a full sense of professional and personal responsibility. The honour of his calling and his college were safe in his hands; and with him passes away one of the earlier type of physicians whose sense of dignity, academic propriety, and culture were among their most marked and agreeable characteristics.

THE Very Rev. Dr. Egan has been appointed Rector of the Catholic University, and a Fellow of the Royal University of Ireland.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, September 7th, 1882.

Church, William, Hereford Road, Bayswater.
Hull, Walter, Acton, Middlesex.
Larder, Herbert, Denmark Hill, Wimbledon.

The following gentleman also on the same day passed the Primary Professional Examination.

Bullock, Thomas Warren, St. Thomas's Hospital.
Jefferies, Horace, Queen's College, Birmingham.
Plummer, Henry George, Guy's Hospital.
Mander, Percy Robert, Westminster Hospital.

MEDICAL VACANCIES.

The following vacancies are announced:—

- ANDERSON'S COLLEGE DISPENSARY.**—Physician. Applications to D. Wilson, Honorary Secretary.
- ANDERSON'S COLLEGE DISPENSARY.**—Surgeon. Applications to D. Wilson, Honorary Secretary.
- AYR NEW HOSPITAL AND DISPENSARY.**—House-Surgeon to the Hospital and Surgeon to the Dispensary. Salary, £50 per annum. Applications to R. McCallum, Town Chamberlain, Ayr, by September 22nd.
- BALLATER AND SURROUNDING DISTRICT.**—Medical Practitioner. Salary, £35 per annum. Applications, by October 1st, to J. Rinch, Inspector of Poor.
- DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL,** Leicester Square, W.C.—Demonstrator of Contour and Cohesive Fillings. Salary, £50 per annum. Applications by September 29th.
- DERBY AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.**—Assistant-Surgeon. Salary, £170 per annum. Applications by September 27th.
- DOWNPATRICK UNION.**—Medical Officer for Portaferry Dispensary District. Salary, £100 per annum, with £15 yearly as Medical Officer of Health, registration, and vaccination fees. Election on September 20th.
- DURSLEY UNION.**—Medical Officer. Salary, £80 per annum. Applications by September 27th.
- GENERAL HOSPITAL FOR SICK CHILDREN,** Pendlebury, Manchester.—Junior Resident Medical Officer. Salary, £80 per annum. Applications by September 27th.
- GLENLIES UNION,** Dungloe Dispensary District.—Medical Officer. Salary, £110 per annum, and £15 as Medical Officer of Health. Applications by September 26th.
- GREAT NORTHERN HOSPITAL,** Caledonian Road, N.—Dispenser. Salary, £100 per annum. Applications by September 30th.
- HAMPSTEAD PROVIDENT DISPENSARY.**—Medical Officer. Applications, by September 23rd, to the Secretary, 23, High Street, Hampstead.
- JOINT COUNTIES' ASYLUM,** Carmarthen.—Junior Assistant Medical Officer. Salary, £100 per annum. Applications by September 30th.
- LISMORE UNION.**—Medical Officer for Workhouse and Fever Hospital. Salary, £100 per annum. Applications by October 4th.
- MACCLESFIELD GENERAL INFIRMARY.**—Junior House-Surgeon. Salary, £70 per annum. Applications to the Chairman, House Committee, by September 23rd.
- MANCHESTER ROYAL INFIRMARY.**—Resident Surgical Officer. Salary, £150 per annum. Applications by September 22nd.
- MIDDLESEX COUNTY LUNATIC ASYLUM,** Colney Hatch.—Assistant Medical Officer. Salary, £150 per annum. Applications by September 26th.
- PARISHES OF NORTHMAVINE AND DELTING,** Shetland.—Medical Officer. Salary, £60 per annum. Applications to T. M. Adie, Esq., Voe, Shetland, by September 30th.
- QUEEN'S COLLEGE, CORK.**—Chair of Natural History. Candidates to forward testimonials, on or before September 20th, to the Under Secretary, Dublin Castle.
- RADCLIFFE INFIRMARY,** Oxford.—Resident Medical Officer. Salary, £100 per annum. Applications by September 30th.
- ROYAL INFIRMARY OF EDINBURGH.**—Pathologist. Applications to Mr. Peter Bell by September 30th.
- SALFORD UNION.**—Assistant Medical Officer and Dispenser. Salary, £140 per annum. Applications by September 18th.
- ST. GEORGE'S, HANOVER SQUARE, PROVIDENT DISPENSARY,** 59, Mount Street.—Resident Medical Officer. Salary and allowance for last year, £214 4s. 3d. Applications to Mr. G. H. Leach, Secretary, by September 30th.
- UNIVERSITY OF ABERDEEN.**—Six Examiners in Medicine. Salary, £30 per annum. Applications to Robert Walker, Secretary.
- WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.**—House-Surgeon. Salary, £70 per annum. Applications by September 20th.
- WINCHCOMB UNION.**—Medical Officer for the Vale District. Salary, £65 per annum. Applications by September 22nd.
- WORCESTER COUNTY AND CITY LUNATIC ASYLUM.**—Second Assistant Medical Officer. Salary, £100 per annum. Applications by September 22nd.

MEDICAL APPOINTMENTS.

BARROW, A. Boyce, M.B., F.R.C.S., appointed Assistant-Surgeon to the West London Hospital.

BUSH, J. Paul, M.R.C.S.Eng., L.S.A., appointed House-Physician to the Bristol Royal Infirmary, *vice* C. S. Watson, M.B., resigned.

COBBOLD, C. S. W., M.D., Assistant Medical Officer Colney Hatch Asylum, appointed Medical Superintendent of Earlswood Asylum, *vice* G. W. Graham, M.D., appointed Commissioner in Lunacy for New Zealand.

COLLINS, G. W., M.R.C.S., appointed Resident Medical Officer to the Wednesbury Small-pox Hospital.

COOK, J. N., M.R.C.P., appointed House-Surgeon to the Great Northern Hospital, Caledonian Road, N.

COURTNAV, John Hoysted, M.K.Q.C.P.I., L.R.C.P.Lond., appointed Honorary Consulting Surgeon to the Echuca District Hospital, Echuca, Victoria, Australia.

CRADDOCK, Frederick Hurst, B.A., M.R.C.S., L.S.A., Senior Assistant Medical Officer of the Worcester County and City Asylum, appointed Medical Superintendent of the Gloucester County Asylum.

HENDLEY, Harold, M.R.C.S.Eng., appointed House-Surgeon of the West London Hospital, *vice* Richard W. Lloyd, M.R.C.S.Eng., resigned.

HOPKINS, John Walter, M.R.C.S., appointed House-Surgeon and Secretary to the Royal Isle of Wight Infirmary, Ryde, *vice* T. M. Kendall, L.R.C.S., L.R.C.P.Ed., resigned.

THOMPSON, J., M.D., appointed Honorary Treasurer to the Irish Graduates' Association.

THOMPSON, J., M.D., appointed Surgeon to the Surgical Appliance Society, Finsbury Circus.

SMALLMAN, B. F., L.K.Q.C.P.I., appointed Medical Officer to the Boston Union, *vice* J. A. Storey, L.R.C.P., resigned.

SWABY-SMITH, C., M.R.C.P., appointed Honorary Surgeon to the West Metropolitan Fire Brigade.

WEST, John A., M.R.C.S., appointed Clinical Assistant and Registrar to the North-Eastern Hospital for Children, Hackney Road.

HEALTH OF FOREIGN CITIES.—According to a table in the Registrar-General's return for the week ending August 26th, the annual death-rate averaged 24.5 per 1000 in the three principal Indian cities, and was equal to 21.4 in Calcutta, 24.6 in Bombay, and 27.4 in Madras. Cholera caused 19 deaths in Calcutta, and 8 fatal cases of small-pox occurred in Madras. According to the most recent weekly returns, the average annual death-rate per 1000 persons, estimated to be living in twenty-three of the largest European cities, was equal to 28.0 per 1000; this rate showed the usual marked excess upon the average rate in twenty-eight of the largest English towns, which did not exceed 22.7 per 1000 last week, or 5.3 below the mean rate in the European cities. The rate in St. Petersburg was equal to 45.8, and showed a slight increase upon the rate in the previous week; diarrhoeal diseases caused 191, or nearly a third of the deaths from all causes within the city. In three other Northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged 27.6; the excess of mortality in these towns was mainly due to the fatality of diarrhoeal diseases in Copenhagen and Stockholm, and of whooping-cough in Christiania. The Paris death-rate was 24.0, and slightly lower than in the previous week; the fatal cases of typhoid fever were 74, being 32 less than the number in the previous week, and 28 deaths from diphtheria were also reported. The 196 deaths in Brussels, which included 56 from diarrhoeal diseases, were equal to a rate of 25.4. The death-rate in Geneva, however, did not exceed 18.8. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate did not exceed 22.2; the highest rate was 23.5 in Amsterdam, where 4 fatal cases of whooping-cough and 2 of "fever" were recorded. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 28.9 per 1000, and ranged from 22.8 in Vienna and 24.1 in Hamburg, to 33.4 in Berlin and 35.3 in Breslau. Diarrhoeal diseases showed especial fatality in Berlin, Breslau, and Munich; and small-pox caused 11 deaths in Vienna and 6 in Buda-Pesth. In four of the principal Italian cities, the death-rate averaged 27.9; the lowest rate was 23.4 in Turin, and the highest 34.0 in Naples. Fevers caused 20 deaths in Rome, and scarlet fever 15 in Naples. In four of the largest American cities, the average death-rate was no less than 43.1; the rate was 26.7 in Baltimore, 31.3 in Philadelphia, 52.1 in Brooklyn, and 52.5 in New York. Excessive diarrhoeal fatality was the main cause of the high death-rates in these American cities. Typhoid fever caused 10 deaths in Philadelphia.—The return for the week ending September 2nd shows that the annual death-rate in the three principal Indian cities averaged 27.8 per 1000; it was 25.6 in Bombay, 26.0 in Calcutta, and 33.7 in Madras. Cholera caused 18 deaths in Calcutta, and small-pox 11 in Madras. According to the most recent weekly returns, the average annual death-rate, per 1000 persons estimated to be living in twenty-three of the largest European cities, was 27.6 per 1000; this rate showed the usual marked excess upon the average rates in twenty-eight of the largest English towns, which during last week did not exceed 22.7 per 1000. The rate in St. Petersburg was 42.1, but showed a further decline from still higher rates in recent weeks; no fewer than 188, or more than a third of the deaths from all causes, resulted from diarrhoeal diseases. In three other Northern cities—Copenhagen, Stockholm, and

Christiania—the death-rate averaged 33.6, showing a further increase upon the rates in recent weeks, mainly owing to the fatality of diarrhoeal diseases; scarlet fever caused 7 deaths in Stockholm and 5 in Copenhagen. The Paris death-rate declined to 23.4, although the 1006 deaths included 165 from infantile diarrhoea, 82 from typhoid fever, and 26 from diphtheria and croup. The 179 deaths in Brussels, which included 40 fatal cases of diarrhoeal diseases and 3 of small-pox, were equal to a rate of 25.2. The death-rate in Geneva was 30.3, but no exceptional zymotic fatality is reported. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate did not exceed 20.3, the highest rate being 23.8 in Rotterdam. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 28.6, and ranged from 22.5 and 24.0 in Vienna and Munich, to 31.0 in Trieste and 40.2 in Breslau. Diarrhoeal diseases showed considerable fatality in all these German cities, and small-pox caused 12 deaths in Vienna. In four of the principal Italian cities, the death-rate averaged 27.5; it was 22.7 both in Rome and Turin, 31.2 in Naples, and 34.3 in Venice. Scarlet fever caused 8 deaths in Naples, and typhoid fever 4 in Turin; while the high rate in Venice was mainly due to the fatality of diarrhoeal diseases. In four of the largest American cities, the death-rate averaged 32.8, and ranged from 23.5 in Philadelphia to 40.5 in New York. Diarrhoeal diseases showed fatal prevalence in each of these American cities; typhoid fever caused 11 deaths in Baltimore and 10 in Philadelphia, while 6 fatal cases of small-pox were recorded in Baltimore.—For the week ending September 9th, in Calcutta and Bombay the annual death-rate was equal to 23.8 and 25.0 per 1000 respectively; 81 deaths were referred to "fevers" in Bombay, and 66 in Calcutta, where also 7 fatal cases of cholera were returned. According to the most recent weekly returns, the average annual death-rate in twenty-three European cities was equal to 26.2 per 1000 of their aggregate population, showing the usual excess upon the average rate in twenty-eight of the largest English towns, which during last week was 19.9. The rate in St. Petersburg was 46.7, against 45.0 and 42.1 in the two preceding weeks; 200 of the 600 deaths during the week were referred to diarrhoeal diseases, equal to a rate of 15.6 per 1000, whereas the death-rate from these diseases in London last week did not exceed 1.3 per 1000. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged 28.0, the highest rate being 30.9 in Stockholm, where 55 deaths resulted from diarrhoea. The Paris death-rate was equal to 21.7, showing a further decline from the rates in recent weeks; 63 deaths, however, were referred to typhoid fever, equal to an annual rate of 1.47 per 1000, whereas in London the rate of mortality from this disease was last week only 0.15 per 1000. The 193 deaths in Brussels were equal to a rate of 24.6 per 1000, and included 42 from diarrhoeal diseases. The rate in Geneva was as low as 14.3, and showed a considerable decline from those in recent weeks. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the death-rates ranged from 16.8 in Rotterdam to 21.9 both in Amsterdam and the Hague; typhoid fever caused 4 deaths in Amsterdam, and a fatal case of small-pox was returned in Rotterdam. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 26.7, and ranged from 20.6 and 22.9 in Dresden and Hamburg, to 32.2 in Breslau and 33.6 in Trieste. Diarrhoeal diseases caused 166 deaths in Berlin, and showed a general excess in the other German cities; 11 deaths were referred to small-pox in Vienna and 10 in Buda-Pesth. The death-rate averaged 24.8 in the four principal Italian cities, and ranged from 19.3 in Rome to 30.1 in Naples; scarlet fever caused 11 deaths in Naples, and 5 deaths were referred to typhoid fever in Turin and 4 in Venice. In four of the largest American cities the death-rate averaged 30.6; it was equal to 25.4 in Philadelphia, 28.7 in Baltimore, 29.0 in Brooklyn, and 38.7 in New York. Excessive fatality of diarrhoeal diseases caused the comparatively high death-rate in each of these cities, 281 deaths being referred to them in New York and 146 in Brooklyn. Typhoid fever caused 7 deaths both in Philadelphia and Baltimore.

PRESENTATION.—Dr. John W. Cook, being about to leave Manningtree, has been presented with a silver inkstand, a purse of gold, and a list of the subscribers, handsomely illuminated, as a token of esteem, and of regret at losing his valuable services.

THE SISTERS OF CHARITY at Aspinwall, in consequence of the medical staff, the dispensers, and male nurses being down with fever, have had to manage the whole establishment of the Canal Company's Hospital in that town.

DR. WILLIAM NASSAU IRWIN died at his residence in Monaghan last week, at an advanced age. The funeral was a very large one, and the coffin was carried to the hearse by a number of the staff of the Monaghan Regiment, to which the deceased had been so long attached.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....	Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopaedic, 2 P.M.
TUESDAY.....	Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 2 P.M.
WEDNESDAY..	St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopaedic, 10 A.M.
THURSDAY....	St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.
FRIDAY.....	King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.
SATURDAY....	St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARGING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin M. Th.; Dental, M. W. F., 9.30.
GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.
KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th., 2; Throat, Th., 3; Dental, Tu. F., 10.
LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.
MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.
ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopaedic, F., 12.30; Dental, Tu. F., 9.
ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p. Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopaedic, W., 2; Dental, Tu. S., 9; Th., 1.
ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., Tu. F., 2; Eye, Tu. F., 9.15; Ear, M. Th., 2; Skin, Tu. Th., 1.30; Throat, M. Th., 1.45; Dental, W. S., 9.30.
ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.
UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. T., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.3.
WESTMINSTER.—Medical and Surgical daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with Duplicate Copies.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

ANECDOTES OF THE BRITISH MEDICAL ASSOCIATION.

SIR,—Will you allow me to indicate to your correspondent "T. L.", in the JOURNAL for August 26th, the existence of some doubt regarding the originality of the *bon mot* attributed by Mr. J. Noake to the late Dr. Malden of Worcester, who, at the Bath dinner in 1838—when champagne-corks were making a great noise—is reported to have said to a gentleman across the table, "Dr. Macartney, I drink your good health, and congratulate you on coming all the way from Ireland to see so many beautiful 'Drawings of Cork'."

It would appear that the reference to the "Drawings" is merely an alteration of the witty repartee made long before by the celebrated comedian Foote.

The late Mark Lemon, *Anecdotes and Sayings* (Macmillan, 1864), relates that the "English Aristophanes", after one of his trips to the sister kingdom, and praising the hospitality received there, was asked by a gentleman if he had ever been at Cork, and replied: "No, sir; but I have seen many 'Drawings' of it."

Perhaps the Dr. Macartney alluded to may have been the well-known Professor of Trinity College, Dublin, author of the *Treatise on Inflammation*.—I am, sir, yours truly, A MEMBER.

EARTH-CLOSETS.

SIR,—In reply to the inquiry of "Medical Officer of Health" as to construction of earth-closets, allow me to state that a little pamphlet (price sixpence) has been published by Mr. Leonard Armstrong, Medical Officer of Health for Newton Abbot, *On the Advantages and Arrangement of Dry Ash and Earth-Closets in Country Districts*, in which the principles that should regulate all dry systems, and various plans of applying these principles, are shortly pointed out and explained. This pamphlet would probably supply your correspondent with the directions he requires.—Yours, etc., M.E.

THE DEATH-RATE OF EDINBURGH.

SIR,—In the JOURNAL of September 2nd, there was a letter from Dr. Carter of Liverpool, requiring attention on my part, as I have no doubt the matter he refers to was sent by me. My authority for the statement in the JOURNAL of January 7th, 1882, was the *Scotsman* of Monday, January 2nd, 1882, in which it was stated that the death-rate per 1,000 of the population of Edinburgh for 1881 was 20.06, and the number of deaths 4,581. A tabular statement regarding the previous five years was also given in the same paragraph.

Year.	Deaths.	Rate per 1,000 of the population.
1880	4,694	21.05
1879	4,195	19.06
1878	4,676	21.53
1877	4,442	20.86
1876	4,149	19.51

This statement, publicly circulated, was unchallenged, as was also the part of it which appeared in the JOURNAL until Dr. Carter directed attention to it. Probably it was unobserved by Dr. Littlejohn; but that gentleman has it in his power to furnish the official return, and by so doing, not only to settle the question in a satisfactory manner, but possibly enable me to discover the cause of the discrepancy between Dr. Littlejohn's and the *Scotsman's* statements regarding the mortalities.—I am, etc., YOUR EDINBURGH CORRESPONDENT.

SUGGESTION FOR A SICK FUND.

SIR,—I have read with pleasure the two admirable letters in your JOURNAL from Messrs. Boys and Measures respecting the establishment of a sick fund. I have long thought that there should be some society of this kind amongst the middle classes. There are a host of us hard working individuals, who would hail with delight a sick club or society of this kind. There are the Oddfellows' and Foresters' clubs for the working classes; why should there not be a similar one for us hard-worked practitioners? I have suggested the scheme to several insurance companies, and they have one and all declined to take the matter up, and said it would not pay; but I am convinced that, if properly managed on good sound principles, it would not fail to pay.

If the British Medical Association would start a scheme of this sort, I am sure it would be supported by a large number of the medical profession. This society should be for sickness only, as insurance against accident is well provided for by the several accidental insurance companies now existing. Every member joining should pay an entrance fee of two guineas. This would give the society a fund to start with. Then the annual premium should be regulated according to the weekly allowance when ill. I would make one more suggestion, which is this. The amount of annual premium should be also governed by the age of a member at the time of joining the society; for it would be very unfair for a member joining at the age of thirty to pay as much as a member joining at fifty years of age.

I hope the British Medical Association will take the matter up, and start a benefit sick club for us; but, should they decline to do so, I should be happy to co-operate with any of my medical fraternity with a view of establishing a society for the objects above named.—I remain, sir, yours faithfully, EDWIN CHILD.

Vernham, New Malden, September 4th, 1882.

PEDICULI CAPITIS.

SIR,—I should feel much obliged if any of your correspondents would kindly tell me what form of application they have found most cleanly and most efficacious for the destruction of pediculi capituli and their eggs in a case where they are due to accidental contact with an unsuspected source, and in which scrupulous cleanliness is carried out. It is undesirable to cut the hair, which is long and thick, if possible.—I am, etc., INSECTICIDE.

INJUDICIOUS PRAISE.

It is much to be regretted that the friends of medical men will sometimes, with the best intentions, send to the local papers such injudicious remarks as the following, which appears in the *Derbyshire Times* of September 2nd. "Some years ago, the local Oddfellows' lodges banded themselves together at Chesterfield, and established the Chesterfield Medical Aid Association, a society which retained the services of a duly qualified medical man, and thus secured to the members medical assistance at economical rates. I regret, for the sake of the poorer classes, to hear that the Association is to be wound up at the end of the present quarter from lack of funds, a collapse probably due to want of experience in the management. This will be unwelcome intelligence to many among the working classes; but fortunately the medical officer hitherto—Mr. E. Madeley, M.R.C.S.Eng., L.S.A.Lond.—does not intend to remove, but remains in Chesterfield; and no doubt the societies will be able to make individual arrangements in lieu of the united action which has now come to an end. The Association has been valued hitherto by a considerable section of the working classes, who will be glad to hear that, although the institution cannot be kept up, their medical adviser will still be accessible."

Wednesday morning, in a state of great alarm. He said he awoke in the night, with pains in the site of the old wounds radiating upwards to the neck and throat, the arm having a peculiar dead sensation, accompanied at the same time with great mental anxiety and horrible apprehensions. Careful physical examination revealed nothing but cardiac debility. During the next few hours, decided hydro-pneumothorax symptoms rapidly developed, with paroxysms of dyspnoea and dysphagia, which lasted for forty-eight hours. On the third day, he was able to take large quantities of beef-tea, etc.; but, notwithstanding that the dyspnoea and dysphagia both subsided, he continued to get weaker, and died on the Friday (third day), of cardiac asthenia, calm and conscious to the last, and only begging to be let alone. *Post mortem* examination revealed a port-wine condition of the larynx and trachea, and congestion of the lungs.

My principal reason for going so fully into this case is, to warn my professional brethren against putting any faith in nitrate of silver, unless the wounds be of the most superficial character. I now use the strong acids, as there can be no doubt their penetrative powers are infinitely superior to the nitrate of silver, which is decomposed directly it comes into contact with the blood.—I am, sir, yours truly,

W. HENRY DAY.

Clayton House, Pentonville, N., August 23rd, 1882.

MEDICAL RUBBING.

SIR,—Will you permit me to supplement Mr. Fletcher Little's paper on Medical Rubbing, which was read at the annual meeting of the British Medical Association in Worcester, and is published in your issue of August 26th, by impressing upon your readers, more emphatically than his writing appears to do, the great importance of the operator being not only in perfect health, but also within the range of vigorous manhood. Mr. Little says, very truly, "the rubber should be strong and healthy, bright and cheerful, with plenty of energy and intelligence. A stupid lout cannot make a good rubber." Now, although a stupid fellow does not make an efficient rubber, experience teaches that the manipulations of an aged or unsound rubber, be his energy and intelligence ever so great, are as likely to prove injurious to the invalid upon whom he operates as are the awkward and clumsy actions of the other. Whenever two persons are brought into close and frequent contact, there is an interchange, or an effort is made to establish an equilibrium, of the vital forces of the two individuals, the energy of the less robust being increased by the absorption of that of the more robust one. It is therefore easy to conceive of the possibility of a rubber, even while influencing his patient beneficially in some respects, doing him harm in others. Some time ago, I became acquainted with a case which showed that the dangers to be apprehended from employing an unsuitable rubber are not fanciful. The patient, instead of being relieved by the intelligent and persevering exertions of the operator, gradually became worse, and it was not until a more capable substitute was obtained that her convalescence commenced.

The value of efficient rubbing, especially in chronic diseases, can only be properly estimated by those who have had practical experience of its efficacy; and a recognition of this fact should lead medical men, before employing a "professional", to satisfy themselves as to the soundness of his physical condition, as well as to his general fitness for the work he may be called upon to undertake.—I am, etc.,

GEORGE LADE, M.D.

Hydrotherapeutic Establishment, Bushey, August 30th, 1882.

MEDICAL ETIQUETTE.

AN INNOCENT ABROAD.—Our correspondent is quite correct in believing that medical etiquette—following the custom of ordinary etiquette—provides that the medical practitioners residing in any place should call on the new comer. Their omission to do so in the present case may possibly be explained by what our correspondent tells us of the proceedings of the gentleman who started practice in the town before him. A broadcast issue of a pamphlet of testimonials is very likely to make the old professional residents shy of welcoming a new arrival, until they see of what stuff he is made. Very probable, when they see that our correspondent continues to act in accordance with the rules of ordinary professional propriety, they will make amends for their apparent neglect. In the meantime, let our correspondent avoid as poison everything in the shape of pamphlets of testimonials or cards in the newspapers. The cash question is not the thing to be considered; whether it cost pounds or pence, all such advertising of one's self is held in the medical profession to be disgraceful.

UNQUALIFIED.—The necessary information may be obtained by application to Dr. Pardee, University Medical College, 410, East 26th Street, New York; Dr. Curtis, College of Physicians and Surgeons, New York; the Dean, Medical Department, University of Pennsylvania, Philadelphia; the Dean, Jefferson Medical College, Philadelphia; Dr. Fritz, Harvard University, Boston.

AN OPERATION UNDER DIFFICULTIES.

SIR,—On May 13th, at 6 o'clock P.M., I was sent for in a hurry to see Cundasawmy, a Hindoo, a coolie who was working as a miner in one of the shafts on the Nunddydroog Company's property. I was told by the messenger that "a coolie had broken his arm, and was cut". I therefore brought with me a tourniquet, in addition to bandages, etc. This proved fortunate, as I found on my arrival where the patient was, a "cage" or "lift" had fallen from the surface to the bottom of the shaft where the coolie was then at the time standing, striking him and completely severing his right arm about six inches from the shoulder. I at once applied the tourniquet; he was then senseless, and to all appearance dying, but having given stimulants and waiting some time, I had the satisfaction to see him rally. I may here mention that, besides the injury to the arm, he had received two bad scalp-wounds, a severe crush of the chest (I could not make out any fractured ribs, but he subsequently suffered for over a week from well marked pleuro-pneumonia of the right side), wound of the elbow-joint of the left arm, besides several minor wounds on the legs and other parts of the body. The patient having rallied, I administered chloroform, and re-amputated the arm about four inches from the shoulder. The difficulties with which I had to contend were, that I had to do the operation kneeling, as the patient was on the ground (no table being available), in a small native grass hut, with hardly room to stand up or turn round in; to give and keep up the chloroform whilst operating myself, the only assistance I had being from one Englishman and a couple of natives (who would have been better away). The former held the remains of the arm, and with difficulty steadied so short a stump whilst kneeling on the ground. The operation was performed by the light of two candles, and during a tropical thunderstorm. Notwithstanding the very severe injuries this man had received, and his surroundings, he, with the exception of the pleuro-pneumonia, made an excellent recovery.—I am, etc.,

T. G. WHITE, L.R.C.S.I., L.K.Q.C.P.I., Medical Officer,
Kolar Gold Mining District, India.

BEAUTIFUL LANGUAGE.

THE baldness of medical writing is frequently alleged, not without reason, as a matter of complaint. It cannot, at least, be charged against the charming specimen of high medical eloquence which is deservedly put on record by a correspondent of the *Chicago Medical Review*.

"The Chicago physicians seem to have little appreciation of the great genius who is dwelling among them. It is the old story of the prophet being without honour in his own country; as witness the following from a Chicago paper which has accidentally come into my possession. At your Eclectic Medical Society, Dr. Moe detailed a case which had come under his own observation. It was, according to the doctor, a most remarkable case; one which seven other doctors had failed to treat successfully, and which had emerged from the most excruciating pain and the greatest combination of bodily ills under his treatment. The doctor's style of writing was fully as excruciating as the pain of his subject. Among other things, he said: 'Her friends rush to her aid and summons the noblest characters of the profession with all speed to her relief, she still moans for days for weeks for months and years in raging pain, her continued screams reaches the ears of the neighbors who are aroused and summoning grater number to her assistance until the surrounding country with seven regular physicians were running to her relief, and still she pleads for mercy. Professors from other States try their skill and yet her bitter grief is unceasing being starved for months and carcerated with scars from the clavicle to the diaphragm, all in one solid mass of corruption and pain, wailing and moaning without ceasing night and day here she lays in spasms for hours then for hours in torturing agony, weeping sobbing and taring in pain and begging for ease.' This was only a little of what ailed the woman. It took fifty pages of manuscript of a character similar to the above to explain it all. Finally, the doctor reached the influence exerted by eclecticism, and in connection therewith perpetrated the following. 'But in comes theory snorting like a fierce wild tiger snarling and biting her sharpened teeth, direct from the wilde forest of her science with her head erect and her high bushy tail that sweeps the clouds of ignorance. With lofty prancing she glides over the planes in her well beaten track, with gratitude she dashes upon the new made graves in joy of her heart. In this haughty greatness she is suddenly startled at the glimpses of those little bright eyes of that ragged infant who soothed the shrieking pains who caught the tartar and gave ear to those feeble uplifted hands and brought gladness with rejoicing welcom to her parents and friends.' The woman far outdid Dr. Tanner in fasting. One of her fasts lasted for one hundred and twelve days, and another for one hundred and eleven days. Upon the conclusion of the essay, Dr. Moe received the thanks of the Society, and one member said that his only regret was that the doctor was not at the bedside of President Garfield when he died."

ROTARY VACCINATORS.

SIR,—Being a sympathetic nervous man, desirous of being spared the pain of inflicting pain in vaccination, specially in the case of infants, I have tried various methods and various instruments, but have never been satisfied with the speed of the process, or the uniformity of the results. If the baby behave well, I get on pretty well; but, if it cry or struggle, my weak sight becomes weaker, my hand becomes somewhat unsteady, and I almost anticipate the mortification of finding one mark larger than I desired, and another smaller or absent altogether. I have, therefore, ever looked favourably on those instruments which profess, by one rapid motion, to give a painless, uniform, circular scratch; but cannot see how, with the instruments figured in advertisements, we can secure the absolute cleanliness which is now considered essential.

Can any member who has used the rotary instrument of Denis, or Warlomont, or Salt, give it a hearty commendation?—Yours truly,

AMO.

MAGGOTS IN FÆCES.

SIR,—I came across, the other day, a case which I believe to be unique. A boy aged to years, who had for some time past been observed to be out of sorts, pale, anæmic, with foul breath, passed a scybalous mass of fæces containing live maggots. When examined, this mass was found literally swarming with them. Such an unusual and alarming occurrence led to a strict investigation into the probable cause. A quantity of Kiel butter in use in the household was found to contain maggots, and no doubt this was the origin. Of the facts there can be no doubt, as I saw both the maggots passed from the bowel, and also those afterwards found in the butter.

I have mentioned this case to several neighbouring practitioners, none of whom ever heard of such a thing before; and I shall be glad if any of your readers can inform me of ever having met such a case. I enclose my card, and am, etc.,

MEMBER BRITISH MEDICAL ASSOCIATION.

BLOODLETTING.

SIR,—I had the pleasure of listening to Dr. Wade at Worcester; and his address has recalled to me reminiscences of the practice of fifty years ago. Writing from memory, Mr. Wardrop advised the horizontal position in bloodletting, that fainting might be prevented, and more blood drawn. Then came Dr. Marshall Hall, who advocated sitting, so that less might be drawn. And now, for many years, we have not bled at all; we cup much less frequently than thirty years since, and leech occasionally. The effect of Dr. Wade's address on my mind is, that we have erred in abandoning a truly scientific remedy; that it would be well to restore bloodletting to its legitimate place for doing good. As medical officer for the workhouse, I have, since my return, bled three cases, above middle age, chronic in their nature, and with as good results as I could wish. The condition in all was a cerebral one. The doctrine of inflammation, I was taught in Edinburgh by the late John Fletcher, author of *Rudiments of Physiology*, had for its basis the experiments of the late Sir Charles Hastings and Dr. Wilson Philip; preternatural dilatation of the capillaries, the result of preternatural degrees of stimuli—a dilatation varying only in degree from health; and that unloading the vessels by venesection might be necessary. I think, in letting bloodletting fall out of practice, we have not done all we could have done for our patients; we have laid aside a remedy, doubtless for different reasons by different minds; and, I think, have done wrong.—Yours faithfully,

T. L. WALFORD, M.R.C.S.

Reading, September 5th, 1882.

ACCIDENTAL STRANGULATION.

SIR,—The following instance of an unusual form of accidental strangulation having come to my knowledge, I lay it before you, with the hope that it will not be uninteresting to you and your readers.

Several years ago, while travelling in the Puttalam district, Ceylon, the details of the case were narrated to me on reliable authority. I quote from memory the story as I then heard it. In a certain village in that district, a dhotay (i.e., a

AN ADDRESS ON THE GERM-THEORY OF DISEASE.*

Delivered at the Annual Meeting of the East Anglian Branch of the British Medical Association.

By W. M. CROWFOOT, M.B.,

Surgeon to the Beccles Hospital; President of the Branch.

IN these days of rapid progress, when so many busy workers in all parts of the world are continually adding to our stores of knowledge, there is some danger, I think, lest the country medical practitioner, whose time is so fully occupied in the active duties of his profession, should lag behind in the race, and find himself unable to keep up with those who have more time and opportunity to devote to medical science. Perhaps, therefore, on occasions like the present, it may not be unprofitable to glance, not only at the principles which seem to animate the active workers of the present day, but also at the measure of success which has attended their labours.

"The germ-theory", briefly stated, is, that many diseases are caused by the presence in the system of minute germs or spores, which form no natural part of the body, but which, by their growth and multiplication in the body, give rise to the phenomena of the disease. The origin of these germs, though a matter of much interest and importance, is a separate question from, and is not involved in, the theory of causation of diseases by germs. This germ-theory has been used to explain the origin of a great number of diseases; but it will only be possible for me to glance at a few of these on the present occasion; and I propose to select those in which the theory in question has proved useful in suggesting means, either for prophylaxis or treatment.

The class of diseases whose phenomena are, perhaps, best explained by the germ-theory are the eruptive fevers—such as small-pox, scarlet fever, measles, typhus and typhoid fevers. The features which these complaints possess in common—such as their period of incubation, the fever which attends them, the local manifestation, such as the rash of small-pox, scarlet fever, and measles, and the intestinal ulcerations of typhoid fever; the fact that they have a definite period of duration, and attack patients, as a rule, but once in a life-time—are all better accounted for by the germ-theory than by any other. It has been clearly proved in the case of vaccine lymph, and more recently in the case of measles, that the contagium is particulate, *i.e.*, that it consists of minute particles. These, according to the germ-theory, are the germs of parasitic fungi. On finding an entrance into the system, either by being introduced directly into the blood, as in vaccination, or through the mucous membranes of the air-passages or alimentary canal, they commence growth, provided they can find in the body invaded a suitable soil; or, in other words, that material which they require for growth. The period of incubation corresponds with this period of growth, and also of reproduction. The few germs at first introduced increase a thousandfold. When this increase has reached a certain point, fever sets in, and a further change in the history of the parasite ensues, *viz.*, a process of fecundation, or something analogous to that of flowering in the higher plants, the result of which is the production of a vast number of fresh germs or spores. The fecundating process takes place in those parts of the body which are the seats of the local manifestations of the disease, *viz.*, in the skin, in the case of small-pox; in the skin and mucous membrane of the respiratory organs, in measles; and in the intestinal glands, in typhoid fever. When the material in the system on which these parasitic fungi live has all been exhausted, the disease comes to a natural termination. The definite period of duration of an eruptive fever is thus accounted for; and the fact that a person is, as a rule, attacked but once in his life by a disease of this class, is explained by the supposition, that the material on which the parasite feeds having been once destroyed, is either never, or only after a lapse of some years, and then only imperfectly, reproduced in the system. This is a very brief sketch of the application of the germ-theory to the explanation of the phenomena attending eruptive fevers. For a full account of the subject, I must refer my hearers to an *Essay on the Germ-Theory*, by Dr. MacLagan, which is especially interesting to us as general practitioners—inasmuch as he regards the question from a clinical point of view. Now, probably few of my hearers have the

time and opportunities for making elaborate physiological experiments, or minute microscopical investigations; but there are none of us who are not having the clinical features of the eruptive fevers constantly brought under our notice at the bedside of our patients; and we are all, therefore, well able to form an opinion as to how far the germ-theory is capable of explaining the symptoms which diseases of this class manifest.

Now, in testing the truth of this theory, it would seem natural that we should act upon the hints thrown out by Sir J. Paget in his very suggestive address, delivered at the Cambridge meeting of the British Medical Association in 1880, in which he directed the attention of his hearers to the study of the diseases of plants, as tending to elucidate obscure facts in human pathology. If the eruptive fevers be really caused by the growth in the body of parasitic fungi, we ought to learn something from the study of these fungi out of the body; and in this, I think, we shall not be disappointed. There is a fungus which appears in its life-history, and, to a certain extent, in its microscopic character, to bear a considerable resemblance to those attacking the human frame—I mean the well known yeast-plant, or torula cerevisie. This fungus consists of minute spherical or ovoid cells, varying from $\frac{1}{1000}$ to $\frac{2}{1000}$ inch in diameter. These cells, when placed in a suitable soil, such as a saccharine solution, begin, in three hours' time, to multiply by budding, and continue to do so for about three hours, when certain of them, which have become filled with minute granules, burst, and discharge their contents, and these minute granules become the germs of future yeast-plant. But while this physiological process has been going on, a remarkable chemical change has taken place in the saccharine solution, which has undergone the process of fermentation, and has been converted into alcohol and carbonic acid. It would seem probable that all genuine fermentations are due to the growth in the liquids undergoing fermentation of some species of fungus, though each variety of fermentation would seem to require its own special fungus for its production. The analogy existing between the process of fermentation, and the phenomena of eruptive fevers, has long been recognised; and, in consequence of this, the name zymotic diseases has been applied to these fevers; but the close relationship really existing was first shown, I believe, by M. Pasteur, who, in his investigations respecting chicken-cholera, showed—I, that this disease was produced by the presence of an oval bacterium in the blood; 2, that this fungus, when cultivated outside the body in chicken-broth, caused a fermentation, which ended in the production of an alkaloid; and 3, that when grown in the body of the living chicken, this same fungus gave rise to symptoms, many of which were similar to those seen in the eruptive fevers of man; and finally caused the death of the fowl. In the case also of common yeast, if the fungus be grown in blood outside the body, it decomposes the sugar of the blood, producing carbonic acid and alcohol. If introduced into the circulation of a living animal, it destroys life, causing inflammation and ulceration of Peyer's patches. M. Pasteur thinks that, when growing in the body, these fungi act mainly by abstracting oxygen. It is found that, when the yeast-plant is freely supplied with oxygen, it causes but little fermentative change; and M. Pasteur, applying this principle to the fungus which causes chicken-cholera, found that by growing it for some time in oxygen, he obtained a fluid whose active principle was so weakened, that it produced a very mild disease in fowls inoculated with it, but which seemed still to have great protective power against subsequent attacks of the disease; and he further extended this principle to the bacillus anthracis, or organism causing splenic fever in sheep; and, in consequence of his advice, protective inoculation has been extensively employed in France. The analogy, therefore, existing between the phenomena manifested in the growth of parasitic fungi in and out of the animal body, affords strong evidence in favour of the germ-theory as applied to eruptive fevers. On the other hand, it has been urged that if these diseases be caused by germs, these germs ought to be found in the blood. Now, in the case of splenic fever and relapsing fever, germs have been found abundantly in the blood, and have been clearly proved to be the efficient causes of the diseases in question. In most cases, however, the extreme minuteness of the germs would seem to be the reason why they have escaped detection.

If the full grown yeast-cells vary from $\frac{1}{1000}$ to $\frac{2}{1000}$ inch in diameter, how exceedingly minute must be the germs with which these cells are filled, each one of which germs is capable of reproducing, in a suitable soil, a plant similar to that from which it sprung. Moreover, the difficulty of distinguishing between such germs and ordinary granular matter, which may be found everywhere, must be almost insuperable. Professor Tyndall has, I think, clearly shown that, by the passage of a beam of light through the air on a liquid, floating particles may be detected so minute as to elude microscopic research. I think, therefore, that the fact that germs have not yet been detected in the blood

* We omit a few prefatory remarks by the author, of personal and local interest.

in many of the eruptive fevers, must not be considered to be a proof that they do not exist there. But though they have not been detected in the blood, yet in those parts of the body in which the local manifestations of the fever are found, organisms have been discovered in abundance. In the case of measles, Dr. Braidwood and Mr. Vacher state that they found numerous sparkling colourless bodies, like those found in vaccine, but larger, in the breath of the patients. They also found in two fatal cases, in the layer of true skin lying next to the rete Malpighii, numbers of these sparkling colourless bodies, which were unaltered by the material (carmine) used to stain the other constituents of the section. They found similar bodies in the liver and the lungs, but not in any other organs. They conclude from their observations, that the bodies found in the breath are the germs of measles; that they are conveyed by the blood to different parts of the body; and that the skin, and especially the lungs, are the favourite breeding-grounds of the contagium. These observations are published in the *BRITISH MEDICAL JOURNAL* for January 21st, 1882. In small-pox, minute organisms have been found in the fluid of the pustules; and in typhoid fever, Dr. Klein has shown that the lowest lesion is attended with the development of masses of minute organisms over and around the affected glands. In diphtheria, which is a disease presenting many analogies with the eruptive fevers, numerous observers have found that the mucous membrane of the part affected is infiltrated with masses of minute fungi or micrococci; and in erysipelas, an affection also closely allied to the specific fevers, micrococci have been found abundantly in the inflamed skin. The absence in these diseases of minute organisms from the blood is probably partly to be accounted for, as has been already suggested, by their minute size, and partly by the fact that the seat of the local lesion indicates the place where the parasite is propagated, and where it occurs in its perfect condition. In splenic fever and relapsing fever, in which organisms have been found in the blood, it would seem that the parasite attains its perfect condition and propagates itself in the blood itself, hence they are unattended with local lesions; while in the other specific fevers, the fungus exists only in the state of germs in the blood, and attains its full development in the parts affected by the local lesion.

Another objection which has been raised to the germ-theory, as applied to specific fevers, is that bacteria and other low forms of vegetable life are constantly found in various parts of the body without giving rise to disease; but the answer to this is, that there are harmless and injurious microphytes. As Dr. Burdon Sanderson has said, "All microzymes are not contagia; but all contagia may be microzymes"; and surely, from the analogies presented by the higher plants, this is only what we should be led to expect. It is extremely difficult to distinguish between the different species of the humbler plants, and yet these seemingly identical species may possess very different properties. So, also, the ova of even the highest animals may be indistinguishable from each other, yet we know that each ovum possesses a potentiality of its own, which leads to its development into a being similar to the one from which it sprang. As regards the eruptive fevers, I must say that I think the evidence in favour of the theory that they are produced by the growth and propagation of specific vegetable parasites in the body, is very strong.

Another class of diseases to which the germ-theory has been extensively applied, both theoretically and practically, is the group of traumatic infective diseases, including septicæmia, pyæmia, hospital gangrene, and possibly puerperal fever. So many divergent opinions have been expressed of late with respect to diseases of this class, and so many experiments and investigations, leading to different results, have been made for the purpose of elucidating their origin, that I find considerable difficulty in analysing the work done, and in forming a correct idea of what points may be considered as fairly established, and what are still doubtful. The most important recent researches are, I think, to be found in the Report of the Committee appointed by the Pathological Society to investigate the causes of these diseases, published in the *Transactions* for 1879; the experiments performed on animals by Dr. Koch, translated by the Sydenham Society in 1880; and the Report of the Committee appointed by the British Medical Association on Contagium, the last portion of which appeared in the *BRITISH MEDICAL JOURNAL* for February 25th, 1882. Koch, whose experiments are most interesting, and I think very important, found that, on injecting a large dose (eight drops) of putrefying blood under the skin of a mouse, the animal dies in from four to eight hours, and after death no bacteria or other microphytes are found in its blood or viscera; moreover, if its blood be injected into another mouse, it produces no effect. Koch considers that in such a case the animal has been killed by the chemical effect of the putrid blood—that death has been caused by a soluble poison, sepsine, which has been proved to exist in decomposing blood, and that no infective disease has been set up. If, however, a smaller

dose, one or two drops only, of the putrid blood be injected into a mouse, no effect may be produced, but in about a third of the animals experimented upon, a disease, with very marked and definite symptoms, exactly the same in all cases, ensues, and the blood becomes highly infective, a tenth of a drop being sufficient to infect, with the utmost certainty, another mouse, when injected under the skin. After death, no purulent deposits were found in the viscera, but the blood swarmed with minute bacteria, resembling those found in anthrax, but much smaller. This disease Koch calls septicæmia. He found that it could not be conveyed to rabbits, or even to field-mice.

A second disease, progressive gangrene in mice, Koch found was occasionally produced by the introduction of another microphyte in the septicæmic blood. This fungus, which appears as a micrococcus, and not a bacterium, spreads locally from the part infected, producing local gangrene, but does not infect the system generally. If another mouse be inoculated with the discharge from the gangrenous spot, similar results are just as infallibly produced as in the case of the septicæmia already alluded to. A third disease, called by Koch pyæmia in rabbits, was produced by injecting putrid fluids under the skin in these animals. After death, purulent infiltration of the subcutaneous tissue was found extending to the abdomen, spreading through the abdominal walls to the peritoneum, and causing extensive peritonitis. There were also metastatic deposits found in the lungs and liver. This disease proved to be as surely infective as the others, and under the microscope vast numbers of micrococci were found in the blood, which had a tendency to grow in chains, and were clearly distinguishable from other microphytes. Koch describes three other forms of infective disease which he produced in rabbits, and which he calls spreading abscess, septicæmia, and erysipelas, each of which was characterised by the presence of a perfectly definite and distinct micro-organism. The most important results of these experiments is the clear proof which they afford of the fact, that there are several species of infective microphytes, and that each one of these has a life-history of its own, and produces a separate and distinct disease, and this is only what we should expect from the facts disclosed by the eruptive fevers. Furthermore, I think we cannot fail to be struck by the analogy which these diseases described by Koch present to many of the cases of hospital gangrene, septicæmia, pyæmia, and traumatic erysipelas which we see in the human subject; though I think it would be very rash to conclude that they are identical with them. In fact, I believe that the opinion of those who have studied this part of the subject most, is that there are comparatively but few of the diseases of animals which are communicable to man. The Committee of the Pathological Society attacked these diseases, so to speak, from the opposite side to that on which they were approached by Koch. Instead of making experiments on animals, they investigated clinically cases of septicæmia and pyæmia in man. They only met with two doubtful cases analogous to those described by Koch, in which the dose of the poison is so large, and its effect so rapid, that there is no time for infective disease to be set up; and to those cases they apply the name of septic intoxication. In other cases of less rapid septic infection, and of pyæmia examination, of the blood showed the presence of microphytes in it in some cases, but not in all; and furthermore, that no form of bacterium is peculiar to any one kind of disease. On examination of the viscera, micrococci were found either in all, or at least some, of the viscera, and great pathological changes were often manifest in the structures infected by them. Moreover, they recognise, both in respect to septicæmia and also pyæmia, two classes of cases; in one the disease is not infective and the poison does not multiply in the system, and in the other a true general infective process is established.

The committee appointed by the British Medical Association, in their report on the Life-History of Contagium, published in the *JOURNAL* for February 4th, 1882, state that, from numerous experiments on rabbits, they consider that human lochia discharge of the fourth day invariably induces septicæmia in rabbits; that the fatal dose varies from half a drachm to a drachm, according to the size of the animal; that, when allowed to putrefy, it produces local irritation, in addition to the general visceral injuries; that it is most fatal when brought into contact with the pelvic peritoneum; that animal solutions mixed with it do not modify its lethal influence; and that micro-organisms are not present in it, nor are they necessary for the production of the septic properties of the solution. From experiments with other septic fluids, they infer that the presence of pus intensifies the power of a septic fluid, but that pus alone is not necessarily septic; that purulent fluid from the peritoneal cavity is more poisonous than that from connective tissue; and that putrefaction increases the septic action of a septic fluid. On examining microscopically the viscera containing secondary deposits, they found that these deposits were due

to embolism, exudation, and softening or caseation; but they failed to find any micro-organisms.

Lastly, there are the remarkable experiments of Rosenberger, noticed in the *Lancet* for February 18th, 1882. He exposed septic fluids to a temperature of 140° Cent. (284° Fahr.) for two hours, for the purpose of destroying microphytes in them; and then injected animals with them. He found that, though the virulence of these poisons had been weakened by the boiling, yet it had not been destroyed. If a sufficient dose were given, septicæmia was produced, and the blood of animals thus killed proved to be highly infective. Moreover, he found that every variety of septic fluid produced, after boiling, exactly the same form of organism as was produced when the unboiled fluid was used.

Now, on reviewing these various experiments and observations, both clinical and microscopical, what conclusions can we arrive at respecting the relations of the germs of micro-organisms to these traumatic diseases? The most popular theory at present seems to be, that they are the sole causes of this group of diseases. It is said that all putrefactive changes are owing to the presence of germs derived from the atmosphere in the substance undergoing putrefaction. This, however, has been stoutly disputed by some observers. Still I must confess that, to my own mind, the balance of evidence seems to be in favour of those who attribute all putrefactive changes to the agency of germs; but, even if this be granted, it does not follow that the poisonous properties of septic fluids are necessarily due to putrefactive changes. The experiments of Koch and others seem to show that a chemical poison may exist in septic fluids, which may act just as a dose of strychnia or aconite; and, if this be so, it may account for the development of septicæmia and pyæmia in some cases in which it would be difficult to suppose that any germs could have obtained admittance into the fluid the source of the infection. But, if it be granted that some cases of septic poisoning may be due to a chemical rather than an organised poison, still, I think it must also be allowed that there is a strong probability that many forms of septic disease are owing to the growth of microphytes in the body, acting in the same way as in the case of the eruptive fevers.

The experiments of Koch and many others; the discovery of micrococci and bacteria in the viscera in cases of pyæmia and septicæmia; and many of the clinical phenomena of diseases of this class, especially the highly infective character of some of them, all seem to point to this conclusion. The failure to detect these germs in some cases in which they might be expected to be found, may possibly be due to the great difficulty which there is in demonstrating them under the microscope, partly owing to their minute size, and partly owing to their being obscured by the tissues in which they are embedded. Thus, Koch found that it was only by using a peculiar method of staining, and a special mode of illumination, that they could be detected in his specimens. Lastly, as regards the origin of these germs, I think that the balance of evidence is still in favour of the view that they are introduced from without, as in the case of the eruptive fevers. Rosenberger believes that their development after the injection of virus, sterilised, as he thinks, by boiling, can be explained only on the assumption that they arise from non-specific germs pre-existent in the blood; that the virus has introduced a chemical or unorganised poison, which has led to this remarkable development. But this view seems to me to introduce a theory so utterly at variance with all the laws regulating the development of plants and animals, that I think more evidence is required before it can be accepted.

Passing on now from the consideration of these septic diseases to ordinary inflammation, we find that some observers are inclined to attribute all acute inflammations to the action of germs. Dr. A. Ogston, in a paper in the *BRITISH MEDICAL JOURNAL* for March 12th, 1881, has clearly shown that acute and pyæmic abscesses always contain micrococci; and that pus from such abscesses, when injected into the subcutaneous cellular tissue of animals, as a general rule produces acute inflammation, accompanied with blood-poisoning, and ending in abscess; but that its effects may be resisted by an unusually insusceptible animal, especially if the dose be minute. He found, on the other hand, that the pus of chronic or cold abscesses never contained micrococci, and was harmless when injected into animals. He discovered micrococci in suppurating wounds, but found that Listerian dressings prevent micro-organisms from gaining access to wounds. He also proved, by experiment, that micrococci do not produce putrefaction, and that they develop best when removed from the atmosphere.

The exact relations of micro-organisms to inflammation has been very recently considered by Dr. Burdon Sanderson in his *Lumleian Lectures*, recorded in the *BRITISH MEDICAL JOURNAL* for last April; and he lays down the following propositions. 1. The exudation of normal inflammation is non-infective. 2. No organisms endowed with inflammation-producing, or phlogogenic properties, exist in the atmo-

sphere, or ordinary aqueous liquids, with which our bodies come in contact. By this proposition he does not mean to throw any doubt on the supposed existence of specific contagia, but simply maintains that these contagia are non-phlogogenic. 3. Whenever an inflammation becomes infective, it owes that property to a chemical change in the exudation liquid, of which the presence of microzymes is a necessary condition. 4. Micrococci which have found their way into the circulation may serve as vehicles for the dissemination of infective malaria. Taking the observations of Drs. Ogston and Sanderson together, I think we may consider it to be fairly established that simple ordinary inflammations are not caused by microzymes, but that inflammatory products are a very favourable soil for the development of micro-organisms, and, if they gain access to them, an infective disease is at once set up, and a comparatively harmless process is converted into a dangerous one.

The bearing of the germ-theory on diseases of the respiratory organs affords a good example both of the rapidity of scientific progress, and also of the wide application of this theory to the etiology of disease. It might at first sight appear that phthisis could have but little in common either with the eruptive fevers or the traumatic infective fevers. That some forms of disease resembling phthisis, and affecting animals, such as the *Perlsucht*, which attacks cows, are dependent on micro-organisms, has been known for some time. It has also been proved that, by making dogs inhale the sputa of phthisical patients, tubercular disease is set up in their lungs; but when I wrote this part of my paper a few weeks since, I was obliged to own that phthisical disease in the human subject had not yet been proved to be caused by microphytes. Dr. Koch, however, in a paper read before the Physiological Society of Berlin, on the 24th of last March, has proved that a peculiar microphyte, the tubercle-bacillus, exists in the walls of tuberculous cavities, in the sputum of phthisical patients, in degenerated scrofulous glands, in fungous joints, and in the bones of tuberculous cattle. These microphytes can only be made manifest by a peculiar method of preparation, a modification of that which he used in the experiments already alluded to. He found that these microphytes, when coloured with methylene blue, did not lose their colour under the action of vesuvium. In this respect, they differed from all other microphytes, except the bacilli of leprosy, which acted in the same way. This fact is in itself an interesting one, as showing that these minute organisms so closely resembling each other, may yet possess very different chemical properties. The tubercle bacilli are very small rods, in length about one-third of the diameter of a red blood-corpuscle, and in breadth about one-sixth of their length. To prove that these microphytes are the actual *materies morbi* of tuberculosis, Koch made numerous careful culture experiments, and found that if animals were inoculated with a minute portion of the cultivated material, tubercular disease was invariably produced in them, even in those animals which are not usually the subjects of tuberculosis. These experiments of Koch have already been confirmed by independent observers, and their importance for human pathology can scarcely be overestimated.

With reference to pneumonia, the etiology can scarcely be said to be so clear as in phthisis. I feel sure that I have more than once seen outbreaks of pneumonia which owed their origin to air contaminated with sewer-gas, in which several members of a household were attacked at the same time; and some remarkable cases of this kind have recently been described in the medical journals. I think it highly probable that such cases have a parasitic origin; but this, so far as I am aware, has not yet been proved. I know that micrococci have been detected in the lungs in some cases of pneumonia, but this fact is not sufficient of itself to prove that these are the causes of the disease. This question of the etiology of pneumonia is now under the consideration of the Collective Investigation Committee of the British Medical Association, and I trust that some light may thereby be thrown upon it. Ordinary coryza has been attributed to germs; and in the case of influenza, this cause may be the true one; but it has yet to be proved.

In connection with this group of diseases of the respiratory organs may be considered some curious observations of Sternberg, Pasteur, and others with reference to the saliva. Dr. Sternberg describes a fatal form of septicæmia in the rabbit, induced by the injection of human saliva under the skin. This he proved to be caused by the presence in the saliva of a micrococcus, a living organism, which, when subcutaneously injected, multiplies in the connective tissue, and also in the blood shortly before and after death. It does not exist in the saliva of all persons, but only of some, and it is only in those cases in which it is present that the saliva possesses poisonous properties. I need scarcely stay to point out the important bearing of these facts on the etiology of such diseases as rabies and glanders, in both of which the saliva has a peculiarly virulent character, and both of which are probably due to parasitic fungi.

which the medical journals are inundated, seem content to rely upon its empirical aid, in the absence of any remedy founded on pathological principles.

Thus, in a recent debate in the Medical Society on the use of salicylates in the treatment of acute rheumatism, while each speaker vied with his fellows in parading formidable columns of statistics to demonstrate the power of that drug over the subjective symptoms of the disease, it was also freely admitted, "that it seems to have no power of controlling or arresting the cardiac complications of acute rheumatism, that it leaves the patients exhausted and feeble, so that they slowly recover, and does not shorten their stay in hospital" (Dr. Fagge); "That both pericarditis and endocarditis may develop themselves when under its influence, and that the toxic effects are serious in proportion to the largeness of the dose" (Dr. Sidney Coupland); "That, when heart-complications occur, the treatment by salicylate of soda occasionally increases the patient's danger, and has often a very depressing action on the heart, which might be serious in the case of a heart already softened and enfeebled by inflammatory change. Hyperpyrexia is not at all benefited by its use" (Dr. MacLagan). The frequency of relapse following its administration were also generally admitted.

Formerly, the great aim of the physician was the prevention of inflammation of the heart, and its lining and investing membranes. Now-a-days, the development of cardiac disease appears to be regarded as a secondary consideration; and if, by soothing agencies, we succeed in relieving articular troubles, we pose as if we had really cured the ailment, of which they are only the peripheral developments.

For the discarded alkalies, whose efficacy in preventing the onset of endocardial and pericardial inflammation was fully established by the statistical tables published by Dr. Dickinson in 1869, there was much more justification, on clinical and scientific grounds; it is now firmly established that they act directly as sedatives upon the muscular tissue of the heart, reducing powerfully both its excitability and contractility. If authority, in this age of scientific scepticism, were of any weight, I might be permitted to adduce that of Dr. Graves, who taught in his clinic and in his published lectures that, "in the treatment of rheumatic fever, we cannot hope to cure the fever directly by means which merely tend to get rid of the articular inflammation. As arthritis may exist without rheumatism, so rheumatism may exist without arthritis" (*Clinical Lectures*, vol. ii, pp. 159-60). And Sieveking, in his classical disquisition on pain, appears to condemn, by anticipation, the practices of to-day. He ridicules the idea "That there was always an uniform relation between the severity of pain and the intensity and danger of disease, while one might be disposed to assert," he adds, "that the danger of a malady is in the inverse ratio of the pain with which it is associated. The reason why, even now, so many *post mortem* records reveal deep-seated mischief, not observed during life, is because pain fails to guide—nay, because it so often misleads us—negatively and positively, and we do not possess adequate physical means of exploration to detect hidden processes" (*BRITISH MEDICAL JOURNAL*, February 9th, 1867).

As for pyrexia, no one will venture to assert that in fever the danger is proportionate to the elevation of temperature; enteric fever is a patent example of the fact, that there may frequently be evidence of high temperature without any danger to life, and, as often, loss of life in cases which do not exhibit a high temperature in their whole course. My contention is, that the rapid stifling of pain and pyrexia by the salicylic method is not synonymous with the cure of rheumatitis; that such a result is likely to induce a false feeling of security while real danger is impending; and that abundant proof is not wanting to show that, just as the victory over the leading symptoms has been achieved, the patient may succumb to the disease.

My object, however, is not so much to call attention to the epidemic of salicism, from which apparently the medical mind is at present suffering, as to propose to the readers of the *BRITISH MEDICAL JOURNAL* a new and effective remedy for acute rheumatism, which, in my practice and in that of other professional friends, has afforded results as yet unequalled in the treatment of that disease.

In a paper on "The Pathology and Treatment of Acute Rheumatism," which appeared in the *Dublin Journal of Medical Science*, October 1881, I gave the particulars of thirteen consecutive cases of acute and subacute rheumatism, in my own and in the hospital and private practice of Dr. J. Walton Browne, surgeon to the Royal Hospital, Belfast, in which, by means of a topical remedy, and practically without administering a single dose of medicine, the cure was, in almost every instance, at once simple, rapid, and complete. In that treatise, I ventured to predict that, should the pathology of gout be found to be identical with rheumatism, it might be discovered that, owning a common origin, they might also prove amenable to similar cure. A

typical case of gout having soon after occurred, in which the remedy for rheumatism produced a like happy result, I propose to relate the particulars of that case and one of acute rheumatism; from which we may gather the converse of the proposition—viz., that both having proved amenable to similar treatment, we may fairly infer a common origin, *pro tanto*.

CASE I. Acute Rheumatism.—On October 24th, 1879, I visited subconstable H., aged 30, married. He had a rigor on the 21st, followed by pain in the left knee and thigh, which were now red and swollen. On the 25th, pain had extended to the right knee, both ankles, and shoulders. On the 26th, the left elbow was also affected; perspiration was acid and profuse; his urine scanty, and loaded with urates. On the 27th, his state was unchanged. I ordered an opiate at bedtime. He had been previously laid between blankets, and his joints enveloped in cotton-wool. On the 28th, he was no better; he had not slept for a week. At 1 P.M. his temperature was 102°; pulse 108. No cardiac affection was perceptible. I then applied a blister, four inches by three, over the region of the heart, to be replaced with cotton-wool at the end of eight hours. On the 29th, I found the patient completely relieved. His countenance was cheerful; his tongue clean; thirst diminished; perspiration gone; urine copious and clear; temperature 98°; pulse 90. He told me that he began to feel relief at 6 P.M., just five hours after the application of the blister; that soon afterwards he fell asleep for the first time for many days; and that, having had occasion to rise in the night, he walked unaided across the floor, and only remembered his pains after getting into bed. And thus, although on the previous day paralysed in every joint, he was now able without pain to flex and extend them all, and to sit up in bed with ease. On looking at the joints, every trace of redness had departed, and the swelling was very much diminished, and they could be grasped firmly without pain. On the 29th and 30th, he was still improving. Pulse 90; temperature normal. The swelling and pain were absolutely gone from every joint. On November 1st, the pulse was 84; temperature normal. Convalescence was complete, and my visits terminated. A week later he walked to my house, a distance of half a mile, and he soon afterwards returned to duty.

CASE II. Gout.—John W. consulted me on June 15th, 1881, for a severe attack of tonsillitis. I found him next day confined to bed by a well developed fit of gout, to which he and several members of his family were very subject; having himself suffered regularly from its visitation every spring and autumn for the previous six years. His previous illness happened in Cork, continuing for six months, during four of which he was treated by a very experienced Cork practitioner, and the remaining two months by an eminent physician on the staff of the London Hospital. When removed to London, he was crippled and deformed in every joint; his fingers, hands, arms, legs, and feet, were curved and flexed, and he could not move without the aid of a crutch. He was, however, ultimately cured. On examination, I found his right great toe and knee swollen and painful, his heart-action excessively weak, pulse very feeble, 100; temperature 101.4°; skin hot and dry, countenance flushed and anxious, urine clear and plentiful. He had passed a sleepless night, and, to relieve pain, he had plunged his right foot into a pail of cold water, where it remained all the night preceding. I ordered him an ounce of whiskey in a tea-cupful of milk every four hours, wadding to the affected joints, and a blister 6 by 3 inches to the region of the heart for eight hours; no medicine. On the 17th, he was greatly relieved, his countenance was cheerful and pale, his skin cool and perspiring freely, urine unchanged. He had slept for an hour and half; pulse 91, still weak; temperature, 100.6°. The heart's action was feeble, the second sound imperceptible. The pain, swelling, and redness were almost gone from the great toe, part of the left foot and little toe were red and swollen; he had no pain. On the 18th, the right great toe was absolutely well; he had slept well. The heart-sounds were unchanged. The whiskey and light nourishment were continued. On the 19th, temperature was normal: pulse 90, feeble; both feet were quite well; the left knee was swollen and painful, the right slightly so. As he had had some weak fits after slight exertion, approaching to fainting, I asked Dr. Seaton Reid to see him in consultation. He recognised the gravity of the case, the absence of the second sound, and advised an increase of the stimulant and another blister to the heart, alkaline lotion to the knees, and ammonia and other diffusible stimulants internally. The lotion was used, but the medicine, through neglect, not was taken. On the 20th, patient experienced great relief from the second blister. He had slept well; the joints were much improved; pulse 90; temperature 98°. The heart was acting more vigorously; the throat was almost well. On the 21st, he was able to sit up and walk about, the heart-sounds were improving, the second sound had returned. The knee was almost quite free from swelling and pain. On the 22nd, he

began to walk on crutches; I found him in the garden. The stimulants were gradually reduced. On the 23rd, he had dispensed with supports; all pain and swelling having disappeared; his appetite and strength were returning. He betook himself to his ordinary avocation, and my visits ceased. He informed me that he had never experienced so violent an attack, and never recovered so quickly or completely; and his delight was great at being spared the infliction of a single dose of medicine. Five days sufficed for the cure.

These cases, irrespective of their individual importance, afford subject matter for contrast and comparison. No. 1 is the prototype of thirteen published and many unpublished cases. No. 2 represents itself alone; for so far they agree in the simplicity, rapidity, and permanency of their cure, in its being effected by an external remedy, without any internal medication. No. 1 was free from perceptible cardiac ailment; No. 2 suffered from protracted weakness and rhythmical deficiency of beat; the fall of temperature in the first case was accompanied by immediate cessation of profuse perspiration, and by normal excretion of urine as to quantity and quality; while in the second case, with the fall of temperature, the hot dry skin became cool and moist with plentiful perspiration, and urine of normal quantity. The blister in the first case appeared to have restored the inhibitory power of the heat-centres, and to have reduced to their normal condition the powers of the centres which regulate heat-dissipation; while in the second case, the blister seemed to equalise the heat depression with that of production; the superficial vaso-motor and other nerves causing relaxation of the smaller vessels and secretion of sweat and consequent reduction of temperature. As to the pathology of rheumatism, my conviction is, that it is essentially a specific form of endocarditis of neuropathic origin, generally allied with myocarditis: that in its unchecked progress, it speedily modifies the composition of blood, the innervation and calorification of the body; in its ordinary course giving rise to lesions in the textures, the joints, pericardium, pleura, the neurilemma, the meninges of the brain; in fine, in any organ accessible to nervous or arterial influence. Pathologists such as Pfeuffer and Hueter, quoted by Senator in Ziemssen's *Cyclopadia*, vol. xxi, also look upon cardiac disease as the primary change, and articular troubles as the consequence. Hueter states "that endocarditis may be present without giving rise to either subjective or objective symptoms; that it may very well precede the inflammation of the joints, even although not recognised till afterwards; and says also that "its presence must be assumed in those cases which appear to run their course without any cardiac complication whatever". According to Watson, Hope, Graves, Fuller, and others, endocardial and exocardial inflammation may occur as the first, and be for some time the only, local symptom of the disease; and the cardiac complication sometimes precedes, even by several days, the access of articular redness and swelling (Aitken, vol. i, p. 805). Bouilland taught that one-half, other writers one-third, or a less proportion, of rheumatic patients were always affected with endocarditis. This difference of opinion arose mainly from some of those observers mistaking the results of inflammation for the signs and symptoms, and consequently only recognising those as true cases of endocarditis in which they could detect by auscultation the changes worked by inflammation in the valves or lining membrane. This faulty procedure may, perhaps, explain the cause of the discrepancy shown in the returns of endocardial troubles exhibited at the meeting of the Medical Society of London referred to. Such returns, averaging from 3 to 76 per cent., can afford no guide on the subject of the incidence of heart-affections, and would suggest, in the majority, an absence of diligence in diagnostic work.

It is now generally admitted that the exciting cause of acute rheumatism, and of pneumonia, is a chill; and that the effect is produced through the influence of the nervous system; and that, although the intensity of the chill may be directly chilled, the deeply seated internal organs also suffer. The immediate effect of cold upon the surface of the body is to lower their functional activity, and to increase the action of the nerves of the internal organ in relation with that part: endocarditis thus becoming the first step in the development of acute rheumatism, or pneumonia. If it be physiologically true that, when the part of the viscera which are nervously in sympathy with the surface, are chilled, the action of the nerves of the organ is increased, and that, when a derivative in the form of a blister is applied in the nearest vicinity to the endocardial lining when in an inflamed state, it is but carrying into effect the principle that counter-irritation is the most effective plan available to alter the excited condition of nerve-centres, and to restore the normal activity and trophic nerves. Further, if we can then see that counter-irritation over the heart is a potent remedy for the cure of acute rheumatism in all its phases, this fact will

surely throw light on the nature of that disease. According to Dr. Peter Latham, "the treatment of diseases is in fact a part of their pathology. What they need and what they can bear, the kind and strength of the remedy, and the changes which follow its application, are among the surest tests of their nature and tendency." And Cullen, in the preface to his *Nosology*, page 16, says that "remedies cure diseases only in so far as they remove their proximate causes". When, therefore, a blister over the region of the heart cures endocarditis and its articular complications, it would surely not be unsafe to infer that the proximate cause is located in the heart itself.

If, then, it can be satisfactorily established that acute rheumatism may be cured by a topical remedy alone, what becomes of all the theories based on the idea of its zymotic, its constitutional, or auto-genetic origin, and the sundry modes of treatment, and the antidotal remedies devised for the removal of the hypothetical condition of the vital fluid—eliminative, antacid, or otherwise? That it may be done—that it has been done in a number of cases—I have satisfied myself, and, knowing how prone human nature is to self-deception, I have guarded against the personal element by inviting the presence and co-operation of several medical men of the highest ability and scientific acquirements, as witnesses.

My chief desire is, that my simple plan for the cure of rheumatism shall be thoroughly tested by the profession at large; of its efficacy, my own experience, and that of a number of my professional brethren, assures me. I cannot expect, however, that every one who may be equally convinced by personal trial and experience, shall also accept my explanation of its *rationale*. The pathology and physiology of the nervous system are not yet established on sure grounds; its supposed laws are subject to many contradictions, which only a more extensive knowledge of its principles, and their application, can elucidate. Nor would I wish to appear as proclaiming its efficacy in every case. I am satisfied, indeed, that endocarditis will still claim a place in the sad category of fatal diseases; but I also feel that, in cases possible of cure, the abortive plan proposed must claim precedence as the most rapid, safe, and permanent; from its very nature, the most potent to anticipate or remedy functional or organic disorder in the heart and its appendages.

One other important result is likely to flow from its general adoption, viz., the reduction to very moderate dimensions of that class of applicants to whom the physician has so often reluctantly to refuse the benefits of life assurance, on account of the existence of permanent cardiac injury, caused by undetected lesion in cases of ordinary acute rheumatism.

MEDICAL NOTES OF TRAVELS IN EGYPT, THE SOUDAN, AND THE KUNAMA OR BASE COUNTRY: 1881 AND 1882.

By JOSIAH WILLIAMS, L.R.C.P. Ed., Sheffield.

IN November 1881, I accompanied an expedition to the above-named places. I have recently returned, and, in view of passing events, I trust some notes, detailing some of my professional experiences, etc., will not be unacceptable to the readers of the *BRITISH MEDICAL JOURNAL*; and those who purpose making a similar journey may, perchance, pick out here and there an useful hint.

Having sent out my heavy baggage and medicine-chest by P. and O. steamer to Suez, I started off in the early part of November, and rambled through Italy, arriving at Brindisi on the 21st, in time for the P. and O. steamer *Tanjore*, bound for Alexandria, which we reached after a pleasant voyage of a little over three days. Alas! what was then a thriving handsome town, is now a heap of smouldering ruins. A few hours by rail soon took us to Cairo, so full of old world history, dirty Arabs, and flies. *En route*, everyone is struck with astonishment at the number of Arabs suffering from ophthalmia, and the loss of one or both eyes is very common indeed. Even children manifest the greatest indifference to these flies, and do not take the least trouble to brush away the swarm that settles all over their eyelids.

Various reasons are ascribed to the extreme prevalence of Egyptian or purulent ophthalmia—such as the glare of the sun, the flies, the use of unclean dirt and mud, etc. This may have something to do with it, but I think there can be little doubt that the real cause is, that these people live in direct violation of all sanitary laws, and no effort whatever seems to be made to check or get rid of the disease. They live in mud huts, admitting no light nor air, except through the door-way; the earthen floor is sodden with filth and half-covered by pools of water; and even the calls of nature (in the case of children) are obeyed in the dwelling. Several people of all ages and both sexes, who seldom wash, and live

on almost anything they can pick up, live in each hut; and this in a hot climate, where evaporation and decomposition is rapid. It is, therefore, not surprising that strumous ulcers, fevers, purulent ophthalmia, etc., are common and much intensified. Wherever poor Arabs live in towns, this is their mode of life; and Dr. Mariotti of Suez tells me that fever is never absent there, and syphilis one of the most common complaints.

When I had been in Cairo about two days, I gave my donkey-boy a lotion for his eyes, consisting of alum and sulphate of zinc; the result of this was that, before I left Cairo, I met every day, in front of Shepherd's Hotel, a swarm of importunate Arabs, eagerly seeking the same lotion; and when I returned to Cairo in May last, many were the benedictions showered on my head by my old friends, who each came with a large bottle, and departed invoking the protection of "Allah" on me.

Wooed by the soft, warm, dry air of Cairo—where baskets full of lovely roses and other flowers are brought every morning under the windows of the hotel: where the turbaned Oriental is seen with his long flowing robe, and the camel stalks majestically along; where can be seen places of interest that will vie with any other city in the world—may be seen many of our countrymen, who have fled the rigorous winter of England, with unmistakable symptoms of their disease (phthisis) plainly developed, endeavouring to keep off the hand of the fell destroyer yet a little while longer.

After a pleasant week in Cairo and its vicinity, a day's journey by rail takes us to Suez, where no one would stay more than a day if he could possibly help it; but here we were compelled to stay for about a week, on account of a block in the canal—a by no means unfrequent occurrence. At last, we got a steamer to Souakin, the port of Central Africa, and at Souakin we arrived after a four days' passage. Rain here is quite exceptional; but, unfortunately for us, we experienced about three or four days of it—the first rain for about eighteen months. The dwellings of the poorer Arabs here are not made of mud bricks baked in the sun, but of a thatched roof, walled in by the tall strong stems of the dhoum palm leaf, admitting a plentiful supply of air and a good deal of light. I saw fewer cases by far of ophthalmia here, but any amount of syphilis. There is a small place here called a hospital, and one doctor (a German); and I have no hesitation in saying that he deserves all he gets in the way of money for living in such a place. There were then eight cases of syphilis of the anus in men, which this doctor informed me was very common; but there was very little else of interest in the hospital at the time I was there. We remained at Souakin four or five days, and during that time I attended to about one hundred and fifty people, most of the cases being of a very uninteresting character; fortunately for me, my ministrations were successful, or rather not unsuccessful, inasmuch as no patient died under my hands. A little anecdote connected with the place will, I think, convey to the minds of my learned brethren some idea of what I mean. About two or three years ago, a doctor, who was in practice in Souakin, was called to attend a native, on whom he thought it advisable to perform some slight operation; but, unfortunately for the native, and also for the doctor, the native died. After this, "the doctor's lot was not a happy one;" for, in affectionate remembrance of the deceased, and to mark their appreciation of the doctor's efforts to relieve the sufferings of the dear departed one, the friends condescended to call on the worthy leech. They then escorted him to a large open space—where dhurra, etc., is sold—and there, without further ceremony, they fell upon and speedily made an end of him by chopping him to pieces with their knives.

The native treatment of syphilis in young girls is very primitive and very barbarous. Close to the town, in the Red Sea, is a little island, called originally Sana Gin, and from which the town takes its name. The girl is taken across to this island by six women; she is then laid naked on her back; on each arm and each leg sits a woman, another on her chest. The operator, another woman, who is provided with a sharp sea-shell, scrapes away in the vagina until she is satisfied that all diseased parts are removed, and then, utterly regardless of the shrieks of the girl, gets a handful of sand from the sea, and rubs that in. The disease is then supposed to be cured by this rather rough operation. I noticed here and elsewhere whilst travelling amongst the Arabs, that there was scarcely a man, woman, or child who did not bear scars on some parts of their bodies, and many frequently on the chest and back. I found the cause was this: if they had any pain persistently for two or three days anywhere—chest, abdomen, arms, legs, neck, no matter where—they apply a heated iron in one, two, three, or four places.

At last, we succeeded in getting together our camels—eighty in number, about thirty camel-drivers, six native servants for odds and ends in camp, a cook and assistant, a native from Cairo to look after the canteen, cups and saucers, etc., three European servants—all these

and ourselves, well armed with rifles and revolvers, completed a tolerably extensive caravan, I think; larger, in fact, than any I saw besides. Our first journey on camels was across the Desert to Cassala, a distance of about three hundred miles; and, if no hindrance happens on the way, the distance ought to be accomplished in about fifteen or sixteen days; but, for reasons which I will shortly give, we were over three weeks in doing it. About the middle of December, we started on our journey across the Desert; temperature 88° Fahr. in the shade. Within half an hour, we had left Souakin behind us, and we were in the Desert; down came the rain in torrents, and those who have been in the tropics will know what that means. It continued the whole afternoon; and, as soon as it ceased, about 4 P.M., we pitched our camp. I warned all the Europeans to change their clothing as soon as we were in camp. This everyone did except one—the strongest-looking man in build of anyone; change he would not, protesting he should take no harm from a wetting, he was strong enough, and so on. I told him to remember he was not in England, but in the tropics, where it behoved us all to be careful in such matters, and particularly careful to see that the drinking-water was all right. Within an hour after this, I saw this man working away at pitching tents, and positively drinking water, from a "zanzimeer" (a leathern bottle), somewhat the colour of pea-soup, but not quite so thick. I then told him he was going the right way to get dysentery, a particularly fatal disease in a tropical climate. I might as well have talked to the winds, so headstrong was this man. Three days after this, this man, J. B., came to me suffering from bilious vomiting and purging. I prescribed the usual remedies in such cases, and the vomiting ceased, but not so the purging, which now was accompanied with severe griping pains, abdominal tenderness, and great prostration, with constant desire to go to stool. I at once suspected dysentery, and sought out his evacuation, a little way from his tent, where my fears were confirmed. The man's history was as follows. He had been for many years past a kind of privileged servant in the house of a wealthy family in England, passing an easy life, with plenty to eat and drink; besides what he got in the house, he habitually consumed large quantities of beer. He had been the victim of misplaced confidence on several occasions, having suffered severely from syphilis once, and gonorrhoea several times; he had indeed only just got over an attack of gonorrhoea, when he left England on this expedition. On the voyage from Venice to Suez, he suffered incessantly and severely from seasickness. During the few days that we were at Souakin, the weather was very hot, and he drank quantities of anything he could get—beer, bad claret, muddy water—and complained then of feeling very poorly, but not to me, for several days afterwards, when he was almost too ill to proceed. He was a strongly built looking man, about 5 ft. 7 in. in height, about thirty-two years of age, but looked too fat and flabby for knocking about in a tropical climate. Such a man was about the worst subject to be afflicted with dysentery, especially under such adverse circumstances as travelling across the Desert on camels for two or three weeks.

The history of the case was as follows, and I should be glad of the opinions of my professional brethren as to my treatment of the case. I have treated scores of cases in Turkey during the war in 1876 and 1877, but there they were in hospital, and could have proper diet and rest; but in this case he could have neither, and so I think and hope I did the best I could for the poor fellow under the circumstances. Nearly a week after we had started, J. B. complained of vomiting and purging, and I (knowing now what quantities of beer, bad claret, etc., he had been drinking) gave him some pills and medicine as for an ordinary bilious attack. Next evening, he felt better, he said, bilious vomiting having ceased, but still complained of purging, and this, again, continued on the third day, accompanied with great pain and constant desire to go to stool. I now found he had all the symptoms of acute dysentery, fever, great pain on pressure, frequent desire to go to stool, with intense tormina and tenesmus, the stools consisting of mucus or mucus and blood at first, then flakes of lymph, and shreds of disintegrated mucous membrane.

In the evening, when we halted, I gave him a quarter of a grain of morphia and a dose of castor-oil, and applied a large hot poultice over the abdomen, with a little mustard in it, and made him some barley-water, and had some broth made with part of a gazelle that we had shot.

On the fourth day, he passed a more comfortable night, more free from pain, but was up several times in the night, and passed a good deal of scybala. He was too ill to proceed on the journey, we therefore remained. During the day, he had thirty-two motions, sometimes great tenesmus without any evacuation, sometimes foetid, grass-green, and frothy, semi-gelatinous, semi-fatty looking matter, very like the green fat of turtle, with blood and shreds of lymph. The desire

to micturate was frequent; the urine was highly coloured and scanty, sometimes only a few drops coming away. He had an anxious countenance, great emaciation and prostration, feeble pulse, and great abdominal tenderness. The treatment during the day consisted in a water-compress to the abdomen, and twenty grains of powdered ipecacuanha thrice daily. The first two doses were rejected. In the evening, I administered an enema of starch with ten grains of nitrate of silver, and a drachm of tincture of opium. Half-an-hour afterwards he went to stool, and an hour after that felt very great relief, and no desire to go to stool for several hours. His diet was as before.

On the fifth day, he had slept better in the night, and was free from pain. He had no motion until two or three in the morning. During the day, I gave him three doses, each twenty-five grains of powdered ipecacuanha, which he retained, and in the evening did not feel sick. The motions had decreased from thirty-two to eighteen, and this evening he said he felt much better, more free from pain, and thought he would be able to go on the next day. As a matter of fact, we had to push on until we reached water, which was two days off. The enema was repeated.

On the sixth day, he had been only disturbed twice in the night. We decided to move the camp, and do the best we could with the invalid. Before we started, I administered another enema. He had a motion soon afterwards, but not another until midday. He had twenty-five grains of ipecacuanha. I gave him another dose on the march also; but in consequence of the motion of the camel, he soon rejected this. I made some beef-tea and put it in a bottle before we started, and gave him some every half-hour on the march. In the evening he was terribly prostrate, and there was an increase in the number of stools, the character of which had somewhat improved.

On the seventh day, the same line of treatment was continued; we were obliged to halt five hours in the day, and go on again in the evening. We lost the caravan track for about three hours. We made signals of distress by lighting a fire and firing off guns until we were found. My poor patient meantime was thoroughly exhausted, and lying on the sand with a rug over him. At this time of the year (December) the days were very hot and the nights cold. Next day we got to water, with the poor fellow more dead than alive, and here we resolved to halt with a part of the caravan; and we stayed here a week, about half way across the desert, and were visited by a fearful sand-storm which lasted two days and two nights, producing the greatest discomfort to every one, especially the poor patient, whose broth, milk, etc., would soon be filled with sand so what we would to keep it out. Here I was enabled to get a little milk; with this, custard powders, sago puddings, beef-tea, and broths, I fed him during the week, and continued the treatment as before with the very best results, for I do not think I could have a more severe case to treat or greater disadvantages as regards climate and procuring proper diet. The result was that, at the end of a week, he only had two or three stools a day, and much improved in character; the last day we were there, only two, and no pain for several days. I should say that when the stools were numerous, frothy, and bloody, I gave with the ipecacuanha some bismuth. The patient, at the end of this time, expressed himself quite ready to proceed on the journey, and indeed we were obliged to do so, as the camel-drivers were getting impatient at the delay, and their food running short, so *volens volens* on we must go. We rigged up an "augerip" (a native sort of bedstead), and covered it with matting and palm-leaves to keep the glare of the sun off, slung it across a camel's back, and so proceeded on our journey. From this time until the end of our journey—about seven or eight days—the poor fellow rapidly got worse, the worst symptoms again supervened, our daily marches were too long—although I remonstrated several times—the exhaustion was fearful at the end of each day's march, and during the last two days I was afraid he would not reach Cassala alive. When we halted in the evening, I could get him a custard pudding made from custard powders and Swiss milk, but on the march I had nothing but beef-tea and champagne to give him, and this I did every half-hour, and he was able to go on, but he was very weak, and we got to Cassala. There I was met by a doctor, and he put him into a hospital, and he died there.

The ipecacuanha used, in all these muco-enteric affections, to which I refer, is of *Hydrogum cum creta*, with three to five grains of ipecacuanha, and a drachm of tincture of opium.

tropical dysentery, they used to bleed from the arm; that, in time, was discontinued, and leeches freely applied to the painful part, and eight or ten to the anus; but such things could not be obtained in the desert, neither could a warm bath. They used also to rely on scruple doses of calomel, with full doses of Dover's powder (ten to twenty grains), and said these scruple doses of calomel subdued inflammation by direct sedative action. Now, however, ipecacuanha, *per se*, is considered the best remedy to subdue vascular excitement, to relieve mucous membrane by secretion from it, and also to determine freely to the skin. After a simple enema, then inject starch, opium, and nitrate of silver. This I always found afforded marked relief, and no desire was evinced (for several hours) to go to stool.

The total disregard of human life in these parts, is quite shocking to an European. Whilst crossing the Desert, we came up to a man and woman on the second day, who had just accomplished the pilgrimage to Mecca, and were returning to their home, somewhere beyond Cassala. We allowed them to join our caravan, and gave them food; about two days afterwards, we missed the woman, and found that the man who was with her, in the rear of the caravan, had left her on the road the day before, saying that she was too ill and worn out to go any farther. A day or two afterwards, we caught up two brothers, men of about thirty-two or thirty-five, who were also returning from the Mecca pilgrimage; they both looked almost done up, one particularly so. They were fed by us every day, before and after the march. One day, during a sand-storm, where we halted for a day or two, one of our party happened to pass these two brothers about mid-day, one supporting the other; the man said his brother was ill. I was called, and found him dying—his ears, nose, eyes, mouth, and hair filled with sand; twenty minutes passed, and he was dead. His brother borrowed a spade, dug a grave, and buried him at once, not far from the camp. But the pilgrimage was accomplished, and I suppose he died a happy man.

We encamped just outside the town of Cassala, and remained there for several days, buying and hiring camels to proceed on our journey. It soon became known that an "Inglesse hakeem" was in the camp; and every morning a large crowd of Arabs surrounded my tent (seeking advice and medicine), very many of whom suffered from syphilis or its sequelæ, and struma. They looked with awe and wonder at my well-stocked medicine-chest. As far as possible, I took everything in the form of pills, and I cannot speak too highly of the coated pills of Messrs. Richardson and Co. of Leicester; their composition is always to be depended on, and they are, without exception, some of the best-made pills I have met with, and never cracked throughout the journey, notwithstanding the damp at Sanakin and the subsequent great heat. Anyone travelling through that country would do well to be provided, amongst other things, with plenty of iodide of potassium, and different mercurial preparations; oil of male fern, as tape-worm is by no means uncommon; a good stock of quinine, alum, sulphate of zinc, liquor atropiæ, and ipecacuanha, carbolic acid, and several dozen bandages. Liquids are bulky, bottles easily break, and the heat is so great that, unless very carefully secured, evaporation is continuous. Therefore, I did not take more than I could avoid of these. It is most rare to see any natives, of either sex or any age, with bad teeth: their teeth would be the envy of any lady, so beautifully white, sound, and regular are they. This may probably be accounted for by their simple mode of life.

The natives like meat, when they can get it, but live almost exclusively on "dhurra," a grain resembling pearl-barley in size and appearance. It is to the natives what wheat is to us, but it contains one and a half per cent. more of gluten than wheat does. Dhurra contains eleven and a half per cent., and wheat ten per cent. It is the staple article of consumption throughout the country, and our camel-drivers and servants only took two meals a day of it, and yet were capable of great endurance. In the morning, say at 6 A.M., three or four would sit round a wooden bowl, full of boiled dhurra (looking for all the world like a large linseed-meal poultice), and with their fingers would pick out the kernels, and wash it down with water, and at 7 or 8 A.M. would take another meal, and then they would go on their journey, and not eat again until the evening. When we got to a good country, where there was plenty of water, and where the dhurra was not so hard, they would eat it with fat whenever they have it.

A NOTE ON THE TREATMENT OF LOCOMOTOR ATAXY BY PRECISE NERVE-VIBRATION.

By J. MORTIMER GRANVILLE, M.D.

I DO not think the evidence collected, up to this point, is sufficient to justify the assertion, that locomotor ataxy can be certainly cured by nerve-vibration; but the large measure of success I have recently obtained in dealing with some very advanced cases of this truly terrible disease, seems to render it incumbent upon me to place the facts before the profession. The cases I have had have all been clearly marked, with entire absence of patellar tendon-reflex, and with the characteristic impairment, in some instances amounting to almost complete loss, of the power of co-ordination. It is not my intention to report these cases at present, as I am anxious to extend the area of observation, both as regards the number of cases and their duration, before committing myself to a final judgment. Meanwhile, there are certain clinical facts which may be helpful to others, and ought, therefore, to be communicated. I will try to state them as tersely as possible.

1. In every instance, I find exaggerated reflex irritability on application of the percussor to the periphery. For example, when it is applied over the anterior tibial nerve, the foot is drawn forcibly up, which never happens in the case of a healthy subject. In some instances, the irritability is so great that the legs and feet may be turned or drawn in any direction at pleasure, by vibrating the appropriate branches of the nerves supplying them. No effect is produced by percussing the muscles: the effect follows only precise vibration of the nerves.

2. This reflex irritability, or excitability, seems to me to be the real hindrance to the walking; the loss of sensation, which is incident to the malady, being of comparatively secondary importance as regards the disability for locomotion. It is almost invariably confined to the nerves supplying the extensors. I have not in any instance met with more than a slight tendency to cramp, in the flexors, and that rarely.

3. By persisting in the vibration of the irritable nerves, their excitability becomes exhausted; and, in proportion as this happens, they obey the mandate of the will, and voluntary movements, in short, locomotive acts, are possible. Not unfrequently, some debility of the nerve-power and depression of energy in the centres follow immediately upon the exhaustion of their irritability; so that, for a few hours, or it may be days, the patient complains of stiffness, and, although he may have lost the jerky feeling in his limbs, he cannot move them more readily. They are heavy and powerless. This, however, quickly passes away, and the case is found to have made decided progress. The walking is easier and steadier, and control, generally, more direct and precise. At this stage, not earlier, it may be advantageous to percuss over the spines of the vertebrae, with the view of vibrating the nerve-centres. I do not think it is easy, or in many cases possible, to excite the centres except through the afferent nerves; but after the reflex irritability has been reduced, it then often happens that vibrations, which could not at first be propagated along the motor nerves, can be sent from the centres by percussion immediately, or as nearly as possible, over the latter. I believe it will be found that the mechanical vibrations excited in a nerve by percussion, invariably pass in the direction of its normal activity—in the sensory branch, towards the centre; in the motor, towards the periphery. There often seems to be a block, as it were, in the course of a nerve, whether motor or sensory, and, while this lasts, the impulse or impression is diverted, sometimes producing very curious results under vibration by percussion. When the block is broken down by mechanical vibration, the wave again passes in the normal direction. Practically, I do not find much amiss with the sensory nerves. The motor chiefly are at fault.

4. I have collected almost, though perhaps not quite, enough evidence to show that the syphilitic form of locomotor ataxy, or that which undoubtedly follows syphilitic disease, is not a localised, but a local affection. It is a specific inflammatory extension from the penis along the sheaths of the nerves to the proximate centre, and thence by particular fibres to other parts of the cord. The loss of sexual power which occurs, and which is rapidly followed by the indications of deficient nutritive action in the organs of generation, is the immediate consequence of an interruption, more or less considerable, in the nervous connections, consequent on the affection of the nerve-sheaths. The impairment of control over the bladder and the sphincters, causing either diarrhoea or constipation, is contingent on the local progress of the disease, which may generally be traced by the anatomical and physiological communications. It is intensely interesting to work out the details of a case of this class clinically; and no

two cases, in my experience, have been alike, although as a rule they have surface-features of typical resemblance. For example, there is nearly always something wrong with one of the ulnar nerves, not as an accident of disseminated sclerosis, but as a specific extension along particular fibres. I am convinced that these cases of syphilitic ataxy ought to be studied apart, and treated as distinct, from the mass of ataxic disease. The two maladies have little, if anything, in common beyond the name; and that is, as regards both, I think, a misnomer. Moreover, the sensory fault is by no means the primary one, as generally supposed.

5. The sclerosis which occurs in the cord in the syphilitic disease, I believe, to be simply inflammatory thickening of a specific character. I do not think we need talk of "gummata" or "disseminated sclerosis." The malady consists in a direct extension of the local disease along the sheaths of particular nervous tracts. Syphilis is, of course, one of the blood-diseases; but I doubt whether syphilitic "ataxy" falls into that category. The interval which occurs between the healing of a chancre and the appearance of ataxic symptoms may be great; but, if we inquire carefully into the history of cases, we find that there have throughout been local symptoms—very slight it may be—of local nerve-disturbance. Nerve-vibration, unquestionably, does much for these cases; and among other effects which it produces, and for which it is well to provide, is that, in the course of the treatment, it every now and again revivifies the syphilitic virus, and thus at once renders it possible, and necessary, to treat the malady *de novo*, even in cases of very long standing, where there has been no thought of active syphilitic poison for years. Whether the mechanical vibration of the nerves with their thickened sheaths throws off particles of poisonous exudation which find their way into the current of the blood, as in the breaking down of an old cicatrix which has entangled the virus of rabies, I can only conjecture.

It seems possible that the nerve-fibres, which have been mechanically blocked by the exudative processes of the specific disease may be, as it were, shaken loose from their entanglement, and thus become again vibratile. Perhaps it is in the course of this breaking up of the "block" debris are thrown into the circulation. However the revival of the original specific disease may be explained, it undoubtedly every now and again occurs.

I have thus jotted down briefly, and in no formal sequence, the leading facts which I desire to place on record, and to which I think the attention of the profession ought to be directed. One word only, in conclusion; nerve-vibration by percussion is undoubtedly a most useful adjunct to the ordinary treatment of many maladies, and of especial value in the diagnostic study of disease. It will be monstrous if this method be degraded to the level of a "cure," by placing percussors in the hands of patients, and allowing them to use them for themselves. Great harm will be done in some cases, in others there will be disappointment, and nerve-vibration will be discredited. It is an agency for professional use exclusively; and against its employment by laymen, whether alone or under medical advice, I must most earnestly protest.

THE SOY BEAN.—Professor E. Kinch, writing on the subject of the Soy bean (*Soja hispida*) in the July number of the *Agricultural Students' Gazette* (Royal Agricultural College, Cirencester), says: This bean, of which there are a dozen or more varieties known in the East, is very largely used as an article of food in Japan and China, where it is manufactured not only into soy, now exported in considerable quantities to Europe, but also into bean cheese and other forms of food. The soy bean, in its proximate composition, approaches more nearly to animal food than any other known vegetable production, being singularly rich in fat and in albuminoids, and it is therefore a valuable adjunct to the food of the almost vegetarian Japanese. Of late years, especially since the Vienna International Exhibition, many efforts have been made to acclimatise this bean in various parts of the European continent, chiefly in Hungary and Germany. France and Italy have also attempted it, and some of the experiments have been fairly successful. Nature states that Professor Kinch is trying to grow some of the varieties in the botanic garden at Cirencester, and though our climate is probably too uncertain, and the temperature often too low, for most of the varieties to attain perfection, still if any of them could be acclimatised, a valuable leguminous cross would be added to our present list. A detailed analysis is given of the bean as grown in different countries, of several of the foods made from it, of its straw, which is an useful fodder, and of the ash of the bean and straw.

PRESENTATION.—On Friday, the 15th inst., Mr. J. Dysart McCaw of Portlengone, Belfast, was presented by his neighbours and patients with an illuminated address, a horse, Stanhope gig, harness, saddle, and bridle, as a mark of their confidence in him as a medical practitioner, and their esteem and regard for him as a personal friend.

several miles into the country. He was now considered sufficiently purged from all suspicion of infectiousness to justify his being allowed to go into the house, carrying into it absolutely nothing that he had brought from school, except a pocket-book; all his clothes and belongings being locked up in the room in which he had been bathed. Now, if it be possible by any ordinary or even extraordinary precautions to shut out the infection of scarlet fever, it might be thought that it might have been safely calculated on in this case; and yet, what was the result? In a few days, one of the children was down with scarlet fever, and in due time all the others followed suit. It is not very surprising that, under these circumstances, everybody concerned was extremely puzzled to understand how the infection found its way into the house, and the more so because, as I afterwards satisfied myself by personal inquiry, every precaution appeared to have been taken at the school to prevent the possibility of this boy carrying the infection home, two doctors, in addition to the medical officer of health of the district, having passed him as safe, and the latter having assured me that the boy's clothes had been well fumigated with sulphur.

What, then, is the explanation of this apparent mystery, which I was invited to solve about a fortnight after the fever had broken out? It is so simple, as I had no difficulty in satisfying myself within a few minutes after the above facts had been narrated to me, that it is scarcely credible that it could have escaped detection. I found, on inquiry of the boy, that he had had distinct sore-throat a day or two before he was sent home, and on examining his throat—nearly three weeks afterwards—I could detect the traces even then of slight congestion. And yet, to all intents and purposes, the boy was as well then, and had been ever since his return, as he ever was in his life. Can there be the least doubt that this boy brought the infection into the house in his throat, and that all the well-meant precautions which had been taken to avoid the unwished-for result, had been absolutely useless, in view of the neglect on the part of four medical men to examine his throat? I have purposely narrated these facts in such a way as will, I hope, give no clue to where the incident took place; but I think that I could hardly give a better illustration to enforce the importance of a careful examination of the throat, in all cases in which the possibility of communicating the infection of scarlet fever is concerned. I need scarcely allude to the interest which this case also has in connection with the question of the possibility of persons who have had scarlet fever becoming a second time infected by sore-throat, and communicating the infection, even though the throat-symptoms may be of a very mild character; nor need I point out how seriously the difficulty of diagnosing scarlet fever—except on the basis of the full recognition of the probably infectious character of all sore-throat, especially in the young—must interfere with the enforcement of compulsory notification, since it is clear that we cannot seek to compel the notification of any disease until we have laid down clearly what are the symptoms by which it may be unquestionably recognised.

Dr. HILL (Birmingham) said there was no doubt that Dr. Bond had put his hand upon the weak points of scarlatina, and his remarks on sore-throat he thought particularly valuable. He did not, however, think that schoolmasters and schoolmistresses would have that technical knowledge of the disease which would enable them to judge in the way Dr. Bond had indicated. He thought it should be insisted upon that, before the pupils were allowed to take their places upon the benches, a certificate from a medical man should be demanded, stating that the throat was perfectly free from disease.

Mr. VACHER (Birkenhead) thought Dr. Bond's paper of very great significance, and he hoped it might have the effect of drawing public attention to the mucous membrane in cases of scarlatina; hitherto, he thought, attention had been too exclusively directed to the skin. There was, however, no doubt that scarlatina might be communicated by the breath and by the alvine discharges, often before the skin-eruption had appeared, and after the desquamation was completed. He thought, not only was the infectiveness of scarlatina very often carried on to a later period than the peeling of the epidermis, but also that it was infective at an earlier period than was generally supposed.

Dr. BOND, in answer to Dr. Hill's remarks, said he had been told it was very difficult to get certificates; the people would not pay for them; and the only way was for the medical officer to coach the schoolmaster and the schoolmistress up. With regard to what had been said by Mr. Page on the subject of closing schools, he never found any difficulty in the matter. Before he insisted upon the necessity of closing a school, he went to the schoolmaster and told him that, if he took certain precautions, it would not be his duty to advise the managers to close the school; if, on the other hand, it was desirable that the school should be closed, he went to the managers and told them so, and said: "Up to the present time, the responsibility has been on my shoulders;

now I hand it over to you. If you refuse to close it, and deaths should occur, it will be my duty to advise the coroner in each case to hold an inquest."

PRIVATE MEDICAL PRACTITIONERS AND THE PUBLIC HEALTH ACT.

Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By EDWYN SLADE-KING, M.D.,

Licentiate in Sanitary Science; Medical Officer of Health, Ilfracombe.

No Acts of Parliament are more strictly social in their aspect than are those by which our various local sanitary authorities have been called into existence, and which regulate the Sanitary Branch of State Medicine. Under the general name of the Public Health Act and its dependent by-laws, these Acts regulate many of our dealings with our real property, and impose on us many restraints and some apparent inconveniences, which we, as good citizens, endure mostly from deference to that strong public opinion which has called them into existence, and on which alone they rest for a solid foundation. In their present comparatively modern form, they possess neither the sanctity of prescription, nor, in the opinion of some men, the justification of necessity. In fact, it can be no secret, that a large relaxation in their stringency would be welcomed as no small boon by many house owners, and by no inconsiderable minority of the wage-earning classes.

The friends and foes of sanitary legislation agree in attributing to medical men at large, the credit or blame of having so influenced public opinion, that it has demanded with firmness, and accepted with contentment, our present Public Health Act. Stringent as it is; nay more, in maintaining that, as a profession, they are not only preserving an aspect of benevolent neutrality, but are mostly proving to be eager partisans—ever urging their fellow citizens by personal influence, through the press or on the public platform, to join in loyal co-operation with the work of sanitary progress. The time, indeed, may arrive when all men will love cleanness for its own sake, but there exists still a formidable minority of whom the reverse may safely be predicated, especially when their persons or their pockets are likely to be touched.

Medical officers of health are the natural complement of sanitary legislation. Selected from our profession, they are invested by the orders of the Local Government Board with the performance of important public duties. Their personal influence ought to be considerable, for they are in number over nine hundred. Their salaries vary with every shade of irregularity from the £1,000 a year paid by lordly Liverpool, down to the £5 note—the annual value at which Thurstonland assesses the services of its health-officer. Many of their yearly reports show the variety and the importance of the subjects which come under their consideration; and, as in the instance of the specimens published by authority of the Local Government Board, far exceed in value the proportion of payment received for framing them. Such works of supererogation might be fairly placed to the credit of others who, like a late west county medical practitioner, excused his short report on the ground of a still shorter salary. In fact, it is by the meagre payments made to many health-officials, that we may in a degree measure the influence of that minority in whose eyes their more active duties find little favour.

The relations of the health-officer to his sanitary authority and to the public are pretty fairly defined by the orders of the Local Government Board. Still, "the institution and function of his office are of comparatively recent date", and he has not the advantage of experience or of precedent for his guidance, which renders his general tact and good taste more apparent; for, as a rule, his advice is acted on by local authorities, and the public are commonly willing, even when his judgment errs, to credit him with good intentions.

Much of the work of his office must of necessity be self-created; for he is not clothed with the powers of a medical policeman, but his functions seem those of a man who holds official credentials, sufficient to sanction his inquiries and to give due weight to his advice.

The idea which seems to have been present in the minds of those who framed the regulations on which the health-officer depends for guidance, was the creation of an official, prepared by patient local investigation, to offer competent advice to his local sanitary authority, and other interested persons, on all matters affecting the health of his district, and capable, by his own scientific sanitary education, of educating and instructing in preventive medicine all his neighbours, official or non-official.

A sense of moderation and a spirit of reasonable compromise were

shown by Parliament when it framed the Public Health Act. Permission and encouragement were given for local by-laws, varying in their compass and stringency, and adapted to the habits and tastes of distant municipalities; while many important sections of the Act itself were conspicuously permissive, not compulsory. In practice, the local authorities charged with its administration have failed rather in deficiency than in excess of activity. Prosecutions conducted before justices of the peace have mostly resulted in the infliction of penalties and fines so trivial as to have partaken rather of the character of warnings and cautions, than of punishment. In fact, the notion all round has been rather to appeal to the good sense of the people than to their fears.

The private medical practitioner shares in common with his neighbours the advantages and responsibilities of the Public Health Act. It cast on him no peculiar duties. He regarded it as fairly satisfactory, and studiously moderate; very much the reflection of his own medical opinions. He found in it nothing to imply that his medical brother, when selected to fill one of its offices, acquired any monopoly of sanitary knowledge. On the contrary, he fully believed that in such sections as the 46th, 114th, 128th, his own competence was especially recognised.

For some years, the mutual relation which exists between the private medical man and the public health-officer required nothing more for their guidance than the general ethics which govern the etiquette of the medical profession. There was one occasion, indeed, in which the health-officer might have found his duties somewhat conflicting with the functions of a private practitioner. I refer to his action under Section iv, paragraph 6 of the General Order of the Local Government Board, dated November 1872; but in the new order, issued in March 1880, he is instructed that the course of conduct he must pursue, when he receives information of an outbreak of contagious disease, may be modified, when he is satisfied that "all due precautions are being taken to prevent the extension of the disease", evidently implying that, in many cases, the ordinary medical attendant is legally recognised as willing and competent to take all necessary measures, and to act as the sanitary adviser of the household, even in the presence of dangerous epidemic diseases. No one, however, who has perused the recent correspondence in the medical journals, and is conversant with the present current of medical opinion, can doubt that just now there is a *dissonance* in the harmony which has hitherto existed between the health-officer and the private practitioner.

Rightly or wrongly, an opinion seems to have gained ground that the former is somewhat inclined to magnify his office, assuming to be classed in a separate official order; and taking advantage of his position as the accredited adviser of local authorities to urge on a new development of sanitary action, which may prove very annoying to private members of the medical profession.

Since it is clear that the Public Health Act imposes no duties on its officials likely to clash with the functions of private medical men, it is necessary, in order to see how the question has arisen, that we should investigate a circle of action which extends somewhat outside their recognised duties as sanitary officers, embracing the re-classification of death-certificates, the diagnosis of diseases, the personal inspection of sick folk, and their compulsory removal to special hospitals; and even more than this, the advice they have tendered to various local authorities, resulting in those private Acts of Parliament which cast on medical men the onus of the compulsory notification of infectious diseases.

With regard to the causes of death, uncertificated deaths are evidently open to the legitimate criticism of the health-officer. But it ought to be, indeed, a most extreme case in which he could feel himself permitted to impeach the accuracy of any death-certificate signed by a duly registered medical man. Certainly, he is not called on to do so in fulfilment of his duty. Had the legislature intended to cast this responsibility upon him, he would probably have been selected to fill the office of Superintendent-Registrar. But, on the other hand, he ought to cause no offence if he refer in his reports to the difficulty he finds in the classification of deaths, reported simply as the result of "severe chill," "old age," and so on; or if, in attempting to draw some general inferences as to the health of a locality, he groups together in one class cases to which various names may have been assigned by individual

At the present time, the fact of deaths in childhood is acknowledged by our authorities, and is a matter of common knowledge. It is a fact which, however, the local authorities, in their efforts to draw some general inferences as to the health of a locality, are not called upon to do so in fulfilment of their duty. Had the legislature intended to cast this responsibility upon him, he would probably have been selected to fill the office of Superintendent-Registrar. But, on the other hand, he ought to cause no offence if he refer in his reports to the difficulty he finds in the classification of deaths, reported simply as the result of "severe chill," "old age," and so on; or if, in attempting to draw some general inferences as to the health of a locality, he groups together in one class cases to which various names may have been assigned by individual

fatality the footstep of one medical man, or one nurse in particular. Puerperal fever may never have appeared as a certified cause of death. Yet he is justified, surely, in drawing inferences of a very grave nature, and in advising persons competent to act as to the measures which may appear to him to be required to prevent the extension of the presumed disease.

At paragraph 9 of the Specimen Reports of the Health-Officers, published by authority of the Local Government Board, Dr. Arthur Downes writes: "I always record a death under the heading given in the certified returns, whatever may be my own views as to its correctness." This, I venture to suggest, may be accepted as a safe rule. Still, even he does not hesitate to express an opinion as to the correct classification of certain deaths from typhoid fever within his own district; but he is most guarded, attributing neither ignorance nor carelessness, saying simply, "I am inclined to think that the term typhoid is still used by medical men in its pathological rather than in its nosological sense; for two of these [deaths] in my opinion, and I carefully investigated the cases, were not typhoid or enteric fever in the sense in which I use those names." And at paragraph 33, *op. cit.*, Dr. Shea speaks in a similar manner with regard to struma and phthisis.

Any attempts on the part of a health-officer to alter or amend death-certificates would destroy all power of useful comparison with the returns of the Registrar-General, would surely lead to the degradation of medicine in the estimation of the public, and involve a train of consequences obvious to us all. Indeed, Dr. Carter of Liverpool has given us the case of a health-officer, who, on the strength of an examination of the skin *post mortem*, publicly stated that a certificate naming typhoid as the cause of death was false. This is a glaring example of interference by a health-official with another man's functions.

Again, how often does it occur that the health-officer, called suddenly to investigate some outbreak of infectious disease, enters a cottage-door, and unexpectedly is ushered into the sick chamber, where lie a couple of children, patients of some medical man to whom he is an utter stranger. He may pass a trivial remark on their condition and go on his way, thinking no more of the matter. Not so the cottager or the nurse; she knows and cares nothing about medical etiquette, and eagerly informs her medical attendant next morning that Dr. So-and-So has visited the children, and passed his opinion about them. The result of such a communication is, to say the least of it, unsatisfactory, and often inimical to future friendly intercourse. Even a careful explanatory message is half forgotten and half misunderstood: not so a courteous note, which, I take it, should always under such circumstances be the medium of communication between medical men. There are few practitioners who would not willingly permit a health-officer some opportunity of a clinical investigation of infectious disease if he applied to them courteously and in good faith.

But, if these and other difficulties of a kindred nature have occurred under the Public Health Act as it at present stands, what increased friction may not be expected under the threatened departure from the cautious lines on which it was drawn?

We now read of town after town seeking local Acts, compelling medical men first to form an immediate diagnosis of contagious disease, and then to notify its existence for fees as minute as one shilling, and with the alternative of a £10 penalty for neglect; and of a host of clauses which, if sanctioned, will admit sanitary officers within sick men's rooms, who will deport them, remonstrate as they may, to public infirmaries. Medical men begin to ask, To what will all this lead? Will the benevolent curiosity of local authorities tempt them to demand statistics at the same cheap rate relative to venereal diseases, pelvic deformities, or even more delicate matters? We have had a wholesome warning by compulsory unpaid vaccination certificates, and compulsory unpaid death-certificates; and it is one of the many advantages of our great Association, that it gives us opportunity to discuss how far we have just ground to dread a further development of compulsory underpaid work being thrust on us; to ask medical officers of health to be loyal to professional traditions, and to protest against any ill-for interference between physician and patient; and for us all to join and defend by united action those rights of which we seem likely to be deprived in detail by this insidious movement.

Hitherto the working of the Public Health Act has been part of a great system of national sanitary education, which the law primarily took in hand, but which voluntary efforts have immensely supplemented. To enlist the sympathy of the people, we have turned to devoted to sanitary matters: sanitary associations; sanitary lectures delivered at their bidding, printed and scattered everywhere; sanitary guilds; sanitary exhibitions, imposing in their magnificence, their medals and prize-lists; sanitary museums; sanitary congresses; and even Royalty prints for our benefit its experiences of ill-

drained palaces. And, more than all, medical men of every school of thought unite in preaching in thousands of households the gospel of cleanliness, at those moments when sickness secures attention. The palace, the hovel, and the hospital are alike resounding with this crusade against dirt. Still, amid all this outward enthusiasm, there is no small number who quietly cling to old ways, and watch with eager eye any symptoms of coldness exhibited by medical men to the Public Health Act. Detach the support of the medical profession from the Vaccination Acts, and does anyone present to-day suppose they could be enforced in their present shape for twelve months?

But, once let the idea gain ground that the Public Health Acts are distrusted by medical men, and what will be the outcome? The election to every sanitary board of members who will leave inoperative half the clauses of the Health Acts; who will reduce the salary of every medical officer, and so hamper his action as to render his position untenable, and, worse still, will soon paralyse every voluntary work.

In sanitary matters, hitherto, we have journeyed pleasantly enough along parallel roads. A slight divergence is threatened. Is this not a point at which we may well pause, and each have a word to say as medical officers of health, pleading that the most favourable construction should be placed on our actions; that we have had to tread the rougher road; that our trespasses over the boundaries of medical etiquette have arisen from no unworthy motives, but rather from forgetfulness of Talleyrand's warning, "*Surtout point de zèle*"; and that the small value which the public assign to preventive medicine will be made still smaller, without the recognition of our medical brethren? On the other hand, we who are private practitioners may urge that we are naturally jealous of our reputation for exact diagnosis; that we resent all interference between ourselves and our patients; that now it is the duty of health-officers to justify their position as the accredited advisers of local authorities, and to join with us in a vigorous protest against private Acts of Parliament which are repugnant and injurious to our profession at large; that while we willingly regard the health-officer as *primus inter pares* where sanitary advice is necessary, we cannot concede to him a monopoly of sanitary knowledge in private life; that much of the success of the measures taken to check the extension of disease has depended on the timely information which we have furnished voluntarily; that the experience of the last few years has led us to recognise the necessity for notification and isolation of dangerous infectious illness, and that we feel confident that the advantages will in the long run fully preponderate over the alleged dangers of concealment and evasion; but that, when Parliament deals, as it soon must do, with these matters, under a general Act, we claim time and opportunity to express our opinions as to the method which will prove most practical, most acceptable, and, consequently, the best calculated to secure public opinion in its favour; that we will heartily join in any reasonable development of the compulsory clauses of sanitary legislation, provided always that they are general in their incidence, and do not destroy that freedom of relationship which has hitherto existed between us and our patients; but that we are utterly opposed to special prosecutions undertaken on the information of common informers, and in which the opinion of an inspector of nuisances is to be held as of equal weight with our own in medical matters. In foreign countries, our sanitary legislation is regarded with envious admiration. At home, it is popular and easily administered. The reasonable work of sagacious lawgivers, who fully understood that among Englishmen social laws, though they be strong and effectual, will work smoothly, provided they are neither inquisitorial nor vexatious.

HOSPITAL SANITATION EXEMPLIFIED IN THE HISTORY OF THE WORCESTER INFIRMARY, FROM 1754 TO THE PRESENT DATE.

Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

BY HORACE SWETE, M.D.,
Physician to the Worcester Infirmary.

BEING engaged in the latter part of last year in investigating the sanitary defects of our infirmary, and superintending the new arrangements, many interesting points of sanitation were brought before my notice; and it struck me that a commentary on the sanitary history of our infirmary would be an useful subject to bring before the notice of the Section.

In 1745, Dr. Maddox, the Bishop of Worcester, consulted with the four physicians then practising in Worcester—Drs. McKenzie, Attwood, Cameron, and Wall—as to the best means of establishing an infirmary

in Worcester. It appears that Bishop Maddox had before this been instrumental in founding infirmaries. His monument in the cathedral, which you will find in the north aisle of the choir, bears a *bas relief* of the Good Samaritan, and the inscription states: "He was the founder of infirmaries." Dr. McKenzie appears to have been, with the bishop, the prime mover in the work. Dr. Wall was celebrated as the originator of the Worcester china works, having, from his analysis of foreign china, succeeded in making an artificial frit, from which the original Worcester china was manufactured. A convenient house was taken, and altered to suit its purpose, in Silver Street, now occupied by Mr. Thomason's tin works.

Through the courtesy of Mr. Watkins, the secretary of the infirmary, I have been enabled to inspect the minutes and account books from the year 1745 to the present date.

The infirmary was opened in 1746 with twelve beds; Messrs. Russell and Edwards being appointed by the physicians as surgeons. The number of beds gradually increased to forty-eight, an adjoining house being taken. In 1767, these two houses were found too small for the purpose, and a new infirmary in Salt Lane was built.

The sanitary points in this old infirmary show that our ancestors were keenly alive to the value of good air and isolation of infectious diseases. There were no water-closets, but the cash accounts show that a necessary-house with a vault was built in the garden; in fact, the old common privy and pit.

In 1753, a ventilator was put up in the wards. In 1755, water-tanks were erected. In 1756, the stables were fitted up as an infectious hospital. Before this, small-pox patients were boarded out, and nearly every year we find entries of small-pox attacking patients. The same year, a proper dead-house was built.

In 1759, a fitting place was erected for salivating patients, and two hot baths were provided. We find cash payments constantly occurring for sea-water brought up by barges. It may be noted, in reviewing these accounts, that the yearly pay of the apothecary was only £15, of the secretary £10, of the matron £6, of the nurses £3 10s., and of the servants £3. At each annual meeting, if they behaved well through the year, they were voted a small gratuity. Meat cost 3½d. per pound, and coal 9s. a ton.

In the original hospital, then, there was no system of drainage, but sea-water and hot baths were considered necessary; and also ventilation for the wards, and isolation of infectious cases. Perhaps Worcester is the first place where we find a special isolated building for infectious cases attached to its infirmary.

In 1764, the attention of the staff was called to the urgent necessity of more cubic space and freer ventilation. They reported that no more beds could be added, and earnestly hoped that a hospital with larger wards would soon be built. This desire was realised; for, in the autumn of that year, Mr. Garlick of Bristol gave £200 to purchase a plot of ground near the Pitchcroft, on which to build an infirmary. Mr. Garlick wished that the new building should be built of a larger capacity than was then required, as he felt the necessity of plenty of fresh air for hospital wards. The Right Honourable Mr. Rushout of Evesham also gave £500, and exerted himself to collect funds for the new building. A plot of ground on Pitchcroft, near the river, was rented for brickmaking, and the excellence of the bricks may be seen at the present date. Mr. Knock was appointed architect, and a large portion of the present building was erected and opened in 1770, the two lower wards being called the Garlick and Rushout wards. The building then consisted of four wards and an attic storey, with a central executive block. A large brick culvert, 3 feet by 2 feet, was carried to Salt Lane, on the east side of the house, and thence to the river. Close-stools were used in the wards; and there do not seem, at this date, to have been any water-closets, but the old-fashioned necessary-house. At this time, the staff, who were previously elected by the physician, were ordered to be chosen by the general body of subscribers. A marble bust of Mr. Rushout, at the age of 85, is now in the board-room of the infirmary.

In 1772, water-closets are mentioned as being erected.

In 1783, Dr. James Johnstone, junr., was elected physician, at the age of 32. He fell a victim to gaol fever a few years afterwards, having volunteered to attend the prisoners. His brother, the venerable Dr. Johnstone of Birmingham, was the first President of this Association on its foundation in our infirmary in 1832.

The beds, which at first numbered only forty-eight, were increased to eighty in 1798. In 1811, fresh wards were made in the garrets; and in 1824 the closets were improved.

In 1812, Sir Charles Hastings, whose memory we now celebrate, became house-surgeon. In 1819, warm baths were erected, and galvanism was introduced as a remedial agent, a battery of fifty plates and the necessary apparatus being purchased.

In 1820, proper surface-drainage was made, and external Venetian blinds were added to the west front.

In 1823, the north wing was extended westward, and a new system of drainage constructed to the south-west; this drain measured 18 by 12 inches.

In 1825, the medical staff reported on the deficiency of means of isolating patients, erysipelas being constantly present, and advised a proper system of water-closets. Gas was now laid on, and better water-closets and an operating-room were erected; but the wards were not enlarged.

In 1828, it was reported that the infirmary was inadequately supplied with water; and a steam-engine was erected to force water over the house, a new well being sunk.

In 1830, the wards were warmed with stoves; and, in consequence of erysipelas again prevailing, a new dead-house was erected at a greater distance from the building.

In 1839, two new wards were built on the basement of the south wing; the upper floor being left to be added afterwards.

In 1845, being the centenary of the infirmary, Sir Charles Hastings proposed that the south wing should be carried out in a manner similar to the north wing.

In 1848, erysipelas being again prevalent, the wards were ordered to be holystoned.

In 1849, Madame Jenny Lind gave a concert, which produced £840, to be devoted to the building of a chapel, and a new upper attic ward, to be opened and called the Jenny Lind Ward. The water-closets were again remodelled.

In 1850, erysipelas again persisted. The wards were ordered to be scraped, and iron bedsteads to be used.

In 1854, the vault under the chapel was ordered to be used as a drying-room for the laundry. The inefficiency of the garret wards were referred to.

In 1857, the vault under the chapel was fitted up as a ward.

In 1858, water was laid on from the new waterworks.

In 1863, a report of the medical staff as to the unsanitary condition of the wards, and want of ventilation being secured by raising the roof and making the garret into proper wards, was recommended, and lost by one vote.

In 1864, the hospital was ventilated throughout, a lift was erected, and baths and lavatories for each floor; heating apparatus was constructed, with a water-main and fire-cock to each floor; wards were ordered to be constructed in the attics, which were opened as they now are in 1865, the new roof being put on before the old one was removed, so as not to interfere with the work of the hospital.

In 1866, a proper recreation-ground for patients was opened.

In 1867, gas was laid on to the wards.

In 1870, Mr. Martin of Birmingham was instructed to provide a comprehensive scheme for the drainage and water-supply, and efficient rooms for out-patients. A tender was accepted at a cost of £5,464. All the wards were ordered to be warmed with hot air; a new stone staircase to be erected for the north wing, and a bath-room to be erected underneath the chapel. Dr. Strange earnestly advised the erection of an isolated cottage hospital for infectious cases; this, however, was not carried out.

In 1872, another serious outbreak of small-pox took place, when the house was cleared of all but 24 patients, who were revaccinated. No visitors were admitted, and chapel service was discontinued. All the wards were cleared and fumigated. Dr. Strange again urged the necessity of a hospital for isolation, which was built in 1874 (for 12 beds) in the garden, having a proper hot chamber for disinfecting clothing and bedding. During this epidemic of small-pox, the meetings of the committee were held in the Shire Hall.

In 1873, scarlet fever broke out, after which an attack of diphtheria occurred.

In 1875, erysipelas again appeared, and the cases were at once removed to the isolated hospital.

In 1881, an entirely new system of nursing was adopted, a trained matron and nurses being appointed. In the autumn of 1881, erysipelas again appeared, together with diarrhoea, and a general rise of temperature amongst the cases. A meeting of the staff was held, and I was requested to thoroughly examine the condition of the drainage and water-supply. I found this to be in the following condition.

The whole of the water for both drinking and sanitary purposes was derived from a tank in the roof, supplied by the town water. When Mr. Martin had constructed the new water-closets, and lavatories, a tower at the western corner of each wing, separated by a well-ventilated corridor, yet he had taken the water-supply of the closets from the general tank, without the intervention of any siphon or service-pipe, so that the water used for

Drainage and Water-closets.—The water-closets were iron hoppers, with a pull-up valve. They were very rusty and generally filthy, the water-supply not being sufficient to cleanse the pans. The wash-hand basins and baths were filled with sewer-gas, no siphon being placed between them and the main drain, but only a slight bend of a few inches in the pipes of the lavatory. The drains from the housemaids' closets were trapped with bell-trap and siphon, generally kept open; but the pipe itself passed under two furnaces always in use, and then under the kitchen floor to the main drain, so that sewer-gas freely came into the corridor leading to the wards. This was also the case in the dispensary. The soil-pipes were ventilated by a cap placed on a five-inch pipe, and then a three-inch pipe carried up to the roof; the drain was of stoneware piping for a few yards. It then entered the old western stone-drain, which had burst in one place, and was bored with rat-holes in another. This drain passed under the chapel, and the servants' rooms were constantly filled with sewer-gas. The bath and closet under the chapel were filthy, and merely openings for sewer-gas. The sinks had been cut off a few years before, but the siphons were nearly choked with grease. The drain from the *post-mortem* room communicated, without proper trapping, with the general drainage; in three places the drainage was intercepted by catch-pits, without any means of ventilation; and the whole system was faulty; in one place the pipes being laid up an incline, and in others at a dead level.

The Report which I sent to the Committee was endorsed by Mr. Rowe, the county architect. It was, that nothing short of a complete renovation of the old system would be of any avail; and that the whole of the water-closets should be taken up, and Doulton's washout pans with siphon-service-boxes substituted; that a new water-tank should be placed at a position before the water-main entered the general tank, in which Danshell's filter on the instantaneous siphon-principle should be placed, from which filtered water should be conveyed to every ward; that all siphons in drains, except from the closet-pans leading to the soil-pipe, should be abolished, and in their place every sink, bath, lavatory, and down-pipe should be cut off, falling over a Dean's bucket-trap; that the drain from the housemaid's closet should be diverted from the kitchen, and should pass with an open mouth into a trap leading to the old and disused drain on the east side; that all soil-pipes should be ventilated at full width to three feet above the roof, and be capped with a Lloyd's extractor; that one of Stiff's interceptor sewage traps should be used at every soil-pipe, so that the drain, as well as the soil-pipe, should have a ventilating shaft with Lloyd's extractor, as well as a down-shaft for inlet of fresh air; that no drain should be permitted to pass under any part of the building; and that all drains conveying sewage should be of stoneware piping. Mr. Rowe suggested that the sewage should be carried from the southern part of the building directly down the garden, so as to have a straight course with a rapid fall. All these recommendations were cheerfully agreed to by the Committee; and now every drain, except soil-pipes, is cut off, so that no sewer-gas can enter the building; all terminals of drains are ventilated with exhausts, as well as every soil-pipe. All windows in the wards have been fitted with the costless ventilation of Mr. P. Hinckes Bird, which is found to be of great service, especially in the winter, when windows cannot be freely opened, in producing a free ventilation. Each patient has over 1000 cubic feet of space; and either in day or in night the atmosphere of the wards is perfectly fresh.

It seems strange that, when Mr. Martin made such an excellent and comprehensive plan in 1870, which, for its general efficiency cannot be too highly praised, the ventilation of the drainage should have escaped notice.

You will see there has been a continual desire for improvement from the first erection of the hospital; and I feel confident now, that everything that the present state of sanitary science can suggest, has been carried out. The nursing of our hospital is excellent in quality, although we might desire a greater quantity. We are now, however, prepared to instruct probationers, so that before long the number of nurses will be sufficient for the work.

I think our returns of both surgical and medical cases will well bear comparison with other hospitals. Antiseptic treatment is carefully carried out, and a fair share of major operations falls to the lot of the surgeon.

With regard to the work of the staff, it does not become me to speak, but any shortcoming will not be found in the direction of perfect unanimity of feeling, from our senior physician, who now so ably fills the office of President to this great Association, to the junior member of the staff, who is the zealous Secretary to our Worcester and Hereford Branch. Nor is the work of the committee of management, as at some less fortunate hospitals, in any way at variance with the medical staff, as they are at all times ready to carry out our suggestions for the welfare of the patients committed to our care. Time has

not enabled me to give you anything more than a brief sketch of the sanitary history of the Worcester Infirmary, but I should be pleased to show the sanitary arrangements of the hospital to any who may be interested in the matter at 9.30 to-morrow morning.

Mr. NUNN (Bournemouth) believed that the sanitation of hospitals and of dwelling-houses was the main point in all sanitary improvement. With regard to the Worcester Infirmary, he thought it would have been more interesting if the death-rates—and especially from infectious diseases, or tables of sickness from infectious diseases—had been given for the different epochs, showing the variations made. He should say that Worcester Infirmary, previously to the introduction of a water-closet system, was in a better sanitary condition than it was afterwards. This, he maintained, was a retrograde step. He had made an examination of the hospital, and found a complete disconnection of the sewers, which was the only way to get absolute safety, so far as the drains were concerned. But there were yet improvements that could be effected, for, on passing through the out-patient department, he experienced a very strong ebullition of sewer-gas, and he explained to the house-surgeon the way in which it was caused. Not only were the water-closets ventilated, and the sewer-pipes carried out, the sinks and other wastes disconnected, which was very proper, but he noticed that the rain-water pipes were also disconnected. He did not consider that this had been an improvement, inasmuch as it made no provision for charging the D-trap in dry weather, when the evaporation of water allowed the sewer-gas to come up and find its way into the building. He was told everything was disconnected except the soil-pipes. He suggested that these also should be disconnected to make the hospital perfectly safe. There was no doubt that an improvement in all county hospitals was desirable. Some few years ago he had been an inmate of the Bedford Hospital at a time when there was a large death-rate from pyæmia. Looking back to that time, he could not help being convinced that this was almost entirely due to the defective sanitary arrangements of the hospital. He believed, since that time, the sanitary condition of hospitals had been greatly altered. He should have liked to hear whether Worcester Infirmary had been entirely exempt from deaths from pyæmia since these improvements had been effected. Another result of the unsanitary condition of buildings was a form of pneumonia.

The PRESIDENT said, as Dr. Swete was not present to answer the various points, he doubted if it were quite right to criticise his paper. He would make one observation with respect to sewer-gas, and that was that it should not be a question of shutting it out; there ought to be no sewer-gas at all.

THE PUBLIC MEDICINE ASPECTS OF THE ALCOHOL QUESTION.

Introduction to a Discussion in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By NORMAN S. KERR, M.D.

THERE is a peculiar fitness in the discussion of this day. The echoes of the celebration of the jubilee of the temperance movement in this country have hardly died away, ere, at the jubilee meeting of the British Medical Association, we are met to consider the public medicine aspects of the alcohol question. A great wave of enthusiasm, accompanied by that radical change of personal habits, which attests the sincerity of those embarked on it, is steadily sweeping over the land; and it is the duty of the sanitary advisers of the community, the experts in public medicine, to candidly investigate the influence of this widely spreading popular wave on the health and vigour of the people, that the interests of truth may be served, and that the welfare of the nation may be assured.

Influence of Alcohol on the Public Health.—The true influence of alcohol on the general health has been a *questio vexata*, which has evoked a prolonged and animated controversy. It has been urged, on the one side, that all indulgence in alcoholic liquor has, in a state of health, an injurious effect. On the other side, this has been denied, and it has been as strenuously argued that the moderate use of such beverages is favourable alike to physical well-being, and to robustness of morals. Let us endeavour to arrive at the truth.

Alcohol as a Cause of Disease.—Disease may be induced by alcohol, directly or indirectly. There are some diseases caused by alcohol, and by alcohol alone. Such are delirium tremens, dipsomania, and acute and chronic alcoholic poisoning. There are diseases which may arise from

other causes, but which are sometimes the direct product of alcohol. Such are alcoholic phthisis, alcoholic rheumatism, alcoholic gout, and alcoholic paraplegia. Alcohol may produce disease by being a contributory factor. For example, an attack of heat-apoplexy is often found to depend more on the alcohol taken before exposure to intense heat, than on the exposure itself. A similar state of things has frequently been observed in fatal cases of frost-bite. A glass of spirits, swallowed against orders immediately prior to going on guard, has so lessened the power to withstand severe cold, that the unfortunate sentinel has speedily been found frozen to death at his post. Alcohol may also so weaken the vital organs and break down the natural vigour, that disease—for instance, typhus fever—may lay hold on a depraved constitution which, had it not been weakened by alcohol, might have thrown off the poisonous influence, and escaped the attack altogether.

Sickness and Death Caused by Alcohol.—As showing the effect of limited and unlimited drinking on the rate of sickness and death, unimpeachable evidence was adduced by Colonel Sykes, more than thirty years ago, with reference to our Indian forces. In the Government return of the sickness and mortality of the European troops forming the Madras army for the year 1849, these men were classed as total abstainers, temperate, and intemperate. As there were 5 deaths among 450 abstainers, 100 deaths among 4,318 of the temperate, and 42 deaths among 942 of the intemperate, the proportionate mortality was per 1,000 :

Total Abstainers.	Temperate.	Intemperate.
11.1	23.1	44.5

In other words, the mortality of the temperate was double, and of the intemperate quadruple, that of the total abstainers. The number of admissions for sickness among the abstainers was only 10.7 per 1,000 less than among the temperate, showing that the diseases in the former group took a much milder form than in the latter.

Ratio of Admissions to Strength Per Cent.

Total Abstainers.	Temperate.	Intemperate.
130.888	141.593	214.861

This striking testimony to the influence of alcohol on the disease- and death-rates has been confirmed by comparisons between groups of individuals belonging to friendly societies and life-insurance associations. The most recent confirmation is to be found in an actuarial report on the sickness and death among the members of the London Grand Division of the Order of Sons of Temperance. The results of the investigation are derived from observations, comprising 11,016 years of life, in which the members have been exposed to sickness and mortality. The following table affords data for a comparison between the experience of the Sons of Temperance, and that of three other groups of members of two large friendly societies with regard to the sickness *per annum* for each member.

	Weeks of Sickness per Annum.
Sons of Temperance	7.48
Manchester Unity, Rural Towns, and City Districts, 1866-70	26.20
Foresters, 1871-75	27.66

In drawing sound conclusions from that table, two reservations must be borne in mind. 1. The observations as regards the Sons of Temperance are of a comparatively limited extent, embracing but 11,016 years of life, while in the records of the Manchester Unity are comprised 1,321,048 years. The law of average has, therefore, less chance of fully manifesting itself among the abstainers than among the non-abstainers. 2. The Order of Sons of Temperance having been established only in 1867, many years later than the other societies compared with it, its members have not all had time to reach the limit of their age; so that here again, through deficient observations, the law of average does not have fair play. But, after ample allowance for these drawbacks, the comparison shows a very great advantage on the side of total abstinence. It is probable that complete materials for comparison will show at least three times as much sickness among the Oddfellows and Foresters as among the Sons of Temperance.

Proof of the superior healthfulness of total abstinence is afforded by the fact, that in some insurance companies there is a separate section for the abstainers, with the result that these invariably receive a larger proportionate share of the profits than the non-abstainers. In the Whittington office, the bonus in 1881 was 23 per cent. higher in the temperance than in the general department. From the last annual report of the Temperance and General Provident Institution, it appears that the number of deaths expected in the abstaining section was 213. There were but 131, or 32 less. In the general or non-abstaining section the expectancy was 320, and the actual number 290, or 30 less. So clear

was the evidence, that one company offered an extra bonus of 20 per cent. to teetotalers.

The vital statistics of the city of Glasgow afford a good illustration of the effect of alcoholic indulgence on the death-rate. In 1821, the number of deaths, from Cleland's tables, was 3,686, and in the following year, 3,690; but in 1823, when the reduced duties on distilled spirits began to operate, the mortality rose to 4,627, and in 1824 to 4,670.

Year.	Deaths.
1821	3,686
1822	3,690
1823	4,627
1824	4,670

Interesting evidence of the influence of alcohol on mortality is furnished by the Registrar-General's reports, from which the following table is extracted.

Mean Annual Rate of Mortality in England for Three Quinquennials.

Classes.	Cause of Disease.	Annual Deaths per 1,000 Living.		
		5 years, 1865-9.	5 years, 1870-4.	5 years, 1875-9.
I.	Zymotic diseases	5,171.8	4,842.0	3,887.6
II.	Constitutional	4,145.4	3,771.8	3,632.0
III.	Local	8,887.0	9,151.0	9,845.0
IV.	Developmental			3,037.0
V.	Violent deaths			

From this table it will be seen that in every class, except one, the mortality steadily diminished; but in Class III, the mortality as steadily increased. In this class, the principal increase was in deaths from diseases of the brain and nervous system, of the organs of circulation, of the respiratory organs, of the liver, and of the kidneys. These are precisely the organs most apt to be seriously affected by indulgence in alcohol.

The Mortality from Intemperance.—Alcohol being an irritant narcotic poison, swift in action, and of great potency, it would be only in accordance with natural law if the general use of intoxicating drinks were the occasion of a considerable mortality. And so, indeed, they are. It is difficult, if not impossible, to compute accurately the number of deaths from alcoholic indulgence. In the forty-third annual report (for 1880), the Registrar-General recorded only 637 deaths as having been due to alcoholism during the year. There were, in addition, 152 deaths returned as having occurred from violence while the sufferers were intoxicated. This made 789 in all. That this number gives no indication whatever of the truth, everyone acquainted with the subject well knows. Why is this? Simply because in the death-certificate the medical attendant very rarely mentions alcohol as playing any part in the causation of death. If he did so, under the existing system of registration, the peace of many a happy household would be destroyed by the revelation of the intemperance of some respected and lamented member of it, and by the publication of the scandal to the world. But if the certificate of death were seen only by some Government official, and treated as a confidential document, to be used only for the purposes of public health, the true part played by alcohol in the causation of death would be much more accurately returned than at present.

Some years ago, I was led, by a feeling that the popular idea that 60,000 drunkards died in the United Kingdom every year was exaggerated, to inquire into this intricate and difficult question. I noted all the deaths in my own practice which were caused either directly by acute or chronic alcohol-poisoning, or indirectly by the induction of secondary causes. Applying my own results, after due corrections for the usual characteristics of my cases, to the whole number of medical practitioners, I have been enabled to bring the probable number of deaths from personal intemperance below 40,500. The records of twelve medical brethren—some engaged in London, some in provincial towns—have shown a considerably higher average.

Shortly afterwards, Dr. Thomas Martin collected the records of twenty medical men, practicing chiefly in the midland counties. I found Dr. Martin's results somewhat different from both their direct estimation of deaths by which cause, and no deaths at all in his own practice, applied to the total number of deaths in England and Wales in 1875, gave to the number of persons dying, whether wholly or partially, from their own intemperance. The whole number of deaths to which these 39,287 referred being 510,315, this ratio, applied to the

total deaths in the United Kingdom in 1880, gives a grand total of 54,453, or 13,953 more than my estimate.

In 1879, the Harveian Society of London classified 1,615 deaths of adults over twenty years of age, occurring in the practice of some of its members, practising also mostly among the middle classes. Of these 1,615 deaths, 11.64 per cent. were partially, and 4.58 per cent. wholly, due to alcohol. From the Registrar-General's Report, in 1880 there were 528,624 deaths in England and Wales at all ages. Deducting the 264,697 deaths under twenty years, the deaths above twenty years in England and Wales amounted to 263,927. The average of the preliminary Harveian returns, applied to this total, would give 42,808 deaths for England and Wales; 30,721 being partially, and 12,087 wholly, due to alcohol—in other words, for England and Wales alone, 2,308 more deaths than I have ventured to compute for the whole United Kingdom. The Harveian Society has since been engaged in collating similar returns from a very much wider area. The report has not yet been issued; but I have every reason to believe that the results will substantially bear out those of the preliminary inquiry. If, following the plan of endeavouring to understate everything, I take the collective Harveian investigation as showing 4 per cent. wholly and 10 per cent. partially due to alcohol, the result will be considerably higher than my computation. The deaths over twenty years were in 1880, in England and Wales, 263,927, in a population of 25,708,616. The population of Ireland and Scotland for the same year being 8,894,039, there would be, in the same ratio, in these two countries, 91,298 deaths over twenty years. This would make 355,225 deaths over twenty years in the entire kingdom. Four per cent. and 10 per cent. of this total would give respectively 14,209 deaths caused wholly, and 35,522 partially, by alcohol; in all, 49,731, or 9,231 beyond my estimate.

Dr. Hardwicke and other experts have endorsed this estimate as most moderate; and Dr. B. W. Richardson has stated that he thinks the deaths in this category are at least 50,000 annually.

But this is not all the mortality from alcohol. Besides those who die from the effects of drinking in their own person, a larger number of lives are lost through the indulgence of others in strong drink. There are deaths by violence and by accident; the suffocation of children through the drinking of one or both parents; and a long chain of innocent victims, weak women and helpless children, either literally starved to death through the intemperance of the husband and father, or with life gradually crushed out of them through the tyranny and brutality of him who ought to be their cherisher and protector. This indirect mortality from the intemperance of others than the slain is not only much greater than the direct mortality caused by the lethal influence of alcohol on the person, but is infinitely more difficult to compute. Though I have closely studied the subject for years, and have done my best to reduce the figures to as low a compass as possible, I cannot shut my eyes to the probability that, for every death from personal intemperance, there are about two deaths from the excess of others. The estimate of 40,500 dying every year in the United Kingdom from their own intemperance, and 79,500 dying from disease, violence, accident, or starvation, consequent on the intemperance of others, has been submitted to several representative medical gatherings, and has, I regret to say, not been seriously disputed. In fact, it has been pronounced moderate and far within the truth by such competent authorities as the late Dr. Hardwicke, and many other coroners and medical officers of health. Dr. Noble of Manchester attributes one-third of our disease to intemperance; and Dr. Richardson has given utterance to the opinion that, were the British temperate nation, the national vitality would be increased one-third. I need not point out that estimates based on these premises would greatly exceed my own, for a third of the total mortality for 1880 would be 235,775 deaths.

It is extremely desirable to have some more definite idea than we hitherto have been in a position to form as to the true mortality from alcohol. The observers have been too few, and the scope of their practice too limited, to warrant with anything like accuracy the application of the ratio thereby obtained to the total number of deaths. Besides, very few medical men have paid sufficient attention to the matter to render the counterfoils of their past death-certificates a reliable mine of information. At least five hundred reporters in active practice in different parts of the kingdom ought to be asked to note the particulars of the deaths occurring in their experience during a certain specified period. A fair average might thus be obtained, and the ratio applied to the total number of practitioners or to the total number of deaths.

Intemperance in the Army.—One topic is exciting great public interest, and has already attracted the notice of the Section—the topic of workhouse stimulants. At the Sheffield meeting, I had the honour of pointing out the remarkable diversity of practice in the prescription of

alcohol to out-door and in-door paupers. The average cost for stimulants per out-door pauper on the books in the last week of 1871 varied from nothing in Chester to £1 13s. 6d. in Berkshire. For the in-door poor, the average ranged from 6d. per head at Anglesey to £4 6s. 5d. at Knighton. In Ireland, in the same year, there was no charge for alcohol in four unions, while in one union the average expenditure per head of the number relieved was £1 5s. 10d. In Scotland, in 1876, the average varied from 5d. to 17s. per inmate.

There has been a considerable reduction in recent years. In 1876, in England and Wales, there was a decrease from 1871 of three-tenths of a pint, or 1½d. per head. In London, there had been a marked diminution in a number of unions. In the Local Government Board Report for the year ending Lady Day, 1881, of the Metropolitan Workhouses, there are some figures so remarkable as to be almost incredible, when compared with the corresponding items in the 1869 return.

Metropolitan Workhouses: Cost of Alcohol.

Name.	1869.		1881.					
	Days.	Cost.	Days.			Cost.		
			Infirm.	Work-house.	Total.	Infirm.	Work-house.	Total.
St. George's, West	210,970	1,493	197,164	166,064	263,228	9	4	13
Greenwich	317,550	951	77,807	351,944	429,751	279	9	288
Shoreditch	353,320	818	159,292	222,059	381,351	474	5	479
Whitechapel	301,125	603	213,411	111,751	325,162	211	4	215
Wandsworth and Clapham	203,670	785	133,727	116,983	250,710	51	3	54

It will be seen from the above table that in the Wandsworth and Clapham Union, with 53,000 more days' maintenance, the expenditure on alcoholic liquor was £715 less in 1881 than in 1869. In St. George's, in the week, with 52,000 days more, there was spent on intoxicating drink £1,480 less. In the Provinces, in some unions there has been a very great reduction, as at Manchester, Barnsley, Falmouth, Wrexham, Helston, etc.

Marylebone Workhouse.—I have been favoured, by the courtesy of the able and experienced master, Mr. Douglas, with some interesting particulars of the striking reduction in the charge for alcoholic liquor in the Marylebone Workhouse. During the year ending Midsummer, 1881, the last year before the removal of the sick to the new Infirmary, this expenditure was £1,633 for an average of 2,046 inmates. For the first three-quarters of the succeeding year, there was no expenditure at all for strong drink, with an average of 1,528 inmates, though a large number of the inmates were included among the consumers of alcohol during the previous year. There have also been 202 births during the three-quarters with no alcohol, besides a populous nursery, male and female insane wards, and urgent sick cases. Milk and beef-tea have been ordered by the energetic medical officer instead of alcoholic drinks. In the splendidly equipped and well-ordered new infirmary at Notting Hill, there has been a steady diminution of the quantity of intoxicating liquid prescribed by the active and efficient medical staff. With an average of over 700 patients, the alcoholic expenditure is now at the rate of about £300 per annum.

St. Marylebone: Cost of Alcohol.

1881. (Whole Year.)		1882. (Three-quarters expired.)	
Average No. of Inmates.	Cost.	Average No. of Inmates.	Cost.
1,046	£1,633		
		Workhouses	1,558 Nil.
		Infirmary	713 £230
		TOTAL	2,271 £230

Effect of Reduced Stimulation.—Has this reduction in the amount of stimulants consumed been accompanied by any bad effect on the health of the paupers?

One medical officer alone reported that a trial of two months of diminished stimulation increased the death-rate and prolonged the period of convalescence. This opinion was so opposed to all former

experience that, at the request of the Medical Temperance Association, the Local Government Board sent an inspector to inquire into the matter. The inquiry, which was as searching and full as it could possibly be, resulted in an official report that a very large proportion of the alcohol had been administered in cases which had ended fatally; that several fatal cases were of such a nature that the absence of alcohol could not have affected the result; and that the data were too incomplete to warrant the conclusion that the mortality had been increased by the lessening of the stimulants. On the other hand, the late Dr. Simon Nicholls of Longford, Mr. Brittain of Chester, Dr. Collett of Guernsey, Mr. Sleeman of Tavistock, Mr. Dixon of Watlington, Mr. Wearne of Helston, Mr. Bullimore of Falmouth, Dr. Davies of Wrexham, Dr. Webster of St. George's, and other medical officers, have spoken in the highest terms of the beneficial effect of the entire, or almost entire, withdrawal of alcoholic drink upon the health and comfort of the inmates.

If there be no ground for the opinion that the diminution of alcohol increases the rate of mortality and prolongs the convalescence, there have been also no sufficient data for the opinion sometimes propounded that the complete withdrawal of alcohol lessens the death-rate. The various official returns show the fallacy of any such hasty and wide generalisation. In 1877, the parish of St. Cuthbert's, Edinburgh, spending only 2½d. per head on alcohol, had a death-rate of 27.85 per cent.; while Peebles, though spending £3 13s. 10½d. per head, had a death-rate of only 22.4 per cent. That is to say, though spending 352 times as much on alcohol as the former, the latter had 5 per cent. less mortality. In Ireland, in 1871, while £1 5s. 10d. per head gave a mortality of only 18 per cent., three farthings per head gave 35.5 per cent.; and no alcohol at all, in one house 19 per cent., and in another house 28 per cent. The truth is that there are many other factors in the causation of the deaths, besides alcohol; and till we can eliminate all the other factors, which as yet we are unable to do, we cannot possibly form an accurate opinion of the influence of alcohol on the death-rate of the sick. But there is reason to be satisfied with the proof that the withdrawal of alcohol did not increase the number of deaths, or prolong the duration of the convalescent period.

The Beer-allowance to the Healthy.—In many workhouses, it is the custom to give a daily allowance of beer, or other fermented drink, to paupers not sick. For this there seems no excuse. To say the very best that can be said of them, intoxicating drinks are not necessities, but luxuries, which can be done without, at least as well, if not better. Many of the ratepayers have a hard struggle to pay their share of the charges for the maintenance of the poor; and it seems unjust that those who work so industriously and practised so much thrift, to enable them to pay their parochial rates, should supply the recipients of this aid with luxuries, the use of which is never free from a certain degree of risk. The injustice is the greater, that the bulk of the paupers in this country have, directly or indirectly, come upon the parish through drink.

The Officers' Beer Ration.—It is usual to give an allowance of intoxicating drink to the officers. In many cases, where an officer does not consume this allowance, he receives no equivalent. This is most unfair. When brewers find it to their advantage to give their abstaining workmen higher wages than the others, on the ground that the former are more reliable and do their work better (making, in fact, better beer), does it not seem an anachronism that public bodies should offer no inducement to abstemious habits? I am sure that it would be a great gain to individuals and to the public service, if the beer ration to officers were entirely abolished, and a money payment given instead. At the very least, it is manifestly not fair play to give an officer, not caring for the liquor or declining it on principle, neither a cash nor other equivalent.

The presence of strong drink is not conducive to good order and discipline. The newspapers constantly record the conviction of paupers out for the day, for drunkenness and offences connected therewith. In many workhouses, a large proportion of the inmates returned to the house drunk and excited. Not long ago, at a West-end workhouse, 340 women had leave. Within two hours, they began to return drunk and riotous, till in about thirty hours over 200 of them had returned in this shocking state. Violence is not unusual, though the officials wisely take as little notice as possible of what intoxicated paupers do. I have seen the marks of the teeth and nails of an intoxicated female inmate on an official, days after the onslaught. There can be little doubt that the exclusion of strong drink from our workhouses would be a great boon, both to inmates and officers, and the general health and comfort of all would be promoted. Mr. Douglas of St. Marylebone is of opinion that one of the great advantages from the exclusion of alcoholic drink is the improved discipline; for, in the best regulated or smallest workhouse in which stimulants were given, traffic existed in these articles.

The result was, that inmates were occasionally found under the influence of liquor, and quarrelsome. Mr. Douglas adds that, since the discontinuance of beer and spirits, there has been much less waste food.

That the Local Government Board are alive to the expediency of keeping the consumption of alcoholic drink as low as possible, is evidenced by the very plain letter from the assistant-secretary to the medical officer at Littlehampton. In that communication, it is stated that the experience of some of the largest workhouses in the kingdom, where stimulants had been practically discontinued or very largely reduced, showed that alcohol was not needed for the majority of the diseases usually met with, and that there were other means of sustaining failing powers and counteracting disease. For the beer allowances to officers and to the healthy pauper, the guardians are responsible; but, for the stimulants used in the treatment of the sick, the medical officer alone is responsible; and it is greatly to be desired that he should confine his administration of alcoholic drinks to the lowest amount compatible with safety.

Habitual Inebriety.—The important and perplexing problem: How to deal with the habitual drunkard? has for many years occupied the attention of the Section and the Association. With the moral and religious bearings of drunkenness we have nothing to do, except in so far as it is our duty to point out that all the mischief arising from alcohol is brought about by the operation of physiological and pathological law. Moralists and theologians are apt to forget that inebriety is the effect of an immediate material cause. It is in virtue of the action of alcohol as an irritant narcotic poison, that some men, women, and young people become drunkards.

Even in its mildest forms, drunkenness is the product of a physical agent. If the habit of drinking be confirmed, there not unfrequently follows an impaired nutrition of the nervous system, and a change in the tissues of the brain, as in the tissues of the liver, kidneys, and heart, which is unmistakably indicative of a diseased condition. Dipomania, or drink-madness, is as true a mania as pyromania, or kleptomania. Not all drunkards are dipomanics, but the number of those who may be said to be afflicted with the disease of confirmed inebriety is very great.

The subjects of this deplorable and intractable disease are indeed to be pitied. Their nervous organisation has been so shattered, their perceptive faculties so clouded, and their will-power so utterly broken down, that they are unable to resist the uncontrollable crave for the drink, and they defy the most persistent attacks of the philanthropist and the Christian. If they take the teetotal pledge, they are constantly taking it, and as constantly breaking it. Their intentions are good, but their execution is contemptible. Consumed with an unquenchable and irresistible thirst for intoxicants, they are bound hand and foot to a merciless master.

The disease of habitual inebriety owes its origin to a constitutional susceptibility to the narcotic action of alcohol on the nerve-centres. The chief predisposing cause is heredity. I know four ladies, three married and one unmarried, not one of whom is thirty years of age, who are all habitual drunkards. Their mother was a dipomaniac. The most usual exciting causes are, in females, the habit of taking stimulants for the relief of pain, and while nursing; in males, over-exhaustion of the brain, sudden nervous shock, family or business worry. In America, from 15 to 20 per cent. of dipomanics are females. In Britain, the proportion is nearly double.

There is but one means of cure—complete life-long abstinence from all intoxicating drinks. This condition should never be departed from, as cases of relapse have been known to arise from partaking of fermented wine at the communion, and as a medicine, after even a long period of abstinence. Such weak, broken down, shiftless, diseased beings are quite unfitted to manage the affairs either of themselves or others. In the interests of common justice, and in fairness to the unfortunate families and others who are being injured by this veritable drink-mania, there ought to be legal power to lock up such dipomanics, and remove them from the temptations they are unable to resist. The Legislature has declined to grant this power; and it was only with great difficulty that an Act, the *Habitual Drunkards' Act* (1879), has been obtained, authorising the compulsory detention, for any period not exceeding twelve months, of such habitual drunkards as may voluntarily surrender their liberty. The Act is very imperfect. The applicant for admission into a Retreat licensed under the Act, has to declare himself an habitual drunkard within the meaning of the Act, before two magistrates. The Act will expire in seven years; and, unless some good results be forthcoming, it is very unlikely that it will be renewed. If, on the other hand, the results be such as to show that the Act is a failure, we shall probably witness a further extension of the powers of the Legislature, and a further extension of the powers of the magistrates.

Following up the excellent work of the late Dr. Dalrymple and Mr. Alford, and as a result of the efforts of the Habitual Drunkards Committee of the British Medical Association, a philanthropic society, limited by guarantee, has been formed for the purpose of opening the Dalrymple Home for the Treatment of Inebriates. Among the managers are the Archbishop of Canterbury and other prelates, the Duke of Westminster, Earl Shaftesbury, Sir Thomas Watson, Sir Henry Thompson, Dr. Andrew Clark, Dr. B. W. Richardson, Dr. Cameron, M.P., Dr. Farquharson, M.P., and several members of the Association. The society are in treaty for a house and grounds in a healthy suburb of London, and hope shortly to have the Home ready to receive male inmates, either under the Act or otherwise. In Britain we are far behind America in measures for the treatment of the habitual drunkard, and as the Act was obtained mainly through the influence and exertions of the profession, it is the duty of members of the Association, and of medical practitioners generally, to supply ample financial and other support for a fair and thorough experiment.

Increased Consumption of Non-alcoholic Drinks.—There has been of recent years an extraordinary increase in the production and consumption of un-intoxicating drinks. The Annual Museum bears witness to the excellence and attractiveness of high-class unfermented wines, zoe-done, hedozone, and other pleasant, wholesome, and palatable beverages. The variety and extensive use of these non-intoxicants is a favourable omen of the increasing sobriety, and consequent improved health, of the community, and will, therefore, be watched with considerable interest by all enlightened students of public medicine.

Mr. F. J. GRAY (Cannock) said that, being one of the few who held a licence under the Habitual Drunkards Act, he wished to express his opinion with regard to the latter part of Dr. Norman Kerr's paper with reference to the Act, which, as it now stood, was almost a farce. He had had a licence nearly six months, and had a dozen patients in his home, and had had during the time nearly one hundred applications. He had only one under the Act. Many of the latter applications had been for females; and the question in each case was asked, "Can you retain my wife or daughter under the Act without their consent?" and when these applicants were told that they would have to sign their consent before two justices of the peace, and also produce a statutory declaration of two witnesses that they were habitual drunkards under the meaning of the Act, they had answered that it was impossible. Hence many of these patients were debarred from reaping the benefits of a compulsory residence in these retreats, because they were unwilling to go to them, and the friends were unable to place them there without their consent. There were hundreds who would be greatly benefited by a compulsory residence in a retreat. In Mr. Gray's opinion, the signature of a declaration by either the wife or the husband, with one witness, before a justice, should be sufficient, without the consent of the patient. He found that the idea of the greater part of the patients with regard to the retreats was that they were going to be shut up in a prison; but this was not the case. They were allowed their liberty; and everything possible was done, in air and exercise, to make them comfortable.

Dr. C. R. DRYSDALE (London) remarked that, in entering upon the question of the alcoholics, he felt the greatest diffidence in speaking against a substance which was so largely consumed, not only by the laity, in health, but also by members of the medical profession—a profession to which all other members of society came for advice as to their habits. And yet, all his observation of patients led him to the conclusion that alcohol was one of the very commonest causes of death. In fact, next to phthisis, he believed, alcohol caused more deaths among the adult population than any other cause. In Paris, where hospital statistics were excellent, it was found that one-fourth of all deaths were from phthisis; but the most common cause of death was alcohol, and that even in so-called "sober" France. Statistics were on the side of teetotalism. The United Kingdom Temperance and General Assurance Company (London) insured both total abstainers and moderate drinkers, of course, no immoderate ones. In that company, whilst it was expected, by ordinary death-rates, that 213 deaths should have occurred among the teetotallers, only 131 deaths occurred; and whilst 320 were expected to die among the moderate drinkers, 290 died. The result of this was, that every five years a considerable bonus went to the total abstainers, whilst a very small one went to the general public.

Dr. CARTER (Liverpool) remarked that, in his opinion, the fact that total abstainers lived longer than the so-called moderate drinkers, was as well established as any fact not demonstrable could be. The evidence alone of the United Kingdom General and Temperance Institution, which was uniform, and extended over several quinquennials, was always largely in favour of total abstainers. It might be interest-

ing to the Section, as it was to Dr. Carter when he first heard it, to receive evidence which should render this probable. It was presented by Dr. Ridge at a meeting of medical men, over which he (Dr. Carter) presided a few years ago at Liverpool, where this question was discussed. It depended firstly on the similarity of cell-processes in vegetable and animal life. If cress or mustard seed were germinated in an atmosphere containing ever so small a proportion of alcohol, they became dwarfed and diseased. Probably, an analogous effect was produced on animal-cells by the daily dietetic use of alcohol in which many indulged. Secondly, there were results of a physical and mental test to which a number of healthy young students of Edinburgh University submitted themselves—the physical one being to raise a heavy weight many times a minute a foot high, and the mental one learning so many lines of *Paradise Lost*—and then watching the effect on the pulse and heart after three months of total abstinence, and three months of what would be thought very moderate indulgence in alcohol. The result after drinking beer was always distinctly in the direction of so affecting the heart and arteries as to lay the subjects open to the worst effects of the attacks of dangerous disease; and it helped to explain how the mortality came really to be greater among them than among total abstainers.

Dr. SCATLIFF (London) stated that the statistics of life-insurance, etc., as evidence of the beneficial results of abstinence from alcohol, harmonised with his own experience. He believed that the majority of the medical profession thought that the habitual use of alcohol as an ordinary article of diet was unnecessary for ordinary healthy persons. The main thing required was to enlighten the public, and he urged medical men to have the courage of their convictions, and to do their best, by their prescriptions and advice to their patients, to stem the tide of intemperance that was doing so much harm to their fellow-countrymen.

Mr. RITCHIE (Leek) in corroboration of Dr. Norman Kerr's remarks, related the results which he had experienced in the fever-hospital in the town in which he resided. Out of 179 cases treated, 46 were treated with alcohol, and the mortality was 10, making a death-rate of 21.4 per 1,000. The number treated without alcohol was 133, the mortality 5, showing a death-rate of 3.7. For a very long time he had very rarely used alcohol in his private practice. He had invariably found that his patients recovered more rapidly without alcohol, and were certainly less liable to disease. His observations in his own district completely confirm the results as set out in the Registrar-General's return. From 1856 to 1860 some very good sanitary work was carried out, and the mortality in all classes of disease fell wonderfully, except in local diseases, and the excess of disease was exactly in the very class to which Dr. Kerr had referred, viz.: those of the heart, brain, kidney, and liver. Zymotic diseases went down from nearly 8 to not quite 4, and in 1876-81 the death-rate from these diseases was 1.7 per 1,000, but the deaths from local diseases had reached 8.37 in 1851-60, and 11.77 in 1876-81.

Mr. DARBY (Bray) did not attach any great importance to medical statistics, there were so many disturbing causes. He did not think the medical man could do without alcohol altogether as a medical remedy, but some medical men would give more than others, just as some gave more quinine and castor-oil than others. As a rule, he did not think alcohol could be expunged from the pharmacopœia as a medicine. It had always seemed remarkable that the profession at large had not taken notice of the enormous increase in the consumption of aerated waters. He had for years insisted upon his friends never to drink, except at their meals. Medical men, he thought, should impress this upon their neighbours, their friends, and their patients.

The PRESIDENT (Dr. Carpenter) said Dr. Norman Kerr's arguments were so well supported by statistics, that they must have carried conviction to all that they were substantially true and right. The subject was one which required very careful consideration, and some influence should be brought to bear upon the governing bodies, so that something might be done in regard to a discovery of the effects of the limitation of alcohol in workhouses to which he alluded. He urged the Investigation Committee to take up this subject, and work it out to its thorough end. Dr. Kerr had alluded to the question of the habitual drunkards, and on this subject he was followed by Mr. Gray. This was a subject of the greatest difficulty, and one which the Association had been working at for a long period with very little success; and they hoped by the efforts which had been brought to bear, that they would have greater success in the future; and it required all the influence of every individual member who was anxious to do good to his fellow men, to get the habitual drunkards' question reconsidered. Dr. Drysdale's observations were very much to the point. It did appear to him most extraordinary that medical men, acknowledging that alcohol lay at the base of a very large amount of disease, should still continue to recommend it for ordinary daily use as a necessary of life.

Dr. Carter's observations with regard to teetotals were perfectly true; and there was one very important matter with regard to the statistics which had been brought out by one of the teetotal societies, which would have a wider influence upon the working people of this country, when it had been more thoroughly established on a larger basis than it was at present, and it was this: that it had been found, with one of these associations, that the sick pay which was paid per year out of the funds of this benefit society did not increase with the length of the life of the individual. Now, taking the Odd Fellows and the Foresters' Societies, it was found that the labouring man got more sick pay at the age of 35 than he got at 25, and more at 45 than he got at 35. The older he was, the larger was the amount of sick pay drawn from the funds of the institution, and the result was that the Odd Fellows would not add to their ranks any one above 40 years of age. It was shown that total abstainers between the ages of 30 and 40 and 40 and 50 did not draw one penny more sick pay from the funds of this society than the men between 20 and 30. If that were established on a firm basis—and he was pretty sure it would be—it would have great influence upon the working classes when brought prominently before their notice, in directing them into the ranks of temperance. Dr. Scatliff was very just in his observations; the profession did want the courage of their convictions in this matter, and he (the chairman) had very great sympathy with young medical men who took up this matter, and who could not afford to be teetotals. He had himself felt the consequence of having given utterance to his opinions. He would say to the young men, "Stick to your convictions and have courage with them." The statistics of Mr. Ritchie were very much to the point, and he thought the only opposing speech had been that of Mr. Darby. He said very few diseases could be treated without wine or alcohol. He (the chairman) could say that, during the last fifteen years of his life, he had not used wine or alcohol in the treatment of one disease. He had always studiously prohibited it when he had seen it would do harm, and he had never had reason to doubt of the benefit obtained. Before he became a teetotaler he carried out an experiment upon himself, something like that to which Dr. Drysdale had alluded as having been carried out at Edinburgh, and he came to the honest conclusion that, when he took alcohol from day to day, he did not do anything like the amount of mental and muscular work that he did when he gave it up altogether. Having come to that conclusion in his own person, he felt he was perfectly justified in recommending that course to his patients. He did not mean to say that they were not to use it as a medicine under proper circumstances.

Dr. NORMAN KERR said he was almost sorry he had nothing to reply to. Mr. Darby's observations were really outside of his remarks, for he did not speak of alcohol as a medicine. He concluded by proposing that the President of the Section be requested to place the memorials read before the general meeting on Friday, with a request that they might be published among the proceedings of the Association.

Dr. SMITH seconded the resolution, and said he could not bear out what been said by Dr. Scatliff. He himself unhesitatingly told his patients that he did not approve of alcohol, and did not treat them with it.

SHORT NOTES ON VACCINATION.

Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By CHARLES F. MOORE, M.D., F.R.C.S.I., Dublin.

IN the "Short Notes on Vaccination" which I beg to submit to the British Medical Association, I do not propose entering on the subject of the acknowledged value of vaccination, as that has been so often extremely well shown by many competent and able writers, and quite recently by Dr. R. D. R. Sweeting, Medical Superintendent of the Fulham Hospital,* Drs. Wm. McLaren and A. T. Brett.†

The object of my present paper is only in reference to the mode of performing the operation. This may be thought a minor matter, but to those who consider how much of the opposition to the operation arises on the part of mothers and others from the appearance, at all events, of suffering in some cases which the infants present, it seems well worth while to consider every means by which the condition of the child, at the time of the operation, and subsequently, may be ameliorated.

Many parents or others in charge of infants postpone the operation either to the limit of the legal period, or until after it, on some pretext or another, and so delay the matter until dentition has commenced, or until some other unfavourable condition has arisen.

* Memorandum on Vaccination—Metropolitan Asylums Board, March 1882.

† *Lancet*, July 15th, 1882.

The instructions for vaccinators issued by the Privy Council, December 1st, 1859, are very full and excellent, but are not always to be met with. They deal with the conditions unfavourable to vaccination, which should be strictly observed, except in any immediate danger from small-pox. "Four good sized vesicles" are desired by the instructions spoken of—not less than half an inch from one another—or "local effects equal to those just mentioned."

It is no doubt right that discretionary power should be given to vaccinators, as to the particular mode by which they may perform the operation of vaccination; but where so many different plans are pursued, it seems well to point out the objections or the advantages of the several modes advocated. Turning to a very valuable and beautifully illustrated work, published by Baillière, Tindall, and Cox in 1878, and translated by Mr. Morton from the French of Professor Claud Bernard and M. Ch. Huette (of Montargis) at page 9, we read as follows: "There are four methods of vaccination: 1. Friction; 2. Vesication; 3. Scarification; 4. Puncture." The last two only will be described." Scarification is there described as scratching a portion of the skin of the arm, about half an inch square, in all directions, by the point of a needle or sharp lancet, not so deep as to make the blood run, but its appearance in the line of the scratches is to be desired, etc. "In vaccinating by the puncture method, an ordinary lancet, or still better a ('grooved') vaccine lancet and needle, is made use of, etc."

In the valuable *Handbook of Vaccination* of the late Dr. Seaton, perhaps every variety of mode of vaccination practised in Europe or America is described and delineated, as well as each instrument in use for the purpose. I would, however, in particular notice the following by this author: "Many practitioners prefer vaccinating by scarification to the plan of vaccinating by puncture. Scratching single or double, about half an inch or more long, but at distances which should be from half to three-quarters of an inch apart from each other on the arm, are made with the point of a lancet, or with a thick needle, and the lymph is then rubbed on. In the course of each scratch, two or three separate vesicles will arise, or more frequently one oblong compound vesicle will be produced. Two scratches of this kind should be made on each arm, or four on one arm." The author then goes on to speak of the plan of "scratching and cross-scratching" with a lancet that is not too sharp. He mentions Professor Dryer's two-bladed instrument, much used in Denmark; also that of Dr. G. Weir with four needles and a sort of curved spatula. I have used one of these, but I cannot approve of it, as it, as well as the grooved lancet figured in MM. Bernard and Huette's work, is more painful to the person operated on, and less easily kept perfectly clean than the ordinary sharp lancet, kept solely for vaccination.

Dr. Seaton's work advocates inspection of the stage of areola on the eleventh or twelfth day, as well as on the eighth, in case the appearances are at all dubious. This plan I find no difficulty in general in carrying out, explaining the reason, and withholding the certificate until the result is perfectly satisfactory.

The good results obtained, with a minimum of annoyance to those operated on, and freedom from delay or trouble in the healing process afterwards, have for several years induced me to continue the operation, which I shall now describe.

With a perfectly clean sharp lancet, I make five or six single scarifications, holding the lancet as a pen is held, resting securely but gently on the arm of the person operated on, which I hold with the left hand. The operation, thus performed, scarcely occupies two seconds, and when done lightly, but sufficiently, does not waken a sleeping infant, nor cause a waking child to cry, provided the attention be diverted by gently stroking the arm, or otherwise engaging the attention. The lymph from the arm of another child, or preserved in tubes or on points, is then to be gently rubbed with the flat of the lancet or charged points across the little wounds, which may be made to gaps or slight traction on the adjacent skin. It is neither necessary nor desirable to make the incisions at all deep; and if the appearance of a white blood does not speedily occur, getting the parent to gently "hoist" the child, which does not waken a sleeping infant, will generally give the circulation sufficient impetus to cause a slight but sufficient evidence that the cutis was reached by the incisions.

The result of this mode of operating I have found to be one or more, usually two, separate vesicles, or an oblong compound one at the site of each pair of scratches, and one at the site of the single scratch, or more if six were made in all, or that they were made longer than usual.

The integument not being extensively scratched or incised or punctured, is all the more apt to heal by immediate union, and the same rule I have found to hold good in the progress of the drying up of the vesicles. It appears that "scratching and cross-scratching" interferes considerably with the nutrition of the integument, and predisposes to suppura-

tive inflammation, while at the same time it irritates the child, thus producing in the susceptible unfavourable conditions. Although injurious consequences occur extremely rarely, still it is well to endeavour to avoid their occurrence by all means in our power.

I make these observations with a view of imparting the results of a rather extensive experience of eighteen years in a large city district to my younger brethren; and, while I do so, I think I cannot better conclude this paper than with an extract from Dr. Seaton's admirable work, where he speaks of the several modes of inserting lymph. "The only difference that I am aware of, to a careful man who thoroughly understands his work, is this: that he will succeed best in the way to which he is most accustomed." While I give this quotation, I will only add, finally, that those who are comparatively beginners will, I think, find the method I have advocated above, if attention be also paid to perfect cleanliness—dipping the lancet in clean water after each operation—gives the best result with the least amount of annoyance to the patient.*

ON THE VISCERAL ARCHES OF THE MAMMALIA, EXPLAINED BY THEIR STRUCTURE IN THE LOWER TYPES OF VERTEBRATA.

Read in the Section of Anatomy and Physiology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By W. KITCHEN PARKER, F.R.S.,

Hunterian Professor of Anatomy, Royal College of Surgeons of England.

THE existing vertebrata are divisible into two primary groups, namely, those that have gills for aquatic respiration, either for a time or permanently, and those that never possess gills, even in their embryonic condition. Thus we have the "Branchiata" and the "Abranchiata," composed of the fishes and amphibia on one hand, and the Sauroptiles (reptiles and birds in one group) and the Mammalia on the other.

But the embryos of the Branchiate types do not develop the amnion and allantois; they may, therefore, also be called "Anamniota"; the abbranchiate types do develop these parts in their embryonic condition, and therefore may be called "Amniota."

The existing forms of vertebrata are thus sharply divided into two great primary groups; the question occurs, Was the distinction always as sharp and clear as it is now? I am fully satisfied that it was not, and that the higher types arose out of the lower a long while ago.

In a shark or skate, the embryo, whilst in the egg-pocket, has gills growing from all its visceral folds, even from the first postoral arch, that out of which both the upper and lower jaws are formed; these latter, however, form only a temporary structure.

The first cleft, out of which these filamentous temporary gills protrude, becomes the blow-hole of the adult; all the other clefts become the openings that lead to the permanent gills. Of these, there are five in most kinds, six in Hexarchus, and seven in Heptanchus; thus, in the latter, there are nine visceral arches forming the skeleton of the mouth and the large respiratory pharynx.

There are no bony plates finishing the skull and face in these types, but in the lips certain small superficial cartilages are found, called "labials"; two above and one below, as a rule.

The first arch bends over the mouth and subdivides into two pieces: the upper forms the dentigerous upper jaw, and the lower the dentigerous lower jaw. This may be stated in morphological terms in this manner: the first visceral arch of the Selachians forms the endoskeleton of the palatal and oral region, by segmentation into two, or sometimes three, parts.

In the skates there is a further subdivision of the first arch, for the upper piece, or "suspensorium," has above it a semilunar segment, which forms the skeleton of the lid of the blow-hole; it is called the "spiracular cartilage."

In the sharks generally, the next or hyoid arch, which is a permanent gill-bearer, breaks up (also into two pieces only); but in the skates and Chimeroids, the second arch is subdivided like all the rest, namely, into four segments on each side.

If now we travel upwards, and take as an instance one of the higher Ganoid fishes, such as the *Lepidosteus*, or *Rock Hound* of the North American lakes, we find many remarkable modifications of the simpler Selachian arches.

Not only in *Lepidosteus*, one of the higher Ganoid, but also in the sturgeon, one of the lower, we find that the bony "scutes" in the region of the head, have been largely dominated by the endoskeleton, by a

* See also that, in the case of a vesicated spot (see vol. ii.)

sort of organic affinity they have grown to, and become modified by the parts within. And not only so, but the endoskeletal cartilages, that in the shark and skate only get encrusted by false bone—little patches of calcified cartilage-cells—in the Ganoid became truly ossified, so that there are two systems of bones, the deep and the superficial cartilage-bones, and membrane-bones.

This is a grand step towards what we find in the Amniota, where, as we climb higher and still higher, the cartilage, with its bony centres, yields more and more to the superficial bones—bones that are, so to speak, the reappearance of the inner layer of the ancient Ganoid scutes.

In the sturgeon, there is a rudimentary growth of the gill of the first arch, and a permanent gill on the second. In *Lepidosteus*, the first does not appear at all, and the second gill is rudimentary and evanescent. Of the five gill-arches developed in the latter, only four bear gills; the last arch is arrested and gill-less.

These arches, with their segments, become more or less ossified; and, leaving the gill-arches (proper) aside for the present, we may remark that, in *Lepidosteus*, we have in the arch of the jaws and the arch of the tongue the first and second visceral arches—a very compound structure. This structure is made up of a chondrosteous endoskeleton and an exoskeleton composed of ganoid plates, where they reach the surface.

There is no blow-hole in *Lepidosteus*, such as exists and persists in the sturgeon, in common with the Selachians; and the cartilage, which in the skate forms the lid of the blow-hole, is continuous in this, the highest Ganoid type, with the rest of the suspensorium.

The teeth now grow on the superficial bones, and not on the cartilaginous bones, as in the shark and skate; and the cartilaginous upper jaw has become very feeble in its fore part. Yet much of the cartilage of this first visceral arch remains throughout life.

The pier of the mandible of *Lepidosteus*, as in osseous fishes, is ossified above by the metapterygoid, and below by the quadrate. The mandible also, near its articular surface, is ossified; and that centre arises from two points.

Splints are applied to the upper jaw and suspensorium in great number. On the outside, there is the maxillary chain, ending in a small jugal; and the cartilaginous pterygopalatine is supported by two long bones, the palatine and the pterygoid. The strong supporting part of the upper jaw (suspensorium) has a splint above, the mesopterygoid; and another below, the preopercular.

The mandible, besides the periosteal layers that bind the two cartilage-centres into one articular bone, has five splints applied to it.

In front, outside, and above and below, there is the large dentary; inside this, protecting Meckel's cartilage, the long thin splenial; behind this, in the coronoid region, the coronoid bone; and above the hind part, the supra-angular; and below it, the angular.

The hyoid arch of *Lepidosteus* is first divided into an antero-superior and a postero-inferior piece. The upper piece has two centres, the hyo-mandibular and the symplectic; the latter is the part that binds inside the suspensorium, tying the piers of the two arches together. An intercalary piece of cartilage, the interhyal, ties the upper part of the hyoid arch to the lower, which has a small distal segment separately ossified—the hypohyal; whilst the main bone is ossified by a short epiphyal and a long cerato-hyal below it. The basihyal or interglossal is a double bone beset with teeth, and does not ossify.

If anyone will carefully study the skull of the great fin-pike (*Lepidosteus*), an ancient type of fish, he will find that Nature has given him all he wants, and more, for the construction of the face and throat of the amniota or the abbranchiate types—Sauropsida and Mammalia.

One of the first changes to be noticed now, is the dying out of the proper branchial arches; the arrest of the second, or hyoid arch, is also a very important feature; its upper part, correlatively with an increased complexity of the organ of hearing, becomes marvellously transformed, to assist in the construction of the outworks of that organ. I shall refer to this again, soon.

In the Sauropsida, the fore part of the suspensorium—which had become slender in *Lepidosteus*, and quite unlike the huge dentigerous bone of the shark—is now almost suppressed, and the pier of the mandible is ossified by only one centre—the quadrate.

In most birds and some reptiles, there is a mesopterygoid splint, and in the lower bird (emu, cassowary) the squamosal gives off a preopercular process as in the Amphibia, but the preopercular bone is now suppressed. The pterygoids and palatines, however, figure largely all through the series, and the five splints of the mandible reappear in nearly every kind of bird or reptile.

The articular region of the mandible generally develops an internal and a posterior angular process; these spurs are seen in gallinaceous and anserine birds.

The hyoid arch in the Sauropsida is fashioned like that of the fishy types, but the uppermost pier is very slender, and, either by arrest of ossification at a certain point or by direct segmentation of the cartilage, the pharyngo-hyal segment is double, like the pharyngo-branchials of the sturgeon.

The proximal segment is dilated at its upper end, and fits into a new oval opening in the ear-capsule—the fenestra ovalis; this upper piece is the stapes; the distal piece, which stretches the membrana tympani, is the incus; there is no malleus in the Sauropsida.

A band of muscular fibres, which was becoming distinct in the Amphibia, is in these forms specialised as the “stapedius muscle”; there is no muscle functionally answering to the tensor tympani of mammals.

The foot of the hyoid arch is very variably developed, and very variably attached, above; the uppermost segment of a visceral arch is very independent throughout the vertebrata of the lower or main part, which carries the tongue.

In lizards and tortoises, they are rudiments of the third and fourth visceral arches—proper branchials; in crocodiles and birds, only of the third. The mandible gradually grows nearer to the skull as we ascend. In the fishy forms, it is thrown far off by the huge size of the upper piers of the hyoid, made to carry both its own arch and pier, and arch of the mandible. In the Sauropsida, the quadrate bone still intervenes between the skull and mandible, either as a fixture, as in tortoises and crocodiles, or as a free swinging suspensorium, as in snakes, lizards, and birds. But in the mammalia, the mandible articulates directly with the skull; and here, everything is made for solid strength rather than for elastic mobility.

This change seems to be very abrupt; it is accomplished, however, by very gentle prenatal methods. There is nothing new, only an unlooked-for modification of what is very old, morphologically speaking. At first, everything takes place as in the Sauropsida, and even Ichthyopsida; gradually, the hinder part of the mandibular structure is pinched off, as it were; and the fore part gets a new swinging point, further forward.

That which is pinched off is not altogether wasted; its axial part, the quadrate-articular region, is arrested and modified, and becomes a new and additional link in the ear-chain, the “malleus”; whilst the muscular fibres that formed a strong adductor muscle of the mandible in the lower forms, now becomes the elegant little “tensor tympani”, a second muscle of the middle-ear, for the stapedius, as we have just seen, exists in the Sauropsida.

If these modifications be not worth a careful study, I think that the morphologist's function is gone. To me, this growing embryology seems bursting-ripe with rich meanings, suggestions, and teachings.

In the Mammalia, not only is the endoskeletal cartilage of the upper jaw very small in quantity, or entirely suppressed, but the quadrate segment, or suspensorium, is never more than partially segmented off from the articular part of the mandible; it forms merely a quadrate lobe.

For the rest, this first visceral arch is well-developed, forming a strong round cartilaginous rod on each side, and this rod near the chin unites with its fellow of the opposite side, a single process then finishing the structure up to the inside of the lower lip.

Under the quadrate lobe, the cartilage forms inwards as a larger internal angular process, and backwards as a short posterior angular process.

The quadrate lobe articulates with the head, under the “tegmen tympani”, which has a bony cave formed over it by the wide part of the squamosal; the internal angular process grows across the membrana tympani to the inner pier of which its apex is attached.

For some time, say the first third of the intra-uterine period in the placental types, this endoskeletal lower jaw is as large as in the Sauropsida.

But there has been growing, outside its anterior three-fourths, a cartilage which has no representative (as a rule) in those oviparous types, but which is generally represented in the Ichthyopsida. Only in the Chimæroid, however, is it well represented; it is the large inferior labial.

Outside the superficial plate, the dentary is formed; this bone soon attacks the cartilage, converting it into true bone. On the inner side a plate of bone is also formed, and in *Ornithorhynchus*. This is almost free as a “splenial”, and this subdistinct splenial has a definite “coronoid” lobe on its hind part.

Near the chin of the rod (Meckel's cartilage), stripes of thin bony matter soon unites with that of the dentary and its splenial plate.

Proximally, a superficial bone, the “articulare externum,” forms in the adjacent cartilage, ossifies as an “articulare internum”; in the mole, the internal angular process has an epiphysis formed in it.

These centres soon unite, and then we have a "quadrato-articulare" formed, answering to both the quadrate and the articulare bones of the lower types.

The Meckelian rod, after a time, becomes segmented behind the dentary, which has then cartilaginous, coronoid, condyloid, and angular projections, the remnants of the great inferior labial, and quite distinct in nature from the parts so named in the Sauropsida.

The new condyle, or middle process of the lower jaw, attaches itself to a projecting snag of the squamosal—the "zygomatic process"—far in front of the old swinging-point of the lower jaw of a reptile or bird, and the cartilaginous tract lines the glenoid cavity, which is formed in its lower surface, as well as remains upon the condyle of the new ramus.

That part of Meckel's cartilage which remains in the upper or shorter piece of the divided bone, ossifies as a pre-articulare, in the lower animals (marsupials, sloths, etc.); and to this is supplied one, and in several cases two, splint-bones. These represent the "angular" and the "supra-angular" of the reptile and bird.

This part curves round in front of the tympanic cavity, inside the bony annulus. After a time it is absorbed, to a greater or less extent in old specimens, it is generally either gone, or greatly reduced in size.

The little nuclei of cartilage that form in the uppermost part of the hyoid fold become quite distinct, and form the incus and stapes; they are a divided pharyngo-branchial element.

The rest of the hyoid arch, as soon as it becomes detached from the two chondrifying forks above, contracts adhesion with the opisthotic (mastoid) region of the ear-capsule, outside the posterior recess of the tympanic cavity. Into that recess the stapedius muscle runs, and is inserted flush in its back walls. Attached to its tendon, which arises from the neck of the stapes, there is often a small nucleus of cartilage, similar to the interhyal of *Lepidosteus*.

OBSERVATIONS ON THE INNERVATION OF THE HEART.

ON THE SEQUENCE OF THE CONTRACTIONS OF THE DIFFERENT PORTIONS OF THE HEART.

Read in the Section of Anatomy and Physiology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By W. H. GASKELL, M.D., F.R.S.

IN the case of all cold-blooded animals, it is easily seen that the sinus venosus contracts before either the auricles or ventricle, that a distinct pause occurs between its contraction and that of the auricles, and a second pause between the auricular and ventricular contractions. Hitherto, no adequate explanation has been given of this regular sequence in the beating of the various chambers of the heart, or of the pauses which occur between the contractions of consecutive parts. I propose in this paper to confine my remarks to the consideration of this question.

It is evident that, in the case of cold-blooded animals, at all events, the sequence is not due to any excitation of the auricular and ventricular walls, in consequence of their increased tension when distended by blood, for the beats of the several parts continue with the same regularity as before, after all the cavities have been slit open. Such a mechanical explanation is then out of the question, and we must seek for an answer to our problem either in a continuity of muscular tissue, and therefore of contraction, over all parts of the heart, or in the existence of special nervous apparatus at the sino-auricular and auriculo-ventricular junctions.

Hitherto, this question has chiefly been studied on the frog's heart, in which ganglion-cells are found in connection with the nerves in the sinus, at the sino-auricular junction, in the septum between the two auricles, and, in the shape of two large terminal ganglionic masses called Bidder's ganglia, in the tissue connecting the two larger auriculo-ventricular valves with the auriculo-ventricular ring.

The result of experiment has given results which are to all appearance directly contradictory; on the one hand, section of the septum between the auricles, and therefore of the large nerve-paths between sinus and ventricle, is found not to interfere in the least with the sequence of ventricular upon auricular beat; on the other hand, the ventricle remains motionless, and never again responds to the auricular contractions, when the septum, Bidder's ganglia alone have been removed. From these facts, it is concluded, the conclusion is drawn that the nervous apparatus is essential for the maintenance of the sequence of contractions, for auricular beat, and that these cells can

be discharged by impulses which reach them along some path other than the nerve-fibres of the septum.

Again, Marchand has concluded that the pause between the contractions of auricle and ventricle is caused by the time taken up in discharging some intermediate nervous apparatus, such as ganglion-cells, because the time which elapses between the moment of stimulation of the auricle by a single induction-shock, and the resulting contraction of the ventricle, is too long for the passage of a simple nervous impulse.

In the tortoise, the nerve-fibres to which ganglion-cells are attached are situated in the sinus venosus, at the sino-auricular junction, in a band of tissue connecting the two auricles from the middle line of which the septum arises, and in the auriculo-ventricular ring and the base of the ventricle. The septum between the auricles is entirely free from nerve-fibres or nerve-cells. In the tortoise, then, the nerve-fibres with their connected ganglia are situated on the exterior of the heart-cavities, in most places, if not everywhere, in the visceral pericardial layer, and not, as in the frog, on the interior surfaces.

Section of the nerves between the sinus and ventricle produces no effect upon either the rhythm or the sequence of the contractions of the separate parts of the heart.

Section of the auricular muscular tissue does not prevent the sequence of ventricular upon auricular beat, until the amount of tissue connecting the two nearly separated parts of the auricle is extremely small. It is then seen that a contraction-wave passes from the sinus along the auricle up to the point of section and is there blocked, so that no contraction occurs either in the ventricle, or in that part of the auricle on the further side of the section which is in connection with the ventricle.

If the narrow bridge of tissue connecting the two portions of the auricle be large enough, each wave of contraction travels up to this point, then passes over along the rest of the auricle, and, when it reaches the auriculo-ventricular groove, induces a contraction of the ventricle.

If the section be slightly more severe, then, instead of every contraction passing the blocking-point, it frequently happens that only every second contraction is able to pass; so that in this case the ventricle, and that part of the auricle in connection with it, beats with perfect regularity once to every two beats of the sinus and that part of the auricle in connection with the sinus. Further, if the auricle be slit up to only a slight extent, it still contracts as a whole. As the section is increased, and the bridge of muscle connecting the two parts is made smaller and smaller, a distinct difficulty in the passage of the contraction-wave over this narrow neck of tissue is apparent—a difficulty which, upon further section, becomes more and more pronounced, until at last a distinct pause is seen to ensue in the passage of the contraction from the one side to the other of the blocking-point. In other words, section of the muscular tissue of the auricle, combined with a sufficient narrowing of the path along which the contraction-wave must pass, causes an alteration in the conductivity of that narrow portion of tissue, the result of which is to introduce in the cycle of the heart's beat a pause between the contractions of the two portions of the auricular muscle, in addition to the natural pauses at the sino-auricular and auriculo-ventricular grooves.

Again, when the section is such that a partial block is caused, so that only every second contraction passes the blocking-point, then stimulation of the vagus is sometimes able during the stimulation to increase the block so that no contractions pass, and after the end of the stimulation, to diminish it so that all contractions pass. This power of the vagus is clearly in this case upon the muscular tissue itself, for here most certainly ganglion-cells are not in question.

A precisely similar effect is produced by the action of the vagus upon the natural block, at the junction of the auricles and ventricle, as well as that at the sino-auricular junction. Thus, in a former paper, I have shown that upon stimulation of the vagus, the ventricle may remain absolutely still, although the sinus and auricle still continue to contract; and in both the snake and tortoise I have seen the auricle as well as the ventricle reduced to standstill, though the sinus was still contracting. Further, when by traction on the sino-auricular groove the snake's auricle is made to beat synchronously with every second contraction of the sinus, then stimulation of the vagus will often cause the auricular contractions to become again perfectly synchronous with those of the sinus. In no case have I ever seen the ventricle beat synchronously with the sinus without an intermediate contraction of the auricle.

We see, then, that as far as the pauses between the contractions of the separate parts of the heart are concerned, there is no need to suppose that they are due to time taken up by the excitation of certain ganglion-cells at the auriculo-ventricular and sino-auricular junctions; for a similar pause can be artificially produced in any portion of the purely

muscular tissue of the auricle. Also, the resemblance between the action of the vagus upon the conduction of the wave of contraction over the artificial block, with its action upon the sequence of beats at the auriculo-ventricular and sino-auricular junctions, suggests strongly that the nerve acts upon the same kind of tissue in the latter case as in the former—i.e., upon muscular tissue in both instances; and, therefore, that a wave of contraction passes directly, by continuity of muscular tissue, from sinus to auricle and from auricle to ventricle, and the pauses between the several parts are due to a natural blocking of this wave at the junctions between these parts.

In the case of the tortoise, lizard, and frog, this suggestion is absolutely corroborated by histological examination. The muscular fibres of the sinus pass into a band of circularly disposed muscle fibres at the sino-auricular junction; and from this ring the auricular fibres take their origin, to ramify and branch over the surface of the auricle, until they again collect into a second well defined muscular ring at the auriculo-ventricular groove, from which the ventricular fibres directly arise.

Further, the muscular fibres composing the auriculo-ventricular ring are different in character from those of the main portion of either auricle or ventricle. In the tortoise and the lizard, the auricular and ventricular fibres become less distinctly striated as they approach this junction, and in the ring itself are more clearly composed of separate cells, with large nuclei and a small amount of contractile tissue around the nucleus; in fact we see here, at the junction between the highly developed reticulated striated muscle-fibres of the auricle and ventricle, a band of circularly arranged embryonic, comparatively undeveloped, muscle fibres, the remnant, it seems to me, of the original tubular muscle layer of the heart.

The study of the development of the heart shows that it is originally a simple tube, with muscular walls, from end to end of which waves of contraction pass; a portion of this tube expands to form the auricle, and another portion to form the ventricle—these two being connected by an unexpanded part called the canalis auricularis, which gradually disappears as the auricle and ventricle bulge more and more, until the original tubular heart becomes converted into a series of cavities, with constrictions between them.

If, then, where the bulgings took place, the muscular tissue took on a higher form, became striated, and therefore capable of quicker contraction, while, in the constrictions, it remained embryonic, it would follow that the original wave of contraction would pass with greater rapidity over those parts which had reached a higher development than over those which had remained embryonic; in consequence, a block would result wherever the wave passed through the slower contracting tissue, which would be manifested as a distinct pause, if that tissue were hidden from observation, by the overlying of the quickly contracting parts.

This, then, I imagine to be the true explanation, both of the sequence of the contractions of the several parts of the heart and of the pauses between those contractions.

Against this view two objections can be raised:

1. The positive statement that, in the frog, the sequence of rhythm depends upon the integrity of Bidder's ganglia;
2. That, in the mammalian heart, there is no muscular connection between the auricles and ventricles.

The first objection is in reality not valid; for, if by opening one auricle the septum be seized and gently drawn towards the opening, the septum can be cut away without injury to the auriculo-ventricular muscular ring, and then it is found that the sequence between the auricular and ventricular beats still continues, although microscopical examination shows that both ganglia are entirely removed.

If, on the other hand, the ganglia be removed by a slight incision in the middle of the auriculo-ventricular groove, then the ventricle remains still, and no longer responds to the auricular contractions, because, owing to the small size of the internal boundary of the ring, where alone the circle of connecting muscle fibres is situated, the muscular connection between auricle and ventricle has been removed simultaneously with the removal of the ganglia.

The second objection is also, as far as I can judge, at present of doubtful value. I have, however, only just commenced the examination of the auriculo-ventricular ring in the mammalian heart, and cannot, therefore, speak with the same certainty as in the case of the heart of the tortoise. All I can say is, that the connecting band of tissue does not present the same appearance on section as the proper cardiac muscular fibres, but yet its structure is not incompatible with a ring of embryonic muscular tissue.

If, upon further investigation, it be found to be universally true that the muscular fibres in certain definite parts of the heart have remained embryonic, while in other parts they have lost their embryonic character

and taken on a higher development, then an interesting question arises, whether those parts of the heart, where the former tissue has remained unchanged, are not precisely those parts where spontaneous rhythm is found, and whether, therefore, rhythmical contraction is not a property of this cardiac embryonic muscle apart entirely from nerve-cells, a property which, in the case of the more highly developed cardiac fibres, has become rudimentary, because it has given way to the more advantageous property of rapidity of contraction.

ON THE ALLEGED DIGESTIVE CAPABILITIES OF THE WHITE BLOOD-CORPUSCLE; A CONTRIBUTION TO THE PHYSIOLOGY OF CELL-PROTOPLASM.

Read in the Section of Anatomy and Physiology at the Annual Meeting of the British Medical Association at Worcester, August, 1882.

By E. A. SCHAFER, F.R.S.,

Assistant-Professor of Physiology in University College, London.

THE well-known fact that the white blood-corpuscle resembles the amoeba, in seizing upon any particles with which it may come into contact, and retaining them for an indefinite time within its protoplasm, has led to the assumption that, like the amoeba, the white corpuscle possesses the power of digesting organic substances, which may thus be included within it. The assumption has for the most part been tacit; but it has recently been spoken out by no less an authority than Ranvier.

The subject is one which has engaged my attention for a number of years; and I have, both personally and with the assistance of pupils, instituted a large number of experiments, with the view of determining, if possible, what amount of digestive power the white corpuscle can really be said to possess. Our experiments have been made chiefly upon the white corpuscles of the newt, and these have been tested with particles of proteid, of fat, and of starch, which in every case were suspended in salt solution. The proteid particles were in the shape of torulæ of yeast (which were presented to the corpuscles either in the living condition or after having been killed by boiling); the fat was in the shape of milk-globules; and the starch employed was obtained by washing the dough of wheaten flour with salt solution, and, after allowing time for the coarser granules to subside, taking a drop of the supernatant fluid containing the finest particles in suspension.

It was generally desired, in these observations, to restrict the number of particles of any substance which were to be included in the corpuscles. With this end in view, a very small proportion of the fluid containing the particles in suspension was used, compared with the amount of blood employed; and corpuscles were selected for observation which had only taken in one or two of the particles. In all cases the same corpuscle was kept under continuous, or nearly continuous, observation for periods varying from several hours to two days. This could be done either by making the preparation in a Stricker's moist chamber, or in the ordinary way upon a glass slide; but, in the latter case, bordering the cover-glass with oil or paraffin, and being careful to include underneath it a number of air-bubbles.

The general results of the experiments may here be briefly enumerated. In no case observed, although the period of observation extended in some instances to one or even two days, and was never less than five hours, did any particle entirely disappear by solution within the corpuscle. In some cases, the particles became surrounded by a zone of clear fluid, and, included in this, were moved about by the streaming of the protoplasm to different parts of the corpuscle; but, to all appearance, they remained unaltered. Exception may perhaps be made for the yeast torulæ, in which, in many instances, the distinction between the protoplasm and its included vacuole became obscured; but it was not possible to affirm that this was due to anything else than the lessened distinctness with which the torulæ could be seen in the irregular corpuscle. In the case of starch-granules, it was found that, however minute they might be, and however long included, the addition of iodine solution always produced in them the usual intense blue colour. It was noted, however, that the protoplasm of white corpuscles, which had retained many starch-granules, tended to be more deeply tinged by iodine than that of others which contained no starch, whence it may perhaps be inferred that a small amount of starch had undergone transformation into dextrine. On the other hand, it was not found that white corpuscles, which had been abundantly fed with starch, exhibited, on subsequent treatment with iodine, more of the claret-tinted protrusions indicative of glycogen than others which had not contained any starch-granules.

It is clear, from the generally negative character of the results obtained, that the assumption of the possession by indifferent protoplasm, and especially by that of the white corpuscle, of distinct digestive powers, rests upon an entirely insufficient basis of fact; and, although it is scarcely possible to prove that no change whatever occurs in the included organic particles, it may yet be affirmed that, if any change is produced, it is so slight in amount as to be altogether beyond the range of our present means of observation. Moreover, considering that the white corpuscle inhabits a medium which contains in solution all the elements necessary for its nutrition, there is, *a priori*, an improbability of its possessing the means of reducing them from the solid to the fluid condition.

ON ABNORMALITIES OF THE CÆCUM AND COLON WITH REFERENCE TO DEVELOPMENT.

Read in the Section of Anatomy and Physiology at the Annual Meeting of the British Medical Association at Worcester, August 1882.

By C. B. LOCKWOOD, F.R.C.S.,

Demonstrator of Anatomy, etc., in St. Bartholomew's Hospital; Surgeon to the Great Northern Hospital.

ABNORMALITIES of the cæcum and colon are of considerable rarity. They have been referred to by authors, but, as far as I am aware, no attempt has been made to collect and explain them. Only two abnormalities have come under my own observation. These will be briefly described and illustrated. Reference will afterwards be made to the cases which I have been able to collect.

The first case was that of a man, aged 57, who died of intestinal obstruction. At the *post mortem* examination, which was made under difficulties, the cæcum was found in the right hypochondriac region, beneath the liver. The colon crossed from the cæcum to the splenic curve, and thence descended into the pelvis. Here a remarkable abnormality occurred. The descending colon was double; the two tubes were upon the same plane, the smaller one nearer the vertebral column. Each possessed appendices epiploicæ. The tube which was nearest the spine had a very small canal in its centre, which appeared to have a mucous lining. This canal opened above into the colon by means of a small aperture; below, it was lost in a mass of malignant disease. It contained no feces. Its walls were moderately thick. The malignant mass which received the end of the diverticulum also concealed the end of the outer tube, which was the colon proper. (See Fig. 1.) Before attempt-

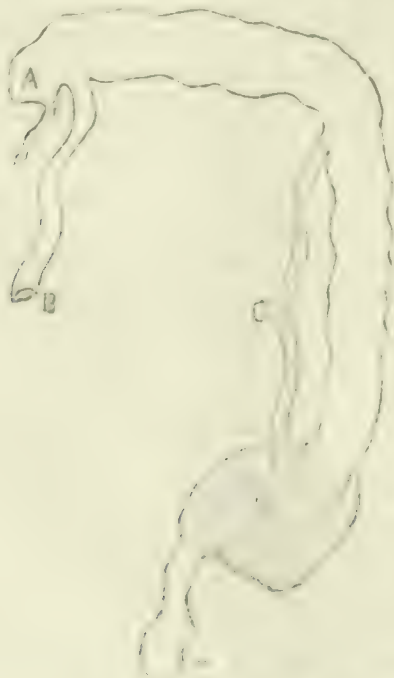


Fig. 1.—A. Cæcum. B. Colon. C. Malignant Mass.

ing to explain the abnormal position of the cæcum, it will be as well to dismiss the double descending colon. It is very hard to imagine how a tube which is at first single can afterwards become double. Without doubt, such an occurrence is exceedingly rare. In the case of the colon, hardly any instances have been described by authors. No case of a double descending colon can be found. Meckel (*Tabule Anatomico-Pathologica*, Tab. xiii, Fig. iv, p. 13) has pictured the intestines of a fetus in which there were two cæca. (See Fig. 2.) The ileum

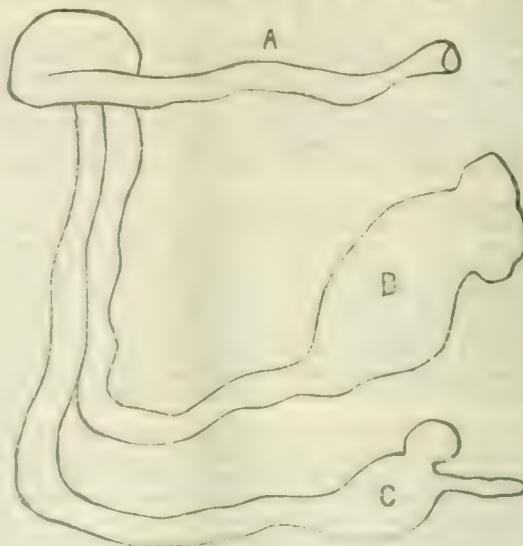


Fig. 2 (from Meckel).—A. Transverse Colon. B. Caput Coli. C. Caput Coli.

opened into the cæcum nearest the middle line, and from it the gut extended upwards towards the hepatic curve. Below this cæcum was another, from which a tube extended parallel to and outside the first, and also continuous with the transverse colon at the hepatic curve. Evidently these cases are in some way related to each other. The reason of this double condition seems especially worthy of discussion. Meckel also figures a case in which the cæcum was bifid (*Ibid.*, Tab. xiii, Fig. 9). Possibly this may be considered a stage towards the more complicated condition. The abnormal position of the cæcum may best be explained by reference to the specimens which are before you.

The first is an embryo, about an inch and a half long, probably about the tenth week of intra-uterine life. The umbilicus is widely open, and small intestines protrude within it. The cæcum lies close to the umbilicus. The alimentary canal descends straight from it into the pelvis. A common mesentery unites all the intestines to the spine. The gut above the cæcum represents the small intestines. These occupy all the right side of the abdomen. There is no difference between the calibre of the colon and that of the small intestines. The explanation of this arrangement appears to be as follows. The intestinal canal in the youngest embryo is a simple tube, almost straight, and attached to the spine by a mesentery. Changes take place in this tube which result in the formation of a stomach, large and small intestine, and cæcum. At present, only the intestinal portion will be considered. It is most necessary to remember that this tube has a very great tendency to elongate. Its ends are fixed, the anterior near the developing diaphragm, the posterior in the pelvis. As the gut elongates, it therefore makes a loop which protrudes into the umbilicus. Not very far from the pelvic end of this loop a small protrusion occurs. This is the rudimentary cæcum and vermiform appendix. The gut which passes straight from this into the pelvis is the large intestine; the gut above becomes small intestine. Growth continues; the umbilicus contracts, and necessarily the cæcum enters the abdomen. The small intestine elongates, and fills the right side of the abdomen. The large intestine, which is quite straight, occupies the left side. The changes through which the large intestine afterwards passes are partially illustrated by the next specimen.

Specimen No. 2 is an embryo apparently between the third and fourth months of intra-uterine life. When the abdomen was opened, the liver reached the pubes. It concealed all the other abdominal viscera. The cæcum was close to the umbilicus; but the colon was

greatly elongated. It has formed a large curve, the convexity of which is near the cardiac end of the stomach. There is now an ascending colon, a splenic flexure, and transverse colon; all united by a long mesentery to the back of the abdomen. The right edge of this mesentery affords attachment to the small intestines. The left and the upper edge are united to the transverse and descending colon. The mesentery of the descending colon is still very abundant, and is attached, in the middle line, to the spine. All of this portion of gut is tortuous, but more especially below where the sigmoid flexure is beginning to form.

In this specimen, it is evident that the cæcum has ascended into the abdomen and turned towards the right side. The elongation of the intestines accounts for this change of position, but not for the direction which it takes. The liver, which is of immense size at this period, prevents it from ascending. It must turn. The attachment of the small intestine to its right side determines that it shall pass round under the liver to the right hypochondriac region. This is the point it has attained in this specimen.

Evidently, there is little difference between the arrangement of the large intestine of this foetus and the abnormal case first described. Supposing the intestinal canal of the foetus to undergo no further elongation, it would exactly represent the abnormal condition. In both there is a cæcum in the hypochondriac region, and no ascending colon. Merely to explain this abnormality by saying that development has been arrested at this point, means very little. As Professor Simpson has shown (*Edinburgh Medical Journal*, vol. lii, 1839, p. 114), adhesions, due to intra-uterine inflammation of the peritoneum, are a frequent cause. Cases will shortly be quoted, clearly showing that it is no unfrequent cause of arrested development of the intestines. No old adhesions were observed in the case under consideration; but, owing to the circumstances under which the *post mortem* examination was conducted, they might easily have been overlooked. This retention of the cæcum beneath the liver is possibly related in some way to the great changes in size which the liver undergoes. It has been seen that in one of the specimens upon the table the liver touched the pubes. Ascending from this point, it is ultimately lodged beneath the ribs. A retardation of its progress there seems not unlikely to influence the position of the intestines. Although referred to in general terms by authors,* I have not been able to discover many instances of this particular abnormality. A case is mentioned by Professor Turner (*Edinburgh Medical Journal*, 1863, p. 110), in which the cæcum lay in the right hypochondriac region. The ileum possessed the same relation to the abdominal wall which the cæcum and ascending colon usually have. This malformation was evidently congenital; but no mention is made of any adhesions. A case very nearly related to this is mentioned by Dr. Hilton Fagge (*Guy's Hospital Reports*, vol. xiv, 1869, p. 343, Case 55). The cæcum was not quite in the hypochondrium; but "when the abdomen was opened, the cæcum was seen to be immensely distended, occupying the centre and upper part of the abdominal cavity, and filling nearly half of it." (This distension was the result of disease.) "When the cæcum was lifted up, it was found to be quite free; but it could not be replaced in its natural position, which was occupied by other parts of the bowels. The cæcum passed into the ascending colon in the right hypochondrium. From this the transverse colon (which was much contracted) ran to the left hypochondrium, passing beneath the cæcum in its course. The descending colon ran downwards for a few inches, and then passed across the spine to the right loin. Thus the sigmoid flexure lay in the ordinary position of the cæcum, and descended from the right to the rectum." The reference in this description to an ascending colon makes the case somewhat dubious; but evidently the malposition of the cæcum was congenital; and it is difficult to see how there could have been much of an ascending colon.

The second case which has come under observation occurred in the dissecting-room. The subject was a male, aged about 25; the colon had not completed its descent into the iliac fossa, and the cæcum was situated opposite the crest of the ilium. Both testicles were retained within the peritoneal cavity, close to the internal abdominal ring.

The explanation of this condition appears to be very simple. When there is an arrest of development, it is not unusual to find that it involves more than one organ. In this case, the colon, as well as the testes, has failed in its descent. An examination of the fourth specimen, which is upon the table, shows that this explanation does not cover all the ground. This dissection of an eight months' foetus shows that the cæcum has descended just below the iliac crest. The testes are within the peritoneal cavity, and close to

the internal abdominal ring. The gubernaculum extends from them towards the pubes. A band of peritoneum passes from the right testis to the under surface of the mesentery, close to where the ilium ends in the cæcum. If the testis be pulled down, the ileum and cæcum also descend. It is not presuming very much to say that, when the gubernaculum drags the testis down, it also alters the position of the cæcum. In the abnormality which has been described, the undescended condition of the cæcum and the undescended testis appear to have an intimate relation. There was no obvious reason why the testes did not descend in this man. The peritoneum in their neighbourhood appeared quite natural. In a similar case described by Simpson, he says there was a slight displacement upwards of the cæcum (*Edinburgh Medical Journal*, vol. lii, p. 17 *et seq.*, Case xxx). The testis was also adherent in the iliac fossa. In this case, the reason of the non-descent of the testis is clear, and its effect upon the descent of the colon obvious. Since the above was written, this point has been found discussed by Serres, who is said by G. St. Hilaire to have seen in several subjects an undescended colon associated with undescended testis (*Histoire des Anomalies de l'Organisation*, etc., vol. i, p. 378). A female foetus which has been dissected shows that there is a similar relation between the descent of the ovary and the descent of the cæcum. In this child, a band of peritoneum extends from the right ovary towards the cæcum, exactly resembling what is seen in the male foetus.

Nothing remains to be said concerning the abnormalities which have come within my personal observation. It may be useful to bring together as many as possible of those described by other observers. They are scattered throughout a great amount of literature, and probably many have been over-looked. Cases which will be referred to as described by Mr. Chiene (*Journal of Anatomy and Physiology*, 1868, p. 14, etc.); by Professor Turner (*Edinburgh Medical Journal*, 1863, p. 110, etc.); and by Professor Cleland (*Journal of Anatomy and Physiology*, 1868, p. 204, *et seq.*) have been exceedingly well explained upon developmental grounds. Differences of opinion exist concerning some points in the development of the intestinal canal, but none exist as to the course which the cæcum pursues. It has been recognised since the description of Haller. From the cases collected, it seems as if the cæcum may be arrested in any part of its progress. It will be better to glance first at the positions it occupies, and afterwards to mention the abnormalities. The positions are as follows.

1. Outside the abdomen.
2. Within the abdomen close to the umbilicus. At this period, owing to the great size of the liver and the shortness of the colon, the cæcum is very low in the abdomen.
3. The cæcum ascends within the abdomen, and is in the left hypochondriac region close to the cardiac end of the stomach. At this period, all the small intestines occupy the right side of the abdomen. The colon occupies the left side. It is almost straight, and is attached by a mesentery to the spine.
4. The cæcum passing round is beneath the liver in the right hypochondriac region.
5. The cæcum descends into the iliac fossa.

The whole colon, before it has attained its final stage, has an abundant mesentery. The small intestines as they elongate occupy the front and lower part of the abdominal cavity. This necessarily tends to raise the transverse and keep back the ascending and descending colons. As these latter attain their proper position and increase in size, they have no tendency to retain their mesentery, but separate its layers until at last they are uncovered behind.

The first place at which it would be expected to find the cæcum retained would be at the umbilicus. Specimen 249 in the Teratological series of the Royal College of Surgeons is an instance of this condition. The most interesting is one recorded by Professor Simpson (*Edinburgh Medical Journal*, vol. lii, 1839, p. 19). The cæcum and part of the small intestines were found in an umbilical hernia, held there by adhesions. This occurred in a newly born child, and the adhesions were due to intra-uterine inflammation. This case is important, as it suggests a probable cause for many of these arrests of development. Merely to say there has been an arrest of development is but half the truth. There must have been some cause for that arrest, and in most cases adhesions are probably present.

The next position in which it might be anticipated that the cæcum would be found, is in the left side of the abdomen. Dr. Wilks (*Medical Times and Gazette*, vol. i, 1882, p. 135) mentions such a case, but does not say whether the bowel was adherent there, or give other particulars. He mentions at the same time three cases in which the cæcum was free in the abdomen. These may have been merely cases in which the mesentery was retained. A case recorded by Dr. Hilton Fagge is much less open to doubt. "The cæcum lay to the left of the um-

* Vater, *De Situ Intes. Coli*, ed. 1737; Morgagni, *De Sedibus et Causis Morborum*, ep. ii, art. xvi; Sæmmering, *De Corporis Humani Fabricâ*, p. 313; Meckel, *Anatomy*, French ed., Paris, 1825, etc.

bilicus, upon the small intestines, which were placed beneath it. It was firmly fixed by old adhesions to the sigmoid flexure and the omentum, which was altogether on the same side, and was fixed to the same spot." (*Guy's Hospital Reports*, vol. xiv, p. 272.) It is added, "that the question was much discussed at the *post mortem* room, whether the position of the cæcum was due to a congenital displacement or a pathological act. The cæcum was entirely surrounded by peritoneum, and the iliac fossa was also lined by a smooth serous membrane. It is probable, therefore, that the cæcum had been entirely free and loose from birth." This latter conclusion of course depends upon the age of the adhesions. The case just quoted from Simpson points to the importance of trying to discriminate between old intra-uterine adhesions and recent ones.

The third position—that in which the large intestines occupy the left side of the abdomen, and the small the right—is illustrated by the following cases. In 1850, Mr. Berry showed a case to the Pathological Society in which "the cæcum, with the ascending colon and the end of the ileum, was turned upside down, and lay in the left side, being kept there by the mesentery." (*Pathological Society's Transactions*, 1850, p. 222.) The description in this case is not very copious; but it appears that, although the large intestine had elongated, it still occupied the left side of the abdomen. There is also a description of a case by Dr. Jukes (Case of Carcinomatous Stricture of the Rectum, etc., 1842) which seems to illustrate the same condition. The most typical cases are described by Reid. In the first, "all the large intestines were coiled up in the left lumbar region and left iliac fossa, and were firmly tied in their situation by the reflexions of the peritoneum. The small intestines consequently occupied the right side," etc. (*Edinburgh Medical Journal*, vol. xlvii, p. 70.) The abnormality in this case was, without doubt, congenital. The second case was exactly similar; but the cæcum was not so firmly fixed in the left lumbar region. (*Ibid.*, p. 71.) Reid was of opinion that the abnormalities were due to congenital defect. Dr. Hilton Fagge (*Ibid.*, p. 345) describes a nearly similar case, in which all the large intestines were upon the left side of the abdomen. The cæcum was in the pelvis. "The right loin was empty, both the ascending and the descending colon being on the left side of the abdomen." This condition does not materially differ from the others, except in the fact that the cæcum was in the pelvis. It appears as if the usual growing and elongation of the colon had occurred; but, as there was no transverse colon, the cæcum necessarily travelled downwards.

In its ascent, the cæcum gets very close to the cardiac end of the stomach. It may be retained in this position, as is shown by a case described by Seymour (*Revue des Sciences Méd.*, 1875, vol. vi). He says: "The cæcum, instead of ending in the right iliac fossa, went into the left, folding upon itself, mounted, covered the spleen, and terminated at the cardiac end of the stomach in a cæcum enormously distended and with very thin walls. The vermiform appendix rested on the spleen. The colon, as large in diameter as the cæcum, passed transversely into the right hypochondriac region, thence descended into the right iliac fossa, where it suddenly diminished in volume as to look like ileum. This portion of the intestine, making a few convolutions, crossed the vertebral column from below upwards towards the left kidney, when it descended again to the right iliac fossa, crossing again the vertebral column. Then it passed transversely to the left to open as usual." No mention is made of any adhesion of the cæcum in the left hypochondrium. The small size of the colon is interesting. It will be seen, by reference to the smallest specimens of embryos, that in them there is no difference in size between colon and ileum. In this case the small calibre of the colon has persisted. Presuming it is true that the cæcum was retained at the cardiac end of the stomach, the peculiar turns and twists which the colon made seem capable of explanation by remembering its tendency to elongate, and by observing that there is no descending colon. The opening of the sigmoid flexure into the rectum on the right side is not unusual. It existed in one of the cases already referred to. Curling dissected twenty newly born children, and found this condition in two of them (*Med.-Chir. Trans.*, vol. xliii, page 311). It has been recognised by Giraldez and by Huguier. The specimens (*et. ante*) show that at first the rectum is quite in the middle, as is also that part of the gut which forms the sigmoid flexure. Here, again, as the large intestine elongates, it must form a loop. It seems probable that, under ordinary circumstances, the presence of the small intestines on the right side will determine the loop bending to the left. The traction exerted by the descent of the left ovary or testicle may also influence its descent into the iliac fossa. The retention of the cæcum in the right hypochondriac region has been already described. The completion of its progress into the iliac fossa has also been considered. Even yet the process of complete development has not been accomplished. If the larger fetus he examined, it is easily seen that there is

a fairly long ascending and descending meso-colon, and also a meso-cæcum. This condition usually persists for a while after birth. Some observers "consider it to be the usual, if not the more common, arrangement" (Holmes's *Surgical Dis. of Children*, London, 1868, page 117). Sometimes there may be only a descending meso-colon. Morgagni (*De Sedibus et Causis Morborum*, lib. iii, epis. 34) mentions a case, in which the descending colon remained in the middle line, and was attached there by mesentery, exactly as it is at an early stage of development. A very interesting case, described by Mr. Chiene (*Journal of Anatomy and Physiology*, 1868, p. 14), shows that the whole of the large intestine may retain its mesentery. In this case "the cæcum was not lodged in the right iliac fossa, but lay loose in the cavity of the abdomen. A meso-cæcum, five inches broad, directly continuous with the mesentery, passed to the surface of the last lumbar vertebra. The colon twisted on itself, and not subdivided into an ascending and transverse portions, lay to the left of the middle line, and was continuous with the descending colon and sigmoid flexure, which occupied their normal positions. A well marked meso-colon was connected to the posterior aspect of the entire colon. The great omentum was prolonged downwards from the lower border of the stomach; its posterior recurrent layers passed backwards to the spine." They had, therefore, no attachment whatever to the colon: a point which throws the greatest light and confirmation upon the views put forward concerning the development of the colon. Another very important feature in this case was this. There was a large cicatrix at the root of the meso-colon. As Mr. Chiene points out, this may have had a very great effect upon the proper development of the intestines, and was almost certainly the cause of their great abnormality. In the sixteenth volume of the *St. Bartholomew's Hospital Reports*, Mr. Walsam describes a case in which the ascending colon and cæcum remain attached to the right border of the mesentery, and have no attachment to the posterior wall of the abdomen, so that, if the mesentery were raised, the cæcum and colon were lifted with it. This is exactly the condition which exists in the two largest fetuses which are before you, and which represent the usual state just before birth. In Mr. Walsam's case, the sigmoid flexure crossed the spine at the fifth lumbar vertebra, to open into the rectum upon the right side. This abnormality of the sigmoid flexure has already been spoken of. It is one of the commonest and best recognised displacements.

A retardation of the process of development seems to have occurred in most of the cases already mentioned. Professor Turner (*Ibid.*, p. 115) has mentioned a case in which the cæcum was found in the pelvis. This he attributes to an excess of development. In one of Dr. Hilton Fagge's cases, owing to the non-existence of a transverse colon, a similar result seems to have been brought about. It is necessary to bear in mind that, as Esquirol (quoted by Copland, *Dictionary of Medicine*, vol. i, p. 386) has pointed out, such displacements of the cæcum, transverse colon, and sigmoid flexure, are very frequent in melancholics. Of course, in these cases they are due to fecal accumulation.

The cases of abnormality mentioned in this paper have many of them a clinical aspect, which has not been referred to. I hope in another place to show that very frequently indeed these abnormalities lead to fatal results, and that, owing to their existence, they have caused the gravest embarrassments to the operator. A knowledge of their occasional existence may be of great service to the physician.

Professor HUMPHRY thanked Mr. Lockwood for his paper and the accompanying interesting specimens.

Dr. HAY (Edinburgh) suggested, as a possible hint for the explanation of the dual condition of the colon, the double condition of the cæcum in some classes of the lower animals. This double condition in Mr. Lockwood's case might have extended to the colon, but in an irregular manner, since there was no double cæcum.

Dr. CATHCART (Edinburgh) asked whether the development of malignant growth in the abnormal cæcum might not be considered in connection with the view, held by some, that malignant growths resulted from the permanent remains in the adult of fetal structures.

Dr. SYMINGTON (Edinburgh) remarked that one of the two tubes in the position of the descending colon might be a diverticulum, there being no proof that they united below.

Mr. SHUTTER (London) pointed out that in one case the congenital abnormality had become the seat of a malignant disease, possibly on account of not only the part being modified in its development as an organ, but on account of the cells composing the tissue having also a modified developmental power, as was often seen in other parts which were more frequently modified in their development.

Mr. ANTHONY A. BOWLEY (London) said, with reference to Mr. Shutter's remark, that he believed that the tendency to development of

a morbid growth in retained testes was due rather to the pressure exercised on them by the abdominal muscles, than to any inclusion of foetal structures which subsequently took on a new growth. He asked Mr. Lockwood whether there was any lack of development of the nervous centres, as suggested by a French Professor at the International Medical Congress, as a cause for failure of perfect growth of the limbs and trunk.

ON SOME POINTS IN THE ANATOMY OF THE CILIARY BODY.

Read in the Section of Anatomy and Physiology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By W. A. BRAILEY, M.D.,

Assistant Ophthalmic Surgeon to Guy's Hospital.

CERTAIN anomalous appearances in the shape and position of the ciliary folds, when viewed in microscopic sections made parallel to their course, were the original cause of my undertaking this short paper. It seemed strange, if the ciliary folds run, as they are described as doing, from before backwards, that we should see, in meridional sections, ridges or papillæ, as if folds were cut transversely to their course; and more strange still, that we should frequently see a fold projecting backwards from the extreme anterior part of the ciliary circle, so as to form a tongue or adze-shaped body lying between the thickest part of the ciliary body and the lens-margin.

The internal surface of the ciliary body may be divided into three zones. The most posterior of these, 1.75 millimètres long from before backwards, is rather less pigmented than either the middle zone or the choroid and retina just posterior to it. A darker, rather crenulated line—the ora serrata—bounds it from these latter; and a similarly crenulated edge limits it from the middle zone in front.

The middle zone, about one millimètre long, is slightly and uniformly ridged in a meridional direction; there being over seven hundred such ridges, each under one-tenth of a millimètre in height, adjacent ones being rather more than this distance apart.

The anterior zone, nearly two millimètres long, presents a comparatively small number, perhaps seventy, of broad, very prominent, much convoluted longitudinal folds, separated from each other by means of narrow valleys, in which lie similar but smaller folds.

Where the middle passes into the anterior zone, we find about every tenth ridge becoming rather suddenly elevated to nearly five times its height. As it rises, it carries up with it on its sides the neighbouring ridges, the whole constituting the complex primary fold. The remaining ridges are contained in the intervening valleys, four in each. We may call them the secondary folds. As we pass forwards, the primary folds increase in height to about sixty-five millimètres, and also in complexity; and each valley now contains only two of the secondary folds, the remaining two forming the lowermost pair upon the sides of the primary folds. Each of the primary folds appears to correspond with, and to be formed by, about eight of the slight ridges of the middle zone.

The increase of surface gained by this extensive folding of the anterior zone is so great, that the secondary folds of the valleys, as well as those on the sides of the primary fold, are further apart than the ridges of the middle zone with which they are continuous, notwithstanding the diminished diameter of the globe as we pass forwards. The folds on the sides of the primary folds are not opposite to each other.

The most anterior part of each primary fold is continued forwards and outwards in front of the termination of the ciliary muscle, to be inserted on the posterior surface of the base of the iris. As the secondary folds curve over in front of the ciliary muscle, they change their direction, becoming inclined together; and each pair are finally continuous by their apices, so that the most anterior and deepest part of each valley, whose floor is now constituted by the peripheral part of the iris, becomes roofed in by the united lowermost pair of secondary folds; so that, from a valley, it has become a tunnel.

The internal free edge of each primary fold right up to its insertion on the iris-base, and, to a less degree, the free edge of each secondary fold also, is broader than its base, and is, as it were, too long, so that it has a plaited or convoluted appearance.

In consequence of these arrangements, all meridional sections show the ridged or papillated appearance to which I have previously referred. In addition, many exhibit the tongue- or adze-like projection where the overhanging edge of a primary fold has been shaved off by the section-cutter.

Under ordinary circumstances, the most projecting part of each ciliary fold touches the lens-capsule. The two do not, however, co-

here; for no fibres of the zonula take their rise from the summits of the folds, though they take origin from the sides, and still more abundantly from the deepest parts of the valleys.

The ciliary muscle, and to a certain extent also the ciliary body, changes in shape, though not materially in total bulk, as we pass from childhood to adult life. In the former case, the anterior edge of the muscle is more rounded, and extends further forwards. Its greatest thickness is about three millimètres, behind its anterior termination. But, in the adult, the greatest thickness is quite in the anterior part; and the muscle extends forwards comparatively little in front of this point.

THE EFFECT OF DISTENSION OF THE RECTUM ON THE OTHER PELVIC VISCERA.

Read in the Section of Anatomy and Physiology at the Annual Meeting of the British Medical Association in Worcester, August 1882

By J. G. GARSON, M.D.,

Anatomical Assistant, Royal College of Surgeons.

SOME years ago, when investigating the result of distension of the rectum in relation to the examination of the abdominal cavity by means of rectal palpation, my attention was attracted to the displacements of the anatomical structures contained in the pelvic cavity produced during the operation. At that time, I only carried my investigations out in the male subject; since then, I have made some further researches on the female, and find that as important practical results are yielded by the latter as by the former. I may, perhaps, be permitted briefly to recapitulate the *modus operandi* of the investigations, and the results found in the male by distension of the rectum, though those have already been published.* In each case, the rectum was distended with an India-rubber bag, similar in shape to those commonly used for the distension of the os uteri. The bag was introduced into the gut in a collapsed condition, and then distended with water until it measured about 24 centimètres in circumference, or, roughly, until it was of the circumference of the closed fist. Previously to placing the bag in the rectum, I ascertained that 300 grammes of water were required to distend it to this circumference. The bladder was also filled with about 240 grammes of water. The subject was then frozen, and afterwards bisected longitudinally and vertically. The section showed that the bladder was entirely raised up out of the pelvic cavity, and along with it the peritoneum also, both in front and behind; so that the bladder occupied much the same position that it does in the new-born child. On comparing this section with a normal one, it was found that the distance of the internal orifice of the urethra behind the symphysis pubis remained equal, so that the displacement of the bladder evidently took place in a plane parallel to that of the symphysis. The dislocation of the bladder was produced, not by raising of the perineum, but by stretching of the urethra in its so-called fixed parts. The prostate was stretched to nearly double its ordinary length, and was flattened. The membranous portion of the urethra was not quite so much stretched, but was considerably longer than usual. The position of the peritoneum in front of the bladder is expressly noteworthy. As a rule, when the bladder is filled to the same extent that it was in our case, the peritoneum is only elevated above the symphysis pubis a few millimètres; but in the section there was, between the upper border of the symphysis pubis and the peritoneum, a clear space of 4 centimètres—a space which would have admitted of the extraction from the bladder of a very large stone by the suprapubic method, without injury to the peritoneum. The results obtained in this section were confirmed by subsequent observations of a similar kind on other subjects, and in some cases the distance between the symphysis pubis and the peritoneum was greater, being as much as 6 centimètres in one subject, where the bladder was even filled with a less quantity of water (200 grammes). By varying the quantity of water injected into the bladder and rectum, it was found that the internal orifice of the urethra was not altered as to its distance behind the symphysis, but its distance from the plane of the conjugata vera varied according to the state of distension of the rectum. The depth of the peritoneal pouch behind the bladder is always diminished by distension of the rectum.

In the female, the investigations I have been able to make hitherto have, in some respects, not been so complete as they were in the male, but are sufficient to indicate what are the main changes in the relation of parts.

By various measurements on the dead subject, and from frozen sec-

* *Edinburgh Medical Journal*, October 1878; and *Archiv für Anat. und Physiologie*, November 1878.

tions made by various German anatomists, I have been able to satisfy myself that the highest point of the fundus uteri usually lies about 4.5-5 centimètres below the line of the conjugata vera. For practical purposes, the position of the fundus may be given in relation to the symphysis pubis instead of the conjugata vera. The most convenient method is to suppose the subject in the horizontal position, with an incision in the middle line extending to the symphysis pubis through the abdominal wall. Measuring from the level of the skin of the abdominal wall immediately above the upper border of the symphysis, the top of the fundus uteri is found to lie, in a direction downwards and backwards behind the symphysis, on an average at a distance of 11-12 centimètres from the point above indicated. On distending the rectum by means of an India-rubber bag filled with 360 grammes of water, the uterus was raised to within two centimètres of the lower end of the abdominal section; in other words, it was raised and pushed forwards to the level of the symphysis. As the bag was being filled, the fundus was observed to rise gradually upwards and forwards. In this subject, the bladder was empty.

In another subject, of which the bladder contained a small quantity of water, the distance of the fundus from the level of the symphysis was 11.5 centimètres when the rectum was empty; and, on filling the bag with 300 grammes of water, the distance was decreased to seven centimètres. The uterus was felt to be quite lax when raised by the distended rectum, and could be moved freely, thus showing that distension of the rectum does not interfere with its mobility. Besides these, I have made several observations, all of which have confirmed the results already narrated; and I have likewise demonstrated the effects of the rectal distension to several gynaecologists.

These observations show, I think, that, in the female as well as in the male, distension of the rectum might be used with advantage for placing the uterus within easier reach in cases where operation is resorted to on that organ, or on the ovaries, which are naturally drawn up along with it.

Professor Trendelenburg of Rostock has, I understand, employed distension of the rectum in the male with success in a case of supra-pubic lithotomy; as far as I know, however, it has never been utilised in the female.

ON THE ORIGIN AND DISTRIBUTION OF THE CANE-SUGAR FERMENT IN ANIMALS.

Read in the Section of Anatomy and Physiology at the Annual Meeting of the British Medical Association, in Worcester, August 1882.

By MATTHEW HAY, M.D.,

Demonstrator of Practical Materia Medica in the University of Edinburgh.

THE eminent physiological chemist, Hoppe-Seyler, expresses the opinion in his work on *Physiologische Chemie*, and again in his *Handbuch der Chemische Analyse*, that the cane-sugar ferment found in the intestine of animals is not a natural product of the intestinal glands, but is derived from the food of the animal being introduced with it, and on account of its difficult solubility and diffusibility, becoming entangled and embedded in the intestinal mucous membrane.

My experiments prove the fallacy of this view; for in the foetus of man and of the cat, I have found the ferment as abundantly as in the full-grown animal. The intestine of the foetus could not possibly have obtained the ferment from contact with food. The cane-sugar ferment is, therefore, like other digestive ferments of the animal body, a natural product of glands within the body.

I have further searched more carefully and more extensively than was done by Claude Bernard for the presence of the ferment in portions of the body other than the small intestine, and I have, like Bernard, failed to find it in any secretion, gland, tissue, or organ, other than the succus entericus, and the mucous membrane of the small intestine. It does not exist in the kidney, as Paschutin states.

Finally, in examining the intestines of various animals for the presence of the ferment, I have met with it in every animal which I have as yet examined (man, dog, cat, rabbit, pig, rat, duck, tortoise, frog, earth-worm, and very abundantly in the intestinal round worm) except the cow, the sheep, and the horse.

Dr. HAY, President of the Section, thanked Dr. Hay for his paper, which, he thought, afforded conclusive evidence as to the presence of the ferment in the small intestine.

Dr. HAY then called attention to the fact that glycogen was converted into glucose in the blood taken from the hepatic artery.

Dr. HAY RAFF (Bristol) congratulated the Section upon having a paper from Dr. Hay, whose work in the physiology of digestion and

absorption was of such recognised value. He would like to ask him one question as to the use of Fehling's solution as a method of testing for grape-sugar as well as cane-sugar. Many substances presented in the body sugar itself, and had the power of reducing the Fehling's solution, and might interfere with the accuracy of the investigation. It would be desirable to have some other proof of the presence of grape-sugar.

Mr. SHUTER (London) pointed out that the presence of large quantities of the ferment in the *ascaris lumbricoides* might be due to the worm having eaten the ferment among which it was lying, or to the ferment having been developed in the intestinal worm's own alimentary canal.

Dr. HAY, in reply, thanked the Section for the cordial way in which his paper had been received. He assured Dr. Haycraft that, to insure accuracy, he tested before, as well as after digestion, in each case, with Fehling's solution.

A CASE OF BIFID DORSAL SPINES IN THE HUMAN SUBJECT.

Read in the Section of Anatomy and Physiology at the Annual Meeting of the British Medical Association, in Worcester, August, 1882.

By L. STRETTON, M.R.C.S. Eng., Kidderminster.

THE case which I now venture to bring before your notice is that of a lad named P. He is a well nourished strong looking lad, 18 years of age, with a vacant expression. He has an abnormal amount of hair about his body. There is no beading of the ribs, no enlargement of the ends of the long bones, and the head is natural in shape, there being no undue prominence of the cranial sutures. On looking into the mouth, nothing abnormal is noticed about the teeth, tongue, etc.; he has a highly arched palate, but no cleft of the hard or soft palate. There is no sign of any paralysis, and all the functions are natural.

History.—His mother, who accompanied him, stated that the labour was perfectly natural, there being no instrumental interference. She said the lad has always been dull and stupid, but has enjoyed good physical health, and she does not think he was backward in performing the natural functions of life.

His Family History is good. His father died of some pulmonary disease, and had not, so far as I can gather, any abnormality. His mother is a fine, healthy, intelligent looking woman. He has one sister, who is married and has one child, but none of these are affected with any abnormal condition.

Description of Abnormality.—On examining the spine, the curves appear to be quite natural, there being no sign of lateral or posterior curvature. He can stoop down to the ground with perfect ease, and has no pain or other symptom indicative of spinal disease.

The spinous processes of the vertebrae are easily felt along the whole extent of the spine; the cervical being quite natural, as also the upper dorsal; indeed, it is not until you come down to the eighth dorsal vertebra that any abnormality is discovered. Here you can feel that the spines are bifid from the eighth to the tenth inclusive.

When the boy is made to bend down so as to bring the spinous processes into more prominent view, you can see that the supra-spinous ligament begins to bifurcate as it leaves the spinous process of the seventh dorsal vertebra, and passes on in two bands which are attached on either sides of the eighth, ninth, and tenth vertebrae; thence they tend to approximate one another, until they again meet at the spinous process of the eleventh vertebra. The ligament then proceeds normally. On closer examination, you can see a distinct depression between these two bands, which is perhaps most visible over the tenth vertebra. When deep pressure is made in this furrow between the vertebrae, there is a good deal of resistance, as if you were pressing on some dense fibrous tissue; over the spinous processes, this resistance is increased, and you can make out beneath the fibrous tissue a stony hardness, which is doubtless bone. There is no visible or palpable impulse on coughing or straining, no sense of fluctuation is discovered, there is not the slightest pain on very deep pressure, and there never was any swelling or greater fullness observed in this region.

Causes of Abnormality.—The question we have to consider, is what is the cause of the deformity? Is it an alteration in the early development of the spinal column, allied to spina bifida, what we might term an abortive spina bifida? Or is it an alteration in the process of ossification apart from earlier development? Before discussing this, I think it will be well to recall a few of the chief points in connection with spina bifida, and the ossification of the vertebrae.

Stafford tells us that spina bifida was first observed by the Arabian physicians, who, from their imperfect knowledge of its morbid struc-

ture, and their ignorance of its real nature, considered it to arise from a double formation of the spinous processes, and accordingly gave it a name signifying spina bifida, or bifurcated spine. From the numerous dissections, however, which have since been made of this disease, it has been discovered that it is owing to a deficiency of the spinous processes or the rings of the vertebrae.

Agreeing then, that it is caused by an arrest of development in some part of the ring of a vertebrae, how is this brought about? 1. By a dropsy, probably inflammatory, of the membranes before the bones are ossified. 2. M. Cruveilhier thinks it is, in some cases, the consequence of adhesions having taken place between the integuments and the coverings of the spinal cord, before the cartilaginous tissue of the laminae was formed; by these adhesions the cord is kept out of the canal, and consequently prevents the formation of the laminae in the corresponding region. 3. A want of union between the two halves of the foetus while in progress of formation. We have an analogue of this in cleft palate, hare-lip, etc., which abnormalities are often associated with spina bifida.

Now, let us turn for a moment to the process of ossification, as apart from development. At birth, each vertebra consists of three separate pieces, one for the main part of the body, and one on each side for the arch and processes. During the first year, the laminae become united behind by a portion of cartilage in which the spinous process is ultimately formed, and thus the arch is completed. Before puberty, no other changes occur, except a gradual increase in the growth of these centres, the upper and under surfaces of the body, and the ends of the transverse and spinous processes being tipped with cartilage, in which ossific granules are not as yet deposited. At sixteen years, four secondary centres appear, one for each transverse process, and two (sometimes united into one) for the spinous process.

I do not think it can be in any way associated with so-called spina bifida, because there is no feeling of fluid, no aperture to be felt, and there was presumably never any tumour over this region; and, besides, had there been any congenital malformation of the bony structures, there would in all probability have been a similar defect of the soft tissues, such as one sees in very slight cases of spina bifida.

Now, let us consider the second cause, viz., an alteration in the process of ossification apart from development. We have seen how the vertebrae are developed from three primary centres of ossification, and that these are supplemented by four secondary centres at sixteen years of age, one for the tip of each transverse and two for the tip of each spinous process, which are sometimes united into one. If we look at the vertebral column, we notice that the cervical vertebrae have bifid spinous processes; the dorsal vertebrae, on the other hand, have no bifid extremity, at least, as far as my experience goes, and I have been unable to find any report of such a case.

I think that, as a rule, the two secondary centres of ossification which make their appearance in the tips of the dorsal spinous processes either coalesce at once, or that there is only one such secondary centre; while in the cervical vertebrae, for some reason not exactly known to us, there are always two separate centres which never coalesce, thus forming the bifid spines. This reason, I venture to think, will account for the deformity in the present case; but why it has only attacked these three vertebrae, I am unable to say.

Professor HUMPHRY thought it a very interesting case, and suggested that it was not uncommon to find two slight prominences of bone on the top of a dorsal spine.

Mr. SHUTER said that, after a careful examination of the man's back, he thought very likely that it was a case in which the point Dr. Humphry had mentioned was very remarkably exaggerated, and that that would explain the abnormality.

TOXICOLOGICAL MEMORANDA.

TEMPERATURE IN A CASE OF BELLADONNA-POISONING.

A CASE lately occurred in this town (Stirling) in which a child, between four and five years of age, whilst out playing with his companions, partook of some berries of the deadly nightshade, and some time thereafter had symptoms of narcotic poisoning. He took the berries between 5 and 6 P.M., and, having arrived at home in an hour or an hour and a half afterwards, asked for something to eat, when he was offered soup, of which he partook. Immediately after, he staggered and fell on the floor of the apartment. He had no vomiting. I saw him at 2 A.M., seven hours after the symptoms of narcotic poisoning had manifested themselves. I found him in a state of continual agitation and terror, with frequently recurring convulsive attacks; the pupils were widely dilated; the face congested and swollen, with dryness of the mouth and throat, and consequently frequent demands for something to drink. He had

previously been delirious, laughing and singing, and imagining someone was thrusting berries into his mouth. Before my arrival, he had been given an emetic, and afterwards an aperient. The emetic brought up two half-digested berries and part of the soup he had taken. There being no doubt about the nature of the poison, he had aperient injections, cold to the head, a mustard-poultice to the stomach, small doses of morphia, and stimulants, etc., administered to him.

Owing, however, to the length of time the poison had been working and the gradual absorption of it into the system, there was little or no hope but that the case would have a fatal termination. The child died at twelve noon on the following day, seventeen hours after the first effects of the poison had been observed. I visited him an hour and half before death, and found him in a state of coma. There was a tympanitic state of the stomach and bowels, which almost certainly pointed to an irritated and inflamed state of the alimentary canal. The chief noteworthy fact, however, was the excessive temperature. At the time of my last visit it was 110° , and it was this several hours before death. I have only observed this temperature once or twice in scarlet fever when death was imminent. To what could the high temperature be owing? Was it to interference with the function of the sympathetic?

JAMES MACNAB, L.R.C.S.Ed., Stirling.

SURGICAL MEMORANDA.

REMOVAL OF PART OF THE APPENDIX VERMIFORMIS FROM A HERNIAL SAC.

T. T., aged 57, a pork-butcher, accustomed to heavy lifting, a well-nourished and healthy man, had suffered for about twenty years from right inguinal rupture, for which he had worn a truss. On the morning of July 20th, he put on his truss as usual, but, on coming down, found himself in great pain, so that he took off the truss, and immediately a large swelling appeared at the seat of rupture, with pain so acute that he lay down writhing on the floor. He went to bed again, applied hot fomentations, and in the evening, feeling no better, sent for me. I found the right side of the scrotum occupied by a hard mass, oblong, having the appearance of a large inguinal hernia, very hard and firm, but elastic to the touch; no gurgling or movement in it; no impulse on coughing. Pressure and handling the tumour gave him pain; and the right iliac region was tender and painful. He had not vomited, and some castor-oil taken in the morning had acted freely during the day. Tongue furred; skin cool; pulse 72. He told me that the hernia had often come down on exertion, with the truss on; but that, until this morning, he had always found it soft, gurgling under the fingers, and easily reduced. I ordered him to continue the fomentation, which comforted him; to take half a grain of extract of belladonna every two hours, with milk and soda-water as nourishment. On July 21st, the night had been restless, with much pain in the right iliac region and in the swelling, which was unchanged, except in being more tender on pressure, and with more cedema of the scrotum. The bowels had acted at 3 A.M.; he had no vomiting; the pulse and skin were natural. The same treatment was continued. On July 22nd, the night had been bad; with more pain and tenderness in the parts, and a distressed expression of face. There was no vomiting; and no further action of the bowels since 3 A.M. yesterday. The pulse and skin were natural. At 11 A.M. my brother saw the case with me, and we decided to cut down on the hernia; as, although there was an absence of vomiting, and, perhaps, of obstruction, there was evidently a strangulated mass, and commencing peritonitis. Under chloroform, I dissected down to the sac, and, on opening it, a little turbid pink serous fluid escaped, of slightly feculent odour. The sac was occupied by a hard solid substance, of about the size of two large fingers. Of bright red colour, and irregular undulated outline, it looked somewhat like three or four cocks' combs strung together, the irregularities being partly covered by a thin layer of recent lymph. There was no bowel in the sac, and the fingers could be passed through the ring without difficulty. Thinking that it was probably a mass of diseased omentum, I cut away as much as could be easily protruded through the wound, the section being through a solid substance, like a fibrous tumour. The part removed was about two and a quarter inches long. The wound was brought together with sutures, and covered with a lint-compress. The cut surface of the substance removed showed the orifice of a tube, about the size of a goose-quill, imbedded in a hard dense growth. The corresponding orifice of the upper part of this tube, similarly imbedded, was visible in the wound. On passing a director down the duct in the part removed, and slitting it open, I had no doubt that it was the appendix caeci, this being made more certain by finding at its extremity, buried in the mass, a small, sharp, rough piece of bone, which had

probably become involved in the duct, and caused the inflammatory diseased growth. The man recovered without a bad symptom, all pain being at once relieved. As there was some suppuration, I removed the sutures on the third day. The wound quickly filled by granulation, and in a fortnight was healed. The open end of the appendix is in the cicatrix, its mucous lining protruding and red. Within a few days of the operation, some flatus passed from it occasionally, verifying our diagnosis, and a little faeculent mucus escapes when he moves about freely; but this is easily controlled by a light truss, with a small pad over the orifice of the duct. He is now (August 20th) hard at work again in his employment. C. R. THOMPSON, Westerham.

REPORTS

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

UNIVERSITY COLLEGE HOSPITAL.

CASE OF VERY COMPLETELY OSSIFIED SARCOMA OF THE LOWER JAW: REMOVAL: RECURRENCE: TWO OPERATIONS: SUBSEQUENT RECURRENCE: AND DEATH FROM EXHAUSTION.

(Under the care of Mr. CHRISTOPHER HEATH.)

[From notes by Mr. STANLEY BOYD, late Surgical Registrar.]

W. G., aged 50, was admitted on May 9th, 1881. About five months previously, he noticed a pricking pain about the left side of the lower jaw; and soon a lump appeared outside the bicuspid teeth; it grew steadily but slowly until one month before admission. At this time, the patient had several teeth extracted, and the increase in the size of the growth became rapid after this interference; there was constant gnawing pain. The patient believed exposure to cold to have been the cause of the swelling. Both his parents died of "old age", and had no kind of tumour.

On admission, the lower part of the left cheek was bulged outwards considerably, by a very hard rounded swelling, which covered the outer side of the left half of the lower jaw from a short distance in front of the angle almost to the left canine; the lower edge of the bone was concealed by slight projection of the mass below it; and, on pressing upwards in the submaxillary region, a considerable swelling could be felt on the inner side of the bone. Altogether, the impression conveyed by the fingers was that the growth was central, and that the so-called expansion of bone had occurred over it. No teeth were present on the left side behind the canine, the alveolus was widened, and presented posteriorly several low rounded swellings, covered by mucous membrane, soft, or even cystic; whilst in front lay a large crater-like ulcer, at the bottom of which no bone was bare. The tongue and floor of the mouth were normal. A small not tender gland could be felt behind the angle of the jaw. There was moderate constant pain in the part, much increased by hanging the head down. As regards general health, there was nothing to be desired.

On May 11th, ether was given, and the growth removed by an incision from the left angle to the symphysis; the jaw was sawn through to the left of the symphysis, the soft parts stripped from the growth, and then the bone was divided near the angle. The wound was closed by wire sutures, and dressed with cotton-wool.

On the second evening, the patient's temperature was 102.6°, and on the third, 103°; till the eighth it was 100°-1.6°. Slight oedema of the cheek and eyelids appeared on the third day, but soon subsided. The wound was all but healed on the eighth, quite so on the twentieth, when the man left hospital, feeling quite well.

The growth was smooth on the surface, and covered by a thin layer of fibrous tissue; it was subperiosteal, not central; and on the inner side of the jaw lay two long oval masses, parallel to the mylo-hyoid ridge, one above, one below it. A section of the large outer mass showed it to consist of solid bone, much denser than ordinary cancellous tissue, surrounded by a margin of soft greyish-yellow tissue, nowhere more than a quarter of an inch thick. Vertical striation was plain in the outer, and was in part due to spicules of bone. On the alveolar border was a layer of similar soft growth, one-third to half an inch thick. Microscopically, the growth consisted of rather large round and polygonal cells, surrounded by bands of spindle-cells, and tracts of fairly developed connective tissue; so that to the naked eye a section, seen by transmitted light, was made up of distinct lobules. The above description refers to the thin soft layer on the surface, and even in its substance dots of bone were numerous; whilst at its base lay a large

mass of deep yellow bone, fairly dense, having large lacunae and ill-developed canaliculi: tumour-cells occupied the cancellous spaces.

Soon after leaving hospital the patient's face swelled a good deal, and it was thought that recurrence of the growth had occurred; but a sequestrum worked out, and the swelling subsided. In three months, however, he was re-admitted, having had a distinct recurrence for six weeks, with much constant pain. His health was still very good.

On September 6th, 1881, the left side of the face was now swollen from two inches below the line of the jaw to above the level of the alar nasi, and from the symphysis to the lower end of the ramus of the jaw. On looking into the mouth, two large firm masses of growth were found—one above the old scar, lying in the cheek, and running back almost to the anterior pillar of the fauces; the other, below the scar, occupied the floor of the mouth. They were separated by a deep groove, at the bottom of which was a little ulceration; elsewhere, the surfaces of the growths were slightly lobulated and covered by mucous membrane.

No large glands were felt. On the following day, the whole of this mass, together with the ramus, coronoid process, and condyle of the jaw, were removed by the ordinary incision for the removal of half the lower jaw.

The patient again recovered, without any bad symptoms; his temperature rose to between 100 and 101° four times only. The hinder part of the wound gaped widely, but it was healing steadily, and there was no obvious recurrence on October 8th, when the patient left the hospital.

The left angle and ramus of the jaw were surrounded on all sides by masses of new growth, in which there was very little bone, as far up as the base of the coronoid process. In the mass which lay below the scar, unconnected with the jaw, there was a large proportion of bone. Microscopically, the growth was very similar to the primary one; there was less division into lobules, and the cells were, perhaps, smaller; the bits of bone seen were much less perfect.

On January 30th, 1882, the patient was again admitted, having noticed a recurrence of the growth two months. The left cheek was now enormously swollen, and the angle of the mouth pushed forwards by a mass of new growth, fungating into the mouth along the line of the jaw, but elsewhere covered by mucous membrane. The old wound was healed, but for an ulcer an inch and a half by half an inch, round which there was a good deal of firm infiltration at its posterior end. The growth was firm and elastic at some points, bony at others; adherent to the symphysis, but not very firmly. The whole face was oedematous; the left temporal fossa rather full, and the seat of much pain. The man was still pretty strong.

On February 2nd, the old incision was opened up, and the main part of the growth turned out. As the skin was stripped up, the hair-bulbs could be seen springing out of the tumour; then a piece in the floor, on either side of the frænum, was removed, and the two ranine arteries cut and tied. When the tongue had been drawn forwards by a string, the symphysis was removed to just beyond the right canine tooth; and, finally, an attempt was made to remove the posterior end of the tumour; but, as it here seemed to involve the tonsil and carotid vessels, and to spread into the temporal fossa, much had to be left.

Again the patient made a good recovery, his evening temperature for the first week being between 100° and 101°. The anterior part of the wound healed, but the posterior gaped widely, and he went out with a large hole here. Pain in the temporal region continued. He died at home on April 5th, having been able to walk up and down stairs to the last. The total duration of the disease would, therefore, seem to have been about seventeen months. A section from the second recurrence was more densely round-celled than either of the preceding specimens; slight traces of lobulation remained, and there was a large amount of rudimentary bone. Throughout, the vessel-walls were formed by cells of the new growth.

ST. ALBAN'S HOSPITAL.

CASE OF PHIMOSIS, WITH RETENTION OF ELEVEN CALCULI IN THE CAVITY OF THE PREPUCE.

(Under the care of Mr. RIDGWAY LLOYD.)

GEORGE T., aged 35, groom, was admitted on October 5th, 1880, suffering from retention of urine. He was accompanied by Dr. Blake of Harpenden, who had seen him for the first time two hours before his admission, and who gave the following account of the case. "I found the patient suffering from inability to pass urine: on looking at the penis, the glans was not visible, but the foreskin was large and long, and completely covered the glans. On the upper aspect, about half an inch from the tip, was an orifice, almost pin-hole in size, from which exuded on pressure dark-coloured blood, having a fishy odour; the

aperture would not admit the point of a No. 5 catheter. Inside the prepuce was felt a number of bodies resembling stones, which grated on pressure. With a director and Syme's bistoury, I enlarged the orifice sufficiently to allow of the introduction of a No. 5 silver catheter, but failed to hit the urethral opening, owing to the presence of the stones."

On the patient's admission, it was evident that the first thing to be done for his relief was to perform circumcision. When this was done, eleven calculi of various sizes, weighing in all seventy grains, fell out, the largest being 11-16ths by 7-16ths of an inch, and weighing twenty grains. The glands were found pale, and much atrophied. October 6th. Bloody urine passed, probably the result of chronic cystitis, as the passage of a sound into the bladder showed the absence of calculi in that viscus. The urine was drawn off twice. October 7th. Urine was passed naturally; there was no hæmaturia. October 16th. The patient left the hospital. November 6th. He passed urine freely, was quite well, and much delighted at his altered and improved condition. He had been married fourteen years, and had four children, the youngest being three years old. For the last eight years, he had been much worse; had had much pain in the penis, and difficulty in micturition.

REMARKS.—In this case, which is believed to be unique, so far as regards the number and size of the calculi, it would be interesting to know whether the calculi were primarily formed in the preputial cavity, or whether a nucleus was washed down thither from the bladder; upon either supposition, it is evident that the chief formation took place within the prepuce. The calculi are faceted, with rounded edges, have an iron-grey metallic lustre, and a light-brown fracture; and are composed for the most part of triple phosphate. The following is an analysis of one of the smaller calculi, most kindly made, at the request of Mr. A. E. Durham, by Dr. Stevenson of Guy's Hospital.

"A small brown calculus, with glossy surface; chipped at one spot, and exhibiting a light-grey interior. Specific gravity, 1.746; weight, 6½ grains; moisture, 2.5; fat and other organic matters, 1.2; uric acid, none; calcium phosphate, 38.5; triple phosphate of magnesium and ammonium, 57.8; total, 100.0."

REVIEWS AND NOTICES.

HANDEBUCH DER ELEKTROTHERAPIE. Von Dr. WILHELM ERB, Professor an der Universität Leipzig.* 1. Hälfte. Leipzig. 1882.

A MANUAL OF ELECTROTHERAPEUTICS. By Professor WILHELM ERB. Part I. Being Part of Von Ziemssen's Handbook of General Therapeutics. With Thirty-four Engravings. Pp. 304. Leipzig: 1882.

THIS new work by Professor ERB, which appears as part of Von Ziemssen's excellent and comprehensive *Manual of General Therapeutics*, consists of lectures which the author has for some years past been in the habit of delivering to the students of the universities of Heidelberg, and more recently of Leipzig; and, when completed, will no doubt form a most able exposition of the present theory and practice of electricity as applied to the diagnosis and treatment of disease. The first part, which is before us, is carefully brought up to the most recent knowledge of the day, and treats of the general questions connected with the medical application of electricity; while the consideration of its uses in special forms of disease, more particularly of the nervous and muscular systems, is reserved for a second part, which is preparing for publication. The book is written in an easy and colloquial style; and, coming from so eminent a source, is sure to prove of considerable interest to the specialist as well as to the general practitioner.

Electricity as a therapeutic agent occupies a very different footing in Germany from what it does in England and France, not only in medical teaching, but also in practice; and, from a historical survey of the development of our knowledge of it, which is given in Professor Erb's first lecture, it appears that, with the single exception of Duchenne of Boulogne, it is almost exclusively German physicians who have worked at the subject in its theoretical as well as its practical bearings. It will be new to many of our readers to hear Professor Erb stating that to have an intimate acquaintance with electricity and its effects is not only of the highest interest, but is actually the duty of every practitioner whose principal aim is the recognition and treatment of disease. Such works as the one before us are likely to do much to popularise the scientific use of galvanism in all ranks of the profession, and to give it the same standing here which it occupies already in Germany and the United States. Professor Erb tells us that we have in this agent "an important, and in many cases indispensable, diagnostic test for certain diseases of the

nervous system; that we may by its means formulate, in not a few cases, a prognosis with an exactness which was formerly undreamt of; and that the constantly increasing number of nervous affections to which modern society is liable, points more and more urgently to the more extensive utilisation of a curative agent which has long gained for itself a prominent place, and the effects of which, for many-sidedness, energy, and reliability, are not surpassed by any other remedies with which we are acquainted."

The second lecture is occupied with an exposition of the physical laws regulating the production of electricity, and a description of the electric instruments used in medicine. With regard to the apparatus for furnishing a continuous current, the author states that an absolute constancy of the galvanic pair used is not necessary; for, as an application rarely exceeds three, five, or at most ten minutes, even the worst batteries will remain constant for such a time; while, on the other hand, variations in the strength of the current are inevitable with the best battery, in consequence of increased conductivity of the skin; of changes of resistance by increased or diminished temperature; of the larger or smaller quantity of liquid with which the electrodes are moistened; of the variations of pressure with which they are applied; and of the polarisation of the electrodes, and perhaps of the tissues which are traversed by the current. Now, although it is perfectly true that the influences just mentioned cause considerable variations in the strength of the current during an application of electricity, it nevertheless seems to us a dangerous principle to deride the constancy of galvanic pairs, and to speak of the "advantages of inconstant elements", as being likely, if acted upon by mechanicians, to lead to slovenly construction of the batteries supplied to practitioners. The author is in the habit of using Stöhrer's instruments, but says quite candidly that there is no battery which is absolutely good and preferable to all others.

The third lecture treats of the accessory instruments, such as electrodes, rheophores, galvanometers, rheostats, etc. With regard to a definite measurement of the current used, the author is of opinion that the usual way of speaking about so many cells or resistances, etc., is to be deprecated, and that the strength of the current should only be measured by a vertical galvanometer showing so many units. Some are of opinion that, if the current-strength be expressed in "milliwebers", this would enable us to compare the statements of others absolutely with our own numbers, to control the strength used in certain therapeutical applications accurately, and give us the same facility of dosing electricity as internal medicines; but Dr. Erb very properly insists on the circumstance that the density of the current is of considerable importance for the physiological and therapeutical effects of the same, quite independently of its strength; so that, for instance, the effect of a current of five milliwebers, applied to a nerve by means of an electrode having a surface of a square centimetre, is quite different from that of a current of the same strength, but applied by an electrode of twenty centimetres' surface. It is therefore quite useless to state simply, for instance, that the first cathode-closing contraction occurs with two milliwebers, or that the spinal cord has been treated with ten milliwebers, etc.; but it is indispensable that at the same time the method, the shape and size of the electrodes, as well as the exact points to which they may have been placed, should be given.

The questions connected with the resistance to the passage of the electric current are discussed in the fourth lecture. We are here treated to Ohm's laws, and the results which flow directly from them, as applicable to therapeutical applications of electricity. The author considers that the differences in the thickness and degree of moisture of the epidermis, and in the number of the sudoriferous glands and sebiparous follicles contained in it, are quite sufficient to explain why the epidermis should offer extremely different resistances to the current in different parts of the body, and why, in different persons, analogous parts of the body should differ in conductivity. Of the latter, some curious instances are related; and the conclusion is drawn from them that it should be the rule, if a patient be examined for the first time, to judge of his individual resistance to passage by a few preliminary galvanometric experiments. The resistance offered by the epidermis being the principal point to which all others, such as the length of the part of the body comprised between the electrodes, etc., are subordinate, it follows that the extent of its transverse section, or, in other words, the size of the electrodes applied to the epidermis, determines the strength of the current introduced into the body. Essential and extra-essential resistance, and its importance for the medical use of the continuous current as well as of the galvanic cautery, as well as the differences which may be caused in the density of the current by electrodes of different size, are then discussed in a very clear and practical manner. This lecture finishes with some remarks on the electrolytic and cathaphoric or mechanical effects of galvanism.

The physiological effects of electricity on the motor nerves and

* Dr. Erb has lately been appointed a professor in the University of Heidelberg.

muscles are described in the fifth lecture. We find here full information on the law of contractions, the polar method of examination, and the phenomena of electrotonus in the living subject. The electro-physiology of the sentient nerves, and of those of special sense, as well as of the other organs, is subsequently discussed.

The most important chapter of the book, and one in which the author is entitled to speak with the greatest authority, is that which treats of the method of electrical examination, and the diagnostic use of electricity. Indeed, it was Erb who first thoroughly studied the phenomena of what he has called "reaction of degeneration" (*Anglicè*, wasting-test), and the pathological changes underlying the same. His remarks on this subject in the present treatise may, therefore, be looked upon as the outcome of all his previous observations, and as such deserve the fullest attention. The principal object of the method and art of electro-diagnostics, more especially as far as the motor nerves and muscles are concerned, consists of the localisation of the current, with the required intensity and density, in these several parts, while leaving neighbouring structures unaffected by it. For an exact investigation of the condition of small parts situated within large containing masses, that is, of nerves, nerve-twigs, and individual muscles, only the polar examination is to be used; and for this the following principles may be laid down: only one pole should be employed at a time, and the effect of the other pole should be excluded as far as possible. The stimulating electrode is called the "different" one, or A; the other, whose effect is not desired or examined, is the "indifferent" one, or B. The "different" electrode A should be very small, in order to allow the current to possess considerable density. This, however, is chiefly applicable to faradisation; with regard to the continuous current, the size should be rather larger, since, if it be very small, the intensity of the current is, on account of diminished transverse section, too much enfeebled, and thereby renders examination more difficult; moreover, a somewhat larger electrode is better able to catch the nerves and their branches than a very fine one. The indifferent electrode B should, on the contrary, always be of considerable size, in order to convey less density of current, and therefore to be less effective, even with considerably increased strength of current. It should always be applied to an indifferent part, generally the sternum, because this bone is situated in the centre of the body, and the current has from there to traverse, in its way towards symmetrically situated parts of the body and the extremities, the same channels and resistances; the current therefore loses its density rapidly, and there are no important nerves or muscles close by which might interfere with the examination; the sternal region is not sensitive, and the person examined may himself fix the electrode there. To put the indifferent electrode to the patella or the hand would, for the same reasons, appear preposterous and unadvisable; we might rather be allowed to put it to the nape of the neck or the sacrum; but the propinquity of the spinal cord and the spinal nerve roots, and, in the cervical region, of the head and brain, render this less advisable. In order to be able to exactly localise the electrode A, precise anatomical knowledge and much practice in the use of the apparatus, especially on one's own body, is indispensable. The same principle of arrangement should always be used; it is even better to use always the same apparatus, with which one is perfectly familiar, and upon which one can place absolute reliance. Any variation in the method or the apparatus is apt to lead to error; and this is one of the reasons why the elements of different therapeutic methods are not interchangeable. The best rule is to keep the electrode constantly in place in the healthy part, as it is only in the diseased part that any significant morbid changes may be detected.

Professor Erb justly remarks that much practice, technical skill, and experienced judgment are required for an electrical examination to be reliable, and that those who think it very easy are greatly mistaken. He then enters fully into the methods for the examination of the motor nerves and muscles, and the various conditions which may be detected, etc.

The author then enters into the question of the therapeutic use of electricity. The author says that the experience of the last thirty years leaves no doubt what-
on the mind that electricity is an extremely powerful and many-
filled remedy for neuralgia, anesthesia, spasm, and paralysis, whether
they be owing to disease of the peripheral nerves or of the nervous
system. The author then enters into a full and detailed description of
the various methods of electrical treatment, and the conditions which
may be detected, etc. The author then enters into a full and detailed
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as yet most defective. This is more particularly owing to our ignor-
ance of the finer nutritive or molecular changes which occur in the
several diseases of the nervous system. The intimate nature and
ultimate causes of inflammation, degeneration, and atrophy are as yet
unknown; in most cases it is impossible to say whether morbid excite-
ment arises from increased stimulation or augmented from excitability;
whether paralysis is due to want of excitability or deficient conduction
in the motor paths, or to inhibitory effects; while of molecular dis-
turbance, of nutrition we actually know next to nothing.

The author then enters into the different theories which are at present
held by the most prominent workers in this field, and eventually comes
to the conclusion that our principal task for the present should be to
develop the therapeutical uses of electricity in an empirical manner;
and that it is premature to endeavour to act always according to physi-
ological premises. He finishes with a discussion of the principal
methods of applying the two currents of electricity, and gives, in a
comparatively small compass, such rules and hints as will be a safe
guide to the practitioner in almost all cases which may happen to come
under his notice.

The second portion of the book, which is promised to appear within
the next few months, will treat of "special electrotherapeutics", in
which the curative influences of electricity in certain diseases will be
described, and the indications for the employment of it, and the special
methods suitable for special forms of disease, will be given.

The work, if finished as well as it has begun, will then no doubt
constitute one of the most valuable therapeutical treatises which have
recently appeared.

A MANUAL OF GYNÆCOLOGY. By D. BERRY HART, M.D., and A.
H. BARBOUR, M.B. With Nine Lithographs and Four Woodcuts.
Edinburgh: MacLachlan and Stewart. 1882.

It is interesting to note, in connection with the appearance of this
work, the fact that "collaboration", invented, like the term which
describes it, in France, is already finding imitators among scientific
writers on this side of the Channel. The present work bears a further
similarity to some recent works published in Paris, in that it is dedi-
cated to, and professedly inspired by, the master and teacher of the
writers. Such work should, indeed, be fruitful; bringing together, as
it does, the larger and deeper stream of ripened experience, and the
smaller but bright and rapid current of youthful energy and inquiry.
The authors state in their preface, that they have tried to remember
that the anatomy, physiology, and pathology of the pelvic organs form
the foundation of a good clinical work. They may fairly claim to have
succeeded in presenting to their readers a well digested résumé of recent
anatomical literature. The sections by Pirogoff and Braune of the
pelvis with its viscera are reproduced, as well as Hyrtl's plate showing
the distribution of the ovarian, uterine, and vaginal arteries. These have
been introduced with advantage; but the two large plates showing female
cadavers in the semiprone position do not appear to serve any useful pur-
pose. In plate v, the second of these, the Sims' speculum seems to be
just where the coccyx is normally situate and the vulva abnormally
posterior. From an anatomical point of view, the drawing is not a
success. As might be expected, following so closely upon the works of
Barnes, Leblond, Mundé, Emmet, and Edis, the book does not offer
much that is new; but, on the other hand, the more recent contribu-
tions to gynæcology have been impartially criticised and weeded, so
that it forms a trustworthy students' manual. The remarks upon
Batter's operation may be quoted as an example. "Some interesting
physiological points have been brought out by it; removal of the
ovaries does not bring on the menopause, sexual appetite is not dimi-
nished, and no womanly attributes are in any way removed. The
outcry that it unsexes a woman is absurd. The ovaries removed were
probably useless for procreation; and when their presence is causing
serious bodily illness, they are better removed." In the statistics of
Batter's operation, as set forth by Hart and Barbour, one cannot help
being struck with one fact. In Edinburgh, Leblond or A. R. Simpson
appears to have performed the operation only once; in Birmingham,
Lawson Tait and Savage have already done it one hundred times—the
former seventy times, the latter thirty times. The work will well repay
perusal. It is worth mentioning, that the authors acknowledge the
services of all borrowed illustrations. The indexes of the consulted
literature form a useful feature in a work which amply sustains the
reputation already acquired by the authors.

BROUETS.—Mrs. Nathaniel Montefiore has given £2,000 to Uni-
versity College Hospital, for the endowment of two beds, in memory
of her late brother, Sir Francis Henry Montefiore, Bart., and her late
son, Mr. Leonard Montefiore.

BRITISH MEDICAL ASSOCIATION. SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 23RD, 1882.

QUARANTINE AND RECENT CHOLERA.

ONCE more autumn has brought news of epidemic cholera and its attendant panic. This time, the Philippine Islands and the Soulo Archipelago have chiefly suffered, though it has also appeared in other quarters. Early in August, there were the usual rumours and denials; but, after an official telegram from Madrid to the Governor-General of the islands, requesting him to send daily bulletins, and to abstain from concealing the truth, as his predecessors often had done when similarly placed, the fact was fully admitted. And well it might be, for by the end of the month there were in one day over five hundred deaths from cholera in Manilla; and the disease still rages, although, fortunately, the death-rate has already greatly diminished, and continues to decrease. Hitherto, the Europeans have almost entirely escaped; while of the natives, during the latter half of the month, four thousand five hundred died in Manilla, and sixteen thousand in the Archipelago. The houses of the Europeans are built with some regard to sanitary precautions; and private letters show that the contagious character of the disease, if in this epidemic it have any, has not been so active as to cause infection in those who do not associate with the natives. The habits of the latter are described as dirty and slovenly. Their dwellings are mere hotbeds for disease, and they resent all interference from European medical men. Of course the authorities are unwilling to admit that cholera is endemic in their islands. There is commerce between China and Manilla; and, apparently without sufficient reason, the epidemic is attributed to an importation from China.

In this, the authorities have only followed the usual course. Sporadic cholera appears in a town or country. It is called cholerae or choleraic diarrhoea, and is hushed up. But, once, the arrival of a vessel from a suspected port is proved, there is not the same need for its concealment. Cholera is no longer a reproach against the sanitary condition of the town, but only an inconvenient proof of the vigour of its commerce. Madrid is an instance. At the beginning of the month, its public health was said to excite uneasiness, in consequence of the occurrence of some cases of sporadic cholera. Fortunately, the disease appears to have subsided; but, had it assumed the severity of an epidemic, the first arrival from Manilla in any Spanish port would have been named as its source. There is a popular demand for such an explanation, and it is always forthcoming. There is, indeed, evidence that, when once a town has been infected with true cholera, its inhabitants may again become infected without fresh importation; and some hygienists even go the length of denying that it is portable by man.

But, without discussing this doctrine, it will be generally admitted that to endeavour to isolate all cases of cholera is a reasonable precaution; not, however, by the irrational methods of quarantine practised at Algiers, Tunis, and the Spanish ports. "The term quarantine," says the United States Report on the cholera epidemic of 1873, "no longer implies that exercise of arbitrary power which has called out such hearty denunciations; no longer implies the detention of healthy individuals in the close and infected cabins of a vessel, which, in times past, cast the sneer 'that quarantine, instead of preserving, actually

involves a sacrifice of life.'" Unfortunately, this is precisely what the term quarantine does still, in many cases, imply; and it is this fact that induces us to refer to the subject in the present crisis. In a recent letter to the *Times* newspaper, Mr. Edwin Chadwick expresses his surprise that, after the favourable reception of the report of the General Board of Health in 1849, which recommended medical inspection and isolation of the sick in place of the old-fashioned system of detention, quarantine regulations should again be enforced at Suez. The capricious nature of the regulations at that port compels us to hope that they will soon be a thing of the past. Note, for instance, the action of the International Sanitary Commission in attempting to establish, on the 4th instant, a quarantine for ships arriving from Bombay and Aden. Now, we are far from saying that the Commission was influenced by other than scientific considerations. It is true that the moment was a critical one for us. Some of our Indian troops had already landed in Egypt, others were on their way, and there was a reserve force in readiness. But our contention is that the Commissioners acted upon insufficient information, and in a manner so arbitrary as to destroy all confidence in their judgment. The Indian Office promptly showed the unreasonableness of the step. At Bombay there had been only seven deaths from cholera during the previous fortnight, and at Aden not one for twelve months. A fireman had died in a pilgrim ship off Aden, and the vessel had since performed a quarantine of ten days at the Island of Namaran. Apparently, this single case was the sole cause of the issue of the regulations, but it was only after very urgent representations that they were withdrawn, and the troops allowed to land. Perhaps it may be said that this is not a fair example of their ordinary procedure. But, on the 10th instant, at the Hygienic Congress at Geneva, M. Fauvel defended their action, and said that the English Government were officially informed by the French Cabinet that quarantine was an indispensable precaution. He added, that he had ground to believe that the English had paid no heed to these suggestions. Should the mischief he feared be realised, the English would be alone responsible, and, at the same time, the chief sufferers, for their army would be rapidly destroyed. M. Fauvel is faithful to the Convention of Constantinople, and has always been first to cry "wolf!" when any enactment of the Commission has been called frivolous. Let us hold him to his cry; let us see the wolf. Our troops have been in Egypt since the beginning of the month, not a single case of cholera has been reported, and quarantine has been neglected with impunity.

The claims of the Commissioners to have kept cholera out of Europe are preposterous. Their regulations have, indeed, been strict enough; but regulations are not observances, and so unjust have been the former that they are constantly evaded. Last year, when a steamer arrived from a suspected Indian port, though it only carried first-class passengers, had no sickness on board, and showed a clean bill of health, it had to undergo the quarantine of observation. A quarantine officer came on deck, and inspected the passengers and crew. In one instance with which we are acquainted, some of the men being engaged below their fellows appeared time after time before the officer, until the official number of the crew was completed. No quarantine work, such as coaling, was allowed after sunset, which is a great source of delay, but there was free communication between ship and shore, though, of course, this was irregular, and not permitted during the day. Even when pratique was given, there was further delay, for there was a long line of vessels waiting for pilots. When at last a pilot was secured, he was not allowed to go on board, and a steam-launch had to be hired for him at the rate of twenty francs an hour, and twenty hours allowed for return. Four thousand francs was not an unusual price to pay for the hire of one of these launches. All this in the name of science is vexatious enough; but the fate of the pilgrim-ships is even worse. When such a vessel arrives from the East at Jeddah, the chances are that it is ordered into quarantine for five or ten days. This means that the vessel must return on its track a four days' journey to the Island of Namaran. On arrival, both pilgrims and cargo must be landed and disinfected. But to land and disinfect two or three thousand tons of cargo in an open

roadstead without help of boats or men is almost impossible—quite so, if the ship is to pay its way; and it may be remarked that a ship is not a charitable institution. Last year, the difficulty was got over in a very simple manner; and we are informed that the same course is likely to be pursued during the present pilgrimage to Mecca. Instead of returning, according to orders, to Namaran, the vessels went straight on to Suez. There the pilgrims were transhipped, and sent back to Jeddah. Sometimes they underwent quarantine at Suez, but sometimes apparently they escaped it. On arrival at Jeddah, they were represented as pilgrims from Europe, and no quarantine was exacted. In truth, it is a hopeless task to attempt to keep cholera out of Arabia by quarantine. Dr. Dickson says it will not travel more than three days into the Desert; but it has frequently appeared in Mecca; and it is doubtful if it is ever wholly absent.

There is nothing in the protest addressed by Earl Granville in March to the Khedive that is opposed to the teachings of modern sanitary science. The International Sanitary Commission is an irresponsible self-elected body, that does not adequately represent the nations concerned. It is deaf to all that we have learned since 1866, and the chief result of its action has been to block the thoroughfare. The Khedive may now be fairly asked to draw up a sanitary code to be submitted for approval to the various governments. We are willing to admit that cholera is endemic in India; but it should also be recognised that the Native Indian Passengers Acts almost entirely prevent any risk of shipping cholera, and that our ship-surgeons are fully capable of isolating any cases that may occur during the voyage. A clean bill of health and a medical inspection made immediately on arrival should give any ship free pratique. Cases of actual sickness should be removed if necessary, but no foolish restrictions should be laid on the healthy.

FORCED FEEDING AND OVERFEEDING.

FORCED feeding, long used in this country and elsewhere in certain cases in which food is rejected, owing either to mechanical obstruction or voluntary refusal, has lately attracted much attention in France, as a means of nutrition in certain kinds of anorexia and intractable vomiting, especially such as are met with pretty frequently in phthisis. An interesting review has been made by Dr. A. Mayor, of the *Revue Médicale de la Suisse Romande*, of the work done in this department in Paris by M. Debove, Dr. Dujardin-Beaumetz, and others. The word forced feeding becomes in this case so far a misnomer, that there is no opposition on the part of the patient. Under such circumstances, the designation should, it is suggested, be super-alimentation or "stuffing". It will, however, suffice for the present to retain the old designation.

On October 28th, 1881, M. Debove reported to the Medical Society of the Paris Hospitals the interesting and paradoxical cases of two phthisical patients in whom he had been able to supplement normal feeding, which intractable vomiting had rendered impossible, by alimentation by means of the œsophageal sound. The first patient, in the third stage of phthisis, had reached such a degree of anorexia, that she rejected all food, even milk. M. Debove, supposing that the anorexia might in this, as in other affections, be independent of any affection of the gastric mucous membrane, it occurred to him to inject a quart of milk into the stomach. It was well tolerated. The treatment was renewed with constant success, and soon the dose of food injected was increased; and from artificial alimentation he advanced to super-alimentation. Two quarts of milk, ten eggs, and two hundred grammes of scraped raw flesh, constituted the daily ration of the patient. Under the influence of this régime, the amelioration of her condition was so apparent, that the treatment was immediately attempted in other cases.

When M. Debove came to the Society for the first time to state the results of this new method, some of his colleagues, already cognisant of the fact that he had obtained in his wards, had tried the employment of super-alimentation on their patients, with remarkable results.

The method of treatment is simple enough. For this purpose, M. Debove introduces a simple œsophageal tube, and administers by it a

gradually increasing quantity of food, reaching at last a very considerable amount.

The instrument which M. Dujardin-Beaumetz now recommends—an œsophageal tube reduced to half its ordinary length, and therefore, not reaching quite into the stomach—is introduced on the stylet. It is connected by an India-rubber tube to the lower part of a glass jar, into which is poured the alimentary fluid, and in the upper part of which jar air can be compressed by means of an India-rubber ball. This vase being placed on the table, the patient can himself handle the India-rubber ball, and regulate at his pleasure the amount of food introduced and the rapidity of feeding. It is obvious that a simple tube and funnel of the simplest construction might be employed, and perhaps the simpler the better.

In a few cases, in which the stomach appears to be dilated, it may be well, in the first instance, to wash out this cavity with a four per cent. solution of bicarbonate of soda, or six per cent. of sulphate of soda. In the absence of dilatation such treatment may be omitted; and it is only necessary, then, at once to introduce the aliment into the funnel of the jar. This consists, usually, of a sort of a broth of milk, eggs, and a certain quantity of meat. M. Dujardin-Beaumetz recommends the addition of common salt. At first, finely scraped raw meat was employed, but lately M. Debove recommends powdered cooked meat for this purpose. The flesh, cut off a fillet of beef, is finely minced, pressed into a cake, carefully baked, then powdered, and passed through a silken tamis cloth. An impalpable powder is thus obtained, which resembles in flavour roast meat, and which represents four times its weight of raw meat. This is perfectly preserved so long as it is kept from wet. Its main defect is its cost, but this may be diminished by mixing it with cooked and powdered lentils.

The vehicle employed is milk, two quarts a day; or, for some patients, two eggs are added to the bouillon.

M. Dujardin-Beaumetz adds, sometimes, to the repast three or four spoonfuls of peptone, or subnitrate of bismuth, where there is intestinal irritation and diarrhoea. Certain contra-indications have already been pointed out by experience.

It might be supposed at first sight that cases of acute laryngeal tuberculosis would have been especially suitable for treatment, and likely to be benefited by it. The contrary has been found to be the case. Again, the risk of introducing the sound by mistake into the larynx is not so small as might be supposed, nor is the error always shown by great distress of breathing or aphasia. Before the injection is made, the patient should be required to breathe out, when it will be ascertained whether air is expelled through the tube.

Some patients are intolerant of the œsophageal sound, and, if this cannot easily be got over, it constitutes a serious obstacle to the treatment. Occasionally, the patient is seized with the desire to vomit, and there is a reflux of the fluid into the sound. This may often be overcome by gentleness and patience, and by the introduction of very small quantities of food at a time. In any case, it is desirable to commence with moderate doses of food, not more than twenty-five drachms of powdered meat; but at each dose this may be gradually augmented. Moreover, the individual digestive aptitudes must be considered, and the occasional individual intolerance of special foods, such as milk, eggs, or soup. Food should never be given until it has first been tested, and found to be in a perfect state of preservation.

As to the results of this treatment in phthisis, it is too early to pronounce any definite opinion; it would appear, however, that, even in the third and acute stage of phthisis, super-alimentation has prevented, at least arrested, the progress of the disease. For the rest, it is evident that a distinction must be drawn between those phthisical patients who have retained their appetite, and those who, on the contrary, are suffering from protracted vomiting and aversion to food. In such cases, striking results are recorded, anorexia giving place to appetite, sweating ceasing, and sleep returning. In some patients, an increase in weight immediately occurs, amounting to as much as from 80 to 100 grammes a day; at the same time, the daily weight of urea increases from 18

and 20 grammes to 50, 60, often 80 grammes. Thus may be noted the fabulous activity which super-alimentation impresses on the organic changes and the phenomena of combustion; and it is possible one may conceive, from this fact, that the ground is modified on which the disease is evolving.

The pulmonary symptoms undergo no less important modifications; in such cases, the cough and expectoration diminish, says M. Debove, and then disappear. The stethoscopic sounds of the bronchial tubes follow the same retrogressive course; the signs of pulmonary induration on the caverns seem to persist; but, in one case, first observed by M. Debove, in which death supervened accidentally from a traumatic injury, and in which *post mortem* examination was made three and a half months after the commencement of the treatment, the walls of the cavern were found to be lined with healthy granulations, and the lesions in course of repair.

Other uses of overfeeding have been suggested. Thus, in a case where the patient had suffered severe losses of blood from a polypus, and was in a state of weakness which rendered an operation dangerous, she was submitted by M. Pannel to this method of overfeeding, and in a short time her strength and appetite returned sufficiently for surgical intervention, which was followed by full success.

Artificial feeding has been employed successfully by M. Troisier, who overcame intractable vomiting, occurring in cases of convalescence in typhoid fever; and it is suggested by M. Debove in some of his cases of extreme chlorosis, when iron cannot be tolerated.

In such cases, this treatment of artificial feeding has succeeded as a means of raising the nutrition sufficiently to enable the patient to support and utilise the iron which may be administered to her.

Again, there are cases where the ordinary alimentary treatment necessary for the disease inspires the patient with insupportable disgust, which is often the case with the milk-treatment of Bright's disease, and of round ulcers in the stomach. In such cases M. Debove has employed the œsophageal sound with great advantage, dissolving, in ordinary milk, a sufficient quantity of concentrated milk-powder, and thus introducing into the stomach, in three catheterisations, the value, without the quantity, of six quarts of milk.

In some cases, M. Dujardin-Beaumetz, considering the ordinary dose of one to two tablespoonfuls of cod-liver oil, which is all a patient can take through the mouth, to be too small, adds to the alimentary broth six or seven tablespoonfuls of cod-liver oil, and in this way the number of phthisical patients who are easily and effectually able to digest it is considerable.

What may be the physiological interpretation of the fact that the stomach digests and assimilates in astonishing quantities food introduced by the œsophageal sound, which it rejects when introduced in other modes, it is difficult to say. The compression of the pneumogastric nerve by the bronchial ganglia has suggested some possible hypotheses; but none has been brought forward which can explain phenomena so much in discord with the actual theories of vomiting. Observation, however, may for the time take the place of theory.

What may be the future of this method of artificial feeding and over-feeding, it is not necessary here to predict. It is certain that its application will be limited, and its usefulness only occasional. It is our purpose here, however, only thus briefly to note the very interesting clinical observations which have been brought forward by French physicians in this matter.*

*The following references to the literature of the subject may be useful. "*Société médicale des Hôpitaux de Paris*, Séances du 28 octobre, du 11 novembre, du 27 novembre, du 9 décembre et du 23 décembre 1881, du 27 janvier, du 14 avril, du 28 avril et du 7 juillet 1882.—*Société de Thérapeutique de Paris*, Séances du 9 novembre, du 23 novembre 1881, et du 24 mai 1882.—Debove, Du traitement de la phthisie par l'alimentation forcée. *Union médicale*, nos. 161 et 162.—Dujardin-Beaumetz, De l'alimentation artificielle chez les phthisiques. *Ibid.*, no. 170.—A. Ferrant, De l'alimentation artificielle des phthisiques. *Ibid.*, 1882, no. 11.—Desnos, De quelques inconvénients ou accidents de l'alimentation forcée chez les phthisiques et des moyens de les conjurer. *Ibid.*, no. 15.—Debove, Recherches sur l'alimentation artificielle, la suralimentation et l'emploi des poudres alimentaires. *Ibid.*, nos. 701 et 702.—Dujardin-Beaumetz, De l'alimentation forcée chez les phthisiques. *Bullet. gén. de thérap.*, 1881, I, p. 381.—Debove, Du traitement de la phthisie par l'alimentation forcée. *Ibid.*, p. 425.—Mesnet, Lettre sur l'emploi des mots "Lavage et alimentation artificielle." *Ibid.*, p. 498.—P. Pannel, L'alimentation artificielle chez les phthisiques. *Ibid.*, 1882, CII., p. 185.—Dujardin-Beaumetz, Sur un nouveau procédé

CHOLERA IN THE EAST.

A SERIES of telegraphic despatches from General Primo de Rivera, the Governor-General of the Philippine Islands, are, for the moment, the only reliable, and are indeed almost the sole, sources of information we yet possess regarding an epidemic of cholera, which has been destroying many lives in Manila and the islands of the Sulu Archipelago. More complete information will soon reach Europe by the mail steamers, but we already know enough to understand that the outbreak has been of unusual severity.

The epidemic would seem to have been imported, and to have spread by contagion in some form. Between the Philippine Islands and North Borneo there is the Sulu Sea, in which are situated the islands known as the Sulu Archipelago, and it is in these islands that cholera first appeared. There does not seem to be any accurate information as to how it was introduced into the archipelago. There is a regular trade between the islands and China and Japan, and cholera has prevailed in Japan to an unusual extent during the whole summer, but we are not aware that the disease has recently prevailed in China. It is not very improbable, therefore, that there may have been some connection between the outbreak in the Sulu Islands and the epidemic in Japan.

The disease, which seems to have begun in the more southerly islands, rapidly extended northwards. Ilo-Ilo, the port of an island lying nearly in the middle of the Philippine group, was soon attacked. Between this port and Manila there is frequent communication, and it is not to be wondered at that the capital of the islands became infected in its turn.

The severity of the epidemic is evidenced by the number of its victims; for some time there was an average of about three hundred deaths daily amongst natives, whilst there were from about four to eight amongst the Europeans. The numbers have fortunately recently decreased; but it is stated that in Manila 4,560 persons died of cholera between the 14th and 29th August, whilst, during the same time, it is supposed that about 16,000 died in the islands of the Archipelago, exclusive of those who had died in the Sulu Islands. On the 18th instant, there were 35 deaths in Manila, and 121 in the vicinity of the town.

The epidemic has appeared at an unfortunate time. The abolition of the tobacco monopoly, and the introduction of other reforms, had induced an influx of persons engaged in commerce, and an era of prosperity was commencing. In consequence of the outbreak, every one, we are told, who can, has escaped to China and Japan, and business is almost at a standstill. It will be interesting to observe whether the fugitives carry contagion with them to any hitherto unaffected district.

The epidemic has fallen, as might have been expected, chiefly on the natives. The quarters in which they live, have of late years become excessively crowded, owing to increase of population. The canals which run through that part of the town have been steadily silting up for years, and have been getting filled with refuse of all kinds, while the Spanish authorities have apparently done nothing to effectually cleanse or purify them. To this dangerous condition of things, the rapid and violent spread of the disease may undoubtedly be attributed.

Amongst the Europeans, those attacked have been chiefly the soldiers of the garrison, a class of men generally imprudent in their habits, and likely to be subjected to the same influences as those affecting the natives.

While endemic cholera is always prevalent in India, there are other Oriental countries in which it only appears at intervals. This is the case with China, Japan, and the Philippine Islands. Of late years it has, however, prevailed more than usually in Japan; and during the present summer it has been unusually severe in the latter country. The exact conditions to which this prevalence in Japan is due are somewhat difficult to understand, but there are certain customs to which considerable weight must be attached. The excretions, in that country, are sprinkled over the ground as manure, and it is beyond doubt that a considerable amount of the dejections from persons affected with cholera is disposed

de lavage. *Ibid.*, CIII., 15 juillet 1882.—Sevestre, Du lavage de l'estomac et de l'alimentation forcée au moyen de la sonde gastrique. *Progrès médical*, 1881, nos. 51 et 52.—Alimentation artificielle dans la phthisie pulmonaire. *Journal de méd. et de chir. pratiques*, janvier 1882, p. 7.

of in this way, excellent regulations for the isolation of patients, and destruction of all infectious matters notwithstanding.

This must lead to occasional contamination of wells; and the disease amongst foreigners has in some instances been directly traced to a particular well which was found to be infected. Importance has also been attached to the habit of burying the dead in very shallow graves.

Considerable alarm has been excited in the European countries bordering on the Mediterranean by the reports of cholera prevailing in the East; but, when we consider the circumstances, it would appear as if this alarm were excessive. Steamers pass through the Suez Canal between Manilla and Spain about twice a month, and bring officers for the troops backwards and forwards between the colony and the mother country. But when we take into account the length of the voyage from Manilla to the Mediterranean, it is evident that there cannot be much to fear from a vessel that has had no cases on board after leaving port. However, to make assurance sure, the Spanish Government have established lazarettos large enough for several hundred persons in the Balearic Islands.

Experience shows that unceasing intercourse between India and Europe does not bring cholera westwards, although it is never absent from our Eastern Empire. A knowledge of this fact should do much to diminish any anxiety that may be felt regarding the danger from the Philippines or Japan. A more real danger, perhaps, exists in the outbreaks that occur amongst Mahometan pilgrims, and it is to vessels carrying these devotees westwards from Mecca that strict supervision should be applied. The voyage is in this case short, and the *personnel* of the vessels is not of a nature to inspire confidence, and it would not be a matter of surprise if by this means Europe should one day again find itself threatened through Asia Minor and the Levant.

M. WECKER has observed that the seeds of liquorice (*liane*), used in Brazil for treating ophthalmia, are inert unless used in the form of an aqueous infusion.

THE professors and lecturers of the Mason Science College, Birmingham, have issued cards for a *conversazione* for Monday evening, October 2nd, to inaugurate the opening of the winter session.

THE distribution of prizes in the Medical Department of King's College will be performed on Monday, October 2nd, at 4 o'clock, by the Right Hon. W. H. Smith, M.P., who will deliver an address on that occasion.

THE forthcoming session at the London Hospital Medical College will open on Monday, October 2nd, when an introductory address to the past and present students, followed by a *conversazione*, will be given by Mr. Jonathan Hutchinson, F.R.S., at 3.30 P.M.

AN official despatch from Manilla reports that on the 15th instant the mortality from cholera was 56 in the town, and 183 in the vicinity. On the 16th, there were 46 deaths at Manilla, and 163 in the neighbourhood.

M. MAREY has recently presented to the Paris Académie des Sciences a communication from Dr. Félizet, on the treatment of diabetes mellitus by bromide of potassium. Dr. Félizet states that he has successfully treated fifteen cases of this malady by administering daily four grammes (one drachm) of the bromide.

THE small-pox epidemic in South Africa, according to a despatch from Cape Town under date of August 29th, continues unabated. Fresh cases are constantly being discovered, principally among the Malay and coloured population; and stringent measures have been taken at Kimberley, Graaf Reinet, Durban, Port Natal, and other places, to prevent the importation of the disease.

THE Municipal Council of Paris have signified their approval of the erection of mortuaries, out of consideration of the fact that working men and their families often occupy only single rooms. The Municipal Administration propose to erect these mortuaries within the city, or near the three great cemeteries of the north, east, and south. The bodies will be conveyed thither, and thence to the nearest or to an extra-mural cemetery.

A MURDER has been recently perpetrated by an inmate of the Prestwich County Asylum, Lancashire, named Luke Carter, who attacked another inmate with a brush and beat him about the head, inflicting such injuries that death resulted shortly afterwards. This, we understand, is the second murder that has taken place at the asylum within a few months, the last case being the murder of one inmate by another with a spade.

M. MAREY, after a series of experiments, has succeeded, by means of photographs, in reproducing the mechanism of the different movements executed by man and birds. He arrived at this result by taking a series of instantaneous photographs of quickly succeeding attitudes (one-tenth of a second). The whole series describes faithfully the details of the mechanism.

WE have received a copy of a circular issued to medical men by an undertaker in Crawford Street, asking for introductions to funerals, and offering commissions. The proposal is an insult to those to whom it is addressed; and we are surprised that any tradesman should feel justified in issuing such a circular, which will certainly rather injure than benefit him in the minds of those to whom it is addressed.

ACCORDING to M. le Dr. A. Dureau, the librarian of the Académie de Médecine, the present number of medical periodicals for France and her colonies is 147 (Paris 85, the departments 52). The German Empire publishes 133 journals; Great Britain, 69; Austria, 54; Italy, 51; Belgium, 28; Spain, 26; Russia, 26; Holland, 16; Switzerland, 10; Sweden and Norway, 9; Denmark, 5; Portugal, 6; the Danubian Principalities, 4; Turkey, 2; Greece, 1; total for Europe, 583. In America 183 medical journals are published; in Asia, 15; and in Oceania, 2. The total for the various continents is 785. The number of journals started since 1679 exceed 2,500.

THE Social Science Congress has opened its twenty-fifth session this week at Nottingham, under very satisfactory conditions. The preparations are of an elaborate character—unequalled, it is stated, at any former gathering. All the departments meet in University College under one roof. One unprecedented feature of the present Congress is the absence of a local subscription for the expenses of the reception. The Corporation have generously undertaken the whole of the pecuniary burden, not only in providing a handsome building, but in meeting all local charges. At the first meeting, Mr. George Hastings, M.P., one of the founders of this Association, and the President for the year, delivered an introductory address.

AT a recent meeting of the Société de Médecine Pratique, M. Brochin reported some experiments made by MM. Paul Bert and Becquard, on the use of oxygenated water in the wards of M. Péan for the dressing of wounds. Excellent results had been obtained in cases of purulent cystitis, ozæna, and ringworm. It had also been employed internally in uræmia and diabetes with good results. Its use had not been so successful in obtaining union by first intention as carbolic water. M. Jolly drew attention to the fact, that to preserve oxygenated water, it must contain an acid. This is more frequently hydrofluoric acid, otherwise it may decompose with an explosion; that used by MM. Paul Bert and Becquard contained sulphuric acid, a fact not to be lost sight of. A certain amount of oxygen is liberated from this water in the form of ozone, and it is in this way that it acts.

EPIDEMIC OF MEASLES AT COVENTRY.

THE outbreak of measles at Coventry has assumed serious proportions. Five hundred cases have been reported, of which five have ended fatally. With the object of checking the progress of the epidemic, the local sanitary committee, acting upon the advice of their medical officer of health, have decided to close all the infant-schools in the city.

ACONITE.

MR. E. M. HOLMES has drawn the attention of the Pharmaceutical Conference (*Pharm. Jour. and Trans.*, September 16th, 1882, p. 234) to the want of uniformity in the root sold as aconite. Many species, or varieties, of the root are current in commerce. Since aconite is now being largely used, internally, in the treatment of inflammatory affections of the lungs, fevers, and other acute cases, it has become extremely important that so powerful an agent should receive far more attention at the hands of the pharmacist than it has hitherto received. We are glad to see that attention has been drawn, by so excellent an authority, to this subject.

FALSE DEATH-CERTIFICATES.

AN inquest has been held at Bromley-by-Bow on the body of the wife of a labourer, who had died a week or two after giving birth to twins. A midwife, named Morrish, who attended the deceased at her confinement, admitted that she gave a certificate that the children were still-born, although one of them lived nine days. She was told by the coroner that she had rendered herself liable to a criminal prosecution, and that he would lay all the facts of the case before the Public Prosecutor. The authorities were determined to put a stop to these practices. The jury endorsed the remarks of the coroner.

TYPHOID FEVER AT BANGOR.

THE outbreak of typhoid at Bangor, we learn, shows no signs of cessation, forty cases having been reported since Sunday. Tent-hospitals and other available accommodation provided by the local authorities have been utilised. The new cases are stated, however, to be of a mild type, and the number of deaths few in proportion to the number of cases. It is thought, now that the water has been diverted from the filter-beds which are said to be impregnated with fever-germs, a perceptible diminution in the cases may occur. At Bethesda, the outbreak has been of a serious character; and all the schools in the district remain closed, the Normal College and the Grammar School having found temporary quarters at Penmaenmawr. Dr. Barry, who was sent down by the Local Government Board two months ago, has, we hear, not yet issued his report, and some dissatisfaction is said to exist in consequence of the delay.

THE TREATMENT OF TYPHOID FEVER BY SALICYLIC ACID.

AT the Académie de Médecine, M. Vulpian reported that, in the course of an attempt to treat typhoid fever by the internal administration of antiseptics, he had found that salicylic acid was the most useful in reducing the temperature of typhoid patients. He gives as much as six grammes (a drachm and a half) a day in small doses of twenty-five to thirty centigrammes every half-hour. In some, particularly young patients, delirium is produced, and in others albuminuria; this latter symptom is, however, very frequent in typhoid fever, and it, moreover, disappears when the patient is able to take seven grammes of salicylic acid a day. Under this treatment, the temperature decreases from 3° or 4° Cent. (5.4° to 7.2° Fahr.) in forty-eight hours. M. Vulpian does not, however, pretend that salicylic acid does more than reduce the temperature; it does not shorten the duration of the disease, nor lessen its mortality. Of all patients, however, which were treated in different ways, those under the salicylic acid treatment improved most rapidly. By interrupting the treatment, M. Vulpian ascertained that the salicylic acid was actually the cause of the lowering of the temperature, which action was continued during convalescence if the treatment were carried on.

UNCERTIFIED DEATHS.

DR. DIXON, the medical officer of health for Bermondsey, in his annual report to the vestry, just published, gives the number of uncertified deaths during the year as 66, or 3.8 per cent. of the total deaths. Forty were males, and twenty-six females. Thirty-eight were children under one year of age, and twelve were between one and five years. He adds: "From the use of such purely professional terms as *spina bifida*, *pyæmia*, *hydrocephalus*, and *tabes mesenterica*, it is evident that the information given to the registrars was supplied by medical students, unqualified assistants, or practitioners who were not on the *Medical Register* of persons duly qualified to practise." Dr. Dixon is fully justified in drawing attention to the large proportion of uncertified deaths occurring in his district, since they are more than twice as numerous there than in London as a whole; and he is no doubt right in the conclusion which he draws. The Society of Medical Officers of Health, in 1880, recommended that, in all uncertified cases where there does not seem *prima facie* ground for holding an inquest, the coroner should direct a qualified medical practitioner to investigate the case. This has not been done, probably because coroners have no legal power to do it; and so the unsatisfactory system continues of the coroner's officer being, in many cases, practically the judge as to whether an inquest is to be held or not.

THE BORDER COUNTIES ASYLUM.

THE lunatic asylum for the counties of Roxburgh, Berwick, and Selkirk, which is under the medical care of Dr. Grierson, contained on the 14th of May last, the day on which the official report on its condition is dated, 233 patients, of whom 108 were males and 125 females. Although opened only in 1872, with an amount of accommodation that was supposed to be equal to meet all the requirements of the district to which it belongs for many years, it is now stated to be very full, and the sick-room accommodation is pronounced quite insufficient. Serious overcrowding has only been prevented by the free and judicious discharge of unrecovered patients on probation. The death-rate has been low, and the existing state of health amongst the inmates is good. Much attention continues to be given to the medical treatment of the patients. The number of entries in the register of restraint and seclusion, which amounted to 260 in a period of six months, would appear extraordinarily large, and would point to something undesirable in the management of the asylum, but for the explanation that nearly all patients for some days after admission are kept in a single room, which, not being in the infirmary, must be locked, such isolation being in every instance recorded as seclusion. In this, as in so many other lunatic asylum reports, the accounts are set forth with unnecessary minuteness. The official auditor must, of course, examine the accounts in detail, but it can scarcely profit the general public to be informed that the sum of 1s. 6d. was expended on goffering-tongs and 2s. on corkscrews.

MEDICAL PROSECUTIONS.

AT page 532 of last week's JOURNAL, we gave an account of the prosecution of Mr. W. H. Viner, at the instance of the Medical Alliance Association, for improperly using the signature of Mr. Berdoo to a death-certificate. In another case Mr. T. G. Pratt, a medical practitioner residing in the East-End of London, was summoned at the instance of the Medical Alliance Association, for unlawfully using the title of a member of the Royal College of Surgeons, L.R.C.P., etc. It was, however, found, after the summons had been taken out, that Mr. Pratt was a duly qualified medical man, but omitted to keep his name on the *Register* as required by the statute. The defendant pleaded ignorance of the law, and the summons was withdrawn. These two cases, samples of many in which prosecutions have been undertaken by the Medical Alliance Association, exhibit at once the strength and the weakness of a course of action on which we should be glad to have an expression of opinion from the profession. Few, we think, will doubt that in regard to the first case professional opinion would entirely approve of the action taken by the Alliance; but in regard to the

second, we fail to see that the Alliance was in any way justified in putting Mr. Pratt to the annoyance and inconvenience of attending at a police-court to prove his possession of the diplomas which he alleges that he had, simply because his name did not appear in the *Medical Register*. Even technical breaches of the law ought, of course, to be avoided; but it is surely not the recognised duty of any medical society to worry a practitioner on account of them.

WONFORD HOUSE HOSPITAL FOR THE INSANE.

THE Commissioners in Lunacy, at the annual inspection of the Wonford Lunatic Hospital at Exeter, expressed their gratification at the improvements which are steadily being carried out in the establishment. We note that many of the wards are decorated with Lambeth ware, generously presented by Mr. James Doulton. Dr. Rees Philipps joins the Commissioners in urging on the Committee the desirability of admitting to the benefits of the hospital deserving cases at low rates of board. Wonford House, he says, gives, perhaps, as large a proportion of charitable help as any other lunatic hospital, but it might, with advantage, give still more. Its financial position is most favourable, and with good management will still further improve. There is a large amount of unoccupied space in the building, which might easily be adapted to afford excellent accommodation for additional inmates. With a small expenditure on fittings and furniture, and a trifling addition to the staff, forty or fifty more patients might be received. This would be a great boon to a painful class of cases of insanity: cases of mental disease afflicting persons of good education and social standing, clergymen, barristers, medical men, clerks, and governesses, who, from reduced circumstances, are unable to meet the lowest charges at which admission can be obtained into licensed houses. Dr. Rees Philipps advocates the admission of cases of this class on another ground, and that is, that a frequent reception of new cases into a lunatic hospital keeps the staff up to the mark and prevents it from getting rusty, while the friction with new minds, even when disordered, is beneficial to the chronic cases.

THE SALVATION ARMY AND INSANITY.

AT a recent meeting of the St. Saviour's Board of Guardians, Mr. Evans inquired whether the proceedings of the Salvation Army had anything to do with the alarming increase of insanity in the Union that had just been reported by the clerk, and was informed that one case of insanity, awaiting removal to an asylum, was an instance of religious mania, arising apparently from the excitement of the Salvation Army campaign, and that a young woman, who was present at the Blue Ribbon Army meeting at the Metropolitan Tabernacle on Sunday, had been taken to Camberwell Workhouse as a lunatic. No doubt, that species of psychical intoxication which vehement indulgence in religious exercises and emotions induces, will sometimes end in mental derangement in persons who would not otherwise have become insane; but, at the same time, it is to be borne in mind that many half-crazy beings, men and women budding for madness, arising out of inherited or physical causes, are powerfully attracted to every new and strange thing, and so plunge zealously into stirring services like those of the Salvation Army, and evolve, perhaps, at these services, into full-bloom lunatics. Their insanity is not unlikely to be attributed entirely to the services, which really had little or nothing to do with its production. They were foredoomed lunatics on the verge of the catastrophe of their fate, and any other kind of agitation would have sufficed to precipitate them into it, as well as the uproar of the Salvation Army. If the statements made, as to the success of the Army in drawing into its ranks habitual drunkards, who become for a time, at any rate, sober and self-regarding, and in ensuring the closure of public-houses in the towns which it has occupied, be even approximately correct, then the ratepayers will have no serious grievance against the Army on account of its influence in causing insanity. It seems likely that, for every case of insanity caused by its religious revelries, at least two cases will be prevented by the limitations which it imposes on alcoholic carousals.

THE PRESIDENCY OF THE PARKES MUSEUM.

IT gives us great pleasure to be able to announce that H.R.H. Prince Leopold, Duke of Albany, has graciously consented to become the President of the Parkes Museum. Her gracious Majesty is the patron of the institution, and among the life-members who joined at the last meeting of the Council, on September 18th, we find the names of many representative men; among others, the Duke of Northumberland, the Earl of Derby, Earl Granville, Earl Fortescue, Sir William Jenner, Sir Thomas Watson, Sir Erasmus Wilson, Mr. Erichsen, Mr. William Eassie, Dr. R. Quain, Dr. C. T. Hare, Dr. Wilson Fox, and Dr. F. Mout. The Museum was founded in 1879 to perpetuate the memory of the late Dr. E. A. Parkes. Dr. Parkes was at one time Physician to University College Hospital, succeeding Dr. C. J. B. Williams; but his chief claims to the gratitude of posterity were established after his resignation of that position, in 1859, in order to take up the appointment of Professor of Hygiene at the Army Medical School at Netley. Remembering this early connection of Dr. Parkes with University College, the Council of that College sheltered the museum during the first few years of its existence. Now, as we stated a short time ago, the museum has been incorporated under Act of Parliament, and is establishing itself in Margaret Street, Cavendish Square. It will be the great aim of the Council to keep the collection abreast of sanitary science as it advances, so that all those who desire to become practically acquainted with the best developments and improvements in sanitary apparatus, may find in the Museum examples of what they seek; in this way, it is hoped that a manifest want may be met, the Museum forming the necessary complement to other enterprises which aim at the instruction of the public generally, and of the working-classes especially, in the principles of public and personal hygiene. Upon the use of the Museum to members of our own profession, who are often called upon to advise in sanitary matters, and to students, we need not enlarge.

THE MACCLESFIELD GENERAL INFIRMARY.

WE regret to learn, from a series of letters in the *Macclesfield Courier and Herald*, that the domestic economy of the General Infirmary in that town is in a most deplorable condition. It appears, from a letter written by Mr. Robert Thorp, for several years Chairman of the House Committee, that at a meeting of that body held on September 8th, 1881, a resolution was passed in the following terms, with only one dissentient:—"The House Committee, having reviewed the domestic arrangements of the Infirmary, are of opinion that a change ought to be made in the management by the selection of a matron especially trained for the purpose, which would tend more to the harmony and good conduct of the Institution." For several years, Mr. Thorp says, the House Committee had been sensible of the "utter incompatibility of the matron's temper with the proper management of the Infirmary." The complaints on the part of both the senior and junior house-surgeons were almost of weekly occurrence. According to the statements of the present and former house-surgeons, the matron endeavoured to reduce the house-surgeons to an entirely subordinate position, insulting them in the wards, while in the execution of their duty; and even, it is said by one writer, threatening to resort to personal violence. The recommendation of the House Committee, which we have transcribed above, was not confirmed at the next meeting of the Governors, and no inquiry into the truth of the allegations against the matron's management of the Infirmary seems to have been held. It is unnecessary for us to follow this unfortunate quarrel through all its phrases; it will suffice to say that the former Chairman and the majority of the members of the House Committee have ceased to attend its meetings, while the house-surgeon complains that he can find no redress for, or even inquiry into, his grievances. We trust that the Governors will perceive the necessity, in the interests of the institution, of holding a searching inquiry into the whole case, and we cannot refrain from expressing our wonder that this course was not adopted after the resolution of the House Committee passed a year ago.

THE USE OF OPIUM.

At the quarterly general meeting of the British Medical Temperance Association, held recently in the rooms of the Medical Society of London, a paper was read by Dr. G. Shearer of Liverpool, on "Recent Apologists for the Opium Trade." Dr. Norman Kerr presided. Dr. Shearer, speaking from an experience gained during a residence of six years in China, said that he had come to the conclusion that the Chinese did not enjoy even comparative immunity from consumption and diseases of the respiratory organs, and that while the drug might be of value during the paroxysms of febrile disorders, it was not a prophylactic against fever. It was true that many used the drug with apparent impunity for many years, but others were seriously injured by the practice. Considered merely as a substitute for food, its usefulness had been overrated. In the discussion which ensued, the political aspect of the question was frequently referred to, special attention being directed to a debate in the House of Commons in 1870, when Mr. Gladstone, in answer to Sir W. Lawson, said: "I affirm that if we are to denounce the use of opium as something which is universally, essentially, and irretrievably bad, that must be done after it has been proved that the use of opium is to be broadly distinguished from the use of every other stimulant—a point which is not yet settled." Dr. Shearer argued that, although a distinction might be drawn between opium and alcohol, the common use of the former might vastly exceed in its baneful effects the common use of the latter. Dr. C. R. Drysdale moved, and Dr. J. J. Ridge seconded, the following resolution, which was ultimately carried: "That this meeting, having considered the evidence for and against the use of opium, condemns it as most injurious to health and happiness." We presume that this expression of opinion is hardly to be taken literally, and that the meeting had no desire to insist on the necessity for abstinence from the use of opium in the treatment of disease.

DEATH-CERTIFICATES.

AN inquest was recently held by Dr. Weatherly, Deputy Coroner for North Somerset, which shows the danger attending the giving of death-certificates by medical men in cases where the certifier has not himself seen the deceased for some considerable time before death. According to the evidence, a single woman, whilst on a visit to her aunt, became very ill, and eventually Mr. Perrin was sent for; but, though he went immediately, when he arrived the woman was already dead, and the body laid out. As there was no means of ascertaining the cause of death, he wrote to the practitioner who had previously attended the deceased, asking him to send a certificate of the cause of death. Receiving no reply, he eventually made a *post mortem* examination, and in his opinion death occurred from hæmorrhage from the womb. It appears that the girl had been previously under the care of Dr. Dowse, house-surgeon to the Newport Infirmary, who at one time thought there was incipient consumption; but no evidence of this was found on *post mortem* examination. The mother of the deceased called upon him after her daughter's death, and asked for a certificate, which he declined to give, as he had not seen the deceased for three weeks. No mention was then made that the body had been seen by a medical man. Two days later, the mother returned with a note from Mr. Perrin, stating that Dr. Dowse might, by giving a certificate, save the people the trouble of an inquest, as there seemed to be natural causes, and no suspicious circumstances. The certificate given, on the strength of this statement, assigned as the cause of death, "Consumption of several months' standing." There appears to be no doubt whatever that the girl had aborted; and under such highly suspicious circumstances as may, perhaps, engage the attention of the police. In the opinion of the coroner—himself a medical man—neither of the medical men engaged in the case was entirely free from blame, an opinion in which we reluctantly concur. The coroner, in charging the jury, is reported to have said, that at first he did not think Dr. Dowse was justified in signing the certificate, but he felt disposed to be a little more lenient, after finding that Mr. Perrin wrote to the witness giving an opinion

that there was no suspicion. But it would have been far better for Dr. Dowse to be more explicit, because, seeing what he attended the young woman for, it certainly seemed wrong to give such a certificate. The jury, in giving their verdict of "Death from hæmorrhage after miscarriage," expressed an opinion that medical men in general should be more careful in giving certificates.

HABITUAL DRUNKARDS.

THE second report of the Inspector of Retreats under the Habitual Drunkards Act, 1879, has been issued as a parliamentary paper. In addition to the previously existing retreat at Cannock, with the exception of one at Westgate-on-Sea, licensed to Mr. John H. Brown for the reception of five male and five female patients, no new establishment has been opened during the year, so that only two are reported upon. The original one—Hall Court, Cannock, Staffordshire, the licensee of which is Mr. G. T. Mockett—will accommodate ten male patients; six were in residence on December 31st, 1880; six were admitted during the year 1881, and twelve were discharged, leaving the establishment empty. There were no deaths during the year, and only one escape was made, the patient being shortly afterwards recaptured. At the Tower House, Westgate-on-Sea, six patients were admitted and two discharged, leaving four remaining on 31st December last. The inspector says:—"Cannock Retreat gave me considerable anxiety during the earlier months of the year, owing to the want of harmony that existed between the licensee and some of his patients, and I was therefore neither surprised nor disappointed when I found, at an unannounced visit which I paid on November 22nd, that the licensee had broken up his establishment, having previously obtained a magistrate's discharge for his remaining three patients, and left the town. However, since the end of the year now reported on, and only within the two last months, it has been opened by a new licensee. Leave of absence has been granted under section 19 of the Act in a few instances by a justice for a patient to reside out of a retreat at the request of the licensee. In one case only have I considered it necessary to advise the Secretary of State to discharge a patient before the expiration of the time for which he had signed, in consequence of business affairs that urgently required his personal attendance at home. Public-houses in the vicinity of retreats will not cease, I fear, to give serious trouble to licensees whose establishments do not possess sufficiently large grounds for the recreation of patients, whose conduct requires that they should be confined within bounds, or where there is not a trustworthy staff of assistants to maintain adequate supervision of the patients when allowed out of bounds. In some cases patients have abstained from drink, and conducted themselves well during the whole of their residence in the retreats, and their condition on discharge afforded some hope of their permanent recovery; but having no record of their subsequent conduct, I am not able to speak of the result with certainty. Others have done well up to the very day of their discharge, and have immediately given way to their prevailing vice. Others, again, have obtained drink in secret, and have broken out during their residence. For such cases as these last two classes there is, I fear, but little hope of permanent cure. But, as regards all the patients, it is almost needless to say that while they conform to the treatment prescribed, their health and condition improve. On the occasion of my visits, the patients generally appeared to me to be benefiting by the treatment, and, in some cases, had much improved. It is much to be regretted that the establishment of the proposed Dalrymple Home for the working and lower middle classes near London (to be licensed under the Act) has been so long delayed. Such an institution, charging moderate fees, standing in extensive grounds in a healthy situation, under the care of an experienced medical man, with an independent remuneration, is, in my opinion, much needed."

MEDICAL MAGISTRATE.—Dr. Henry S. Caye of Newton Abbot has been placed on the commission of the peace for the county of Devon.

SCOTLAND.

THE Swiney Lectureship on Geology, tenable for three years, and vacant by the expiry of Professor Alleyne Nicholson's term of office, has been conferred, by the trustees of the British Museum, on Ramsay Heatley Traquair, M.D., F.R.S.E., Keeper of the Natural History Collection in the Edinburgh Museum of Science and Art.

GLASGOW SUBURBAN HOSPITAL.

THE suburban villages of Crosshill, Govanhill, Cambuslang, and Rutherglen, near Glasgow, have taken steps to erect, in concert with each other, a combination hospital at Cathcart. It is intended to provide accommodation for over 30 patients, and it is believed this will be done at a cost of less than £2,000.

THE GLASGOW SANITARY PROTECTION ASSOCIATION.

WE are glad to observe that this Association, a notice of the objects of which has already appeared in the JOURNAL, has now completed the arrangements for beginning its practical work. A large number of subscribers have come forward, and the Association commences its career with every prospect of success, and will, no doubt, prove a great assistance to the authorities in improving the sanitary condition of the city.

HOSPITAL WANTS AT KIRKCALDY.

THE Board of Supervision have been endeavouring to awaken the Local Authority of Kirkcaldy to a sense of their duty, and of the requirements of a populous place such as Kirkcaldy (containing as it does over 20,000 inhabitants), in the matter of hospital accommodation, of which accommodation at present it is destitute. It is to be hoped so undesirable a condition of matters will soon cease to exist.

AMBULANCE WORK IN GREENOCK.

FOR some time, there has been a movement on foot in Greenock to provide the town with an ambulance, to give suitable provision in case of accident. The necessary funds having been forthcoming, it has been decided to purchase one of the Howard ambulance vans, and the committee have been empowered to equip it with splints and all the other necessary apparatus, and to present it, in the subscribers' names, to the Police Board for behoof of the community. No more useful gift could be presented to a town than a good carriage ambulance; and no doubt the one now furnished by the inhabitants of Greenock will prove of great service to the sick and injured of that town.

THE UNIVERSITY COLLEGE, DUNDEE.

WE understand that the Council of the College have decided that it will not be advisable to open the College before the winter session of next year. It has been found impossible to begin the teaching this year at the time when the University Session in Scotland opens, and, before November, students will have arranged to study elsewhere. Under these circumstances, an opening in January would be unfortunate for the College, whereas, if the classes commence in November of next year, along with the other Scotch universities, the institution will make a fair start.

MILK AS A VEHICLE OF FEVER.

AGAIN we have to draw attention to an outbreak of fever which recently occurred in two of the suburbs of Glasgow, and the cause of which has been traced by the officers of health to the poisoned milk-supply of a farm in the neighbouring village of Eaglesham. It appears that this farm, when visited, was found to be in a very unsanitary condition, and in the farm-house itself one of the inmates had recently been suffering illness of a febrile character. This case, along with another that happened recently at Bowling, supplies a strong illustration

of the necessity for strict supervision on the part of the local authority in each district of the sources of the milk-supply within its boundaries. Unless this is done, the milk sent to adjoining places may be the cause of disseminating disease.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending September 9th, it appears that the death-rate in the eight principal towns during the week was 20.1 per 1,000 of the estimated population. This rate is 1.3 above that for the corresponding week of last year; but 1.0 below that for the previous week of the present year. The lowest mortality was recorded in Aberdeen, viz.: 9.7 per 1,000; and the highest in Perth, viz.: 36.1 per 1,000. The mortality from the seven most familiar zymotic diseases was at the rate of 5.2 per 1,000, or 0.1 above the rate for the previous week. In Perth, the mortality from miasmatic diseases was unusually high. Acute diseases of the chest caused 61 deaths, or 19 fewer than the number registered during the previous week. The mean temperature was 54.0°, being 1.3° below that of the week immediately preceding, and 0.1° below that of the corresponding week of last year.

THE CHAIR OF SURGERY IN ABERDEEN.

THE candidates actually in the field for this chair seem to be limited to two, viz., Dr. James Cantlie of the Charing Cross Hospital, and Dr. Alexander Ogston, of Aberdeen. Both candidates have sent in their applications to Sir William Harcourt. Dr. A. Ogston was appointed junior surgeon to the Aberdeen Infirmary in 1870, acting surgeon in 1874, and full surgeon in 1880; and since 1874, he has taken part in the usual teaching of clinical surgery in connection with the hospital. Dr. Cantlie is at present senior assistant-surgeon in the Charing Cross Hospital, where for several years he has taught anatomy as the basis of surgery. In addition, Dr. Cantlie states that he has been actively engaged in teaching operative surgery in the same school. In his letter of application, Dr. Cantlie states that it is his intention to devote himself to pure surgery. Testimonials in support of the candidates of Drs. Cantlie and Ogston have been drawn up by their respective students.

ABERDEEN ROYAL INFIRMARY.

AT the statutory quarterly meeting of the managers of this institution, held last week, the question of establishing a hospital, or devoting a certain portion of the Infirmary for the treatment of diseases of the chest, was considered. Professor Stephenson remarked that the time seemed to have arrived when they ought to consider the wants of the institution in general. It was finally agreed to enlarge the remit to the Committee of Management thus: "That, in addition to the question regarding a ward for the diseases of the chest, it be remitted to the Committee of Management to consider and report upon what additional accommodation and improvements are required in the present building, and what special wards, if any, are necessary to render the services of the institution more efficient to the public." Professor Struthers, at the same time, said he would give notice of a motion suggesting the appointment of an assistant-physician.

NEW HOME FOR THE SICK.

A PLEASANTLY situated hydropathic establishment at Kilmaccolm, near Greenock, not having realised the anticipations of its proprietors and shareholders, is stated to have caught the attention of Miss Clugston (who is indefatigable in her devotion to the cause of the sick, the convalescent, and the incurable), and to have seemed suitable to her for the purposes of a convalescent hospital. Some of the inhabitants of Kilmaccolm, however, evidently have scruples against the planting in their midst of this benevolent, though perhaps somewhat dispiriting, institution; and at a public meeting, held there this week, they even went the length of proposing to rehabilitate the hydropathic enterprise. It was

resolved to ascertain more accurately the feelings of the community, by the accurate gauge of the amount of money that can be raised amongst them in the purchase of shares.

HANDSOME GIFT OF MEDICAL BURSARIES TO ABERDEEN UNIVERSITY.

THE long-felt want of medical bursaries in this university is surely and gradually being supplied. Only a few years ago, there were no medical bursaries proper; but, since Professor Struthers called attention to this matter several years ago, the public has responded generously to the suggestion that the Medical Faculty ought to be supplied with those valuable aids to the prosperity of every university. A considerable number of bursaries have been founded within the last year or two; and again we have to announce that a further capital sum of upwards of £2,000 has been given by Mrs. Elizabeth Watts or Marr, relict of the late Mr. John Marr, pianoforte-maker, Aberdeen, for the founding of four medical bursaries in connection with the University of Aberdeen. The revenue from the funds thus assigned may be reckoned at nearly £100 *per annum*, which Mrs. Marr directs shall be paid to the Medical Faculty from this time forward, for the benefit of four students who shall be prosecuting their studies in Aberdeen University with a view to entering the medical profession. Two of these bursaries are to be called "The Watts Bursaries," in token of the donor's affectionate regard for the memory of her father; and the other two "The Marr Bursaries," in loving remembrance of her deceased husband. Each bursary will probably be of the value of £20 to £25 yearly; and they will be open to competition with this provision, that, in the case of the "Watts" bursaries, candidates or students of the name of Watt, Watts, or Wattie, natives or sons of natives of the parish of Tarland, shall, *ceteris paribus*, be preferred; and, in the case of the "Marr" bursaries, there is a like provision in favour of candidates of the name of Marr, natives or sons of natives of Aberdeen. While there is no lack of bursaries in the study of divinity, it has been long felt that medical study was but poorly provided for; and this generous gift of Mrs. Marr, during her life-time, does not a little to meet the want. It is to be hoped that the good example thus set will in time be followed by other like beneficent donors.

IRELAND.

THE Abbeylax Board of Guardians, in the belief that their medical officers of health are paid too largely for the duties they perform, have passed a resolution, reducing their salaries; but so far have been unable to obtain the sanction of the Local Government Board for the reduction they contemplate.

POMEROY DISPENSARY DISTRICT.

AT a special meeting of the Dispensary Committee, held recently, Dr. Thomas Henry was unanimously appointed medical officer, in the room of his father, who had resigned. Dr. Henry, senior, has held the post for the past forty-seven years; and it is expected that he will receive the highest amount of superannuation the Act permits.

LONDONDERRY COUNTY AND CITY INFIRMARY.

DURING the past year, the receipts show a balance of about £31 over expenditure—a result which is satisfactory when the unsettled condition of the country is taken into consideration. There were seventy-one operations performed, including two amputations for compound fractures of the leg, ten of the breast, and four of the foot and toes, besides twenty-one minor operations. Of these seventy-one, but one died, the fatal case of amputation of the leg being in a sailor, who, when drunk, was run over by a railway engine, and had a compound fracture of one thigh, and a compound fracture of the other leg, necessitating its removal. Besides these, there were twenty-seven dislocations and sprains, nineteen fractures of the arm, three of the clavicle,

eighteen of the legs, three of the skull, and eleven of the thigh; also forty-three cases of eye-diseases treated, twenty-seven of rheumatism, sixteen cases of skin-disease, etc., from which it is apparent that the infirmary is doing good work; and that the medical students attending the medical and surgical practice of the hospital have an opportunity of obtaining a very practical knowledge of their profession. There is a steadily increasing demand for the services of the nurses trained in the hospital, and their services have added a very fair sum to the funds of a very deserving and thoroughly organised institution.

MERCER'S HOSPITAL.

DR. CHARLES F. KNIGHT has been elected Physician to this hospital, in succession to Dr. George F. Duffey, recently appointed Physician to the City of Dublin Hospital. Dr. Knight is a graduate (M.D., 1877) of the (late) Queen's University, and a Demonstrator of Anatomy at the Ledwich School of Medicine. With one exception, all the members of the visiting staff at Mercer's Hospital are now connected with the Ledwich School.

THE EGYPTIAN EXPEDITION.

MEDICAL NOTES FROM ISMAILIA.

[FROM A SPECIAL CORRESPONDENT.]

SEPTEMBER 1st.—The regiments on their way out left any men who were not likely to be fit for field service at once at Malta. These cases were principally venereal. Several cases were left at Alexandria when the force left for this place. Since its arrival here, the force has been very healthy. There have been numerous cases of great abdominal pain of a spasmodic nature, sometimes accompanied by diarrhoea and vomiting, almost all recovering in a day or two when treated with preparations of opium. In a small number of these cases the men remained weak for some days. Diarrhoea is sometimes rather obstinate; but I have scarcely seen a case of dysentery. There are a few cases in which men say they have passed blood and matter, but I have not seen a dysenteric stool, and the dysenteric smell is not observable. A considerable number of men when marching in the day time have fallen out from the effect of the sun; but most cases were simple exhaustion and faintness. There have, so far, been very few cases of genuine sunstroke. The cases of disorders of the stomach and digestion seem to be caused by the extremely large quantities of fluid, of different kinds, swallowed by men on first arriving in a warm climate, to assuage thirst, which it seems impossible to satisfy. The Commissariat bread also is not of good quality. The water, though muddy, is fairly good. The medical cases in the base hospital at Ismailia are: diarrhoea, rarely severe; men remaining weak after slight sunstroke; a few cases suspiciously like dysentery; also a few cases of continued fever, probably sun-fever. There are no cases of ophthalmia that I have seen or heard of; no conjunctivitis. The young soldiers do not appear to suffer more than the others.

I have seen six cases of bullet-wound. The men were wounded on August 29th, and arrived at the base hospital on September 1st. The patients arrived at the hospital most carefully dressed. They stated they were looked after immediately, and had morphia injected, which made them very comfortable.

Case I was one of bullet-wound above the left trochanter. An unsuccessful attempt was made, soon after the action, to extract the bullet, though the patient stated that it was felt, and that the surgeon told him it was impacted in the bone. When seen at the base hospital, the man was comfortable. He had no fever; the wound was slightly inflamed. It was considered better to wait for suppuration before interfering further. The wound was dressed with carbolised cotton. Case II. The bullet entered two inches above the external malleolus, and passed out one inch above the internal malleolus, of the left leg. Both wounds were very small. The ankle was movable without crepitation, not suppurating. It was dressed, and carbolic lotion and a splint applied. The bullet in this case passed first to the leg of No. 3. Case III was one of wound of the left leg, the entrance being below and behind the head of the fibula, the exit behind and below the head of the tibia, the wound sloping downwards and inwards. The knee-joint was swollen, and there was considerable inflammation; the knee was bent; the bones were not movable, being probably injured to some extent. It was dressed with carbolic lotion and irrigation. Case IV. The bullet entered the chest in front, near the extremity of

the left second rib, and had its exit behind, in front of the angle of the eighth rib. The man was fairly comfortable; he had no cough nor blood-spitting; his breathing was short; there were no physical signs of inflammation of lungs or pleura; no air nor mucus from the wound. The patient was placed on his back. The wounds were lightly dressed with carbolic lotion. Sticking-plaster was applied to the ribs, and opium given. Case v. The bullet entered the chest at the angle of the eighth rib on the left side, and was extracted very soon after action at the middle of the tenth right rib. The patient's breathing was short; he had no cough, no blood-spitting, and very little fever. The wounds were lightly dressed with carbolic lotion. Sticking-plaster was applied to keep the ribs immovable, and opium was given. Case vi was one of bullet-wound on the soft parts above and behind the trochanter. The bullet was extracted soon after the receipt of the injury. The dressing was found clean; there was no pain, smell, or inflammation. The dressing was not removed.

All sick and wounded who are not likely to recover quickly and are in a fit state for removal, are sent back from the field hospitals by boats on the Fresh-water Canal; a few are sent by railway. The base hospital is relieved by sending mild cases to Gozo and Cyprus, and more severe cases to England.

I append a table, which shows that the young soldiers are not predominant in hospital. The table gives ages and service of forty-four men in two of the wards of the base-hospital, exclusive of wounded.

Ages (years).	Service (years).	Ages (years).	Service (years).	Ages (years).	Service (years).	Ages (years).	Service (years).
30	5	38	9	24	3 $\frac{1}{2}$	32	12
23	4 $\frac{1}{2}$	20		29	5	21	3 $\frac{1}{2}$
26	4	32	12	29	5 $\frac{1}{2}$	27	6 $\frac{1}{2}$
32	15	22	4	25	6	21 $\frac{1}{2}$	2 $\frac{1}{2}$
22	4	21	1	24	6	25	3 $\frac{1}{2}$
30	14	21	1	32	14 $\frac{1}{2}$	35	9 $\frac{1}{2}$
24	5	27	8	29	10 $\frac{1}{2}$	22	3 $\frac{1}{2}$
22	4 $\frac{1}{2}$	26		25	3	26	5 $\frac{1}{2}$
36	10	23	5	29	14	20	1 $\frac{1}{2}$
22	1 $\frac{1}{2}$	25	7	25	6 $\frac{1}{2}$	24	5
24	5	25	5	23	3		

September 3rd.—The European soldiers here are bivouacked under tents. Each man has a blanket. The sun is strong, but there is no great heat; and the nights are fairly cool, often cold towards morning. The native troops are under canvas in the open. Each man gets a pound and a half of meat, a pound and a half of bread, potatoes and onions, half an ounce of lime-juice, with half an ounce of tea daily. The meat consists of fresh beef and frozen mutton. The bread is not very good; otherwise the rations are good and liberal. The men up country are in double bell-tents. A ration of rum is issued twice a week to men at the base. The hospital at the base is in the Khedive's palace, a large lofty building, extremely well ventilated by doors and windows. It is cool and comfortable, day and night. The equipment is not good, as most of the appliances are at Alexandria, as it was at first thought that would be the base. The patients are on mattresses on the floor, in their own clothing. The hospital is not yet dieted, but the men's rations are made into soup. Beef-tea, milk, eggs, grapes, etc., are issued when necessary. The medical officers are hard worked, but are in sufficient numbers to look after the sick. The attendance is not very good. The orderlies in the wards are very hard worked—in fact, overworked. There is a fair supply of medicine. The men which have come under my notice are a few men with night-blindness. They were recommended to use one eye for day, and the other for night work. A good many men are weakly from hard work, fatigue, and bad digestion. Men are sent from the front with weakness and history of slight sunstroke. The men at Ismailia are looking well and strong.

A number of men are being sent to this place from the front, principally sufferers from fevers, probably

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September 6th.—About four hundred men have been invalided to Malta and England, most of them not seriously ill, but not likely to be fit for duty for some time. The great majority are sent away to clear the Base-Hospital. There are nearly four hundred cases in this hospital. Tents are pitched for dysenteric and mild cases, cases of fever and sunstroke being treated in the palace. The typhoid fever and suspected typhoid cases are also treated in tents. There are only eight cases of eye affections, and only two of those are at all severe. It is noticeable that in most of the fever patients, though the temperature runs to 104°, the pulse does not exceed 80. There are three or four cases of typhoid fever; all but one have been sent from the front. Very few deaths have occurred. The deaths in the Base-Hospital are only three; two from wounds, one of the head, the other of the back; one from sunstroke.

MEDICAL NEWS FROM ISMAILIA. [FROM ANOTHER CORRESPONDENT.]

September 9th, 1882.

SINCE I last wrote you, I find the Netley Sisters have arrived, and are now hard at work at the Base Hospital. For some days past, the work has been done by a few local Sisters of Mercy, but their ignorance of the English language rendered their duties not only irksome to themselves, but of little profit to their patients, although their hearts were all in the work. A few Friars, also, have been seen stalking silently about the Palace; the same drawback, however, applies to them. This is now at an end, and the familiar red cape and grey dress can now be seen in every ward and alongside every bed in this splendid hospital. I was talking to Sister Armour this afternoon, and her surprise at the grand ward and cool atmosphere of the palace was amusing. The wounded, as a rule, are doing well; the most serious cases still remain, but the convalescents are shipped off to the hospital-ship *Carthage*, for transport to Cyprus and Gozo, where base field-hospitals are already established. The traditional idea of thirst is even now-a-days always associated with the wounded, and doubtless exists to an equal extent as in days of old. In the times of the Peninsular war, a doctor would have given words for a bit of ice for his most serious cases. Now, an ice-machine, capable of turning out five hundredweight of ice a day, is actually at work within a few hundred yards of the hospital, and, I need scarcely say, is appreciated to its utmost extent.

I regret to have to report the illness of Brigade-Surgeon Veale, who is in charge here. He is suffering from an attack of dysentery, and was yesterday removed on board the hospital-ship *Carthage*. It is to be hoped that his illness will prove but temporary, for his services can be badly spared just now.

Already the days are cooler and the nights chilly towards morning, and the improvement is having a marked effect on the wounded as well as on the cases of dysentery. Diarrhoea is very prevalent among the troops, owing to several causes. The drinking of bad water in large quantities, the chills from the falls in temperature, and the imperfectly cooked bread, all tend to produce this disease. As the campaign advances, however, it is certain to diminish, and already symptoms of decrease in the numbers attacked are apparent. It is a diarrhoea, as a rule, that easily succumbs to the ordinary astringents; if neglected, however, it would probably lead to more serious results. It appears to be the only disease that one has to treat in this country. I see in the *Times* and other papers the initials of Surgeon-Major Shaw, killed on the 26th, are given as "J. A." This is wrong, the initial should have been "G." Surgeon-Major G. Shaw was attached to No. 1 Bearer Company, and the other was, I believe, in charge of a regiment. Both were at the front, and the friends of the surviving may be glad to know that he is so; and those of the poor fellow who is gone, that he died nobly, and left behind him an incident which will live in the annals of the Army Hospital Corps as long as it exists.

The *Orantes*, *Carthage*, and *British Prince*, which have left Ismailia for Portsmouth, and hand over their sick and wounded for treatment at the Royal Victoria Hospital, Netley, which has been specially prepared to receive them.

The following list of medical officers now serving with the Indian contingent have been ordered home to England, having completed their tour of foreign service, instead of returning to India:—Brigade-Surgeon J. G. Faught, Surgeons-Major C. H. Harvey, A. N. Fox, J. F. Beattie, Surgeons J. T. Carey, A. W. Carleton, M. R. Ryan, T. Boyd, W. J. R. Rainsforth, E. O. Reynolds. The vacancies caused thereby it is contemplated to fill during the temporary stay of the troops in Egypt from the officers of the Army Medical Department now doing duty with other troops there.

MEDICAL SCHOOLS AND HOSPITALS IN IRELAND.

SCHOOL OF PHYSIC IN IRELAND.—This school is formed by an amalgamation of the medical schools of Trinity College and of the King and Queen's College of Physicians; the King's Professors of Institutes of Medicine, Practice of Medicine, Materia Medica, and Midwifery, and the Professor of Medical Jurisprudence, being appointed by the latter. The departments of Medicine and Surgery are presided over by the Regius Professor of Physic, Dr. J. T. Banks; and the Regius Professor of Surgery, Dr. W. Colles. The teaching staff is as follows. University Professor of Anatomy and Surgery, Dr. Macalister, junior, Tu., Th., S., 1; senior, M., W., F., 3. University Professor of Chemistry, Dr. J. E. Reynolds, Tu., Th., 2; S., 11. University Professor of Botany, Dr. E. P. Wright. Professor of Surgery in Trinity College, Dr. E. H. Bennett, M., W., F., 1. University Anatomist, Dr. T. E. Little, Tu., Th., S., 12. Professor of Comparative Anatomy, Dr. A. Macalister, Tu., Th., S., 3. University Lecturer in Operative Surgery, Dr. R. G. Butcher. King's Professor of Institutes of Medicine, Dr. J. M. Purser, Tu., Th., S., 3. King's Professor of Practice of Medicine, Dr. J. M. Finny, Tu., Th., S., 1. King's Professor of Materia Medica and Pharmacy, Dr. W. G. Smith, W., Th., F., S., 12. King's Professor of Midwifery, Dr. J. R. Kirkpatrick, W. W. Th., F., 4. Professor of Medical Jurisprudence, Dr. R. Travers, M., W., Th., F., 3. Erasmus Smith's Professor of Natural Philosophy, Mr. G. F. Fitzgerald, M., W., F., 2.

The Winter Session commences on October 1st by the opening of the Dissecting Room. Lectures commence a month later. The Winter Courses consist of fifty-six Lectures each. Attendance on at least forty-two Lectures in each Course is required. The Summer Session commences April 1st. The Courses in the summer (except those of Materia Medica and Medical Jurisprudence) consist of Laboratory Instruction and Practical Demonstrations.

The Dissecting Room is open from sunrise to sunset, under the superintendence of Professor Macalister; by whom, and by the University Anatomist and four Demonstrators, instruction is given daily. The new Laboratory of Practical Histology and Physiology is under the direction of Professor Purser. Students can enter for the study of Pathological Histology at any time; and a complete course of instruction in Animal Histology is given in the summer. The Chemical Laboratories are open daily, under the supervision of Professor Reynolds. Professor Bennett gives a complete course of Demonstrations in Operative Surgery during April and May. Professor Fitzpatrick gives Demonstrations in Obstetric Medicine and Surgery on Thursdays and Fridays. Practical Botany is taught in the Botanic Garden and the Herbarium by Professor Wright.

The Museums of Anatomy and Zoology, of Pathology, of Materia Medica, and of Midwifery; and of Botany, are open to the students of the School of Physic.

Scholarships, Prizes, etc.—Two Medical Scholarships, value of each £20 *per annum*, tenable for two years, are awarded annually. A Medical Travelling Prize and a Surgical Travelling Prize, value of each £100, are also awarded in alternate years. The Professor of Chemistry gives Prizes amounting to £10; and the Professor of Botany Prizes amounting to £5.

Fees.—For Anatomy, Medicine, Practice of Medicine, Materia Medica, Midwifery, Medical Jurisprudence, Institutes of Medicine, Practical Chemistry, Obstetric Medicine and Surgery (at Sir P. Dun's Hospital), Ophthalmic Surgery (at St. Mark's Hospital), each £3 3s.; Demonstrations and Dissections, each year, £8 8s.; Surgery and Chemistry, each £2 2s.; Botany, £1 11s. 6d. Students dissecting during the fourth year pay £2 2s.

SCHOOL OF SURGERY: ROYAL COLLEGE OF SURGEONS IN IRELAND.—The session will commence on Monday, October 25th. The Dissecting Room will open on October 1st. Lectures will be given as follows. *Winter Session:* Anatomy and Physiology, Dr. Cunningham, M. W. F. S., 3; Descriptive Anatomy, Mr. Thornley Stoker, daily, except Saturday, 12; Surgery, Mr. J. Stannus Hughes and Mr. Stokes, Tu. Th. S., 1; Practice of Medicine, Dr. James Little, M. W. F., 1; Chemistry, Dr. Cameron, T. Th. S., 2; Midwifery and Gynaecology, Dr. Roe, T. Th. S., 3. Lectures on Comparative Anatomy will be delivered by Dr. Mapother. Practical Instruction in Operative Surgery will be given as part of the surgical course. The Professor of Chemistry receives operating pupils into the chemical laboratory. The dissecting-rooms open from October 1st, and are available from 8 A.M. to 10 P.M. during the session. The dissections are under the direction of the professors of anatomy, assisted by five demonstrators.—*Summer Session*, commencing April 1st, 1883: Materia Medica, Mr. Macnamara; Medical Jurisprudence, Dr. Davy; Botany, Dr. Minchin;

Practical Chemistry, Dr. Cameron; Midwifery and Gynaecology, Dr. Roe; Hygiene, Dr. Cameron; Ophthalmic and Aural Surgery, Dr. A. H. Jacob.

The fee for the course of lectures is £3 3s., excepting Descriptive Anatomy, which is £8 8s.; Practical Chemistry, which is £5 5s.; and Ophthalmic and Aural Surgery and Hygiene, which are free. Composition fee for all lectures and dissections for the Diploma in Surgery, £56 17s. 6d.

ADELAIDE MEDICAL AND SURGICAL HOSPITALS.—Consulting Physician, Dr. J. F. Duncan; Consulting Obstetric Surgeon, Dr. Lombe Atthill. Physicians, Dr. Henry H. Head, Dr. James Little. Assistant Physician, Dr. Wallace Beatty. Surgeons, Dr. John K. Barton, Mr. B. Wills Richardson, Dr. Kendal Franks. Obstetric Surgeon, Dr. R. D. Purefoy. Ophthalmic Surgeon, Mr. H. R. Swanzy. Dental Surgeon, Dr. R. T. Stark.

Fee for nine months' hospital attendance, £12 12s.; six months, £8 8s.; summer three months, £5 5s.

There are wards for infants and children, and there is a large detached fever hospital. Special hours are devoted to Clinical Instruction in the Diseases peculiar to Women, and in the Diseases of the Eye, Ear, Throat, and Skin; and students are individually instructed in the use of the Stethoscope, Ophthalmoscope, and Microscope, in its application to Clinical Medicine. Three resident pupils are selected half-yearly. At the termination of the session, prizes in Clinical Medicine and Surgery, in Obstetric Medicine, and in Ophthalmic Surgery, will be awarded. In addition, the Hudson Scholarship (£30 and a gold medal), and a Prize of £10 with a silver medal, will be awarded for proficiency in the subjects for which the clinical prizes are given.

Further particulars may be obtained from Mr. B. Wills Richardson, 22, Ely Place; or any of the other members of the medical staff.

CARMICHAEL COLLEGE OF MEDICINE.—The Dissecting Rooms will be open on October 2nd. Lectures will commence on November 1st. The following are the Courses.—*Winter Session:* Medicine, Dr. J. W. Moore, M., W., and F., 12; Surgery, Dr. J. K. Barton and Dr. A. H. Corley, T., Th., and S., 12; Systematic Anatomy, Dr. F. Heuston, three times weekly; Anatomy, Dr. J. L. Stoney, senior, Tu., Th., 1; junior, M., W., F., 1; Physiology, Dr. J. A. Scott, senior, M., W., F., 2; junior, Tu., Th., 2; Midwifery, Dr. W. B. Jennings and Dr. A. V. Macan, M., W., and F., 3; Chemistry, Dr. C. R. C. Tichborne, T., Th., and S., 3; Ophthalmic Surgery, Dr. C. E. Fitzgerald, W., 1.—*Summer Session*, 1883: Botany and Zoology, Dr. W. R. McNab, M., W., F., 11; Pathology, Dr. S. Woodhouse, T., Th., S., 11; Materia Medica, Dr. G. F. Duffey, M., W., F., 12; Practical Chemistry, Dr. Tichborne, T., Th., S., 1, 30; Forensic Medicine, Mr. Auchinleck, M., W., and F., 1; Practical Histology, Dr. J. A. Scott, M., T., Th., F., 4; Practical Surgery, Dr. Barton and Dr. Corley. There are nine Anatomical Demonstrators, who superintend the dissections. A bone-room, adjoining the dissecting-room, is open for the first time this session. The Physiological Department comprises a Histology Room, a room for Physiological Chemistry, and one for Physiological apparatus. The Museum comprises a valuable collection of Anatomical and Pathological preparations. There is also an extensive Museum of Materia Medica.—Fees, for each course of lectures, £3 3s.; for each course of Practical Instruction, £5 5s. A second practical course can be attended for £2 2s., if no certificate be required. The fee for Ophthalmic Surgery is £2 2s., if a certificate be required. Perpetual Pupils, paying £58 17s. 6d. in two instalments, can attend all the lectures required by the Royal College of Surgeons of Ireland, or by the University of Dublin. Systemic Anatomy is free, if no certificate be required. The Carmichael and Mayne Scholarships, each £15 in value, and class and special Prizes to the value of £67, are awarded annually. For information, apply to Dr. Woodhouse, at the College; or to, Lower Fitzwilliam Street.

CATHOLIC UNIVERSITY SCHOOL OF MEDICINE.—*Winter Session:* The dissecting-rooms will be opened on October 1st. The lectures will commence on Monday, October 30th. Anatomy and Physiology, Dr. Coppinger, M., W., F., 1; Dr. Nixon, M., Tu., W., Th., and F., 12; Anatomical Demonstrations, Dr. Nixon and Dr. Coppinger, daily except S.; Chemistry, Dr. J. Campbell, M., W., and F., 2; Surgery, Mr. P. J. Hayes, M., W., and F., 3; Medicine and Pathology, Dr. R. D. Lyons, T., Th., 3, and S., 12; Midwifery, Dr. J. A. Byrne, T., Th., 2, and S., 1; Demonstrations in Dissecting-rooms, Mr. J. M. Redmond, Mr. M. J. Kehoe, Mr. McCullagh, Mr. McArdle, Mr. Chance, Mr. J. F. O'Carroll, and Mr. Strahan. *Summer Session*, 1883: Practical Chemistry, Dr. John Campbell, M., T., W., and F.,

12 to 3 P.M.; *Materia Medica and Therapeutics*, Dr. F. J. B. Quinlan, M., T., W., and Th., 1; *Medical Jurisprudence*, Dr. S. M. MacSwiney, M., T., W., and Th., 12; *Botany*, Dr. G. Sigerson; *Zoology*, Dr. Sigerson; *Histology*, Dr. Nixon and Dr. Coppinger; *Natural Philosophy*, the Rev. Gerald Molloy, D.D., T., Th., S., 11.

The school is within a few minutes' walk of the principal hospitals of the city. It includes a complete chemical laboratory, and well-supplied students' library.

Prices.—At the termination of the winter and of the summer sessions respectively, public examinations will be held in each class; and a prize of £3 3s. will be offered for competition among students who shall have diligently attended at least three-fourths of the lectures in the class for the current session.

Further particulars may be learned from the Honorary Secretary, Professor Campbell, 161, Rathgar Road; or at the School of Medicine, Cecilia Street.

COOMRE LYING-IN HOSPITAL.—Consulting-Physician, Dr. Gordon; Master, Dr. G. H. Kidd; Deputy-Master, Dr. Poole. The hospital contains sixty-five beds, in two divisions, one devoted to Midwifery, and the other to Diseases of Women. Students can enter for six months at any period of the year. Clinical Instruction is given daily, and Lectures are delivered on the more important cases. Two paid Pupil Midwifery Assistants and one Clinical Clerk are selected half-yearly from among the pupils. Certificates of attendance are accepted by the Examining Boards; and the diploma of the hospital is recognised by the Irish Local Government Board as a qualification in Midwifery. **Fees:** extern pupils, £8 8s.; intern pupils, £18 18s. Particulars may be learned on application to the Registrar at the Hospital.

JERVIS STREET HOSPITAL, DUBLIN.—Physicians, Dr. S. M. MacSwiney, Dr. W. Martin. Surgeons, Dr. J. S. Hughes, Mr. A. Meldon, Mr. J. E. Kelly, Dr. W. Stoker, Dr. J. J. Cranny, Dr. R. MacDonnell, Mr. J. V. Lentaigne.

This hospital, which is at present being rebuilt, is central in situation. An extensive dispensary is attached.

Clinical instruction is given by the Physician and Surgeon on duty on alternate mornings, between 9 and 11. Two clinical lectures are delivered each week, and pathological specimens are exhibited. Surgical instruments and appliances of all kinds are made the subject of special instruction.

Surgical operations are performed on Saturdays at 10 A.M., except in cases of emergency.

Resident Pupils and Dressers are selected from among the most attentive of the advanced students, without payment of any additional fee. Two Interns are appointed each half-year, and are provided with apartments, etc., free of expense. Special certificates are given to the Resident Pupils and Dressers who have performed their respective duties to the satisfaction of the Physicians and Surgeons.

LEDWICH SCHOOL OF ANATOMY AND SURGERY.—The lectures will be delivered by the following teachers. *Anatomy, Surgical and Descriptive:* Mr. T. P. Mason, Mr. A. R. Glanville, Mr. M. A. Ward, Mr. C. H. Robinson, Mr. F. A. Nixon, and Mr. E. Ledwich. *Anatomy, Physiology, and Pathology:* Dr. T. P. Mason, Mr. M. A. Ward, and Mr. T. Mason, five days weekly, at 12 o'clock. *Surgery:* Mr. I. E. Kelly. *Medicine:* Dr. Arthur W. Foot. *Midwifery:* Dr. S. R. Mason. *Chemistry and Natural Philosophy:* Dr. E. Lapper. *Practical Chemistry:* Dr. Lapper. *Ophthalmic and Aural Surgery:* Mr. A. H. Benson. *Institutes of Medicine:* Mr. E. Ledwich. *Materia Medica:* Dr. R. D. Parefoy. *Forensic Medicine and Hygiene:* Dr. Robert Travers. *Anatomical Demonstrations* daily. A course of operations to be performed by the students, under the superintendence of the lecturer (subjects, etc., included), £5 5s.

The school will open on October 1st. During the summer session, there will be lectures on Midwifery, Chemistry, *Materia Medica*, Botany, and Forensic Medicine.

There are endowments in favour of students, subject to the conditions prescribed by the founder, in the following departments: two in *Anatomy and Physiology*, two in *Minute Anatomy*, two in *Practical Anatomy*, and one in *Surgery*. The usual prizes in the other departments will be awarded at the termination of the session.

MATER MISERICORDIÆ HOSPITAL.—Physicians, Dr. C. J. Nixon, Dr. J. M. Redmond, Dr. M. A. Boyd. Assistant-Physician, Dr. John Murphy. Consulting Surgeon, Mr. F. R. Cruise. Surgeons, Mr.

P. J. Hayes, Mr. C. Coppinger, Mr. M. J. Kilgariff. Assistant-Surgeon, Mr. H. Kennedy. Obstetric Physician, Dr. T. M. Madden. Ophthalmic Surgeon, Mr. C. Coppinger.

This hospital contains 230 beds, including 50 beds for fever and other contagious diseases. There is a ward for ophthalmic diseases.

Two clinical prizes (the "Leonard Prizes") of £15 each, one medical and one surgical, will be given at the end of the winter session.

Fee for nine months, £12 12s.; six winter months, £8 8s.; three summer months, £5 5s.

Further particulars may be learned by application to Dr. Hayes, 18, Merriam Square, North, or to any of the other medical officers.

MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY.—Physicians, Dr. A. W. Foot, Dr. J. W. Moore. Surgeons, Dr. G. H. Porter, Mr. J. H. Wharton, Mr. P. C. Smyly, Mr. R. Macnamara, Dr. L. H. Ormsby, Mr. W. J. Hepburn.

The hospital contains 120 beds for the reception of medical and surgical cases. An extensive dispensary, lending library, and physical laboratory, are attached. An additional ward has been erected for the reception of children.

The winter session will commence on October 1st, and the clinical lectures on the first Monday in November. Four clinical lectures will be delivered weekly, and instructions in Medicine and Surgery will be given on alternate days. The Physicians and Surgeons on duty visit the hospital at 9 A.M.

Prizes will be given at the termination of the winter course to the best answers in their respective classes. The office of Resident Pupil is open to pupils as well as apprentices.

Further information may be obtained on application to W. J. Hepburn, Esq., 53, York Street, Dublin; or at the Hospital.

MERCER'S HOSPITAL.—Physicians, Dr. T. P. Mason, Dr. C. F. Knight. Surgeons, Mr. E. S. O'Grady, Mr. F. A. Nixon, and Mr. M. A. Ward.

Special instruction is given in Cutaneous, Gynaecological, Infantile, and Ophthalmic Diseases. Lectures upon Clinical Medicine and Clinical Surgery are delivered weekly.

Resident Pupils and Clinical Clerks are appointed half-yearly, and Dressers are selected each quarter. Prizes in Clinical Medicine and Clinical Surgery are awarded at the termination of the winter session.

Fees for the winter and summer session (nine months) £12 12s.; for the six winter months, £8 8s.; for the three summer months, £5 5s.

Further information can be obtained from any of the medical officers of the Hospital, or from Mr. James Shaw, Secretary to the medical staff.

QUEEN'S COLLEGE, BELFAST.—The following courses are delivered. *Anatomy and Physiology*, Dr. P. Redfern, M., T., W., Th., F., 2; *Practical Anatomy*, Dr. Anderson, daily, except Sat., 12; *Medicine*, Dr. James Cumming, M., T., W., Th., 4; *Surgery*, Dr. A. Gordon, M., T., W., Th., 1; *Materia Medica*, Dr. J. Seaton Reid, M., T., W., Th., 4; *Midwifery*, Dr. R. F. Dill, M., T., W., Th., 3; *Chemistry*, Dr. Lettis, M., T., W., Th., F., 3; *Medical Jurisprudence*, Dr. J. F. Hodges, M., T., W., Th., 2 (summer); *Natural Philosophy*, Dr. J. D. Everett, 11; *Zoology*, Dr. R. O. Cunningham, M., T., W., F., 1; *Botany*, Dr. Cunningham, M., T., W., Th., 11.

Fees.—*Medical Jurisprudence*, Chemistry, *Materia Medica*, *Physiology*, *Surgery*, *Midwifery*, and *Zoology and Botany*, each 2 guineas; *Anatomy* of same course, half free; *Practical Chemistry* and *Practical Anatomy*, each course, £3; *Anatomy and Physiology*, each course, £3; each subsequent course, £2. Eight Junior Scholarships, of the value of £25 each, are awarded annually, after examination, to students of the Faculty of Medicine; two being awarded for each of the four years of study.

Clinical instruction is given at the Belfast Royal Hospital. The Ulster Hospital for Diseases of Women and Children, and the Lying-in Hospital in Belfast, are open to students.

QUEEN'S COLLEGE, DUBLIN.—The following courses of lectures are given. *Anatomy and Physiology*, Dr. I. L. Charles, daily, 1; *Practical Anatomy*, daily, 12; *Medicine*, Dr. D. C. O'Connor, M., W., S., 12; *Surgery*, Dr. S. O'Sullivan, M., W., F., 4; *Materia Medica*, Dr. M. O'Keefe, T., Th., 3; S., 12; *Midwifery*, Dr. H. Macnamara, T., M., S., 4; *Medical Jurisprudence and Public Health*, Dr. O'Connell, and Mr. M. S. O'Shaughnessy, M., P., 4; *Natural Philosophy*, Mr. J. England; *Chemistry and Practical Chemistry*, Dr. M. Simpson, M.,

W., F.; Zoology and Botany, M., W., F.; Logic, Mr. G. S. Read; Modern Languages, Mr. O. O'Ryan.

The building in which the Medical School is located is provided with a large, well-lighted, and well-ventilated dissecting-room, with Physiological and Toxicological Laboratories, Materia Medica, Anatomical and Pathological Museums, as well as a room for surgical and obstetrical instruments and appliances. There are well-appointed Physical and Chemical Laboratories, and a large Natural History Museum in the adjoining building; and part of the College ground is laid out as a Botanic Garden. The College Library is open daily to students of the school.

Fees.—For Practical Anatomy and Practical Chemistry, £3 each course; for Anatomy and Physiology, £3 for first course, and £2 for subsequent course. Other Medical Classes, £2 for first course, and £1 for second course. Eight scholarships (value £25 each), as well as several exhibitions and class prizes, are awarded every year to the most deserving students.

Clinical instruction is given at the North and South Infirmarys and Lying-in Hospitals; students can also attend the Mercy Hospital, the Maternity, the Hospital for Diseases of Women and Children, and the Ophthalmic and Aural Hospital. Fee for Clinical Lectures and attendance at either the North or South Infirmary, £8 8s. for twelve months; £5 5s. for six months; at the Lying-in Hospital and the Maternity for six months, each £3 3s. The attendance at the Ophthalmic and Aural Hospital is free to students of the College.

A course of Clinical Lectures will be delivered on Tuesdays, Thursdays, and Saturdays during the first three months of each winter session in the Cork District Lunatic Asylum, by Dr. Eames, Resident Medical Superintendent. The fee is £3 3s.

QUEEN'S COLLEGE, GALWAY.—**Professors:** Anatomy and Physiology, Dr. J. P. Pye, M., T., W., Th., F., 3; Anatomy, Dr. Pye, same days, 1; Medicine, Dr. J. I. Lynham, T., Th., S., 12; Surgery, Dr. J. V. Browne, M., W., F., 11; Materia Medica, Dr. N. W. Colahan, T., Th., S., 2; Medical Jurisprudence, Dr. R. J. Kinkead, M., W., F., 12; Midwifery and Gynaecology, Dr. R. J. Kinkead, M., W., F., 2; Chemistry, Dr. T. H. Rowney, M., W., F., 12; Practical Chemistry, Dr. T. H. Rowney, M., W., F., 2; Botany and Zoology, Dr. A. G. Melville, T., Th., S., 11; Experimental Physics, Mr. Larmor, Tu., Th., 12; Modern Languages, Dr. C. Geisler. The College Library is open daily to students; also the Museums of Human and Comparative Anatomy, of Physiological Instruments, of Pathology, of Materia Medica, of Natural History, of Chemistry, and of Natural Philosophy; and the Montgomery Obstetric Collection.

Prizes.—Attached are eight scholarships of the value of £25 each; four exhibitions of the value of £12 each; two exhibitions of the value of £16 each; and seasonal prizes in each of the subjects of the curriculum are awarded annually. All scholarships and exhibitions of the second, third, and fourth years may be competed for by students who have attained the requisite standing in any Medical School recognised by the Senate of the Queen's University, and have passed the Matriculation Examination in the College.

Clinical Lectures are delivered on Tuesdays and Fridays, and practical teaching at the bedside on other days of the week, at the Galway County Infirmary and the Galway Town Hospital.

Fees.—Matriculation, first year, 10s.; each subsequent year, 5s.; Anatomy and Physiology, first course, £3; each subsequent course, £2; Practical Anatomy and Practical Chemistry, each course, £3; other courses, £2 each; second courses of Materia Medica, Surgery, Medicine, and Midwifery, each £1. Clinical Instruction, six months, £4 4s.; Resident Clerkship, six months, £15 15s.

RICHMOND, WHITWORTH, AND HARDWICKE HOSPITALS.—Physicians: Dr. J. T. Banks, Dr. B. G. McDowell, Dr. S. Gordon, Dr. R. D. Lyons; Assistant-Physician and Pathologist: Dr. Reuben J. Harvey; Consulting Obstetric Surgeon: Dr. G. H. Kidd; Surgeons: Dr. William Stokes, Dr. William Thomson, Dr. W. Thornley Stoker, Dr. Anthony H. Corley; Ophthalmic Surgeon: Dr. A. H. Jacob.

These hospitals contain 312 beds; 110 for surgical cases, 82 for medical cases, and 120 for fever and other epidemic diseases.

There will be a distinct Course of Lectures and Clinical Instruction in Fevers. Operations are performed on Monday and Wednesday mornings, except in cases of emergency. A Course of Practical Instruction in Ophthalmic Surgery will be given; fee, £3 3s. Practical Pharmacy is taught under the superintendence of the apothecary of the hospitals. A Resident Surgeon is appointed every alternate year, receives a salary, and holds office for two years. Eight Resident Clinical Clerks are appointed each half-year, and provided with fur-

nished apartments, fuel, etc. These appointments are open not only to advanced students, but also to those who are qualified in Medicine or Surgery. The dressers are selected from among the best qualified of the pupils, without the payment of any additional fee.

The Richmond Lunatic Asylum, containing over 1,000 patients, adjoins these hospitals, affording every facility for the study of mental diseases. The hospitals are visited at nine o'clock by the physicians and surgeons on alternate days. Two Clinical Lectures are delivered in each week, in addition to the usual bedside instruction.

Fees.—For the winter and summer session, £12 12s.; for the six winter months, £8 8s.; for the three summer months, £5 5s. Resident Clinical Clerks £21 for the winter session; £15 15s. for the summer term, including certificate of attendance.

ROTUNDA HOSPITALS.—Master, Dr. Lombe Atthill; Assistant-Physicians, Dr. A. Horne, and Dr. R. Henry; Pathologist, Dr. G. F. Duffey.

This institution consists of two distinct hospitals—namely, the Lying-in Hospital, for labour cases, and the Auxiliary Hospital, for patients suffering from uterine and ovarian disease. There are also a large extern maternity in connection with the hospital, and a Dispensary for Diseases of Women. An Obstetrical Museum, containing upwards of five hundred preparations, is attached to the hospital.

Clinical Instruction in Midwifery and the Diseases of Women is given daily; and Lectures are delivered regularly during the session.

The Diploma from this hospital is granted to pupils after a six months' attendance, and on their passing an examination. It is recognised by the Local Government Board in Ireland, as a qualification in Midwifery.

Accommodation is provided for a limited number of Intern Pupils.

Fees.—Intern Pupils: six months, £21; three months, £12 12s.; two months, £9 9s.; one month, £6 6s. Extern Pupils: six months, £10 10s.; three months, £6 6s.

SIR PATRICK DUN'S HOSPITAL.—Consulting Physician, Dr. J. T. Banks; Consulting-Surgeon, Dr. W. Colles; Physicians, Dr. J. M. Purser, Dr. J. M. Finny, Dr. W. G. Smith; Midwifery Physician, Dr. J. R. Kirkpatrick; Surgeons, Dr. E. H. Bennett, Dr. T. E. Little, Dr. R. G. Butcher, Dr. C. B. Ball.

The physician on duty visits the wards, with his class, at 9 A.M. on Mondays, Wednesdays, and Fridays; and the surgeon on duty, with his class, at 9 A.M. on Tuesdays, Thursdays, and Saturdays. The Hospital Dispensary is open from 9 to 4 daily.

The payment of £12 12s. to the hospital entitles the student to hospital attendance and clinical teaching during the winter and summer sessions. For the winter session alone, the fee is £8 8s.; for the summer alone, £5 5s. For twelve months' instruction in Practical Midwifery, students of Trinity College, £3 3s.; other students £6 6s. Silver Clinical medals in Medicine and in Surgery are awarded to the students who shall pass the best examinations on the Medical and Surgical cases treated in the hospital during the year.

DR. STEEVENS'S HOSPITAL.—Consulting Physicians: Dr. H. Freke and Dr. T. W. Grimshaw. Consulting Surgeons: Mr. S. G. Wilmot and Mr. G. H. Porter. Physicians: Dr. H. C. Tweedy; Dr. R. A. Hayes. Surgeons: Mr. W. Colles; Dr. E. Hamilton; Dr. R. McDonnell. Surgeon-Dentist: Mr. J. A. Baker. Obstetric Physician: Dr. A. Duke.

The Medical School formerly attached to the Hospital having been discontinued, the Medical Officers have determined to devote all their energies to the advancement of Clinical Instruction. The Hospital contains 250 beds. There are a Ward entirely devoted to Syphilitic Disease, and a detached building for Fever cases; also an extensive Out-patient Department, with separate Clinics for Diseases of the Skin, Throat, Teeth, and those peculiar to Women.

Arrangements have been made that each Pupil shall be assigned one or more beds, for the care of which he will be responsible; and he will be expected to keep accurate notes of the cases. At the end of each Hospital year, Gold Medals will be awarded for general attention and proficiency in Clinical work and Case-taking.

Clinical Lectures are given by the Physicians and Surgeons. Surgical Operations are performed on Saturdays, at 10 A.M., except in cases of emergency.

The Museum is open daily to the Pupils of the Hospital. There is also a Lending Library.

Fees.—Hospital Practice: Nine Months, £12 12s.; Six Months, £8 8s.; Three Months, £5 5s. Dressership: Winter, Six Months, £21; Summer ditto, £15 15s.

THE ANNUAL MUSEUM OF THE BRITISH MEDICAL ASSOCIATION.

THE excellence of the museum, or, as it was fittingly called, "Exhibition of objects of interest to the profession", at the annual meeting in Worcester, deserves more than a mere passing notice. It certainly was one of the largest and best arranged exhibitions we ever remember in connection with the Association.

The Public Hall, in which it was held, is a finely proportioned and handsome room, just rebuilt after destruction by fire. This hall, containing 4,000 square feet of floor-space, was completely filled, not only on the floor, but in the great gallery and orchestra, while a minor hall at the back was devoted to an assortment of sanitary appliances, water-filters, etc.

Worcester has no medical school very near to it; therefore it could scarcely be expected to vie with some of the more favoured centres of teaching, at which many of the former meetings have been held, in the showing of a large collection of pathological specimens. They were on this occasion only small in number, but unique in character. The Museum Committee, knowing how little to expect in this department, set to work, therefore, to make it more of an exhibition of objects of general interest, worthy, at the same time, of the jubilee of a great Association; and in this, we think all must admit that they succeeded to an extent which must have surpassed even their most sanguine expectations.

The collection of Surgical Instruments and Appliances (Class 2) was as complete as could have been desired. Arnold and Sons, Coxeter and Sons, Cubley and Preston (Sheffield), Ferris, Boorne, Townsend, and Boucher (Bristol), Krohne and Sesemann, Macfarlane and Co. (Edinburgh), David Marr, Mayer and Meltzer, J. F. Pratt, Salt and Son (Birmingham), Symes and Co. (Liverpool), F. Walters and Co., Weiss and Son, Wood and Co. (Liverpool), etc., all showed the newest designs and latest improvements which had been produced by their respective firms, and, consequently, considerably engrossed the attention of members. In this department, also, were included exhibits by individual members and others, viz.: Dr. Darwin (Automatic Tongue Depressor), Messrs. B. Edgington and Co. (Patent Trestle Cot and Ambulance Litter), Mr. Reginald Harrison (Urethral Irrigators, etc.), Mr. J. G. Ingram (Patent Seamless Enema), Mr. Priestley Smith (a New Registering Perimeter), Mr. J. B. Reynolds (Model of a Patent Invalid's Bed), Dr. de Styrup (Urinary Cabinet), Zander Medico-Gymnastic Company (three Active and Passive Machines), etc.

Class 3 consisted of a large and admirable collection of the best forms of Microscopes, Optical and Philosophical Instruments. In this department, Messrs. R. and J. Beck, F. Darton and Co., Ferris and Co., Field and Son, Lancaster and Son, David Marr, Parkes and Son, Pickard and Curry, M. Pillscher, and others, made such a show of instruments as secured for them a large amount of attention. The Pathological and Physiological Sections were also indebted to these firms for a full supply of microscopes for demonstrations, etc.

Class 4 comprised New Drugs, Chemicals, Pharmaceutical Preparations, and Dietetics, in which there were no fewer than twenty-two exhibitors, on whose stands could be found specimens of everything new and choice, but which, owing to their number and variety, we are prevented from particularising. All the leading firms, both English and American, were well represented.

Class 5 included Sanitary Appliances and Apparatus, Domestic Water Filters, etc. There were plans of complete systems of ventilation and drainage, applied to hospital, mansion, or cottage, by Messrs. Boyle and Son, Thomasson and Key (Worcester), Dr. Charles West (Nice), the Worcester Sanitary and Ventilating Company, and others; while Messrs. Maguire and Son (Dublin), Dr. Neale, and the Gloucester Sanitary Supply Association showed Disinfecting Chambers, Flushing Tanks, Air and Water Heaters, Purifiers, etc. Messrs. Doulton had an extensive exhibit of their Patent Closets, Flushing Pans, Lavatories, Ventilating Boxes, and Filters; in the Filter Department were also some good specimens from the Silicated Carbon Company, Dr. Bond's Aerating Filter, Johnson's Enamelled Iron Filter with Carbon Plates, and many others too numerous to mention.

Class 6, consisting of New Medical Books, Periodicals, Medical Stationery, Portraits, etc., made an interesting and charming class, covering the whole of the pathology. Messrs. J. and A. Churchill showed every book and new or improved edition of the most important medical writings, as well as a collection of their more interesting works, published by Messrs. Deighton and Co. (Worcester), as agents for Messrs. Smith, Elder, and Co., Baillière and Co., Sampson Low, Marston, and Co., and others, had a most interesting stall. Messrs. Bennett and Son (Worcester) exhibited portraits of the late Sir

Charles Hastings, of many prominent members of the Association, and of the President and Reception Committee.

We cannot close this cursory account of such an admirable exhibition without a word of reference to the catalogue, which is indeed both complete in arrangement and classification, and accurate in detail. The amount of labour entailed in this and in the general arrangement of the exhibits, and the management of the whole museum, reflects the greatest credit upon the Honorary Secretary and Curator, Mr. J. Randle Buck, whose energy, courtesy, and genial manner won for him the heartiest expressions of good feeling from the members generally, and also from the exhibitors. These must have been gratifying to him, as an evidence of the appreciation of his labours.

We will now give, in alphabetical order of names, a brief notice of articles shown by some of the exhibitors.

Messrs. Allen and Hanburys exhibited, among their well known specialities, specimens of their Tasteless Castor-oil, their Perfected Cod-liver Oil, and their well known malted preparations. The "A. and H. Malt Extract", and their "Malted Farinaceous Food" for infants and invalids have acquired high and distinct reputation as articles of diet. They possess highly nutritive and restorative powers in a concentrated form, and are invaluable for delicate children, invalids, and persons of weak digestion. Among their pharmaceutical preparations of interest shown were their Nitrite of Amyl Capsules, Resorcine, etc.; also their improved patented Juiubes, which are of pleasing appearance and agreeable taste. At a separate stall were also shown by this firm specimens of the Soluble Pills and Granules of Messrs. W. H. Schieffelin and Co., for which Messrs. Allen and Hanburys have undertaken the sole agency in this country.

Among the exhibitors of surgical instruments, Messrs. Arnold and Sons were conspicuous for their display of pocket companions and improved surgical appliances, comprising Dr. Hensley's Exploring Aspirator, Dr. Murphy's Obstetric Case, Dr. Ward Cousins' Stethoscopes, Dr. Cousins's Trocars for Antiseptic Tapping, and their new-shaped Pocket-Case. This *multum in parvo* pocket-case is so shaped that it adapts itself to the contour of the body, and can be carried in the breast-pocket without bulging. This elegant three-fold case, though measuring only $5\frac{1}{2} \times 4\frac{1}{2} \times 1$ inches, contains:—Exploring trocar with silver cannula, Syme's and Paget's abscess-knife, scalpel and finger-knife, sharp and probe-pointed bistoury, electroplated spatula, bow dressing or polypus-forceps, torsion-forceps, probe-pointed dressing scissors, spring dressing forceps, silver male and female catheter united, silver caustic case with palladium spring-holder, bleeding lancet, gum-lancet, silver director, two silver probes, and half-a-dozen needles. In addition to the above, it is also provided with an ivory tablet for pencil notes.

Messrs. Baillière, Tindall, and Cox had on view Mr. Barraud's Commemorative Portrait-Picture of the International Medical Congress in 1881, of which we have already spoken in terms of commendation.

Messrs. R. and J. Beck of London exhibited a complete collection of their Object-Glasses and Microscopes, from the simplest students' form to their most complicated binocular. With these instruments the various bacilli and micrococci were shown, and they were kindly lent to demonstrate in the sections both Dr. Hoggan's paper on Nerves, and the various preparations of Bacillus Tuberculosis as demonstrated by Drs. Gibbs, Mackenzie, and others. As prepared by Dr. Gibbs, the bacilli were easily shown under a simple quarter-inch, but with the one-sixth of Beck's cheapest series, the bacilli were very distinctly shown under the microscope.

Messrs. Bennett and Son (Worcester) showed what is considered to be an admirable Portrait of the late Sir Charles Hastings, founder of the Association.

Mr. Anthony A. Bowlby, of St. Bartholomew's Hospital, exhibited the following Specimens of Casts, made of a new material:—1. Cast of the Forearm of a man covered, especially on the dorsal surface, with warty growths, which rendered the arm almost useless, but, as would be expected, he worked; various other parts of the body were similarly affected. 2 and 3. Casts of a Hand and Knee showing small "Rheumatic Nodules," in the subcutaneous tissue over the phalangeal articulations and the patella; from a girl aged 24, who had suffered from rheumatism. 4 and 5. Casts of a Hand and Knee showing "Rheumatic Nodules" over the Knee and Hand, respectively, from a girl aged 14, who had suffered from rheumatism. 6. Cast of a Hand showing the atrophy and deformity resulting from rheumatism. 7. Cast of a Forearm affected with Rheumatism. 8. Cast of a Hand affected with Rheumatism. 9. Cast of a Hand affected with Rheumatism. 10. Cast of a Hand affected with Rheumatism.

Messrs. P. Boyle and Son exhibited a patent Self-acting Air-Pump Ventilators and system of ventilation, which received the highest award at the recent International Medical and Sanitary Exhibition. These ventilators are known to be efficient.

sound scientific principles, efficiently extracting the foul air, and being entirely free from down draught, and, accordingly, are well adapted for the purpose for which they are designed.

Messrs. Brand and Company exhibited and distributed samples of their Dietetic Specialities for Invalids. Many of these are of known excellence. Their essences of beef, mutton, veal, and chicken—consisting solely the natural juices of the meat, containing both the salts and the nitrogenous compounds in a fluid state—are particularly suitable for delicate stomachs, and persons of weak digestion. "Brand's Own Sauce" is well known as an excellent and agreeable relish. This firm has also recently introduced an essence of malt, prepared under Dence and Mason's patent process. It is alleged that this preparation—consisting solely of the essence or soluble portion of pure English malt of the finest quality, without admixture or flavour, prepared in a highly concentrated form—combines the elements of self-contained nutriment with those properties of the diastase which act as an aid to the digestive organs in the assimilation of other food.

Messrs. Burgoyne, Burbidges, Cyriax, and Farries, in addition to their known pharmaceutical preparations, exhibited the new pepsine preparation, Malto-pepsyn, composed of saccharated pepsine, saccharated pancreatine, acid lacto-phosphate of lime, and exsiccated extract of malt, which is said to have much greater digestive power, and to be much cheaper than pepsine.

Messrs. Burroughs, Wellcome, and Co. exhibited their useful preparations of Beef and Iron Wine, and Beef and Iron Wine with Quinine, and the "Burroughs's Elixoids" of bark, bromide of potassium, and pepsine; also Hazeline, which has been highly commended by many medical men who have used it; and their Ammonia Inhaler.

Messrs. Chapman and Co. showed samples of Dr. Jagielski's Koumiss, prepared in different modifications of consistence; also Russian Koumiss, Koumiss Extract, and Sparkling Bland.

The exhibit of Messrs. Corby, Stacey, and Co. was replete with interest of a therapeutic and pharmaceutical character, and was noticeable the uniform excellence of their preparations. Their Concentrated Liquors for the ready production of Syrups are very elegant, and of great practical advantage. The specimens of Medicated Wools, including ergotised, iodoform, iodised, etc., are well worthy of the notice of the profession; as also the Oleate of Copper, successfully used in cases of ringworm. The fact that their Dialysed Preparations of Opium are always of uniform strength, as proved by analysis, should not be lost sight of. Among the novelties, an efficient but inexpensive Inhalation-Respirator claimed special attention. This, we understand, has been made by Messrs. Corby and Co., in accordance with the directions given in Dr. Burney Yeo's lecture on the Antiseptic Treatment of Pulmonary Consumption. It is admirable in its simplicity, and its small cost places it within the resources of all. We would further notice the Adonis Vernalis, a new Russian remedy in heart-complaints, successfully employed recently by Dr. Sée in Paris; also the Psoralea Liniment, introduced by this firm, and successfully prescribed in cases of alopecia. Their Mentholine Sticks, for simply rubbing the part affected by neuralgia, are well adapted for the application of this remedy. The Meat-Juice prepared by Mann S. Valentine, at Richmond, U.S.A., by hydraulic pressure, is a valuable preparation; it contains the full amount of albumen, and is taken mixed with cold or tepid water.

The display of Messrs. James Coxeter and Son included many objects of an interesting and novel character. Amongst various Eye Instruments, we noticed a very compact and workable refraction Ophthalmoscope by Dr. Gowers, and modifications of the same by Mr. Nettleship and Mr. McHardy, the latter having a tilting mirror for the direct method. There was also a considerable variety of Ear and Throat Instruments, including Coxeter's new Aural Polypus-forceps, Baber's Acid-applier, Dr. Arnold's and Dr. Morell Mackenzie's new Snare, Mr. Lund's Nasal Polypus-forceps, Dr. Semon's modification of Löwenberg's pharyngeal forceps, Politzer's improved apparatus for Medicated Vapours, as employed at the Central London Throat and Ear Hospital, and Mr. Lennox Browne's Oxyhydrogen Lamp. As shown in operation at the museum, this seemed a very simple affair. A bottle of compressed oxygen formed the stand, and on this was fixed the lamp, on a movable socket, so that it could be tilted in any direction, or raised or lowered at will. The light is colourless, and of almost 1000 candle power. We are informed that at the hospital the cost of oxygen does not exceed threepence per hour. Among Urethral Instruments were Dr. Bigelow's Lithotrites and evacuating apparatus, and Mr. Berkeley Hill's modification of these; Mr. Lund's fine Stricture Instruments, including some excellent celluloid filiform bougies, and Grunfeld's endoscope, as demonstrated by him with the oxyhydrogen lamp at University College Hospital a month or two ago. Various

Ovariectomy and Obstetric Instruments were also shown; also a very complete case of nickel-plated minor operation instruments; and Coxeter's new truss, which by a corrugation in the spring gives great strength, combined with extreme thinness of metal; consequently, the trusses are very light. Messrs. Coxeter also showed a very complete assortment of their Medical Batteries, the only ones, we see, that obtained the highest awards in the recent exhibitions in Paris and in London; also an excellent Bichromate Caustery Battery, and extremely convenient cauteries for using with it. The firm also exhibited a novelty in the shape of a Caustery Battery without acids, always ready at a moment's notice. Mr. McHardy's neat Electro-magnet, for extracting fragments of iron from the eye; a Dental Mallet; and Edison's Electric Pen, demonstrating the various uses to which the batteries can be put; Coxeter's modification of Dr. Hughes Bennett's Diagnosis Handle; Dr. Althaus's element board; and a new dynamometer by Dr. Russell Reynolds for delicate observations in paralysis, were amongst the accessories to the battery which were exhibited.

[To be continued.]

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL:

NOTICE OF QUARTERLY MEETINGS FOR 1882: ELECTION OF MEMBERS.

A MEETING of the Committee of Council will be held on Wednesday, October 18th. Gentlemen desirous of becoming members of the Association must send in their forms of application for election to the General Secretary not later than 21 days before the meeting—viz., September 27th, in accordance with the regulation for the election of members passed at the meeting of the Committee of Council of October 12th, 1881.

August 31st, 1882.

FRANCIS FOWKE, *General Secretary*.

COMMITTEE OF COUNCIL.

NOTICE OF MEETING.

A MEETING of the Committee of Council will be held in the Council Room, Exeter Hall, Strand, London, on Wednesday, the 18th day of October next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary*.

161A, Strand, London, September 12th, 1882.

COLLECTIVE INVESTIGATION OF DISEASE.

THE following subjects are now under investigation by the Committee: Acute Rheumatism; Pneumonia; Chorea.

Cards to be filled up with particulars of cases, together with memorandum papers explaining the nature and objects of the investigations, have been prepared and distributed through the Secretaries of the Branches or of local committees.

Members who have not received them will be supplied with them on application to the Secretary of their local committee, or to myself.

Cards and memorandum papers for the investigation of Diphtheria are nearly ready, and will shortly be in the hands of the local Secretaries, who will supply them, on application, to any members having cases of this disease under their care, and willing to assist in its investigation.

F. A. MAHOMED, *Secretary to the Committee*.

12, St. Thomas Street, London, S.E.

BRANCH MEETINGS TO BE HELD.

SOUTH MIDLAND BRANCH.—The autumnal meeting will be held at Kettering on Thursday, September 28th. Gentlemen desirous of reading papers, or of showing cases or specimens, are requested to communicate at their earliest convenience with the Honorary Secretary.—G. F. KIRBY SMITH, *Honorary Secretary*, Northampton.—August 29th, 1882.

SOUTH-EASTERN BRANCH: EAST AND WEST KENT DISTRICTS.—A conjoint meeting of the above Districts will be held at the Town Hall, Folkestone, under the presidency of R. L. Bowles, M.D., F.R.C.P., on Thursday, September 28th, at 3 p.m. The President kindly invites members to luncheon. Dinner will take place at the West Cliff Hotel, at 5 p.m. Agenda.—Collective Investigation Committee: Nomination of District Subcommittees. Dr. Bowles will open a discussion on the Ventilation and Management of Sewers. Mr. Thurston: Case of Atresia Vaginae. Dr. Tyson: Malignant Disease *versus* Syphilis.—A. H. B. HALLOWES, Maidstone, T. WHITEHEAD REID, Canterbury, *Honorary Secretaries*.—September 6th, 1882.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of the above District will take place on Wednesday, September 27th, at the Railway Hotel, East Grinstead, at 4 p.m.; Mr. Wallis of Hartfield in the chair. Dinner at 6

It believes that the adoption of such powers as those above indicated would secure the hearty co-operation of the medical profession and of the great majority of the public; for while it would ensure the strict sanitary supervision of the more dangerous classes, it would leave untouched the confidential relationships between the private medical man and his patients, and would secure the respectable and provident artisan and shopkeeper, as well as the classes socially above them, from the annoyance of an inquisitorial surveillance and domiciliary visitation.

It therefore begs to suggest that the sanitary authority should draft a Bill comprising the above recommendations, and to pray that such draft Bill might be forwarded to the Medical Institution of this city, for full discussion by its members as to those competent to advise on its provisions, and directly concerned in them; and that, in case of disagreement upon any clauses, a conference should take place between a committee of the Health Committee and the Medical Institution to discuss such clauses.

The Council met on the 6th. The motion originally proposed to the Health Committee by its chairman, was as follows: "That the Council be recommended to empower the Health Committee to take the necessary steps for procuring a provisional order, to be confirmed in the next session of Parliament, for amending the local Sanitary Acts by providing for the notification of infectious diseases, in accordance with the clauses recommended for adoption in the more important sanitary districts by the Select Committee of the House of Commons appointed during the last session to consider the subject of local legislation, and contained in the appendix to their report."

Between the time when that motion was proposed, and the meeting of the Council, the strong and practically unanimous opposition of the profession to indiscriminate compulsory notification by medical men had begun to manifest itself, and probably on this account it was that all the latter half of the resolution, which would have committed the Council to a definite form of notification, was omitted, it being intimated by the Chairman of the Health Committee that in its altered form, it simply indicated their wish to make provision for the notification of infectious diseases, but how that notification was to be given—whether by the householder, or the medical man, or by both—they did not suggest to the Council, for the reason that they wished to hear from the medical profession of Liverpool, the suggestions that they had promised to lay before the Committee for their consideration. On that understanding, the resolution was passed.

At the meeting of the Health Committee on the 14th instant, it was resolved that a deputation should visit certain of the towns where compulsory notification had been in operation, and examine into its results, and that subsequently a conference should be held between the Health Committee and a deputation of the profession, to agree upon what should be done, as it was felt and expressed by more than one of those who spoke on the subject, that it would be impossible to carry any scheme to a successful issue if the medical profession were unitedly opposed to it. And that they are unitedly opposed to indiscriminate compulsory notification by members of their own body, is made abundantly clear by the fact that 258, out of a total of about 300 or 310 in actual practice, signed a petition a short time since, against Mr. Hastings' Bill, and that at least a dozen of the few who did not sign have explained that the omission to do so was either owing to their absence from home, or other causes beyond their control.

CORRESPONDENCE.

NOTIFICATION OF INFECTIOUS DISEASES.

SIR,—On reading the report of the discussion on compulsory notification of zymotic diseases, given in your last number, I was struck by the absence of statistics showing the usefulness of such notification. It requires very little knowledge of human nature to perceive that, in a large proportion of cases, parents will be strongly opposed to the removal of their children to an isolating hospital. There is, to begin with, the danger and distress in removal. It is a known fact, that after a patient in a non-febrile state has been removed to hospital, there is not unfrequently elevation of temperature, which may at least be taken as an indication of considerable disturbance to the system. The ambulances employed to remove patients are not all perfectly constructed spring vehicles, though, of course, at considerable expense that might be remedied. Moreover, medical men, even officers of health, are not infallible. Chicken-pox, measles, scarlet fever even, and various skin-diseases are sent in as small-pox. Various erythematous are confounded with scarlet-fever. The mistakes with reference to typhoid are numerous, and often excusable. I cannot say that in such instances I have

ever seen the diseases which patients were supposed to have, subsequently come on in hospital, though I should think this not unlikely in those cases which have to be sent back.

Again, it is out of the question to allow free ingress and egress to the friends of patients in an isolating hospital. They will become infected occasionally, whatever precautions you take, and your isolation is thus at least partially discomfited. On the other hand, human nature has its tenderness, which must be gently dealt with. There are few feelings stronger than the desire to be near, at least, and, if possible, do something for the dear sick. This is not gush, but a fact that has to be reasoned with. As has been justly pointed out, the result of compulsory removal in many cases will be deception on the part of the friends, whether it is through themselves or the medical man that notification is required; and the result of concealment and inefficient precautions will be the spread of disease.

It is evident that what would be gained by the isolation of one family, would be lost by concealment in another. No doubt, concealment explains the enormous relative mortality of the reported cases in Bolton. It is idle to suggest the variation of type in disease, in face of such a mortality affecting alike scarlet-fever and typhoid. There must be some exceedingly malignant influence in Bolton so to simultaneously vary the type in both diseases, whatever that influence may be.

Let us grant, for a moment, that by promptly securing all the cases of infectious disease at once, and taking them to an isolating hospital, you could ultimately drive those diseases from this country, is it possible to carry the necessary law into force? Supposing a case of scarlet fever to occur in the spacious house of a wealthy man, it is easy for him to have it isolated in some part of the building, with special attendants and a minimum of communication with the rest of the inmates, so little in fact as to put it out of all reasonable probability that the disease should be conveyed to the others. The patient is at home, and every luxury at once supplied, while they have the satisfaction of providing for his wants and the comfort of knowing how matters stand. Is the medical officer of health compulsorily to remove this patient? Or is there to be one law for the rich and one for the poor? It is perhaps desirable in the interests of society, that there should be one law for the rich and another for the poor in this case. It is certain, however, that any law in a matter of this kind, which is enforced on one class and neglected in another, will excite a great amount of dislike. For the most part, poor people, who cannot isolate their sick, will agree to their removal, if satisfied that they will be properly treated, and if their own danger is judiciously pressed.

I have nothing to say against small-pox and fever hospitals. They are generally well-officed, well-managed, and the patients skilfully and kindly nursed. I do not believe that they are dangerous to the neighbourhood in which they lie, except to a small extent by the communication between those inside and those outside. It is true that close to small-pox hospitals small-pox, as a rule, is more prevalent than at some distance away. It does not, however, decrease gradually as you go off. There is a great prejudice against small-pox, and it is only a certain class of people who will live near a small-pox hospital. A dirty focus gathers. There is such a focus at the back of Deptford Hospital; there is another in Peckham, a quarter of a mile away; and one in Greenwich, near the docks, a long way off, and till lately far removed from small-pox hospitals. In all three, small-pox is exceptionally virulent. Moreover, at Homerton, the grounds of the fever and small-pox hospitals are separated from the City of London Union by a wall only, yet for a long time no case of either occurred in the Union. At Deptford, fever and small-pox were treated in the same building for six months, there being almost no communication except through the air. There were only one or two cases of small-pox in the fever wards, and these in the wards most remote from small-pox. These hospitals are, I believe, a great blessing to the poor, especially in an epidemic, and no doubt control its course to some extent, but I do not believe that alone they will stamp out zymotic diseases.

A word about measles. Is it worth while isolating measles? It is a general belief—founded, no doubt, on the sequence of cases—that the infection is very active at the commencement of the disease. The disease is widely spread, and requires immense accommodation. It is not unlikely that, in this disease, serious damage to the lungs will be caused during removal. Is it intended to isolate whooping-cough? Is epidemic catarrh to be isolated?

On the whole, my belief is that the removal of infectious diseases should be entirely voluntary, though their notification may be enforced if necessary. It has to be remembered, however, that enforced notification means enforced removal. Thus, a child is notified to have a zymotic disease. The officer of health calls, advises removal, and, on refusal, hints that he has only to report the case where the father works, and his employment will cease. Such a case is all the harder as, with

that matters will again change for the better. The time has come when

matter is, that Government has, within the last year, caused every individual medical man to be pitted against his neighbour; and takes the cheapest, not the most suitable or acceptable, man. To give an example in my own instance. I was requested this year to act on former terms, as surgeon to the regiment with which I am connected. I agreed to do so. After I had accepted the terms, the Principal Medical Officer of the district wrote, asking me to accept the "new contract rates". I did not refuse, but demurred. Another practitioner in the town either applied "from information received", or was applied to by the Principal Medical Officer; he at once jumped at the thing, although he knew I had performed the duty for years at a higher rate. I was then informed that, "if I did not accept the rates, another gentleman would be named for the duty." The commanding officer objected to the rates as inadequate, but without avail. I was advised to accept the terms, and appeal to the Secretary of State, which I did, but, I regret to say, without good result. In another instance, where the medical men practising in the district happened to be gentlemen, all refused to undersell the holder of the office; but, in consequence of the successful stratagem in my case, other threats were employed, to the effect that "an army medical officer would be sent to do the duty"; and the surgeon had to give way.

It seems intolerable that the Director-General should lend his countenance to such proceedings. He cannot know anything of the differences between militia service and regular service. The duties involve loss of private practice, as the regimental work must be attended to in the first instance; and it is no glory or honour to belong to a regiment, as the medical officer is regarded by all and sundry as on a different footing from the other officers. The men regard him as a civilian, and his authority is therefore, in many cases, ignored.

I venture to think that, if the Association would take up the question, and suggest the reappointment to commission of medical officers; or, if Government are adverse to this, the creation of adequately paid officiating appointments, with honorary rank, the service would be greatly benefited, the commanding officers better satisfied, and the surgeons returned to their proper position as officers and gentlemen, and not retained as now—badly paid, overworked, to-be-kicked-out-at-pleasure drudges.—Yours, etc.,

MILITIA.

SIR,—Will you kindly inform me, in your answers to correspondents, if a staff-surgeon (honorary) of the volunteers, after fifteen years' service, is entitled, on resignation, to claim the honour of retiring with his rank, and to wear the uniform of his former corps on any public occasion. Also, on his resignation under these circumstances being accepted, is he still entitled to use the cockade in his groom's hat?—I am, etc.,

VOLUNTEER SURGEON.

. The War Office "Regulations for the Volunteer Forces" do not contain any provision of the kind named in the query of our correspondent; and we presume, therefore, that no such provision exists. In the regular forces, when officers relinquish their regimental commissions, the rule is that they do not retain any rank in the service except in cases exempted from the regulation by the Sovereign's especial authority. Only those retired officers who are permitted to retain their rank in the army, or whose names are allowed to remain in the *Army List*, are entitled to wear uniform, and their uniform is that of unattached officers. (See Queen's Regulations and Orders for the Army, Sections 2 and 10.)

OBITUARY.

CHARLES MOREHEAD, M.D., C.I.E.,

RETIRED SURGEON-MAJOR, BOMBAY ARMY.

DR. CHARLES MOREHEAD, C.I.E., who died recently, was the son of the late Rev. Robert Morehead, D.D., rector of Easington, Yorkshire. He was born in 1807, when his father was incumbent of the Episcopal Church at Leith, and entered the Bombay Medical Service in 1829. From 1835 to 1838, Dr. Morehead was on the staff of Sir Robert Grant, Governor of Bombay, having in the former year been elected President of the Medical and Physical Society of Bombay, a position he held until 1839. In 1838, on the death of Sir Robert Grant, he was appointed surgeon in the European and Native General Hospitals, and in 1845 became the first Principal and Professor of the principles and practice of medicine in the Grant Medical College Bombay. A zealous promoter of every scheme tending to advance the cause of native education, Dr. Morehead acted as secretary to the board charged with that department of administration from 1840 to 1845. Continuing as Principal of the Grant Medical College, and surgeon to the Jarnsetjee Jejeebhoy Hospital, till 1859, he in September of that year took a sick furlough to Europe, and finally retired from the Bombay Medical Service on June 30th, 1862. In January 1860, he became Surgeon-Major, and on September 6th, 1861, he was appointed an Honorary Surgeon to the Queen. Dr. Morehead was M.D. of Edinburgh, and a Fellow of the Edinburgh Royal Society; and in 1881 his services in the cause of Indian education were acknowledged by his being created a Companion of the Order of the Indian Empire. As an author, Dr. Morehead was known for works treating of the diseases of Europeans in India, and the practice of medicine in that country. He also wrote a life of his father. In 1844 he married Harriet Anne, daughter of the Venerable George Barnes, D.D., first Archdeacon of Bombay, the founder of the Bombay Education Society.

THE Examination for Certificates in Sanitary Science of the University of Cambridge begins on Tuesday, October 3rd. Candidates must send in their names to Professor Liveing, Cambridge, on or before September 28th.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, September 14th, 1882.

Blaikie, William, Oswestry.

Parry-Jones, William Richard, Rhos Ruabon.

Muddle, Edward John, Queen's Road, Dalston.

Pryce, Thomas Davies, Newtown, Montgomeryshire.

Willett, George Gilman Drake, Bristol.

MEDICAL VACANCIES.

The following vacancies are announced:—

BALLATER AND SURROUNDING DISTRICT.—Medical Practitioner. Salary, £35 per annum. Applications, by October 1st, to J. Rinch, Inspector of Poor.

DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL, Leicester Square, W.C.—Demonstrator of Contour and Cohesive Fillings. Salary, £50 per annum. Applications by September 29th.

DURSLEY UNION.—Medical Officer. Salary, £80 per annum. Applications by September 27th.

GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Junior Resident Medical Officer. Salary, £80 per annum. Applications by September 27th.

GLENLIES UNION, Dungloe Dispensary District.—Medical Officer. Salary, £110 per annum, and £15 as Medical Officer of Health. Applications by September 26th.

GREAT NORTHERN HOSPITAL, Caledonian Road, N.—Dispenser. Salary, £100 per annum. Applications by September 30th.

HAMPSTEAD PROVIDENT DISPENSARY.—Medical Officer. Applications, by September 23rd, to the Secretary, 23, High Street, Hampstead.

LISMORE UNION.—Medical Officer for Workhouse and Fever Hospital. Salary, £100 per annum. Applications by October 4th.

MIDDLESEX COUNTY LUNATIC ASYLUM, Colney Hatch.—Assistant Medical Officer. Salary, £150 per annum. Applications by September 26th.

PARISHES OF NORTHMAVINE AND DELTING, Shetland.—Medical Officer. Salary, £60 per annum. Applications to T. M. Adie, Esq., Voe, Shetland, by September 30th.

RADCLIFFE INFIRMARY, Oxford.—Resident Medical Officer. Salary, £100 per annum. Applications by September 30th.

ROYAL INFIRMARY OF EDINBURGH.—Pathologist. Applications to Mr. Peter Bell by September 30th.

ST. GEORGE'S, HANOVER SQUARE, PROVIDENT DISPENSARY, 59, Mount Street.—Resident Medical Officer. Salary and allowance for last year, £214 4s. 3d. Applications to Mr. G. H. Leach, Secretary, by September 30th.

MEDICAL APPOINTMENTS.

ELORE, Isaac, M.R.C.S. Eng., appointed Resident Medical Officer to the Netherfield Institution for Infectious Diseases, Liverpool, *vice* E. W. Hope, M.D., resigned.

DODSON, Joseph, M.R.C.S., L.S.A., appointed Medical Officer and Public Vaccinator for the Headingley-cum-Burley District of the Leeds Union, *vice* C. Jack, M.D., resigned.

RAND, R. Frank, M.B., C.M. Edin., appointed House-Surgeon to the Oldham Infirmary, *vice* A. Harkness, L.R.C.P., resigned.

ROBERTSON, Donald William, Esq., appointed Medical Officer to the Pickering Union, *vice* F. W. Smailes.

SHAW, J., M.D., M.R.C.P., Pidcock, G. Douglas, B.A., M.B., O'Connor, Bernard, M.D., M.R.C.P., appointed Physicians to the Hospital for Consumption and Diseases of the Chest, Mount Vernon, Hampstead.

WRIGHT, W. H., L.K.Q.C.P.I., L.M., M.R.C.S.E., L.S.A.L., Derby, appointed Surgeon to the Derby Borough Police, also Medical Officer of Health to the Altrunton and Boulton Local Board.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

BREWER.—On 17th July, at Stow Hill, Newport, Monmouthshire, the wife of H. Melvill Brewer, L.R.C.P.L., M.R.C.S.E., etc., of a daughter.

DEATH.

BYRNE.—At Salcombe, South Devon, September 9th, Theodore Edgar Dickson Byrne, Esq., J.P., L.R.C.P., M.R.C.S., of Elshieshiels Tower, Lochmaben, Dumfriesshire, and Drumness, Kirkcudbright, N.B., aged 50.

IN giving an account of the Mormon Insane Establishment at Utah, in the Salt Lake Tribune, Mr. G. A. Tucker, an inspector of the Insane Asylums and Gaols in New South Wales, states that the Insane was under the charge of Dr. Seymour B. Young, Brigham's nephew, and three Mormon commissioners. He found 21 patients in the most filthy condition imaginable. Some were in iron cages outside the main building, while others were in irons, bound hand and foot. Of these two were perfectly sane. One of them was robbed of his wife by a Mormon polygamist ten years since, and has been confined in the asylum ever since.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to the Manager, at the Journal Office, 161A, Strand, London, and not to the Editor.

SANITATION IN SWISS HOTELS.

SIR,—I beg to endorse fully your remarks as to faulty sanitation in Swiss hotels. The defects are so patent, and, indeed, universal, that the marvel is that so few cases of typhoid are developed—a circumstance one must needs attribute to the prophylactic effects of a very open air life. None the less, the evil is grave. It obtains at some health-resorts—which it is better not to name—where the number of tourists increase yearly.—Obediently yours,
FREDERICK ROBINSON.
17, Sussex Gardens, Eastbourne, September 16th, 1882.

THE PRUDENTIAL ASSURANCE COMPANY AND THEIR MEDICAL FEES.

SIR,—A few days back, I was requested by an agent of the Prudential Assurance Company to call at a village about four miles off, and examine a person for a life-policy of £100. I accordingly did so, and sent the report to London, stating that, in addition to the usual fee of one guinea, I should require 7s. 6d. for the visit. I received, by return of post, the amount demanded (£1 8s. 6d.), together with a letter stating that, as I did not hold the appointment of medical referee for the Company, they would be obliged if I would decline to act on behalf of the Company, unless specially requested by the Chief Office.

A few days after this, the agent and a superintendent called upon me, stating that I had overcharged the Company, and showed me a scale of fees. This scale of fees was on the following economical scale: On assurances not amounting to £100, 2s. 6d. per case; on assurances of £100 and upwards, five shillings per cent. on the sum assured.

I need scarcely say that I flatly refused to examine any cases on that scale; and I think that, if the members of our profession were to make a decided stand in the matter, the Prudential Assurance Company would be obliged to offer reasonable fees for a very important service.—I am, sir, yours truly,
M.D. and B.S. (Lond.).

AN APPEAL.

SIR,—Will you allow us to appeal to the profession on behalf of the family of the late Dr. Thompson of Beverley? This gentleman died, after a short illness, from inflammation of the lungs, brought on by exposure while in the performance of his duties, leaving a wife and six daughters, the youngest about twelve months old, almost destitute. We shall be glad to receive any subscriptions that may be sent; and are, sir, your obedient servants,
HENRY WALKER, M.D.
E. D. TOMLINSON, Brigade-Surgeon (half-pay), Beverley.

Beverley, September 13th, 1882.

PEDICULI CAPITIS.

SIR,—I think your correspondent, "Insecticide", will find two grains of perchloride of mercury, dissolved in an ounce of dilute acetic acid, a clean and effectual remedy for pediculi. It not only destroys the parasite, but dissolves the nits which are formed on the hairs. The solution ought to be well rubbed into the parts night and morning, and the clothes should be disinfected, or the disease is liable to recur. In order to secure the destruction of the nits, the clothes should be heated to at least 200° Fahr. I have found this treatment most effective for pediculi.—Yours truly,
W. J. BEATTY, L.R.C.P., etc.

Stockton-on-Tees, September 16th, 1882.

SIR,—I should advise "Insecticide" to follow Dr. Roberts's treatment for pediculi. He states, in his work on *Medicine*, that "A clean and effectual application consists of two grains of perchloride of mercury to an ounce of dilute acetic acid, which not only destroys the pediculi, but dissolves the nits which are formed on the hair." Oil of rosemary is a good application, or staphisagria semina, made into an ointment with lard, to which a few drops of oil of lavender or rosemary may be added to improve the odour. The head must be washed often in warm water, with soap. Old standing cases of severe pediculi capitis in young children should not be cured suddenly, as Devergie has seen two infantile deaths which were due to the loss of the accustomed irritation, etc., in the scalp.—I am, sir, your obedient servant,
J. Y. KEYNOLDS, L.R.C.P. Lond., etc.

Stoke-by-Clare, September 16th, 1882.

SIR,—If the hair be saturated two or three times with rectified or methylated spirit of wine, and allowed to evaporate, no difficulty will be experienced. It has never failed me, even when the hair is matted together.—I am, etc.,
M.B.

SIR,—In reply to "Insecticide": Two young ladies were brought to me some years ago, whose heads were infested with pediculi. I first washed them thoroughly with soap and water; and, after allowing them perfectly to dry, laid the heads back, with their profusion of hair in a basin, containing a solution of bichloride of mercury in spirit of wine. This was diligently rubbed in for about ten minutes, and then allowed once more to dry, and remain so for half an hour. Another lavish expenditure of soap and water, and the cure was complete. Every living creature was destroyed; and the ova, though still adherent to the hairs, were collapsed and shrivelled, and gradually separated, and came away like scurf with the use of the brush. Unfortunately, I forget the strength of the solution.—I am, yours, etc.,
EDWARD GARRAWAY.

Faversham, September 1882.

H. T. (x) should apply to the Chief Commissioner of Police, with recommendations. (z) By the guardians.

SIR,—Can you inform me of the name of any asylum which will admit a pauper incurable idiot child? Earlswood will not admit him, because he is incurable. The county asylum will not continue to have him longer, because he is a child, and is so noisy; for these reasons, the resident medical officer has sent him home, with the remark that there were plenty of asylums for children. I should be obliged if you could mention one.—Faithfully yours,
RUSTICS.

Pauper incurable idiot children are admitted into Darent Asylum, Dartford, if the parents reside in the metropolitan area. Pauper idiots are also admitted into the Royal Albert Asylum, Lancaster, if the parents reside in the northern counties, and into the Star Cross Asylum, Exeter, if the parents live in the western counties; but whether incurable cases are taken into these latter asylums we are not aware. Information, however, would be obtained by applying to the Superintendents of those institutions.

SIR,—If "Unqualified" would write to me, I could give him some information about all the colleges mentioned in BRITISH MEDICAL JOURNAL last week.—Yours, etc.,
W. WILLIAMS.
Llanfair, Abergelle, September 19th, 1882.

SIR,—With reference to the desire of a "Junior Member of the Profession and Association" as to the treatment of his case, I would strongly counsel him to submit the patient to a mercurial course; and that marriage should be deferred until such procedure—gentle in form—of administration be fully effected.—Obediently yours,
A LATE SURGEON-MAJOR IN THE GUARDS.

MIDWIFERY ENGAGEMENTS.

SIR,—"R."s position is this: If Mrs. X. was attended before the receiving of the note by "R." by another medical man, "R." can claim the whole fee, and recover it; but if Mrs. X. did without a medical attendant, then "R." can sue for the whole amount, and the judge (county court) will assess what fair amount of damages will meet the case, taking into consideration the fact that, being engaged for "about the 4th", "R." must have been to some trouble expecting the case to come off, by leaving word where he was to be found in case of a call, etc. But if Mrs. X. was not confined before the receiving of the note by "R.", I am afraid "R." has no remedy, for it is in the power of any contracting party to rescind a contract (unless signed) at any time before the contract work (using that term for the labour) being completed. Of course, if the "contract work" is completed before the receiving the note, then an action will lie, as I stated before. I have tested this question when in general practice.—Yours obediently,
EDWARD M. OWENS.

Hydropathic Establishment, Leamington, September 18th, 1882.

TREATMENT OF SCURVY.

SIR,—During the epidemic of measles here, parents of the children were particularly anxious the doctor should examine their mouths. The lips were dry and patchy, the gums spongy and ulcerated, especially near the base of the teeth. As the teeth were loose, there might have been suspicion of mercurialisation. The parents were reassured upon this point, that it was a peculiar feature of the outbreak. In one or two instances, when the disease assumed a typhoid aspect, the children swallowed their teeth; these, in other instances, dropped out of their mouths.

A young man, with spinal disease, had all the signs of sea-scurvy, spongy gums, etc. I ascertained that vegetables had been repugnant to him, and for a long period he had refrained from taking any. The use of vegetables and turpentine with potash, both cheap remedies, wrought a speedy cure. I beg leave to suggest these drugs upon an extensive scale, as on ship-board. I believe alkalies more effective when not given, for internal or external use, in a state of chemical combination likely to neutralise the effect, e.g., the citrates internally, or sulphur with lime externally, in the treatment of scabies. I prefer free sulphur, and it is the most reliable.

The late Dr. Joseph Bell, Senior Physician to the Glasgow Royal Infirmary, loudly condemned citrate of potash in the treatment of rheumatism; perhaps scurvy might be included.—Yours obediently,
NOT A LEVELLER.

PRIZES.

SIR,—I am anxious to compete for a prize given for the best thesis composed on some medical subject. I am, however, ignorant as regards any society or individual who may have offered a prize or prizes for competition within the next few months. If you can give me any information upon the subject—as I have no doubt you can—you will greatly oblige, yours faithfully,
P.S.—I enclose my card.

THE TITLE OF DOCTOR.

SIR,—The use of the title of Doctor varies greatly in different parts of the United Kingdom; and the opinions of medical men of equal professional and social status differ as much, in fact, are often directly opposed to each other, with regard to its inclusive and exclusive application. I can say, from personal knowledge, that, in a not distant part of Her Majesty's dominions, the application of it, by courtesy, to all the diplomates of Colleges of Physicians is general and unquestioned, and any other mode of address would be felt and resented as an impertinence. I do not now refer to its use by the vulgar and uneducated, but by all non-professional gentry, as well as by the leading members of our profession. Its long use in a generic significance has thus assumed locally proportions bordering on a right, conceded by both well and ill bred people to physicians, whether university graduates or not. We find, on consulting standard dictionaries, as well as old records, that the word doctor does not exclusively mean an university graduate; the attempt, therefore, of such to appropriate to themselves the exclusive use of the title is an objectionable innovation, which can neither be defended on the plea of good taste, nor on that of necessity, as they possess a ready means of indicating their diploma.

Very many men, as well as myself, began study in the belief that the diploma of a College of Physicians conferred on us the right to the prefix of Doctor; and I do not hesitate to say that, had we known the propriety of this designation was questioned as an act of courtesy, at least a large majority of us would have secured a diploma entitling us to its undisputed use.

The opinions of the members of our profession differing thus widely, but not those of the public, I must say that I cannot see any impropriety in the adoption of the prefix Doctor by many physicians who, like myself, had not, before commencing practice, heard the right to it questioned, but had acted in all good faith precisely as our neighbours.

A close observation of the objections urged against it induces me to think that, in very many cases, those who assume the exclusive right to the title would augment their dignity and secure additional public confidence if they trusted for success to more fraternal methods than that of vaunting M.D. against L.R.C.P., etc.; the public can, in the majority of cases, very quickly discover professional merit, whether found in M.D. or L.R.C.P.

Meanwhile, having begun practice with the questionable prefix, I shall yield so far to public ignorance (?) as to retain it until the profession or the general community adopt some convenient and descriptive designation for the medical practitioner, which does not handicap him by conveying to the uninitiated an absolutely false impression of his qualifications for practice, as the single titles of Physician or Surgeon, or even general practitioner do. Mr. Blank, Surgeon, as a designation for a doubly qualified medical man who practises very little surgery, is obviously incorrect; and somewhat similar objections apply to the other two titles.

As the prefix Doctor is applied indiscriminately by many of the public to qualified practitioners and quacks, its present use by physicians does not in the slightest degree detract from the merit or advantage of possessing an university diploma, the distinction of which is easily and briefly marked by the addition of correspond-

AN ADDRESS ON HEALTH.

*Delivered at the Social Science Congress,*BY SIR RUTHERFORD ALCOCK, F.R.C.S., K.C.B.,
President of the Health Department.

THE department over which I have been requested to preside on this occasion is described in one word—health. And I doubt if there be in the whole range of language another single word so certainly, and at the same time so universally, conveying a meaning of deepest interest to every individual member of the human race. “*Mens sana in corpore sano*” may not be so absolutely conditional as entirely to preclude the exercise of sound mental powers, despite the ravages of disease, and all the enervating influences of protracted suffering and physical deterioration. Many illustrious examples of this triumph of mind over matter, and the spirit over the body, are furnished by history. But they are the exceptions, and chiefly remarkable because they run counter to the common experience of mankind. This tells us that a healthy mind in a healthy body, so often associated together, if not inseparable, are at least essential conditions of activity and enjoyment of life. It is certain that life is often much embittered by minor ailments, apart from the diseases which run a fatal course. As the bodily organs unquestionably do influence the mind, and may enfeeble or distort the judgment, whatever tends to maintain a fair standard of health adds essentially to the sum of human happiness and good judgment.

There has lately passed away a very distinguished man, who died at eighty-three, after a life of incessant labour. Dr. Pusey was an example of the intimate connection between mental vigour and physical vitality. Mind, spirit, and body are indissolubly united, and subject to the same laws, the violation of which entails a penalty on all the three. We hear so much of vital organs, and the fatal effects of any injury to them, that we are in some danger of regarding as unimportant all minor deviations from health. Yet from these often spring the first beginnings of graver maladies, and whatever enfeebles the vital powers is a source of danger, by rendering the bodyless able to resist an attack. The public health cannot fail to be of paramount importance to every community. Yet few precious things are so persistently neglected, so rashly imperilled, or so wantonly thrown away. And, as regards whole nations or communities, few objects of public interest meet with so little attention. Efforts at sanitation are either passively discouraged, or active resistance is offered. The association has undoubtedly done much good in this direction, but much more remains to be effected for the education of the popular mind, before thenation will take the necessary steps to secure the greatest attainable immunity from disease, and the lowest rate of mortality. The antagonistic forces to be met are not difficult to define, and they may be ranged under a few heads. Putting aside, as insignificant in number and influence, the small section of dissidents known by the police reports chiefly as the “*Peculiar People*,” and the more active combination of anti-vaccinators who do their best to prevent the adoption of the most certain means of security against the ravages of small-pox and the spread of infection, we may reduce the ranks of the opposing force to those who object to the sanitary legislation required either on the ground of a distrust in the power to affect any material change in the average mortality, which they believe is regulated by laws beyond man’s control, as is the proportion of the sexes born—and subject to conditions and influences beyond the scope of human intelligence, or on the ground that any compulsory legislation would be an undue interference with the personal liberty of the subject, or the rights of property and vested interests. I will only say here in reference to the latter plea, that there is no evil, danger, or abuse the law has ever sought to put an end to, in which this stalking-horse of the liberty of the subject has not been brought to the front. But we all know that the very foundations of society and liberty, as distinct from the license to injure others, is the relinquishment of many individual rights for the common benefit. So long as the health or life of one individual is alone concerned, as in diseases which are neither infectious nor contagious, each one may claim some large discretionary right to decide whether either the one or the other be worth preserving, and refuse to the State or to others any power of deciding. But it is a wholly different matter when a person is attacked by an infectious and death-spreading disease, endangering the health and lives of others, and the interests as well as the safety of a whole community.

The adoption of compulsory measures of isolation and disinfection

becomes, then, an act of self-preservation and public policy. Mr. Edwin Chadwick, who speaks with authority on such a subject, has recently told us that he always found in his local inquiries that the seats of epidemic disease—the results of bad sanitary conditions—are the seats of irritation, of disturbance, and of crime. Epidemics are no respecters of persons, attacking alike the rich and the poor, and regardless of age or sex. Let us turn to another point of view—the economic—and trace a few of the financial results of epidemic visitations. Mr. Chadwick, in his paper on “*Sanitary Progress*,” read at the meeting of the Association in Dublin last year, has so admirably dealt with this aspect of the question that I need only refer to it for the most complete demonstration.

The total loss to the wage-earning class by the loss of work through sickness, he told us, has been estimated by Dr. John Watts, who had had great experience in friendly societies, at £13,000,000 in the course of a working man’s life. The diminution of pain and misery, and the saving of the expense of curative and other services, not excluding the cost of burial, otherwise to be incurred by increased mortality, all would go in addition to the credit of sanitary preventive measures. He refers to the report of the Local Government Board for 1880-81, in which it is stated that the death-rate of England and Wales had fallen during the last decade by nearly four and a half per cent., showing by a rough estimate that about a quarter of a million of persons were saved from death, who would have died if the death-rate had been the same as in the previous thirty years. Thus, if twelve cases of serious but non-fatal cases be reckoned for every death—and the early estimate was greater—it follows that about three million persons, or over one-ninth of the population, had been saved from a sick bed by some influence at work in the past decade, which had not been in operation previously. “*More than three-quarters of this reduction of deaths*,” the registrar’s report states, “*comes under the head of the seven zymotic diseases, that is to say, of the diseases which are the most influenced by sanitary improvements.*”

As regards our navy and army, of which the money cost more directly comes, perhaps, home to many, as constituting charges on the consolidated fund, and a large expenditure annually—about one-third of the whole revenue raised by taxation—it has been estimated that every soldier sent to India costs the State £100. But I believe every soldier with a three years’ training—taking the cost of his maintenance, etc.—represents a much larger sum. The loss by death or sickness of every soldier, if it incapacitate him for further service, is the loss, therefore, of so much money, however cheaply we may rate the value of a man’s life *per se*. From this point of view army statistics give startling results. It may be matter of surprise to many that the loss by the sword, and all the death dealing instruments and engines of modern warfare, is small in comparison with the deaths from sickness.

This comes out most remarkably in those periods distinguished by the greatest battles, and the storming of the strongest fortresses, as I proved by a critical examination many years ago of the War Office returns of our losses in the Peninsular war. The total loss by the sword during our twenty-two years’ war consequent on the French Revolution, including Waterloo and Trafalgar, appears by the War Office returns to have been under 20,000; but the loss by disease, Mr. Chadwick asserts, I believe on good evidence, was more than three to one, and of sickness at least ten times as many more cases must have existed, with loss of their services temporary or permanent. The deduction to be drawn from these military statistics should be a great encouragement to a general when once in the field to prosecute his operations vigorously, convinced that he will lose fewer men in the most bloody battles or sieges, if successful, than by sickness, if his operations are delayed and hang fire, with troops massed in camps or temporary quarters where sanitary measures can with difficulty be enforced under the most favourable circumstances, and are often either impossible or wholly neglected. Sufficient care has never been taken at the opening or at the close of a campaign to provide—and not only provide, but have available on the spot—the supplies required to secure the men from the most obvious causes of sickness: want of warm clothing, blankets, good food, and the adoption of certain sanitary and preventive measures of the most elementary kind for their maintenance in health. I cannot think it need always be so, or that the governing powers will in the future, as in the past, be more easily led to incur a vast additional expense in raising new levies, never as good as the men already in the field, than to bestow proper care and forethought in taking care of the men they have. Even the economic results of blunders and neglect, counting millions sterling, sink into insignificance by comparison with the disastrous effects which a diminished and sickly force may have on the issue of a campaign and the policy of the country.

Some curious and but little considered economic results are closely interwoven with the whole question of sanitary preventive measures on which I have already touched, as regards the loss in wages to the sufferers of sickness, and to the nation in the product of their labour. But the subject may be more thoroughly worked out by reference to a report published annually by the authority of the Registrar-General of Births, Deaths, and Marriages in London and nineteen other large towns, making up a population about equal in number. There is to be found within its seventy-four pages, condensed in tabular form, a record full of instruction and of absorbing interest, giving the sum of all the "ills to which the flesh is heir" from diseases or violence. Of the first class, at the head, stand endemic diseases, or those peculiar forms of disease which arise spontaneously, as it is termed, in a country or particular locality. However such diseases may be mitigated, or their worst effects arrested, medical science has no preventive power for them, so long as the local conditions remain. But sanitary science can materially alter these, and so effect what medicine cannot. Then we pass on to hereditary and constitutional diseases—gout, insanity, consumption, and other forms, which are susceptible of being transmitted from generation to generation—and a long array of constitutional and local diseases, for which curative medicine is the chief resource. But placed at the head of all the specified causes of death, we find a class designated under the term zymotic; that is, diseases which prevail among a large number of the people of a country, rage for a certain time, and then gradually diminish and disappear, to return again at periods more or less remote.

Now, of these epidemic enemies to the human race, which come like the sudden invasion of an armed force, to devastate and destroy wherever they find weak powers of resistance, or an ill conditioned population, and then more slowly disappear, are enemies which, if met at the gates, may be arrested in their course, and in brief period put to flight by sanitary measures, if vigorously supported by the community. Taking, then, the whole range of diseases tabulated in these returns or causes of death, we have this important conclusion for our guidance, that from one-fifth to one-sixth, on an average, of the total mortality is due to diseases of a preventible kind; which it is in our power, by the adoption of proper sanitative measures, to eliminate nearly—so far, at least, as to prevent their ever taking an epidemic form ranging over large and populous areas. How far the most infectious of this class of diseases are preventible by proper measures is hardly matter of dispute at the present day. If it were, the evidence of all the most competent witnesses, professional and non-professional, to the number of nearly one hundred, who appeared before the Royal Commission which has recently been sitting, would suffice to satisfy the most sceptical. Although their report has not yet appeared, I think, without any grave indiscretion, I may refer to what will so soon be laid before Parliament and published.

In speaking of sanitary measures, it is necessary to distinguish between the power of preventing a first outbreak of any of the zymotic diseases—and that of arresting their spread in a neighbourhood, and its propagation in more distant places by infection. It is this last which may with certainty be effected. Perhaps nothing could more strikingly convey to the popular mind this fact than the evidence given by Mrs. Johnstone, the energetic secretary of the Hastings Sanitary Aid Association. Upon this cardinal point of the power of isolation to arrest the spread of infection, the evidence received was absolutely unanimous, showing that such isolation almost invariably answered its purpose. The Commission could, therefore, hardly come to any other conclusion, but that on the outbreak of an infectious disease the first imperative necessity is to isolate every case immediately and effectually as it arises. When this is neglected, and due care is not taken to disinfect the house and linen, and in the case of small-pox the re-vaccination of the neighbours, the most fatal results constantly follow. [The speaker here quoted from the evidence of Dr. Thorne, a Medical Inspector of the Local Government Board, and continued:] To prevent all this danger and sickness with destruction of life from preventible disease is, I hold, to be imperative, even at a considerable cost of individual liberty and convenience. What sacrifices of this kind may be required for the general protection will probably be left to Parliament to determine after due inquiry. But whatever these may be, the compulsory notification and isolation of those infected must form essential provisions of any effective legislation. As to the objections still maintained in many quarters, Mr. Hastings, our President of Congress this year, who has taken such active and beneficial interest in promoting efficient sanitary legislation, was entirely justified last year when this question was under discussion at the Dublin meeting, in saying that precisely the same arguments as were now used in reference to the notification of infectious diseases, were used against the registration of deaths; and no medical man now would come forward and say

that any of the evils prophesied from such a duty being enforced upon medical men had been realised. In this sense the Bill brought in by Sir Trevor Lawrence and others last Session, and promoted by the Social Science Association, was framed, and I heartily trust it will ultimately be passed. The Hospitals Commission, to which I have referred, was chiefly appointed to consider the hospital accommodation in the metropolis for the treatment of infectious diseases. But the scope of the inquiry was much enlarged by the necessity of hearing evidence and reporting upon a variety of questions directly connected with the treatment of infectious epidemics, the best means of securing the public health, and the difficulties encountered in providing adequate hospital accommodation, more especially for small-pox cases. These difficulties, which had given rise to protracted litigation and the closing of two of the Asylum Board hospitals by injunctions in Chancery—obtained by owners of property and parish vestries—are mainly due to the active opposition of such parties, showing the necessity for compulsory powers. Notification, the isolation of the infected, and the acquisition of sites for hospitals where most required, are imperatively needed in the public interest. By such legislation only could proper provision be made; for, while the necessity for hospital accommodation is generally admitted, and the isolation of the infected of every district within reasonable distances a recognised necessity, all in turn are indispensed to allow the location of such hospital within their own boundaries; a broad line has been drawn between the danger attending the aggregation of cases of small-pox and of fevers. From the hospitals devoted to the treatment of the latter, under the regulations of the Metropolitan Asylums Board, there does not appear to have been any instance of the spread of infection to the neighbourhood; while, as regards small-pox, although the same immunity has not been secured, and may possibly be unattainable, there is such protection afforded by vaccination, that no adult need be exposed to danger, even from the closest contact, unless they voluntarily refuse this means of safety; nor need children be more exposed, save by the wilful neglect of their parents. The proof of this, I cannot but believe, is so clear that it may reasonably be hoped the time will come when small-pox will no longer exist in our midst as an epidemic, destroying its thousands in a year; and this despite all the anti-vaccinationists which prejudice and ignorance combined can possibly give birth to. The evidence of security to the vast majority that are properly vaccinated, and the effect of which is from time to time tested by revaccination, is too overwhelming for any servility of error to prevail in the long run. And, this great scourge of the human race being thus eliminated, as it might well be even in this generation by the aid of vaccination, there would only remain the other infectious diseases, which can more safely be confined within a limited area of isolation for treatment, with comparatively little if any danger, under proper sanitary conditions, of spreading even in a populous neighbourhood. The difficulty of providing hospital accommodation for those in the metropolis, when this fact is generally known, will in a great degree disappear. The Asylum Board hospitals already built will, in a great measure, supply the necessary accommodation, with the addition, perhaps, of one or two more in the localities most widely separated from the existing establishments. And for small-pox patients, all the convalescent and slighter cases which will admit of removal, without danger, to a considerable distance, could be transported by land or water outside the ring of inner London, leaving only the most severe cases for treatment near to the places, if not in the parishes where they actually occur, and in such diminished numbers as to lessen materially, if not entirely to obviate, any danger of infection extending to the surrounding neighbourhood. As to the average of mortality and the effect of a diminution of 1 or 2 per cent. even upon the whole population, few people, perhaps, fully realise what this means. The death-rate, as shown by the Registrar-General's report for 1880-81, in England and Wales had fallen during the last decade $4\frac{1}{2}$ per cent. It may, therefore, the report tells us, be roughly estimated that about a quarter of a million of persons were saved from death who would have died—if the death-rate had been the same as in the preceding thirty years. We can all see that the saving of a quarter of a million of lives by improved sanitative and preventive measures is not a trifling gain; and curative science does not make so rapid progress, that we need not have reduced rate of deaths from disease in the last ten years more than due chiefly due to sanitative improvements, rather than medical advances. And taking into account an average of twelve serious cases of sickness for every one that proves fatal—and about a hundred for every one that proves to be twenty and not twelve—the reduced rate of a half per cent. really means that in this period some three millions of persons, or a sixth of the whole population, had been saved from disease, its pain, and its misery. And more than three-quarters of this reduction of deaths, the report goes on to say, occurred under the head of the seven zymotic

diseases which take an epidemic form, and are the most influenced by sanitary improvements.

When Sir William Gull tells us that there are 20,000 deaths annually from typhoid fever, and that these form but a small part of the deaths caused by infectious fevers, we cannot doubt that the necessity for strenuous effort is very great, and that any failure on the part of the nation and the Government to adopt all such measures as may most effectually narrow the area of infection, would lay both open to the gravest reproach. Above all, it is essential that hospitals for the isolation of all infectious cases should be provided in all our towns.

A TROPICAL FEVER.

By G. SHERMAN-BIGG, Alkhabad, India,
Surgeon, Army Medical Department.

THERE is a fever in the tropics (for want of a better name, I call it tropical fever) which possesses certain characteristics of its own. Akin to malarial fever, and also to enteric, it cannot correctly be designated by either name. It is certainly sporadic, and usually attacks adults. That it is not due to the germs of malaria there is every reason to conclude, as neither quinine, arsenic, nor any other antifebrifuges exert any influence on the course of the disease. The great weakness, the dry raw-beef appearance of the tongue, the exstaxis, the sordes on the mouth and lips, the persistent headache, the indomitable thirst, and the loss of appetite, at first lead one to suspect enteric fever; but the obstinate constipation throughout the disease, the absence of tympanites and of gurgling in the right iliac region, the want of any eruption, and the clear intellect the patient maintains throughout, upset the theory of suppuration. It cannot be classed as a fever of continued type, as there are decided remissions; nor can it be said to be relapsing fever, since it is not epidemic, and the attacks are irregular.

The disease runs its course in twenty-one days; and there is often a relapse, which resembles in severity and duration the primary attack. The temperature from the commencement of the illness resembles that of convalescence from true enteric fever, the difference between the morning and evening temperatures being as much as three, four, and even five degrees. It is usual for one of the internal organs to be principally affected. It may be the stomach, as shown by vomiting and nausea; or the lungs may be considerably congested, and in some cases pneumonia; or the liver may be enlarged and tender, accompanied occasionally with jaundice; or the spleen may be the seat of hyperæmia.

The disease is not usually fatal; but troublesome sequelæ generally result, the most common being thromb, producing swelling, and œdema of one limb, with painful, tender and enlarged iliac glands. The necropsy, when death has occurred in the early stage, shows congestion of the internal organ affected, with extensive congestion of the mucous membrane of the ileum. The jejunum and duodenum are also, though in a less degree, congested. It cases in which death has occurred later on in the disease, the splenic organ affected during life shows more marked evidence of congestion. For instance, the spleen may be enlarged to three or four times its natural size; it may be soft and friable, and of a dark red colour; or the liver may have a nutmeg appearance; or even the smallest bronchi may be considerably congested. The most important changes, however, take place in the small intestines; the congestion extends from the ileum to the lower part of the duodenum, and the mucous membrane is studded with patches of ulceration. The solitary glands and Peyer's patches are also the seats of ulceration; but they do not seem to be more especially selected than any other part of the lining membrane.

REMARKS.—Malaria is an important factor in the production of ague; but what part it plays in fevers of a continued and remittent type is a matter open to serious argument. It is true, that fevers of this latter class occur nearly exclusively in malarious districts; but may this not be a coincidence? People who have lived in the tropics must have noticed the carelessness, the want of thought and attention to the atmospheric changes. At one time, the weather may be warm and genial; and in half an hour's time, raw and damp. Anglo-Indians, indulge in violent exercise in thin and scanty attire, and then sit down in the open air, without thinking of changing or putting on a warmer covering. This sudden atmospheric change of temperature, acting on an overheated system, produces a severe chill; and, whereas in England we should have a severe influenza, here in India we have a fever, more or less severe, according to the health of our constitution. I see no reason why this chill should attack one organ in preference to another; and, just as in some cases it gives rise to congestion of the lungs, in others to hyperæmia of the liver or spleen, so I think there are fair grounds for supposing that, should the intestines be the weak point, the chill may produce a catarrhal inflammation, and so bring about the fever which, for want of a better name, I have termed tropical fever.

AN ADDRESS

ON THE

PAST, PRESENT, AND FUTURE OF MEDICINE.

Delivered at the Annual Meeting of the North of Ireland Branch of the British Medical Association.

By EDWARD C. THOMPSON, M.B.,
Surgeon to the County Tyrone Infirmary; President of the Branch.

GENTLEMEN,—I find it no easy matter, at this our annual gathering, to select for my address a subject of sufficient importance to engage your attention.

The various matters of interest to our profession have been so ably dealt with by my predecessors in office, and by many other eminent members of the British Medical Association, that it is with extreme diffidence and mistrust in my own powers I venture to address you to-day. Knowing, however, as I well do, the kind indulgence which you always extend to those who do their best, I will endeavour to fulfil the duty that devolves upon me, sincerely trusting that, in the treatment of the various matters relating to the profession of medicine, which I have selected for discussion, no word may fall from me likely to give offence to any one present or absent.

Gentlemen,—It is almost unnecessary to remind you of the antiquity of medicine. You are doubtless aware that it is the most ancient of all the sciences; and that, in the early ages, the practice of it was attributed to the gods. Æsculapius was the father of medicine; and, in the writings of Cicero, Homer, and many others, we find frequent mention made of the healing art. Herodotus tells us that the Chaldeans and Babylonians had no physicians, and that their sick were brought to the market-places for cure, where the passers-by interrogated them as to their symptoms. Again, we find that strange cures were recorded upon the walls of ancient Egyptian and Grecian sanctuaries—so that the temples, called after Æsculapius, served instead of hospitals for the study of disease. Galen tells us that medical instruction was first given at Rhodes, Cnidos, and Cos; and that the most celebrated physicians were educated at the latter seat of learning. Amongst the many sages who practised the art of medicine was Pythagoras, who travelled much in the East, and finally settled at Crotona, where he instructed his pupils in medicine. He does not appear to have dissected the human body; but comparative anatomy and dissection of the bodies of animals seem to have been his constant study. Herophilus, in the year B.C. 300, was probably the first real worker in the vast field of human anatomy; and the principal author, of any importance in medicine, was Acron of Agrigentum, whose services were of such importance during the prevalence of the great plague, which depopulated Athens nearly 2,200 years ago. It was, however, Hippocrates, one of the two celebrated sons of Cos, who first emancipated medicine from the trammels of superstition and corruption which disgraced it, and established it on something like a firm foundation. He seems to have watched, and recorded with great accuracy and closeness, the signs and symptoms of disease. So effectually did he perform this portion of his work, that we find Celsus stating that succeeding physicians, notwithstanding their improvements in the treatment of disease, owed their knowledge of its signs and symptoms to Hippocrates; indeed, so well did this wonderful physician appreciate the duties and responsibilities of his profession that, to this day, the celebrated Hippocratic oath should be inscribed in letters of gold upon the certificates of every student and practitioner of medicine. It is as follows: "I swear by Apollo, by Æsculapius, by Hygiea, and all the gods, that I will fulfil religiously, to the best of my power and judgment, the solemn promise and the written bond which I now make. I will honour my parents, the master who has taught me this art, and endeavour to minister to all his necessities; I will consider his children as my own brothers, and will teach them my profession, should they desire to follow it, without remuneration or bond. I will admit to my lessons my own sons, and those of my tutor, and those who have been inscribed as pupils and have taken the medical oath, but none else. I will prescribe such a course of regimen as may be suited to the condition of my patients, according to the best of my ability, power, and judgment, seeking to preserve them from anything that might prove injurious. No inducement shall ever lead me to administer poison, nor will I ever be the author of such advice; neither will I contribute to an abortion. I will maintain religiously the purity and integrity of my art. I will not cut any one for

stone, but will leave the operation to those who cultivate it. Into whatever dwellings I may go, I will enter them with the sole view of succouring the sick; and abstaining from all injurious views and corruption, especially from any immodest action towards women or men, freemen or slave. If, during my attendance, or even unprofessionally, in common life, I happen to see or hear of any circumstances which should not be revealed, I will consider them a profound secret. May I rigidly observe this oath, and enjoy good success in life. Should I transgress and become a perjurer, may the reverse be my lot."

It is to Hippocrates we owe the merit of having first added philosophy and reasoning to experience, and of introducing those discussions which ultimately overthrew empiricism, and led to the triumph of dogmatism, under Galen, the celebrated physician, who travelled from Rome to Alexandria to study a human skeleton, and who published, as the result of his observations, anatomical descriptions of surpassing excellence. Ever since his time, notwithstanding that the medical profession has conjoined the results both of reasoning and experience, each method has had its own supporters. Even now, it is nothing uncommon to find men, calling themselves practical, entirely ignoring theory; on the other hand, we frequently meet with those who live by theory, and despise what they choose to call the practical man. The mean should be struck exactly between these opposing views; for the person who makes it his ambition to succeed as a physician or surgeon must be guided by the lessons of experience, even though they sometimes clash with the teachings of theory.

Cullen truly observed, many years ago, that everyone now-a-days pretends to neglect theory and stick to observation. But the first is in talk only; for every man has his theory, good or bad, which he occasionally employs; and the only difference is, that weak men, who have little extent of ability for, or who have had little experience in, reasoning, are most liable to be attached to frivolous theories; but the truly judicious practitioners and good observers are such as have the most extensive views of the animal economy, and know best the true account of the present state of theory, and, therefore, of the proper place to stop in the application of it.

If we regard the whole field of human knowledge, we must be led, it may be insensibly, to classify the various sciences under two heads; viz., the exact and the inexact. To Sir Isaac Newton belongs the honour of first demonstrating that all the heavenly bodies gravitate towards each other, by the same law that attracts bodies on the earth's surface towards its centre. In chemistry, the law of affinity is the fact upon which most of the phenomena of chemical science depend. The possession of this primitive fact gives, necessarily, great accuracy to those sciences in which it has been ascertained; and they are, therefore, called exact. But there are other sciences which possess no primitive fact; for instance, agriculture. No man can till the ground and cultivate the crops, and be certain of the same result upon each occasion. Many circumstances may occur which may entirely falsify his anticipations. A science such as this must be classed as inexact, and to this category medicine belongs.

Every day, however, new facts are being brought to light, new ideas formed, and a closer acquaintance acquired with the insidious nature and progress of many diseases. All this work is being quietly done, notwithstanding the giant obstacles placed in the way of our profession by an intelligent public, who, forgetful of the many sacrifices we have made for them, upbraid us in the strongest language because, forsooth, we support the practice of vivisection. In reality, however, by the Act of our Parliament passed some years since, we are practically deprived, in this country, of the opportunity of making experiments on living animals, and, as a necessary result, are being left far behind in the race after knowledge, and in the ascertainment of that primitive fact or law to which I have before alluded, by the physiologists of other countries. It is true, the Act does not in express words interdict all experiments upon animals; but it renders it so extremely difficult to procure a certificate or licence from the Secretary of State, that in reality it has had this effect.

The act, indeed, apparently contemplates, as the chief subjects of experiment, the lower groups of the unfeeling persons, who, with no other motive in view, than the mere pleasure of torturing living animals, are engaged in the very degrading class of experiments the Act is intended to prevent, for instead of inflicting harm on the poor, and hinting to them instead severe punishment, it in reality contends them with our professional class of scientific investigators, whose names should be, if they are not, a sufficient guarantee for the purity of their motives. Let us contrast such treatment, with the pleasant unobtrusive tract, with which the world from time immemorial has regarded the character of our profession; consider the relation of closest intimacy and confidence to which we

are admitted in the sanctities and tendernesses of domestic life, and our responsibility of human life and death. Consider that there is not a member of our profession to whom the law does not allow full discretion, whether he shall kill the child to save the mother in certain difficulties of child-birth, and in contrast with all this, is it to be seriously maintained that society cannot trust us with the responsibility of performing experiments upon living animals; that our foremost workers cannot be trusted to behave honestly towards their brute fellow creatures? It is a sad pity that our legislators, in a moment of extreme weakness, were tempted to yield to the popular agitation of the moment, chiefly supported as it was by a noisy band of would-be philanthropic men and women; indeed, amidst all this outcry, how strange it is to detect the voice of the female, who must needs raise her hands in work for which she is unsuited, either mentally or socially.

The female enthusiast is rather a strange specimen of the philanthropic world, she is nearly always unmarried, and knows nothing of the world and less of science. She is generally incapable of reasoning, and she will not read, at any rate she does not read, the account of those stern undying truths which have been brought to light by vivisection. Do these philanthropists ever consider the monstrous cruelties practised daily under the name of sport, the agony endured by hunted animals, or the torture inflicted on fish and birds in the popular amusements of fishing and shooting, and the unrelenting deprivation of so many animals, for man's convenience, of their sexual life?

Do these philanthropic females, I ask again, ever consider that the feathers which adorn their persons, are in many instances torn from the quivering flesh of live birds? But alas, for modern consistency, which would be ludicrous in its very absurdity, were not the issues of life and death involved in its consideration, a wise legislature allows unskilled and unlicensed operators to ply their trade, without anaesthetics, upon the wretched brutes, and yet denies to the most humane and disinterested of men the means of carrying on their scientific researches into the causes and cure of disease?

In other countries the opposition to science, long raised by ignorance of its true nature, has gradually vanished, and the work has progressed unimpeded by outside restraints. Are these conditions to be allowed in this country to suffer change? Have not the results been so vast and so beneficial to the human race, that we may point to them with just pride, as we protest against any restriction being raised in the future other than those which suggest themselves to every enlightened mind.

To limit the search after truth is to stop the search in its entirety: for who can limit, or hold in check, the inquiries of the human mind? or who can direct the channels along which thought shall flow? Not even the most vehement antivivisectionists will, I think, maintain that the life of a man is not of infinitely greater value than that of a beast: and yet it is asserted that not a single scientific fact, or curative agent of the least benefit to mankind, has been discovered by vivisection. Why, have not the different sounds of the human heart, and the mysteries that shrouded their interpretation, in health and disease, been solved by experiments, or living animals—notably the horse? Was not the tourniquet one of the first outcomes of Harvey's great discovery of the circulation of the blood—an instrument which has probably saved more human lives than have been lost to the brute creation by the necessary investigations to elucidate this problem?

Was not the operation of transfusion and its utility ascertained from vivisection? Has not the human race benefited to an enormous extent by the well-known experiments of Dr. Marshall Hall, and Sir Charles Bell, into the nervous systems of animals: and more recently by those of Claude Bernard?

But not to go further back, let us recall to our memories the application which M. Pasteur's invaluable studies into the facts of fermentation and putrefaction have received at the hands of Mr. Lister, in his writings on the antiseptic treatment of wounds—a practice which has already been the means of saving innumerable lives, and which has reduced the mortality, after severe operations, to a minimum. Again, out of the experimental studies of anthrax has grown a knowledge of various ways in which the contagium of that dreadful disease can be greatly mitigated, not only in man, but also in animals. M. Pasteur has also shown that by inoculation with the contagium of a very fatal fowl disease, he can mitigate its severity. A similar discovery has been made by Professor Semmer of Dorpat, that by treatment, like that with which the contagium of splenic fever is mitigated, he can bring the most virulent septic contagium into such a state, that it will be mild enough to serve for harmless inoculations, which shall be protective against future infections. And, lastly, we have the recent experiments of Koch as to the parasitic nature of tubercle, and its probable contagious character.

It would be impossible to point to work of greater promise to the

world than these various contributions to the knowledge of disease, and of its cure and prevention; and these contributions only could have come from the performance of experiments upon living animals.

Another great cry of the antivivisectionists is, that if animals must be experimented upon, it shall only be under the influence of anaesthetics. But is it not a positive and uncontradicted fact that the action of anaesthetics was ascertained by the experiments of Sir James Simpson upon living animals—a discovery which, as Sir James Paget so ably puts it, has more than any other added to the happiness of the human race?

"Past all counting," he says, "is the sum of happiness enjoyed by the millions who, in the last thirty-three years, have escaped the pains that were inevitable in physical operations, pains made more terrible by apprehension, more keen by close attention; sometimes awful in swift agony, sometimes prolonged beyond even the most patient endurance, and then renewed in memory, or in more terrible dreams."

Notwithstanding, however, that our legislature has recently placed such a heavy embargo upon the scientific investigation of disease by virtually prohibiting vivisection, let us shortly glance at the great progress the science of medicine has made within even recent years; and the immeasurable benefits which a merciful God, by its means, has conferred on suffering humanity.

I shall not refer to the difficulties overcome by the famous Haller; nor of the researches of Vesalius, Asellius, Harvey, Morgagni, Pott, Hunter, and many other equally eminent investigators. To do so in anything like a satisfactory manner, would occupy far too much of your time, and be outside the scope of an address such as the present. I refer to them, however, as it would ill become a writer passing in review the ancient history of medicine, and endeavouring shortly to detail the advantages mankind has derived from the practice of it, to omit from mention such honoured names.

The 17th Century brings back to our recollection, Radcliffe, Sydenham, Mead, Cheselden, who first performed the operation for relief of congenital cataract; and in the 18th Century, John Hunter was born, a name which must always recall pleasurable emotions in the breasts of all medical men; and one of itself sufficient to render a century famous.

Passing from the 18th to the 19th Century, we have much to be proud of, both in the names of those who have, alas! ceased from their labours, and of those who are still active workers in our midst. Amongst the former, I need only mention such names as Hey, Cooper, Swan, Abernethy, Robert Smith, Stokes, Graves, Liston, Leall, Ferguson, Crampton, and Edward Jenner, who by unparalleled perseverance and unflinching determination, convinced the world of the benefits of vaccination. Has any man approached Jenner as a benefactor of the human race? And yet, what has been his reward? A grateful country removed the statue erected to him in Trafalgar Square to make room for that of Sir Charles Napier. Base ingratitude, which almost makes one doubtful of the fairness of Englishmen; pitiful ignorance of the meaning of real glory. Let it pass, however; the name of the exterminator of small-pox will live, when that of the conqueror of Scinde has perished from memory. Amongst the living members of our profession, I need only mention Paget, Watson, Jenner, Spencer Wells, Lister, Sir Henry Thompson, Pasteur, Virchow, Bowman, Charcot, and many others of nearly equal eminence, to whose disinterested exertions is due in a great measure the great improvement which has taken place in recent years, both in the diagnosis and treatment of every form of disease and injury. This century can also boast of the discovery of anaesthetics by Sir James Simpson, and of the invention of the stethoscope by Laennec; of the ophthalmoscope, otoscope, laryngoscope, endoscope, aspirator, clinical thermometer, sphygmograph, and innumerable other instruments of the greatest ingenuity and mechanical skill. It is in surgery that the most evident advancement has taken place. The modern surgeon remembers with pride the triumphs of ovariectomy, which has been the blessed means of restoring to health and strength thousands of mothers. Thanks to the ingenuity of Von Graefe, the operation of cataract extraction has been much simplified, and made so certain of success, that statistical tables show nearly 90 per cent. of complete recoveries from blindness. Indeed, your distinguished townsman, Dr. McKeown, very recently brought under the notice of one of our meetings, statistical tables which showed the splendid result of fifty-three recoveries out of fifty-six cases operated on. By this single operation, numberless persons have been restored to the inestimable blessing of sight, who, but for it, would have ended their days in complete blindness. The operation of iridectomy, in glaucoma, has had a similar beneficial result. The abstruse optical investigations of Donders, Helmholtz, and others, have borne such ripe fruit, that numbers whose sight was comparatively useless, now enjoy it almost in perfection.

Professor Sayer's treatment of spinal curvature by suspension and the plaster-of-Paris jacket, has saved many lives, and cured hundreds of cases, hitherto considered entirely hopeless.

By Martin's elastic bandage, the cure of chronic ulcers, and other intractable skin affections, has been effected.

By Esmarch's elastic bandage, amputations, the ligature of arteries, and many other operations can be performed without the loss of a drop of blood. The application of the germ theory to the treatment of wounds has, I doubt not, saved the lives of innumerable able-bodied men and women. To the investigations of Sir Henry Thompson and Professor Bigelow we are indebted for the improvements in lithotripsy. Professors M'Ewen and Adams have opened up an entirely new field of operative procedure in their subcutaneous osteotomies, and it is only quite lately that these operations have been added to the triumphs of surgery. In fact, the treatment of every disease and injury is now conducted on well ascertained principles; and although in medicine this rule does not apply so strictly as in surgery, owing to the uncertainty of drug treatment, still its advancement has been very great. Advancement in the knowledge of every branch of the profession of medicine, and blessings, past estimating, have been conferred on mankind, compared with which the achievements of our rival professions—such as the Church, the bar, and the military services sink into insignificance. And yet how frequently do we find these services ignored, and the recipients of them pass contemptuous remarks on doctors and doctoring generally. How often do we find, during the prevalence of some dangerous epidemic—wherever, indeed, there is sickness, sorrow, and death—the doctor's visit looked forward to with hope, and affording the only bright spot in a surrounding of utter darkness and despair. Yet, when the reverse prevails, and, owing to the physician's efforts, aided by God's goodness, the danger is past, and a loved one perhaps restored from the jaws of death to the arms of loving parents and friends, how frequently do we see the doctor forgotten, and his efforts talked slightly of?

Gentlemen, having endeavoured, in a necessarily short and imperfect manner, to point out to you—first, the great antiquity of medicine, and what is understood by its study; secondly, some of the difficulties which are placed in the way of its proper investigation; thirdly, the great advancement the science of medicine and surgery has made within recent years; and, fourthly, some of the advantages and blessings it has conferred on humanity, and the claim it has on the sympathy and respect of all men; let us now briefly proceed to consider the reason why the medical profession has not attained that public esteem and respect to which it is so justly entitled. Does not the blame rest on ourselves? I am afraid that, to some extent, this is the case. We have a criticising public to deal with, and being, in a measure, their servants, we cannot throw them off, although it cannot be said they are independent of us. There is, therefore, mutual dependence, and there should be mutual confidence. But how often do we find this rudely broken by the dishonest action of the practitioner, who, called to see a patient, in consultation with his brother practitioner, lets fall those little innuendoes which are so eagerly seized upon by the patient and his friends, and which say in acts, if not in words, how fortunate you called upon me in this case, for if you only adhere to the directions and treatment I now recommend, you may depend upon it your friend will get well.

Medical men must occasionally differ, both as to diagnosis and treatment. The greatest judges in the land frequently differ about the meaning of phrases, and often even as to the proper interpretation of words. Why, therefore, should it be thought so strange if one Doctor does not agree (on rare occasions) with another, in the interpretation of nature's most hidden and difficult secrets? It is not very long ago since I read in some English morning paper, that the House of Lords, as the highest legal tribunal, reversed a considerable proportion of the judgments of the next highest Court in the land, the Court of Appeal. Although, therefore, medical men sometimes disagree in their view of a difficult case, there is no reason why the difference of opinion, and treatment to be followed, should be made a subject of comment by the patient or his friends. On the contrary, the difference, if it exists, ought to be sacred as between man and man, and the public should be educated to understand that when medical men meet together in consultation, their whole intelligence and learning are given up to the difficult problems of unravelling the nature of their patient's case, and trying, with all the means science has placed at their disposal, to do the best in their power either to alleviate or cure their suffering fellow-creatures. At present, the public are too much in the habit of looking upon it as a natural characteristic of medical men to be always either abusing each other, differing in opinion, or standing on etiquette, and there really is sufficient grounds for the view thus taken. In large towns you hardly ever speak to a certain class of medical men without

neglected to apply for relief to a regularly qualified physician or surgeon.

Every experienced physician knows well that, in the treatment of disease, but little medicine is really required. Every reading man knows that there is more robust health and less disease in Great Britain than in any other country in Europe, and yet I unhesitatingly assert that in this country there are more drugs, chemicals, and mineral waters consumed than in all the countries in Europe taken together.

What remedy can we apply to this state of things? A practitioner in country districts, away from towns, must doubtless supply his own medicines; but he should never sell it, thus lowering his profession to a trade. Indeed, every medical student, before being granted a degree, should be made to sign an undertaking such as the Hippocratic oath, which almost embraces everything that is necessary, never to degrade either himself or his profession by trading in medicine; with the certain punishment, if he did so, of having his name removed from the *Medical Register*.

In towns it would be well if medical men could be got to club together, form a company, and appoint a thoroughly qualified chemist to attend to the dispensing of the prescriptions of the various doctors who joined the association. This would drive competing chemists from the field, give probably a good return for the money invested, prove a real protection and advantage to the public by ensuring them good drugs, and greatly tend to improve the position of medical practitioners.

It is a strange but true fact, that in medicine the person who frequently succeeds best in the world, is not the highly educated gentleman, but the bustling busybody, who with, it may be a soft and unctious manner and an imposing equipage, parades his learning, or rather his ignorance, to a sympathetic indiscriminating public, who nearly always mistake self assertion for true knowledge. It is often by means such as these, coupled with complete disregard of professional etiquette, that practices are made, to the exclusion of men of merit and modesty, touting fellows often become the medical attendants even of the great, to whom they stand in relation of half friends, half underlings. I remember a medical friend of mine told me not very long ago that he had almost determined to give up the practice he had held for many years, he found it so hard, nay, impossible, to contend against some of the pranks of his brother practitioners in the same town, one of whom kept a drug store, a surgery, a consulting room, and a whiskey and wine store all in the same house; very convenient no doubt, but alas! in reality how often attended with disastrous consequences to the unhappy patients who are fools enough to consult, or place dependence in doctors of this description, and how damaging to our profession which tolerates the possibility of such a state of things. We all know that in England our profession in the lower grade is nothing but a trade, happily this does not apply as a general rule to Ireland, where the position of a medical man is somewhat more respectable, but even here we frequently meet with doctors in good position and fair practice, giving advice and innumerable boxes of pills or bottles of medicine for a few shillings.

Let us discuss for a few moments another branch of this part of our subject. Medical men frequently astonish a criticising public by their evidence in courts of justice, sometimes differing as to the interpretation of the plainest case without apparently even the smallest regard for their own character. Can we blame the laity if they sometimes sneer at our opinions, and even accuse us of violating the principles of honour? Such differences of opinion are generally most manifested in cases of railway accident; surely in such cases it should not be impossible for the medical man selected by the railway company, and for the injured individual, to meet together and discuss the various matters touching the patient's case honestly and fairly, and if a difference did unfortunately exist, and could not be reconciled, power should be given to call in an expert in whose judgment reliance could be placed, and whose skill in the special department of his art was unquestioned. By such means, doctors would be enabled to arrange their disagreements instead of proclaiming, as so frequently happens, to the world their irreconcilable jealousies.

It is, indeed, marvellous how the backbitings and disagreements of medical men, in these days of enlightenment and progress, can continue to exist. I believe they are first fostered and brought into life in the various schools, colleges, and hospitals of the United Kingdom, and the spirit there generated is infused into the students, and afterwards becomes the distinguishing characteristic of medical men generally.

Fortunately, when things are at their worst they usually begin to improve; and I have every confidence that, with the increase in medical education and the scientific training of our doctors and surgeons, such a wholesome spirit of unity and strength will be imported into our profession as to make it impossible for any member of it to act un-

professionally without drawing upon himself the anger of the whole body.

Nothing presents to my mind such a hopeful outlook for all of us as the success which attends the annual meetings of our Association, and the formation by its means of a connecting link between all grades and classes of the medical profession. That this is taking place—it may be slowly—is manifest by the rapid rise in social position of the army and navy medical services. I believe the recent improvement effected in the position of the officers of these important departments is merely an evidence of the increasing influence of the profession of medicine. The rivalry of our various educational colleges is a great blot upon our escutcheon; and we can only hope the Government Commission at present at work will recommend such changes in the various schools and colleges, by a process of amalgamation, if not of actual disestablishment, as will insure the success of the one portal examination system, so earnestly recommended and so universally supported by the members of our profession. Indeed, it is strange how Government has permitted the divided interests of our various medical schools to exist unchecked so long, to their own detriment as well as ours. How different from the "large-heartedness" which Hunter hoped "would always guide our teachers and colleges".

If, in passing, I might dwell for one moment on this all-absorbing question of education, I would suggest to those it is my great privilege to address here to-day, the necessity which exists for making the Irish medical schools more efficient in the practical or clinical instruction of their pupils. In our various professional colleges, there is no lack of lectures, delivered by lecturers who, I am very sorry to say, only too often cannot lecture; but there is an urgent want of larger opportunities for practical training in clinical medicine and surgery. No one can acquire skill in chemistry, physiology, or histology without practising experiments and manipulations in the laboratory; and it is equally impossible for students to become skilful physicians or surgeons who have not had actual personal labour in our hospitals. It is not enough for a student to have the opportunity of following his teacher round the wards of a hospital, an unit in a hundred or a hundred and fifty others, poking his nose over his comrade's shoulder, and standing upon tiptoe to try and get a glance at what is going on at the bedside of the patient, that the desired end is to be attained. No; it is by absolute hard work and patient investigation at the bedside of the sick, and there alone, that the student will gain the required practical knowledge, and will learn to apply those lessons which he reads in the splendid text-books which exist for his instruction and guidance. Our hospitals should be more thrown open to students, under, of course, reasonable rules, so as not to interfere with the comfort of the sick; and lectures, except in the wards or theatre of a hospital, and illustrated by living examples of the disease under discussion, should be abolished, as a mere waste of the time and money of the student. It takes a lecturer a very long time to explain the peculiar sound of healthy respiration, or the different murmurs in heart-disease; and, when he has finished his discourse, the immense majority of students are just as wise as they were at the commencement. Illustrate these different physical phenomena with a stethoscopic examination by the students of a patient suffering from the disease under discussion, and the result will be a very different one.

I repeat our hospitals should be more thrown open to students, and they should be encouraged to visit them, and inquire for themselves into the hidden mysteries of disease; by no other means will they attain that quickness of perception and readiness of resource without which no one will ever attain success as a physician or surgeon. Doubtless this question is surrounded with difficulties; there are in this country few large hospitals, and a small minority only of our students obtain dresserships; but, in addition to this, owing, I believe, to the lack of enthusiasm on the part of their teachers for clinical instruction, there seems a positive dislike, among students, to make use of the hospitals in the country districts in which they live. I know, where I reside, I am surrounded by students, who are being instructed both at Belfast and Dublin, yet they shun the opportunities that would be gladly and gratuitously given to them, both in the county infirmary and the workhouse hospital; and at both institutions, I verily believe, they would see enough to vastly improve their clinical knowledge, or rather clinical ignorance.

I remember well, when serving as surgeon in Her Majesty's Navy, that one of the staff-surgeons at Haslar Hospital laughed at me when I advocated, in conversation with him, the advantages of competitive examinations. "Why", said he, "in the hospital at present, one of my surgeons, who got first place at the late examination, could not apply a bandage, and would not take upon himself the responsibility of prescribing for a patient." This student was educated at one of the Irish Colleges, and his case is a sad reflection upon medical educa-

tion generally; but it is by no means an isolated example, and I have ventured to refer to it here merely to increase, if that be necessary or possible, the interest taken in clinical instruction in this College of Belfast—now, I believe, one of the educational departments of the Royal University, and which can boast of teachers second to none in Ireland.

Theoretical instruction is all very well, but I assert that, in this country, practical teaching is in a great measure ignored, and time wasted in cramming the heads of our students with learning, which they quickly forget, and which, from the want of practical knowledge, they cannot apply. I believe great improvement would take place in our social position if entrance into the profession of medicine was barred by a real searching preliminary examination, and if, in connection with our colleges, there existed preliminary training schools, where the student, having chosen his profession and having passed an entrance examination in Greek, Latin, Mathematics, Modern Languages, etc., could be instructed before entering college in those subjects which form the groundwork of his future studies, such as physical science, physiology, *materia medica*, chemistry, botany, and elementary anatomy—subjects which at present consume two years of the four spent in a medical college, and which allow very little time for clinical instruction. In these preliminary training schools, too, the student should be instructed in dressing and bandaging and in the use and application of the most important medical and surgical instruments; for instance, what is to prevent instruction being given in the use of the stethoscope, in so far at least as the healthy sounds of the chest are concerned, or in the mode of using the ophthalmoscope, tourniquet, thermometer, laryngoscope, and the various other every-day instruments in general use.

Instead of knowing anything of these various matters, our students go direct from school to college with generally a very loose smattering knowledge of classics and mathematics, and they spend the first two years of their college life in endeavouring to master the very subjects they should have learned at school, and are thus prevented from devoting their whole time to attendance in the dissecting room, and at hospital, where alone they can ever hope to really learn their profession. We have too many educational colleges, and no preliminary training schools. Our hospitals are too small, and are not made sufficient use of, and I am sorry to say our race of teachers is sadly degenerating. Where, for instance, in Ireland have we an authority of importance in any of the various departments of medicine or surgery? and where, might I ask, are we to look for the successors of Stokes, Corrigan, Colles, Adams, Crampton, Carmichael, and Robert Smith?

Our examinations, and our mode of conveying instruction, should be made more practical than it is, to be successful in the great object of examinations generally, and this is especially necessary in the profession of medicine, where shoals of young half-educated lads are annually let loose to learn their business, by endangering, in the first instance, the lives and health of their fellow-men. Our students are not to blame, but our colleges and teachers in this country and in Scotland are, and the sooner they come to know it the better. As I have said, I have come across a good many Queen's College and Dublin students, and they, one and all, are walking encyclopedias of medical lore, which, unfortunately, they are able to make little use of, owing to the absence of good sound clinical instruction. The time has come, therefore, when Government should insist upon every student passing, by a strict and searching theoretical and practical examination, through the only possible entrance to our profession, viz., the one portal of a preliminary training school, and the public, if they have any regard for their own safety, should insist on the speedy accomplishment of this, to them, most important end. I most sincerely trust that a great future lies before our colleges, and that the changes which most of us so much desire, will be pregnant with good results, both as regards the advancement of the science and the quality of those who have taken upon themselves the responsibility of the profession. I have referred at length, as I did in a very clumsy manner, to this great question of medical education, because I see in it the true means of raising the respectability and public influence of our noble and disinterested profession.

In the discussion of the various questions which have engaged our attention to-day, I have endeavoured to avoid giving offence to anyone, and I hope I have succeeded. It is, however, impossible to discuss these questions without touching upon the faults of the present system, and I have done so. I have endeavoured to show that the present system is not only defective, but that it is a barrier to the progress of the profession, and that it is a source of danger to the public. I have endeavoured to show that the only way to improve the profession is by a more practical and searching examination, and by the establishment of preliminary training schools. I have endeavoured to show that the present system is not only defective, but that it is a barrier to the progress of the profession, and that it is a source of danger to the public.

Ireland Branch of the British Medical Association, which has done so much to join us together in the bond of brotherhood and friendship, and which has tended in such a marked manner to advance the position and interests of that profession which we all so much love, and which I hope it is the end and object of our lives to see raised some day to that proud position of influence and dignity, to which it is so eminently entitled.

A NEW METHOD FOR THE CURE OF SALIVARY FISTULA OF STENSON'S DUCT.

BY DR. L. G. RICHELLOT,

Professeur Agrégé à la Faculté de Paris; Chirurgien des Hôpitaux.

WHEN an opening is made, through any cause whatever, in the course of Stenson's duct, the wound either heals easily or the anterior portion of the duct contracts and becomes obliterated, the saliva continuing to flow out of the fistulous orifice. In the last case, a salivary fistula of Stenson's duct is established, and has no tendency to close, since the anterior portion of the duct is no more able to transmit the secretion of the parotid gland. It is evident that an operation alone can remedy this morbid condition, by re-establishing the continuity of the salivary duct in its course along the tissues of the cheek. Many methods have been recommended for the cure of this infirmity, on account of the difficulties inherent to the subject, the different opinions of surgeons, and the different clinical forms that a fistula may assume, according to its cause, its precise seat, and its local complications. In case of complete obstruction of the orifice of the duct, the aim is always to create a new issue for the saliva into the buccal cavity by establishing a kind of internal salivary fistula on the soft parts of the cheek.

On this principle, Leroy, Monro, Desault, Duphœnix, Deguise, and Bécлар have proceeded in very different ways, which I will not enumerate, as they are to be found in most treatises on the subject. I will only remark that the practice of introducing, as Monro recommends, a seton which goes through both the thickness of the cheek and the fistula, is an uncertain way of restoring the normal course of the canals, because the presence of the thread prevents the closure of the fistulous orifice in the cheek; and, when the thread is removed, that orifice remains open, and resists all endeavours to close by means of a suture, if the anterior portion, previously formed and maintained for a time by the seton, should contract and close, as generally happens under the circumstances. The principle that we must follow is to succeed in obliterating the fistula in the cheek during the period that the saliva is being conducted into the mouth by the artificial aid of a seton, and not after the seton is withdrawn; for this conduction of the saliva once more along its proper course is the essential condition for the obliteration of the fistula. To apply this principle, care must be taken that the artificial anterior part of the duct is not only permeable when the fistula in the cheek is sutured, but is also kept open by artificial means as long as the sutured fistulous orifice remains imperfectly closed. From this point of view, Duphœnix's cannula seems to me, *a priori*, superior to Desault's seton, and even to the method of Deguise; but I repeat that my aim is not to criticise in detail facts already known.

A case of salivary fistula has recently been under my care, where, from its very nature, I have been able to carry out the above principles; and this after a method differing in certain respects from any hitherto adopted. The method I have originated seems to me worthy of the attention of the profession, because it may, if I am not mistaken, be practised in almost all cases of salivary fistula, and because it has, over the other methods known to me, the double advantage of being simple and easily tolerated by the tissues involved in the operation.

Alfred Weber, aged 42, stoker, was admitted at St. Louis Hospital, ward St. Augustin, No. 22 in August 1881, when I was in charge of Dr. Le Dentu's patients. This man had been shot through the right cheek twenty-five years previously; the wound had practically healed, as they can only be parted to the extent of one millimetre; the wound is situated in very hard tissue, over a broken tooth, and a well-healed wound without excision. For the last two years, the wound had been perfect, and the idea of an operation with the principle of the starch or of Rizoli, to mobilise the jaws, was abandoned.

The patient entered the hospital for the cure of a salivary fistula of Stenson's duct, which was, like the wound, the result of the shot wound, and which had its seat on the anterior part of the duct, about the middle of the parotid gland. The communication of the duct with the buccal cavity was established by a suture, and the saliva was conducted into the mouth by the artificial aid of a seton, which was introduced into the duct, and passed through the fistulous orifice, and out of the mouth by the

orifice of the abscess. As long as the latter was kept open by a thread or by a drainage tube, the abnormal orifice of the duct remained closed; but when the abscess was allowed to heal, then the fistula immediately reopened, and allowed the parotid saliva to escape. The patient had often been subjected to these vicissitudes, and he had come to beg us to put an end to this unpleasant condition of affairs. When admitted, the fistula itself was closed, and at its site there remained a small scar, slightly depressed and of solid consistence; three centimètres, almost vertically, below the scar, was the orifice of an abscess, and a little more in advance, on the surface of the buccinator, was a second orifice similar to the first; both these orifices of the abscess were made a few weeks before admission by a surgeon, they were connected by a drainage tube, and the patient knows by experience that, if the tube were removed and the abscess left to heal, the fistula would open again. The saliva flowed abundantly, particularly after meals, through the anterior orifice of the abscess, on a level with the buccinator. In fact the posterior part of Stenson's duct discharged its saliva, no longer through an abnormal orifice on the duct, but into the cavity of the abscess, which formed, as it were, an ampullary enlargement of the duct; and the saliva escaped on the outside by the anterior opening of this enlargement, which lay in a better position for the discharge of saliva, than did the posterior opening.

In considering the anterior orifice of the abscess as the real fistula to be healed, I felt that my task had become relatively simplified. That orifice lay on a level with the buccinator, and I could penetrate into the mouth by a short and direct incision. I therefore proposed the following plan of operation. Firstly, a trocar was to be plunged through the anterior orifice of the abscess alongside of the drainage-tube, and brought out on the surface of the buccal mucous membrane at the site of the normal orifice of Stenson's duct. Then, with the help of the cannula, I intended to pass one end of an India-rubber tube, fastening the other end to the drainage-tube previously inserted into the abscess. On pulling the old tube backwards, the extremity of the new tube could be brought out of the posterior orifice of the abscess. The new India-rubber tube would then occupy the newly formed canal and the abscess to its full extent, leaving the fistula free from any foreign body. I next proposed to close the fistula by a stitch of suture, as soon as the saliva had begun to flow regularly and freely into the mouth. The new India-rubber tube would then be removed, so that the posterior orifice of the abscess alone remained open; its closure would be the last stage of the proceeding, and not likely to be difficult, because any wound communicating with Stenson's duct would readily heal when no obstruction remained to the regular discharge of the saliva.

In attempting to re-establish the salivary channel by a drainage-tube, I could not anticipate with certainty that this means would be sufficient; but I deemed it expedient to attempt a method very simple in its execution, and which the tissues could easily tolerate: such was the double motive which, *à priori*, diverted me from the other methods recommended by Duphenix, Deguise, and Béclard. I am going to relate now the result which attended this operation.

The operation was performed on August 25th. I perforated the cheek with a hydrocele trocar; I then inserted the tube in the proposed method, and, at the same time, sutured the fistula. Some swelling and slight pain came on a few days later; carbolic acid injections were administered through the tube; but the suture broke down, and the saliva began to flow through the fistula again.

This first failure seemed to me easily explained: the inflammatory swelling after operation compressed the drainage-tube, and the saliva, unable to flow through it or around it, found its way again through the fistula. I then proposed to insert a larger tube; pierced it with a greater number of holes; and I determined to undertake the operation patiently in two stages at different periods, so as first to insure the patency of the canal by organising the new passage, and only attempting the obliteration of the fistula after the canal had become perfectly pervious.

I waited until the inflammatory swelling had passed, and soon the drainage-tube, that I had inserted on August 25th, could once more slide freely amidst the tissues; then I substituted for it, on September 3rd, a tube much larger and provided with a greater number of holes. At the same time, I perceived that the fistula had become contracted—a proof that the presence of the first tube had already partly deviated the course of the saliva, although the patient himself could give no precise indication in this respect. For an instant I was led to believe that, with the new tube, one or two cauterisations with nitrate of silver would be sufficient to obliterate the fistula.

Things were then left *in statu quo* until the middle of September. During that fortnight, the saliva continued to flow through the abnormal orifice, especially after meals. But some of it ran also into the

mouth, as the patient began to notice; and, after each meal, he pressed the cheek from behind forwards, so as to force the saliva towards the buccal cavity. Ere long, the parotid secretion, through this practice, on the part of the patient, flowed chiefly through the new channel, and the fistula became almost dry. Thus, I had reason to believe that, after all, the India-rubber tube would be sufficient to re-establish the salivary passage, and that I was not far from attaining my object.

I inserted the suture on September 17th, carefully applying carbolic dressings. I took great care not to remove the drainage tube; because, as I said in the beginning, the newly-formed salivary passage had to be maintained by artificial means, as long as the cicatrisation of the fistula remained incomplete.

On September 24th, I removed the suture. The fistula was closed, nothing flowed to the outside. The patient, however, continued to squeeze the cheek, which favoured the course of the saliva. Finally, in the first week in October, the saliva flowed naturally, and without any difficulty, into the mouth. The scar appearing solid, and the new canal through the cheek well-established, I decided, on October 13th, to take out the drainage-tube.

Only the posterior orifice of the old abscess now remained to heal. As I had foreseen, it soon closed almost spontaneously; and on October 17th, the cure was perfect. The patient was kept under observation till the 22nd, and he then left for the Convalescent Hospital at Vincennes.

Briefly, I may recapitulate the steps of the operation thus: Following classical authors, I created an internal salivary fistula by maintaining a foreign body in the tissues. I employed for that purpose an India-rubber tube, as being easy to put in place, and easily tolerated by the patient. Moreover, I took advantage of a special feature in the case to let the posterior extremity of the drain come out of an abnormal orifice situate behind the course of the saliva. This afforded me the opportunity of leaving the fistula free, whilst the canal in the cheek began to form itself; then obliterating this fistula in due time, and finally maintaining the artificial canalisation during the time necessary for the consolidation of the cicatrix. If I was somewhat delayed, it was because I had not determined on a sufficiently clear course from the beginning, and I had not conceived at first, in its successive stages, the method which ultimately proved successful.

I believe that there would be an advantage in employing in most salivary fistulae of Stenson's duct, as the only dressing, a drainage-tube; and, moreover, in following as matter of principle the method I conceived, which was inspired by the presence of an abscess, and bearing a posterior as well as an anterior orifice. The operation may be summarised as follows:—

1. Plunge a trocar backwards through the fistula, and bring it out through the surface of the cheek, so as to create a posterior orifice situated out of the course of the saliva. Insert a provisional seton in place of the trocar.

2. Perforate the cheek obliquely forward through the fistula, and insert an India-rubber tube, the anterior extremity of which issues through the mouth.

3. Fasten the posterior extremity of the tube to the provisional seton-thread, and let it come out by the newly created orifice, so that a loop of rubber tubing shall fall behind the fistula, but not in contact with it.

4. Close the fistula by suture. Before the suture is formed, it is necessary that the inflammatory swelling excited by the tube be reduced, and that the saliva should flow into the mouth with comparative ease. After suture, wait until the course of the saliva is perfectly free, in the right direction, and the cicatrisation of the fistula perfectly solid, before the tube is removed.

In this method there are two new points—the use of a rubber tube and the formation of a posterior orifice. These are the advantages I have found. Nothing is so easy as to pass a drain in the way I have described. The cannula of Duphenix, the wire of Deguise and Béclard cannot be so well borne, neither are they of so ready an application. Admitting the tube as the only instrument for dressing, how should it be used? To pass it simply from the mouth to the fistula, is simply to establish the unfavourable condition I have noticed in the beginning of this paper, when criticising the Monro method. It is impossible to obliterate the fistula without first removing the seton. It follows that the saliva, in the presence of a canal of recent formation and of a sutured wound as yet imperfectly healed, is as likely to force the wound as follow the new channel. If, on the other hand, the rubber loop leaves the fistula free, and passes behind it to reach a posterior orifice, it follows that the more the new channel becomes expanded and pervious, the more the fistula will cease to transmit saliva, and will tend to become obliterated. After allowing the seton time to permanently establish the new passage, nothing is left but to close the fistula, itself almost ready

we heard this, we sent scouts out to look for the other party, and all set to with a will to cut down all the mimosas and kittar-bushes in the neighbourhood. When we had dragged these in, and formed a strong zareeba, through which no enemy could get—for we fully expected an attack—the other party arrived safely. We then held a council of war, and determined to go in quest of poor Mahomet, and attack the marauders if we could find them. I got my bandages, etc., ready at once, and four of us armed ourselves with rifles and revolvers, and put six rifles into the hands of natives that we could depend on, gave four more a revolver each, and took fifteen of the Basé with us, promising them good backsheesh for every one they killed; they, of course, had their native weapons, the assegais and shield. We mounted our horses, and off we started. At last, we came upon the scene of the late unfortunate encounter, and searched high and low for Mahomet and his assailants, until darkness came on, but without success. We then returned to camp. Next morning, we determined to retreat into the Basé country, fearing that hundreds of these savage border-tribes might swoop down on our camp for the sake of plunder; and we knew that we should only be able to muster about twenty in the whole camp who would fight; the other fifty would run away, we were sure. We had just decided to go once more in search of Mahomet, when there was a great cry of Doctor! Doctor! and every one rushed to one side of the camp, rifle in hand. I stopped to get my rifle also, thinking that now we were in for it, and that we were about to be attacked. But what a pitiful sight met my gaze; there was poor Mahomet supporting a mass of his intestines, and this was his account of himself.

When the camel-boy had left him, he sat exhausted under a tree for some time, and then walked for a time, and in this way made his way on towards the camp until night came on; he then sat under a tree, and remained there all night, expecting every moment that some wild beast would come and tear him to pieces. He both saw and heard us pass as we returned from our search, but could not make himself heard; and next morning he managed to crawl into camp.

On examination, I found him suffering from an incised wound (made with the point of an assegai), about an inch in length, and about an inch below the umbilicus, through which protruded a large mass of intestine covered with sand. I soon gave him some beef-tea and brandy, and washed off as much of the sand as I could. Some was so adherent on the dried intestine (which by this time had a very claret-coloured appearance), that I could not pick it off, for fear of picking a hole in the intestine; and, as I was certain he must in any case die, I contented myself with washing it; and, as I could not return it without enlarging the opening, I did so on a director with a blunt-pointed bistoury, sewed up the wound, and was proceeding to bandage him up, when I found two other flesh-wounds near the spine in the lumbar region, and also one through the fleshy part of the arm. I put sutures in these, bandaged him up, put him on an angarep covered over with palm-leaves, and on this he was carried to the next camp; beef-tea and brandy being administered every half-hour *en route*. At 6 A.M. next day, I was called to him, as he could not pass urine. I used the catheter; but he died at 9 A.M., never having recovered from the state of collapse in which I first saw him. He died about thirty-six hours after he was wounded.

About a fortnight afterwards, we found ourselves once more amongst the Bemiamir Arabs, some of the party having made a map of the Basé country through which we passed. During my previous visit, I had performed many minor operations, and had attended to two or three hundred patients. Now, several came to me, thanking me; and some would give me a goat, a sheep, or a skin of milk; one a spear, a shield, or an Arab knife. I might write a great deal more about this journey, but I fear that "the exuberance of my own verbosity" may be too much for the JOURNAL. We went from here to the Settile—a large flowing river—where we encamped amongst the Hamram (or sword-hunting) Arabs for about a fortnight, and then made our way on to Kerin, through the Auseba valley to Massowah, and from there to Suez, Cairo, and Alexandria, returning through Venice home.

I had nearly forgotten to relate how parturition is managed amongst the Bemiamir Arabs, the particulars of which I gleaned from the Sheikh, who is the possessor of four or five wives and a host of children. He very good-naturedly offered me four wives if I would remain amongst them for two or three years; but this very tempting offer I declined. When a woman is in labour, she is attended to by some knowing old woman (they would rather die than let a man come near them). Should the labour be protracted, a rope is put under each arm and attached to a piece of wood overhead. On this rope she presses each time she has a pain; and in this standing position she is delivered. I asked, "How do you manage, supposing the child is in such a position as to require instrumental interference?" "Well, then," he said, "we can do nothing, and she has to die." Should she suffer from flood-

ing, she is put to sit in hot water for ten minutes; and then a bandage is wound round her several times as tightly as it can be put; a decoction is then given her to drink, made from tamarinds and the leaves of some tree, the name of which I was unable to ascertain; and, if she live, she is not allowed to taste water for seven days, but has nothing but warm milk. The Abyssinian mode of conducting labour is also curious. The woman lies on her back: two stones are pushed under her buttocks; two women grasp her legs; and, just when the child is entering the world, a tray full of flour is put under to receive it.

I do not suppose anyone will be likely to visit the Egyptian Soudan just now; but when all this trouble is over, doubtless there will be found gentlemen—who prefer a life of travel and adventure, who are fond of sport and scientific research—who are obliged for their health's sake to winter in some more genial clime than England. But to make such an expedition as ours, surrounded as we were by every comfort, requires a very long purse, and it certainly is more enjoyable than roughing it. I spent twelve months in the Turkish army, during the late war—not sent out by the Stafford House Committee—and I know what is the most agreeable mode of travelling. I consider the journey I have just made eminently suitable to a man of a phthisical tendency, and endowed with a plethora of riches, which he should not be afraid of parting with. The air is warm and dry, and rarely are the nights uncomfortably hot, but are for the most part very pleasant and cool. During our journey across the Desert, the thermometer registered, in the middle of December, 82° Fahr. in the shade. We generally took the temperature about 1 or 2 P.M. daily. The heat gradually increased to 90° and 92° by the end of December. During the first few nights we had heavy dew, but as we slept in tents and could shut them up, this mattered little to us. We found two blankets and a quilt were not too much for us. During January, the daily temperature at the same hour was 90° to 92° Fahr. in the shade; but the nights at Cassala were much warmer, and we often found a sheet and blanket quite sufficient. During February, whilst travelling in the Basé country, temperature 90° to 95° in the shade, and frequently in the night as low as 37°. During March, travelling in the Basé country to the Bemiamir Arabs, and from there to the Basé Settile, 97° to 102°. April, travelling amongst the Hamram Arabs on the Settile and on to Massowah, 98° to 105° and 106°. During March and April, the nights were much warmer, but still very comfortable. When we reached Massowah, and got on board a steamer, we ceased taking the temperature.

Except whilst crossing the Desert, we could generally manage to get a bath night and morning. Our meals were always at regular hours—7 A.M. and 2 and 7 P.M.; we retired to rest at 10 P.M., and arose about 6.30 or 7 A.M.; and all of us returned to England heavier, and looking the picture of health. I gained eight pounds in weight, and have possibly prolonged my life by ten years. One of our expedition has not wintered in England during the past seven or eight years, he having a somewhat delicate chest. He has been out in the Soudan two or three times, and finds it suits him better than anywhere else he has visited.

A CASE OF HÆMOPHILIA.

By C. R. FRANCIS, M.B.,

Surgeon-General Indian Army (retired).

J. P., Quartermaster-Sergeant in the —th European regiment, a steady man, unmarried, was about to proceed on furlough, in 1859, to England, under a new regulation made for the benefit of non-commissioned officers of good character; but he did not get beyond Calcutta. Unfortunately, being mixed up in a drinking bout with some former comrades—even the best soldiers will sometimes lose their heads when out for a holiday—he received a blow in the face, from which he nearly, it was said, bled to death. After being on the sick-list for several days, he was sent back to his regiment, of which I was then in medical charge, at Lucknow.

When I was conversing, one day, with J. P. about his misfortune, he told me that he once, when in England, went to a chemist's to have a tooth drawn, and that he did not leave the house for two days. Uncontrollable bleeding followed the extraction, and it only ceased when the chemist restored the tooth to its place—a natural mode of plugging which might have been resorted to earlier.

I became, of course, much interested in the serjeant, and told him to let me know at once if ever he should be unwell. One morning, I was hastily summoned to his quarters, the messenger stating that he was bleeding from the nose, and that it would not stop. Dr. C., another regimental surgeon, who happened to be present, and myself, went at once together. J. P.'s face was much disfigured. He said that he had fallen over a well the previous night in the dark; that his

nose began to bleed, and that it had continued bleeding ever since, in spite of a variety of remedies that had been applied. Knowing his history, I felt that the posterior nares had better be plugged forthwith, which was accordingly done; when the hæmorrhage ceased.

Some time afterwards, I was again hurriedly sent for to see J. P., who was bleeding, it was said, from the lungs. I had been visiting him daily for a week on account of an attack of bronchial catarrh, with cough and expectoration. I had made a point of endeavouring to keep the cough within bounds, feeling certain that if it increased in severity, and the sputa became tinged with blood—as one sees sometimes where the fits of coughing in such cases are violent—the hæmorrhagic diathesis would display itself. And so it happened. Shortly before I arrived the expectoration was tinged, and I was at once summoned. When the poor sergeant saw me, he exclaimed, "Ah! doctor, its all over with me now". I replied, "Not so; but you must come out of this hot place". He was lying on a couch in a small room in his quarters, surrounded by his friends, who had begun to crowd about him. Although it was midnight in November, the air was not, however, unpleasantly cold. I had him placed in an easy chair outside in front of his quarters, and dispersed the crowd. The further development of the hæmorrhagic diathesis was, I felt, a greater evil than the possible aggravation of his bronchial attack. The bleeding was not severe, but came continuously and uninterruptedly oozing forth. It was evidently checked somewhat by the colder atmosphere; but further steps were required to stop it altogether. I was unwilling to incur any greater risk by covering the chest with ice, and preferred trying the effect of a powerful astringent, internally. I therefore gave twenty grains of acetate of lead in a wine-glassful of vinegar and water; and, in a couple of hours, gave ten grains more. This was enough. The bleeding, which nearly ceased after the first dose, did so altogether after the second. J. P. made a good recovery in every way. I saw him occasionally for about a year afterwards. The regiment—one of those that objected to be transferred, after the mutiny, from the East India Company to the Crown without further bounty—was broken up, and I lost sight of him. I had cautioned him that, living as he did on the brink of a precipice, he should be especially careful of himself in certain ways that I indicated, and I believe that he was so.

Remarks.—There was no evidence of hereditary transmission in this case, at least the patient himself was not aware of it. His natural health was good. There was no tendency to swelling of joints. There is said to be a marked deficiency of fibrin in the blood, with an excess of red corpuscles, in hæmophilia—a condition that would be favourable to continued bleeding from slight traumatic causes. In India we see this condition in bites from snakes—from some kinds more than from others—hence to apply leeches to, or to scarify swellings in such cases is not desirable. It is met with also in those who indulge too freely in alcohol. Fibrin being diminished, the cohesive property of the blood would be diminished also. But, is this the pathology of hæmophilia in every case? As has been observed in professional circles, this disease, ten years ago, had no place in the Nomenclature of Diseases prepared by the College of Physicians. If the constitution of the blood be the same in all cases, a plan of treatment, dietetic and otherwise, might be adopted with advantage. The subject is doubtless worthy of fuller investigation than, so far as I know, it has yet received. I venture to think that, as far as possible, an albuminoid diet would be the best; with total abstinence from alcohol as a beverage, and the less liquid of any kind the better. As a matter of course, all risk of incurring traumatic injury should be avoided. He in whom the diathesis exists, should become, if not already, a Nazarite. In the event of a cold with cough, being caught, the latter should be kept well under control, and checked as soon as may be. Straining at stool is hazardous, as blood then sometimes oozes forth, a drop or two appearing in the evacuations. Hence the paramount importance of living within rigid regularity, and of all the functions of the body being properly performed.

I do not know whether any fatal cases of hæmophilia have been recorded. It is probably more troublesome than dangerous, when the bleeding is on the surface. If from a cavity like the lungs it would naturally cause anxiety. It is fortunate when the tendency is known; and in such cases early treatment is essential. In delicate constitutions serious results might be the consequence of neglect in this respect, especially in the case of children. I am not sure that a child, who was treated in my student days for hydrocephalus on the severe antiphlogistic plan, and who died from uncontrolled hæmorrhage from loose bites on the temples, was not the victim of hæmophilia and want of proper care combined.

I have never seen a case in a native in India.

INTRA-UTERINE FIBROID POLYPUS.

By PERCY BOULTON, M.D., M.R.C.P. Lond.,

Physician to the Samaritan Free and Queen Charlotte's Hospitals.

THE following interesting case of fibroid tumour of the uterus was recently under my care at the Dorset House branch of the Samaritan Hospital.

Mrs. C., aged 43, came up from the country on Friday, December 2nd, 1881. On Saturday, when I first saw her, it was evident that she was in a most exhausted condition from the great loss of blood, which had continued for five years. I thought it prudent to keep her quiet in bed till Monday, and to give restoratives, intending, if necessary, to plug the vagina in the meantime. On Sunday I went to see her, and it was evident that, if her life was to be saved, there was not a moment to be lost. It happened that on that day one of my colleagues and two other medical friends were to lunch with me, and, consequently, I was able to get at once such assistance as I required. After administering some stimulant, I had the patient carried on to the operating-table, and, chloroform having been administered, I was able to make out that the brim of the pelvis was completely blocked by a fibroid mass, of the size of a large cocoa-nut; that it was free along the front, and right side of the uterus, but very broadly attached along most of the back and left side. The os was widely dilated, and could not be felt.

It was clear that to make room for enucleation, the first thing to do was to get the wire *écraseur* round the free portion, and slice off as much as possible. Practically, it was like a case of labour delayed at the brim, first on account of disproportion, and, secondly, from attachments above. I always use an *écraseur*, armed with piano-wire noose; it is easy to get over a tumour like this, where there is little space, and firm enough to direct when got over, and it rarely breaks. At one slice I removed about half the tumour, and was then able to feel beyond the brim what did not seem very assuring for the success of the operation—that the mass still remaining was firmly attached everywhere, and the cervix so involved, that it was impossible to make out what was tumour and what uterus.

The loss at this part of the operation, though slight, was at once indicated by failure of the pulse; and, while my friends gave brandy, I again got the wire of the *écraseur* just over the edge of the stump of the tumour, and tightened it to act as a tourniquet during the rest of the operation. The patient at once rallied again, and I commenced enucleation; but it was not till I had persevered for a considerable time that I was able to separate with my finger-nail a point between the tumour and the uterus below. Once started, and certain of the line of separation, I speedily enucleated quite up to the fundus, at which point there was a band of union, about an inch and a half in diameter, as tough as leather, and on which I could make no impression. I therefore drew the mass down, slipped the *écraseur*, already on the tumour, round this neck, and slowly removed the whole of the second half. There was scarcely any further bleeding; so, after syringing out the uterus with iodine and water, I plugged the vagina with glycerine and iodine plugs, and had the patient put to bed. The urine was drawn regularly, and milk and brandy given at short intervals.

The patient rallied well. The day after the operation all plugs were removed from the vagina, and the uterus syringed out daily with iodine and water. Mrs. C. went on admirably for some days; but on the 7th the temperature went up to 103°, and for a few days I was kept very anxious by what was evidently slight septicæmia from the suppurating stump. I had to supplement the nourishment taken by the mouth with nutritive enemata, and keep the uterus frequently washed out with iodine and water. At the end of another week the patient was convalescing, and she returned home in January quite well.

A NEW ANTISCORBUTIC.—A new antiscorbutic called "amchur" is being introduced, we hear, among our native soldiers in India, and promises, it is said, to be an excellent substitute for lime-juice, to which it is greatly preferred by the men, who have long used a similar compound as a condiment. It is made from green mangoes, which are skinned, stoned, cut into pieces, and dried in the sun. Dr. Clarke, Deputy Surgeon-General on the Eastern Frontier District, reports that amchur not only maintains the digestive energy of the men, but that its use among troops, where neither a variety of food nor vegetables are obtainable, commends itself strongly as a result of practical experiment to the military authorities. One ration should be half an ounce, which would be an equivalent for an ounce of good lime-juice.

BRITISH MEDICAL ASSOCIATION.

FIFTIETH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

THE SELF-LIMITED DURATION OF PULMONARY PHTHISIS.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By AUSTIN FLINT, M.D., LL.D.,

Professor of the Principles and Practice of Medicine and Clinical Medicine,
Bellevue Hospital, New York.

My object in this paper is to show that pulmonary phthisis may have a self-limited duration; that, in a certain proportion of cases, this disease ends favourably, irrespective of any appreciable extrinsic agencies, recovery taking place, provided the nature and extent of the local lesions be not such as to render them either irreparable or innocuous. If the doctrine of self-limitation as applied to phthisis be not entirely new, it has, at all events, received as yet very little consideration in medical literature and in medical practice. If the doctrine in this application be true, it has important pathological and practical bearings, to some of which I shall briefly advert.

How is self-limitation to be proved as applied to phthisis or to any other disease? Facts pertaining to morbid anatomy and to therapeutics may render the application of the doctrine probable; but, evidently, positive and complete proof can only be afforded by a collection of cases in which the disease pursued its course without active interference in the way of treatment, either medicinal or hygienic, and without notable changes in habits of life, or in any of the conditions under which the patients were situated when the disease became developed. For obvious reasons these requirements for absolute proof are not easily obtained in cases of a disease like pulmonary phthisis. Yet cases involving these requirements occasionally come under medical observation. The hopeful mental state which generally accompanies phthisis sometimes lead patients to trust altogether to nature for restoration to health, and to continue their usual manner of living without any alteration. Some patients do this from a conviction that they have not a malady of sufficient consequence to claim attention, beyond, perhaps, palliative remedies; and some from circumstances which render it difficult to do otherwise. Again, there are phthisical patients who do nothing in the way of either therapeutics or hygiene from a thorough scepticism as to the advantage of doing anything.

In 1858, I had collected a considerable number of histories of cases of phthisis, recorded during the preceding twenty years of medical practice, and I was led to examine the collection for those cases in which there had been an arrest of the disease. Twenty-four cases were in this category. The histories of these twenty-four cases were analysed with reference to points of agreement in the management; I assumed that in the points of agreement must lie the means by which the disease had been arrested, provided these points of agreement were not equally common in other cases in which the disease was not arrested. A striking result of this analytical study was, that in a few cases no appreciable influences, either of medication, diet, or regimen, had been brought to bear on the disease; the patients took no active remedies, and continued unchanged the same habits of living as before the development of the disease. It seemed a logical inference that in these cases the disease was not arrested, but that the recovery was owing to an intrinsic tendency thereto. An abridged account of the histories of these twenty-four cases was embraced in a report published in the *American Journal of Medical Sciences*, January 1858.

In 1863, I had accumulated additional cases. The number amounted to sixty-two. These cases were studied analytically in the same way as those analysed in 1858. In seven cases, no medicinal or hygienic measures of management were employed. The recovery in four of these cases was complete. In three cases good general health had been regained and maintained for a long period, some cough and expectoration remaining. An abstract of the histories of the sixty-two cases was published in the *Transactions of the New York Academy of Medicine* for the year 1863.

In 1875 were published, in a work entitled *Phthisis in a Series of Clinical Studies*, the results of an analysis of the histories of all the

cases of phthisis which I had recorded during thirty-four years, the number being 670. Of these 670 cases forty-four ended in recovery. Details of the history of each of the forty-four cases are given in the work sufficiently to render evident the recovery and the correctness of the diagnosis. In addition to these forty-four cases, there were thirty-one cases in which the disease ceased to progress, and remained non-progressive for at least several months, and in most instances for several years. In these thirty-one cases, the phthisical disease was considered as having ended, complete recovery not taking place in consequence of irreparable lesions. As cases for analytical study with reference to the agencies which may have caused the arrest of the disease, these thirty-one cases of non-progressive phthisis seemed hardly less valuable than the forty-four cases which ended in complete recovery. Adding together the two groups of cases, out of the 670 recorded histories of phthisis, there were seventy-five in which the disease either ended in complete recovery or remained for a long period non-progressive.

Of the forty-four cases ending in recovery, in twenty-three there was no medicinal treatment to which arrest of the disease could be attributed. In several of the twenty-three cases there was no medicinal treatment; in the remainder of the cases, the treatment consisted of simple tonics, palliatives of cough, or remedies to meet some other symptomatic indications. Of the thirty-one cases of non-progression of the phthisical disease without complete recovery, in fifteen there was no medication by which it might be supposed the disease had been controlled, and in several no medicinal treatment whatever. The two groups of cases—namely, those ending in recovery, and those becoming non-progressive without recovery—thus furnished about an equal proportion of those in which medicinal treatment was either wanting, or in no degree curative, the proportion in the first group being twenty-three of forty-four, and in the second group fifteen of thirty-one. In respect of hygienic or non-medicinal treatment, in some cases of both groups there was no change whatever in habits of life or other circumstances. In other cases there were changes involving improved hygienic conditions, but in a considerable number the changes were such that a potential influence could not be attributed to them. It is probably correct to say that the changes may have favoured the recovery or the non-progression, but that they were inadequate to arrest the disease. In my work is introduced a condensed history of each of the seventy-five cases, which form the two groups now referred to.

A self-limited duration cannot be inferred from a single case, or from a very few cases, for this reason: the course and termination may have been affected by influences which are extrinsic, but not apparent. In order to obviate liability to error on this score, the number of cases must be sufficient to render it impossible, or vastly improbable, that in all such influences could have been overlooked. It is needless to say that the cases from which the inference of self-limitation is drawn must have been carefully observed and honestly recorded. Another requirement is essential—namely, there must be no room for distrusting the accuracy of the diagnosis. Assuming competency for observation and veracity, the diagnosis in each of the seventy-five cases is attested by the recorded histories, and it will be admitted that the number of cases is sufficiently large for the exclusion of error on the score of unrecognised extrinsic influences. The number of cases might be increased by the addition of those which have come under observation since 1875. This seems to me needless with a view to strengthen the conclusion respecting self-limitation. I therefore submit, as substantiated by the clinical facts which I have cited, the following proposition—Pulmonary phthisis, in a certain proportion of cases, has a self-limited duration, the disease ceasing to exist after more or less progress of the local affection, all symptoms referable to the lungs disappearing, and recovery, as regards the general health, being complete. The disease is also self-limited in a certain proportion of cases in which lesions remain, giving rise to more or less of cough and expectoration, the persistence of these lesions not being incompatible with good general health and long duration of life.

It is an interesting fact that self-limitation is exemplified in the majority of the fatal cases of phthisis. As is well known, the disease, as a rule, advances not by a continuous progress, but by a series of successive invasions, separated by variable intervals. After each invasion, or, as it has been termed, tuberculous eruption, there is a temporary self-limitation of the disease. I will not venture on a discussion of the question whether this fact be sufficiently explained by the statement that each eruption of tubercles for a time exhausts the tuberculous cachexia, or whether the fact be owing to the production of successive broods of the bacilli tubercule. It suffices to state the clinical fact. The fact suggests a capital object in the treatment, namely, prevention of a renewed invasion. The continuous advancement of the disease, as an exception to the rule, is the pathological

feature of the so-called "galloping consumption," or phthisis florida.

In the cases ending favourably, which have been referred to as furnishing proof of a self-limited duration, the diagnostic symptoms and physical signs were so well marked, as to leave no room for doubt as to the existence of phthisis. From cases which have come under my observation, I have been led to believe that not very unfrequently phthisis ends by self-limitation without having advanced far enough for the diagnosis to be considered as positive. A patient has had for some time a slight cough, either dry or with a scanty expectoration; there has been some loss in weight, and the body heat is somewhat raised, with, perhaps, spitting of blood. These symptoms, taken in connection with the age of the patient, and, it may be, grounds for suspecting a congenital predisposition, point to a tuberculous affection. But examinations of the chest in such a case may fail to reveal distinct physical signs. Very likely the problem, as regards the physical diagnosis, is to determine whether at the summit of the chest on the right side there are abnormal signs, or only the normal points of disparity between the two sides. There may be found only a subcrepitant *râle*, or slight pleuritic rubbing, or an interrupted respiratory murmur at the summit on one side, without conclusive evidence of tuberculous solidification. Under these circumstances, the physician either commits his judgment to a diagnosis of incipient phthisis, or, as is more probable, he reserves an opinion for further developments. After a short time all the pulmonary and general symptoms disappear. Now, if incipient phthisis have been diagnosed, the physician concludes that the diagnosis was erroneous. He feels obliged so to conclude, in consequence of the common belief that phthisis does not thus commence and end from self-limitation. But it is highly probable that the diagnosis was correct. Phthisis existed and ended in its incipency. It would be proper enough to distinguish these as cases of abortive phthisis. If I mistake not, all medical observers of much experience will admit that the foregoing sketch represents a class of cases not extremely rare. That they are not very rare is a fair inference from the frequency with which the traces of an old abortive phthisical affection are found in bodies dead with other diseases than phthisis.

A topic of practical importance is the bearing of self-limitation on the prognosis in individual cases of phthisis. The analytical study of my collection of cases showed that, as a rule, in those which ended favourably from an intrinsic tendency, the tuberculous affection was moderate or small in amount, but that there are exceptions to this rule. All observers of much experience will agree that the prognosis in cases of phthisis is to be based more on the general condition of the patient than on the local symptoms and signs. To consider the elements of prognosis would be here out of place, even if time permitted. In general terms, the symptoms which denote tolerance of the phthisical affection, are those which indicate a favourable intrinsic tendency, and, on the other hand, pyrexia, progressive loss of weight, frequency of the heart's action, and anorexia, point to an opposite tendency. Of special importance, in a practical view, is the bearing of the doctrine of self-limitation on the conclusions to be drawn from observations respecting the agency of therapeutic and hygienic measures in the treatment of cases of phthisis. How many and various are the remedies which have been supposed to have been sometimes curative in cases of this disease! Instances of their apparent curative power have been attested by honest observers. Making the fullest allowance for errors in diagnosis, I cannot doubt the credibility of more or less of these cases. Recovery has taken place under the employment of divers remedies; yet these remedies have so generally failed that, for the most part, they are now obsolete. The explanation of their apparent efficacy is to be found in the doctrine of self-limitation. The disease ended favourably, not from a specific influence of the remedies, but from an intrinsic tendency. This is not saying that the remedies may not have been, to a greater or less extent, serviceable. It may be laid down as a principle, however, that, when ever experience has seemed to show success from treatment by a variety of remedies the efficient cause lies in the disease itself. This principle becomes more evident the more we become acquainted with the natural history of diseases. To accept this principle is not to disparage the value of treatment. In certain cases of phthisis, as of other diseases, the disease may be cured by a variety of means, and, as a result, the disease may be cured, in spite of measures which are not curative. On the other hand, when the disease is advanced, treatment is not likely to prove of much service. The conclusions respecting the curative value of treatment, therefore, must be based on this factor. The extent to which the disease may be cured, in some cases, is considerable, in some moderate.

The doctrine of self-limitation bears on the climatic and other measures entering into the hygienic treatment of cases of phthisis with not less force than on the employment of drugs. As regards climate, is there a practical theorem more perplexing to the practitioner of medicine than that of selecting the best resorts for phthisical patients, provided the selection be made on the basis of an impartial consideration of the reported results of climatic agencies in different situations? Underlying the exaggerations on the one hand, and on the other hand the depreciations of particular climatic resorts, founded on the different results in a few cases, is the factor of unknown power, self-limitation, the existence of which is generally ignored. Here is the explanation, at least in part, of the discrepancies of testimony concerning the results of climatic influences in different situations.

The extent of influence attributable to self-limitation in phthisis is by no means as yet ascertained. There is ample room for observations bearing on this point of inquiry. Impressed with the importance of clinical studies having this direction, I cannot forbear the remark that they promise more in the way of practical utility than has hitherto been derived from the discussion of the histologico-pathological questions which, of late years, have engrossed so much attention and occupied so large a space in medical literature.

THE CONTAGION OF PHTHISIS.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By C. THEODORE WILLIAMS, M.A., M.D., F.R.C.P.,
Physician to the Hospital for Consumption, Brompton.

THE discovery of the tubercle bacillus by Koch, and the highly interesting series of experiments which led up to it, have naturally caused us to review phthisis in its various aspects, and especially in that which relates to contagion.

How far consumption is infectious, is a question which has been under discussion for centuries, and on which great difference of opinion has prevailed, and still prevails, in various countries, the north of Europe holding, as a rule, its non-contagiousness, and the south its contagiousness.

The chief difficulty lies in the fact that many of the most potent agents of causation in phthisis, such as dampness of soil, bad ventilation, and deficient food, are also conditions which would promote the multiplication of low organisms; and, on the other hand, heredity, which is the source of a large amount of phthisis, cannot be reconciled in its action with the bacillus theory: for, if a man had strongly inherited phthisis in his tissues, are we to believe the bacilli have been transmitted in the seminal fluid of his father? How can we account for the cases where the parents, having died of consumption, the children are necessarily attacked on arriving at a certain age, with a severe type of the disease? And, moreover, there are several instances—of which one striking one is present to my mind—where the children, who happened to be scattered in various parts of the world, were yet attacked, and succumbed to the fell disease at about the same age.

The microscope tells us that Koch's bacilli are present in phthisical sputum in fair abundance, as well, of course, as on the walls of cavities, and in tubercle of various kinds. Now, when we consider the number of consumptive people who, being under no restriction, go about coughing and expectorating freely in the streets and parks of London, and remember that this sputum abounds in bacilli, that it dries, and, becoming dust, is wafted about in the atmosphere, and doubtless inhaled by a large proportion of the population, we must admit that the bacilli, though ever present, are not very active in ill-doing, and probably because the soil they enter is not always suitable. The forms of contagion in phthisis which have been most discussed are the following:—1. Infection through breathing the same atmosphere—i.e., infection by inhalation. 2. Infection through marriage. 3. Infection through the milk of diseased animals, or even of phthisical women.

With regard to the prevalence of the first form of infection, it has been held by the contagionists that it is far more common than is supposed, and that many of the so-called cases of hereditary origin are really instances of infection; as, when several sisters die successively from phthisis, the allusion that, given the disease and death of the first, the others probably contracted the disease by inhalation, either when sleeping in the same room, or in tending on the invalid. The greater number of Dr. Musgrave Clay's 111 instances, published in 1879, to which Dr. Wilson Fox has kindly drawn my attention, are examples of this form of contagion, and appear to have arisen from

close attendance. A large number are cases of husband and wife sleeping together, when both the first and second form of infection may be suspected.

The object of this paper is to illustrate the extent of the infection of phthisis by a consideration of the health statistics of the Brompton Hospital resident staff since the opening of the hospital in 1846, and it is the first form of infection that these illustrate.

In the year 1867, the late Dr. Cotton, one of the physicians, and Mr. Vertue Edwards, then the resident medical officer, gave a most complete and interesting report of the health of the residents during the first twenty-one years of the hospital's existence, to which, for the purposes of this paper, a second series, extending over the last fifteen years, has now been added, with the able assistance of Mr. Edwards, of the hospital secretary, and of other members of the resident staff, including the present and past resident medical officers and lady superintendents. The two together form a set of statistics ranging over a period of thirty-six years, and relating to several hundreds of individuals, subjected more or less to contact and association with consumptive patients for periods varying from three months and upwards. No account has been taken of officials and of nurses who were subjected to these influences for less than three consecutive months.

The hospital commenced in 1846 with ninety beds, which, in 1856, was increased to two hundred. In 1873, a temporary utilisation of the ordinary dwelling-houses, which stood on the site of the present fine new building, raised the number of beds to two hundred and forty, which was maintained till 1879, when the temporary wing was closed. At present, there are, again, about two hundred and forty beds in use, funds being as yet wanting to allow the whole number of three hundred and thirty-seven to be maintained. As the present magnificent new building has only been opened a few months, its results will not be included in our statistics.

The ventilation of the hospital is now carried on by extraction, by coils of steam pipes placed in towers in different parts of the building, the air being changed two to three times an hour. There is, in addition, extraction by the fire-places. Admission of air takes place at one wing at the level of the galleries and wards; in the other at the basement—the air being heated in winter before admission. Previous to the introduction of the extraction system, in 1877, the left wing was ventilated most imperfectly, and the impure state of the air showed itself in an outbreak of erysipelas and sore-throat in 1869, and again in 1875. Since 1877, however, the extraction of foul air has been well performed; and, as long as the proper difference of 10° Fahr. between the shaft and the wards is maintained, all goes well; whenever, through accident or other causes, this extraction-rate has been diminished, or, if the difference has been reduced to *nil*, sore-throat has appeared in some of the wards. Three-fourths of the patients are cases of phthisis, in various stages and forms; in many this disease is very advanced, accompanied by pyrexia or large expectoration, or by both. The rest of the patients are instances of other forms of chest-disease—such as pleurisy, empyema, bronchitis, chronic pneumonia, bronchiectasis, and emphysema, or else of diseases of the heart. The spittoons of the patients are changed two or three times a day; but, until lately, unless the odour was unpleasant, no attempt was made to disinfect them.

It seems to me that the above facts are instructive as bearing on the bacillus-question. The deficiency in the ventilation must have led to a large accumulation in the wards of the products of respiration, and also of our friends the bacilli; we consequently ought to have seen an extension of the disease to non-consumptive cases or to the nurses, but nothing of the sort occurred, only the usual results of hospitalism—*i.e.*, erysipelas and sore-throat.

The out-patient department was, until last winter, situated in the old hospital, and was quite insufficient properly to accommodate the large numbers of out-patients attending. The ventilation was exceedingly bad, and communication with the dispensary being made by windows, the air of that department was rendered more impure—a great contrast to the lofty halls and consulting-rooms and convenient dispensary of the present out-patient department. The attendance of two hundred to three hundred out-patients daily, of whom a large proportion were consumptive, must, on the theory of infection, have proved a considerable source of danger to the assistant-physicians, to the clerk who enters their names, and to the porters who marshal them and keep order.

We will now consider the case of the residents.

Resident Medical Officers.—There have been four. All are alive, and tolerably well. Mr. Vertue Edwards held the post for twenty-five years without any symptom of lung-disease, and still enjoys good health. Of the others, two showed, at some time of their residence, signs of hospitalism, but none of definite consumption.

Clinical Assistants.—These are senior students or qualified medical

men, who reside in the hospital for six months, and are engaged in the treatment of patients and the recording of cases. They also assist the pathologist in making the *post mortem* examinations. About 150 have held office since the opening of the hospital; and, of 59, Mr. Edwards reported, in 1867, that 3 had become consumptive; and, of these 59, one more has since contracted the disease. Mr. Edwards states that all were free from phthisical disease during their residence in the hospital. Of the 16 before Mr. Edwards's time, one, who had strong family predisposition, died of phthisis. Of the 75 who have held office since 1867, 1 have traced all but 3; and of these 72, one has died from other causes than phthisis; 2 have died of consumption; in one case the clinical assistant had hæmoptysis previous to residence; and in the other case the disease came on one, if not two years after leaving the hospital, the gentleman being quite well during his term of office. Another, who was overworked, became consumptive while in the hospital, but has since entirely recovered. The remaining 69 are all well, and actively engaged in practice, many of them holding distinguished positions in the profession.

Therefore, of the 150, 8 became consumptive at some time or another of their lives, of whom 5 died; but in only one instance was it clearly proved that the disease was contracted while he resided in the hospital. This is the more remarkable, as it is by no means rare for a clinical assistant, when overworked, to suffer from sore-throat, and other symptoms of hospitalism; but these unfavourable conditions do not appear to produce definite consumptive disease any more than they do so in a general hospital.

Matrons and Lady Superintendents.—Of these there have been 6, none of whom suffered from consumption, and who have generally enjoyed good health. One lady held this post for twenty-four years. All are alive except one, who died at an advanced age.

Nurses and Servants.—The head nurses or sisters sleep in rooms communicating with the wards through the galleries, and during the day their duties bring them constantly into contact with the patients. The assistant nurses sleep in bedrooms above the wards, but practically live in the galleries and wards, being engaged in either day or night nursing.

Among the nurses in residence up to 1867, Mr. Edwards reported one death from apoplexy and one from phthisis, the disease being in this case contracted under conditions of great poverty after she had left the hospital. Since his report, some of these nurses have died—one of cancer aged 52; one of chronic pneumonia, preceded by erysipelas, chronic rheumatic arthritis, and enlarged cervical glands. Three have died of phthisis after leaving the hospital, two of whom were quite free from chest-symptoms while in residence, and were not attacked till many years later; in one case, however, the disease seems to have commenced while she was a nurse, and I will, therefore, give her history. She came to the hospital as housemaid in 1861, aged 23, one sister having died of phthisis. She became a nurse, and married one of the consumptive patients, who died, leaving her with a child. She returned to the hospital, and remained a head nurse till 1874, when, after twelve years' service, she married again and left the hospital, but, being ill-treated by her husband, she separated from him and took to private nursing. She was sent to the Riviera, and caught a severe cold on the journey thither. Tubercular disease developed in full force, and she returned as an in-patient to the Brompton Hospital to die there of hæmoptysis in a few months. She was ascertained to have had consumptive disease during the last years when she was nursing at Brompton, though, considering the family history, and her first marriage, we can hardly draw any definite conclusion from this case, which happens to be the only one in which consumptive disease came on in the hospital among the nurses, and this in a period of thirty-six years. The present head nurse on the Victoria Gallery has lost her father, mother, four brothers and sisters from phthisis. She is now forty-three, and has been eleven years either nurse or head nurse, and enjoys excellent health, though she is indefatigable at her duties. We have had many nurses, residing for periods of ten, fifteen, twenty, twenty-four years, but none of them have suffered from any symptoms of consumption. Since 1867, there have been 101 nurses, 3 of whom have died; 1 was drowned at sea; 1 died of poisoning in Ireland; 1 of phthisis after leaving the hospital, but there is no evidence of her having contracted it there.

The chief duty of the gallery maids is to sweep and scrub the floors of the wards, which occupies them for several hours daily, and other household work takes them among the in-patients. Mr. Edwards mentions one who was in the hospital for fifteen months, had subsequent situations of all work; in the last she fell ill, and, coming back to Brompton as a patient, died of consumption. One died of heart-disease. Of the 32 engaged since 1867, many cannot be traced up to the present time. Some are married and known to be well, and no death has been

ascertained. No case of phthisis occurred among them while in the hospital.

House-porters.—There have been twenty porters, including the gate- and out-patient porters, not all residents. None, as far as we know, have died of phthisis. All, except the gate- and out-patient porters, have duties in the *post mortem* room, and in removing bodies from the wards and from the dead-house. One, who resides in the hospital, has to sew up the bodies after examinations; he came to the hospital a youth, and not in very robust health, about ten years ago, and has, in spite of the unhealthy nature of his duties, developed into a strong, well-knit man. We have not been able to trace the after-fate of all these men, some of whom were but a short time in service; but 5 are ascertained to have since died—1 of apoplexy, 1 of paralysis, 1 after an operation on his throat, and 2 from the results of drink. One of these last was an out-patient porter, the other out-patient porters being alive and well. I lay stress on this, because their duties entirely lie in the waiting-rooms of the out-patients, where they cannot well escape inhaling some of the breath. One gate-porter suffered from chronic pneumonia, which was attributed to his exposure to draughts; and, on his account, the lodge was rebuilt. This man was twenty years in the hospital service, and now enjoys a pension.

Non-residents.—**Secretary and Clerks.**—Of these there have been 9, of whom 3 have been threatened with lung disease, and of these, one went to Madeira, but has apparently recovered since, and the two others seem to be in excellent health. The present secretary has held office for twenty-four years.

Dispensers.—Of these there have been about 22, who have served for periods varying from a few months to many years, 7 have died, one committed suicide, one died of liver disease, 2 of pneumonia, 3 of phthisis; of these last, one became intemperate, left the hospital, and being in wretched circumstances, died of consumption two years after leaving. A second left the hospital well after two years' residence, but after going into business, contracted phthisis and died. In a third the lung disease appeared during the three years he was at the hospital, and he died at Bournemouth, after having been an in-patient at Brompton. One dispenser, who held office for two years, and afterwards went into business on his own account, was admitted as in-patient for phthisis twenty-five years later, and is still living. There were also two dispensers who showed distinct signs of consumptive disease, but entirely recovered, and are now in good health. On the other hand, the senior and second dispenser have held office for twenty and twenty-three years each, and enjoy excellent health. These dispensers have no duties in the wards, but as before mentioned, the overcrowded out-patient department in the old hospital communicated with the dispensary by two windows, and the air of this apartment, already insufficient for the increased number of dispensers, was thus further vitiated. This may be connected with the large mortality in the department.

Chaplain.—Of these there have been 4; one has died of heart disease, the other three have reached considerably advanced ages, not of lung-disease. The present chaplain has been there eight years, and enjoys excellent health. He has no other duties than in the hospital.

Physician and Assistant-Physicians.—There have been 29, of whom 8 have died; but only one of these deaths was from phthisis. Of the 21 survivors, all are apparently well and strong, and none of them are known to have any disease of the lungs—even though some were strongly predisposed to it. The duties of the assistant physicians keep them for many hours at a time in close contact with a large number of consumptive patients, and it is difficult to see how they can avoid, in the course of a careful examination of the chest, inhaling a certain amount of the patient's breath. The physicians are also liable to this danger, but to a less extent, as the number of patients whom they examine is smaller.

There is a small institution called the "Home" in connection with the hospital, where male convicts wait their turn for admission. It is a small building, having 12 or 13 rooms, with no arrangements for artificial ventilation, and contains from 12 to 14 inmates. It has been open about twenty years, and during this period there have been four matrons, all of whom have enjoyed good health, and the present one has resided there thirteen years as matron, after being six years general assistant.

A comparison of the above statistics, furnished by the largest institution for the treatment of consumption in the world, will lead us to infer that the hospital is a safe place for consumptive patients, and that the nature of the duties of the various classes of staff, for such an amount of phthisis, might be carried on in any large institution not specially devoted to consumption, and that, in the case of a large population. We cannot altogether account for the small percentage of this disease by the excellent system of ventilation, as in the case of the "Home," no special advantages of this sort exist, and yet the resident matrons escaped.

When we consider the habits of the lower classes who live in close contact with phthisical members of their families under the depressing influences of poverty and crowding, it is remarkable that in so few cases direct infection is traceable, and this is again an argument against the contagiousness of phthisis.

Dr. R. Thompson, in a paper published in the autumn of 1880, gives as the result of a careful inquiry as to the extent to which phthisis is due to infection, that excluding all cases of hereditary taint, he found among 15,000 consumptives, fifteen instances of wives becoming infected through nursing consumptive husbands.

Dr. R. Thompson describes a particular group of symptoms which characterise those cases in which rapid emaciation and disproportionate pulmonary disease appear to be the chief features; and he cites a case under my care in the hospital, in which, after death, the lungs showed more the appearances of infective pneumonia than of phthisis, though some tubercle was present. He concludes that phthisis is not a zymotic disease, capable of sowing itself and reproducing the same form of disease, with identical signs and symptoms, but rather an ulcerative process, capable of giving rise to pyæmia. He thus opposes the view of similar contagion, which is strongly supported by Musgrave, Clay, and others. Dr. Hermann Weber's cases, recorded in the *Clinical Transactions* (vol. viii, p. 144), prove the possibility of phthisis being communicated from husband to wife, and were interesting, as showing that the fact of pregnancy considerably increased the danger of infection to the wife, and the acuteness of the disease thus generated. According to him, the danger to the husband is comparatively small.

In my own hospital practice, extending over more than fifteen years, I confess I have never, with the exception of the case cited by Dr. R. Thompson, come across an instance referable to infection alone; but I remember a few cases in private practice not characterised by any special group of symptoms, and in all of which the persons attacked had been living a very intimate life with those who affected them. On the other hand, when we bear in mind the far greater number of examples of consumptives living in close intimacy with healthy people, in such relationships as husband and wife, mother and daughter, or sisters sleeping together, where no spread of tubercular disease has taken place, we must admit that the negative evidence against infection greatly preponderates over that of the very few positive instances.

Omitting for the present, on account of lack of time, the question of infection through the milk of diseased animals, I would sum up in the following conclusions.

1. The evidence of large institutions for the treatment of consumption, such as the Brompton Hospital, directly negatives any idea of consumption being a distinctly infective disease, like a zymotic fever.
2. Phthisis is not, in the ordinary sense of the word, an infectious disease; the opportunities for contagion being most numerous, while the examples of its action are exceedingly rare.
3. In the rare instances of contagion through inhalation, the conditions appear to have been—(1) close intimacy with the patient, such as sleeping in the same bed or room; (2) activity of the tubercular process, either in the way of tuberculosis or of excavation; (3) neglect of proper ventilation of the room.
4. In addition to the above, a husband may, though he rarely does so, infect his wife by coition; and this risk is considerably increased in the event of pregnancy.
5. By the adoption of proper hygienic measures, such as good ventilation, and separation of consumptive from healthy people at night, all danger of infection can easily be obviated.

I cannot close this paper without a due acknowledgment of the great help given me in collecting the data by Mr. and Mrs. Verue Edwards, both of whom were long connected with the hospital, as resident medical officer and matron respectively.

Dr. CLIFFORD ALLBUTT (President of the Section) said he was very glad Dr. Austin Flint had favoured the Section with remarks on the natural history of disease, to which he had referred in his opening address. But he thought it was well to remember exactly what was meant by the self-limited duration of phthisis. It was admitted that chronic phthisis, and still more obviously acute phthisis, progressed by bursts; and active patients recovered, whilst in others, not so fortunate, the disease did not subside. That seemed connected with the inner causation of phthisis. But when the cavity broke down, and was spat out into the system, the inner cause was so far at an end that if that occurred outside of the body, and were properly dressed, there would be an end of the process. And it would so remain if organisms could be kept out, and if it were possible, by putting the patient into an antiseptic atmosphere, to keep the organisms from entering the cavity, it was scarcely fair to say that the recovery was not the natural tendency of the disease, and that the treatment was an interference with

the natural history of the disease. What was done by climatic treatment, etc., was merely negative and not positive. Phthisis did not appear to him to be of any great danger in itself, if it were not in such an awkward natural position—the lungs; and if it were possible, by any external means, to prevent the intrusion of the external influences which interfered with the natural history of the disease. Referring to Dr. Williams's paper, he said that it was scarcely correct to speak of the "bacillus theory"; it was the bacillus fact. Whatever the inference that might be drawn from it, the fact was perfectly indisputable, that there was not merely a bacillus, but a peculiar phthisis bacillus, which belonged to the disease, and was not found accidentally. How far this would help in understanding the spread of phthisis was, of course, another thing. But, to take typhoid fever, although it was contagious, there had not yet been found a single case of transference from patients to medical men or nurses in the hospital with which he was connected. Of course, that was very different from typhus fever, in which there was such transference. It was a question, of course, of the life-history of the contagium. Nothing was known of the life-history of the bacillus, or how it passed from person to person. It might be that the bacilli were entertained as hosts, and that they did no harm unless there were an hereditary susceptibility; or it might be that they were breathed without harm, or that they were introduced in some peculiar way at present unknown. But, he thought that the bacillus must be accepted as a fact, and not as a theory, and the question must be dealt with accordingly.

Dr. HENRY BENNET (Weybridge) was much gratified to be able to support the views enunciated by Dr. Austin Flint, which he had already done in his work on the treatment of phthisis. It was a great pleasure to him to see the able New York physician in the flesh, and to join his countrymen and the Association in welcoming him to England. In his youth, long ago, in 1840, he was the resident medical official (*interne*) of the Salpêtrière in Paris, where 3,500 aged infirm women, above 65, were supported and treated. During his year of office he made 300 *post mortem* examinations, and found in about twenty-five cases, indubitable proofs of their having been phthisical at some antecedent period of life; cavities healed with a membranous lining, cretaceous deposits, puckering, adhesions, etc. He presumed that coming from the country, as most of the working classes did in Paris, and in large towns in general, they had flagged, became consumptive and returned home in the country, there to recover under the influence of nature, and the natural limitation of the disease. The late Professor Hughes Bennett, when pathologist in Edinburgh a few years later, made 800 *post mortem* examinations with the same result. Indeed, he believed that all who had had the same opportunities of observation in asylums for the aged, and who had studied the subject, had met with similar cases. These were legitimate illustrations of the natural limitation of the disease. With reference to the contagiousness of phthisis, he was himself a learner, an observer, anxiously waiting for the results of recent researches. He thought, however, that fair grounds existed for the belief that a very vitiated atmosphere, deeply impregnated with the exhalations from phthisical cavities full of pus, might propagate the disease. He had himself seen cases which seem to corroborate such views, but he had never seen any that could support them when there was free ventilation. He remembered a case where a healthy young husband was shut up in a small cabin for four months returning from New Zealand with a wife dying from advanced consumption, and who died a few days after landing. He became phthisical soon after, and subsequently died. In the south of Europe the inhabitants shut the windows at night for fear of malaria, but in cases of lung disease, he believed that they shut them also in the day, which might account for the propagation of the disease amongst relations, and for their conviction that it was a propagated disease. He quite agreed with Dr. Theodore Williams that so far there was no evidence whatever to prove that there was any risk or danger of contracting phthisis whilst attending, nursing, and living with phthisical sufferers, provided that there was free ventilation. This was an important argument to use in favour of ventilation with relatives, and he constantly used it. He had always very much more trouble in persuading relatives to accept proper ventilation than in persuading the invalids themselves.

Dr. C. R. DRYSDALE (London) said he was glad to hear such an experienced observer as Dr. Austin Flint say that the Niemeyer view of pulmonary consumption was fading away from the view of the profession; as it had always been his painful experience that, whilst in the dead-house there were found to be many species of consumption, at the bedside he had found it very difficult to get any clear information which would lead to prognosis or treatment, even from the authorities who were most certain as to the majority of cases being tubercular; and said that "nothing is so dangerous for a phthisical person as to become tuberculous." He himself was a believer in the

unity of pulmonary consumption; and thought that the great problem now was to treat and to prevent phthisis, by climate on the one hand, and by the choice of parents. On the question of contagion of phthisis, Dr. Drysdale believed that the hereditary character of phthisis was inimical to the idea that it was a contagious disease, in any way to be put among the list of contagious or infectious diseases, such as the exanthemata or syphilis. He had, as a general rule, scarcely ever seen any case of phthisis which could be put fairly down to the head of contagious, with the exception of a very few where husbands or wives had succumbed to the disease after the death of their partners. In these cases, of course, the breathing of the same air, often in small rooms and in the same bed, did sometimes seem to cause the disease; and, indeed, similar circumstances, in the case of large bodies of men, such as those formerly seen in the West Indian troops, where the men lived in berths, as on board-ship, in small rooms, had given rise to large outbreaks of acute phthisis, resembling, in many respects, the disease of cows and horses shut up in small ill-ventilated stables, which developed pommelière and glanders.

Dr. BARHAM (Truro) remarked that Laennec enunciated, from the first, the natural limitation of phthisis in distinguishing the healing of the walls of vomice by fibrinous exudation, and contraction or cretification. He pointed out the necessity of making allowance for the ratio of mortality from phthisis in the whole population in estimating the influence of supposed infection in consumption hospitals and private dwellings. He mentioned, as a characteristic instance of the fallacies which might attend the inference of contagion from family communication, that the male population which is seafaring, dies from phthisis only in the proportion of three to ten females of the same families, the latter living almost constantly at home, engaged chiefly in needlework.

Dr. BALFOUR (Edinburgh), stated that it must never be forgotten that there were a pathological phthisis which might also be stethoscopic, and a true clinical phthisis, and that the self-limitation of the disease in many cases, which was so different from what was well known to be too often the ordinary course of the disease, might indicate the presence of a merely local disease, apart from any infective process, and whether that process was necessarily associated with a bacillus or not; and in any further investigation into the question this matter should be carefully investigated.

Mr. GOODCHILD (Ealing) asked whether, looking to the fact that inoculation of bacilli was demonstrable, and also to the apparently opposed statistics showing phthisis to be rarely communicated directly to otherwise healthy persons, the logical conclusion was not that the bacilli were abortive, except when they form a suitable nidus upon the mucous membranes of persons hereditarily disposed, or debilitated by accidental causes.

Dr. FLINT, in his reply, said he had abstained from touching the matter of Dr. Balfour's question from considerations as to time; and the evidence of limitation referred to by Dr. Bennet was referred to in his paper, but had not been read for the same reason. With regard to Dr. Drysdale's reference to phthisis and tuberculosis again becoming synonymous, he had not gone into the matter; but of course it was well known that, about twenty-five years ago, a distinction was made between miliary tubercle, to which the name tuberculosis was proposed to be limited, and other processes. But the distinction seemed now to be destroyed by the more recent histological investigations.

Dr. WILLIAMS, replying to Dr. Allbutt, said that he did not question the existence of the bacillus, but only the part it played in the pathology of phthisis, which, he thought, consisted more in spreading the secondary inflammations than in the causation of the disease. The comparison of the infection of typhoid fever with that of phthisis would not hold good, as in the former the secretions from the intestines were the poison, and could be easily disinfected; whereas in phthisis it was the breath and pulmonary secretion, which it was impossible to entirely disinfect. Therefore phthisis, if really infectious, would be very infectious indeed. With regard to Dr. Austin Flint's self-limited duration of pulmonary phthisis, he recognised it, but held that it existed in a very small proportion of consumptives, and generally in those of advanced age.

Dr. FLINT, in answer to Dr. Williams's question, said that his seventy-four cases were not subjected to atmospheric influences. With regard to Laennec, his writings showed that, while he denied the curability of phthisis, he virtually admitted its self-limitation.

SCARLET FEVER AT ACCRINGTON.—The epidemic of scarlet fever in Accrington, we hear, still continues to be of a very alarming character, nine deaths having been reported this week. A meeting of school managers has been held, and a deputation appointed to wait upon Mr. Mundella, in order that school examinations may be omitted this year without forfeit of the usual grants.

ON THE WINTER CLIMATE OF SAN REMO.

Presented to the Section of Medicine at the Annual Meeting of the British Medical Association at Worcester, August 1882.

By ARTHUR HILL HASSALL, M.D. Lond.,

Late Senior Physician to the Royal Free Hospital: Founder of and Consulting Physician to the National Hospital for Consumption and Diseases of the Chest.

MUCH as has been written on the subject, there is scarcely one, of all the various foreign health resorts, the climate of which, as based on strict meteorological data, has yet been properly worked out. From this general statement, thanks to Dr. Marcet, Cannes may to some extent be deemed an exception. In very many cases, the information obtained is limited to statements of the mean season, or annual north shade temperature, the number of days on which the sun shines, with perhaps the sun heat and the number of days on which rain falls, with, in some cases, the amount of the rainfall. These data are wholly insufficient to determine the climate of any given place, and a great variety of other details are required, many, but not all of which, will be found embraced in the present and previous communications on the climate of San Remo; as for example the following: the north shade temperature at three periods of the day; the mean daily variation of temperature; the sun heat by both the ordinary black bulb and solar radiation thermometers; the number of days on which the sun shines, the duration of the sunshine, the number of days on which rain falls, the number of hours of day rain; also the relative humidity at three periods of the day; the temperature of the sea, and lastly the direction, force and frequency of the prevailing winds. Other desirable or necessary particulars, not included in my data, are daily readings of the barometers, and the exact force and duration of the winds; these omissions I hope to supply in future. Again, in order to arrive at a full and accurate knowledge of the climate of any given locality, it is necessary that the observations should be recorded for a series of years. It is for this reason principally that I again trouble the Association with this, my third year's report; but another reason is, that I am desirous of making my Annual Meteorological Report so far complete that it may serve as a guide and model for observers in the case of other health resorts. It is scarcely necessary to insist that all instruments used should be the very best, and their accuracy authoritatively guaranteed, also that they should be correctly placed, especially the thermometers to the north, in a properly lowered box, which should not be touched by the sun's rays at any period of the day.

The shade observations recorded in my reports for the winter seasons of 1879-80 and 1880-81 were made at an elevation of 48 feet above the sea, 30 above the ground, and at a distance of about 500 feet from the sea; those now about to be given were made 4 feet above the ground, 30 feet above the sea, and about 400 feet therefrom; the lowered box being even still more effectually protected than heretofore against the sun's rays.

In the following table, the chief particulars are given relative to the north shade temperature for the season 1881-82:

TABLE I.—Mean Monthly North Shade Temperature.

Month	Mean North Shade Temperature (Fahr.)
Jan.	50.6
Feb.	51.4
Mar.	51.8
Apr.	57.3
May	58.6
June	59.7
July	59.7
Aug.	59.7
Sept.	59.7
Oct.	59.7
Nov.	59.7
Dec.	59.7

From the above table it is seen that January was much the coldest month, with a mean temperature of 50.6° Fahr., December and February being next coldest, with a temperature of 51.4 and 51.8° respectively. The months of March and April were the warmest months, with a mean of 57.3 and 57.3° respectively. The mean of the three daily readings

for the whole season was 54.4°, and the mean of the minima and maxima readings 53.4°; that the highest day-temperature recorded was in April, 69.5°; and the lowest night-temperature, 38.0°, in February. The lowest temperature on the ground occurred on February 3rd, namely, 33.4°; so that the freezing point was not once reached during the whole season, except in exposed places and situations. The mean of the 3 P.M. readings was 57.4°, and of the maxima readings 58.6°; and it is to these temperatures that visitors are exposed; and this, it should be remembered, only when they happen to be in the shade to the north; in the sun, of course, the temperature to which they would be subject would be much higher.

A point of great importance to notice is the daily range of temperature; the greatest day-range shown in the table is 12.2° Fahr. in March, and the mean range for the whole season only 5.3°; these figures showing that the shade-temperature, at all events, varies within very moderate limits. Comparing the above figures with those of the two previous seasons, the results stand thus.

From the figures for the winter season 1879-80, it appears that the two coldest months were December and January, the mean for the former being 45.2°, and for the latter 47.5°. The two warmest months were March and April, the means being 55.0° and 59.3°, and the mean temperature for the whole season was 52.0° Fahr. The lowest temperature for the whole season was 27.9°. The thermometer in the air reached the freezing point five times in December and once in January; the winter climate, therefore, of San Remo for the season 1879-80 was, on the whole, a more than usually mild one, being above the average 51.5°, though colder than the seasons of 1880-81, and 1881-82.

The greatest day-difference of temperature was 14.0°, and the mean of the six months 5.7°. The mean of the 3 P.M. readings was 57.9°, and of the maxima readings 59.7°. From the observations for the next season, 1880-81, the conclusions were: that January was the coldest month, with a mean temperature of 46.7° Fahr.; that February was the next coldest, with a mean of 51.5°; that the two warmest months were November and April, the means being 57.7° and 60.2° respectively. The mean of the three daily readings was 54.3°, and that of the maxima and minima readings 54.1°. The lowest temperature in the air for the whole winter, namely, 33.0°, or one degree above freezing point, occurred in January. The mean of the night minima observations in the air was 48.6°, and on the ground 44.8°; the thermometer on the ground descended on three occasions below the freezing point, the degrees indicated being 30.5°, 31.5°, and 31.0° Fahr. The greatest variation of temperature on any one day of the season 1879-80 was 14.0°, and, for the season 1880-81, also 14.0°; the mean difference for the whole six months being, in the one case, 6.3°, and 5.7° in the other; the figures again show that the north-shade temperature varies within very moderate limits.

The mean six months' winter season temperature for nine years ending 1873-74, as deduced from the observations of the Official Meteorological Observatory at San Remo, and which observatory is placed at the top of the Palazzo di Città, was, as shown in my work on *San Remo and the Western Riviera*, 51.5°; the means for the three seasons recorded by me were, as has been just stated, 52.00°, 54.3°, and 54.4°, = 53.6° per season. The season 1880-81, it will be remembered, was a very severe one in England and many other countries. During the seasons 1880-81 and 1881-82, the temperature of the air, neither by day nor night, ever descended, even on a single occasion, to the freezing point.

TABLE II.—Sun Heat and Sunshine.

Month	Sun Heat (Fahr.)	Sunshine (Hours)
Jan.	11.4	11.4
Feb.	11.4	11.4
Mar.	11.4	11.4
Apr.	11.4	11.4
May	11.4	11.4
June	11.4	11.4
July	11.4	11.4
Aug.	11.4	11.4
Sept.	11.4	11.4
Oct.	11.4	11.4
Nov.	11.4	11.4
Dec.	11.4	11.4

From an examination of the above table, it is seen that the mean

sun-heat *in vacuo* for the season 1881-82 was 114.7; that the mean maximum sun-heat was 122.5; that the mean sun-heat in air was 71.8, and the mean maximum sun-heat in air 78.8; the mean excess of sun-heat *in vacuo* over that in the air being 37.5. It may here be remarked that neither the vacuum sun-thermometer nor that exposed to the air indicate the temperature to which the human body is ordinarily exposed; in the one case, the bulb is *in vacuo*, and protected from the effects of currents of air and moisture; and, in the other, it is not enclosed in a vacuum, but exposed to both air and moisture. It appears further, from the table, that there were 167 days out of a total of 181 constituting the season, = 27.8 days per month, on which the sun shone; that the number of hours of sunshine was 1,412, = 23.5 hours per month, out of a possible sunshine of over 1,850 hours, equal to a mean daily sunshine of 8 hours 27 minutes. There were thus only 14 days of the whole six months on which the sun did not shine. These figures must be regarded as approximate, and not rigidly exact. These means include only the days on which the sun actually did shine; but, spreading the sunshine over all the 181 days, whether sunshiny or cloudy, the figures would be somewhat different, as shown in the following table.

TABLE III.—Sun Heat and Sunshine. All Days.

Month.	Average Sun Heat in Vacuum.	Average Sun Heat in Air.	Mean Daily Sunshine.
November.....	101.7	71.4	6.09
December.....	97.7	69.4	6.16
January.....	105.9	67.4	5.57
February.....	111.6	67.4	8.29
March.....	121.4	72.0	9.44
April.....	128.1	75.4	10.19
Mean	111.0	70.5	7.49

The above figures abundantly establish the fact of the bright and sunny character of the climate during the season 1881-82; the readings for the two previous seasons may be quoted in further corroboration of the brilliancy of the climate, although it is not necessary to give the figures in full. During the season 1879-80, it appears that there were 166 days on which the sun shone, and that the duration of the sunshine was 1,330 hours; equal to no less than 8.05 hours of sunshine per day. During the season 1880-81, there were 160 days of sunshine, the sun shining for 1,177 hours, with an average for each sunshiny day of seven hours eighteen minutes.

The very excellent work of the late Dr. Sparks, on the *Riviera*, contains the statement (p. 2) that there is a mean annual difference of no less than 75.2° Fahr. between "spots exposed to full sunshine" and "those in the shade of a northern wall". This statement was founded upon the observations of M. Teyssie of Nice, a veteran

TABLE IV.—Rain and Rainfall.

Month.	Days of Day Rain.	Days of Night Rain.	Hours of Day Rain.	Total Rainfall.	Mean 9 A.M.	Relative Humidity 3 P.M.	Humidity 9 P.M.	Mean Monthly Humidity.	Highest Humidity (Readings)	Lowest Humidity (Readings)
November.....	4	5	28.00	9.47	76.8	73.1	73.5	74.5	95.8	55.8
December.....	6	7	19.10	1.47	69.1	66.1	66.0	67.1	84.8	46.7
January.....	2	4	19.00	1.42	71.0	72.0	69.1	70.7	85.8	55.8
February.....	1	1	1.30	0.82	66.3	64.2	65.1	65.5	86.0	42.4
March.....	3	5	6.15	2.11	69.5	67.5	70.5	69.2	92.0†	45.8
April.....	2	5	7.00	1.35	70.0	63.7	67.0	66.9	85.0	40.6‡
Total	18	27	80.55	16.64	70.4	67.7	68.0	68.7	88.2	47.8

* The unprecedented quantity of 7.26 inches fell in 24 hours between 9 a.m. on the 28th of November and the same hours of the following morning, doing much damage.

† A Sea Fog, a very rare occurrence.

‡ Strong N.E. and S.E. winds.

meteorologist; it is, however, erroneous, as indeed a very little reflection, on facts, will prove, and as I have shown in a paper "On the

Climate of the Riviera", published in the second volume of the *Transactions of the International Medical Congress*, held in London August 1881. The greatest difference between sun-heat as indicated by the ordinary black bulb solar thermometer and the north shade day-temperature I found was 38.2; and the mean difference of all the observations made was only 15.7, in place of a mean difference of over 70° Fahr. This error is one of great magnitude and importance; and it has not only been widely disseminated by the work of Dr. Sparks, but by other publications. Had the statement been founded in fact, the Riviera would never have achieved its present great and well sustained reputation as a winter health-resort.

I turn now to the facts respecting the rain, rainfall, and relative humidity of the past season.

It is shown in the above table, amongst other particulars, that during the whole six months rain fell in the daytime only on 18 occasions; and 27 times, including the nights as well as days, the hours during which the day-rain actually descended were but 81, the total rainfall for the whole season being 16.64 inches. It is usually deemed sufficient to give but one reading of the relative humidity, even when three observations are taken daily; but this does not convey all the information required, since the humidity varies greatly in the course of the same day. As a rule, the air contains more moisture in the morning than in the evening, and least of all in the afternoon; thus, it appears from the table that the mean humidity for the whole season at 9 A.M. was 70.4; at 3 P.M., 67.7; and at 9 P.M., 68.0; the mean of the three readings being 68.7. The highest humidity is usually associated with persistent and fine rain, and the lowest with strong winds. On no occasion have I ever known the air to remain at saturation-point for a whole day. The figures quoted prove that the winter season of 1881-82 at San Remo was a very favourable one as respects rain and moisture; the air, although comparatively dry, was not so to the extent of its becoming overstimulating and exciting. Of the 16 inches of rain, no less than 7.26 inches fell in the course of twenty-four hours, doing much damage.

Turning now to my meteorological reports for the seasons 1879-80 and 1880-81, the facts as to the rain, rainfall, and humidity stand thus. During the first of these seasons, it appears that there were 29 days on which a measurable quantity of rain fell; that the period during which it actually descended was 117 hours between 9 A.M. and 9 P.M.; that the total rainfall amounted to 10.26 inches; and that the relative humidity was 67.8. Then, turning to the second of the seasons referred to, it appears that rain fell on no less than 43 days, and, including the nights as well, on 49 occasions. This is a very high average for San Remo, since the mean number of rainy days for the whole year, founded on nine years' observations, amounts to only 48.0. The number of hours of day-rain only for the six months was 161; the total rainfall, including the nights, amounted to 15.27 inches; the average rainfall for the whole year, founded on the observations of a series of years, being but 28.78 inches; the mean relative humidity of the air for the whole season was 72.6. These figures show that the winter season of 1880-81 was, for San Remo, unusually wet, though, as contrasted with England and many other countries, it would still have to be regarded as a very dry one.

Another factor in the climate of San Remo, and indeed of all the towns on the shores of the Mediterranean, is the temperature of the sea itself, which, during very nearly the whole of the six season months, is much greater than that of the air at 9 A.M., owing to the absorption and storage of a portion of the great heat of the sun. This fact will be apparent on an examination of the subjoined table.

TABLE V.—Temperature of the Sea.

Month.	Mean Temperature of Sea.	Highest Temperature	Lowest Temperature	Mean Temperature of Air 9 A.M.	Sea Warmer than Air.
November.....	61.4	62.5	60.8	56.7	4.7
December.....	57.9	60.6	55.8	49.8	8.1
January.....	55.9	56.5	55.6	48.1	7.8
February.....	55.1	56.0	54.3	50.8	4.3
March.....	56.4	59.0	55.8	55.6	0.8
April.....	58.2	59.4	57.3	58.9	0.7
Mean	57.5	58.0	56.5	53.3	4.2

From this table, it appears that the mean temperature of the sea at

9 A.M. for the whole season was 57.5; that the highest point reached was 62.5' in the month of November; and the lowest, 56.0', in February; showing a difference of 6.5' between the highest and lowest points reached. The mean temperature of the air at 9 A.M. was 53.3', giving a difference of 4.2' on the whole season between the air and the sea. During the two coldest months of the year, December and January, the mean difference in favour of the sea was 8.1' and 7.8'; in March, the sea was only 0.8' warmer than the air; while in April the air was 0.7' warmer than the sea. It thus appears that it is during the two coldest winter months the sea is relatively the warmest; that is, just when the air most requires to be warmed.

Referring to the table of the temperature of the sea for the season 1879-80, I find that the mean of the six months was 55.5; that the highest temperature, which also occurred in November, was 63.2'; and the lowest, 51.6', in December; giving a difference of 11.6'. The mean temperature of the air at 9 A.M. was 51.6, showing a difference of 3.9' for the whole season. Again, during the three coldest months, November, December, and January, the sea was relatively the warmest, the mean difference being 7.6, 10.3, and 7.3, respectively. In March, the temperature of the sea and air corresponded; but in April the air was 2.5' warmer than the sea. On one occasion in November, the difference in favour of the sea amounted to no less than 19.6'; in December, to 18.4; and in January, to 16.4'.

For the season 1880-81, the figures stand thus. The mean temperature for the whole season was 57.7; the highest point reached, 63.9', in November; and the lowest, 52.6', in February; showing a difference of 11.3' between the highest and the lowest points. The mean temperature of the air at 9 A.M. for the six months was 53.9', giving a difference of only 3.8' on the whole season between the air and the sea. In this season, again, the greatest mean difference occurred in November, December, and January, and was for those months as follows, 5.3, 7.6, and 9.4'. In March, there was but little difference between the sea and air; but in April the air was 3.5 warmer than the sea. The greatest difference in November amounted to 11.5; in December, to 9.9'; and in January, to 15.8'.

The high temperature of the water of the Mediterranean has, therefore, considerable effect in raising, especially at night and in the early morning and evening, and also during the colder winter months, the temperature of the air.

Another very influential factor in the climate of any place is the wind, its frequency, direction, duration, and force. These particulars are seldom studied sufficiently. In the following table, the principal facts are embodied relative to the stronger winds.

TABLE VI.—Strong Winds, 1881-82. Scale 3 to 4.

Month.	N.W. For Mistral	N.E. Greece	S.E. Sirocco	S.	S.W.	W.	No.
December							
January							
February							
March							
April							
May							
June							
July							
August							
September							
October							
November							
For							

during the season; that due north winds were rare; that north-east and east winds and westerly winds were rather frequent; also that, during the six months, "strong winds" prevailed on nineteen days, and "moderately strong" winds on thirty-one days. The north-west wind, or mistral, is not of very frequent occurrence at San Remo; neither does it blow with anything like the force with which it prevails in the towns of the Riviera which lie more to the west. People in general, who understand but little about the winds, are apt to regard all winds coming from the west, and especially if accompanied by dust, as the mistral; and hence this wind is often said to blow when it really does not. East winds, it must be remembered, though still preserving some of their bad characteristics, are not nearly so severe and trying as they are in England. Against the N.E. winds the protection afforded is very considerable, but it is less complete against the east wind; Capo Verde, the eastern protecting headland of the bay, having an elevation of only about 350 ft., while the height of the western headland is about 800 ft. The season, therefore, of 1881-82 may be said to have been a very windy one; indeed, not only San Remo, but the whole of the Western Riviera, must be pronounced as windy. The winds, doubtless, on some occasions, interfere with the comfort and movements of invalids, and they constitute the one serious and considerable drawback of what is still a most delightful climate. On the other hand, it must be recollected that winds play a very important part, particularly in warm climates, in purifying the air, and exert also, for the most part, tonic effects on the system.

It may be affirmed, then, of the climate of San Remo, during the six months constituting the winter season, that it is moderately warm; well sheltered from the northerly winds; that it is bright, sunny, and exhilarating; that there are but few rainy days; and that the air is dry, but not excessively, or so as to produce irritation. Furthermore, the air is particularly fresh and agreeable, owing to the prevalence of the sea and land breezes. It is true, it is more windy at times than is agreeable or desirable; and this constitutes the chief disadvantage of the climate, a disadvantage common to the Western Riviera.

The accuracy of the above description of the climate of San Remo is, in the main, still further attested by the botany, zoology, and, in fact, by nearly the whole range of the natural history of the district. Much of the vegetation is semi-tropical, and animal life abounds, often in forms met with only in countries noted for the uniform mildness of their climate. I may here incidentally remark that the fire-fly, the movements and luminosity of which are so graceful and pleasing, makes its appearance at San Remo in abundance in spring. This year it appeared sooner than usual, and I first saw it on April 19th. I have not yet been able to learn whether it is found at any of the other health-resorts to the west of San Remo, but at Cannes it is not known.

FAMILY HISTORY IN RELATION TO CONTAGION IN PHTHISIS PULMONALIS.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association at Worcester, August 1882.

By ROBERT ROBERTSON, M.B. & C.M.Ed.,

Resident Medical Officer to the National Hospital for Consumption Ventnor.

CLINICAL inquiry into the family history of consumptive patients has hitherto been directed mainly to the question of the possibility of hereditary influence having favoured the development of the destructive process in the lungs. The frequency with which case after case has occurred in the same family, with which indeed whole families have been destroyed by this fatal malady, has fully warranted the assumption that, if the disease has not been directly transmitted from parent to offspring, there has been at any rate a transmission of a special liability to it, so marked as to modify materially the "expectation of life" in the progeny of a consumptive stock. That phthisis pulmonalis may be communicable is, of course, no new idea; probably there are few medical men who have not seen cases that have suggested such a notion. The evidence has not, however, been such as to give prominence to the view, even as an occasional mode of origin of the disease; and few persons would have been prepared, a few months ago, to assert that it was invariably communicated.

I have, however, to inform the Society that I have accustomed us to revolutions; one after another position has been turned by them, until it has become more and more to adhere to the old tradition sanctioned by the authorities of the past, and to regard the approval of great minds as cannot cease to venerate. I am, however, if, in any other instance, there has been so much and so complete a casting aside of tradition. Koch's researches have apparently carried conviction to the public mind, wherever they have become

The table shows that the north-west winds were not very prevalent

known; and already the proximity of a consumption hospital has seemed to some minds as alarming, or more so, than one for small-pox; and the predominant symptom of such a belief, a newspaper protest, has not been wanting. Now, if the tone of the medical press be considered, can this be termed a sensational or an unwarranted development. For, in a recent medical publication, we are told that, "if we accept, as it seems in every way probable we must, the conclusion that the very breath of such tuberculous subjects may carry infection with it, a new terror is added to life," etc., an estimate of the doctrine certainly not wanting in gravity. The value of the germ-theory of this disease, from a preventive and remedial standpoint, cannot yet be fairly estimated; but it is more apt to be under than overrated in the face of the slight success of antiseptic treatment hitherto; yet, if to some susceptible minds the doctrine is adding "a new terror to life," it may safely be predicted that a calmer consideration will enable many to rejoice that the fiat of heredity is of less serious omen than it may hitherto have seemed to them. It is, at any rate, only reasonable to assume that the extension of our knowledge of the etiology of the disease, as in the past, will in the future continue to diminish the number of its victims.

As medical men, called to deal with disease as it occurs in actual life, we have to acknowledge that we are in arrears of this laboratory teaching, and that the whole clinical field will need revision by the light of the knowledge thus obtained. It is as a small contribution to that revision that I venture to present, for your consideration, the results of some inquiries into "family history in relation to contagion in phthisis."

One hundred cases have been taken from those coming under observation while writing this paper; for, although a very much greater number might have been collected from the records of the hospital, cases so collected would be wanting in that completeness which, in the present inquiry, it is desirable they should have. The objects held in view in the investigation have been: 1. To ascertain how far direct exposure to the disease by intimate association with known phthisical persons has preceded its onset; 2. To determine how frequently a presumption of exposure, from the family relation of the individuals, has been unattended with a development of the disease; and 3. To ascertain how far an inherited liability to the disease influenced the results of exposure. In one or two cases of deaths of adults under forty years where asthma or bronchitis has been assigned, and in one of "consumption of the bowels" with cough, phthisis has been assumed.

In inquiring into the history of exposure, so great an interval of time elapsed in many cases before symptoms of illness appeared in the patient that it is difficult to believe that the exposure had any connection with the onset. It is true that, in a disease so insidious, its commencement may have been at a period considerably antecedent to the development of symptoms that the patient would recognise. Still this must at most be a question of a few months, even if we believe that a survival of specific bacilli inhaled long before has continued, though giving rise to no symptoms of importance until some favourable opportunity of prostration of their host has occurred, when they have been able to produce a more evident impression. The following case may illustrate this possibility.

CASE I.—W. P., cheesemonger's assistant, was married a second time, and his second wife was healthy. His first wife died of consumption two years and three months ago. Before his wife's death, and while she was ill, the patient had a slight "hawking" in the throat, and the medical man treated it with benefit as a "relaxed throat". He continued as well and fit for work as ever, free from cough, etc., for fifteen months after his wife's death; then, having got wet through, he was laid up for a fortnight with "inflammation of the lungs"; cough has never left him, and he has steadily got worse, until now he has well marked and active disease in both lungs. His relatives were free from suspicion of chest-affection, and he himself indisposed to believe that he caught consumption from his first wife. The wetting and subsequent acute illness undoubtedly, however, correspond with what, without the coincidence of his wife's illness, would have been deemed the commencement of the disease.

Delay in the development of lung mischief may perhaps also occur in consequence of some other structure being first affected, an affection of gland or joint, or perhaps abscesses elsewhere, as in the two following cases, may have been the original seat of mischief.

CASE II.—J. W., aged 33, carpenter, with no phthisical antecedents and no history of exposure, began to be troubled with ischio-rectal abscess three years ago. For a time, the swelling, etc., seemed to be going away, but ultimately it reached the surface, and a fistula was established, for which he was operated on seven months ago. Since the operation, slight cough and pain in the right side have manifested themselves, with occasional streaky hæmoptysis, and he has been too

weak to work. The apex of the right lung is affected to the second lobe.

CASE III.—A. G., clerk, aged 21, whose father and two brothers died ten years since of phthisis, and whose mother (living) has suffered with "abscess of the lung" for two years, and is much emaciated, had always enjoyed good health until thirteen months ago. Then abscess of the lower jaw developed in connection with a diseased tooth. The sinus through the cheek continued to discharge for seven months, and it was during this period that lung-symptoms began to show themselves. He has now cavities in both lungs.

In both these cases, the source of infection may have been other than that assumed, but the possibility of self-infection suggested in these and similar cases will have to be borne in mind; for it seems only reasonable to believe that an organism capable of setting up inflammatory and destructive processes in lung, gland, or joint under suitable conditions, may under similar conditions do so in other tissues.

The analysis of one hundred cases as to the evidence of exposure is as follows. In thirty-six cases, no exposure could be ascertained. In sixty-four cases, exposure at some time or other was made out (including seven uncertain). Taking these sixty-four cases, however, in reference to time of exposure, we find twenty-six were living exposed at the time their illness began; six showed symptoms within twelve months of exposure; twenty-four had not been exposed for periods varying from fifteen months to twenty-three years; one not for a long period (time uncertain); and in seven the fact of exposure was doubtful. It must further be noted that twenty-two of the twenty-four cases were exposed at periods of more than two years before the beginning of their own illness.

Thus, if we allow that all who showed symptoms of illness within twelve months of association with a phthisical person may have been infected at the time of such exposure, thirty-two per cent., or about one third of the whole, may be so classed. Yet, strong as the presumption may seem for the contagiousness of phthisis from so large a proportion presenting evidence of recent exposure, very few of these cases occurred without what would have been previously recognised as a sufficient cause for the disease. Two cases may suffice to illustrate this.

CASE IV.—A. R., aged 39, bookseller, with no phthisis in his family, had for nineteen years been employed in an establishment where thirty people were occupied, and, latterly at any rate, he had been practically the manager of the place. The premises were badly ventilated, and the workpeople were either working in draughts or in a close hot atmosphere. The patient has always been dyspeptic, and, during a period of overwork and unusual mental worry, he got into a low state of health; cough then developed, has continued since, and he is now in an advanced stage of disease. While he was there his employer was known to be consumptive, and, since he has left, three others have succumbed to the disease.

CASE V.—S. G., aged 15, of no occupation. His father, and five or six of his brothers and sisters, all died of consumption. His mother's family is not consumptive. His father, who had been ailing for eight years, died seven years ago. His mother, still living and quite healthy, has had fourteen children. Of these seven died in childhood, and four, adults, have died of consumption within eight years, the last six weeks ago. The patient, who had not previously been under medical treatment, and who denied that there was anything wrong with her, has consolidation of the apex of the left lung. The village in Norfolk where this family lives, I am informed by their medical attendant, is without drainage; the water rises to within a few inches of the surface of the soil, and hence the houses are very damp.

In the first of these cases, the long period of immunity, in spite of dyspepsia, draughts, and foul atmosphere, and the coincident debility from mental and bodily overwork at the time of development of lung symptoms, cannot be left out of count, though the probability of communication seems so strong. In the second case, the continued exemption of the mother, sleeping night after night for eight years with the consumptive husband, and during that time, and the succeeding seven years, nursing under the hygienic conditions given, her husband and four of her children, certainly warrants the assumption that other factors than bacteria were busy in the extermination that went on around her, and to which thirteen out of sixteen of the family have succumbed.

But the evidence of the failure of exposure where a presumption of its occurrence has existed must be carried further, for this failure has been the impediment to a clinical acceptance of the doctrine of communicability.

Of the 100 cases, 40 were or had been married, 27 men and 13 women. Of the 27 men, the wife has also suffered from lung-

disease in two, one dying fifteen months before her husband fell ill, the other beginning to suffer from cough, etc., twelve months after her husband. In both instances, the second person affected had no phthisical relative. Among thirteen women patients, four are said to have had phthisical husbands. One had nothing wrong with her chest until three years after the death of her husband. Both lungs are now in an early stage of disease. A second, of a consumptive stock, began to suffer with chest and throat about twelve months after her husband's death, and has now, three years after, slight mischief at the right apex. A third had glandular abscesses of the neck before marriage. Eight months ago, has had the right elbow-joint recently excised for strumous disease, and has quite lately become affected with cough, pains in the chest, and night sweats. She has incipient mischief of right apex. Her husband is of a very consumptive family, and has had a severe cough as long as she has known him. In the fourth case, the husband is said to have spat a little blood some time before marriage, but has shown no signs of chest affection since. The patient, whose brother and sister have both had hæmoptysis, was quite well until six months after marriage, when she had an attack of bronchitis, and there is at this time considerable mischief in both of her lungs. It may well be doubted if any one of these four can justly be counted as instances of communication of the disease from husband to wife. But, assuming that they are undoubted cases, we have still among forty married couples thirty-four instances (eighty-five per cent.) of the most intimate association of a phthisical and a healthy person with complete immunity from disease.

Consumption occurred in thirty-seven instances among the parents of the one hundred cases taken. In nine, both had been affected; in six of these the second parent lived from five to ten years after the death of the other. In one, no information as to the relation of one to the other could be obtained; in two, husband and wife died within six months of each other. But, counting these also as examples of communication, the immunity among parents amounts to seventy-six per cent where one of the two has been consumptive. In three out of twelve instances of consumption in the grandparents, both husband and wife suffered, or immunity in seventy-five per cent. Thus, in the whole of the eighty-nine instances where a husband or wife has been consumptive, we find there has been immunity in the other in eighty per cent. If we exclude fourteen cases in which either the information is insufficient, or the interval which elapsed before the second individual became affected, appears to have been too great to render its communication probable, it is found that there has been an immunity from disease in 94.6 per cent.

These 100 patients further represent families of children, amounting in the aggregate to 698 individuals. About 15 per cent. of these (from a calculation based on 54 cases) died in childhood; and, of the remaining 593, less than one-third (183) became consumptive. If the immunity from disease is here less striking, as compared with statistics of married people, it must be remembered that the brothers and sisters of consumptive patients are liable to similar inherited constitutional defects; that the exposure to the disease has been probably during a period in which most have been undergoing critical developmental changes; that accidental influences, favouring the onset of lung-mischief, have probably been more common.

In tracing the influence of heredity on the results of exposure, we find that, in 60 cases, consumption had occurred in the preceding generation (*i.e.*, in father, mother, or their brothers and sisters); in seven, the information obtainable was incomplete; in 33, no case of consumption had occurred in parents, or their brothers and sisters. Among the children of the 60 families, the disease manifested itself in 34.72 per cent.; among the 33, in 21.76 per cent.; or a difference of nearly 13 per cent. between those with and those without phthisical antecedents. How far increased risk of exposure influenced this difference may be judged perhaps from the fact that, in the 60 cases, it occurred in 39.8 per cent. of parents' relatives, and in only 22.48 per cent. of the parents themselves. The disease also occurred in the two previous generations, with considerably greater frequency among the men than the women.

The following is a brief summary of the results in relation to the infectiveness of *tubercle pulmonalis*.

1. Among 100 individuals affected, about one-third have recognisably been exposed to the disease within a period having an appreciable connection with the onset of their own illness.
2. Among married couples, of which one person has been affected, there has been immunity from disease in the other person in, at least, 80 per cent. of those inquired into; and that, among the children in the families represented by patients under observation, immunity from disease occurred in nearly 60 per cent.
3. The existence of phthisis in members of the preceding generation

was attended with an increased frequency of its occurrence in the succeeding one, amounting to nearly 13 per cent. Hence it may be concluded that:

1. Probably, in every case of phthisis, the inception and presence of a specific bacterium is essential to the destructive process.
2. Probably there is a certain risk of communication of the disease to unaffected persons, and, *ceteris paribus*, the greater, the more intimate the association.
3. Continued association with a consumptive person is probably not in itself sufficient to originate the disease in any instance.
4. The preparation of the lung-tissue by a chill, debility, etc., is probably as essential to the destructive process as the presence of the specific bacterium itself.

ALPINE HEIGHTS AND MARINE CLIMATES IN THE TREATMENT OF CONSUMPTION.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association at Worcester, August 1882.

By C. R. DRYSDALE, M.D.,

Senior Physician to the Metropolitan Free Hospital, and late Physician to the North London Consumption Hospital.

PHTHISIS is extremely hereditary; for, perhaps, three-fourths of patients among the richer classes have had either a parent or a grand-parent affected by the disease. It is also greatly caused by bad living and poverty, for whilst it constitutes 68 per 1,000 of all deaths among the rich in France, 230 per 1,000 deaths among the poor in that country are caused by it. How irrational, then, still to attempt to range this disease in juxtaposition with the contagious. This idea, we might have expected, would not exist long after the discussion some years ago on M. Villemin's experiments. Apart from hereditary causes and poverty, there are two great antecedents of phthisis. One so justly insisted on by Dr. MacCormac of Belfast, bad air; the other insisted on by Drs. Buchanan and Bowditch, dampness of dwellings or sub-soil. Dr. Hermann Weber has added yet another, namely, septicity of the air in different localities on the sea-level.

Those who have had much experience of phthisis among hospital cases know how rarely the poorer classes recover from this modern plague, for phthisis is now the great cause of death among the most civilised countries; since, taking a low estimate of 250 deaths per 1,000 annually from it, England and Wales alone have 65,000 deaths from phthisis annually. Hence we must not expect too much from any treatment of such a disease. It is now, however, known that in extremely favourable circumstances, an arrest, or complete recovery from phthisis does occasionally take place.

During my professional life, I have seen and heard of about forty cases, some of them in members of the medical profession, of temporary or permanent arrest of the disease; but amongst these there have been, I think, only three hospital patients, one of whom went to Colorado, and the other two to New Zealand by sailing vessels.

It happened to be my lot to reside during the winter of 1852 in Coire, in the Grisons; and whilst there, I made visits to the now renowned stations in the Engadine Valley, Davos Platz, Kloster Brücke, Küblis, and other villages. At Coire, in the Rhine valley, phthisis was common enough; but I remember at that early date even, that there was an opinion that it was very rare indeed among the dwellers in the high Alps, and the remark had long been made that consumption is much rarer in localities situated far above sea-level. For example, Humboldt in 1852 (*Notes of a Traveller*), tells how that the city of Quito, 9,000 feet above the sea, was free from the disease. The same assertion was made by Hutton (1857), Tschudi (1846), and Newton (Mexico, written in 1848). Jourdanet, however, writing in 1864, was the most enthusiastic admirer of high altitudes, and exclaimed (*Mexico, its Climate and Disease*), "The day when men desire it, the climate of the Anahuac will extinguish pulmonary consumption."

Dr. Parker, himself an example of the power of hygiene in arresting this terrible disease, mentions, what all will agree with, that great elevation is not necessary to the cure of phthisis; but, among other climates, it is now becoming recognised that high altitudes are extremely useful in certain cases of the disease. Even in comparatively little elevated situations in Europe, such as the Harz mountains, there seems to be but very little consumption, for Dr. Brockman (*Band 6, des Hist. Path.*) says that out of 30,000 patients treated in these mountains, there were but twenty-three cases of it, and nine of these were strangers. But, again, there seems an equal immunity from phthisis in the islands of Lewis and Mull in the Hebrides (Dr. Christison, *Edin. Soc. Sci. adl.*), and also in Iceland (Hjaltelin), and Norway (Dr. Hare, Phila-

delphia Congress). Nearer London we have Berwickshire with but one death per 1,000 inhabitants annually from phthisis (Christison *l. c.*).

Dr. Lombard of Geneva is about to discuss the influence of great elevations at Geneva in September, and alleges that "high and medium altitudes have a prophylactic and therapeutic influence on phthisis." (*Programme du 4me C. int. d'Hygiène*, 1882, p. 11.) In a former work, published in 1858, that author mentioned that phthisis in Switzerland was unknown among the dwellers in spots 4,500 to 5,000 feet above sea-level.

Hirsch speaks of high plains on the Ghauts and Neilgherry Hills from 4,000 to 7,000 feet high, where phthisis is unknown among the population. Peru is a country abounding in consumption in its coast cities; but Guibert (*Phthisis in Peru*, 1862) says that in the Cordilleras there are cities of 10,000, 20,000, and 40,000 where phthisis is not seen. La Paz, a city in Bolivia, 12,000 feet above the sea, is one of these.

The author who first made this question a practical one in the treatment of phthisis in this country was Dr. Hermann Weber, whose cases, published in 1867 in the *BRITISH MEDICAL JOURNAL*, excited great attention at the time, and have continued to do so ever since.

To show that my own views on this question are not of yesterday, I may mention that in 1868 I wrote a pamphlet on this subject, and that it has greatly interested me since that date. Recently, in 1876, we have had some excellent evidence of the curative effects of the high plains of Colorado by Dr. Denison; and in 1881 a similar set of cases narrated by Dr. Theodore Williams at the International Medical Congress in London.

It may be remembered that Dr. Weber spoke of patients he had had in London, natives of the Engadine valley, who were attacked with phthisis in London, and who recovered entirely on return to their native valleys.

Dr. Denison of Colorado, who was himself, as he tells us, a case of arrested phthisis from residence in Denver, Colorado, maintains that one of the chief points in the value of mountain air is its absence from moisture. All low altitude air, he contends, is moist; and he adds that even Davos Platz, which is 5,200 feet over the level of the sea, is a moist climate as compared with high altitudes in Central America. Thus, at Saint Moritz, there were only fifteen clear days in the fourteen winter months 1866-67 and 1867-68. On the eastern slopes of the Rocky Mountains, again, there are very few days without sunshine, and few rainy days; besides which there are cities of some size, such as Cheyenne (Wyoming), 6,100 feet; Denver, 5,200; Idaho Springs, 7,540; Pueblo, 4,630, etc.; besides plateaus, such as the North, Middle, and South Parks, which are from 8,000 to 10,000 feet above the sea; besides a number of admirable sites in New Mexico, Mexico, and Peru.

In Denver, there is nearly four times as little moisture in the cubic foot of air that there is in the air of Florida (112:392); whilst Davos has 1.24 grammes of watery vapour in a cube foot of air in its winter months. Dr. Denison also points to Egypt as another example of a climate useful to consumptives, and where the air is very dry. On this account, he claims also that there is great diathermancy in the air of the Colorado plains, and that, as soon as the sun is above the horizon, its rays are full of warmth. There were, he says, only thirteen days, between January 1st, 1873 and August 1876, in which the sun was invisible the whole day at Denver, Colorado.

Dr. Denison, and recently Dr. Williams, have insisted on the advantages which the phthisical reap from the increased respirations and increased volume of air respired by them at stations where the air is rarefied, as at Davos and in Denver, etc. The lungs, says the former observer, have no rest; and in this lies their salvation, since by this means the disease-germs are being constantly expelled from the body, and the diameter of the chest is increased. Denison adds that, in the parallel of 40° latitude in the United States, from 20 to 30 per cent. of all deaths on the coast-levels are from phthisis; whereas, at from 4,000 to 6,000 feet above the sea, only from 1 to 2 per cent. of all deaths are from this cause. Dr. Denison says that, in twenty-five cases of phthisis treated by him in Denver, in the first stage of the disease, no less than 68 per cent. were much improved or cured. In eleven cases in the second stage, two were much improved, four slightly so. In thirty cases in the third stage of the disease, observed for nine months and a half by Dr. Denison, five were much improved, five slightly so. He mentions that twenty-one of the patients had hæmoptysis before entering Colorado, fifteen of whom were probably without cavity; and all these did well.

Dr. Austin Flint, one of the best authorities in the United States on phthisis, says he has seen perhaps seventy-five cases in which arrest or complete recovery from phthisis has taken place; but, in the face of such evidence from the eastern slopes of the Rocky Mountains, attri-

butes these arrests of the disease more to circumstances incidental to the climate than to climate *per se*.

If we may formulate the recommendations of Drs. Denison and Williams, as to this advantage of great altitudes in phthisis, they may perhaps be said to be, the greater coolness and dryness of the air, its greater transparency and diathermancy, and the effect such climates have in increasing the capacity of the chest. Permanent residence is recommended by Denison. Persons with heart-disease should not seek such altitudes.

The experience of those American physicians who discussed Dr. Denison's paper in 1876 was not quite in unison with his conclusions. Dr. Duffy of North Carolina said there was but little phthisis in either of the Carolinas. Dr. Baldwin of Florida claimed many cures of phthisis for patients wintering in that State. He urges that an equable temperature is useful, and cannot believe that the extreme difference between day and night temperatures, as seen in Colorado (60°), can be so good as that of only 10°, as seen in Florida. Dr. Henry Gibbon's personal advice to patient's with phthisis, after long experience, is that they should get on the back of a mule or horse, and keep moving until they find a suitable climate. Dr. H. A. Johnson of Chicago tells us he has known of consumptives going to Denver, Florida, North Carolina, etc., and coming back much benefited. In the early stages, patients are benefited by the mountains; but, when cavities appear, it is hazardous to go there. Dr. Hare of London spoke highly of a winter residence in the Engadine, if the patient could take exercise; but delicate patients required a more genial climate.

Dr. Theodore Williams has given a most valuable series of cases to show the effect of stay in Davos. Of twenty-two patients sent by himself thither, no fewer than ten were well enough to be called "arrested phthisis". The dimensions of the chest increase greatly after a stay in the mountains, which is not the case in other kinds of treatment, according to Dr. Williams.

Dr. Herman Weber's present opinion, as gleaned from observations made on Dr. Theodore Williams's paper, is that there is often an increased expansibility of the thorax in cases treated at Davos. He, however, attributes the good effects of high altitudes scarcely at all to climbing, but rather to an absence of septicity in the air in high places. This he holds of prime importance, although there may be other localities where the air is quite as pure. The quality of meals, life out of doors, and ventilation, are more indispensable in consumption than in other diseases. He seems to think, contrary to Dr. Williams's experience, that hereditary cases do not do well in such high altitudes.

Dr. Wilson Fox remarked that high altitudes were freer from damp, ventilation is better, and the air is purer, all of which points are favourable to the cure or arrest of the disease, and may be either cold, as at Davos, or warm, as in Bloemfontein, South Africa. But, if good, it cannot be right for patients to descend again to common levels.

My own personal experience is in favour of sending patients in the early stages of phthisis to Colorado and Davos. I have known two or three apparent arrests of phthisis to take place after such visits to places of high altitudes. And the argument of Dr. Williams, as to the increased capacity of the thorax being curative, I think is of much importance. Yet there is a good deal of discomfort and suffering caused by sending patients to such cold stations; and it is only those who can and will take plenty of out-door exercise that should betake themselves to such places.

Marine climates have been greatly extolled by many in phthisis, whilst others have condemned them. Dr. Rochard (*Mém. de l'Acad. de Méd.*, 1856) has pronounced an opinion adverse to sea-voyages in phthisis. But that writer refers, in his arguments, chiefly to seamen; and hence his conclusions do not affect the case of passengers who travel in the comfortable sailing-vessels or steamers of our day, replete with every comfort and convenience. It is of importance, too, to distinguish between the case of steamers which rapidly pass from tropical heat into temperatures of severity in a few days' sail, and sailing-vessels which proceed more leisurely.

In my experience, the voyage to Australia and New Zealand in such sailing-vessels is the most curative of all treatments of phthisis which is at the command of the ordinary inhabitant of the British Isles. The patient should leave this country in October, and will reach the port in Australasia in about three months. The patient may then either reside permanently in New Zealand, or return in a few weeks to Great Britain. In either case, many cures or temporary arrests of this disease are known to occur. The temperature of the ocean will vary in such a voyage from 40° Fahr. in the Indian Ocean to 80° at the Equator.

A cruise in the Mediterranean in a yacht is a most useful treatment

"house", in the interpretation-clauses of that Act, "includes schools"; consequently, their closure is a voluntary act, there being no legal power to compel it. There is, however, the alternative of proceeding against parents or others under the provisions against infection clauses, 126 *et seq.*, for the wilful exposure of a child or its clothing out of an infected house, without proper precautions having been taken against the spread of disease, by sending it to school. Although it is easy enough to prove the fact of exposure and the neglect of proper precautions, we are met with the legal difficulty that, in the vast majority of cases, it is impossible to prove that the exposure was "wilful", as required by the Act, and that it was not through ignorance or indifference; this was the legal interpretation and difficulty in my case. Again, the working of the present Education Act is in direct antagonism to the Public Health Act as to the safety of school-children with respect to infectious diseases. School-authorities and teachers have a direct pecuniary interest in the attendance of children, regardless of the condition of the children and the houses from which they come. In the epidemic of scarlet fever which occurred in my district, I actually found a mistress of one of the public elementary schools visiting infected houses, hunting up absentees for an examination about to take place in a few days. This fault of the Education Act is a very grave one, and defeats its own object. The present Code of Regulations of the Education Department will be superseded in May next by a new one, in which, as sanitarians, we hail that some official cognisance is taken of the sanitation of public elementary schools. In Clause 98, it states that "The managers must comply with any notice of the sanitary authority of the district in which the school is situated, requiring them for a specified time, with a view to preventing the spread of disease, either to close the school, or to exclude any scholars from attendance, subject to an appeal to the department if the managers consider the notice to be unreasonable." The sanitary weakness of the clause seems to me to be that the Education Department, on appeal, may be expected to be naturally prejudiced in favour of the school-managers; and it is an anomaly that the court of appeal in matters of health should be the Education, and not the Health, Department of the Government. It is to be noticed, also, that the New Code seems to contain no provision by which the finances of the school will not be prejudicially affected by the absence of children certified to be ill with infectious disease, or otherwise have been exposed to infection; consequently, the inducement to managers and teachers to get children into the schools, especially at examination time, at all risks, is continued. To place school-sanitation on a satisfactory footing, and make health-requirements advance education in the highest degree, it is requisite, among other considerations, if a stop is to be put to the mere farce which the non-compliance with many of the most important provisions of the present health Acts frequently is, to make provision in an amended Health Act, and the reorganisation of the sanitary service of the country upon the basis sketched out by the Joint Committee of State Medicine of this and the Social Science Associations in 1877, for:

1. That school (and all other) health matters be under the jurisdiction of the Health Department and local sanitary authorities only.
2. That universal notification of the seven principal zymotics, to the medical officer of health, be compulsory, on both the medical attendant and householder.
3. That the closure of schools be compulsory, when acting as centres of infection.

These provisions will prove useless and a farce, unless—

4. The provision of hospitals for infectious disease be compulsory; as also must be—
5. The removal thereto of persons suffering from infectious disease from houses in which efficient isolation is impossible.

As forcibly illustrating the urgent necessity for the compulsory notification of infectious diseases, not only in the general health interest of a community—particularly its child-population—but also if schools are to be prevented from acting as centres of infection, in answer to inquiries addressed to them, I have, through the courtesy of the medical officers of health of the twenty-three English towns possessing local Acts for the compulsory notification of infectious diseases, been enabled to compile the subjoined Table, from which it will be readily seen how extensive and intimate is the relationship between zymotic diseases and schools.

In three of the towns, in which the incidence of certain zymotic diseases at school-age is distinguished, it will be observed that, with a total population of 207,975, from 54 to no less than 97 per cent. of the total cases notified occurred at school-age—that is, under thirteen years. From the perusal of the information from the places for which I am able to tabulate the total number of cases only, it is evident that a similarly large proportion of cases were those of school-age. So completely are zymotic diseases under control by means of the compulsory

Table showing Proportion of Cases of Zymotic Diseases in 1881 in the twenty-three English towns possessing local Acts for the Compulsory Notification of Infectious Diseases, distinguishing (where possible) the cases under school-age.

Town.	Popula- tion 1881.	No. Cases Inf. Dise. Notified.	No. Cases under 13 yrs (school-age)	Small Pox.	Scarlet Fever.	Measles.	Typhoid.	Typhus.	Fever Contd.	Diarrhea.	Diphtheria.	Whooping Cough.	Frysip-las.	Fusipetal Fever.	Schools closed for Epidemic.
1 Birkenhead..	Act applied 1882.	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2 Barrow-in-Furness	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3 Blackburn ..	104,000	514	..	15	168	391	..	..	..	..	..	..	..	..	..
4 Blackpool ..	14,228	63	..	..	43	4	16	..	..	..	..	..	..	..	..
5 Bolton ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6 Bradford (Yorks.)	183,008	525	410	..	387	18	..	..	..	..	5	..	..	..	1
7 Burton-on-Trent..	39,653	158	..	3	126	21	..	..	..	..	..	..	..	..	..
8 Derby ..	81,648	577	..	46	423	95	1	..	..	..	..	..	..	..	..
9 Huddersfield ..	82,113	297	..	4	205	9	68	..	5	..	5	..	1	..	..
10 Jarrow ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11 Lancaster ..	20,724	399	..	..	73	3	2	210	..	..	111	..	..	..	..
12 Leicester ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13 Llandudno ..	4,967	24	13	1	20	3	..	..	..	..	..	..	..	..	..
14 Manchester ..	Act applied 1882.	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15 Norwich ..	87,843	403	..	8	340	50	..	..	..	..	5	..	..	..	..
16 Nottingham ..	Act applied 1882.	..	..	..	..	..	..	..	..	..	..	..	..	..	..
17 Oldham ..	112,176	658	..	15	487	133	1	..	..	..	22	..	..	..	..
18 Preston ..	90,524	832	..	9	233	232	209	..	..	..	4	63	82	..	..
19 Reading ..	Act applied end 1881	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20 Rotherham ..	34,782	1607	..	..	163	121	23	110	36	8	146	..	..	..	..
21 Stafford ..	20,000	15	14	..	2	1	..	..	..	..	..	..	..	..	..
22 Stalybridge ..	26,238	176	..	5	159	9	1	..	..	..	..	..	..	..	..
23 Warrington ..	41,482	1386	..	1	362	14	..	..	..	..	9	..	..	..	..

* For five months only.

† Closed (not officially, in consequence of prevalence of measles, (notification of which is not required by the Local Act.)

Blank Spaces indicate that the disease is not required to be notified. Whole blank line indicates no information received to inquiries.

notification of infectious diseases, and the means (imperfect as the sanitary machinery in some instances is) brought to bear upon them, that it was not found necessary, in a single instance, to official resort to the closure of schools.

My opinion with regard to the closure of schools during the prevalence of zymotic diseases is, that

1. Where there is no compulsory notification of infectious diseases, it is necessary to close schools as soon as it is evident that they are acting as centres of infection; but that
2. Where there is compulsory notification, and the knowledge so acquired is efficiently utilised, and its necessary adjunct—proper means for isolation of cases, that is, hospital accommodation—exists, the control of zymotic diseases is so complete, and the consequent protection to schools from the introduction of contagia so efficient, it is extremely seldom that it is necessary to require their closure.

THE ETIOLOGY OF THE ACUTE SPECIFIC DISEASES.

Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By KENNETH W. MILLICAN, B.A., M.R.C.S., L.R.C.P.Ed.

PROBABLY the most important, as it is certainly one of the most interesting, problems which Public Medicine proposes to us for solution, is to be found in the inquiry concerning the etiology of the acute specific infectious diseases. Their rapidity of propagation, their dangerous sequelæ, and their large fatality, all render them objects of special attention to the sanitary worker. The past few years have seen great advances in our knowledge of them; but though many theories have been advanced, and much dogmatically asserted respecting them, there is still much that is obscure.

Probably the greatest advance that has been made, is the attempt to connect them with the growth and development of living organisms, constituting what is known as the "germ-theory" of disease. Although speculation had, for some years, directed itself towards this field of thought, the first important practical application of it may be safely

lapsing fever and other diseases—may be developed afresh, if the same series of conditions coexist as were efficient in the origin of the scarlet-fever germ. And, in the consideration of these conditions, I feel justified in asserting that more prominence will, in future, have to be assigned to the individual in whom the disease appears. For the act of poisoning to occur, there must be not only the poison, but a person apt to be poisoned.

In short, while a great deal has been attributed to the specific nature of the germ, the specific nature of its *pabulum* has not yet received due attention. In the first development of the specific scarlet fever germ, the adjustment of the organism to its environment played no unimportant part. The process of development is surely going on now in all respects; but, while in all the higher organisms with an extended life-history it is so slow as to be beyond the reach of our observation, it is just in these lowest forms of life that we should expect to find it perceptible, if at all. It is not very many years ago in the history of medicine since we learned the distinction between typhus and typhoid fevers, between scarlatina and measles. That may have been the result of insufficient or inaccurate observation; but it may also have been the result of the fact that these diseases were then only in process of development.

Be this as it may, it appears to me to be a fairly logical and scientific hypothesis, and one not devoid of evidence in its favour, that germs possessed of no specific disease character may, on gaining entrance into the system, endeavour to adjust themselves to their new environment. They may seize upon a pabulum from the blood of their host, either because of its abundance or its resemblance to that upon which they have been accustomed to thrive. The removal of the pabulum they select—consisting probably of some proximate organic principle—may be the cause of the symptoms induced; and according to that chosen, so will be the collocation of symptoms initiated. These may be indefinite, or more or less like or unlike any known type; but, in accordance with the law of the origin of species, their offspring, multiplied a millionfold, acquire an hereditary tendency to select for themselves that pabulum to which they have been accustomed, and so by gradual development is produced the specific germ of a specific disease. That some folks are more readily susceptible to a given disease than others may be thus readily accounted for, by the hypothesis that they do not present the requisite pabulum; while those cases of change of type—and which, it may be well to point out, are seldom, if ever, abrupt, but always resemble the original more or less—receive their explanation in a “struggle for existence” on the part of the organism, which, failing to find that to which it is accustomed, has sufficient strength to adjust itself to its environment, and assimilate what it can get.

That changes in the blood do occur in fevers is well known; may it not be that when chemical and microscopical research has attended more thoroughly to this point, the actual kind of loss sustained by the blood may come to light? and in this research I apprehend no little aid will be derived from the spectroscope.

These considerations I believe to apply to all “specific” diseases, though not equally so. That small-pox may originate *de novo* I firmly believe, and I consider the case of my own which I related evidence in some degree of the fact: that cases in which it appears to do so are very few and far between as compared with even scarlet fever—not to say diphtheria—I am ready to concede. In explanation whereof I would venture to suggest that small-pox, as we know it, is a disease of very high specificity, and therefore, doubtless, of very complex origin; that the improved sanitary conditions render the fortuitous concurrence of circumstances more unlikely; and that the now wide-spread custom of vaccination must have had some influence in the matter.

Questions of indefinite incubation I should expect to find easily accounted for on this hypothesis. The question I would propound is this: “Does indefinite incubation occur in well-marked and typical cases, or only when there is a “struggle for existence?” When contracted from a typical case by a patient who ultimately develops it typically, cannot the incubation always be pretty definitely fixed?

To summarise:—

1. I conceive the processes of development and the origin of species to be still going on in diseases.

2. It is hypothesized that organisms not essentially disease-germs, may become so on introduction within the human economy; that the form taken by the disease depends upon the pabulum selected by the germ, and that specific characters are in course of time developed in the germs.

3. This process accounts for the *de novo* origin of the so-called acute specific infectious diseases; for abnormal cases of these diseases; and for changes of type in transmission.

4. This process is probably evolving, through the many unclassifiable and abnormal cases, fresh “specific” diseases in the future.

And, finally, if I may without presumption venture to indicate a few lines of research, I would say:—

1. It is to abnormal rather than to normal cases that I would look for the future settlement of the question.

2. It is desirable that in cases of infectious disease, where no origin can be traced, special attention should be paid to any irregularities indicating imperfect or progressive development.

3. In cases of seeming change of type, special inquiry should be made into hereditary predisposition.

4. Further chemical, microscopical, and spectroscopical examinations of the blood should be made in fever cases; especially comparing the results in cases respectively of typical and abnormal characters.

5. Finally, special attention should be paid to cases and epidemics of such affections as form prominent symptoms in certain well-established diseases: *e.g.*, infectious sore-throat, and the question of its development into scarlatina or diphtheria; catarrhal diarrhoea, and its relation to typhoid fever; and the relation of röteln, which is undoubtedly autogenetic to measles and scarlatina, which are commonly held to be specific.

SURGICAL MEMORANDA.

CASE OF FOREIGN BODY IN BRONCHUS, EXPELLED BY COUGHING AFTER EIGHT MONTHS' RETENTION.

IN November last, a strong healthy man, aged 29, by occupation a shipyard fitter, was sent to the Hartlepool Hospital by Mr. Edger of Hartlepool. He stated that he had been shooting with a blow-pipe and dart, and that, as he was about to blow the dart from the tube, he coughed suddenly. The dart was drawn into his mouth by the force of the inspiration, and he was under the impression that he had swallowed it; but from the history of the case, together with the symptoms described, and the examination which I made, I concluded that it was probably lodged in the right bronchus. The dart was made of a strong needle two inches in length, around the blunt end of which a quantity of worsted was wrapped, sufficient to fit the half-inch calibre of the blow-pipe tube. After the accident, the patient felt but little inconvenience for two days; he had, however, slight pain in the region of the right bronchus, and a little cough with expectoration which was streaked with blood. On the third day, he had a violent fit of coughing, with slight hæmoptysis. Acting on my advice, he remained very quiet for a fortnight, when he was recommended to go to Newcastle, where he consulted Dr. MacLachlan and Dr. Page. On his return he went to work for a week, when he felt pain in the neighbourhood of the right bronchus, and had violent fits of coughing every three or four days, with slight hæmoptysis, and a taste of worsted in his mouth. The patient gave up work for three weeks, and again consulted Dr. Page of Newcastle. In February he returned to work, and has continued at work ever since, though he has occasionally had to rest a day or two, owing to violent fits of coughing, accompanied by slight hæmoptysis and the taste of worsted in his mouth. He has lost a stone in weight, but he does not consider that his general health has been affected. Latterly, he has suffered no inconvenience. On July 25th, the patient had a violent fit of coughing, and brought up the thick end of the needle, with some of the worsted still attached to the eye, together with a little blood. The piece of needle, about an inch in length, stuck into the roof of his mouth, from which he extracted it himself. About six hours after this, he had a similar fit of coughing, and brought up the point of the needle, about three-quarters of an inch in length. The needle had rusted completely through the middle. The case appears to me to be worthy of interest, inasmuch as a short time ago a similar case was reported, in which the patient is stated to have died of inflammation of the lungs within ten days of the occurrence of the accident. The common practice of shooting with a blow-pipe and dart would seem, therefore, to be an amusement not altogether devoid of danger.

ALFRED E. BENTHALL, M.R.C.P., M.R.C.S., etc.,
House-Surgeon to the Hartlepool Hospital.

SUCCESSFUL TRACHEOTOMY IN ARTICULO MORTIS.

THE following case of tracheotomy will, I think, be of interest, read in connection with Mr. Waren Tay's case in the JOURNAL of September 16th.

A boy, aged 4½ years, had been suffering for a few days from diphtheritic sore throat. Iron and chlorate of potash were prescribed; but he did not take his medicine as he ought, and the disease progressed, till the symptoms became so alarming, that tracheotomy was evidently soon to be required. This was on January 8th, and at noon of

the same day I was sent for hurriedly, as the child was dying. On my reaching him, he was certainly moribund; the pulse was imperceptible, the lips blue, the eyes glazed, etc.; and it was only on allowing his father to listen with the stethoscope, and satisfy himself that the heart was still beating, that I obtained permission to operate. But it appeared to be too late. I started artificial respiration, cold douches, etc., and in about five minutes the child took a deep inspiration through the tube, gradually the respiration became more frequent, till at last he fell into a quiet slumber. He was then put in a steam chamber; the exudation was picked away as it came, and the smaller tube was frequently taken out to be cleaned. He was ordered to minims of liquor ferri perchloridi, and 8 grains of chlorate of potash in water every three hours, and he now took his medicine much better than previously. He afterwards had a good night. I was sent for in the early morning, on account of a violent paroxysm, which was relieved by cleaning out the smaller tube. In the evening his neck was much swollen from glandular irritation. On January 10th, the exudation was very tenacious. I began to apply a 10 per cent. spray of liquor potassæ down the pharynx, and down the tube. This was not found to answer, and a spray of sulphurous acid (1 in 8) was accordingly adopted. This seemed to give great comfort. In the evening, the pulse was 140. The urine contained one-fourth of albumen. On January 11th he was better; the tongue was cleaning. Digitalis and spirit of nitrous ether were added to his iron and chlorate of potash. The urine contained one-sixth of albumen. He was allowed milk diet, but no stimulants. On the 12th there was erythema in the neck, and on removing the large tube, an ulcer was found underneath. This was daily dressed with boracic ointment. After this, he made steady progress, and on January 19th, the eleventh day after operation, the tube was removed, and henceforward his progress was uninterrupted.

The salient points of this case are these: 1. In diphtheria we may operate at the last moment with hope of success; 2, the system was drenched with iron and chlorate of potash; 3, the sulphurous acid spray was of great utility.

Holloway, N., Sept. 1882.

JAS. CRABB, M.D.

I SHALL esteem it a favour to be permitted to bear testimony to the "dome-trocar," and its various modifications, designed by Dr. Simon Fitch of Halifax, Nova Scotia. One of these modifications, the handy and useful trocar-catheter, is described by him in the JOURNAL of September 16th. The avoidance of laceration and other injuries of the tissues penetrated by this instrument, is so conducive to a good result from operative interference, that I am surprised the dome-trocar has been so little used in Britain. In America it is in very general use, and is thought of very highly.

NORMAN KERR, M.D.

SYPHILITIC INOCULATION BY TATTOOING.

As illustrating somewhat aptly one of the channels by which syphilis is engendered *ab extra*, the following case may prove useful. The patient was the finest man, as to physique, in the Scots Guards, and his general character being equally good, it was a matter of regret that the misfortune did not befall a less worthy representative of the corps. He was a young Scotch soldier drawn from the agricultural class, six feet four inches in height, with chest and limbs fully proportioned and symmetrical, when he came to hospital. He had two circular patches situated on the hand and feet of a tattooed figure about four inches long, which embellished the forearm. This figure is of somewhat classical order, and rather epicene in general aspect, but possibly representing the goddess of war, as a crown surmounts the head of the personage. The spots resembled "blind" boils, to which recruits are subject, and no special attention was given in the first instance, the patient declaring his health to be, as it appeared, good. The eruption remained stationary however; the boggiess changed to induration of base, with a scaly surface; feverishness and sore throat ushered in eruption on the face, and the nature of the ailment stood clearly revealed. I regret that inquiry failed to elicit satisfactorily the source from whence the virus came, although the artist was a private in the regiment, in fact its professional tattooer. My late colleague, Dr. Campbell, who served in China and Japan, informs me that syphilitic inoculation through this medium is not all unfrequent in the latter country, where, according to recent travellers has reached the acme of perfection. (See Miss Bird's *Travel in Japan*.) In past years, when deserters were marked, and afterwards sought to obliterate the letter "D" by merging it into a flower-pot and rose-bush, there was more scope for the practice than at present. And, *en passant*, let me add that until the legislature relaxes somewhat its present excessive philanthropy, and reverts

to a distinctive mark, there can be no hope of materially lessening the many thousands of deserters who cost the country annually so large a sum.

FREDERICK ROBINSON, M.D., F.R.C.P.,
late Surgeon-Major, Scots Guards.

Eastbourne, July 5th, 1882.

CLINICAL MEMORANDA.

NERVE VIBRATION.

DR. MORTIMER GRANVILLE's theory of the nature and causation of that variety of syphilis which simulates the graver forms of locomotor ataxy, deserves the earnest consideration of all working members of the profession. I will not go into the subject now, as it involves so many debatable points of detail; but, as regards the beneficial effects of nerve-vibration, judiciously applied in suitable cases, I can bear testimony. In this connection I should like to mention some interesting results which have occurred in my own practice. In a case which I was recently treating by nerve-vibration, the patient presented himself one day with all the indications of a sharp attack of influenza— injected conjunctivæ, frontal headache, etc. Percussion over the superior cervical ganglia, within a few minutes, unexpectedly removed both the objective and subjective symptoms. In another case, still under observation, where there is a difference in the size of the pupils, percussion over the seventh cervical vertebra renders them equal, in which state they remain for a few days after each application. In a case of protracted melancholia in a married lady, which I am now treating by peripheral nerve-vibration, the most promising results have already been obtained. After six months' trial of this remedy, in various nervous affections, I am inclined to believe that much benefit may be looked for from its use, and would recommend my brother practitioners to give it a full and patient trial, where ordinary treatment has been ineffectual. I anticipate good results from nerve-vibration in those anomalous forms of nervous disturbances, which, for the want of an appropriate name, we term mimetic.—I am, sir, yours truly,
23, Wimpole Street. HUGH CAMPBELL, M.D.

THERAPEUTIC MEMORANDA.

THE EXTERNAL USE OF IODINE IN ERYSIPELAS.

VARIOUS communications respecting the use of iodine in erysipelas, recently contributed to the JOURNAL, have served to show how remedies, at one time used, fall out of notice, and are again brought forward by observers as novelties.

The use of this agent, although cursorily alluded to by several standard authors, has not received that special mention which its effects on this disease deserve. Some of your correspondents have spoken of the results obtained in a comparatively small number of cases. During the last few years I have had exceptional opportunities of testing its value on a large scale, having had since 1878 more than 300 cases of erysipelas under my care. From this extended experience, and after the use of all the more commonly used remedies, so successful have I become of the superiority of iodine as an external application over all other agents, that I now use it constantly as an ordinary everyday matter of routine practice.

The tincture of iodine of the *Pharmaceutica*, but made with methylated spirit (for economy's sake), will be found convenient for use, diluted when used for the face with 25 per cent. more spirit; this is more especially needful with delicate skins, as smarting will be caused if the tincture of full strength be used.

Iodine possesses powerful antiseptic and germicidal properties, and, perchance, its action may be found to depend upon these, the more so as erysipelas is now known to be associated with micro-organisms in the skin and cellular tissue affected; or it may simply be due to its powerful astringent action on the vessels, the latter view being put forward to explain its success in the treatment of eczema, and with the best results. Its effect is immediate; it is more agreeable to the patient, is easier applied, is more cleanly, and is attended with less discomfort, afterwards, to the skin than many other frequently used, but less efficacious, remedies. The only precautions necessary, are to warn the patient to keep his eyes shut for a few minutes until the spirit has evaporated, or the fumes will irritate the conjunctivæ; and in traumatic cases, not to let it pass beyond the edge of the wound.

As an application to the face in cases of variola, it will check the spread of much service; it is too much to say of it that it allays the itching, but certainly its use in my hands, extending over many years, in such cases, has been highly satisfactory. It allays the itching, it checks

factor, and, I believe, hastens the drying up of the pustules, and at the same time acts as an agreeable disinfectant to the ward.

Monsall Hospital, Manchester.

H. Y. TOMKINS, M.D.

OBSTETRIC MEMORANDA.

PRESENTATION OF BROW, FEET, AND HANDS.

THE following case, which I consider to be unique, may prove interesting to the readers of the JOURNAL.

On September 9th, I was sent for to attend Mrs. C., in her fourth confinement. On my arrival, I learned that the waters had broken about thirty-four hours previously, without the occurrence of any pains. About four hours after the discharge of the waters, the pains began, and had continued at short and regular intervals since. "Some water came away with every pain" until a few hours before I was sent for. On examination, I found the os fully dilated, and occupying the brim. I felt the upper part of the face, and at least two extremities—a hand and a foot. I thought there was a third, but I could not be quite certain. I called in Dr. Dobbin to my assistance, and the result of his examination was to confirm my diagnosis. It occurred to us that it might be a case of twins. We decided, however, to try and convert the brow into a vertex, and if that failed to seize hold of a foot and bring it down. On passing my hand into the vagina, a strong pain came on and drove the presenting part down a little, Dr. Dobbin assisting by pressure over the abdomen. I passed my fingers up to the occiput, and, after some time, succeeded in effecting flexion of the head. The pains now became stronger, more frequent, and more effective. During each pain, I pressed up the extremities until the head alone occupied the cavity of the pelvis. Labour now proceeded naturally, and a few pains sufficed to send the child into the world. We then saw clearly the nature of the case. The lower extremities were extended at the knee, and fully flexed at the hip joints, so that the feet were in contact with the face; and the arms were so flexed that a hand lay against each side of the head. The child was about three weeks premature, the mother not expecting her confinement until the end of the month. For the first twenty-four hours after birth, it remained very puny; but since then it has improved greatly, and is now a stout healthy child. Had it been a full-term foetus, labour would no doubt have been more difficult. Should any member have met with a similar case, I should like to know the treatment adopted.

WILLIAM SMYTH, M.D., M.Ch., Banbridge, co. Down.

REPORTS

OF HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.

SYPHILIS AFFECTING, IN RARE CASES, THE APPENDAGES OF THE EYE: WITH REMARKS.

By J. F. STREATFIELD, F.R.C.S., etc.

1. *Syphilitic Inflammation of the Lacrymal Gland.*—Dacryo-adenitis is hardly known to us but as a name recurring in the text-books on the diseases of the eye. Very few cases have been reported; and it is not remarkable, therefore, that I cannot remember that I have myself seen a case before that which I will now relate. It was, I think, unmistakably a chronic inflammatory enlargement of the lacrymal gland, and, as unmistakably, in my opinion, the cause of it was constitutional syphilis. In the last great work on the subject, Mr. Berkeley Hill's new edition of his book on *Syphilis*, etc., speaking of general glandular enlargement among secondary manifestations of the disease, he recounts the particular groups of glands, the posterior cervical, etc., and the individual glands, submaxillary, pre-auricular, etc., which are commonly or rarely enlarged in this disease; but he has no mention of the lacrymal gland being thus affected; and Mr. Nettleship, in the chapter on syphilitic diseases of the eye and its appendages, in the same work, also does not seem to have met with it; but he quotes from a German authority one such case, which is often referred to when the subject is in question (both lacrymal glands were affected unequally, and, with mercury, the inflammatory symptoms were soon reduced). Dr. Bull, in the *New York Medical Journal* of April last, p. 360, refers to this case and to one other as lesions due directly to syphilis,

and primarily arising in the lacrymal gland; but he is not satisfied with their histories. He then relates a case in which the lacrymal gland became inflamed and enlarged as a consequence of syphilitic periostitis of the orbit, extending to the fibrous envelope of the gland (with which the periosteum is closely connected), and thence to the trabeculae and connective tissue in the interior of the gland. In my case, however, the inflammation of the gland seems to have originated in itself, for there was no manifestation of disease in any of the surrounding parts.

D. K., a thin unhealthy looking man, a seed-crusher, aged 25, came to me as an out-patient, at the Moorfields Eye Hospital, on February 1st, 1881, for a swelling and drooping of the left upper eyelid, so that he could only raise the lid very imperfectly. This inability was evidently mechanical, not paralytic (ptosis); for, at the outer and upper part of this lid, in the situation of the lacrymal gland, or of the palpebral portion of it at least, there was a considerable firm or hard, and flat, but somewhat nodular swelling, thickening, or enlargement, easily to be made out by manipulation with the fingers. It did not, however, extend nearly to the edge of the lid in any part. The lower edge of this hard swelling was definite, rounded, and, as far as it could be felt and examined externally, it was not so much thickened as it was higher up, where it extended back under the edge of the upper border of the orbit. It was evident to the touch that it was not closely connected with the skin of the lid or the immediately subcutaneous parts, which were, however, somewhat oedematous, and there was a slight external redness and a little tenderness on pressure. An ineffectual attempt to evert the lid caused much pain, but otherwise he had no pain in this region. The palpebral conjunctiva of this lid was somewhat swollen and brawny. The eye itself, and the bones of the orbit, were not in any way affected. At the inner canthus of the right eye, there was also a red brawny swelling, as large as a pea, unconnected with the lacrymal sac or canals. He said that, nine or ten months before he came to the hospital, he had caught a "cold" in his eyes, with watery discharges, and that the eyelids used to stick together; and that, five or six weeks ago, a red and tender swelling began to appear at the outer and back part of the left upper lid, where it now was to be seen and felt. Two weeks later, the swelling began at the right inner canthus. He denied having contracted a chancre, but he had a conspicuous skin-eruption on the face, especially on the upper part of the forehead, near the hair, scaly and papular, of a reddish and coppery colour, which was undoubtedly syphilitic. The fauces were congested, but not ulcerated. He was given an iodide of potassium mixture, in five-grain doses, three times a day.

February 17th. The skin-eruption had extended on the face and neck.

February 20th. The oedema and chemosis were less. The hard swelling was unaltered.

March 3rd. There was an enlarged gland over the left parotid. The hard swelling of the left upper lid was somewhat less. The skin-eruption now had extended over the whole of the body. The swelling at the right inner canthus was probably a mucous tubercle.

March 10th. The hard swelling of the left upper lid was diminishing in size; but, as the surrounding parts were less oedematous, it seemed to be harder than it had been before. I passed my little finger under the lid, between it and the eyeball, and I felt that I could reach beyond the hard swelling to the roof of the orbit, where no thickening or enlargement existed. The rash was more marked. He was ordered pil. hydrargyri gr. ii, *bis* *dse*.

March 21st. The hard swelling was no longer to be detected, and the oedema was almost gone. The right inner canthus was also less swollen and red. The rash was not less extensive than it had been. Three grains of the blue pill were prescribed, to be taken twice a day.

June 9th. The swelling of the left upper eyelid had wholly disappeared. There never was any discharge or any pain, but a slight aching occasionally. Indeed, there were no very marked symptoms at any time. He came to the hospital only because he could not open the eye properly. Negatively, it may be remarked of this case that the disease was not symmetrical. In syphilitic iritis, choroiditis, retinitis, etc., it is not nearly always that both eyes are diseased. That there was no exophthalmos is only worth noting, as it is additionally corroborative of my diagnosis that it was a case of primary dacryo-adenitis—I mean an inflammation of the lacrymal gland *per se*, and in contrast with Dr. Bull's case, in which there was periostitis first of all. The situation, shape, and outline of this thickening of the upper lid were facts easily to be demonstrated; and together they made it impossible that the part affected was any other than the lacrymal gland. Of course, I cannot be, in the same way, so positive as to the specific cause of this dacryo-adenitis; but the man was unmistakably suffering from constitutional syphilis; and, by exclusion, I think the disease of the lacrymal gland was syphilitic. Again, it got well when mercury

was given. That secondary syphilis is so common, and this dacryo-adenitis, which I attribute to syphilis, is almost unknown, is only to be accounted for by the fact that disease of the lacrymal gland, of any kind whatever, is so very rare.

II. *Syphilitic Chancre at the Inner Canthus*.—J. J., a tall, robust, healthy looking man, aged 22, an excavator, unmarried, was admitted as an in-patient at the Moorfields Eye Hospital on April 24th, 1882 (but he had been under observation as an out-patient for a short time before this). Just a month before, he had noticed a small red pimple at the inner corner of the eyelids of the left eye. It caused no pain, and slowly increased in size. No definite history could be obtained, but he had been exposed to the risk of inoculation. After a fortnight, a swelling appeared above the angle of the lower jaw, on the left side. At first, it was about the size of a hazel-nut, very hard, and slightly tender, evidently the lymphatic gland over the parotid. This swelling (inflammatory oedema) gradually increased, and extended more widely and deeply.

There was a small brawny sore of the skin, close to the mucous membrane, extending from near the left lower punctum to the commissure. It afterwards extended further around the inner canthus—almost from one punctum to the other. It was smooth on the surface, with a very little muco-purulent discharge. The surrounding parts were oedematous, so that the sore was nearly hidden, without eversion of the projecting skin around it. The base of the sore was hard, but scarcely cartilaginous. The swelling of the left side of the cheek became a large diffuse induration, in the position of the parotid gland, and extended down some way below the angle of the jaw. That part superficial to the bone was tender on pressure. He had no sore-throat or rash on the body. He was ordered the unguentum hydrargyri to be rubbed into the thighs night and morning.

April 28th. The swelling in the parotid region had diminished; the lymphatic gland over it was still enlarged. A roseolous eruption was observed on the abdomen, and three or four mucous tubercles on the penis and scrotum, which the patient said appeared two days before. The tonsils were enlarged and relaxed.

May 5th. The sore-throat was worse, and slightly ulcerated.

May 10th. The rash, which had been decidedly syphilitic, was fading rapidly.

May 13th. The gums being tender, the mercurial inunction was stopped for a few days, and then three grains of grey-powder, three times a day, were ordered.

May 19th. The primary sore was nearly healed, and the glandular enlargements almost gone. The rash, soon after this, had quite disappeared.

The ocular conjunctiva of the left eye, which had been somewhat oedematous, had a strange, opaque, dull, even, dead-white appearance, slightly thickened, as if it had been sodden, quite unlike the normally thin, transparent, and easily movable mucous membrane of the eye. There was hardly a conjunctival vessel to be seen, and it was altogether not very unlike in appearance some common artificial opaque-glass eyes. He was discharged from the hospital on June 3rd; and, since that time, he has not been seen.

Primary syphilitic sores on the eyelids are seldom seen in this country, but they can hardly be said to be very rare. I think, in my life, I have seen, before this one, two or three such sores, always at the margins of the lids. The situation of the sore at the commissure of the eyelids, in these rare cases, was not unusual, but there was very much swelling of the surrounding parts in the present case. No ill results occurred as regards the eyelids, no narrowing of the palpebral apertures, no eversion or lacrymation, although the sore was so near to the puncta.

NEWCASTLE-ON-TYNE INFIRMARY.

TWO CASES OF RECOVERY FROM TETANUS.

(Under the care of Dr. ARNISON.)

[Reported by JAMES LIMONT, M.B., Senior House-Surgeon.]

CASE I. *Crush of Fingers; Tetanus; Nerve-stretching; Calabar Bean; Recovery*.—T. R., aged 14, printer's boy, was admitted March 29th, complaining of general malaise and stiffness of the jaws, of three days' duration. Fourteen days previously, the middle and ring fingers and the back of the hand were crushed by a printing machine. When admitted, the masseters and sterno-mastoids were in a state of toxic contraction; risus sardonius was well marked; the wound was very septic; and there was obstinate constipation and profuse sweating. A free purge of calomel and jalap was given, followed by chloral hydrate, in doses of twenty grains, every four hours.

March 31st. The rigidity of the muscles was more marked. The middle finger was amputated at the carpo-metacarpal joint.

On March 31st, the dorsal and abdominal muscles had become quite stiff; and, on April 2nd, severe diaphragmatic pain was added to the previous symptoms. Morphia injections were ordered.

April 4th. The pain was somewhat relieved by the morphia. He could not pass urine; but, on the catheter being passed, the urine was driven out in jets at each spasm of the abdominal muscles.

April 7th. Any attempt to swallow was prevented by spasm; in the abdominal muscles, there was a spasm about every two seconds. The lower extremities were perfectly rigid, in an extended position.

April 8th. He was somewhat easier in the morning, but during the forenoon was suddenly seized with spasm of the respiratory muscles, producing cyanosis and deadly pallor. Respiration was quite stopped; but, chloroform being at hand, was given by artificial respiration, and complete relaxation of all muscles was obtained. On Dr. Arnison's arrival, he decided to try nerve-stretching. The attempt to chloroform the patient produced spasm, and it had again to be given by means of artificial respiration. The ulnar, median, and musculo-spiral nerves were stretched in the upper arm, with antiseptic precautions. On the patient recovering from chloroform, the rigidity was less, and respiration was free. The patient, however, was seized with very severe spasms in the afternoon; and a large dose of chloral, *per rectum*, having failed to relieve him, one-third of a grain of extract of Calabar bean was injected subcutaneously; this relieved him so much as to allow him to sleep. Calabar bean was repeated every two hours; and in the evening there was no difficulty in breathing or swallowing, and all the muscles were somewhat relaxed.

April 9th. The Calabar bean was continued. The patient had slept well during the night; he was quite easy, and passed urine freely.

On April 10th, there was some gastric and intestinal irritation. The Calabar bean was stopped. He had been very easy up to this time. Chloral-hydrate was ordered.

April 15th. Chloral-hydrate was omitted for the last two days, through a mistake of the nurse; the legs, which two days before he could draw up, were now quite rigid. Chloral-hydrate was recommenced.

April 19th. He had improved steadily since last note. He could open his mouth fairly well, and sit up in bed, and the legs could be quite easily drawn up. The dressings over the incisions for nerve-stretching were removed for the first time; the wounds were quite healed. He continued to improve, and left the hospital on May 17th.

On June 10th, he reported himself as in perfect health.

CASE II. *Compound Fracture of Arm; Dislocation of Femur; Amputation of Arm; Tetanus on the forty-first Day; Chloral Hydrate Recovery*.—J. H., aged 41, a labourer, was admitted on May 10th, complaining of loss of power in the right leg, and inability to open the mouth, of six days' duration. Forty-seven days previously, he had been brought into the hospital, having sustained a severe smash of the right arm and dislocation of the right femur. The latter was reduced by manipulation. For nine days an attempt was made to save the arm, but it was then found necessary to amputate it in the middle third. The patient made a good recovery, and went home on April 27th with the stump nearly healed.

After going home, he first noticed pain on the inside of the right thigh. Three days later, there were stiffness of the jaw, obstinate constipation, and profuse sweating. When admitted, the jaw was firmly fixed; the right leg was markedly and the left leg slightly stiff; the abdominal muscles very hard; the risus sardonius marked during the spasms. There was no pain or tenderness in the stump; but there was pain along the inside of the right thigh and below the knee. A strong purge of calomel and croton-oil was given, and chloral hydrate with hydrocyanic acid at short intervals afterwards. The patient was put in a quiet room by himself.

May 12th. The muscles were slightly relaxed. There was no pain in the thigh, but tenderness over the right brachial plexus.

May 14th. Pain was complained of in the course of the right obturator nerve down to the back of the knee. Both lower extremities were perfectly rigid. Towards night, the spasms becoming very painful, the hypodermic injection of morphia was commenced.

On May 16th, he was much easier, and could flex and extend the lower extremities. Up to June 2nd, there was gradual improvement. Chloral hydrate was discontinued on that day.

June 3rd. About thirty hours after stopping the chloral hydrate, the patient was much worse, and had severe tetanic spasms. The chloral was started again, and in about an hour after the first dose he felt quite easy again.

June 6th. He had gone on improving up to this time, and could now walk without pain.

Dr. Arnison, writing on September 20th, 1882, informs us that "both patients have been seen in the street within the last few weeks".

REMARKS BY DR. ARNISON.—In the first case (T. R., aged 14), the increase in severity of the symptoms was gradual; food was taken and digested; and it was hoped, from the comparatively chronic character of the attack, that recovery might take place without operation further than the amputation of the finger, until the boy's life was placed in such imminent peril from suffocation. The ulnar nerve was stretched, as well as the other two, as it was uncertain how far the injury to the ring finger might be the cause of the attack, though confined to destruction of the nail, and at the time of operation nearly well. The after-progress of the case makes it uncertain to what must be given the credit of the result. There was not much immediate benefit from the nerve-stretching, and the boy would most likely have died if Calabar bean had not been used; and when that had to be omitted, it was necessary to continue the administration of chloral for some time; but, on the other hand, until the nerves were stretched, treatment failed to have any control over the disease, and after the operation the progress to recovery began. I am inclined to think that the patient was kept alive by Calabar bean until the nerve-stretching had time to exert its influence, and that he would have died if either had been omitted.

In the second case (J. H., aged 41), the period of incubation is unusually long—forty-one days from the accident, thirty-two from the amputation. The symptoms were never so severe as in the first case, but sufficiently well marked to place the diagnosis beyond doubt. Nerve-stretching would perhaps again have been employed if there had been a clear indication which nerves to stretch; the injury to the arm was the more likely cause of the tetanus, and there was marked tenderness over the brachial plexus; but, on the other hand, tetanus may arise from a simple dislocation. The first indications of its approach were felt in the thigh, and the obturator pain was at least as prominent as the brachial tenderness. Chloral hydrate was the chief remedy employed, and to it the recovery is due. Free purgation was used in both cases.

In cutting down upon the nerves for the purpose of stretching them, the median and ulnar nerves were both found by an incision along the inner border of the biceps, the muscular spiral by an incision internal to the supinator longus.

REVIEWS AND NOTICES.

THE CHANGE OF LIFE. By E. J. TILT, M.D. Fourth Edition. London: J. and A. Churchill.

THIS well-known work still holds a certain section of the medical public, as is shown by the appearance of a fourth edition. It represents the anti-surgical school of gynaecology; and, perhaps, just as some pioneers of that school err in that they interfere needlessly, so does the present work fall short in that it ignores operative measures, which have been proved, over and over again, to be of the greatest value in the cure of disease. The statement in the author's preface, referring to Dr. Emmet, as follows—"Subacute, or chronic inflammation of the cervix, which so often shows itself by uterine ulceration, is for him a myth, a delusion, and nothing but the everted rim of a more or less lacerated cervix"—gives the clue to the whole theory upon which Dr. TILT bases his work. He quotes the superficial sneer, that tracheloraphy is "une débauche chirurgicale;" so it may be, if needlessly undertaken; but then all surgical proceedings might be similarly stigmatised if performed without due reason. The work contains much valuable information on the diseases, nervous and others, which accompany the cessation of the menstrual function.

DISEASES OF WOMEN. By ARTHUR W. EDIS, M.D., F.R.C.P. Second Edition. London: Smith, Elder, and Co. 1882.

IT is not by any means an easy task to write a text-book upon any subject, in the domain of medicine, which will meet with any marked success among students and practitioners of medicine. Such a book must combine several qualities in a large degree. It must be handy, well illustrated, full of the latest advances in the theme it treats of, judiciously dogmatic, trustworthy, and, lastly, it must be readable. Dr. EDIS, it is no exaggeration to say, has succeeded, in an unusual degree, in producing a book which may honestly lay claim to these qualities. The first edition was so quickly exhausted, that but little time has elapsed between the appearance of the first and second editions, for the emendations of doubtful or the incorporation of new matter. The work, however, bears witness to having undergone conscientious revision and correction. Although he has thus revised it, the author has not increased the bulk of the book, having preferred to keep to his original intention of making it a practical manual for the student and junior practitioner, and not an encyclopædia. The work has taken a high place among the standard text-books on gynaecology.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 30TH, 1882.

THE VACCINATION INQUIRY AT NORWICH.

WHILE sympathising with Dr. Guy in the annoyance and vexation to which he was subjected, during the course of the inquiry held by a Commission, recently appointed to investigate ten cases of erysipelas following vaccination, at his public station in Norwich, we desire to weigh the evidence to hand, with the double object of tracing cause and effect, and of finding a means whereby such untoward results may in future be guarded against.

It is well that this inquiry was instituted tolerably soon after the occurrence of the events examined. Too often such an investigation has been delayed so long, that the best aids to memory furnish only imperfect or improbable data. The reports of this inquiry, which have from time to time appeared in the *Times*, furnish the basis of the following criticism. Besides being meagre, these paragraphs do not furnish any consecutive record of the dates, after vaccination, at which the erysipelatous or septicæmic sequelæ attacked their victims. The general inference suggested by the published reports is, that, in most of these ten instances, the phenomena of the blood-poisoning followed the development of vaccinia; in some instances, the former showed itself before the eighth day or date of maturation of the vaccine vesicle; in others, it occurred after this day, when the vaccine fever was at its height. In some instances, there is record of a distinct erysipelatous or erythematous rash commencing at the vaccinated spots, starting at more distant foci in others. In other instances, the published reports lead to the inference that phlebitis or septicæmia were the forms of illness to which the children succumbed. That these diseases are for the most part (though not necessarily) intimately associated with wounds, however slight, is well known to all surgeons. "When the extraordinary power of vaccine lymph is considered, it ought not to seem extraordinary (says the *Times* leader on the Norwich inquiry) that the door opened for it as a prophylactic should, in bodies waiting only a sign to fall into disorder, be occasionally perverted for hostile purposes." That various inflammatory affections of the skin, cutaneous eruptions of great variety, might accompany or follow vaccinia, was a fact well known to Dr. Jenner and his co-workers. In a letter to the *Times*, Dr. H. D. Dudgeon draws attention to this; and states that Dr. Pearson wrote to Dr. Jenner (February 15th, 1799) thus: "In my patients, the inflammation around the inoculated (*i.e.*, vaccinated) parts has been merely what I would call erythematous, or the same kind of affection as in scarlatina." Dr. Woodville says, in a letter dated 1799: "We cannot boast that our cow-pox inoculation has never been attended with eruptions."

As regards the Norwich Inquiry, we are glad to find Mr. Corrie Grant, the legal representative of the parents whose children were the sufferers, acquiescing in praise of Dr. Guy's skill, experience, and care as a vaccinator (*Times*' report, September 5th). The evidence on this point was abundant and convincing; so Mr. Grant proceeds to examine five causes which might lead to the outbreak of disease among vaccinated children. These he enumerates thus:—Circumstances connected with (a) the vaccinifer, those connected with (b) the mode of vaccination, with (c) the vaccinated patients, with (d) atmospheric or epidemic conditions, with (lastly) the vaccine lymph. The conclusion

he arrived at, after careful consideration of the evidence adduced, was "that the presence of erysipelas in the cases under inquiry appeared to be associated with the last of these causes, the lymph." Yet we find it reported in the *Times*, September 1st, that "a child named Johnson, which was vaccinated from Mrs. Lambert's child, had also not experienced any ill effects." Mrs. L.'s child was one of the cases under investigation, and yet more than one child had received the lymph from this vacciner with impunity. Further, from the same report we learn that other children vaccinated from the child Carver, who was vaccinated from Sewell (along with Lambert) had *not* suffered. No wonder then that Dr. Gay's suspicions were not aroused when some of these children were afterwards brought to him in a feverish state of erythema. The logical acumen of the leading legal counsel on the opposite side, can find no other source for these untoward results, than the very vaccine lymph which proved harmless when introduced into the systems of other children placed under circumstances exactly similar with those who had suffered. If it were true, as stated by Mr. W. J. Collins, M.B.M.S. (Lond.) in a letter to the *Times*, dated September 7th, that "in vaccination we inoculate a septic animal fluid, whose mode of action is unknown to us, and whose effects we cannot measure, and no amount of care or caution can obviate results like those which have provoked pardonable indignation at Norwich," it is indeed a most grave responsibility which the Governments of all civilised nations have undertaken, on the earnest entreaty of the medical profession, in legally enforcing vaccination. Vaccine is *not* a septic fluid, although we know as little of its motor power as we do of that of castor oil.

"What concerns the public is much less whether a particular practitioner has been careful or careless, than the relation between the disasters which have befallen ten of his patients, and a principle as well as a system" (*Times*, September 4th). The principle stands on a firm basis of nearly a century's experience of vaccination all over the world. The system of public vaccination, as conducted in this country, may probably with advantage be subjected from time to time to close scrutiny. The directions given to public vaccinators by the Local Government Board are explicit and useful. They require him to look at the child before vaccinating it, to see that it is healthy, and presents no cutaneous eruption. Further, it is suggested, when possible, that any symptoms of ill-health, as diarrhoea, or any concomitant unfavourable conditions, as the presence of infectious disease in other members of the family, should be inquired into before vaccination is performed. In the next place, the public vaccinator is instructed to remove lymph only from vesicles which pour out freely, and which are not abraded nor are surrounded by areola. He is cautioned not to remove with the vaccine, blood, epithelial scales, purulent-looking fluid, or any contaminations of the lymph. He is, further, recommended to wash after every second vaccination the instrument with which he operates. Following closely these directions, it is scarcely possible for him to err. Parents are only too ready to dilate on symptoms presented by their children; while the mottled skin and firm feel of a child's arm, with the absence of any eruption on the scalp, will at a glance satisfy the public vaccinator as to the child's health. The clear fluid rapidly bubbling up from vesicles should alone be used. But here we meet with a difficulty. Public vaccinators are only very poorly remunerated for the time and care bestowed on their duties; but they are required to make bricks without straw. They are afforded only partial opportunities for obtaining lymph, as compared with other practitioners. On one day they may have twenty vaccinifers and only twelve to vaccinate, while, on another occasion, they may have four vaccinifers, of whom only two present the bubbling crystal springs, while there are twenty to be vaccinated. Surely the only disease which is known to avert another disease, ought to be committed to the custody of specialists. If large vaccination areas were arranged, and entrusted to the charge of medical men who devoted exclusive attention to vaccination, not only could an unlimited supply of trustworthy humanised vaccine be thus obtained, but this vaccine could readily be rejuvenated through the calf.

Now, could we, by employing animal vaccine alone, avert the possible advent of erysipelas and cutaneous diseases? Our reply must be in the negative. We can multiply our lymph supply to almost any extent by means of animal vaccination, but we cannot overlook its drawbacks. No animal disease can be communicated to man through vaccine lymph (as far as observation has hitherto gone); but "an outbreak of erysipelas has often enough followed the employment of an absolutely pure vaccine lymph from a healthy child or calf." "The infectious diseases of wounds, and especially erysipelas, are not dependent on the source of the lymph." (P. Boëmer—"Neben Vaccination mit Animaler und Humanister Lympe unter besonderer Berücksichtigung der Impferisypels;"—in *Deut. Med. Wochen.* No. 5, 1882). On the other hand, the advocates of animal vaccination assert that erysipelas, and like ill-results, follow the employment of calf vaccine much more seldom than they do vaccination with humanised vaccine. We admit this, but it may be explained otherwise than through the purity of the lymph. Before removing lymph from the calf, great care is taken that the surface of the vesicles be perfectly clean. Now, equal care should be bestowed on the human subject. Many parents, in all classes of society, are under the impression that after an arm has been vaccinated it should not be washed till the lymph has been removed. Other parents, especially primiparæ, are readily induced to apply cold cream or lard around, or poultices over, the vesicles for a day or two before they bring their children for inspection, to allay the consequent inflammation. It is, therefore, no uncommon thing for a public vaccinator to meet with a vacciner showing a greasy, unclean arm, which he ought to purify before puncturing the vesicles. But even if such applications have not been used before the infant was brought for inspection, they are very commonly applied immediately after, and the lymph oozing over such an uncleanly surface soon becomes poisonous. It would be well, therefore, if public vaccinators advised parents after vaccination to wash off the lymph oozing from the vesicles and dry the arm, but on no account to apply cold cream, ointments, etc. Another common excitant of unhealthy inflammation in vaccination vesicles is the access of worsted, threads, from clothing, and especially of aniline dyes from coloured ribbons used to keep up the sleeves in infants. These aniline dyes are known to induce eczematous and other eruptions when they come in contact with sound adult skins, and they no doubt frequently cause irritation when partly dissolved and applied to abraded vaccine vesicles.

It would, indeed, be a happy outcome of the Norwich inquiry if thereby the Local Government Board were led to reconsider the present arrangements for public vaccination, especially in respect to the efficient carrying out of the arm-to-arm method, and the supply of lymph, as also the proper remuneration of the vaccinators.

As regards the antivaccinators, who doubtless will make hay while the sun shines, and will suck honey from the Norwich inquiry, it may not be inapt to quote from the preface by Aëuleus to his letters published in 1805: "If the opposers of this benign discovery will obstinately and pertinaciously persist in their clamorous hostility, it is in vain to expect they will be diverted from their purpose by argument; no accumulation of evidence, however satisfactory and conclusive, will compel them from their ground, which is altogether independent of the real merits of cow-pox, and centres in private interest in opposition to public good."

THE HUDDERSFIELD LEAD-POISONING CASE.

AN action for damages for injury resulting from the use of a public water-supply has recently been decided at the Yorkshire Summer Assizes against the Huddersfield Corporation. The case, which is a notable one, has not attracted that public attention which it merits from its scientific bearings and its instructiveness. We are indebted to the *Chemical News* of August 25th last for an account of the principal facts of the case. The well known scientist, Mr. Crookes, the editor of that journal, having been professionally engaged on the trial, we may assume that the report in the *Chemical News* states the proved scientific facts and opinions expressed with accuracy.

A solicitor practising in Huddersfield, and living in the outskirts of that town, was the plaintiff in the action, and recovered damages. About a year ago, he was attacked, first with violent colic, and ultimately with wrist-drop, and the other usual symptoms of lead-poisoning. He lost almost entirely the use of his arms; his brain was affected; and at one time his life seemed in peril. He has subsequently, under medical treatment, partially recovered the use of his limbs; but at the trial it was stated that he was still unable to dress himself. The fact that the plaintiff was suffering from lead-poisoning being beyond all dispute, the question arose as to how the noxious metal was introduced into his system. It appears that the water-supply, which, as in most of the large northern manufacturing towns of the North of England, is the property of the corporation, is derived from several reservoirs, the plaintiff's house being served from the Blackmoorfoot reservoir. All the various water-sources are remarkably free, both from saline constituents and organic impurities. They are consequently exceedingly soft, and that from the Blackmoorfoot dam is perhaps the purest. Unfortunately, in consequence of that very purity, it is, though perfectly wholesome in reservoirs, channels, and mains, capable of acting upon leaden service-pipes. Concerning the immediate cause and *modus operandi* of this action, differences of opinion prevail; and to these differences of opinion we shall again advert.

In samples of water drawn from the plaintiff's house, Mr. Jarman, the borough analyst for Huddersfield, found 0.34 grain of lead per gallon; whilst Mr. Fairley, of Leeds, found 0.4 grain per gallon. Mr. A. Allen, of Sheffield, found a much larger quantity, viz., in two samples respectively, 0.77 and 0.84 grain of lead per gallon. On the other hand, Dr. Tidy found, in a sample of water from the plaintiff's kitchen, only 0.01, and in that from the washhouse 0.04 grain of lead per gallon. As the reporter of the case justly observes, these discrepancies are quite intelligible, without casting any reflection upon the accuracy of the analyses. The contamination with lead being derived from the service-pipes which the water traversed on its way from the mains, it is plain, he says, that different samples must vary largely, according to the time the water had been allowed to stand in them before being drawn. We presume, from this remark, that the water was not stored in leaden cisterns. It is not creditable, however, that samples for analysis should have been drawn under such widely different circumstances as to cause a variation in the amount of noxious metal present from 0.01 to 0.80 grain, without some statement being made as to the conditions under which the samples were drawn.

We now come to the most important points from a public health point of view. Does the water of the Blackmoorfoot dam dissolve lead more rapidly than soft waters generally do; and, if so, why? Again, why do soft waters so readily dissolve lead? Mr. Jarman, in an official report presented to the Huddersfield Corporation in 1879, states that the Blackmoorfoot water very closely resembles that supplied by the Manchester Corporation. Indeed, the waters of Halifax, Bradford, Leeds, Batley, Sheffield, and Manchester, as well as that from most of the Huddersfield reservoirs, if allowed to lodge in leaden pipes for twelve hours, all take up appreciable quantities of the metal. Dr. Robertson is even reported to have said that the Manchester water has been found to contain 0.3 grains of the poisonous metal per gallon. Hence it must be concluded that the Blackmoorfoot water does not form any marked exception to other mountain waters. Nevertheless, we are surprised to learn that the Manchester water-supply ever contained so much as 0.3 grain of lead per gallon; and we imagine that no waters could possibly contain so much of that dangerous metal habitually, and yet be as a rule unproductive of toxic results. We believe the rule is a good one, that any water containing one-tenth of a grain of lead per gallon, or even one part per million, should be rejected as unfit for drinking purposes.

It may be asked why, if lead be so generally present, or liable to be present, in the pipe waters supplied to our northern cities, is lead poisoning not more common? In the Huddersfield trial, the testimony of the medical witnesses was that such cases are not rare; and that

lead is exceedingly capricious in its action; and it is stated that an individual's power of resisting the influence of lead, or, indeed, of many other poisons, stands in no perceptible relation to his apparent health and vigour.

The Huddersfield water has an acid reaction, and this has been shown to be due to the presence of sulphuric acid, or an acid sulphate. As to the precise action of this acid, there was a wide difference of opinion among the experts. Drs. Crakes, Odling, and Tidy were of opinion—an opinion which we believe to be highly questionable, and resting upon no sufficient experimental data—that sulphuric acid, if present in small quantities, must tend to protect the pipes from the action of the water, by forming a thin layer of the insoluble, or, at least, very sparingly soluble, lead sulphate. Mr. A. Allen of Sheffield took a different view: one which we are surprised to find the editor of the *Chemical News* described as “novel.” Mr. Allen said that sulphuric acid would cause corrosion; and the fact that Mr. Jarman recommended as a remedy the addition of lime-water, tends to show that he, too, shared Mr. Allen's views on this point. We hope the point will be the subject of special experimental observation. It is a notorious fact that the simultaneous presence of free acid and free oxygen in water is a condition eminently favourable to the oxidation of the metal; and this condition was existent in the Blackmoorfoot water. That the lead sulphate thus formed did not prevent deleterious quantities of lead going into solution, is also incontestably proved by the large quantities of lead found by three analysts. Lead sulphate, though sparingly soluble, is, in fact, not altogether insoluble; and in this case, the lead sulphate spoken of as coating the interior of the conduit pipes—whether existent or not—was clearly incompetent to protect the water from contamination with lead. We, at the same time, freely admit that Dr. Tidy's fears that the use of an excess of lime might increase the mischief, may be well founded; and the use of lime-water to neutralise the free acid of the town supplies ought not to be permitted till its use has received ample experimental investigation.

The origin of the acidity of the Huddersfield water is curious, and is supposed to be this. The Blackmoorfoot dam receives certain ferruginous springs. These ferruginous compounds are, we presume, of the nature of ferrous salts (proto-salts). The iron salts thus introduced, on being diffused in the water and exposed to air, become split up into a basic salt, which is deposited; and free acid, or, perhaps, an acid ferric salt (persalt of iron), which remains in solution. If, as was suggested at the trial, the frequent action of soft pure waters upon boiler plates, as at Glasgow, is due to the corrosive action of oxygen held in solution in the water, the prevention of the corrosion of lead pipes by soft waters presents a great difficulty, since de-aeration of the water, even if practicable and advisable from a dietetic point of view, would render the water unpalatable. This question of the action of soft pure water upon lead, is one of extreme interest, in view of the extensive use of these waters by large towns, and their proposed further use for the metropolis.

We are greatly indebted to the reporter in the *Chemical News* for our knowledge of this interesting case; and we have borrowed largely from his report, using his own words freely. We venture, however, to express our dissent from some of his conclusions.

PARASITIC HÆMOPTYSIS AND DISTOMA RINGERI.

A RECENT number of the *Medical Reports* of the Chinese Imperial Customs, a serial that is known in Europe chiefly through the fact that it has been the medium chosen by Dr. Manson of Amoy for the publication of some of his best work, contains a contribution by that investigator on a parasite concerned in the production of hæmoptysis. The title of the paper is “Distoma Ringeri and Parasitical Hæmoptysis.” Dr. Manson refers to a previous paper published in the *Reports*, in which he had called attention to a new parasite, the mature form of which had shortly before been discovered by Dr. Ringer in Tamsui, Formosa. In his previous paper, the author had succeeded

in associating this animal with a peculiar form of recurring hæmoptysis common in one part, at least, of the Chinese Empire, and which had not previously been understood. At the same time, Professor Baelz of Tokio had been working at the subject in Japan, in which country he had found this parasitic disease to be not uncommon. The bodies described by Professor Baelz as *gregarinae*, were proved by Manson to be the ova of *Distoma Ringeri*. In making a *post mortem* examination of a Portuguese who had died of aneurysm of the aorta, Dr. Ringer had found a parasite in the lungs; in the sputum of a Chinaman suffering from a chronic intermitting hæmoptysis, Dr. Manson had found certain bodies which he had no difficulty in recognising as the ova of a parasite; and when these bodies and the ova emitted by *Distoma Ringeri* were compared, they were found to be identical in size, shape, colour, and contents. In characteristic sputum sent to Dr. Manson by Professor Baelz from Japan, it was seen that the bodies described by the latter observer were identical with the ova of *Distoma Ringeri*.

The geographical distribution of this parasitic hæmoptysis seems to be limited. At Amoy it is not common, Dr. Manson having failed to find the parasite in the sputa of about 150 individuals who resided in that district. It is quite otherwise in North Formosa, which is separated from Amoy by about 200 miles of sea. Dr. Manson's application to a resident of Tamsui, a port of Formosa, was at once answered by the despatch of two bottles full of ova-laden sputum, obtained from his two servants, both of whom suffered from parasitic hæmoptysis. The disease was reported to be extremely common in that locality. Dr. Manson had, at a former period, been struck by the large number of cases of hæmoptysis he had met with in Central and South Formosa, and has now little doubt that in *Distoma Ringeri* we have the explanation of their frequent occurrence. The prevalence of the parasite in Japan and Formosa, and its apparent absence on the mainland of China, lead him to speculate on the possible existence of an intermediary host, which finds the conditions necessary for its life in soil or geological structure common to Japan and Formosa, but not present on the neighbouring continent.

Parasitic hæmoptysis can readily be diagnosed. There is a history of irregular intermitting hæmoptysis associated with slight cough, and, in the intervals of more active bleeding, the expectoration once or several times a day of small pellets of viscid brownish mucus. Violent exercise is apt to produce profuse hæmorrhage; and irritation of the lung in any way, so as to induce coughing, causes the discharge either of quantities of blood or of the characteristic sputum. At the same time, there are no objective symptoms of lung-disease, and the patient probably enjoys good general health. Examination of a small portion of the sputum with a microscope at once settles the diagnosis.

Dr. Manson gives the histories of two cases, one of which may be taken as illustrative of the course of the disease. A male, aged 31, began to spit blood eleven years previously, when working on the tea-hills near Banka. At first he noticed, when he breathed hard in carrying heavy burdens, that he coughed a little and brought up mucus mixed with blood; from that time onwards, he spat blood more or less constantly—some days none, other days a considerable quantity. Once, when pulling in a boat, about two years before he was seen by Dr. Manson, he suddenly brought up over a bowlful of pure blood; but as a rule, unless when exerting himself violently, he only brought up a few drops mixed with the mucus. Sometimes he did not spit for a few days, perhaps a month together, and then the hæmoptysis returned, to last for one or two months. He had a slight cough; but, on auscultation, nothing much amiss could be detected. His thorax was very finely developed. He had been in the habit of drinking water from river, well, paddy-field, or ditch, whichever lay most convenient; and he said that all the inhabitants of North Formosa are similarly indiscreet.

When examined with the microscope, the ova of *Distoma Ringeri* are seen to be shaped very much after the fashion of a fowl's egg, with the exception that a circular operculum, about half the breadth of the egg, closes the broad end. On an average they measure about $\frac{1}{100}$ " \times $\frac{1}{150}$ ",

but some specimens are slightly larger and others slightly smaller. Their colour, which, when blood is entirely absent, as is sometimes the case, imparts the characteristic brownish tinge to the sputum, is a dirty reddish brown, and appears to reside both in the shell and in the granular portion of its contents. The shell is without markings, and shows in double outline, more especially when it has been fractured by pressure.

Dr. Manson found that the ova from the sputum developed in filtered well-water, and was thus able to trace the embryo through its various stages until it emerged from its shell, when it could be seen moving actively about by ciliary motion in the field of the microscope. He summarises his observations and views thus. The ova are laid into the bronchia mucus; in the sputum, they are cast on the ground; by rain or other means they are carried to stagnant water; they sink to the bottom; in the course of six weeks or two months, ciliated embryos are developed; when mature, these force their opercula and swim free in the water. What the next stage may be, can only be conjectured. Doubtless they enter the body of some fresh-water animal to undergo further metamorphoses. Perhaps this animal is eaten by man, or possibly the parasites once more obtain their freedom, and, while still in the water, are swallowed, and thus obtain an opportunity of gaining access to the human lungs—their final destiny.

Many points connected with this parasite still wait an explanation; and we have little doubt that workers in China and Japan will be able, before long, to add to the information which has been given by Dr. Manson. A more widespread acquaintance with his observations will, doubtless, stimulate observers in other parts of the world to investigate the possible connection of parasitism with obscure forms of disease.

DURING the past week, six deaths from scarlet fever have been registered at Accrington, where a number of new cases of the disease have been reported. At Whitchurch, Salop, scarlatina, which has been prevalent for some weeks, still continues to spread.

MRS. NATHANIEL MONTEFIORE has given £2,600 to University College Hospital, for the endowment of two beds, in memory of her late brother, Sir Francis Henry Goldsmith, Bart., and her late son, Mr. Leonard Montefiore.

IN the year ending October 31st last, there were 114 orders of inquiry in commissions of lunacy executed by the Masters in Lunacy, and the percentage on lunatics' incomes under general orders amounted to £27,060. There were 234 petitions presented for hearing.

IN the year ending September 29th, 1881, the number charged and detained as criminal lunatics in England and Wales was 827—656 males and 216 females, at a cost, including salaries, of £88,229 11s. 8d., being an average of £3 4s. 2d. each.

THE last advices state that the ravages of small-pox at Cape Town are worse than ever. Two thousand cases are reported, of which 600 have been fatal, mostly among natives, but the disease is spreading among the whites.

DR. ARDOUIN, French physician, attached to the General European Catholic Hospital, Alexandria, has been named by the French Government, Chevalier of the Legion of Honour, in recognition of his services during the present Egyptian crisis.

A CROWDED meeting of the St. John's Ambulance Association was held at Swanage last week, to inaugurate a centre for the Isle of Purbeck. Dr. Sieveking attended as a deputation from the Central Executive Committee, and delivered an address. It was resolved to open classes without delay, and to ask the Earl of Eldon to become President.

THE King's College Old Students' Dinner will be held this year on Monday evening, at Limmer's Hotel.

THE opening of the winter session of the Medical Faculty of University College, Liverpool, will take place to-day (Saturday, September 30th) at 3 P.M., and not on Monday, October 2nd, as stated in the JOURNAL of September 9th.

THE epidemic of small-pox in the Black Country still continues to spread. The appearance of the disease in dangerous proximity to the borough of Wolverhampton has induced the Poor-law and sanitary authorities to take active steps to secure hospital accommodation for the immediate isolation of cases as they occur.

AT West Ham Police-court on Wednesday, an application was made by Dr. Collingridge, Medical Officer of Health for the Port of London, for an order to destroy over 1,000 carcasses of sheep lying in the Victoria Docks, on the ground that it was unsound and unfit for food. The magistrate, after having inspected the meat, granted the required order. The sheep formed part of the cargo of the *Orient* steamship which had brought it from Egypt.

M. PASTEUR demonstrated, two years since, that fowls contracted charbon only when their temperature was lowered, their normal temperature being 111° Fahr. M. Paul Gibier has recently determined that frogs contract charbon when under the influence of relatively high temperature. He placed twenty frogs in tepid water, and inoculated them with charbon virus; five of them contracted the malady. Their blood indicated the presence of bacteria. These elements were larger than those observed in the bovine and ovine species. Guinea-pigs and rabbits were inoculated with the blood of the frogs, and contracted charbon.

M. DASTRES has forwarded a note to the Paris Académie des Sciences describing his researches in order to arrive at an explanation of the laws which determine the beat of the heart and its periodic variation. M. Marey has shown that cardiac excitability, which disappears during systole, reappears during diastole. The causes of these variations are: 1. Pressure of the blood on the walls of the heart; 2. The action of the intracardiac nerves; 3. The action of the extracardiac nerves. M. Dastres concludes, from his observations, that the period of repose observed after every systole and diastole is independent of muscular action, and is determined by the action of the intracardiac nerve-apparatus which regulates the beat of the heart.

THE death is announced of Dr. Waller Lewis, chief medical officer of the General Post Office. Dr. Lewis has held this office for a long series of years, and administered it with remarkable skill and efficiency. He had previously held the post of medical officer to the Metropolitan Commission of Sewers, and was a medical superintendent and inspector of the old Board of Health, and a Sanitary Commissioner of the Home Office; in this capacity, he had made a valuable series of reports on epidemic cholera, on burial-vaults in metropolitan churches, and on French laws for regulating noxious trades. His series of reports on the health of the *employés* of the General Post Office were always remarkable for their clearness, good sense, and vigour. Dr. Waller Lewis was much esteemed by the late Lord Palmerston, to whom he owed most of his early appointments; a favour which he fully justified by the tact and ability which he showed in carrying out the duties intrusted to him. He was Foreign Secretary of the Epidemiological Society. Dr. Lewis was for many years well known in London society, and especially in club-land, where his peculiar accomplishments as a *whist-player* of high excellence gave him especial repute. His death leaves an appointment vacant which is of sufficient value to have

already produced a cloud of candidates, prominent among whom is Mr. Wickham Barnes, the well known Honorary Secretary of the Poor-law Medical Association.

THE USE OF ALCOHOL IN WORKHOUSES.

AT the last meeting of the Leek Board of Guardians considerable discussion took place as to the propriety of supplying the paupers with alcoholic stimulants. Some guardians, while upholding their use in some cases, wished them to be served out by the medical officer and for medicinal purposes; others were for the total abolition of alcohol from the dietary. It was carried ultimately, by a small majority, that no tenders for beer should be accepted.

NEW INFECTIOUS HOSPITAL AT LANCASTER.

THE Earl of Lathom opened, on the 27th instant, a new detached infirmary at Lancaster, which has been erected in the grounds of the Royal Albert Asylum through the munificence of Mr. Edward Rodgett, of Darwen Bank, Preston, at a cost of £4,000. The want of an infirmary for infectious diseases was made apparent by a severe epidemic of scarlatina which occurred in 1877; and after the committee had carefully considered the matter, and declined to incur any liability on building account, Mr. Rodgett generously came forward and offered to incur the entire cost of the building. The hospital, which is placed on a dry, pleasant, sunny site south of the Asylum, is a substantial structure built of local freestone, and having all modern sanitary appliances of the most approved pattern.

NOTIFICATION OF INFECTIOUS DISEASE AT WARRINGTON.

IN referring to this subject in his sanitary report at Warrington, Mr. Gornall, the medical officer of health, observes "that the more experience he has of the working of the compulsory powers, the more he is convinced they are really benign. When the townspeople realise this, when they will contribute that essential element of success, early notification, then may be expected a more efficient working of the Act, and an early arrest of scarlet and endemic fevers." At present, Mr. Gornall is "heavily handicapped in having to endure a shower of remonstrances from minds fatally biased with the fixed idea that 'the flooding of the soul of a few individuals with sympathetic emotion' is worthy of greater consideration than the preservation of a community from a fatal epidemic."

GERMAN SAUSAGES.

THE subject of sausages, and the substances employed in their manufacture, is again unpleasantly brought before our notice by a charge which has been, during the past week, brought against Charles Shaw, a manufacturer of German sausages, residing in the East-End of London. The defendant, who it was stated has been carrying on business as "C. Shaw and Son, Breakfast Sausage Manufacturers," was charged with having deposited, or caused to be deposited, a quantity of horse-flesh for the purpose of preparation for sale, and intended as food for man. After hearing the evidence, the magistrate found that the case was fully made out by the evidence, and imposed the full penalty of £20 and costs, or two months in default. The money was paid.

PROPOSED POOR-LAW CLEARING-HOUSE.

THE prolonged correspondence that has of late taken place between the Local Government Board and the Holborn Poor-law Guardians, for the erection of a new workhouse for the accommodation of the poor of the district at present boarded out, has resulted in the commencement of an agitation for the establishment of a Poor-law clearing-house, whereby the vacant places in the workhouses throughout the country would be utilised. The new system would require clerks of guardians to send to the central office weekly statements of the number of vacant places in the different workhouses; and, a minimum cost of maintenance having been fixed, these places would be filled up by the

transference from the overcrowded districts of the surplus number of paupers. It is claimed that a considerable saving could be effected in minimising the erection of costly workhouses, and that, consequently, a considerable reduction would follow in the poor's rate throughout the country. Steps are, it is stated, being taken to bring this suggestion to a practical issue.

THE OUTBREAK OF SMALL-POX AT CAPE TOWN.

ACCORDING to a despatch from Cape Town, under date of September 5th, the spread of small-pox continues, and there are now over one thousand cases under treatment. The lately established hospital at Renszkie's farm is quite full, and the returns of fresh cases show a daily increase. The Union Company's steamer *Spartan* returned yesterday from Port Elizabeth, a week before her time, with two cases on board. A case has also been reported on the *Clan Campbell* at East London, and this steamer has been quarantined in consequence. The Natal Government has declared Cape Town an infected port, and all vessels from thence are quarantined. At Kimberley, the greatest excitement prevails, in consequence of the fears of the introduction of the disease, and even illegal measures have been resorted to for the exclusion of suspected persons. The streets of Cape Town have quite a deserted appearance, and business is suffering greatly.

MILITARY HYGIENE.

IN nothing is the progress of hygiene, properly so called, more clearly shown than in the care taken of the health of the private soldier at the present time. We have been particularly struck by this fact in glancing over the pages of Sir Garnet Wolseley's *Soldier's Pocket-book*. That general, whose mind seems capable at once of the largest strategic combinations and the most minute attention to details of all kinds, points out to officers, in the work above mentioned, that one of their most important duties is to provide for the health and comfort of their men, even to giving up their own bottle of wine, so as to enforce, by example, their warnings against the use of spirits by their subordinates. Sir Garnet Wolseley is very anxious that the soldier shall have little or no spirits, but plenty of meat; and he also points out the dietetic advantage of slow cooking, of hot food, and of a varied diet. With regard to the personal care of the soldiers, Sir Garnet not only gives the most elaborate directions as to field hospitals, but insists that the regimental doctors shall inspect the men's toe-nails, to see that they are not too long; and also orders that the soldier's hair shall be cropped to half an inch in length. There is sound reason in all these details, which have an excellent influence on the moral and physical condition of men, and so enable us to make the most of our small but efficient bodies of armed men.

DEPTFORD SMALL-POX HOSPITAL.

DR. BRISTOWE, of St. Thomas's Hospital, in his annual report as medical officer of health for Camberwell, says that the prevalence of small-pox in the parish has been altogether out of proportion to that presented either by London as a whole, or by any other metropolitan parish. Since the opening of the hospital for the reception of small-pox cases, small-pox has never ceased to prevail in a greater or less degree in No. 4 Ward, on the borders of which the hospital is situated; and at times its prevalence has been almost appalling, notably in the spring of 1879, and in the early part, and again at the end of 1881. "If," says Dr. Bristowe, "the mortality from small-pox in London during the year 1881 had been as large in relation to population as that in No. 4 Ward, the deaths from small-pox would have been 9,348 instead of only 2,376; and under the same conditions, those in the parish of Camberwell would have been 458 instead of 190. During the year, 890 cases of small-pox and 499 of scarlet-fever were dealt with by the sanitary inspectors, and 1,047 houses disinfected; 533 cases of small-pox were sent to the hospitals by the guardians in the course of the year." Legal action to bring about the closing of this hospital, or to confine its use to patients south of the Thames, is stayed, pending the report of the Royal Commission.

CHOLERA AMONGST HOSPITAL ATTENDANTS.

It has been frequently pointed out in the published Indian reports that the facts bearing on the Cholera contagion theory, so far as they concern the general population, are always most difficult to ascertain; and the accuracy of the statements regarding them can never be depended upon. But the facts regarding hospital attendants on the sick are free from this vagueness and uncertainty. It is known that they have been in constant contact with cholera cases for certain periods. If casual contact, such as takes place among people generally, is sufficient to propagate cholera, then continuous contact with cholera cases should produce very decided results; and attendants ought to suffer in far greater proportion than others. For the last few years the statistics of attacks among hospital attendants have been collected, and the results show that the number of cases among them was very small. The experience of 1880-81 repeats the same story, and the immunity of such attendants from attack is even more strikingly illustrated than usual. The figures for that year show that of 1,009 attendants, eleven were attacked, or about one per cent. So far from being an evidence of contagion, these figures, in conjunction with those of former years, appear to show that attendance on cholera cases brings with it no danger whatever, especially when it is borne in mind that the attendants are often exposed to the same local influences as those who have been already attacked.

HEALTH OF THE PRIMATE.

SINCE our report on the 16th, the Archbishop has continued to gain power, the pulse is no longer intermittent, the aphthous state of the mouth and throat has been entirely removed. The expectoration has again ceased to be rusty. There is crepitation over the major portion of the posterior part of the right lung, it is slight at the base of the left. There is some dullness at the right base, but air enters freely to every part. There is some bronchophony on the right only. The pulse has continued to be 96 per minute, and is slowly gaining power. The temperature is about half a degree above normal, varying three to four tenths only. There were a few tremors in the arm (which was paralysed 14 years ago) but they have ceased. Sensation is perfect in the arm, but volition is somewhat weaker than in the right. The Archbishop has been raised up occasionally to take his food, which is still quite unstimulating. The food is relished, and the bowels continue to act without difficulty. The quantity of urine is still about 80 ounces voided in about 24 times in the 24 hours. There is a trace of albumen, but for the last few days casts have been absent. The phosphates are normal. The chlorides are less than half the average, which is also the case with the urea. Looking at the imminent danger which threatened the Archbishop about a month ago, the present condition of His Grace is a striking proof of the advantage of a simple diet over the stimulating plan, which is frequently followed in similar states of extreme exhaustion arising from or connected with embolism.

THE DROITWICH BRINE BATHS.

THE very enjoyable visit paid by the members of the British Medical Association to Droitwich should serve to emphasise the lesson given at the Bath meeting, that England, as well as Germany, contains inland baths which are powerful as medicinal agents. Though there is undoubted evidence that the Droitwich brine baths are serviceable in rheumatic gout and in many cases of chronic rheumatism, a disease against which our profession may well call in every aid, damaging as it may be, not only to the patient, but also to the reputation of the practitioner, they are comparatively little called to their aid by medical men. Doubtless, the one great cause of this neglect is the tendency possessed, to a greater or less extent, by every champion of a new remedy—that of parading it as a specific for nearly every disease under the sun. And the Droitwich brine baths, though less widely and unduly praised than many other remedies, have had to bear their share in this condemnation. The present intelligent managers of the Royal Brine Baths, who have not only opened new private and swimming

baths, but also provided large and comfortable hotel accommodation in connection with them, may be trusted to avoid this error. It may be of use, as well as of interest, to know that they have also made arrangements by which poor patients can have the benefit of the baths at a very low rate.

AN OPERATING COUCH FOR VENEREAL WARDS.

Dr. O. PETERSEN writes, in the *St. Petersburger Medicinische Wochenschrift*, a short account of a new kind of couch now employed in the syphilitic wards of the Alexander Hospital, St. Petersburg. In minor operations about the groin and the genitals, the loins and nates of the patient are apt to become soaked in blood, morbid secretions, or lotions used for washing the wound or seat of disease. To avoid this inconvenience, Dr. Petersen has contrived a bed, interrupted in the middle by a space one square metre in extent, unoccupied by any mattress; on each side of this space, towards the head and foot of the bed, is a mattress covered with macintosh. A deep tray is fitted to the iron sides of the bed, so as to lie under the open space, the tray is perforated by a large aperture through which fluids may escape into a receptacle beneath. A stout iron bar bridges over the space, being fixed to the iron sides of the bed, along which it can slide upwards and downwards. In the middle of the bar is a raised portion, convex upwards and covered with a narrow macintosh pad or cushion. If a bubo has to be laid open, the couch is rolled alongside the patient's bed, and he is raised on to the couch, the bar over the space being slid under his nates, so that his sacrum rests on the elevated cushion. The sinus, when laid open, can be freely washed and syringed, the fluid running down the perineum or over the pelvis, by the flanks, into the tray under the space, and the integuments of the patient's back escape all contact with the fluid. The flanks and perineum can readily be dried. By a contrivance, the foot of the couch can be elevated or depressed, to place the patient in a convenient attitude for phimosi operations, or for any incisions in the perineum, where much blood is lost, and free washing with water or lotion is required.

THE MILITARY HOSPITAL AT ISMAILIA.

It is reported that there has been a deplorable breakdown of the hospital service at Ismailia. As comments would have done no good, and would have distressed the families of the wounded, no notice has been yet taken of it. The correspondent who reports it mentions that Surgeon-General Hanbury has now, however, applied for a court of inquiry, in order that the blame and scandal may be removed from the Medical Department, and placed upon the shoulders of those properly responsible for deficiencies such as were only equalled in the Russian hospitals during the late war. The enormous hospital at Ismailia was opened without drugs, instruments, provisions, or stores, and was unable to supply the front with any medical essentials. There was also an extraordinary lack of hospital attendants. Officers who lay in the wards tell stories which are ludicrous, though painful, of neglect and want of food. All acknowledge themselves grateful for the kindness, sympathy, and skill of the doctors. The fault was not theirs; red tape had finished what incompetence began. We shall hear much more of the matter, as several officers personally appealed to Sir Garnet Wolseley, and told him that they were literally starving. Now that it is over, every regiment has its story on the subject. We may point out that with regard to the want of food, which appears to have been the chief cause of suffering to the wounded, the blame obviously can in no way be laid at the door of the Army Medical Department. The Commissariat alone is responsible for food supplied to all branches of the army. No doubt, the delay of the hospital ship *Carthage* at Malta for one day, and for two days at Alexandria, was unfortunate; and this of necessity retarded the arrival of hospital stores at Ismailia. This delay, however, was not under control of the Medical Department.

THE ADMINISTRATION OF SMALL-POX HOSPITALS.

THE application made to Mr. Bridge last week at Southwark Police-court by a working man for the removal of his wife to the small-pox

hospital, amply demonstrates the urgent need for reform in the method of administration of these hospitals. The applicant stated that he lodged in one room in the Southwark Bridge Road, had two children, and was unable to pay for his wife's removal. On hearing his statement, the magistrate referred him to the relieving officer, whom, he contended, was bound to remove her; but the man returned to Mr. Bridge, and stated that the relieving officer refused to assist him, as he had employed a private doctor, and was not a pauper, and added that he should apply to the sanitary authority. The warrant officer of the court stated that he had seen the sanitary inspector, who said it was the duty of the relieving officer to see to the removal. Some discussion then followed between the sanitary inspector and the relieving officer as to whose duty it was, Mr. Bridge most properly observing that it was monstrous that such conflict should be allowed to exist between parochial authorities. Fortunately, the public had forwarded funds to the court to assist poor people, and he ordered the sum of £4 4s. to be paid to the sanitary inspector to remove the poor woman immediately. This case is but one more example of the folly of leaving the Metropolitan Asylums Board as a poor-law body, instead of making it the public health authority of the metropolis *quâ* hospital accommodation. The absurd compromise which was made in 1880, by giving the sanitary authorities power to contract with the Asylums Board for the treatment of cases sent by the former, has turned out as was to be expected, a complete failure; and it is to be hoped that this scandal above recorded may direct public attention again to the subject.

AN AMPUTATION OF THE CERVIX UTERI FOR MALIGNANT DISEASE.

IN a paper read before the Société de Médecine, Paris, M. Polaillon, after relating a series of cases, makes the following summary of his opinions on the subject. 1. Amputation of the cancerous cervix by the galvanic cautery is not a serious operation; a perfect cure may be expected if all the visible disease be removed. If traces of diseased tissue are seen in the uterine stump, immediately after the cervix has been severed, complete cauterisation of the affected tissue will be necessary; for this purpose, solid chloride of zinc points are very efficacious. M. Polaillon thrusts one point into the cervical canal of the stump, and one or two more into any diseased tissue on the raw surface of the stump. After separation of the eschars, this process of cauterisation may have to be continued till all trace of disease is removed. Unsuccessful results have been due, not only to delay in operating, but also to neglect in thoroughly destroying all traces of disease in the stump. Amputation of the cervix by the knife, as practised by Dupuytren and Lisfranc, is, in M. Polaillon's opinion, a most dangerous operation; amputation by galvanic cautery causes no risk to life, in the vast majority of cases, when it is performed by experienced hands. In one case, however, serious secondary hæmorrhage occurred on the tenth day after operation; it was checked by plugging the vagina, and recovery was complete. Another case was complicated, not only by hæmorrhage on the second day, but by a severe attack of quotidian ague, from which the patient had suffered several years previously. Cicatrization of the uterine stump was uninterrupted during the course of the ague, and the patient left the hospital in good health.

THE UNDERGROUND RAILWAY.

THE opening during the past week of another section of the inner circle railway is not an unimportant event to members of the medical profession, particularly those who happen to reside in the City. When the circle shall be made entire, a few months hence, by the completion of the line from the Tower of London to the Mansion House, any one entering a train at either of the stations of the old Metropolitan Railway, Moorgate Street or Bishopsgate Street, for example, can be conveyed without change of carriage direct to the Temple, Charing Cross, Westminster, and all other parts supplied by the District Railway. This cannot fail to be a great boon to City practitioners. The portion

of tunnel opened last Monday, from Aldgate to the Tower, is illuminated by a row of Swan incandescent electric lights suspended on each side; but, as the lamps in the carriages remained alight, one could scarcely say what the result of such method of lighting, if tried alone, would be. It seems probable, however, that the constantly changing shadows produced by the door and window frames of the moving carriages would render reading or other occupation for the eyes anything but comfortable. Besides, if this method of illumination were tried, lights would have also to be suspended at each side of the line when it is uncovered. This would necessarily add much to the expense; but the financial portion of the question is necessarily one which affects the railway company alone. Whilst we acknowledge the great benefit reaped daily by the public from the Metropolitan Railway, we cannot refrain from asking if the railway company has really done all of which it is capable to render the atmosphere on its line a little more like the ordinary above-ground London air. One has only to take one's stand on the platforms at Gower Street or Portland Road stations to discover for oneself how very far from pure is the air one is forced to breathe. The employés of the company suffer from their daily contact with it, and many would-be passengers are driven to seek other less expeditious but above-ground methods of conveyance. So that, if a determined effort to abate the nuisance should result in its abolition, it is certain that financially the company would not be altogether losers by any reasonable outlay made for the furtherance of this very desirable object.

THE INCUBATION PERIOD OF SCARLET FEVER.

IN his last annual report on the health of the Newmarket Rural District, Mr. Armistead refers specially to an outbreak of scarlet fever as one of peculiar interest, as serving to throw considerable light upon the still doubtful points of the duration of the infection in scarlet fever, and also upon the period of its incubation. An outbreak occurred in a village early in the year, and the disease was carried by one of the cases to another village (Westley) where every precaution was taken. But when the outbreak was nearly ended, a man from a different part of the district (Bottisham Fen) took his wife and three children in a cart to Westley on August 12th or 13th, and stayed next door to a child who had been ill with scarlet fever for six weeks, but had finished desquamating, and was so far recovered that she and the children from Bottisham Fen were allowed to play together. They went back to Bottisham Fen on the following day, and on August 19th the scarlet fever rash was distinctly seen on all three children simultaneously. The disease spread to six other children in the Fen, and to two others in another village. With regard to the duration of the fever, Mr. Armistead states that the child at Westley sickened on July 2nd, the children from Bottisham Fen came in contact with the child at Westley on the evening of August 13th, and on the following morning—the whole of the period of exposure to infection being only about twenty-four hours—and then they returned home. To Mr. Armistead's mind these facts show that the infection of scarlet fever will last six weeks at least, and be apparently as strong at the end of that time as ever it was. As to the period of incubation on August 14th: the children were removed quite away from any source of infection; on the 19th, the rash was out; and the disease actually began on the 18th, after a period of incubation of four days, or about ninety-six hours, which is the same as Mr. Armistead has found in two former cases which he investigated.

THE DUTIES OF CHEMISTS.

ON Monday afternoon, the Coroner for Central Middlesex (Dr. Thomas Hall) sat in court at the Clerkenwell Coroner's Court with reference to the death of James Whiston, aged two months, whose parents reside at Epsom, Surrey. According to the evidence, it appeared that the deceased was one of an illegitimate family. The mother, thinking that the child was suffering from a violent attack, took him to a chemist's shop in the Finsbury Road, and was given some medicine, and told by the assistant that she ought to position the deceased.

The mother asked the assistant whether there was any danger to the deceased, and he told her that he did not think there was. The next morning, finding that the child was much worse, Dr. Day was called in. The deceased was in a dying condition, and expired on Wednesday morning. Dr. Day now stated that the death of deceased was due to inflammation of the lungs. The Coroner said that it was a most difficult thing to know where chemists' duties end in such cases as these, and where the doctor's commenced. Chemists had better not give advice in such cases, but had better keep to their duties of dispensing and compounding medicines. The jury returned a verdict of death from natural causes. No one, we suppose, will seriously contend that it is the duty of chemists to treat cases of bronchitis or inflammation of the lungs, and it should be known that those chemists who venture to do so render themselves liable to a prosecution under the Apothecaries' Act. At the same time, it must be remembered that the shutting up of the old-fashioned apothecaries' shop (an indirect consequence of the Acts of 1815 and 1858), is largely responsible for the rush to the druggist's by the poor in all minor ailments. The Act of 1815 was designed to secure that the apothecary who kept shop should be a medically educated man; the Medical Act of 1858 placed the apothecary so educated on a par with the physician or surgeon. The education was secured, but the shop disappeared; and in some respects it seems to have resulted so that there is room for doubt whether the result is wholly gain.

THE CO-OPERATIVE MEDICAL ASSOCIATION (LIMITED).

WE print elsewhere two letters drawn forth by our remarks in the JOURNAL for September 16th on the formation of this Association. With much that is contained in "Undergraduate's" letter, we heartily sympathise. It is a grievance, alleged especially by young practitioners desirous of making a living in London, that if they conduct themselves honourably, according to the well-recognised rules of their profession, and refrain from advertising or setting up sham dispensaries, they are very likely to see the patients in their neighbourhood absorbed by those of their brethren who have no scruples about either the one or the other; and when to these ordinary forms of irregular practice is added the vicinity of an "Association" or "Institution", with some high-sounding names on its consulting staff, who probably never attend, the cup of the young practitioner's troubles may be considered full. But we cannot agree that the remedy he suggests, i.e., the recognition of advertising as legitimate (for private medical clubs are already quite legitimate) would be either permissible or efficacious. The more widely it were adopted, the less proportionate benefit would accrue to those using it; and the spectacle of the doctor vying with the butcher or greengrocer in their appeals for custom would not be an edifying one. The Honorary Secretary to the Association appears to admit the force of our remark that the non-subscribing branch of his Association is open to great abuse, and we need hardly remind him that two blacks do not make a white. He is not quite correct in asserting, in such unqualified terms, that the free hospitals, abuses and all, are warmly approved by the bulk of the medical profession. Our columns have of late years borne abundant evidence to the existence within the profession of a great and growing desire for the reform of the very abuses to which he refers; and we are therefore the better entitled to criticise, and, if need be, to condemn, an Association which, while professing to provide a remedy for those abuses, seems to us well calculated to introduce another, and, perhaps, a greater abuse. Mr. Undergraduate seems to have forgotten that the object of the South London Medical Aid Institute, on the model of which the Association is formed, is stated to be "to enable the poor to obtain medical and surgical aid, and to obtain the best medical advice near home at a rate within their means," and "to relieve charitable institutions of people compelled to go there through want of means to employ a private medical practitioner." (2nd Annual Report, p. 3.) Nor does he seem to have noticed the erroneous statement which we pointed out in the proceedings of his Association, and which we trust will be corrected before this is

further circulated. When he has succeeded in convincing legal practitioners that shilling and sixpenny fees ought to be substituted for the six-and-eightpences and three-and-fourpences now in vogue, it will be time enough to urge a similar reduction on the medical profession.

THE SANITARY INSTITUTE OF GREAT BRITAIN.

THIS congress was opened on the 26th inst., at Newcastle-on-Tyne, by a very interesting address from Captain Douglas Galton, C.B., the President. In the course of his comprehensive survey of the present condition of sanitary science, Captain Galton glanced at the germ hypothesis and at the possible influence of bacteria in producing malarial and other fevers. He then passed on to the consideration of the great reduction in the death-rate of the British army by the improvements effected in the hygienic conditions of military life in consequence of the recommendations of the Royal Commission on the Sanitary State of the Army and of the Barrack and Hospital Commission. He then went on to show how, in Newcastle itself, a death-rate of 26.1 per 1000 in 1875 was reduced to 23.5 in 1879, to 22.8 in 1880, and to 21.8 in 1881; and the change having been largely due to the pulling down of a group of unwholesome buildings, inhabited by the poorest classes, in which there had been a death-rate ranging from 40 to 54 per 1000, and to this extent increasing the general average. This led to an exposition of the advantages of model dwellings, which Captain Galton shows may be taken to yield an average of about ten years of additional working life to the artisan class inhabiting them. We hope to return to this instructive address of Captain Galton on some future occasion, so as to give in greater detail his important collection of sanitary facts and deductions therefrom. Dr. H. E. Armstrong read an interesting paper on the Sanitary History of Newcastle-on-Tyne, showing the great improvement effected in the health of the population by sanitary improvements of the nature of new streets and model dwellings. This paper evoked a well merited tribute of praise to Dr. Armstrong for his share in originating and carrying out these improvements from Captain Douglas Galton and Mr. Barkas, and a hearty vote of thanks was accorded to Dr. Armstrong. A paper was read by Mr. Symons for Dr. Alfred Carpenter of Croydon on the Sanitary Aspect of Dress, of which the conclusion was that the promulgation of sound information on the subject of the unhealthiness of many of the present fashions in dress might influence opinion, and so assist in bringing good sense into play in the matter of the disuse of objectionable forms of clothing, and the substitution of improved garments. Papers were also read: upon the effects of paint and colour manufactories in London on the health of the producer, by Dr. Benjamin Browning; by Captain R. Hildyard, on the influence in sanitary progress which medical men might exercise in their private practice; and by Dr. Lediard, on arsenic in domestic fabrics.

EUROPEAN MEDICAL MEN IN EGYPT.

In the JOURNAL of August 12th, we published a paragraph stating that the Khedive had conferred on Dr. Dutrieux the dignity of Bey, and appointed him chief physician of the Government Hospital in Alexandria, in acknowledgment of his professional conduct during and after the bombardment. We regret to learn, from an esteemed correspondent in Egypt, that the comment on Dr. Dutrieux has caused some pain, and is regarded, as our correspondent describes it, as a "slur" upon the other members of the profession in the place. He also informs us that the promotion of Dr. Dutrieux, who is an oculist by profession, to the chief post in the hospital, has caused great discontent among the other members of the staff. If this be so, it is to be regretted that the good nature of the Khedive should have led him to act as he has done, at a time when unanimity of action was of the highest importance; but we would trust that the view which our correspondent has taken of the situation is somewhat exaggerated. In any case, it can scarcely be necessary for us to formally disclaim any desire to throw a "slur" upon our European brethren in Egypt, the reports of whose proceedings,

which we have from time to time received, indicate that they have steadily adhered to the noblest traditions of their profession. Such men as Dr. Grant Bey of Cairo and Dr. Mackie of Alexandria may be safely relied on to maintain the honour and usefulness of medicine. Dr. Mackie, the surgeon to the British Consulate, in Alexandria, has been indefatigable in his endeavours to assist and advise the Egyptian authorities in dealing with the sanitary condition of Alexandria, and providing for the treatment of the sick and wounded; and, notwithstanding that he has had to contend with difficulties arising from native ignorance and apathy, has, by his personal influence with the Khedive, and his unremitting perseverance, succeeded in bringing affairs into a much more satisfactory state than at first existed. We are informed that Dr. Mackie, who has spent the greater part of twenty years in Egypt, was, at the time of the massacre of Europeans in Alexandria, about to take a well merited rest from work, and had actually applied for leave of absence. On the occurrence of the massacre, however, he at once decided to remain at his post and do all in his power to assist in relieving the sufferings resulting from the terrible events of the day. In this work, he has, with the aid of his European colleagues in Alexandria, done much to earn the grateful remembrance of the community, and to merit such honour at the hands of the highest authority as shall be a fair recognition of his services. The disturbed state of the country has forced Dr. Grant Bey to take up his residence for a time in Alexandria, where he also has been active in good work. He has, we believe, taken an early opportunity of returning to Cairo, to sustain, as he has hitherto done, the honour of the name of the British physician.

WORKING MEN ON HYGIENE.

As some index to the feeling of the working classes on the important subject of the isolation of infectious diseases, it may be interesting to our readers to print the following, which was passed at the Trades Union Congress recently held at Manchester. Mr. Threlfall of Southport moved "That, having regard to the failure of the Public Health Act, 1875, to stop the origin and spread of disease, this congress is of opinion that it is desirable to so amend the Act as to render it incumbent on local authorities to isolate persons in whose houses infectious diseases exist, and that compensation should be granted for any loss arising thereby." He said that if the Act were amended in the direction indicated by the resolution, the ultimate consequence would be that sanitary authorities would be enabled to compel working men to stop at home whilst there was disease in their houses. Under such circumstances, he considered that working men ought to be compensated from the public purse for their loss of work. Mr. Davies, of Birmingham, moved, as an amendment, "that this congress is of opinion that it is desirable to so amend the Public Health Act, as to render it incumbent on local authorities to isolate persons in whose houses infectious disease exists, and to enforce the notification by the medical profession of all infectious cases." He denied altogether that the Public Health Act of 1875 was a failure. On the contrary, he believed it had been a great success. The difficulty with which the health committees of corporations had to contend was that property owners neglected to cleanse their houses. He submitted the amendment because, under the resolution, the ratepayers would be taxed for that which should be effected by private individuals, and they knew that when compensation was given by public authorities, the middle classes, and not the artisans, received most consideration. What the corporations now required, was compulsory notification in all cases of infectious diseases. The present system was, he asserted, most unfair to working men. If infectious diseases existed in their houses it was notified, whereas the medical advisers of the middle classes did not notify such cases. Infection was as liable to spread from one quarter as from another, and therefore working men should be in favour of compulsory notification. —Mr. Judle, of Leeds, seconded the amendment, which met with small support, and the resolution was ultimately adopted. With regard to the now prominent subject of the unsanitary condition of

bakehouses, Mr. Jenkins, of Manchester, moved, "that the Parliamentary Committee be instructed to use their influence with the Government to promote a measure in the forthcoming session, having for its object the prevention of bakehouses being constructed underground; the Act to apply to all places where bread, biscuits, and confectionery are made, and that the same be inspected as factories, workshops, and mines." There was no opposition to the motion, but a proposal by Mr. M'Lean, who spoke on behalf of the tailors, to make the resolution apply, not only to bakehouses, but to all other workshops underground, was negatived, and the original motion was passed.

THE SOCIAL SCIENCE CONGRESS.

WE print in another column Sir Rutherford Alcock's admirable inaugural address delivered in the Health section of this congress. The demands on our space this week forbid us from reproducing some of the other interesting addresses delivered in this section, which, however, we shall shortly reproduce. Amongst the principal papers read was one by Mr. W. H. Michael, Q.C. "What are the advantages of a system of notification of infectious disease, and what are the best means of carrying the same into execution?" which was followed by a discussion on the subject and the adoption of a resolution moved by Mr. F. S. Powell, of Bradford: "That this department (Health) considers it highly desirable in the public interests that the legislature should at the earliest opportunity pass a general enactment for the compulsory notification of infectious diseases, on the principle of the Bill introduced into the House of Commons in the past year by Mr. Hastings." Dr. T. Gilbert Smith read a paper on the question: "What reforms are desirable in the administration of hospitals?" which, after some discussion, led to the resolution moved by Mr. F. S. Powell, and seconded by Dr. Cameron, Medical Officer of Health for Dublin: "That this department, deeply convinced of the necessity of reform in the administration of metropolitan hospitals and other institutions for the medical treatment of the sick, requests the Council to continue their exertions to obtain the appointment of a Royal Commission, with the view to obtain reliable data upon which reforms should be based, and make such recommendations as may appear desirable. Mr. Thomas M. Dolan, F.R.C.S., read a paper on the special question of "How does the employment of mothers in mills and manufactories influence infant mortality, and ought any, and if so, what restrictions be placed on such employment?" Mr. Dolan stated that he had given considerable attention to this subject, with the result of convincing him that infant mortality was favoured by the employment of women in factories during the last days of gestation, and by a too early return to work. After much discussion, a resolution was moved by Mr. Powell, and carried unanimously, that "This section having carefully considered the question of the employment of mothers in mills and manufactories, is of opinion that in the absence of more precise and accurate statistical information on the subject, it is inexpedient that any special restriction be placed by statute on such employment." Dr. C. R. Drysdale read papers on "The Spread of Pulmonary Consumption," "The Superior Prophylactic Power of Animal Vaccination against Small-pox," and on "Our Present and Future Food Supplies." Dr. Ewing Whittle of Liverpool, read a paper on "Revaccination; how best to promote it." Mr. George Smith of Coalville, pointed out the defects of the Canal Boats Act of 1877, and stated the remedies proposed by the Bills of 1881 and 1882, in reference to the sanitary condition of the canal population, and suggested placing the gipsies under similar legislative regulations. Miss Yates, in a paper on "Bread Reform," pointed out the asserted advantages of whole-meal bread over the ordinary white bread of daily consumption. Mrs. King read a paper on "National Dress," in which she stated that the National Dress Society were offering a prize of £30 for a dress best answering the following requirements: freedom of movement, absence of pressure over any part of the body, not more weight than was necessary for warmth, with both weight and warmth equally distributed, grace and

beauty, combined with health, comfort and convenience, and not departing too conspicuously from women's ordinary dress. Prizes of £5 each are also to be offered for the best tricycle, lawn tennis, and cricketing dresses for women. The Secretary of the Social Science Association, Mr. J. L. Clifford-Smith, has taken advantage of the present Congress, which commemorates the twenty-fifth anniversary of the foundation of the Association, to publish a small manual, which he styles "A Narrative of Results," and in which he gives a succinct account of the circumstances under which, in July 1857, the Society was originated, together with a narrative of its past labours and their results. According to the preface, it exhibits "some of the methods which have been adopted for the achievement of certain results, as to the lasting advantages of most of which few doubts can be entertained." And it has been chiefly compiled from the records of the Association. The first chapter, in describing the origin of the Association, which was due to a wide-felt "necessity for a closer union among the supporters of the various efforts then being made for social advancement", states also the plan upon which, after mature deliberation, it was decided to divide the Association into departments, each with its own officers. The Committee sought "to obtain aid from all those interested in social improvements, without reference to classes or opinions; sincere help was welcomed from whatever quarter it was offered"; and it was distinctly stated that the object of the Association was "to elicit truth, not to propound dogmas." As Mr. Clifford-Smith observes, "to the upholding of this fundamental principle the prosperity of the Association is, no doubt, in great part due." The chapters dealing with questions which have engaged the department of Jurisprudence and Amendment of the Law, embrace a wide range of subjects, including Coroners, foreign marriage laws, prison and convict discipline, etc.; and then comes a chapter on education, necessarily not quite so discursive. The department of public health enumerates, amongst the subjects which have engaged its labours, the public health acts, adulteration of food, quarantine, the registration of births and deaths, the Indian army sanitary commission, hospitals, health of merchant seamen, loss of life at sea, cholera, artisans' dwellings, mines, state medicine, baby-farming and registration of nurses, water-supply, slaughter-houses, habitual drunkards, pollution of rivers, inspection of lodging-houses and hotels, the compulsory notification of infectious diseases, canal and river population, adjustment of areas, building by-laws, provident dispensaries, and smoke abatement. From which it will be seen that the gains to public health from the labours of the association have neither been few nor trivial. A short chapter on art in its relation to the civilisation, education, and industrial development of the people; and on the best methods of cultivating a sound and high standard of taste in all ranks of the nation, is followed by one enumerating the various societies formed in connection with and affiliated to the association, and by a concluding retrospective chapter, which also deals with the financial resources of the association. Appendices, relating to former meetings, and the laws and officers of the association, conclude this little volume, which will be of great service to the workers in the various departments of which it treats.

SCOTLAND.

THE COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES.

LAST week, a deputation from the Liverpool Corporation, consisting of Alderman Torward, Councillor Hughes, and Councillor Dr. Hamilton, visited Edinburgh for the purpose of inquiring into the working of the Edinburgh municipal and police as regards the notification of infectious diseases. The medical officer of health and some of the municipal authorities explained the details of the proceeding in such cases, and otherwise made the deputation acquainted with the results obtained by the Act.

THE CENSUS RETURNS OF SCOTLAND.

THE Registrar-General has issued the full report on the Scotch census of 1881, and the population of Scotland is ascertained to be 3,735,573—a result which differs by only about 1,000 from the approximate returns issued some months ago. In 1871, the population was 3,360,018, so that the increase in the ten years amounts to 375,555 persons. By comparing the population with the area of Scotland, it appears that there are 125 persons to every square mile, or rather over five acres to each person. An examination also of the figures shows that during the ten years there has been a loss to Scotland of 93,328 persons, due to excess of emigration over immigration.

THE SANITARY ASSOCIATION OF SCOTLAND.

THE eighth annual meeting of this Association was held at Greenock on the 6th inst., and was very largely attended. In the course of the remarks that fell from different speakers some very interesting facts were brought out with regard to the improvement during recent years of the public health of Greenock. Formerly that burgh, owing to a variety of causes, had the highest death-rate of any town in Scotland, the annual proportion of deaths on one occasion reaching as high as 67 per 1000 of the population. Since 1876, when the Local Authority acquired Parliamentary powers to carry out a scheme of sanitary town improvement, in many of the crowded closes and unhealthy districts of the burgh, steady progress in the right direction has been made. Thus between 1855 and 1875 the mean death-rate was 30.24, while for five years ending 1880, since stringent regulations had been adopted, it was 24 per 1000, till last year it was reduced to 22.14, the lowest on record. Such facts are very creditable to the sanitary authorities, and clearly demonstrate their utility and necessity.

FEVER ACCOMMODATION IN EDINBURGH.

IN former numbers of the JOURNAL, notice was taken of the purchase of the greater part of the old Infirmary buildings in Edinburgh by the municipality, and the conversion of the purchase into a hospital suitable for the treatment of epidemics. Notice was also taken of the serious drain upon the managers of the Edinburgh Royal Infirmary, that the maintenance of a separate fever hospital entailed upon their resources, amounting, as it did, to about £3,000 a year. The managers made representations to the town council on the subject, and suggested that the municipal authorities should take advantage of the provisions of the Public Health Act, which empowers the local authority to provide for the treatment of such cases, the cost being defrayed out of the rates; and that, in this way, a payment should be made by the city to the infirmary of at least a portion of the expense connected with the maintenance of a separate fever hospital. The consequence of this movement on the part of the managers, and its consideration by the town council, is that an arrangement has been proposed which it is hoped will serve the interests of both parties. The outline of this arrangement, so far as made public, is that the infirmary shall continue to treat cases of fever, etc., in their fever wards in the old infirmary, and should receive an annual grant from the rates to help to defray the expenditure incurred. (It is also stated that such a grant is not likely to exceed £2,000.) In the case of an epidemic, however, this grant might be increased. The details will be supplied in a report which is at present being prepared by a subcommittee.

HEALTH OF THE PRINCIPAL SCOTCH TOWNS.

DURING the month of August the deaths of 2,110 persons were registered in the eight principal Scotch towns, the number of the sexes was, males 1,053, and females 1,057. The total number was 160 under the average for the same month during the preceding ten years. The mortality of each town was, per 1,000 of its population, Edinburgh, 18; 19 in Aberdeen; 21 in Glasgow, Dundee, Leith and Perth; 22 in Greenock; and 27 in Paisley. Forty-four per cent. of the deaths in these towns were of children under five years of age, and the percentage of each town was, in Perth, 25; in Edinburgh,

34; in Aberdeen and Paisley, 35; in Greenock, 48; in Leith, 50; and in Glasgow, 51. Twenty-three per cent. of the entire mortality was due to zymotic diseases, they having caused 490 deaths, this rate was exceeded in Glasgow, Dundee, and Perth. Of 48 deaths caused by fever, 38 were registered as enteric, 9 as typhus, and one as simple continued fever; in Perth as much as 11.5 per cent. of the deaths was ascribed to fever. Whooping-cough caused 56 deaths; scarlet fever, 54; measles, 38; diphtheria, 26; croup, 22; metria, 5; and dysentery 4 deaths. Diarrhoea was most fatal, having caused 195 deaths, or 9.2 per cent. of them all. In Dundee 13.2 per cent., in Edinburgh 11.1 per cent., in Greenock 9.9 per cent., in Glasgow 8.8 per cent., and in Aberdeen 6.4 per cent. of the entire mortality was due to diarrhoea. An unwonted name appears in the Registrar-General's report, namely, that of cholera, to which 18 deaths are ascribed. Of 16 deaths so ascribed, in Glasgow 6 were stated to be by infantile cholera, 5 by diarrhoea and vomiting, 4 by British cholera, and one by choleraic diarrhoea. (The foregoing shows the necessity of accurately defining such a disease, as doubtless many of the cases which have been recently reported from foreign parts might be classified in the same satisfactory manner). Apoplexy caused 47 deaths; paralysis, 49; cardiac diseases, 123; hydrocephalus, 47; and premature birth debility 55 deaths. Phthisis pulmonalis caused 12.3 per cent. of the entire mortality, or 259 deaths. Inflammatory affections of the respiratory organs, other than those already mentioned, contributed 282 deaths, equal to 12.3 per cent. of the whole. Of 64 deaths due to violent causes, three were of suicides. During the month the births of 3,458 children, 1,747 males, and 1,711 females, were registered. As to meteorological conditions, the month of August was, on the whole, favourable. Although the barometer was low and much disturbed, the prevailing winds were from the west, the rain was moderate, the mean temperature was higher, and the dryness of the air greater than the average. The details being, that the mean barometric pressure was less by 0.068 inch, and its monthly range greater by 0.150 inch, the mean temperature greater by 0.6°, and its mean daily range greater by 0.6°, the mean humidity less by 6°, the rain in number of days less by 4°, and its depth in inches less by 1.58 inches, and the wind pressure greater by 0.32 lb. than the average of the same month during the preceding twenty-five years. The highest mean temperature 59.6°, was at Glasgow; the lowest, 57.1°, was at Edinburgh. The greatest depth of rain, 3.47 inches, with fifteen days of falling, was at Greenock; and lowest, 1.47 inches, with six days failing, was at Perth.

IRELAND.

At a meeting of the North of Ireland Branch of the British Medical Association, held at Londonderry, on September 7th, Dr. John Moore (Belfast) and Sir William Millar (Londonderry) were nominated as representatives on the Parliamentary Bills Committee.

PRESENTATION TO DR. M'CAW, PORTGLENONE.

ON Friday evening, the 15th instant, a presentation was made, in the Victoria Hotel, Portglenone, to Dr. M'Caw of that town, of a valuable horse, stanhope-gig, harness, saddle, and bridle, on the occasion of his being elected to the Fellowship of the Royal College of Surgeons, Edinburgh, and as a mark of their confidence in him as a medical practitioner, and their esteem and regard for him as a personal friend.

QUEEN'S COLLEGE, BELFAST: ANNUAL REPORT.

ONE hundred and fifty-six candidates passed at the matriculation examination, held at the commencement of the session, which, with twenty-six admitted *ad eundem* from other colleges, and fifteen non-matriculated, made a total of one hundred and ninety-seven. This shows an increase of nearly 25 per cent. upon any previous year. This increase has caused the deficiency of accommodation in the college

buildings to be much felt; while the demand for practical instruction in chemistry, physiology, etc., has become so great, that, if the new buildings and laboratories are not provided without delay, the efficiency of the college will be endangered. It is, however, probable that the necessary steps will at once be taken to have these wants supplied. The Natural History Museum is well supplied with valuable specimens, and the Anatomical Museum is in excellent order. A sum of upwards of £1,500, raised by subscription to establish a scholarship as a memorial of Dr. Thomas Andrews, late Vice-President, has been invested; and the proceeds are now available for the purposes for which they were intended.

FATAL ACCIDENT TO DR. THOMPSON, LISBURN.

A MELANCHOLY accident occurred to this eminent member of the profession (a short notice of whose life will be found in our obituary column), at Dunmurry station, on the Great Northern Railway, on Friday, September 23rd. He had driven from Lisburn to Dunmurry to meet Dr. Ross of Belfast in consultation; and, after having paid his visit, he came down to the station for the purpose of catching the first train to Belfast. To go from one side of the station to the other, instead of passing by the bridge under the railway, he attempted to cross over the rails; but, as he was doing so, the express train, due in Belfast at 11.30 A.M., dashed up, and struck him with great violence, jerking him forwards seven or eight yards against the platform. There was a fracture of the temporal bone and of the right arm produced by the injury. When lifted up, he was found to be unconscious, and bleeding profusely from the wound on the temple. He died very shortly afterwards.

ST. VINCENT'S HOSPITAL.

ANOTHER Dublin hospital appointment has become vacant. Mr. Matthew J. Kehoe, who was elected to St. Vincent's Hospital in March 1880, in succession to the late Mr. W. H. O'Leary, M.P., when a very junior member of the profession, has resigned his surgeoncy, after but a short tenure of an appointment which is generally such a coveted one, especially by young medical men. The electors to vacancies on the staff of St. Vincent's Hospital are the ladies of the Sisters of Charity, by which Order the institution was founded in 1834—the medical staff recommending the names of two of the most eligible, in their opinion, of the candidates to the electors. Such being the case, it would be only natural to suppose, under existing circumstances in Ireland, that, as heretofore, candidates of one religious denomination solely would offer themselves. On the present occasion, however, we hear that two at least of the candidates are members of a different persuasion. Both are men who have made a reputation for themselves, as hard workers and successful teachers, the appointment of either of whom would not only be advantageous to the hospital as a school, but would also be an example of religious tolerance, as much needed, unfortunately, by one church as by another. The election will be next week.

HYDROPHOBIA IN IRELAND.

THE Registrar-General, Dr. Grimshaw, in his quarterly return just issued, states that the registrars throughout Ireland report the deaths of five persons from hydrophobia during the quarter, and refer to the prevalence of rabies in dogs, and other animals, in twenty-six districts. The information concerning this disease, Dr. Grimshaw tells us, was furnished in reply to a special query addressed to the registrars, when issuing the usual reminder concerning the returns for the second quarter of this year. The registrars promptly complied with the request to furnish any information within their knowledge regarding the prevalence of hydrophobia in their districts, and thus supplied the Government with accurate and recent information regarding this fatal affection. The great value of the system which constitutes the poor-law medical officers the registrars of their respective districts, is forcibly illustrated by the result of this inquiry. If the registrars had been registering officers and nothing more, the information which they could

have afforded relative to hydrophobia, would have been merely a record of deaths from that disease; but, as medical officers, they become, in nearly all cases, intimately acquainted with all suspected cases of rabies.

THE EGYPTIAN EXPEDITION.

MEDICAL NOTES FROM ISMAILIA.

[FROM A SPECIAL CORRESPONDENT.]

OUR correspondent forwards the following clinical notes of cases of sickness in the Field Hospital at Ismailia.

CASE I.—B., Royal Marines, aged 32, was admitted on August 31st, at 4 P.M. He had been in Egypt since the first occupation. He had been ill a few days, was very weak, and vomited. His tongue was moist, and coated; his skin hot; pulse quiet and weak; he had headache. On September 1st, 7 A.M., the symptoms were as before; the temperature 102°. Ten grains of quinine were given; and milk and beef-tea as diet. At 10 A.M., the temperature was 103°; at 2.30 P.M., 103.5°. On September 2, at 6.15 A.M., he was much better; temperature, 101°. At 5 P.M., the temperature was 103°. The spleen was enlarged and tender; there were no spots. On September 3rd, at 6.15 A.M., his pulse was 80, soft; the tongue moist; the bowels regular. There was iliac gurgling; no diarrhoea; temperature, 102°. At 4 P.M., he was much better; he had a little appetite; temperature, 101.6°. On September 4th, he was much better, but still thirsty; his appetite was returning; the pulse was a little weak; temperature, 101.4°.

CASE II.—L., aged 23, was admitted on August 30th (third day of illness) at 4 P.M. He came with the first troops. He had general malaise and bad headache. On September 1st, at 6.30 A.M., he was very feverish, and a history of tightness of the chest, and headache; temperature 103°. Quinine (fifteen grains) was given, and beef-tea and milk ordered. At 2.30 P.M., temperature 104°. September 2nd, 6.30 A.M., he had had a bad night, with pain in the loins; temperature 103°. Fifteen grains of quinine were given; at 4 P.M. he felt a little better. The fever continued; the pain in the back was easier; there were no spots; the spleen was enlarged. At 8.30 P.M., temperature 104°. On September 3rd, at 6.30 A.M., he complained of pain in the back. The bowels were slightly relaxed; there was iliac gurgling; no spots; the spleen was enlarged; the tongue moist, and coated; pulse 80; temperature 102°; 11.30 A.M., temperature 103.6°. Quinine was repeated. At 4.30 P.M. he felt better, but weak; temperature 103.3°. September 4th, 7 A.M., he was better; felt cool; pulse 80. He still had pain in the head and back; temperature 101°; bowels slightly loose. 4 P.M., temperature 103.2°; fifth to eighth day, 6.30 A.M., temperature 102.3°; does not feel better; tongue moist; quinine, ten grains. 5 P.M., much the same, bad headache; pulse 82; temperature 103°; no diarrhoea; spleen large. Sixth to eighth day, 6.30 A.M., feels very well; sweated last night; pulse good; tongue coated, moist; temperature 102.6°; 4 P.M., much the same; temperature 103.2°. Seventh to ninth day, restless night; bowels moved three times; watery stools; pulse 83; sweated very much; tongue moist, clean; temperature 102°.

CASE III.—H., aged 24, was admitted at 4.30 on September 1st, at the second day of illness. He said he became ill on the previous day, with colic and purging, and passed blood and slime. He was very feverish, and had great headache. Temperature 103.2°; spleen was tender; the bowels were only moved once to-day; no blood. At 3.30 P.M. he was very feverish; temperature 104°; the bowels had not been moved. September 3rd, at 6 A.M., he had had a very good night; passed watery stools twice; no blood or slime; he was still tender over the bowels. He had fifteen grains of quinine. Pulse 80, temperature 99.12°. At noon he only felt weak; the temperature was normal. On September 4th he was quite well.

CASE IV.—H., aged 25, who had been a fortnight in the country, was admitted on September 2nd, 5 P.M. He felt chilly and giddy in the morning, and had pain in the head and back. He tried to do his work, but nearly fell down. On admission, he was in a high state of fever; temperature 104°. Ten grains of quinine were ordered, and beef-tea and milk as diet. At 8.30 A.M., he was much better, but still feverish; temperature 103.2°; pulse 80; temperature 100. At 12 noon he was much better, but very weak; temperature 99.4°; the looseness continued. At 4.30 P.M. he was very weak and faint; he had been up very frequently to stool; temperature 100°. That weakness passed off in a short time. On September

ber 4th he had tenderness over the bowels, and had been purged very often: there was some blood in the stools; temperature normal. He was ordered to have twenty grains of ipecacuanha. 5th, no fever-pains in bowels or diarrhoea. To have opium pills. 6th, still purged, no blood; weak acetate of lead and opium pills. Sent on board ship.

CASE V.—A., aged 32, was admitted on September 3rd. He felt weak, and vomited some blood. He was frequently purged, and passed blood and mucus. He had been ill for four days; there was no fever. Twenty grains of ipecacuanha were given. At 4.30 P.M. he was a little better, but weak. On September 4th, at 7 A.M., he was better. The ipecacuanha was repeated. September 5th, sent on board ship, nearly well, but weak.

CASE VI.—F. was admitted at 6.30 A.M. on September 3rd (the second day of illness). He had been in the country a month. He felt feverish and chilly on the previous day, and had pains in the bowels, and passed slime and blood. At 4.30 P.M., he was very feverish, with coated tongue. Temperature 103°. He had been purged several times; there was a little blood in the stools. Fifteen grains of quinine were given. On the 4th, he was much cooler; temperature 100.1°. He had tenderness over the bowels, and thirst; and was still passing blood. Ipecacuanha and quinine were ordered. September 4th, evening; quite cool, but bowels sore. Fourth and fifth day, passed no blood, no fever; sixth, nearly well, but weak. Sent on board ship.

CASE VII.—B., aged 22, was admitted at 7 A.M. on September 3rd, having been sent from the front. He was feverish and thirsty; very weak. He said he had had looseness, but had not discharged blood or slime. He had been ill about seven days. The pulse was quiet and weak; tongue inclined to dryness. He had cough with expectoration. There was pneumonia. No dulness over the lung. Some dry crepitation was heard over part of the right lung. Quinine (fifteen grains) was given at 4 P.M. He said he had passed urine; there was none in the bladder. The tongue was becoming dry and brown in the middle. Temperature 103.2°; pulse weak, 108. He had been purged, but had not passed blood or slime. There were no spots. The spleen was natural. At 9 P.M. he was very feverish and delirious. The temperature could not be taken. Cold was applied to the head. September 4th. The delirium continued during the night. The bowels loose, the stools being yellow and fluid. He was quite sensible; very weak. Temperature 99°; tongue brown and dry; spleen natural. September 4th, 11.30 A.M., temperature 102.3°; cough continues; crepitation at back of lungs. 4 P.M., temperature 103°; fair pulse; very nervous and restless; groans constantly, asks to be shot; tongue dry and brown. 5th, very delirious last night; not purged; says he feels very well this morning; tongue cleaner; temperature 103.2°; 11 P.M., tongue cleaner; pulse good; no diarrhoea; coughs a little; sputum thick, reddish; temperature 103.6°. Evening, symptoms much the same. 6th, 7 A.M., very bad; has taken little nourishment; picking at bedclothes; moved four times during the night; stool like dirty water; seems quite stupid; tongue brown and dry; temperature 101°; pulse very weak, 100; still has slight pneumonic sputum; this is, most likely, typhoid fever. 4.45, very weak; pulse 114, weak; temperature 104°; tongue brown and dry; not purged; takes nourishment badly; breathing, 52; is too weak to examine chest. 7th, pulse 120; very weak; three motions during night; tongue brown and dry; respirations rapid; temperature 101°; is taking meat, brandy, and eggs.

CASE VIII.—L. was admitted on September 3rd at 7 A.M. He had been in the country three weeks. Three days before admission, he had shivering pain in the head and back, and was now very feverish; tongue coated; temperature 103°. At 4 P.M. he was still in a high state of fever. There was splenic tenderness; no looseness. Temperature 104.6°. September 4th, 7 A.M. He was still very feverish. There was no diarrhoea. Splenic tenderness was present. He vomited during the night. Temperature 104.7°. Fifteen grains of quinine were given. 4 P.M., temperature 104°; stomach sick; tongue brown in the middle, inclined to be dry. 5th, fifth day, feels better; weak; tongue yellow margin; temperature 103°. 4 P.M., worse; temperature 104°; no diarrhoea. Sixth to eighth day, seems a little better; tongue brown in the middle; bowels loose; pulse, 80; temperature, 104°. 4 A.M., a little loose; tongue moist; temperature, 105°; pulse weak. 7th, seventh day, very weak; head painful; tongue inclined to dryness, brown; pulse, 106; no diarrhoea; spleen large; suspicious spots; temperature, 104.6°.

CASE IX.—September 3rd. Corporal C., R.M.A., fourth day of illness; general malaise; temperature, 101.4°. Removed from my care. Fifth and sixth day, returned. Sixth day, 6.50 A.M., very weak; temperature, 102.4°; slightly loose; pulse soft, 86; throat inflamed; tongue dry, inclined to brown; spleen natural; suspicious spots. 11 A.M., temperature, 103°. 4.30 P.M., temperature 103°; tongue dry in the middle, brown; pulse weak.

Sixth and seventh day, very weak; tongue dry; throat slightly red; pulse, 99; weak; loose watery stools; spleen enlarged, tender; suspicious spots; temperature, 103.7°. Typhoid (?) 4.30 P.M., feels better; pulse 80; weak; tongue brown; temperature, 103.4°. Seventh and eighth day, tongue cleaner; is very weak; throat better; temperature, 102°; pulse very weak; no diarrhoea.

There are many cases of men with looseness, pain, and tenderness of the bowels, and blood and slime in the stools, coated moist tongue, weakness, and normal pulse and temperature, who have had no fever. All the fevers mentioned above appear to be malarious. The cases of high fever with dysenteric symptoms may be ague with dysentery or malarious dysentery.

[FROM ANOTHER CORRESPONDENT.]

THE Khedive's palace at Ismailia, which has been temporarily appropriated as a hospital for our troops, is an oblong, two-storied building, similar in external appearance to an ordinary modern French chateau. Its principal façade is towards the south, on which side it is approached by a flight of stone steps, giving access to a central entrance-hall of about sixty feet square. On the right and left of this hall, there is an apartment of about sixty feet long by thirty broad, and in rear of these apartments are some rooms of smaller dimensions. Beyond these, again, on each side, is a magnificent room, upwards of seventy feet in length, and between thirty and forty in breadth, which occupies nearly the whole length of the side of the building.

The second storey is approached from the entrance-hall by a broad wooden staircase, and the space on this floor is subdivided into rooms of various sizes, which open from one to the other, although they have also a separate access by a corridor running nearly from end to end.

The windows are of the ordinary French kind—glass for the interior, and wooden shutters outside. There is no verandah on the eastern, southern, or western sides of the building; consequently, the rooms have no other protection from the intense noontide heat than that which the shutters are capable of affording.

The floors are of wood throughout, except in the entrance-hall, which is paved with marble. The walls are simply lime-washed, in different colours; but the ceilings, especially in the large rooms to the extreme right and left on the ground floor, are tastefully painted and picked out in gold. The height of the rooms is about the same throughout, and must be, I should guess, between eighteen and twenty feet. It is considered that the entire building is capable of accommodating nearly two hundred sick.

The palace stands in a garden of about eight or ten acres, surrounded by a wall of masonry; and in the garden there are growing, or rather there were growing, previously to our arrival and before the supply of water was cut off, vines, plantains, figs, tamarind, eucalyptus, and other trees, which are still green and capable of affording some shade, although they are already beginning to droop, owing to the deprivation of water.

Close to the western wall of the garden, in fact forming a portion of it, are the guard-room, kitchen, and a few other small rooms, which were probably intended for the lower servants of the household. These are now utilised for similar purposes by ourselves.

The palace, on our arrival, was found completely denuded of every particle of furniture. There were the walls, and the ceilings, and the floors, but there was absolutely nothing else out of which to provide accommodation for sick and wounded men. In the whole of the building there were originally four water-closets, two on each storey, supplied with water from a tank on the roof, but as the water had been cut off and the tank was empty, these were of course useless. The first and most pressing need therefore was to institute the dry earth system of conservancy. Accordingly, latrines were dug in the usual manner at the bottom of the garden, but when dysenteric patients began to arrive in large numbers, it was soon found that, in spite of all verbal prohibitions, they would persist in using, especially at night, whatever part of the garden they found most convenient—whilst to the distant latrines they would not, oftentimes, even could not, go—an attempt was then made to form a few dry earth closets within the building for use, at night especially, by the bad cases; but these almost immediately became an intolerable nuisance; for the British soldier is not generally imbued with correct notions on sanitary matters, and it was found impossible to limit the use of these dry earth boxes to the cases of serious illness only, a trial was next made of a latrine pit or two at a distance of only twenty yards from the building; but the same difficulty again presented itself, viz.: the prevention of its use by ordinary patients, and after an experience of about a couple of days, this plan had likewise to be abandoned.

the greatest pleasure; and it is no exaggeration to state that the services rendered by these good sisters were of the highest possible value to our sick and wounded men. They worked, six of them, with the utmost zeal, and although they could not speak a word of English, they were able, from their skill in dealing with the sick, and from their ready tact, to anticipate all that was required.

Miss Caulfield has since arrived with her staff of English nurses; consequently the Sisters of Charity have been relieved of their onerous duties; and now that the base hospital is approaching completion, in its personal as well as in its material requisites, we look forward with much confidence to the great and serious work that is still before us.

We are evidently on the eve of a grand military coup, which may finish the Egyptian campaign for our troops so far as fighting is concerned. Part of the troops will remain to maintain order; and it seems a serious question, especially as regards Alexandria, how they are to be provided with healthy accommodation if they are to be lodged in temporary or permanent barracks. The sanitary arrangements of most private houses, and all public buildings, in Alexandria are vile beyond description. I visited with Surgeon-Major Riordan, Sanitary Medical Officer, a few days ago, the temporary barracks of the 2nd Battalion Derbyshire Regiment and the 2nd Battalion Manchester Regiment, two regiments which are quartered in the town of Alexandria. The sanitary condition of the International Tribunal Buildings, where the chief guard is quartered, is bad in the extreme. It is a mistake to apply the word "sanitary" to any arrangement connected with it; it is a huge building built over a public privy with numerous drains opening in the courts and courtyard. The "zabtieh", where others are quartered, may be described in pretty much the same language. Up to the present, the health of these two regiments has been good, their proportion of sick being under five per cent., with no special causes of disease. Up to the present, the strong sun and dry heat, with high temperature, have acted as good antiseptics; but when the first rains of winter fall, the defective sanitary arrangements of Alexandria will make themselves felt. The number of sick at present in the base-hospital here, now in charge of Brigade-Surgeon McGrath, Principal Medical Officer, is 162. Of these, 34 are suffering from fevers, continued and paroxysmal, 32 from syphilis, 44 from diarrhoea and dysentery, one injury received in battle, 10 accidental injuries, 9 diseases of urinary system, 6 debility, the others from slight and varied illnesses. From a civil practitioner's point of view, the proportion of syphilis is uncommonly large.

The sanitary question will now be the principal one, and as we are yet at least two months from the onset of the cold, wet, unsettled weather of an Alexandrian winter, it is to be hoped the military authorities will make good use of their time, and find good quarters for their men; or aid Dr. Riordan in his efforts with the local authorities to improve—if they can be improved—the present.

The health of the civil population still continues very satisfactory. A few cases of typhoid, and of what some call bilious remittent fever, have occurred lately; but no more than occur every year at this season.

Lady Strangford is expected to arrive in a few days, bringing with her nurses for the Egyptian wounded; or, according to the original idea, to organise the native hospital here. She will arrive late in the day, probably, for ambulance service, but, if not obstructed by the jealousy of the native medical authorities, she has a great field before her to introduce a civilised system of nursing and organisation in the Egyptian native hospitals.

If there is a service in Egypt which requires reform, and which if properly reformed and well worked would have an untold influence in civilising and raising the poor fellaheen, it is the medical. No man is more appreciated in Egypt, or has more influence amongst the lower classes of fellaheen than a surgeon, if he shows a real interest in them, and can talk to them in their own language. A pure physician they probably do not appreciate so much. They don't understand undergoing a long treatment, taking medicines, and being put on diet; especially a diet not at all in accordance with their views. They want to find the man who will "cure" them, and not "treat" them. They are willing to take a dose or two of medicine, but want to see a practical beneficial result of it at once. This, of course, they more often see in the work of an operating surgeon than in that of a physician. This question of medical and hospital reorganisation and reform is one which I would bring to the notice of the English Government—to have its share amongst other reforms in Egypt—and I am convinced, from long and extensive experience, and close intercourse, extending over twenty-two years, that no reform yet undertaken will exercise a greater influence in changing the character of the people. I should call it the first and preparatory reform; preparatory for all the others, financial, governmental, etc. With hospital reform must also go "prison reform", if the social status and self-respect of the people is to be raised,

and their ignorant, brutish fanaticism lowered. But this is too long a question for the present, I shall return to it. Meantime, I would say, the English Government, with so much in its power for reforming Egypt, would do well to ask counsel of those experienced in the country and who know the character of the mass of the people intimately, to know whom it requires more than a knowledge of diplomacy, and diplomatic agents seldom possess the means of gaining this knowledge.

Alexandria, September 12th, 1882.

[FROM ANOTHER CORRESPONDENT.]

Camp Tel-el-Kebir, September 14th, 1882.

On the eve of the 13th we received secret orders to prepare for a night march. Only what could be carried on the person, or horse, if you were lucky enough to have one, was allowed in the way of baggage, and at 7.30 P.M. we set out for the appointed rendezvous. In the dark we took up our assigned position, and bivouacked for a few hours. About 1.30 A.M. we again moved on, halting occasionally to keep position. Just before dawn, a long halt was made, and in front of us suddenly broke out a terrific roll of musketry. It was a pretty sight, darkness just sufficient to show the flash of the rifle, every now and then brilliantly illuminated by the big guns. We were not allowed to enjoy this rare display long in peace, for soon the shell of the enemy fell among us thick and fast. Falling here and there, some a hundred yards away, others within a few feet, made it one of the unpleasantest half hours I ever spent. One shell burst within a few feet of me, scattering the stones and dust in my face, and a splinter bending my spur, others were as close, still neither horse nor man was hit, and why, I cannot make out, except that the shell is not such a dangerous projectile as is imagined. Within half an hour the fire of the enemy perceptibly slackened, and the column that I was with gradually advanced.

About this time a few Arabs passed through our very midst. Thinking they were friendly Arabs, they were allowed to pass unmolested. Within a few minutes these very Bedouins—for they were Arabi's videttes—came across a wounded man, and shot him in the spine. We had not gone far when signs of the fight met our eyes. Here was a dead horse, there an exhausted soldier. On one side I saw a smashed femur from a bullet, and not far off a dead Highlander, shot clean through the head. On we rode, the dead and dying becoming thicker every moment—all English, not an Arab to be seen—the reason being that they had no look-out, or strong outpost; and this, I am told, materially assisted to our brilliant victory. We were now within a few yards of the intrenchments, and formidable, indeed, they looked in the grey dawn. Our men had carried the fortifications by storm; a sudden rush, and they were in—not without some terrible losses, some fairly delivered blows, and others treacherously dealt by wounded and prisoners. Captain Dalbiac, R.A., of F.I.R.A., was shot through the left gluteus, the ball entering just below the scrotum, and passing out about the centre of the muscle referred to. He was shot, so he told me, by a wounded man not five yards off. A poor Highlander officer was found inside the intrenchments, shot through the chest and abdomen, four chambers of his revolver discharged by his left hand, and his broken sword in his right. Captain Roulston, R.N., met with a similar fate, although not so immediately fatal. The Highland Brigade had got inside, and the naval officer was seen to follow, charging on horseback. As his pony mounted the breastwork, it was shot under him, rolling his rider over. In another moment the officer was up, only to be down again by a bullet through his lungs. He is not expected to recover. Another naval officer, whose name I forget, had surrounded by his men a number of Arabs; he advanced towards them, motioning with his hands for them to lay down their arms and surrender. Many did so, but one could not resist the temptation, as the officer drew near, and blazed at him. The naval officer at once charged for him with his sword, but his horse rearing just then gave the cowardly prisoner another chance, which he did not fail to take advantage of, and the officer rolled over shot in the arm, fracturing both ulnar and radius. The Highland Brigade had to bear the brunt of the attack, and these noble fellows were thickly sprinkled over the ground and trenches; one was particularly ghastly, and noticed by several. He was lying in the trench, with an unpleasant expression, and the lower part of his body quite blue.

It would take too long to write in detail all the horrible sights that one met with; but one I shall never forget. I was riding along one of the trenches inside the earthworks, when I came across a trench full of dead and dying, so thick were they that not a bit of ground could be seen, and in some places they were five or six deep, one over the other like herrings in a barrel. In the midst of this heap, I saw an Arab who had been shot in the head, a fragment of shell taking away

half his face. He must have been blind in both eyes, or he never could have done what I witnessed. He felt about among the dead and wounded for a wet rag, and then he would wring the bloody garments of his comrades, and suck it for a drop of moisture to wet his tongue. I could not get down among this heap, or he should have had some water; so I turned away from the sickening sight.

Once inside the works few of our dead were met with, but hundreds of Egyptians could be seen sprinkling the ground with their white coats, bloodstained and dusty.

We rode on, passing bodies in all the strange positions met with on the battlefield, and came to Arabi's camp. It was a strange sight to see the hundreds, yes thousands of huts, and Arabi's own standing out prominently among all, conspicuous for its gorgeousness. Within three hours from the first shot being fired we were preparing breakfast with the fires intended for the use of our enemy. Arabi had fled by train. All had gone, leaving everything behind them. I came across a surgeon's tent, he had not waited to take his instruments with him, but bolted, leaving drugs and all behind. The instruments were of French make. The "Vet" also left in a hurry, I noticed his instruments were made by Arnold, London.

The wounded were all brought into the first dressing station within a couple of hours. There they were attended to as rapidly as possible, and then removed to the Field Hospital, and from thence to Ismailia the same evening. The Bearer Companies, I hear, did good service, especially those which were well up to the front.

After our own wounded had been attended to, those of the enemy were brought in and dressed, and bad they were, poor brutes; many could not believe that they would not be put to death if caught by us, so hundreds feigned dead till darkness should allow them to escape. Others more brave asked for a drink, and when given :o one, three or four would at once jump up, who had previously looked as if dead. For hours after the battle was over, wounded Egyptians kept crawling into camp : one came to me with a bayonet wound of the abdomen, through which the intestines were protruding as large as a man's head. With difficulty I reduced this, and stitched him up, passing him then on to his prison. Another came in soon after with his ankle joint completely smashed and a bullet through his thigh. He, like all I saw, bore their sufferings without a murmur—so characteristic of the native race. The prisoners were utilised to bury dead, and within twenty-four hours the sanitary condition of the camp was fairly satisfactory.

[FROM ANOTHER CORRESPONDENT.]

Tel-el-Keber, September 14th.

On Sunday, the 10th, I lost sight of the cases at the base hospital at Ismailia as I proceeded to the front. I proceeded on the march at 4.30 P.M., with a regiment from Ismailia, for Nefiche. The distance being only three miles, but over heavy sand, no man fell out. We bivouacked for the night at Nefiche. The men carried ammunition, rifles, and blankets, as the nights are cold; no valises. Next day, one man with ophthalmia being sent back, we marched at 4.30 A.M. for Mahouta, about seven miles. At the end of four or five miles, we bivouacked for the day, and had dinner. The men, by means of pieces of wood round their bayonets, made themselves more comfortable shades, the sun being very hot. One man with ophthalmia and one who was feverish were sent back by canal to Ismailia. The march to Mahouta was completed in the evening, where we bivouacked for the night. The smell in this camp and on the march to it was very bad, on account of the dead men and horses, etc., who were killed in the action of some days previously. All the dead and carcasses were buried, but not very deep. On Tuesday, the 12th, I started at five minutes to 5 A.M. We marched to Kassassin, about eleven or twelve miles. Breakfast was served by the men when we had marched about eight miles. Arrived at Kassassin at noon. The latter part of the march was very hot. There was only one man who had to be carried the latter part of the march; he was simply exhausted. The accoutrements of two or three men were also carried. There was no sunstroke. Coffee or beer was always served before a march was begun. We bivouacked at Kassassin until 6.45 P.M. At that hour the regiment turned out, the men carrying only their ammunition and rifles, water-bottles, and biscuits. Four men were not fit to march on account of slight feverishness and exhaustion. The march was completed at 10.30 P.M. at Kassassin, and there were two ambulances. A party of two Frenchmen, one

During the night, we marched about twelve miles, to get on the left of Axala's position at Tel-el-Keber. Not a man fell out. I attribute the good marching, and the fact that there was no sunstroke, to the absence of drink. I am convinced that sunstroke nearly always happens in the case of men whose skins are not acting on account of the effects of acohol. During the night, there were several halts.

and the men slept during each halt. At daybreak, we were close to the Arab entrenchments, and the enemy opened a heavy fire of shells and musketry. For about five minutes, our men marched steadily on, nobody being hit. During the next ten minutes, the wounded dropped very rapidly: they were looked to at once by the regimental ambulances. Luckily, the position was so rapidly taken, that the Arabs left their water-bottles on the field, and the wounded were easily provided with water, for which they craved. The ambulance-bearers were soon on the field, and all the wounded were carried to the field hospitals; in a very short time, the wounded were removed, and the dead buried. The same evening, nearly all the wounded were sent to Ismailia by train. Of one regiment which went into action over seven hundred strong, I saw two killed, and about fifteen wounded; and a good many, suffering from exhaustion, had to go to the field hospital, as they were unable to march with the regiment to camp, which was about three miles from where the entrenchments were carried. These latter seemed to give way only when the excitement was over.

Hundreds of the Egyptian wounded are being brought in, and treated by our bearer-companies.

LADY STRANGFORD, who has arrived with staff and appliances for nursing a hundred and fifty wounded, has had placed at her disposal, by the Khedive, Arabi Pacha's house, and will at once take our severely wounded from the Arab hospital, which will relieve the strain there. This is a use to which even Arabi himself could hardly object.

ACCORDING to the statistics of the Army Medical Department contained in a recent telegram, the average number of sick admitted to the Ismailia Base Hospital, from August 24th to the end of the first week in September, amounted to sixty-two daily, or between one-half and three-quarters per cent. of the active British force in the field at that date. These cases do not include the men wounded in action. Since then the army has been increased by the arrival of the Highland Brigade and other troops, and the daily average to September 13th was 140, or about 1 per cent. of the whole force.

The majority of the men under treatment are suffering from sunstroke and diarrhoea, while, to a less extent, dysentery and ophthalmia prevail. The above figures do not include the cases of sickness among the Indian troops, the number of which is, however, merely nominal.

THE ANNUAL MUSEUM OF THE BRITISH
MEDICAL ASSOCIATION.

[Continued from page 597.]

MESSRS. CUBLEY and PRISTON (Sheffield), well known manufacturers of chemical, electrical, and scientific apparatus, exhibited the Electro-magnets, for the removal of iron and steel fragments from the interior of the eye. These magnets, which were designed by Mr. Simeon Snell, Ophthalmic Surgeon to the Sheffield General Infirmary, have been largely used by him and other oculists with remarkable success. The manufacturers have been able, after repeated trials, to lessen the weight and size without decreasing the power. (For report of cases, see BRITISH MEDICAL JOURNAL, May 28th, 1878.)

Messrs. F. Darton and Co. (London) showed an extensive collection of philosophical, physiological, and optical instruments, including Ocular Trial-Glasses, Ophthalmoscopes, Clinical and Surface Thermometers, Aneroid and Glycerine Barometers, Hygrometers, Night-Alarms, etc.

Dr. G. H. Darwin (Manchester) exhibited his ingenious Automatic Tongue-Depressor, made in three sizes to suit the age of the patient.

Messrs. Doulton and Co., whose exhibits form a most important feature in sanitary exhibitions, showed a handsome Lavatory fitted with tip-up basin and Doulton-ware columns: Water-waste Preventing Valves and Cisterns: Improved Valve-Close: Side-outlet and Flush-out Water-closets: their well known patent Accumulation Valves: Dr. Bernay's Patent Manganous Carbon Filter: Gully and Intercepting Trap: and other sanitary appliances.

Dr. Thomas Dutton (Sidesham, Chichester) showed an interesting wet specimen of Ulcer of the Stomach in an apparently healthy man, fifty years of age, who had met with sudden death from perforation.

Mr. Benjamin Edginton (London) exhibited his patent Trestle Cot for Invalids, which is so constructed that it stands by itself in any place without lines or pegs, and is equally suitable for use on the

as a litter. The whole folds up and packs into a bag about 3 ft. 6 in. long.

Messrs. Evans, Sons, and Co. (Liverpool and London) exhibited their Malt-Coffee, which is said to consist of a blend of the choicest coffees, free from chicory, and contains malt-diastase in an active form, as also the albuminoids and other valuable principles of malted grain in an easy assimilable form, and is recommended as a nourishing and health-producing article of diet. They also showed Fossiline, a bland, colourless, pure hydrocarbon jelly, recommended as a basis for ointments, inasmuch as it is said not to become rancid. Fossiline-plaster has also the advantage over ordinary adhesive plaster, of being more pliable; it adheres more readily without the application of heat. Another speciality of this firm is their Porous Plasters in rolls, seven inches and a half wide, being belladonna, capsicum, roborans, and strengthening, spread on leatherine as a substitute for moleskin, than which it is cheaper. The Cube Cigarettes, combined with stramonium and cannabis Indica, are said to have a direct and immediate action on the air-passages in promoting expectoration; they are recommended in cases of asthma, catarrh, colds, dyspnoea, bronchitis, etc. The Montserrat Lime-Fruit Juice is also introduced by this firm, as a reliable juice for medical use.

Messrs. Ferris and Co. (Bristol) exhibited a choice selection of Surgical Instruments and Appliances, comprising a very elegant Pneumatic Aspirator; Pocket Cases; Eye Instruments; Bigelow's Lithotrite and Evacuation Apparatus; American Tooth-Forceps, of beautiful workmanship and original design; Microscopes, by Wasserlein of Berlin, and Hartnack of Paris; Ophthalmoscopes, by DeWecker, Landolt, and Liebreich; an Artificial Eye, for demonstrating; a Portable Induction Apparatus; Celluloid Stethoscopes, Catheters, Bougies, Hypodermic Syringes; New Gum-elastic Catheter à Boule, by Zamotte; a very portable and elegant Midwifery Bag, fitted complete with nickel-plated instruments; also their new patent perfect Clinical Thermometer. In the Drug Department, they exhibited their well-known preparations, including Fuchsine, Quebracho, Grindelia Robusta, resublimed Naphthol, Papaya, Picrotoxine, Resorcine, Gynocardia, and Convallaria Majalis, etc.; and a very elegant Dispensing Cabinet in walnut, fitted complete, suitable for side-table or consulting-room.

Messrs. Felton and Sons showed samples of their Spécialité Lime Juice.

Dr. T. Colcott Fox exhibited some well executed Water-colour Drawings, illustrating various forms of skin-disease.

Mr. T. W. H. Garstang (Dobcross, Manchester) showed an interesting specimen of Uterine Fibroid, removed with the placenta after parturition.

Messrs. J. G. Ingram and Son (Hackney Wick,) exhibited their Improved Higginson Enema and Syringe Apparatus. This enema apparatus possesses undoubted advantages, obtained by the mode of manufacture, which is accomplished by repeated dipping in a solution of India-rubber until the required substance is attained. This process adds greatly to its strength and durability, and at the same time dispenses with all seams. The disadvantage of splitting and leaking, which is often a great source of trouble with enema apparatus made of several pieces of sheet India-rubber cemented together, is thus in a great measure overcome. This enema is fitted with improved valves, which prevent the admission of air with the fluid, and has the further advantage that it can, at any time, be repaired if necessary.

Dr. E. H. Jacob of Leeds showed a new Polygraph, or general recording apparatus of simple form, made by Rothe of Prague.

Messrs. H. and T. Kirby and Co. had a small but select display, in which we noticed, as novelties, a series of Medicated Chocolates; some, such as those of iron, santonine, red gum, and phosphate of lime, intended chiefly for the administration of medicines to children; and others for adults, containing charcoal, quinine, and extract of coca. In all these, the taste of the medicine appears to be entirely disguised by that of the chocolate. They also exhibited, as new preparations, a class of medicine termed "Elixir Mixtures," some of which, as caffeine, guarana, bark, and iron, are like cordials, and may be taken undiluted; whilst others, as hops, the bromides, colchicine, and lithia, they recommend to be taken diluted, or in aerated water. These are all made by using a sweetened aromatic spirit as the base in which the various medicaments are dissolved. They are very similar to the elixirs largely prescribed in America, and are an agreeable and useful class of medicines. In addition to their well-known Pearl-Coated Pills, this firm exhibited specimens of Gelatine-Coated Pills, both ovoid and spheroid, amongst which were granules of aconitine, atropine, digitaline, hyoscyamine, pilocarpine, and other alkaloids and active principles. Their display contained also a variety of their Glyceols, or Jelly Lozenges, made of gelatine and glycerine variously medicated, and intended principally for throat

affections; Thymol Powder for toilet and nursery use; Nutrimentin, or Condensed Farinated Beef, and a selection of their Miniatore Dispensaries.

Messrs. Krohne and Sesemann exhibited a complete set of Ovariectomy Instruments, with improvements to the present day. Amongst them, we noticed Spencer Wells' Pressure-Forceps, made of various sizes, straight, and bent at different angles. The smaller ones are for temporary stopping of bleeding before ligature, or for the suppression of bleeding permanently by crushing together the coats of the bleeding vessels. The larger ones are applied as temporary clamps when removing fibroid tumours. They also showed Thornton's T-shaped Pressure-Forceps, used for the same purposes; Dr. Bantock's modification of Koeberle's *Serre-Neud*, aided by two transversely placed guarded pins; and Mr. Lawson Tait's plated copper-wire Clamp for supporting the pedicle of intraperitoneal tumours. They also exhibited Junker's Anæsthetic Apparatus, with latest improvements, for administering chloroform, bichloride of methylene, or any other anæsthetic, economically and with regulated dilution; with which, it is believed, the administration of an anæsthetic is rendered safer than with any other apparatus at present in use. A known quantity of the narcotic vapour is administered with each inspiration, which, with chloroform, does not exceed 1.2 minims at a time. A pliable metallic Temperature-Regulator (Leiter's patent), for continuous application of dry or moist warmth or cold to the different parts of the body, was shown. It is made in round, square, oblong, and cup-shaped forms, of various sizes. Special caps are made for applying cold to the head. When ordering a cap for the head, the circumference of it, taken just above the ears, should be given. The firm also exhibited Allingham's Clamp for crushing piles, and also one of large size for crushing the tissues when removing a tongue. The power of these instruments is very great; the opposing blades are made to meet by direct screw-pressure, by which the vessels are completely crushed. Bryant's Double Splint for the treatment of hip-disease and hip-injuries, with recent improvements, was also shown; also a new apparatus for storing compressed air, with which to work spray-tubes, especially adapted for specialists in throat-diseases. It is also used for inhaling of compressed air. They also showed Lister's Steam Spray-Producers, and the various materials for antiseptic dressings, amongst which there was a fine specimen of the Puff Ball (*Lycoperdon giganteum*), recommended by Dr. Thompson, Surgeon to the County Tyrone Infirmary, as a hæmostatic and surgical dressing. They also showed a set of Pierce's Ear-Instruments; Politzer's new Ear-Tubes; Mr. Reginald Harrison's new Stricture-dilating Instrument and new Trocar for tapping the bladder; Splints by Mr. Bryant and Mr. Thomas of Liverpool; Artificial Eyes; and a Glass Syringe used by Mr. Bader of Guy's Hospital for the treatment of gonorrhoeal, purulent, and other forms of ophthalmia.

Messrs. Lancaster and Son (Birmingham) exhibited a varied collection of philosophical and optical instruments.

Dr. H. A. Lediard (Carlisle) showed the Case and Cast of new Splint, devised to give support to heel-flap after Syme's amputation.

Messrs. J. and C. Lloyd exhibited samples of their "Universal" Food for Infants, Children, Invalids, and others, which has already received a favourable notice in our columns.

Messrs. J. F. Macfarlan and Co. (Edinburgh) occupied a stall with a display of appliances and dressings for antiseptic treatment; and also exhibited specimens of their pharmaceutical preparations—Opium Alkaloids, Chloroform, Salicine, Aloine, Chrysophanic Acid, and Berberine Sulphate.

Messrs. Mackey, Mackey, and Co. had a good display of their many specialties, including several soluble preparations of Cerium, their Cod-liver Oil preparations, Fluid Extracts, preparations of Iron and Quinine, and Tincture of Quinine; solution of pure Hydrate of Chloral; Syrupus Ferri Dialysati; Epulixon for the Antiseptic Treatment of Surgical Cases; Saccere Album, or White Rock Wax, a pure white hydrocarbon, prepared from petroleum; Saccere Hamamelis, a new remedy for hæmorrhoids, bruises, sprains, ulcerated wounds, and inflamed mucous surfaces; Mackey's Oxychlorogene, a powerful and complete deodoriser, antiseptic, and disinfectant; Anemone Pulsatilla, said to be useful in whooping-cough, inflammation of the throat and respiratory organs, and in similar conditions of the urinary organs. These, and many others of the special preparations of this firm, have already been referred to in our notices of previous exhibitions. Our attention was specially drawn to their new production of Papaw-juice and Papaine, which is said to be of great value in chronic eczema and psoriasis; papaw-juice having the property of digesting living tissues, normal or pathological, and converting them into dead ones (*vide* Mr. Malcolm Morris, BRITISH MEDICAL JOURNAL, May 20th, 1882).

Messrs. Maguire and Son, of the Dublin Sanitary and Engineering Works, exhibited two sizes of Dr. Scott's Patent Self-Regulating Dis-

2. Dr. McKeown (Belfast): The treatment of certain Deep-seated Diseases of the Eye by Subcutaneous Injections of Pilocarpine.
 3. Professor Dill (Belfast): A Case of Puerperal Tetanus.
 4. Dr. Palmer (Armagh): A Case of Removal of the Upper Jaw.
 5. Sir W. Millar (Derry): Ligature of the Femoral Artery for Popliteal Aneurysm—Dislocation of the Hip-joint; Difficult Reduction.
 6. Dr. Carson (Portrush): Extensive Desquamation in a New-born Child.
 7. Dr. Bernard (Derry): On the Abuse of Tobacco.
- After the meeting, the members of Derry entertained all the visitors to luncheon in the Imperial Hotel.

SPECIAL CORRESPONDENCE.

BELFAST.

[FROM OUR OWN CORRESPONDENT.]

Death of a Nurse in the Belfast Royal Hospital from Strychnia Poisoning.—Accident to Sir Hervey Bruce, M.P.—Death from Eating Raw Turnips.

AN inquest was held in the Belfast Royal Hospital, on September 19th, on the body of Emily McConnell—a nurse in the institution—who died suddenly the previous day. It appears she was going about her duties as usual, and conversing with some people in the ward, when she suddenly felt ill, left the ward, and called upon another nurse, saying she was sick. A man who was in the hospital at the time, visiting his wife, went out to see what was the matter. He found her standing clutching the door, with her back against the sash. She asked him for a chair; and, when about to place her in it, she fell to the floor in convulsions. When he lifted her up, she exclaimed she was choking. The resident surgeon, who saw her at once, found her perfectly conscious, but suffering from spastic rigidity of the muscles, and tetanic convulsions. She died in twenty-five minutes from the onset of her illness. Her muscles relaxed before death, and her breathing became good. She was twenty-two years of age, married, and had only been four months in the hospital. Her father is at present in an asylum, and is an epileptic. Death was at first believed to have been due to an epileptic fit; but, afterwards, two bottles were found in her pocket, one containing a solution of sulphate of eserine, two grains to the ounce; the other was labelled "Strychnine—Poison." It is now believed that she had taken a dose of this latter poison, and that death was due to that cause. The inquest was adjourned, in order that a *post mortem* examination might be made. The body of the deceased was accordingly examined, and death was found to be due to strychnia poisoning. It came out, in evidence, that the lock of the pharmacy-door has been broken for the last fortnight, and that there is no regular person in charge—the dispenser having left. This has called forth severe comments in the columns of some of the local papers.

An accident, which might have been attended with the most grievous consequences, happened last week to Sir Hervey Bruce, Bart., the Member of Parliament for Coleraine. He was out with a party grouse-shooting on the Magilligan Mountains, which are part of his estate, and was accidentally shot in the face. One of the pellets of shot struck him on the left eye. He, shortly afterwards, put himself under the care of Dr. McKeown of Belfast. The sclerotic was indented, and floating opacities were found in the vitreous, but no trace of the pellet could be discovered. We are glad to learn that he has been making most satisfactory progress.

A death occurred in the County Armagh, in the beginning of this week, from eating a large quantity of raw turnips. From the evidence at the inquest, it appeared he ate four Swede turnips and a pint of blackberries, and that he died after two hours' illness, death being due—according to the testimony of Dr. H. J. Kean—to inflammation of the intestinal canal.

CORRESPONDENCE.

THE CO-OPERATIVE MEDICAL ASSOCIATION (LIMITED).

SIR,—As Honorary Secretary to the Co-operative Medical Association (Limited), you will perhaps permit me the opportunity of saying in your columns, in answer to your critical remarks of last week, that your contention that the non-subscribing branch of the Association appears to you liable to great abuse, as there is no guarantee that those

who pay one shilling a visit may not belong to a class of persons who are well able to pay the usual charges is assuredly a thousandfold more applicable to free hospitals (which are warmly approved by the bulk of the medical profession), with the substitution only of the words "nothing a visit".

Are members of Co-operative Stores, may I ask, required to pass an examination on the threshold as to whether they do or do not belong to a class of persons who are well able to pay the usual shopkeepers' charges? Such an inquisition is wholly foreign to the spirit of co-operation, and to the liberty of the individual.

Your proposition that it is necessary for those who want medicine at co-operative prices "to profess themselves unable to pay a doctor's bill" is surely beside the mark. There is nothing demoralising in buying cheaply. It is the system of giving, whether in the Poor-law, the charities, or the hospitals of the kingdom, which eats into the independence and self-respect of the people.

This Association may safely rely that it will be used, in the vast majority of cases, by the really poor or needy, without the attempted adoption of any artificial and impossible inquisitorial check.

I should be pleased to see a similar co-operative law association established (to be worked, of course, by qualified practitioners)—although there are no institutions in the law, like hospitals in medicine, affording gratuitous assistance, to be held in check; and believe that the benefit of such an association to the necessitous public would enormously outweigh any damage to the profession.

The powerful voice of the BRITISH MEDICAL JOURNAL—albeit that the present scheme "indicates a fresh danger to the medical profession"—might, I venture to think, be devoted better, in the public interest, to reforming the abuses of free hospitals, than in decrying, in so narrow a spirit, an Association whose success must necessarily tend to that reform.—I am, sir, yours faithfully,

F. A. A. ROWLAND.

14, Clement's Inn, W.C., September 19th, 1882.

SIR,—In your last issue was a notice of the Co-operative Medical Association, which gives young London practitioners cause for further alarm at the wholesale spread of the colossal form of cheap practice. To men of long standing, commanding good patients or possessing independent incomes, the subject presents neither attraction nor repulsion; but for the many who have to work up their position through the working classes, there certainly is an element of distrust in it.

One remarkable feature is that, given an "Association" of names, cheap practising and lay advertising immediately become admissible; whereas a private individual resorting to such measures is either looked down upon by his *confrères* as "cheap and nasty", or his publications are held up for enlightenment in the medical press. I ask, Where is the difference between collective and individual action in such a case? We certainly know that, in many hospitals and like institutions, gentlemen give their valuable services without at times even the recognition of an honorarium, and great should be their praise; but we also know that, in most provident dispensaries and similar associations, the medical officers receive nearly all the small fees of their patients; and the staff of the latter bodies being invariably limited, why cannot their neighbours who are precluded from joining them defend their own interests by acting in their individual capacity?

It is beside the question that mere names of lay members on a committee can place things above suspicion, for patients will as soon detect public as private mismanagement or ill-treatment if there be any. That there may be more abuse in private than public working, is confuted by the exposure, censure, and loss, that would be directly brought upon the perpetrators. The holders of public appointments are compelled, from the pressure of such duties, to keep either pupils or assistants; and in all hospitals, the bulk of extern and intern work is done by unqualified students; so wherein differs the position of the private practitioner who exercises immediate supervision over his subordinate?

The recognition by the profession of private medical clubs, and, as legitimate, an advertisement of them, as is accorded public ones, would remove the fetters of a present one-sided privilege. In face of the existing administration of poorer class practice, medical men must either bestir themselves to boldly showing the masses that they are prepared to treat them at small remuneration, or from lack of courage to face for a while the scowl of their more fortunate "brothers", they must quietly and surely witness the doctoring of the working man drift into the hands of the few.

Your comment on my *outré* ethics of the above knotty problem would be very acceptable to others than yours truly,

London, September 19th, 1882.

AN UNDERGRADUATE.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

POOR-LAW RELIEF.

SIR.—You commented lately upon the matter of Dr. O'Connor and the guardians of the North Witchford Union. I hold an adjoining district, and should be glad of your opinion upon the following case, which occurred some time ago.

A boy, aged 12, sustained a fracture of the femur. I attended him at once, and directed the father, a labouring man with six children, to apply for a parish order. The relieving officer declined to grant the order on his own responsibility, but brought the matter before the board at the next meeting. The board, having considered the matter, declined, on the ground that the man was in receipt of good wages, and able to pay. Of course, if they had stopped there, I should have had nothing to say on the subject; but, having passed this resolution, it struck them that "perhaps they had better do something", and accordingly they gave an order for 2s. 6d. per week and a loaf of bread, although the parents had never asked for anything of the kind, and did not want it. Now, had the guardians the power to do this? It certainly does not seem either sense or logic.—I remain, yours obediently.

. There can be no doubt that the action of the board of guardians in this matter was as unfair as it was illegal. By granting relief, they virtually recognised the pauperism of the family; and, if our correspondent had sued them in the county court, we believe that he would have recovered the fee. We fear that it is now too late, as all claims against a board of guardians must be sent in and paid within a twelvemonth after they are incurred. If, however, it has not exceeded that time, we strongly advise his taking out a summons forthwith.

STOURBRIDGE WORKHOUSE.

A CORRESPONDENT writes: "I recently had an opportunity of going over the Stourbridge Workhouse. The gentleman with whom I was staying, in urging my visit, evidently was of opinion that the arrangements were such as would meet with my approval, and was, therefore, somewhat astonished when, on my return, I stated that, as a house for the reception of sick, aged, infirm, imbecile, lying-in women, and children, it was, without doubt, the very worst establishment of the kind I had ever seen.

"The Stourbridge Workhouse is supposed to provide accommodation for the indigent poor of a population of about 74,000 inhabitants, distributed over about 16,200 acres. The house itself is licensed for 450 inmates. At the time of my visit, it had fallen below this number; but in the winter, or in seasons of distress, I heard that it often exceeded the number. How they are housed, I will as far as I am able, seeing that I did not take notes and am writing from memory, proceed to point out. I first passed through the kitchen, fairly clean, but only adapted to meet the legitimate wants of a fifth of the ordinary inmates. I next proceeded to the female sick and infirm wards. Here I found the old and the young, the simply infirm and helplessly sick, lying along side of each other, without the smallest effort at classification; indeed, such classification is wholly and completely impossible. The wards were in the utmost degree unfitted for the purpose, with their low ceilings, cheerless walls, and generally unkempt look; whilst the bedsteads were so crowded together as to render it all but impossible to provide decently for the ordinary necessities of the sick and infirm. On the male side, I noted the same absence of classification and decent consideration for the sick and aged. The lying-in ward, in which the parturient of the Stourbridge workhouse are confined, is but some nineteen feet long by fifteen feet wide, and about nine feet eight inches high, and is clearly deplorably unfit for its purpose. The arrangements for housing the epileptic, imbecile, and semi-demented persons of both sexes are also deplorably sad.

"Reverting to the character of these cases, it is difficult to understand how it happens that the Commissioners in Lunacy sanction the detention of several of these cases in a workhouse at all; but, if they and the Poor-law inspectors do permit the guardians to do so, surely some regulation as to additional comfort should be insisted on in these unhappy classes of cases.

"I am glad to be able to testify that the house was clean, so far as its structural arrangements made it possible to keep it so; and it is much to the credit of the master and matron that, under such difficult conditions, they should keep it so.

"In the course of my visit, I occasionally made a remark as to the fitness, or rather the unfitness of things, when I learned that the Local Government Board had at various times made an effort to get the place pulled down and a fresh building erected, but that their recommendations had been disregarded. It is, indeed, difficult to comprehend how it has happened that such a place should be permitted to exist in these days. The Local Government Board ought long since to have ordered its demolition, and probably would if the true condition of the place had been fairly brought to its notice."

THE MEDICAL OFFICER OF THE NORTH WITCHFORD UNION AND THE LOCAL GOVERNMENT BOARD.

It will be remembered that, in our issue of July 1st, we drew attention to the case of Dr. O'Connor, of the North Witchford Union, Cambridgeshire, which was as follows. Dr. O'Connor was requested by the friends to visit one Annie Barber. He went without an order, and on his arrival found that she was ill, and that her son, a boy nine years old, had broken his leg. He attended to both, and requested that the friends should apply to the relieving officer for an order, which this official declined to give; promising, however, to bring the matter before the guardians at their next board meeting. On doing so, the guardians gave an order for attendance on the mother, but declined to give one for the son, stating that Dr. O'Connor must consider this child, whom they had pauperised by granting an order for the mother, as a private patient. Thereupon, Dr. O'Connor wrote to the Local Government Board, and after stating the facts, asked the interference of the department towards getting his extra fee. After the customary correspondence between the central office and the guardians, Dr. O'Connor received from the former a letter, in which the opinion was expressed "that the case is not one with respect to which they can properly interfere with the discretion of the board of guardians."

Undeterred by this summary refusal to intervene, Dr. O'Connor, moved thereto by the misrepresentations of the North Witchford Guardians, again appealed to the Local Government Board, traversing the guardians' assertions. This letter, after two months' consideration, has provoked from the department the following:

"In reply, I am directed to state that the fees, which, under the regulations issued by the Board, are payable to medical officers in cases of fracture, are payable in those instances in which they become legally due, without any express order or direction on the part of the Board; and I am to add, that the Board are not empowered to decide authoritatively as to whether in any particular case a fee is payable.

"The Board have, however, in this instance, thought it right to communicate again with the board of guardians, in order that they might have an opportunity of reconsidering their decision, but find that they still decline to adopt your view in the matter. The Board, under these circumstances, are not in a position to render you any further assistance."

Now, admitting, of which we have grave doubts, that the Department has no legal power to intervene authoritatively in any dispute as to fees which may arise between a local board and their medical Officers, we would submit that if in this case (which is one of gross injustice), the Department had expressed the view that Dr. O'Connor was entitled to his fee, instead of carefully abstaining from expressing any opinion thereon, the guardians would have paid it without further difficulty. At it is, Dr. O'Connor, unless he be content to submit to its loss, has before him no other alternative than to sue his board in the County Court, with the certainty that if he recovers the fee, he will have provoked the continuous hostility of the board of guardians, all of which might have been avoided if the Department had cared to give expression to the opinion which, from the tone of their letter, it is evident they have formed as to the merits of the case.

OBITUARY.

WILLIAM THOMPSON, M.D., F.R.C.S.I.

DR. THOMPSON, who died last week from a sad accident, the details of which will be found in our columns devoted to Irish news, was a native of Lisburn, and sprang from a most respectable family. His father was one of the first cotton-manufacturers in Lisburn, of which enterprise that town was, in former days, a great centre. His grandfather was an extensive medical practitioner in the district. Dr. William Thompson was born in 1806, and was, therefore, at the time of his decease, in his 76th year.

At an early age, he went to reside with his grandfather, and his early training was directed to prepare him for entrance into the medical profession. He received his early education in the Lisburn Academy, and studied, as a classical scholar, under Mr. Hudson, then an eminent teacher of Greek and Latin.

In 1820, he was entered as one of the medical pupils of William Stewart, M.D., Surgical Superintendent of co. Antrim Infirmary. After having had all the advantages afforded by that institution in the practice of surgery and medicine, he set off to Paris, and completed his education there, under a leading member of the profession. He graduated in the Edinburgh University in 1828, and he obtained the licence of the Royal College of Surgeons in Ireland in 1830. Dr. Thompson commenced practice in Lisburn fifty-four years ago. Dr. Stewart always took a warm interest in his young friend, and, as he

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Resident House Surgeon. Salary £100, with apartments, etc. Applications to be forwarded to the Secretary, on or before October 2nd.

WIMBORNE AND CRANBORNE UNION.—Medical Officer and Public Vaccinator. Salary, £80, and usual vaccination and extra fees. Applications before October 5th to F. H. Tanner.

MEDICAL APPOINTMENTS.

FENTON, George, appointed Honorary Consulting Accoucheur to the Western Dispensary, *vice* T. Chambers, M.D., F.R.C.P., resigned.

HODGSON, G. G., M.R.C.S., appointed Honorary Surgeon to the Bootle Borough Hospital, *vice* C. Swaby-Smith, M.R.C.S., resigned.

LEE, Henry Boynton, late of the Leeds School of Medicine and Infirmary, appointed Demonstrator of Anatomy and Physiology at the Sheffield School of Medicine, *vice* Dr. White.

NEVE, Ernest F., M.B. and C.M. Edin., M.R.C.S.Lond., appointed Resident Physician to Cowgate Dispensary, Edinburgh.

WINDLE, Bertram C. A., A.B., M.B., B.Ch., Diploma of State Medicine (University of Dublin), appointed Pathologist and Registrar to the General Hospital, Birmingham.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

DOUGLAS.—September 26th, at Avenue House, Leamington, the wife of W. Douglas, M.D., of a son.

MARRIAGES.

MARTIN-BAYNES.—On the 21st inst., at S. Oswald's, Knuzden, by the Rev. W. H. Baynes, M.A., assisted by the Rev. J. P. Baynes, M.A., brothers of the bride, John M. H. Martin, M.D., of Arnhem, Blackburn, to Thomasine Edith, younger daughter of the late John Baynes, J.P., D.L., of Blackburn.

SAVILLE-BOOTH.—On the 21st inst., at St. Margaret's Church, Holyrood, Prestwich, Manchester, John George Saville, L.R.C.S., L.R.C.P., of Radcliffe, Manchester, to Elizabeth, elder daughter of the late John Booth, Esq., of Radcliffe. (No cards.)

DEATH.

PHILLIPPO.—On September 1st, at Kingston, Jamaica, Emma, wife of Dr. Phillippo, aged 44.

HEALTH OF FOREIGN CITIES.—It appears from statistics, published in the Registrar-General's last weekly return, that the annual death-rate in the three principal Indian cities recently averaged 26.7 per 1000, and was equal to 23.2 in Bombay, 26.2 in Calcutta, and 33.6 in Madras. Cholera caused 6 deaths in Calcutta, and small-pox 4 in Madras; fever fatality showed the usual large excess in each of these cities. According to the most recent weekly returns, the average annual death-rate per 1000 persons, estimated to be living in twenty-eight of the largest European cities, was equal to 23.9; this rate exceeded by 1.9 the average rate last week in twenty-eight of the largest English towns. The death-rate in St. Petersburg was equal to 41.7, but showed a decline from the rates in previous weeks; diarrhoea caused 159 and scarlet fever 20 of the 535 deaths in the city. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged only 23.6, the rate ranging from 17.5 in Christiania to 26.1 in Copenhagen; diarrhoeal diseases were exceedingly fatal in Copenhagen, and diphtheria caused 5 of the 81 deaths in Stockholm. The Paris death-rate declined to 21.6, although 53 deaths resulted from typhoid fever, 40 from diphtheria and croup, and 6 from small-pox. The 164 deaths in Brussels, which included 35 from diarrhoeal diseases, were equal to a rate of 20.7. The death-rate in Geneva was so low as 10.5. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate did not exceed 21.9, while the highest rate was 22.3 in the Hague, where 2 fatal cases of scarlet fever were recorded. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 24.4, and ranged from 20.7 in Hamburg to 30.3 in Breslau. Diarrhoeal diseases again showed excessive fatality in most of these German cities; small-pox caused 5 deaths in Vienna and 3 in Buda-Pesth. In three of the principal Italian cities, the mean death-rate was 21.2; the lowest rate was 18.6 in Rome, and the highest 26.6 in Venice; typhoid fever caused 5 deaths in Turin, 4 in Venice, and 3 in Rome. In four of the largest American cities, the death-rate averaged 26.6; it was 21.5 in Philadelphia, 24.7 in Baltimore, 28.6 in Brooklyn, and 30.2 in New York. Diarrhoeal diseases showed a marked fatality in New York and Brooklyn. Small-pox caused 15 deaths in Baltimore, and typhoid fever 14 in Philadelphia.

We learn from the *Western Morning News* that, at the weekly meeting of the Newton Board of Guardians on September 6th, an application of Mr. Manley, medical officer of the Ipplepen district, for an increase of salary, was refused, on the ground that the salary had recently been raised and the population decreased.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopaedic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.....St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopaedic, 10 A.M.

THURSDAY.....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.

FRIDAY.....King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu, F, 1.30; Skin, M, Th; Dental, M, W, F, 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu, 1.30; Obstetric, M, W, F, 1.30; Eye, M, Th, 1.30; Tu, F, 12.30; Ear, Tu, F, 12.30; Skin, Tu, 12.30; Dental, Tu, Th, F, 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu, Th, S, 2; o.p., M, W, F, 12.30; Eye, M, Th, 1; Ophthalmic Department, W, 1; Ear, Th, 2; Skin, Th, 3; Throat, Th, 3; Dental, Tu, F, 10.

LONDON.—Medical, daily, exc. S, 2; Surgical, daily, 1.30 and 2; Obstetric, M, Th, 1.30; o.p., W, S, 1.30; Eye, W, S, 9; Ear, S, 9.30; Skin, W, 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu, F, 1.30; o.p., W, S, 1.30; Eye, W, S, 8.30; Ear, and Throat, Tu, 9; Skin, F, 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu, Th, S, 2; o.p., W, S, 9; Eye, Tu, W, Th, S, 2; Ear, M, 2.30; Skin, F, 1.30; Larynx, W, 11.30; Orthopaedic, F, 12.30; Dental, Tu, F, 9.

ST. GEORGE'S.—Medical and Surgical, M, Tu, F, S, 1; Obstetric, Tu, S, 1; o.p., Th, 2; Eye, W, S, 2; Ear, Tu, 2; Skin, Th, 1; Throat, M, 2; Orthopaedic, W, 2; Dental, Tu, S, 9; Th, 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu, F, 9.30; o.p., Tu, F, 2; Eye, Tu, F, 9.15; Ear, M, Th, 2; Skin, Tu, Th, 1.30; Throat, M, Th, 1.45; Dental, W, S, 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M, Th, 2; o.p., W, F, 12.30; Eye, M, Th, 2; o.p., daily, except Sat., 1.30; Ear, Tu, 12.30; Skin, Th, 12.30; Throat, Tu, 12.30; Children, S, 12.30; Dental, Tu, F, 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M, Tu, F, 1.30; Eye, M, Tu, Th, F, 2; Ear, S, 1.30; Skin, W, 1.45; S, 9.15; Throat, Th, 2.30; Dental, W, 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu, F, 3; Eye, M, Th, 2.30; Ear, Tu, F, 9; Skin, Th, 1; Dental, W, S, 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

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CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with Duplicate Copies.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

PRESIDENT'S ADDRESS,

DELIVERED AT THE

Annual Meeting of the Yorkshire Branch of the British Medical Association, held at the Leeds School of Medicine, July 26th, 1882.

By T. R. JESSOP, F.R.C.S.,

Surgeon to the Leeds General Infirmary; Lecturer on Surgery,
Leeds School of Medicine.

GENTLEMEN,—My first duty on rising to address you, is the paramount one of thanking you, in the warmest terms at my command, for the honour you have conferred upon me, in electing me to preside over our meetings during the year we are now commencing—an honour which, believe me, I esteem the greater, when I bring to my remembrance the distinguished and eminent gentlemen who have preceded me, and when, on looking round, I see so many amongst you who are far more capable than I of fulfilling the duties pertaining to the occupant of this chair.

You will accept, I am sure, my thankful acknowledgment of your favour, and will extend your generosity to the pardon of my shortcomings. My second duty is the pleasurable one of offering you all a hearty welcome, once again, to an annual gathering in the Leeds School of Medicine, where so many pleasant and profitable meetings have previously been held; and, in doing so, I would take the opportunity of inviting all who have not visited the wards of our infirmary, to spend the interval between leaving this room and our reunion at another place, in inspecting the interesting series of cases collected specially for the purposes of this day. And yet another duty, alas! remains to me—less easily performed—namely, to select some subject upon which I can make it worth your while to dwell with me, during the few minutes I am permitted to occupy before we proceed with the more important work before us—not that there is any lack of material to interest us. Periodical gatherings such as this, indeed, suggest—naturally suggest—innumerable topics upon which we may well confer together; afford us the means, if we are so disposed, of indulging our idiosyncrasies, and offer to your presidents at least—who, by virtue of their office, are relieved from the terrors of open criticism—opportunities of launching their wildest projects. I cannot plead a poverty of material for an address. Whether we look back upon the past, survey the field around us, or cast our eyes ahead, the scene teems with objects to arrest our attention, and we are embarrassed by the very multiplicity of subjects, each worthy our most earnest consideration. My difficulty is one of selection. A progressive science like that we profess, in an age which is specially characterised by activity and energy, presents so many points of simultaneous growth, that the most indefatigable amongst us would fail in an attempt to do more than appropriate a mere fraction of accumulated results.

When I look back but a few years and see what changes have been wrought even in that single branch of our profession which has claimed from me a closer observation than any other—I mean practical surgery—I am confronted with a series of achievements which is really surprising. A comparison of an average week's work in the infirmary across the way, with a record of what was accomplished during a like period ten years ago, has suggested to me that I might ask you to consider with me a few of those improvements in surgery which have been effected during recent years; for it would be impossible, within the limits of your patience, to allude even in the most cursory manner to all the advances—substantial advances—which we have appropriated for the benefit of our patients during a much shorter period than the decade last completed. I will confine myself strictly to those which are of most recent date, and of which I have personal experience: to a brief summary of the latest surgery practised at Leeds.

At the very onset, I am struck with the intimate connection between these advances and the antiseptic method of treating wounds; but as it is now considerably more than ten years since Mr. Lister impelled the profession to recognise how much our efforts are thwarted by the putrefactive agencies around us, and demonstrated how certainly their baneful effects may in many cases be counteracted, it would be outside my present purpose to enter into the consideration of the merits of antiseptic surgery. Suffice it to say, that it has gradually become the established practice here in Leeds, and that it has now almost supplanted all the older methods known to our predecessors. I feel, indeed, that there is no longer need to defend Listerism. The boldness of the man who in this day would dare to deny or even doubt its power for good, partakes more of rashness than of prudence. See how confidently the surgeon proceeds, under its protecting influence, to

separate or divide the various structures of the body; to make sections through bone producing the worst forms of compound fracture, without fear of the result; to open up cavities and joints, and even to expose the various viscera to his inspection.

Antiseptic surgery has become an established institution. In making mention of it at all, indeed, I only desire to accentuate the invaluable part it has played in leading up to many of the modern surgical improvements. There are few instances of more complete change of practice than is to be observed in our present, as compared with our former mode of dealing with cancers in their various forms and situations. Not long ago a scirrhus breast was deemed unfit for removal on grounds we should think wholly insufficient now. An extensive infiltration of the gland itself, an implication of the pectoral muscle beneath, giving rise to a feeling of attachment to the ribs, the extension of the disease to the axillary lymphatics, and a portion to those beneath the pectorals or above the clavicle, were held to debar us from operative interference. The verdict "too late" was pronounced upon all but the most limited. During recent years we have gradually extended our operations, until now I should not be far wrong if I said that our rule is to remove in all cases in which an entire extirpation of the disease is practicable, with fair prospect of recovery and of ultimate closure of the wound. And so with return growths. Whilst formerly it was held that a reappearance of the disease after removal—surely indicating an ineradicable constitutional taint—prohibited all further operative measures, our practice now is to apply the same rule to these as to the primary disease—to remove, viz., where possible. As an instance of the extent to which, with antiseptic precautions, we may pursue a cancerous infiltration, I may mention the case of a hospital patient from whom I had previously removed the scirrhus mamma, and who had now returned with such a fulness between the clavicle and the deeply indented scar, as to lead me to explore for secondary disease. On opening up the axillary and sub-pectoral spaces, I found them to be literally filled with adherent and infiltrating masses of growth, as is frequently the case, out of all proportion to the pre-existing signs. For their extirpation prolonged tearing and dissection were needed, during the course of which, first of all the pleural cavity was distinctly laid open, and subsequently the axillary artery, which had been imbedded, and, perhaps, displaced, was completely torn across, and yet, with all this, the woman was able to leave the hospital within three weeks, her wound soundly healed, and herself none the worse apparently for the dangers through which she had passed. And again, as illustrating the advantages to be gained by perseverance in the removal of recurrent growths, I may select the case of a lady—a patient under the joint care of Mr. Halliday of this town and myself—who, after having during twelve consecutive months undergone no fewer than six separate operations (including the original amputation of the breast), for the removal of cancerous nodules affecting the cicatrix, the surrounding skin and subjacent tissues and the axillary lymphatics, passed upwards of two years of usefulness in the enjoyment of good health, now again exerting herself beyond the average of women; and then died, without any sign of outward disease, from an acute thoracic affection of short duration.

A similar change of practice, too, is now pursued in dealing with cancerous disease in other situations. In epithelioma of the face, involving a large extent of surface, the bones and deeper structures, we remove widely and unsparingly, filling up the unsightly gap by transplanted pieces of adjacent skin. In cancer of the penis, we no longer feel bound to accept, as a valid reason for refusing to operate, the inconvenience of having a meatus flush with the pubes, from whose orifice the urine dribbles over and excoriates the scrotal integuments. On the contrary, we now pursue the disease even to the removal of the entire organ, including its crura and the subscrotal corpus spongiosum, as well as its associated inguinal lymphatics, diverting the urethra from its normal course to an outlet in the perineum.

Of the removal of laryngeal, of pyloric and intestine, and of uterine cancers, the collective experience is not yet large enough to warrant me in including them in the category of accepted surgery. The mere mention of them, however, will serve to show the direction in which the surgical world is working—to emphasise the opinion now rapidly gaining ground, in favour of the early and the complete removal of cancerous growths, wherever it is found to be practicable.

It will not be deemed foreign to this subject, if I allude to two important measures for the relief of cancerous patients, one of which, indeed—I mean colotomy in cancer of the rectum—can only be considered amongst recent improvements, in the sense that it is but now becoming the practice to resort to it in cases where obstruction has not yet supervened; the other, gastrotomy—a proceeding which bids fair, both to add materially to the duration of life, and to substitute a more merciful death for that of starvation, with its prolonged hunger and thirst, in

patients afflicted with oesophageal cancer—operations having common aims: to put, viz., the affected organ in a state of rest; to place it, in fact, in the position of an external instead of an internal organ essential to life.

Left lumbar colotomy, though a severe measure if resorted to when the patient is in a state of extreme exhaustion following upon prolonged obstruction of the bowel, is found to be comparatively free from danger when performed under more favourable circumstances. Latterly, we have been in the habit of opening the colon for the purpose of diverting the fæces from the diseased channel, in every case of cancerous rectum, where the sufferings of the patient have been of sufficient severity as in themselves to increase the dangers to life—whether those sufferings have arisen from the defæcation attendant upon a gradually encroaching growth, or from the teasing dysenteric tenesmus which characterises the ulcerative form of disease. And I am disposed myself to think that it would be sound practice to make an artificial anus in every case of cancer of the rectum, as soon as the diagnosis shall be complete, without waiting for those distressing symptoms which must, sooner or later, inevitably arise, and the extreme presence of which has hitherto been deemed essential to the legitimate performance of the operation. For it cannot be questioned that the contact of offensive material such as fæces, together with the frequent injury of necessity resulting from its passage through the diseased gut—injury which is surely indicated by the discharge of blood and mucus—must have the effect, not only of adding directly to the patient's distress, but also of increasing the rapidity of the tumour's growth. With the twofold object, then, of retarding the infiltrating and ulcerative processes, and of avoiding altogether the onset of the obstructive symptoms on the one hand, or of the diarrhoeic distress on the other, I would advocate the early resort to Callisen's operation in the loin.

Remarks of a similar kind would apply, with at least equal force, to the lately projected operation of gastrostomy, especially those having reference to the early resort to the operation. For, if the artificial opening into the stomach be delayed until the oesophageal constriction is complete, not only will the patient's strength have become so far spent as materially to lessen his chances of recovery, but it will possibly be found—as actually occurred on a recent occasion to myself—that the stomach, owing to the lengthened absence of food, has shrunk from its normal contact with the abdominal wall, and disappeared beneath the arch of the diaphragm. When undertaken in suitable cases, like early colotomy, gastrostomy may doubtless be classed amongst recent substantial improvements.

I am wandering somewhat, I find, from my intention of merely recording in brief a few of the more prominent amongst the recent additions to the art of surgery. It is difficult to withhold one's own impressions and experiences; but I must pass on rapidly to enumerate a few other, if less important, still interesting illustrations of our onward march.

Chiefly through the example of two Scotch surgeons—Macewen of Glasgow and Ogston of Aberdeen—the section of bones for the rectification of deformities resulting from defective nutrition in early youth forms a prominent feature in every operating-theatre. The pressure of mechanical appliances, aided by the division of tendons, were the only and often inefficient means made use of for the straightening of rickety curves and knock-knees, until Ogston, emboldened, doubtless, by a well-founded confidence in the power of Listerism to prevent the occurrence of putrefactive inflammation, devised the plan of treating cases of genu valgum which is now known by his name, and which consists of sawing off the inner condyle of the femur, and displacing the detached portions of bones upwards to such an extent as to restore the normal plane of the articular surface: and Macewen, followed by Reeves, Barwell, and others, applied the same fearless principle of free open antiseptic section of bones—using chisel and mallet or saw with the greatest freedom—for the rectification of curved bones and distorted joints.

I have often thought of the stroke on the part of William Adams when, twelve years ago, he announced that he had divided the neck of the femur by a subcutaneous saw, for the restoration of a limb in a case of rickety valgum at the hip-joint; and I well remember with what misgivings I possibly accompanied I proceeded to undertake the second example of the now established operation. We need only call to mind the terror contrasted between two men, I, when medical schools were the haunts of learning, and the other, to state that it was just as the saw was being applied to the neck of the thigh bone with a determination to save the patient's life, to realise how advanced an advance had been made since Adams's important discovery. In the days of Listerism, when a surgeon, in which I hardly ever see a crumb of courage, was a general wonder in our wards, when gymnastic exercises marred the stature of all our hospitals, the

risks involved in the presence of a wound communicating with injured bone were so terrible as to forbid the surgeon from voluntarily inflicting a compound fracture to obtain a merely æsthetic result. It may fairly be reckoned, I think, an enormous gain, that, with perfect confidence, engendered by the certain foreknowledge of a favourable issue, we proceed, at intervals of a few weeks only, deliberately to cut down upon, and even remove wedges from, the thigh and leg bones, in as many as six or eight different spots in the same individual.

Somewhat akin to this subject of osteotomy, is the plan we are now pursuing in the treatment of fractured patella, for the purpose of procuring direct, and, under the most favourable circumstances, bony union. How unsatisfactory in their results are the ordinary methods of treating recent simple transverse fractures of the patella, is testified by the great variety of appliances recommended, and made use of; the many special splints and inclined planes, the bandages and plasters, the hooks and steel pins, as well as by the permanent limp, the changed employment, the never-to-be-cast-off knee-cap, and the disunited fragments. Encouraged by the success which followed upon the close wiring together of the exposed fragments in a series of remarkable cases of compound fracture of the bone, as well by the excellent result obtained by Mr. Wheelhouse in a hospital patient, who was incapacitated for work by reason of the wide separation of the two halves of his patella. I have undertaken the responsibility of adopting a similar course in a case of recent fracture, and the result may now be seen amongst the patients on exhibition at the infirmary, in the comparatively slight alteration in the size and shape of the bone, and in the entire absence of movement at the seat of fracture; and it may be claimed as a distinct advantage over other plans of treatment that, through the incision made for the exposure of the fractured surfaces, all blood and other effusions capable of impairing the future movements of the joint may be effectually removed. Did time permit, I should like to dwell upon the freedom with which joints are now opened, upon the removal of loose cartilages by means of direct incisions upon the laying open of capsule and synovial cavity for the cutting short of inflammatory disease, and for the relief of pain, when tense with purulent effusion; and upon the scraping or clipping away of the various products of slow disease. I might remind you of all that has been accomplished in the way of restoring paralysed limbs by the re-union of long since divided nerves, of the help demanded of us by the physician in his treatment of obstinate neuralgia, in the shape of stretching, dividing, or dissecting out of the implicated nerve, and of the excellent results that may be obtained from the direct union, by suture, of tendons divided by accident, or by the surgeon himself. The operations again of nephrotomy and nephrectomy—the cutting into and the extirpation of the kidney—may be claimed as belonging to the period we are reviewing, and of these we have had several excellent examples in Leeds. One single case of extirpation, though one of the first to succeed in this country, has not enamoured me of the operation but has led me rather to look upon it as a feat of dexterity and daring than as likely to lessen appreciably the sum of human suffering. In nephrotomy, on the other hand, we possess a means of relief, no difficult of application, which may be resorted to in varying conditions, with feelings of safety, and prospect of benefiting our patient. I know indeed of no single occurrence in the course of my practice upon which I can look back with greater pleasure than I do upon the case of a hospital female patient, whose kidney I incised under unusual circumstances that I may be pardoned for briefly alluding to. Purulent urine was being painfully squirted, every few minutes, from an intolerant bladder. Physical examination of the perineum, pelvis, loins, and pelvis; chemical and microscopic examination of the urine revealed no more than the single fact of purulent urine. In the hope of relieving her most distressing symptoms, I resorted to the operation for which we are indebted to Mr. Teale, of dividing the neck of the bladder; and when, in its removal, the finger was swept round the interior of the viscus, I was struck by the fact that the left ureter could be felt in the wall of the bladder as firm as if it had been a piece of whipcord, whilst the orifice of the right could with difficulty be made out. Immediately, it became clear that the mass was seated in the left kidney, and with perfect confidence the stone, I thought they were taken; the kidney was exposed in the loin, it was cut away with a knife, and from its cavity there exuded from two to three ounces of opaque pus, the evacuation of which, as the event at this juncture, I thought, was a step that was not to be retraced.

By the introduction of these operations, we are naturally reminded of many other important additions to the surgery of the abdomen, the perfection to which ovariotomy has been brought, of hysterectomy, of oophorectomy, and of exploratory operations in abdominal affections. But I must not detain you longer. Imperfect as my attention has been to place before you some of the more striking achievements

by our fellow workers, I have said sufficient, I hope, to demonstrate the existence of much remaining vitality in the world of surgery, and to justify the promise of still further triumphs to some.

BILHARZIA HÆMATOBIA IN CONNECTION WITH A FORM OF DYSENTERY IN EGYPT.

By JAMES MACKIE, M.B.,

Surgeon to H.M. Consulate and the Deaconesses' Hospital, Alexandria.

FROM what has lately been written on the subject of *Bilharzia* in connection with our expeditionary force to Egypt, one might be led to infer that *Bilharzia hæmatobia* and endemic Egyptian hæmaturia are almost interchangeable terms, and that the one never exists without the other. This, in the great majority of cases, is true; but, it does not seem to have received the attention it deserves, that persons may suffer severely from the parasite without showing any symptom of hæmaturia or other urinary disorder. Many cases of supposed dysentery and severe internal hæmorrhoidal affections are caused by the presence of, and irritation caused by, multitudes of the ova of *Bilharzia hæmatobia* imbedded in the walls of the rectum; and to this I wish to draw attention, as being of interest in relation to chronic dysenteric affections which may present themselves amongst our troops remaining long in the country. Many natives from the interior of Egypt present themselves for advice in our out-patient department at the Deaconesses' Hospital, complaining sometimes of "piles", sometimes of "dysentery", sometimes of "constant pain and weight in the rectum with tenesmus". Whatever name they may give to their complaint when asked what it is, they all complain pretty much of the same symptoms—viz., straining at stool, constant weight and discomfort, perhaps pain about the rectum, constant or frequent desire to go to stool, and passing only a little mucus and blood, pain at hypogastrium, emaciation, etc., having generally been ill for months before they apply. If closely inquired into, those cases hardly present a history of ordinary dysentery or hæmorrhoids; there is a something in the history more nearly resembling a mild form of malignant disease; but the history of the case can only be got from a native by those knowing their language and accustomed to examine them. To clear up the diagnosis: if the forefinger is introduced well up into the rectum—and it generally requires to be pushed up as far as it can reach—small, soft, but firm nodules will be felt, generally about the size of a small bean, often very numerous, and giving the impression to the feel of a small, well-defined sessile pile, but too high up for piles, and not hard enough for malignant disease. By introducing carefully along the finger a small hæmorrhoidal forceps, one of these small tumours can easily be twisted off for examination under the microscope, when its blood-vessels will be found to be filled with the ova of *Bilharzia hæmatobia*; and in my own experience the ova found in the rectum have in nearly all cases the spike placed laterally, differing from those generally found in the urine, which have the spike at the extremity. The presence of *Bilharzia hæmatobia* may be manifested by dysenteric symptoms, as I have already mentioned, without the patient ever having shown any sign of urinary disorder, or any ova being found in the urine after repeated and careful microscopic examinations.

One case, which was under my care last winter in the Deaconesses' Hospital, impressed me very much at the time—happening to be under treatment when a correspondence was going on between me and the directors of the Eastern Telegraph Company in Egypt, and the directors and Dr. Cobbold in London, regarding a number of cases of hæmaturia amongst the company's staff at Suez, which has already been referred to in the *Times* war correspondence, and lately by Dr. Cobbold in the *BRITISH MEDICAL JOURNAL* and elsewhere. Acting on advice in London, the directors of the company suggested that the urine of all the *employés* should be sent to me for examination from time to time, in order to detect the presence of the parasite as early as possible. In a letter to the company, I pointed out that the disease often existed without any evidence of it to be found in the urine. I instanced the case of the patient, an Arab above referred to, who happened to be under observation. The urine of this man was carefully and repeatedly examined for me by Dr. Murison, a most careful and accurate observer, by Dr. Vernoni, and by myself. We took every care to examine the last drop drawn from the bladder; we even irritated the bladder by the catheter to obtain a little blood; we never found a single ovum from the bladder, while his rectum was full of small tumours, each of which was crowded with ova. The man's sufferings were great, and state bad. He seemed to be, as I described it, infested with bilharzia, and never had had a symptom of any urinary disorder, according to his own statement, which I can confirm from observation while in hospital.

In all cases of what may be termed subacute chronic dysentery in people who have been some time resident in Egypt, and exposed to drinking unfiltered water, the rectum should be carefully examined by the finger pushed up as high as possible; and if small tumours, such as I have described, are found, they should be examined under the microscope.

THE EFFICACY OF VACCINATION.

By J. HIGHAM HILL, M.D., F.R.C.S.E.,

Special Medical Officer appointed by the Government during the recent Epidemic of Small-pox in Sydney.

DURING the late outbreak of small-pox in Sydney I had many very favourable opportunities of witnessing the great efficacy of vaccination as a prophylactic against that disease; and as in some respects the experience was remarkable, I hope that I shall not be considered a slayer of the slain in writing to bear additional testimony to such a well recognised fact. I think it will be generally conceded that, while sceptics of the efficacy of vaccination and antivaccination agitators exist, it is well that practitioners who have had special opportunities of personally observing that efficacy should place upon record their convictions on this important subject, together with some of the facts upon which they are founded.

In the first place, vaccination not being compulsory in the colony of New South Wales, there was a large amount of unprotected material in the shape of unvaccinated people, adults and children, for the disease to prey upon; and a feeling amounting almost to panic on its sudden and unexpected appearance in Sydney in June of last year.

Secondly. The measures adopted by the Government to prevent the spreading of the disease were unusual, and apart from the question of their intrinsic value, afforded peculiarly good opportunities of testing the protective influence of vaccination.

On a suspected case of small-pox being reported to the authorities, the house was at once visited by a member of the Government Medical Staff, specially appointed; and if, on examination of the individual, the suspicion proved well founded, the house and its inmates were immediately placed in a state of strict quarantine, and no unauthorised person allowed to leave it; special police arrangements having been made to enable this to be done under the Colonial Quarantine Act. If the affected person could not or would not be removed to hospital, as was frequently the case, the other inmates were in very many instances kept in the same house, there being often no accommodation for them in the "sanitary camp", which was erected some miles out of town near Botany Bay. The patient was isolated as much as possible, but the isolation which could be effected in small or overcrowded houses was practically nominal. Under such circumstances, the protection of the unaffected inmates and neighbours by prophylactic means was a matter of the greatest importance, and to the credit of vaccination I can safely assert that results proved it to be a protector equal to the occasion—very few vaccinated inmates of quarantined houses contracting this most infectious disease, and those few having as a rule very mild, modified attacks, although all were greatly exposed to the infection while living under depressing influences and bad hygienic conditions, being confined in small houses, with little or no opportunity for obtaining fresh air, exercise, etc. Many nurses were employed, but none contracted the disease, all having been protected by previous attacks or efficient vaccination before commencing their duties. On the other hand, in every instance where anti-vaccination prejudices could not be overcome, and although small-pox was in their houses, persons would not be vaccinated, or allow their children to be vaccinated, severe, and very often fatal, attacks were the rule without exception; and, when too late, these persons bitterly bewailed their ignorance and stupidity.

I could mention many cases where only the unvaccinated members of households were picked out by the disease and attacked, the others leading, as it were, "charmed lives," although exposed freely to the infection, and, as I have stated, under bad hygienic conditions, thus testing, with unusual severity, the protective power of their vaccination. And as with households so with neighbourhoods, as the following instances taken from many will show.

A woman, living in a semi-detached wooden house, was attacked with small-pox of the severe confluent type. Neither she, nor her husband, nor her daughter, aged 16, the only occupants of the house, had been vaccinated. I vaccinated the two latter as soon as possible; the daughter escaped altogether, although acting as nurse to her mother. The husband had a very mild attack, consisting of only half-a-dozen modified variolous pustules on the face and hands, with very little constitutional disturbance, and no secondary fever. Next door was a

for forty-eight hours—the temperature falling from 102.8° to 100.6° in the case of the eldest boy, and from 103.2° to 98.4° in that of the second son. The case of the eldest boy seemed to be about twelve hours earlier than that of his brother. Meanwhile, the youngest son, who had been separated at a different part of the house, continued in his usual health, and was sent away on Tuesday, May 2nd, to Brighton. The other two boys continued to progress very favourably.

It is now that the chief feature in these cases presents itself. On Saturday, May 6th, the youngest son, who had been sent away to Brighton, was attacked with symptoms of a cold and cough, associated with loss of appetite and feverishness. He was fetched home on the following day. On the 8th, his temperature was 101.4° , with the above symptoms more marked, and a rash of a "pimply" character on the back of the neck. During the night of the 10th, a marked rash, having all the characters of true measles, and resembling that of the other two sons, was developed, with delirium, diarrhoea, and oppressed breathing. The next morning, his temperature was 103° . He has since passed through the attack, but at one time showed threatening symptoms from the character of his breathing.

Upon the infectiveness of measles, Niemeyer says, "When is measles infectious? With our present knowledge, we should say it is most infectious while the eruption is out; that it is probably not infectious in the stage of desquamation, while numerous cases speak of its being so in the prodromal stage. The popular opinion that measles is most catching in the desquamative stage arises from inattention to the period of incubation. A child infected by its brother or sister breaks out with the disease while the latter is desquamating, it is true, but was infected while the exanthema was at its height, or perhaps even before the eruption. The probability of infection during the prodromal stage is supplied by the wonderful spread of measles through schools. Great care is usually taken to keep out of the school any children who have not passed through the desquamative stage, as well as those having any suspicious exanthema, but children with catarrh and cough are allowed to sit on the seat with well children."

The data of my cases are sufficiently accurate to prove—First, That measles is infectious when the stage of desquamation has apparently passed (the two eldest boys having caught the disease from a boy who had measles more than a fortnight before). Secondly, That measles is infectious before the rash appears (the third boy having been separated from his brothers directly the rash was observed on the face of his eldest brother). Thirdly, That the period of incubation of measles is about ten days. This was exactly the time which elapsed between the return of the convalescent to the school and the first symptoms in the eldest boy, and it was rather less than that period which elapsed between the separation of the eldest and youngest boy, and the development of undoubted symptoms in the latter. This last calculation (see dates) suggests that the youngest boy caught the disease from his eldest brother the day before the appearance of any rash.

If these opinions should prove to be true, the difficulties in arresting an epidemic of measles will be unusually great. The last conclusion is a point upon which the attention of medical officers of health might be more particularly directed.

Other questions also suggest themselves from a consideration of these cases. Do infectious diseases differ in their character or severity according to the stage of the disease in which the infection is propagated? Is measles, when caught during the prodromal stage, more severe than when propagated at another period? Do the investigations of Pasteur suggest that there may be a difference in this respect?

The treatment adopted in the above cases consisted in the strict use of disinfectants—carbolic acid being used about the room, and for a suspended sheet at each doorway—and a solution of thymol for sponging the body night and morning. Internally, sulphite of soda in ten grain doses was given thrice daily.

BEQUESTS.—Mr. James Bourne, of Stoke, bequeathed £1,000 to the Royal Albert Hospital at Devenport, and, in the event of his widow failing to exercise a certain power of appointment, £4,000 additional, and £500 to the Seamen's Hospital (*Dreadnought*) at Greenwich. —Mr. William Henry Le Bas, of Wilton Crescent, bequeathed £100 to the Brompton Hospital for Consumption and Diseases of the Chest, and £100 to the City of London Hospital for Diseases of the Chest. —Miss Mary Ann Barbara Holburne bequeathed £100 to the Royal United Hospital, and £100 to the Mineral Water Hospital both at Bath.

THE Hay-Fever Association, which recently held its annual meeting at New Hampshire, has twenty-seven vice-presidents distributed through all the states of the Union. It has two committees, one on "Scientific Facts", the other on "Proposed Remedies".

BRITISH MEDICAL ASSOCIATION.

FIFTIETH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

ON BONE-SETTING.

Being an Introduction to a Discussion in the Section of Surgery at the Annual Meeting of the British Medical Association in Worcester, August 9th, 1882.

By HOWARD MARSH, F.R.C.S.,

Assistant-Surgeon to, and Lecturer on Anatomy at, St. Bartholomew's Hospital.

FOR some years, the value of manipulative movement as a method of treatment has attracted an increasing amount of attention. This has been, partly, because those who have used it in the ordinary course of practice have found it successful in a variety of cases. But it has also been due, in part, to the circumstance that it has become the fashion with many of the public to place themselves in the hands of bone-setters, with the effect that, while some, as I shall presently show, are either cajoled or injured, others undoubtedly receive some benefit. Both these results have led surgeons, alike in the interest of those who consult them and in respect to their own position, to look carefully into what passes under the name of bone-setting.

It will be remembered that, in 1867, Sir James Paget gave a clinical lecture on the Cases that Bone-setters Cure, which was afterwards embodied in his volume of *Clinical Lectures and Essays*; while, in 1871, Dr. Wharton Hood issued, in a separate form, some lectures which had originally appeared in the *Lancet* on this subject. To Mr. Banks of Liverpool, Dr. Spender of Bath, Mr. Cross of Clifton, and others, we are indebted for instructive contributions. As to what I have now to say, I know there are many here who will find little of novelty in it. I am, however, happy to rely on their readiness to supply, in the ensuing discussion, the omissions which they will not fail to detect in my paper.

Bone-setters are a very miscellaneous group, who resemble each other mainly in the negative point, that they have never studied either anatomy, pathology, or surgery. Some are blacksmiths on the Cumberland hills, or shepherds in the sequestered valleys of Wales. Practitioners of this kind, standing in the same relation to surgery that herbalists bear to medicine, have existed, in these remote districts, from immemorial times. They belong to the same order which in bygone days included fortune-tellers, ring-charmers, and the workers of all kinds of village miracles. At the other end of the scale are practitioners of a less unsophisticated stamp. Residing in large towns, they equip themselves with the names of the principal bones and muscles, and with a few stock medical phrases; they procure a skeleton, on which they undertake to show patients the precise nature of their complaints; they employ anaesthetics freely, and make full use of daily passive movements, rubbing and shampooing; while, in spinal cases, they often put on Sayre's plaster-jacket. These individuals, however, are in the same position as the most homely of their order, in this important particular—that diagnosis, properly so called, forms no part of their system. Indeed, diagnosis and their method are two things that are incompatible. At present, the bone-setter's programme is both concise and logical. In every case alike he asserts that a bone is out, and that he can put it in. Now, the second clause of this formula postulates the first. But let him once enter upon diagnosis—let him once find, not that a bone is out, but that the case is one of tumour, or paralysis, and he has cut the ground from under his own feet. No. Beyond the assertion that a bone is out, or some similar phrase, he never goes. If pressed for particulars, he cuts the knot by saying, "I can cure you—what more do you want?" Old Mr. Hutton of Watford used to say, "Don't bother me with anatomy—I know nothing about it." A patient, therefore, who consults a bone-setter is simply playing a game of hazard. His fate depends on what is the matter with him. If he has a stiff ankle after a sprain, he will very likely be cured. If he has a strumous joint, he will be more or less injured; while if he has a bunion, or a node on his tibia, he will find himself neither better nor worse for his venture.

Our ordinary experience of bone-setters' practice illustrates all this. For my own part, I have known several cases in which they have done good; while, on the other hand, the following instances have come under my own observation. One lady, aged 60, had a bursa at large

glance at the joint, or by sweeping their fingers over the surface, sometimes without even having the patient undressed. It shows the sort of diagnosis to which this kind of legerdemain leads them, and it shows that the cures which they sometimes work, and which the public so confidently attribute to some deft and cunning manipulation, the secret of which surgeons have never been able to master, may be accomplished by such simple and broad-daylight movements as flexion and circumduction of the limb.

A girl, aged 14, at St. Bartholomew's Hospital, had walked lame for two years. Her limb was a little flexed and abducted, and she complained of considerable pain at the hip. Examining her for hip-disease, I found the joint perfectly movable in all directions and to its full range, except that rotation inwards gave her sharp pain. There was no wasting. Thinking the case like the preceding, I gave her gas, and carried the limb freely in every direction. Her symptoms completely vanished. Three days later, she left the hospital, apparently perfectly well. She has had no return. Here, again, I believe one of the rotator muscles had slipped.

5. Another group is formed by cases of internal derangement of the knee-joint, as described by Hey and Cooper. These are just the cases in which bone-setters are very likely to succeed. They are not uncommon, and they are not rarely overlooked. A gentleman remarked to me a little time ago, that he wished surgeons would pay more attention to the small bones of the body. When I asked his meaning, he told me that his gamekeeper had been attending a hospital for a month without benefit, but that a bone-setter, who said one of the small bones was out, had immediately set him right. I found, on inquiry, that the patient's knee had been disabled in a similar manner on two previous occasions. The bone-setter met the case with the remark—common with these practitioners—that, though surgeons know all about the big bones, they pay very little attention to the little ones. If we substitute the term "lesser ailments" for small bones, the assertion rests, perhaps, on some foundation in fact.

6. But none of the foregoing are the cases to which bone-setters chiefly owe their reputation. They owe their reputation chiefly to cases in which joints that are themselves healthy are stiffened and painful from surrounding adhesions, or from the rigidity of muscles that have been either fixed by too long position, or left contracted after reflex irritation has subsided. Of this latter condition—which I think is more common than some suppose—a good instance is seen in the closure of the jaw by contraction of the masseter and other muscles during the cutting of a difficult wisdom tooth, and which will remain for a long time if left undisturbed, but which soon passes off if the mouth is opened when the patient is under gas. The following is typical of a large group, which they cure by breaking down adhesions. A man, aged 50, had sprained his ankle severely nine months before coming to the hospital. I found the joint stiff, cold, painful under weight, and in a state of brawny swelling. I moved it freely in all directions. Numerous adhesions easily gave way. An hour afterwards, he could walk with only slight lameness. A week later, he reported himself quite well. Cases of this kind are to be frequently met with in any large out-patient department, and in any large private practice; the shoulder, the ankle, and the elbow being the most common instances.

7. Manipulation is often strikingly successful, as every surgeon knows, and as Mr. Heath has insisted, when applied to joints left stiff after fracture of a neighbouring bone. Nevertheless, patients are sometimes discharged from hospitals with a joint so stiff, as in the familiar instance of the wrist after a Colles's fracture, that the limb is disabled. And some of them go to a bone-setter, after waiting for a month, or even for six months, for the stiffness to wear off. The bone-setter says a small bone is out. He moves the joint, and by breaking down adhesions, cures the patient. And of course the patient believes that a bone was out, and blames the surgeon for his oversight. In other cases, a fracture unites with an unavoidable and immaterial amount of deformity, or in a child with a little bend in the epiphysis, but the neighbouring joint is left stiff. A bone-setter is applied to, who points to the slight projection, and says a bone is out. He moves the limb and breaks down the adhesions, and the patient can now use the joint. The bone-setter gets all the credit and the surgeon all the blame. But it is truly our own fault if this state of things is to continue. The remedy is a very simple one. Let us be careful to follow the rule of moving every case that requires it before the patient passes out of our hands. In dislocations, as in old sprains, practice has often been remiss. Joints have been allowed, after the dislocation has been reduced, to remain, as Dr. Monktion of Maidstone and others have so well pointed out—fixed for far too long a period—often for five or six weeks, and the patient has been told that he will gradually regain the use of the limb. Many patients get tired of waiting, and go to a bone-setter, with the usual result. The joint is freely moved, and in

the course of a few days the patient comes to show us that he is cured. In such cases let us not only move limbs if they have become stiff, but let us guard against the formation of adhesions by resorting to passive movements on the fourth or fifth day after reduction, and repeating them at intervals of two or three days, as a part of the subsequent treatment. I have lately seen a case of dislocation of the shoulder in which motion was perfect three weeks after reduction—gentle passive movements having been regularly used every three or four days.

The other group—that in which a joint remains stiff after injury from simple muscular rigidity—is illustrated by the following case. A patient was lately under Mr. Willett, in St. Bartholomew's Hospital, who, after a fall on his hand, could not extend his elbow; the biceps could be felt contracted. A bone-setter said the head of the radius was out; but this it palpably was not. Under gas Mr. Willett easily extended the limb; the rigidity of the biceps disappeared, and the patient was discharged cured in the course of three or four days. The next was, I believe, a similar case. A young lady fell on her back while "rinking." For many weeks she was confined to bed, and unable to move herself. At length she so far recovered that she could walk; but she moved with a slight stoop, and with her limbs stiff and abducted, and her knees somewhat flexed. Not improving further she was taken to a bone-setter, who said that two of the buttons of her back—their term for the spinous processes—were out, and who freely moved her limbs, and operated on her spine. In two days she could walk upright, and with her limbs in the normal posture. She was soon quite well. I know of another case in which a lady was unable to walk eight months after a fall from her horse, but who rapidly recovered after a bone-setter had moved her limbs. Perhaps she was hysterical, but I believe the case belonged to that large group in which bone-setting acts by freeing muscles that have become fixed in their sheaths, and rigid by long continued posture after injury.

But, gentlemen, I have already detained you too long, and I will conclude with the following propositions:

1. There are a large number of cases in which manipulation proves itself one of the most successful methods in the whole field of minor surgery.

2. It is an error to regard manipulative treatment as necessarily a process of violence. In the majority of suitable cases, it can be carried out with such slight force, that the chance of doing injury is extremely small.

3. It is chiefly useful in cases in which healthy joints have their movements restricted, and are rendered painful by some external agency such as—and very commonly—adhesions; or by rigidity of muscles, slipped tendons, and so forth. In the knee, however, internal arrangement must be carefully borne in mind.

4. We must remember how likely it is that adhesions will form after sprains, dislocations, and fractures, or after any injury leading to the exudation of lymph in the sheaths of tendons and other soft parts: We must prevent their formation—as far as we can—by gentle passive movement of the joint shortly after the injury, where this is possible. We must not keep joints too long fixed by splints and bandages, and we must not dismiss patients till we are sure no adhesions or rigid muscles remain to impede movement.

5. Manipulation will seldom do good; it will generally do harm in cases in which joints have been seriously diseased. In cases of firm fibrous ankylosis, it is quite unlikely to restore movement. It may, however, sometimes be employed to improve the position of the limb.

6. Joints that are fit for manipulation are those which, after injury, or the slightest forms of inflammation, are habitually cool and free from considerable synovial swelling, or which look quite sound, or around which the tissues are brawny and the skin pale, or indistinctly dusky, and in which movement within a limited range is free and smooth. Mere pain, if the joint be cool, and there are no signs of serious disease, by no means forbids manipulation. On the contrary, it is a strong reason for using it.

7. A certain number of instances are met with in which no exact diagnosis can be made, but in which there is no evidence of structural disease, though the limb is stiff and disabled. In such cases, if manipulation be employed, an anæsthetic being given, and the limb being carried in all directions through its normal range of movement, we shall not rarely effect a cure, which, however, we may not be able to explain. Some of these are examples of hysteria; some deep-seated adhesions, some slipped tendons, and some simple muscular rigidity.

8. It is advisable as a rule to use an anæsthetic, not only to save the patient pain, but also, by relaxing the muscles, to bring the effort used to bear entirely on the source of abnormal resistance, whatever it may be. And, during manipulation, joints must always be fixed before they are extended.

9. We must often supplement manipulation with continued passive movements, douching, shampooing, etc.

10. Lastly, I will venture to refer to the importance of attending carefully to the minor affections about the joints. By being remiss in these cases we open the door to bone-setting, and are apt to commit oversights that we cannot fail to regret.

ON THE SELECTION OF CASES FOR FORCIBLE MOVEMENT IN THE TREATMENT OF STIFF JOINTS, AND THE METHOD OF PROCEDURE.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By WILLIAM ADAMS, F.R.C.S.,
Surgeon to the Great Northern Hospital.

THE practice of "forcible extension", as it is generally called, of joints which have become stiffened by inflammation, has of late years developed into a recognised surgical procedure, with which we are now all familiar; but not many years since we only heard of the "bone-setter" forcibly breaking down stiff joints, and frequently obtaining motion, in cases in which surgeons had failed to restore the usefulness of the joint after subduing the inflammation. It is no doubt true that surgeons formerly thought they had obtained the best possible result when, as they supposed, they cured the disease, generally by rest, immobility, and counterirritation—thus saving the amputating-knife then so freely used; and obtained a stiff joint, and with it an useful limb.

In a large number of these cases, however, the "bone-setter" found that, by forcibly bending the joint, he could break down inflammatory adhesions and restore useful motion to the joint. This success has for generations past formed the triumph of the "bone-setter's" art—a triumph which he generally magnified by assuring the patient that there was "a bone out", and that he had reduced the dislocation. However, there could be no doubt as to the result; and the patient obtained an useful limb with a movable joint—more frequently the knee-joint than any other—for which he felt deeply indebted to the "bone-setter", who, he believed, must have some power of discerning an injury which the surgeon had overlooked.

Side by side with this series of brilliant successes, came another series of disastrous failures, often of the most serious kind—cases in which the forcible movement of the "bone-setter" was followed by serious inflammation, more intractable than the original mischief, and in some instances leading to amputation—the very result which the surgeon prided himself upon avoiding. These failures, however, in no way damaged the reputation of the "bone-setter", who only failed after the surgeon had also failed, as he assured his credulous patient, either to cure the disease or reduce the newly discovered dislocation.

The "bone-setter" of the present day, faithful to the traditions of the past, still continues the practice of so-called "forcible extension", and with the same result—viz., the admixture of a large number of unsuccessful with his successful cases. This, of course, is readily explained by the fact that the "bone-setter", having no medical education, has no power of selection. He is unable to distinguish cases of a constitutional from cases of a local origin; and whether the stiff joint may result from scrofulous or strumous disease, from rheumatism or from ordinary inflammation; or whether it may be the result of an accident in a healthy constitution. The same practice is, therefore, applied to all classes of cases, with the result above stated.

The selection of cases can only be based upon accurate pathological knowledge; and even in the present day, when pathology is so much cultivated, the basis upon which the selection should be made seems to be undetermined. It therefore occurred to me that this subject might be usefully brought under discussion at the present meeting; and that I would bring forward some observations on the pathological conditions met with in the different classes of cases, which may be found useful as a guide in the selection of appropriate cases, and upon which my own practice has been based.

In using the term "stiff joint", it is necessary to explain that it is to be understood to include cases of bony ankylosis, or of fibrous ankylosis—i.e., cases in which, after the removal of the articular cartilages, the exposed osseous surfaces are directly connected by bone, or by a dense fibrous band passing between them. Essentially, the joint is stiff, in which the parts are stiffened by inflammatory thickening of the articular surfaces, or by the joint; including, however, the capsule, and the ligaments, and the tendons, and the synovial membrane, and the articular cartilages.

The existence of the articular cartilage is essential to the restoration

of useful and permanent motion. The healthy, or nearly, healthy condition of this structure may generally be inferred from the clinical history of the case, although sometimes it cannot be determined until after the first attempt to move the joint whilst the patient is under some anæsthetic.

For our present purpose, I would arrange all cases of stiff joint in the five following classes, placed in order from the most favourable to the most unfavourable, for treatment by forcible movement:

- i. Cases of traumatic origin in healthy constitutions, generally occurring in the adult.
- ii. Cases after rheumatic inflammation of the joint.
- iii. Cases after strumous disease of the joint.
- iv. Cases after acute suppurative inflammation, of pyæmic origin; and suppurative inflammation in the neighbourhood of, and extending to, the joint.
- v. Cases consequent upon muscular contractions.

CLASS I. The cases of stiff joint included in the first class—viz., those of traumatic origin in healthy adults—are, as a general rule, favourable for treatment by forcible movement; and permanent useful motion is obtained in most cases, only one or two operations being required.

There are two favourable conditions in all the cases included in this class, viz., the absence of suppurative inflammation in the joint, and of ulceration in the articular cartilages; so that, when the adhesions can be broken through, the most favourable conditions for permanent useful motion remain.

The cases included in this class may be arranged in the four following groups:

1. *Cases of stiff joint occurring after dislocations which have been reduced.*—In these cases, it is frequently found that the motion at the joint is limited; and if after a short time this is not increased gradually by ordinary movement, it is advisable to give an anæsthetic, and resort to forcible movement. Some adhesions generally give way very easily, and no repetition of the operation is required.
2. *Cases of stiff joint, or cases in which the motion is very limited, in unreduced dislocations of long standing.*—In this class, motion can frequently be increased by tenotomy and gradual mechanical extension; but it is also advisable sometimes to resort to forcible movement, and seldom more than one operation is required.
3. *Cases of stiff joint after fractures into, or in the neighbourhood of, joints.*—This includes a variety of cases, such as Pott's fracture at the ankle-joint; Colles's fracture at the wrist; fracture through the condyles of the humerus; and other fractures in the neighbourhood of the shoulder, hip, or knee-joint. All these injuries are apt to be followed more or less by stiff joint, or very limited motion; and these cases are especially favourable for treatment by forcible movement. One or two operations are sufficient in the slighter cases, but more may be required in proportion to the severity of the injury and the inflammation by which it had been followed. The stronger adhesions are generally external to the articulation; but in these cases, intra-articular adhesions also exist.
4. *Cases of Stiff Joint occurring after Bruises, followed by Inflammation of the joint.*—In injuries of this kind, which now uncommonly occur at the shoulder-joint, motion remains sometimes limited by inflammatory adhesions, chiefly external to the articulation; and when motion cannot be sufficiently increased by ordinary movements, it is advisable to resort to forcible movement; and, at one operation, the adhesions generally give way sufficiently to restore the full amount of natural motion.

CLASS II. The cases of stiff joint included in the second class, viz., those of rheumatic origin, are also, as a general rule, favourable for treatment; and, as in the traumatic class, two favourable conditions for the restoration of motion exist, viz., the absence of suppurative inflammation in the joint, and of ulceration of the articular cartilages. In most of these cases, only one or two operations are required, but in the more severe cases, the operation will have to be repeated several times.

In rheumatic inflammation, whether affecting the joints, the eye, the pericardium, or pleura, I believe it may be stated as a general law that there is no disposition either to suppurate or ulceration attacking any of the structures involved, whether fibrous, serous, or synovial; the general result of rheumatic inflammation being the effusion of lymph, and organisation of adhesions.

The cases included in this class may be arranged in the three following groups:

1. *Cases of Stiff Joint occurring after Acute Rheumatic Inflammation.*—As a general rule, acute inflammation such as occurs in the course of rheumatic fever, subsides without leaving the articulation permanently damaged, and without such adhesions as would interfere with free

motion. The necessity for resorting to forcible movement, therefore, rarely occurs in this class; but, should the motion remain limited, any adhesions will be found to give way rapidly with very little force.

2. *Cases of Stiff Joint occurring after Gonorrhœal Rheumatism* are generally favourable for treatment; and, in cases commenced soon after the inflammation has subsided, by forcible movement, permanently useful motion may be obtained, as in this affection no suppuration occurs, nor are the articular cartilages destroyed by ulceration. But, in the more severe cases, and when the attempt to regain motion has been too long delayed, and structural changes have gradually occurred in the articular cartilages, the result is uncertain. Complete failure sometimes occurs, *i.e.*, although motion may be obtained at the time, it cannot be permanently kept; restiffening of the joints occurring in spite of all efforts to the contrary that may be made.

It is characteristic of this affection that, as a rule, only one joint is involved—generally the knee or hip-joint; and when we remember that the stage of inflammation, with acute pain, frequently lasts from four to six months, during which time the limb is kept at rest, and the joint in a state of immobility, we cannot be surprised to find that the adhesions, which are both intra- and extra-capsular, are very close and strong. On this account, I recommend that the attempts to regain motion be made gradually, and repeated at intervals of three weeks, very little being done at any one sitting; and that on no account should any attempt be made to regain the full amount of motion required at any one operation. By this gradual method, I have repeatedly succeeded, when the more violent method would have failed. One case in which I adopted this treatment sixteen years ago, useful motion at the hip-joint, which in this case was affected, is still retained.

3. *Cases of Stiff Joint occurring after Chronic Rheumatic Inflammation* are generally favourable for treatment, when the attempts to regain motion have not been too long delayed. The cases belonging to this class which have fallen under my observation have generally occurred in adults, and the shoulder-joint has usually been the only articulation affected. The patients have not usually suffered from any severe or well marked rheumatic inflammation of the joint, but have complained of wandering rheumatic pains, lingering more about the shoulder-joint; still the joint-affection is not considered by the patient to be rheumatic. I have seen many of these cases at the National Hospital for Paralysis, where they apply in consequence of loss of power in the arm, which they fear is of paralytic origin. The stiffening of the shoulder-joint is only detected by the physician who examines the case, and afterwards transfers it for surgical treatment. This affection is usually associated with a feeble condition of the general health, and the patients sometimes suffer from kidney-disease, with albuminuria. The adhesions in these cases seem to be entirely intracapsular, and give way very readily under slight force. In some cases, the operation has to be repeated, but generally passive movements, alone, will be sufficient to retain motion.

In some of these cases, when of long standing, structural changes in the articular cartilages gradually occur, and the joints become so firmly ankylosed, that no treatment will avail.

These cases are not associated with the articular enlargements and other structural changes which occur in the ordinary form of chronic rheumatic arthritis, in which we know there is no disposition to either fibrous or bony ankylosis, though the movements of the joint may be restricted and limited by osseous enlargements and other structural changes; but the articular surfaces become polished and eburnated after the slow removal of the articular cartilages.

CLASS III. The cases of stiff-joint included in the third class, *viz.*, those following strumous disease of the joint, are essentially unfavourable for treatment by forcible movement, in consequence of the destructive character of the disease, which is usually accompanied by suppurative inflammation, as well as ulceration of the articular cartilages. Even when external abscess does not occur, the disorganisation of the joint is usually complete, and either fibrous or bony ankylosis may be looked forward to as the best result that can be obtained.

Only in a limited number of these cases, in which by judicious treatment the disease has been arrested in an early stage, should any attempt be made to obtain motion—generally by passive movements systematically conducted, rather than by forcible movement; although occasionally, in a well-selected case, after an interval of time, during which the joint has been in a perfectly quiescent state, movement by slight force might be attempted, and if well borne, may be repeated at intervals, until the motion of the joint has been restored to a useful, if not to the full extent.

CLASS IV. The cases of stiff-joint included in the fourth class, *viz.*, those of pyæmic origin, as well as those resulting from suppurative inflammation, commencing in the neighbourhood of the joint, and sub-

sequently extending to the articulation, are essentially unfavourable for treatment in consequence of destruction of the articular cartilages, and complete disorganisation of the joints. This is more marked in the true pyæmic class, in which the destruction is rapid and complete; either ankylosis, excision, or amputation, being the results to which the surgeon can alone look forward.

In the other class, in which the articulation becomes secondarily involved, the articular cartilage sometimes escapes destruction, but both intra- and extra-articular adhesions exist to such a formidable extent, as to render the restoration of motion very uncertain. These cases, however, should be submitted to treatment shortly after the inflammation has subsided; and if forcible movement be carefully conducted and frequently repeated, at intervals of from two to three weeks, very little being accomplished at each sitting, the adhesions may be gradually torn through, and in those cases in which the articular cartilages have escaped destruction, useful motion may be permanently obtained.

CLASS V. The cases included in the fifth class, *viz.*, those consequent upon muscular contraction, should, perhaps, hardly be grouped in the same category as those we have already considered, because the joints are not stiffened by articular changes or adhesions, either external or internal, to the articulation; but in this class of cases, the joints are rigidly fixed by muscular contractions, mostly occurring at the hip- or knee-joint, and depending upon various causes, such as paralysis and spasmodic affections; the fixed condition of the joint often being aided by long retained position—often of several years' duration—during which structural shortening and adaptation of all the structures surrounding the joint have occurred, so that a condition approaching immobility has been established.

Although differing widely in its pathological conditions from the joint-diseases previously considered, still I have in so many instances seen cases of this class submitted to the same treatment by "forcible extension"—or, as I prefer to call it, "forcible movement"—that it seems necessary to discuss them at the same time, if only to say that in all cases of this class, the treatment by forcible movement is totally inapplicable and injurious.

Forcible movement ought never to be employed to overcome muscular contractions, which will certainly yield to tenotomy and gradual mechanical extension, whether applied by means of the weight and pulley or mechanical instruments with rack and pinion movement. Healthy structures shortened by adopted atrophy will certainly yield to gradual mechanical extension.

I have thus endeavoured to describe the five classes of cases into which all cases of stiff-joint may be arranged; and in the pathological conditions existing in each class we may find reliable indications which will enable us to make a judicious selection of cases to which the practice of forcible movement is applicable, and thus establish the practice upon a scientific basis.

Method of Procedure.—It remains for me now only to make a few observations on the method of procedure which I have found to be followed by the best results, and attended by the least risk of such accidents as have been known to occur when the more violent method generally recommended has been employed.

A considerable amount of force is used by some surgeons, and even machinery recommended, for the "breaking down" of joints; but I believe where it is necessary to use so much force, there can be very little hope of restoring permanently useful motion to the joints. It is difficult to believe that, in such cases, the articular cartilages can be in a sufficiently healthy condition for permanently useful motion. I have seen many failures, *i.e.*, cases in which the joints have quickly restiffened, and complete bony ankylosis resulted, and have never witnessed any good results which would justify the employment of such an amount of force.

The accidents which have been known to follow the employment of an extreme degree of force are numerous, such as fracture of the long bones, especially the femur and humerus; separation of the epiphyses; transverse fracture of the patella; laceration of the ligamentum patellæ; rupture of the popliteal vessels, necessitating amputation; laceration of the skin; and also laceration of all the superficial structures, so as completely to expose the interior of the knee-joint. Instead, therefore, of employing the more violent method, and attempting to obtain the full range of motion in a joint at one operation, I adopt the gradual method in all severe cases, using at the first operation only just sufficient force to obtain the least possible movement; and then, at successive operations, repeated at intervals of from two to three weeks, tear through other adhesions and gradually increase the range of motion until the full extent is obtained. After each operation, I apply hot water dressing, generally using spongio-piline, and to the leg always employ weight-extension. Absolute rest is essential, and when applic-

long beak, and the point slightly turned upward. The lateral groove commences half an inch above the angle, and terminates about the same distance from the point. The main peculiarity is the length of the beak, and this varies regularly with the size of the staff.

The Shortness of the Angle permits the instrument to be easily felt, and so assists the operator in making the deep perineal incision. As soon as the angle is exposed, he readily learns by the finger the point of the staff he has reached. When the finger enters the groove, the position is indicated exactly by the part of the nail engaged in it. The point of the finger-nail informs the operator he is on the angle; but, directly the side of the nail is well insinuated in the groove, he can be sure that he has reached the beak, and that a simple movement of the knife will open the bladder.

The Beak is nearly straight, and is fixed at a Right Angle in the Staff.—When the instrument is held firmly in position under the pubic arch, the floor of the bladder is steadily depressed; at the same time the beak is parallel to the rectum, and so protects that organ from injury. The horizontal beak forms a straight guide into the bladder, and a straight movement of the knife in the groove is very readily and safely accomplished.

The Long-beak.—This part of the staff enters the bladder a little more than an inch, and is kept in contact with the stone. The long beak affords important advantages, especially in operations upon children; for, during early life, the urethral structures are more soft and delicate and the bladder is situated high up behind the pubic arch. It is a simple safeguard against one of the most common and painful accidents which occur during lithotomy, as the point cannot be pushed out of the bladder.

Lastly, the long beak renders the introduction of the finger into the bladder over the staff both easy and safe. The upper concave border of the staff is the best guide to the stone in all operations upon children, for, not only is the upper wall less prone to shift under the finger, but by gentle pressure in this direction, the bladder is brought down, and its neck very readily dilated. It, moreover, effectually prevents the operator from slipping the finger into the areolar tissue of the rectovesical space, which has often been mistaken for the interior of the bladder itself.

Mr. T. H. BARTLETT (Birmingham) asked whether the knife was to be passed to the end of the staff.

Mr. H. LANGLEY BROWNE (West Bromwich), referring to the results of lithotomy at the West Bromwich Hospital, related a case in which his colleague, Mr. Sansome, had successfully removed a stone, weighing over seven ounces, by the lateral method.

Dr. LUNN (Hull) said that he preferred Skey's rectangular staff.

Mr. LUND (Manchester) considered a very sharp knife of the first importance in operating on children.

Dr. GRIFFITHS (Swansea) also spoke.

Dr. WARD COUSINS replied, stating that the knife was passed to the end of the staff, and eulogising its safety and advantages in the hands of inexperienced operators.

CASE OF LITHOLAPAXY IN WHICH A STONE WEIGHING OVER TWO OUNCES WAS REMOVED AT ONE SITTING.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association, in Worcester, August 1882.

By REGINALD HARRISON, F.R.C.S.,

Surgeon to the Liverpool Royal Infirmary.

I THINK it will be generally conceded by all surgeons who have had experience in the treatment of stone in the bladder, that for all calculi of a moderate size occurring in otherwise healthy male adults, lithotripsy, or the crushing operation, is the treatment which will give the best results. Calculi within the dimensions of half an ounce or thereabouts may now be painlessly removed, at a single sitting, with a safety and certainty as to render the proceeding one of the most successful within the limits of surgery. It will be hardly necessary therefore further to illustrate the performance of the operation under circumstances where there can be no doubt as to the propriety of its selection. The direction, I take it, where information will still be of value, is when the confines between lithotomy and lithotripsy are reached—where there is difficulty in deciding whether to crush or to cut is the safer treatment. Where stones are of an unusually large size, or, where their presence is complicated with co-existing disease in the urethra, prostate, bladder, or kidneys, it cannot be said that there is a consent in opinion such as applies to the previous circumstances. Hence it is of

importance that the profession should be furnished with records where the complication I have mentioned were present. In the following case I had considerable doubts whether crushing or cutting would be the safer. I decided on the former, for reasons that I will presently give.

D. L., a steward, aged 27, was admitted into the Liverpool Royal Infirmary on May 25th, 1882. For five years he had suffered from symptoms of stone. On examination with the sound, a large one could be felt; the urine was acid, of specific gravity 1010, and free from albumen.

On May 30th I had the patient placed under ether, and was prepared either to cut or to crush. On introducing the smooth-bladed lithotrite I found that I had a stone of moderate hardness, having a diameter of very nearly three inches by measurement. Though the stone was exceedingly large, yet the bladder was still sufficiently capacious to permit of my being able to manipulate with the lithotrite; further, the urethra was of a full size, and the calculus was not of a nature which led me to infer that oxalate of lime entered into its composition. I therefore determined, with the concurrence of my colleagues, Mr. Banks and Mr. Parker, to remove it by Bigelow's method.

As the stone was too large to permit of my being able to crack it across with the lithotrite, I contented myself first with chipping away at its circumference, until I had so reduced it in size that I could grasp it, and at the same time close the screw of the instrument. In this way I broke it across with the fenestrated lithotrite. The operation was subsequently completed by the smooth-bladed instrument. I refer to this particularly, for the reason that, for many years, even when dealing with large stones, I have been able to do all that I wanted with the smooth-bladed lithotrite—an instrument I very much prefer. The operation lasted two hours and ten minutes, during which period the patient was kept under the influence of ether or chloroform, according to circumstances, by my house-surgeon, Mr. Strahan. Somewhere about thirty washings were employed. There was very little hæmorrhage. When the bladder was found to be tolerably free from *débris* it was well washed out to conclude with, with water of a temperature of 100°.

With the exception of one fragment, which was subsequently passed while the patient was micturating, the whole of the calculus was removed in the manner I have described. The progress of the case may be very briefly stated. From first to last the patient never had a symptom which caused either him or myself any uneasiness. For the first four days the urine was smoky-coloured and contained blood, though the patient was always able to void it without the catheter. On the evening of the tenth and few subsequent days, he had a considerable rise of temperature: this was explained by his not completely emptying the bladder where the stone had previously lodged, and there being some pus in the urine. By washing out the bladder twice a day with tepid water, and a rubber catheter and bottle, this symptom speedily disappeared. On July 1st, thirty-two days after the operation, he left the infirmary perfectly well, for the purpose of resuming his occupation as a steward on board a passenger steamer. Before he left the infirmary I carefully examined his bladder with a sound, for the purpose of ascertaining that every portion of the stone had been removed.

The calculus was a compound one of phosphates and urates; the fragments weighed, when dried, exactly two ounces and two drachms; making an allowance for a certain loss of fragments during the numerous washings, it was concluded that the stone could not have weighed less than two ounces and a half, and is, consequently, one of the largest that has been removed in this manner.

In reference to the instrument employed, I should like to add one or two words. The case illustrates what the smooth-bladed lithotrite is capable of accomplishing. My previous experience in the use of this instrument justified the anticipation I formed, that with some assistance from the more powerful fenestrated weapon in cracking the calculus across, it would be found equal to this occasion. The objection raised to it, in particular, is that it is liable to become impacted with *débris*. Though I have seldom used any other instrument than those modelled upon this plan, I have never suffered much inconvenience from *débris*. Probably this is due to the frequency with which I make use of the wash-bottle, with the object of keeping the bladder clear of all fragments which are capable of being withdrawn.

The aspirator I employ is Bigelow's original one—the same with which I saw him working in Boston in 1878, and which I brought over with me. I have tried several modifications, but prefer the instrument I selected specially for this case. It is here fitted up for inspection. An objection raised against it is that it admits a certain amount of air. I have not found a small quantity of air in the bladder interfere with the necessary manipulations, for the reason, I suppose, that the air and the stone occupy opposite sides of the viscus, and that where the one is

the other is not to be found. If enough gets into the bladder to provoke spasm, it is easily got rid of through the evacuating catheter by the hand over the pubes. I refer to this circumstance, not because I have been inconvenienced by it, but by reason of too much importance being, in my opinion, attached to it.

In concluding these observations I would remark that it is in extreme cases such as the one I have narrated that Bigelow's method comes out in strong contrast to all other proceedings having for their object the removal of a stone from the bladder by first crushing it. It is under these circumstances that we fully recognise the tolerance of the bladder to prolonged instrumental manipulations so long as they are judiciously performed, and, further, to the importance as a part of the modern operation for stone, of the removal of all fragments from the bladder which may be capable of exciting inflammation. Without the due recognition of these important principles the field of lithotripsy would still have remained comparatively limited.

THE APPLICATION OF RETINOSCOPY TO THE DIAGNOSIS AND TREATMENT OF THE ERRORS OF REFRACTION.

Read in the Section of Ophthalmology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By HENRY JULER, F.R.C.S.,

Senior Assistant-Surgeon and Pathologist, Royal Westminster Ophthalmic Hospital; Clinical Assistant, Moorfields and St. Mary's Hospitals.

I BRING forward the subject of retinoscopy or "keratoscopy," because of its recent introduction into actual practice, and its extreme value as an easy, quick, and exact method of detecting and of correcting all errors of refraction which are amenable to treatment.

The History of Retinoscopy can be narrated in a few words. In the English edition of Professor Donders's work on the "Anomalies of Refraction," dated 1864, there is a footnote by the author, in which he describes the occasional use of the method by Mr. Wm. Bowman of London. He says, "My friend Bowman recently informs me that he has sometimes been led to the discovery of regular astigmatism of the cornea, and the direction of the chief meridians, by using the mirror of the ophthalmoscope much in the same way as for slight degree of conical cornea. The observation is more easy if the optic disc be in the line of sight, and the pupil large, and its inclination rapidly varied, so as to throw light on the eye at small angles to the perpendicular, and from opposite sides in successive meridians. The area of the pupil exhibits a somewhat linear shadow in some meridians rather than in others." Thus we see that the method was not unknown in England as far back as eighteen years ago. Its systematic development and further introduction to practice, however, are due to the labours of M. Cuignet of Lille, who published an article on "Keratoscopy" in 1874. After this, the subject was further developed by Dr. Mengin, a former pupil of M. Cuignet, who established its use in M. Galezowski's *Clinique* in Paris. In the same *clinique* the subject was warmly embraced by Dr. Parent, who published an article in the February number of the *Recueil d'Ophthalmologie* 1880, in which several important practical details were worked out. In London, the subject has been enthusiastically taken up during the last two years, and a description of the process has been introduced by Mr. Stanford Morton in his little work on *Refraction*.

The Nature of the Process is easily described. It consists in illuminating a portion of the retina by means of a cone of light reflected from a concave mirror, and in observing the direction taken by the image of this illuminated area when the mirror is tilted about its centre. The patient is seated in a dark room; a bright ophthalmoscope lamp is placed a little above or on one side of the head behind the plane of the eyes. The patient is to look straight forwards, and his eyes to be well shaded from direct rays from the lamp. The observer is seated in front of the patient, so that their heads are at the same level, at a distance of 120 centimètres. The mirror used is concave, of about 4 centimètres diameter, 25 centimètres focal length, and perforated by a central aperture of about 3 millimètres. The previous use of some form of atropine for the paralysis of the accommodation, and the dilatation of the pupil, is preferable in all cases. Under these conditions, when the refractive media of the eye are quite transparent, by throwing a cone of light into the eye by means of the mirror, and observing through the central aperture of the mirror, we obtain illumination of the fundus oculi. The nature of this illumination varies with the degree of ametropia. In emmetropia and in low degrees of ametropia, it is of a bright reddish-white appearance, the brilliancy of

which decreases with each dioptric of ametropia until, in cases of excessively high degree, the illumination is so feeble as to be hardly perceptible until a correcting glass is placed in front of the eye under examination.

The explanation of the process will be greatly simplified if we replace the refractive media of the eye by a biconvex lens, called in optical works the "equivalent lens," and the retina by a moveable screen placed behind it. Then, if the screen be placed at the principal focus of the lens, an emmetropic eye will be represented; if the screen be placed between the lens and its principal focus, a hypermetropic eye; and, again, if the screen be placed behind the principal focus, a myopic eye, the accommodation in each instance being supposed to be paralysed.

Such an arrangement of lens and screen has been constructed for me by Mr. Pillischer of New Bond Street, and is here shown in the form of an artificial eye, with which it is easy to imitate the processes of retinoscopy under the different conditions of hypermetropia, myopia, and emmetropia, and so to demonstrate the appearances on a large scale. In Fig. 1 let L represent the lamp, M¹ M² the positions of the

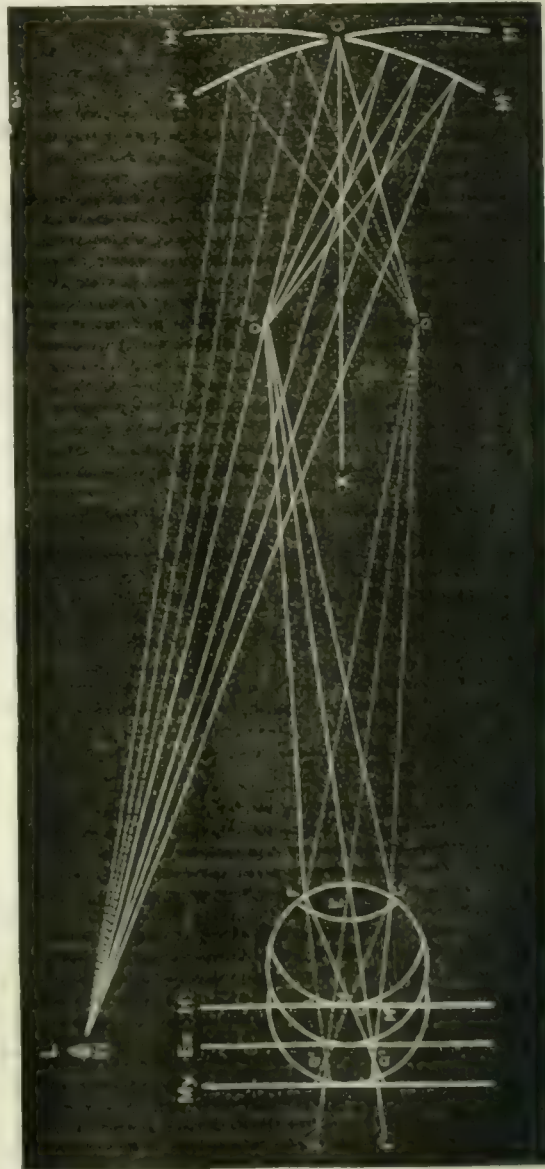


FIG. 1.

mirror at the beginning and the end of rotation. O¹ O² the positions of the inverted images of L, from which the divergent rays pass to the

eye; and let H, Em, My, be the positions of the screen or retina in hypermetropia, emmetropia, and myopia respectively.

Let us now consider the path of light from the lamp to the lens. Let C be the centre and CX the axis of the mirror; then a pencil of light proceeding from L will, after reflexion from the mirror $M^1 C M^1$, converge upon a point O^1 , situated along the line $C O^1$, such that $O^1 C$ and $L C$ make equal angles with the axis $C X$. From the point O^1 the light diverges, and that portion of it which is included within the cone $F O^1 C$, enters the lens.

After refraction the rays converge to a point Q^1 , called the conjugate focus of O^1 with respect to the lens. Q^1 is situated on the line joining O^1 with the centre of the lens E, and its position is determined by an easy geometrical construction. Join Q^1 with all the points of F G on the margin of the lens, and you get a cone $Q^1 F G$; this cone represents the cone $O^1 F G$ after refraction through the lens E. Supposing now we place the moveable screen at a point H, which cuts the cone in LM; then the area LM will be illuminated, and the rest of the cone will be dark. If the screen be a plane surface, the illuminated area will be an oval, and if $O^1 E$ make only a small angle with the optical axis of the lens, the oval will be very nearly a circle. Thus, light proceeding from L after reflection at $M^1 C M^1$, and refraction at F E G, illuminates an oval area upon the screen at A, and all the rest of the screen is dark.

In the actual eye, the point FG will of course correspond to the margin of the iris. Similarly, for the second position of the mirror, $M^2 C M^2$, the light from L illuminates an oval $L^1 M^1$, when the screen intersects the cone $Q^2 F G$, Q^2 being situated on the line joining O^2 with E. Thus we see that as the mirror is tilted so that O^1 passes to O^2 , the refracted light must pass in the opposite direction, $Q^1 Q^2$, whether the screen be placed at H, at Em, or at My. What we observe, on looking through the mirror during its tilting, is the movement of the image of this illuminated area whose dark margin has the form of a crescent. This image and its crescentic edge can be clearly seen at 120 centimetres to move in the following manner. 1. In *hypermetropia*, it moves in the opposite direction to that of the mirror in all cases. 2. In *myopia*, it moves in a similar direction to that of the mirror in all cases which are equal to one dioptric and upwards. In those below one dioptric, there is no distinct image visible at 120 centimetres; but if we place a concave lens in front of the patient's eye which is slightly above the amount of myopia, this will give a distinct image and crescent moving in the opposite direction. Thus, if in an eye under examination we get no image with a spherical + 0.25D, but an opposite clear image with + 0.75D, then we know that the mean between these two—viz., + 0.50D—is the approximate expression of the myopia in that eye. 3. In *emmetropia*, only a bright reflex is seen; this moves in a direction opposite to that of the mirror, but there is no distinct outline of the image, nor yet any crescentic margin of shadow. Now, rays emerging from an emmetropic eye are (Fig. 4) parallel; if, therefore, we place a convex lens in front of the cornea, this will cause convergence of the parallel rays, such as takes place in myopia, so that a similar image and crescentic shadow are seen. Our distance from the eye remaining the same (120 centimetres), the glass required to effect this will be + 1D. If, again, we place a concave glass in front of the eye, even as low as - 0.25D, we immediately obtain a distinct image and crescent moving in the opposite direction. Thus we know an eye to be *emmetropic* when, at a distance of 120 centimetres, there is only a bright reflex without a definite image or crescentic shadow, and when an opposite image and shadow are produced by - 0.25D, and a similar image and shadow by + 1D.

There is, I find, a slight difference between my observations as to the appearances in emmetropia and weak myopia, and those of Dr. Parent, and others. This I believe to be due to the angle under which the eye is observed. Dr. Parent makes the patient look to one side, so as to examine the optic axis, and to get a good reflex from the optic disc. I prefer the patient to look straight at my forehead, that I may examine the visual axis and the yellow spot region.

These conditions can be explained by reference to the Figs. 2, 3, and 4, where, disregarding the rays which have entered the eye so as to form an illuminated area, let us consider those rays only which proceed from that area of the retina. In the *hypermetropic* eye, which is diagrammatically represented by Fig. 2, the screen H is in front of the principal focal plane; therefore rays proceeding from O_1 would form a virtual erect image, which would appear to the observer at M^2 to be situated at the conjugate focus I_1 . Similarly, O_2 would appear to be at I_2 . These images, therefore, would appear to move from I_1 to I_2 ; that is, in the same direction as the illuminated area, which, we have seen, is opposite to that of rotation.

In the *myopic* eye (Fig. 3), the plane of the retina or screen is situated behind the principal focal plane Em; therefore rays proceeding

from O_1 are refracted so as to form a real inverted image in front of the conjugate focus I_1 . Similarly, O_2 will have its image at I_2 ; there-

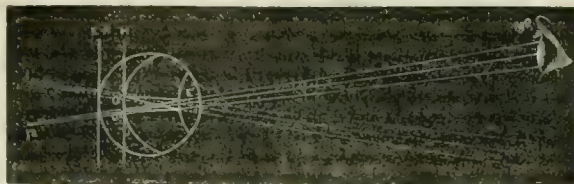


Fig. 2.

fore, as O_1 passes to O_2 , I_1 must pass to I_2 —that is, in the opposite direction to that of the areas, and therefore in a similar direction to that of the mirror. When the myopia is below one dioptric, the conjugate focus I_1 is necessarily thrown very far from E; so that, until the observer is beyond the position of this image, he will only get a blurred appearance.



Fig. 3.

In the *emmetropic* eye (Fig. 4), the retina is situated at the principal focal plane of the lens E; hence rays proceeding from O_1 will, after refraction, proceed in a direction parallel to one another, so that no distinct image can be formed at any distance, and the observer sees only a bright reflex without any crescentic shadow at its margin.

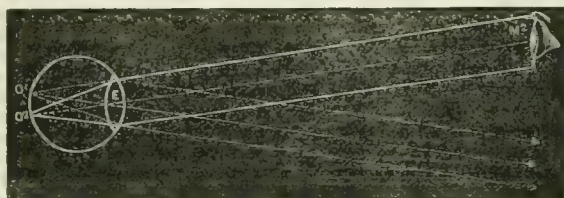


Fig. 4.

On testing for regular astigmatism, the same signs are to be sought in the two chief meridians as have been described for the hypermetropic, the myopic, and the emmetropic eyes. This is easily effected by successively tilting the mirror in the vertical, horizontal, and oblique directions.

In mixed astigmatism, we find the characters of myopia in one meridian, and of hypermetropia in the meridian at right angles to this. In compound astigmatism, we find hypermetropia or myopia in both meridians; but there is a difference in the intensity of the illumination, and in the rapidity of the movement of the image and crescent. In simple astigmatism, we find the signs of emmetropia in one meridian, and of hypermetropia or myopia in the other.

Having thus found the kind of error of refraction in a given eye or a given meridian, we proceed to estimate the amount or degree of the same. This is effected by successively placing trial glasses of increasing strength in front of the patient's eye by means of well-fitting spectacle-frames. The glasses should be well centred in front of the eye, and as close as is convenient without interfering with the movements of the eyelids. By this means, we endeavour so to neutralise the ametropia as to produce an appearance similar to that of the normal eye. In estimating the degree of ametropia by trial glasses, our object is to produce the emmetropic appearance. Thus, suppose a myopic eye or meridian to be under examination, we place successively in front of it concave glasses of increasing strength until one is found which just causes the shadow to become opposite instead of similar at 120 centimetres; then, by deducting 1 D from the strength of the glass used, the remainder gives the degree of myopia in that eye or in that meridian. Next, let the eye under examination be hypermetropic, here we use convex glasses of increasing strength until the opposite image and crescent just become blurred and only a bright reflex is visible. The strength of the glass used is the exact expression of the total hypermetropia of the eye or meridian in question.

When testing for astigmatism, the above method of proceeding is adopted separately for each chief meridian. A little practice will soon enable the surgeon to ascertain the approximate direction of each meridian, and the kind of error in each.

Having thus ascertained the kind and the degree of error, by means of retinoscopy, we confirm the diagnosis by making the patient read distant types with the glasses indicated.

In cases of simple hypermetropia and myopia, this is usually effected in a few seconds; but, in cases of astigmatism, the necessary calculations have to be made from the data obtained by retinoscopy, as to the combination or otherwise of spherical and cylindrical glasses which shall be used; and the direction of the axis of the cylinder must, of course, be accurately adjusted. It will usually be found that this method is very exact. In my experience, it is the quickest and most easily worked of all the methods at our disposal.

The purely objective nature of retinoscopy is, I think, a feature which strongly recommends it to our notice; for, not only in ordinary cases are we able to make a rapid and exact diagnosis, but also in children, in the illiterate, in hysterical, and malingering cases, and in others where, owing to slight retinal or choroidal changes, the patient is quite unable to help us by subjective symptoms in coming to a correct conclusion.

ON THE TRANSPLANTATION OF SKIN *EN MASSE* IN THE TREATMENT OF ECTROPION AND OTHER DEFORMITIES OF THE EYELIDS.

Read in the Section of Ophthalmology at the Annual Meeting of the
British Medical Association in Worcester, August 1882.

By CHARLES BELL TAYLOR, M.D., F.R.C.S.,

Surgeon to the Nottingham and Midland Eye Infirmary.

UPWARDS of seven years ago (March 1875), I was operating upon a lady for ptosis. The defect was somewhat exaggerated; and, in order to remove it, I excised a piece of skin from the upper lid. I cannot give you the exact measurement of the portion removed; suffice that it was, as the sequel proved, a large piece—indeed, too large a piece. The bleeding that followed was rather in excess of what is usual in these cases; and, owing to this and some other accidental circumstance, at least twenty minutes elapsed before I commenced to stitch up the wound. I had no sooner, however, inserted a suture, than I found that I had done too much. It was clear that the patient would hardly be able to close the eye even with effort, and that during sleep it must remain partially open. What was to be done? No elaborate plastic operation, for various reasons, was possible just then. It would not do to leave the wound to granulate, or to bring the edges together in its present condition. I thought how stupid I had been to divide the pedicle before ascertaining the effect of sutures, and turned my eyes regretfully upon the piece of skin which was lying in the operating-tray, a shrivelled, cold, cerulean piece of dead flesh. Was it dead? I recalled that I once stopped excessive hæmorrhage following tooth-extraction by replacing the tooth, which remained *in situ* for years; and I determined to put the piece of dead skin back. It was accordingly replaced, without any extraordinary precautions. The wound healed by the first intention, and the shrinkage which followed sufficed to cure the original defect.

I am ashamed to say that I was not aware at that time that Lefort, the great French surgeon, had demonstrated in 1870 that it was possible to transplant large pieces of skin from one part of the body to another without pedicle; and, owing to my want of information on the subject, I brought this case forward at the annual meeting of the Midland Branch of the British Medical Association held at Leicester, as an experiment *new* in the treatment of ptosis. The conclusions I drew from the case, in the paper then read, were the following.

1. It is possible to transplant large pieces of skin from one part of the body to another, and from one person to another, under favourable circumstances, without pedicle.

2. Such transplants considerably—at least to one-half of their original size.

3. Thin, silky, wrinkled tissues, such as the skin of the eyelids, the scrotum, and foreskin, are the best adapted for this purpose.

4. With this fine tissue, no preparation, such as scraping and planing of the raw surface of the flap, is necessary; and, lastly, in removing tissue from one part of the body, as ptosis and ectropion, leave the flap attached to a pedicle until you have ascertained precisely the full effect of the operation you are performing.

I introduced a patient, on whom I had successfully operated very shortly after the case recorded, at the Leicester meeting; and the subject, about the same time, or earlier, for anything I know, was so ably handled by my friend Dr. Wolfe of Glasgow, that the operation now bears his name.

I have had a photograph taken of a case treated in this way: as you see, a bad case of ectropion occurring in a scrofulous subject, the result of extensive exfoliation of diseased bone. This child, who came from a distance, had been seen by other surgeons, and some attempt had been made to remedy the deformity; but the small portion of the upper lid which had escaped destruction was so firmly embedded in the diseased tissue, that it was evident that nothing but a most careful operation, with transplantation of new skin, necessarily from a distant region, would suffice; while it was clear that, unless something was done, that the eye, constantly open, congested, and perpetually exposed to external irritation, would be seriously damaged. It was impossible in this case to preserve a pedicle while transplanting from a distant region, as the patient was exceptionally timid and irritable. I therefore decided to transplant *en masse*, and selected for this purpose a piece of delicate skin from the inside of the arm. The upper lid was turned completely inside out, and I took advantage of this position to make a raw surface well within the lashes; a similar raw surface was established on the opposing edge of the lower lid; what remained of the eyelid cut free from its abnormal attachment, and the two raw surfaces brought together and firmly attached by sutures deeply placed in the lids; the upper portion of skin, which was buried under the orbital ridge, was then carefully dissected out, and the raw surface between the two covered with the flap borrowed from the arm. The parts were saturated with a solution of boracic acid, and maintained *in situ* with a compress bandage. The lids adhered, thus establishing a permanent ankyloblepharon; and, with but a slight attempt at sloughing at the edge, the transplanted skin became firmly attached in its new situation. I maintained the ankyloblepharon for six months, when, finding that the new lid was firmly embedded in its new situation, I divided the attachments between the lids, and dismised the case with the result shown in another photograph in my possession. The lashes are seen to be as perfect in the one eye as in the other—a most important point; and, altogether, the case may be considered a perfect success, exceptional no doubt, but not the less gratifying on that account.

I have another case, very similar to the preceding, now under treatment. In this case, the portion of skin, transplanted from another person, sloughed; but I have no doubt that I shall be able to fill up the raw surface from another source; in the meantime, the eyelids have grown together, and the lashes are preserved.

Now, although I am glad to be thus able to bear testimony to the success of Wolfe's operation in a certain small percentage of cases, and although it is clear this method may be adopted when the epidermic graft of Reverdin, or the mosaic of Wecker, would fail to supply the loss of substance, I am bound to confess that, the more experience I have of the operation, the more extensively and unaccountably does the brilliant success of my first repetition of a year. I think my experience will be borne out by that of other surgeons, and may I summarise it in a few words: that, although you may sometimes succeed, as I have done, the flaps slough, as a rule, or, if they do not slough, some portion of the epidermis exfoliates, leaving a shred merely—thus, instead of contact with the raw surface—alone vital. If we could take skin from the upper eyelid, the scrotum, or foreskin, we might be more successful. Under any circumstances, I should always, when possible, maintain a pedicle, if only for twenty-four or forty-eight hours, or until the new tissue exhibited some signs of vital connection with the parts beneath. It has been objected to this latter proposition, that the part in the neighbourhood of the diseased parts is an additional deformity, and that the twisting of the pedicle leaves an unsightly ridge; but, as is shown in a photograph of a very old case, in which I maintained a raw eyelid from the temple after excision for tumour, there is not the slightest scar or ridge to be seen; and I have here a patient on whom a very extensive symblepharon has been cured by transplantation of the skin of the upper lid onto the lower surface of the eyelid, with a pedicle, which was maintained intact for some days. In this case, there was no conjunctiva to transplant; and, although it is only three weeks old, there is no scar and no ridge. I demonstrated this operation at the Clinical Society of London in 1874. I believe I am the only surgeon, either at home or abroad, who has ever practised this method of treatment in cases of symblepharon; and I have much pleasure in commending it to your notice.

THE salary of Dr. Goldie, the Medical Officer of Health for the Leeds Urban Sanitary District, has been increased from £400 to £500 per annum.

ABSTRACTS OF
INTRODUCTORY ADDRESSES
DELIVERED AT
THE METROPOLITAN AND PROVINCIAL
SCHOOLS.
ON OCTOBER 2nd, 1882.

ST. GEORGE'S HOSPITAL.

THE Introductory Address was delivered by HERBERT WATNEY, M.D., M.R.C.P., Assistant-Physician to the Hospital.

After referring to the loss sustained by the medical school through the resignation of Dr. Barclay, the lecturer spoke of the new examination instituted by the Royal College of Surgeons, to be held by the teachers of anatomy and physiology. He considered that it will be only a guide and help to the ordinary hard-working student, and will be so easy as not to discourage any, but will prevent the first year of student life being partially wasted, as has sometimes been the case. A short account was then given of some of the sciences bearing on medicine. He said: "Anatomy, the foundation of the medical sciences, can now be satisfactorily studied by all who enter our profession; but this has only been the case during the last hundred years. It is, however, a question whether the pendulum has not now swung a little too far; whether the examination in the minor details of anatomy, and, consequently, the teaching of these details, have not gone further than there is any need; whether the oldest science does not engross too much of the student's powers, not as regard its essential principles, but for its minutiae." And the very strong opinion of William Hunter was quoted to the same effect.

He then dwelt on the importance of physiology, and its fascination as a study, bringing us face to face, as it does, with the problems of life and death, and leading us to "the borderland of the material and the immaterial"; but he pointed out that the same evil of overrating the importance of minutiae is sometimes met with in this study, saying that there is a physiology whose devotees seem to think more of the instruments or the specimens, soon to be set aside for newer and better ones, than of the valuable observations obtainable by such means. Pathology was described as being at present divided into two great branches: one, which may be fairly classed as belonging to the two sciences of anatomy and physiology, dealing with the anatomical or physiological changes wrought in the body; the other quite different in its character, aiming at much deeper knowledge, seeking to discover the causes of certain diseases, even, it is said, cultivating these causes, and so controlling them that they become innocuous. It is probable that vaccination is a remarkable instance of this method of rendering a virulent poison harmless by means of a series of cultivations in the bodies of the lower animals.

The great necessity for the study of pharmacology was next referred to, and Dr. Watney spoke of the study of materia medica as being only a "survival".

The value of hygiene was then spoken of, and the change in the death-rate of the population during a number of years was considered a clear indication that hygiene is giving us most valuable aid in our struggle with disease. He remarked that during the time that the sciences bearing on the healing art have been developing, much work which may truly be called scientific has been accomplished in medicine and surgery; but we are still obliged in great measure to act from the basis of experience and from a knowledge which, though it has the authority of time, has never had a scientific foundation.

He then attempted to answer the question, What should be the due relationship between the scientific and the practical in the training of the student, and in his after-life as a medical man? After showing that there is generally an intimate union of these two apparently opposite principles in those whom we regard with the greatest respect, he proceeded: A scientific education implies study with a view to the acquisition of knowledge apart from any ulterior object; that is, seeking to know what has been accomplished in any subject, and to be so placed that future progress is possible, supposing that the patience and abilities of the individual are equal to such advance. It should, however, also include the acquisition of the scientific method. Practical education implies the study of any subject in such a manner that we can bring our knowledge to bear at the present or at a future time. The scientific worker is remarkable for his dissatisfaction with the present state of our attainments and his desire to know more; further, he is noted for the accuracy of his knowledge, it may be only in a very limited field, but in that field he is not only aware of what has

been discovered, but of the manner in which the discoveries were arrived at, and the extremely unsatisfactory basis on which much of our supposed knowledge rests. On the other hand, the sympathies of the practical worker are with that portion of mankind which exists near and about him; and his energies and abilities are concentrated to produce, with the present fund of knowledge, the greatest results and the utmost benefit. He said, it cannot be too strongly insisted on, that the study of the sciences bearing on medicine will not alone enable you to become a safe guide in surgery or medicine; these last have to be studied; they have their methods and instruments of precision, some of which, such as chemical reagents, are well known to the chemist; others, as the thermometer, to the physicist; yet it is impossible for any physicist or chemist, or even for those who have studied the sciences more nearly allied to our profession, to understand the value of certain phenomena, taken in conjunction with others, unless they have studied medicine itself. Therefore, in answer to the question, What is to be the relationship between the scientific and the practical in your course of study? I would say, If you wish to follow the practice of medicine, do not devote too much time to the study of the sciences; they are to be only portions of your education; they are the sources of much knowledge, but they are not the knowledge itself.

He then continued: Science is not liked by some, because it makes so little of the individual opinion, and treats so lightly that power which some men have of enforcing their views and persuading their fellow men. In politics, and in art, we see the immense influence of the individual—how his word is taken almost as law. Yet the habit of accepting without question what is told us, has been the most fatal stumbling-block to the advance of medicine. The reputation of Galen helped to retard for centuries the advance of anatomy; and the deference paid to authority during the middle ages did incalculable injury to the large body of practitioners of that time, who learned to work in a mechanical, self-satisfied manner, impatient of any advance, unob-servant, allowing centuries of time to pass and millions of sick folk to be under their hands, without attempting anything further than to struggle with one another as to who should be the greatest, "seeking rather to conquer their opponents in argument than to penetrate the secrets of nature." It is, however, easy, standing on the platform of our present knowledge, to point out the failures of the past generation; but the question which every thoughtful man will put to himself is not what were their absurdities, their mistakes, but what can we learn from their failures? It is clear that ability will not prevent mistakes and even absurdities, for many of the older practitioners were men of great genius, and we have no proof at all that there is more ability now than formerly, nor can anyone imagine that we take more pains than formerly was taken. Must we, then, assume that we have a better method? and yet, who can say that he has a better method than Harvey? At last we are driven to the conclusion that medicine is a progressive science, and that we are profiting by the information obtained by others, reaping the fruit sown by them at great expense, after many failures and much disappointment. Now, with regard to the question, What is to be the relationship between the scientific and the practical in your future life? I would urge that everyone who practises the medical profession should, besides his ordinary avocations, work in a scientific manner at some subject, and aid in the advance of knowledge. It is very necessary that you start with one humbling thought, that you cannot finish your studies, and that you must go into practice to a certain extent incompletely prepared. It is impossible that you should be a good anatomist, or physiologist, or pathologist, or a good practitioner, when you leave this or any other school of medicine. It has lately been debated whether four years is enough for study, and whether the curriculum ought not to extend over five years. Surely ten years would not be enough to master anatomy and physiology alone, and by the end of that time so many advances would have been made, that you would hardly be able to keep your knowledge current with the times; thus physiology is being split up into various departments, and few are skilled alike in physiological chemistry, in experimental physiology, and in the use of the microscope. If you grieve at the thought that your knowledge must necessarily be imperfect, console yourselves with the fact that it is found in planting trees in exposed and windy situations that it is necessary to take quite young and small ones, for that the older and taller trees, which have had the advantage of good surroundings, and have been accustomed for a long time to cling to their supports, do not grow so well in such situations as shorter trees, which, though smaller when first put in, eventually become more vigorous. So the well-taught but not too fully-taught student, though at first he may seem behind the artificially-forced stripling, will send his roots down deeper, and obtain a firmer hold in any new undertaking he may choose. And you are sure of true

success, your aim will be to allay pain, to prevent the effects of wrong-doing, and to combat death. It is true your patients will suffer for their follies, will at times be wrung by pain, and will, at length, all die, yet you will be successful, because you will not set before yourselves, or others, the false chimera that you can finally resist death, or prevent its painful accompaniments. You will accomplish what you hoped to do, alleviate pain, in a great measure prevent the effects of evil, and delay the advent of death itself. Yes, you will succeed: but let not that be our only success, great as it may be, we may look forward to the time when we shall meet Him and be with Him who alone has conquered pain and sin and death, and who has won a complete success for us.

KING'S COLLEGE.

THE practice of delivering a formal introductory address has here been abandoned, and the opening of the session is now signalled by the distribution of prizes. On this occasion, the Right Hon. W. H. SMITH, whose connection with the hospital dates back to its earliest years, took the chair, and gave away the prizes. After discharging this duty, the Right Hon. gentleman, in the course of a short speech, referred to the presence of ladies at the ceremony, and said they owed much to the countenance and support of ladies in the arduous duties they were called upon to discharge in life. He therefore, addressed them as equally interested in the study, the practice, and the pursuit of medicine. He spoke to them only as a layman; his knowledge of medical men and medical schools was greater in the earlier part of his life than it was now, and he looked back with pleasure to his former position as a member of the Committee of King's College Hospital. He worked gladly then, in a subordinate position under eminent men, of whom he could now name but a few surviving; that was a portion of his life which he had thoroughly enjoyed. In going from ward to ward, and often from bed to bed, of the hospital, he saw and could bear testimony to the fact that our system of medical education was calculated to affect and to bring into action the holiest sentiments of human nature. The work done in the hospital benefited the man who did it as well as the man who was the immediate object of his care. Addressing the public, he said they had a distinct interest in the support of such institutions as King's College Hospital. But for the hospitals and hospital cases, there would be a deficiency in the education of the medical student which would be absolutely irreparable. The loss could not be supplied in any other way. He had already referred to the care bestowed at the bedside of the patient, and he could not help feeling that he might owe the life of some who were near and dear to him to the knowledge thus obtained. Without that knowledge, the student would be deficient in probably the most important part of his education. The work recently done so nobly and successfully by our soldiers and sailors in Egypt—and, he would add, by our doctors—was due in great measure to our men having what Englishmen usually endeavoured to have—sound minds in sound bodies. It was the vigour and the power of the men which had enabled them to carry out a great movement. The duty of a doctor, in his opinion, was to go beyond the position of a medical adviser, and to become the friend of his patient. In this way, he could often do more than by the mere administration of medicines and drugs. Tact and judgment, he felt certain, existed now to as great an extent as they did formerly. Truth he recommended to medical men in dealing with their patients, and he recommended it as one who had passed the summit and was going down hill. When a man had obtained a reputation for truthfulness, any hope he might give was almost the best kind of tonic that could be given; but, on the other hand, the medical man who was known to give hope where there was no hope, lost much of his power. In conclusion, the right hon. gentleman entreated the students to go on and obtain the approval of their own consciences; thus they would obtain the highest reward for their labours. A vote of thanks was proposed by Sir Richard Wilbraham, who referred to the fact that the two house-surgeons of the hospital had but recently returned from the seat of war in Egypt, where they had been able to render important service. The motion was seconded by Canon Barry, and carried by acclamation.

LONDON HOSPITAL.

MR. JONATHAN HUTCHINSON, F.R.S., senior surgeon to the hospital, delivered an address in the course of the *conversazione* held at that institution on the evening of October 2nd. This address was not of the usual nature, the lecturer observing that he was conclusively deterred from venturing on purely professional topics by the character of his audience, many of the most honoured guests on that occasion

being members of other professions. The chief part of Mr. Hutchinson's discourse related to Carlyle. Adverting to the impatience, intolerance, and tendency at times to see only the dark side of things which marked Carlyle's character, the lecturer proceeded to some remarks upon "life-patience," by which he meant the ability to see that really all things were working together for good; and, thus to be candid, patient, and hopeful under all the varying conditions of human life. Failures in life-patience were, to a very large extent, due to temperament, or to passing states of health; but they were also, to a not inconsiderable extent, influenced by opinions and creeds. Mr. Hutchinson dwelt at some length on Carlyle's antipathy to Darwinian science. "I have said," the lecturer observed, "that Carlyle was impatient, and that he formed, under the influence of prejudice, very unjust opinions on some topics. Amongst others, he spoke of the doctrines of Darwin as too contemptible to be worth a moment's consideration. In putting them thus scornfully aside, I think he missed a main source of comfort in life. The truth is that, what Carlyle himself was proclaiming in the language of the mystic, Charles Darwin was explaining in the language of science. Carlyle was asserting that there is a spiritual power in nature, was bidding us reverence that power as supernatural, and as working, through rough and mysterious ways, towards certain and definite good. Darwin, looking at the same facts from a biologist's standpoint, explained how this result did indeed come about, and that, too, through the simplest and most unmythical ways. It has been thought by many, by believers as well as sceptics, that Darwin's explanations are melancholy ones, and that they would in short land us again in regions of mere brute force; I cannot think that this view is correct. Darwin did not impose any new 'law,' he simply interpreted the facts of Nature, and Nature, whether his explanations be true or false, will go on in the future as it has done in the past. We may then expect confidently in the future the same kind, perhaps the same rate, of progress which there has been in the past. This consideration should certainly forestall despair, and there remains another which may, I think, reasonably give us a lively hope. When we use such phrases as 'Survival of the fittest,' 'The battle of life,' 'The struggle for existence,' and the like, we by no means have regard to brute force only; friendship is also a force, affection and love are forces of incalculable power, and it is with these which we have to reckon in estimating the prospects of the battle. That victory will, in the long run, be found on the side on which they are ranged is certain if we reflect for a moment on their nature. Love and friendship, as well as hatred and selfishness, will make use of material means and brute force in order to success. These means will be common to both, and since love leads to union and hatred to isolation, love must of necessity in the end prove the stronger. Surely a mind familiar with such thoughts gains much in the solid foundation of its hopes.

"There is nothing here erratic or uncertain. Under the laws which the Creator has given to life, simple as possible in themselves, there must be progress in earthly happiness. Nor do the facts of history belie this speculative conclusion. Did time permit, it would be easy from various other departments of natural science to produce arguments of a similar nature, and show how much knowledge in these directions tend to produce patient hopefulness as to the destinies of mankind."

MR. HUTCHINSON traced a similar unconscious and unrecognised similarity between the principles of Darwin and the ideas of Wordsworth and Browning. He showed, from appropriate quotations, that both these poets, looking at their subjects from the spiritual side and using poetical language, assert precisely the same conclusions as those of Darwin.

ST. MARY'S HOSPITAL.

THE introductory address was delivered by T. KING CHAMBERS, M.D., senior consulting physician to the hospital.

Dr. Chambers began his introductory address by observing that a lecture of this kind is usually delivered by some active junior member of the staff, who has at his fingers' ends all the special advantages which a new pupil at St. Mary's inherits. He, however, had no longer that personal experience, and in fact was bidding a farewell to his old chair, which illness prevented him from doing a few years ago. He had, therefore, selected as his subject "The Relation of the Medical Student to the General Medical Council". He was the junior member of that mysterious body, and, therefore, supposed to be a fit and proper person to introduce it. "The Medical Council's most important duty is to watch over the student, to see that he gets justly that education for which he gives his time and money, to show him the path by which he may become a useful and honoured Englishman, and to make that path as easy and direct as possible. That the Council is performing this duty is graphically shown by contrasting the medical student as

described, and truly described, by Charles Dickens, with the medical student of to-day. Mr. Pickwick and Mr. Wardle, with all their good nature and hearty sympathy with all that is human, found it impossible to associate with the young "sawbones" of that voracious history. Just fancy Mr. Ben Allen and Mr. Bob Sawyer inviting their sisters and their cousins and their aunts to an evening entertainment! How those respectable persons would have resented the impertinence. Now-a-days, I find medical students have no hesitation in giving concerts and other performances, for which ladies eagerly seek tickets, and contribute personal help; and at your athletic sports, the show of irreproachable bonnets, with irreproachable faces beneath them, is bewildering. May this association with the best part of the best nation in the world, the educated middle classes of England, abide for ever! For you grow like what you mix with. I will take this opportunity of giving you a few words of warning. Do not on any consideration make the mistake of accepting places as assistants, before you have passed the qualifying examinations. By so doing, you will be mixing yourselves up with a set of men who have lost all ambition of being legitimate practitioners, who have degenerated into mere drudges, whose manners and morals and education unfit them to be your companions. You run great risk of becoming like them, and being equally despised; and, by delaying your fitness for going up to your final examination, you are making your education more tedious, and therefore more expensive in the end. But when you have cleared examining boards off your minds, then, indeed, I do not know a more valuable part of education than that which can be got by a good assistantship. For, having learnt systematically and thoroughly how to learn, you will understand quickly the details of the application of your knowledge, and profit in direct proportion as you have not muddled your brains with those details beforehand. They are selfish and cruel persons who tempt you to be unqualified assistants. They do it for their own dirty profit, and it is a very bad bargain for you." Dr. Chambers then demonstrated how a very great portion of this improvement of the comfort and social position of the medical student was due to the action of the Medical Council in forcing upon parents and guardians the duty of giving a sound preliminary education to those destined for the profession. "When a student feels the satisfaction of ease in acquiring technical knowledge, and a fitness for belonging to the cultured classes which early education bestows, he should not forget his indebtedness for it to the Medical Council. To the influence of the Medical Council is also due another great comfort to the student—the substitution of several examinations for that one which used to hang like a sword of Damocles over his whole career. Perhaps some may exclaim that this is worse and worse—it is the hanging up of several swords instead of one. But that is a superficial view of the matter. It is in reality a 'dilution' of the single examination, which, spread over several years, ceases to be a legitimate object of fear altogether. If an old man's pupilage could come over again, he would certainly choose that body to examine him which most divided its examinations, for he knows that he would eat, drink, and sleep the better for his choice. Then, the curricula of the different licensing boards have been the subject of serious thought and arrangements by the Council. They are made as harmonious and as equal as possible. The student may rest assured that, by following them strictly and honestly, he will be making the best use of his time to insure success in the examinations; and success in the examinations is a pledge to you that you have those qualities which lead to success in after life. Do not, my dear fellow teachers, take umbrage at what I have said as to the need of keeping examinations constantly in view. Observe the signs of the times; examination, as an engine of education, is becoming more and more powerful; and, wisely or unwisely, all orders of men are agreed in reposing their confidence in it. Trust has begotten a resolve to deserve trust; and I feel sure that the schemes of instruction suggested by the medical examining boards, and approved by the Council, are the best guides we can have. Your responsibility is very great; yet it is not too great to be borne by the exercise of the simple commercial virtues of sobriety, punctuality, and attention to business. Let your 'sobriety' be known unto all men in deed, in thought, and in speech. Words, as Homer tells us, have wings, and they fly to the ends of the earth. You can hardly fail to have been startled, if not awestruck, by the quotation of some chance sentence of yours out of a lecture or conversation in the mouth of an old pupil, or pupil's pupil; it may reappear in the colonies or come back from America. Take care, then, that is a true message which thus travels forth. Avoid all paradox, exaggeration, or inexact illustration, however brilliant. Be assured it will haunt you, and start up when you least desire. 'Punctuality' is the homeliest of virtues, but the neglect of it, by teachers, is visited with very public loss of reputation. Pray remember that every minute students are kept waiting is most likely occupied in criticising

you, and in commenting, not favourably, sometimes not quite fairly, upon your person, your manners, and your teaching. I will leave you to judge if that conduces to your influence for good. 'Attention to business' is an expression which seems to demand an opinion as to what your chief business is. You will, of course, say it is to make pupils into the best and safest practitioners that the time afforded us allows of their being made. Yet teachers differ somewhat as to the surest mode of attaining this end, and, possibly, some of you may dissent from my concluding sentences. A frank submission to the mastery of the inevitable examiner is, I am sure, the wisest course, and I expect this will lead, in the end, to changes in our method of communicating instruction. It must gradually become less professorial and more catechetical or tutorial. I mean that a considerable part of the time devoted to each study should be occupied in question and answer on matter previously prepared by the class. The subject should be explained and enforced from the chair; not, as of old, given out fresh from the chair, and learnt up by notes afterwards. The catechetical method gives a shrewdness in catching the point of a question, and a facility in answering it, which contributes greatly to success in examinations, and to readiness in the emergencies of future life, and by bringing their two minds into more immediate contact, it gives the teacher a power of measuring the progress, and declaring when sufficient advance has been made to sanction the issue of a certificate of sufficient attendance. To try and gain this early would be a sharp spur to early diligence, and would insure the presence of minds, as well as bodies, on the benches of our theatre. Students complain, not entirely without reason, of the number of lectures they have to sit out, and of the days broken up into fragments and consumed. If you adopted this plan, the remedy would be in the complainer's own hands, for he would only have to show a mastery of his subject to be free for the rest of the session, and give his time to reading and ward-study. I am satisfied, by observation not limited to medical schools, that the catechetical is, of all methods, the most sure and effectual for teaching Englishmen. I should not have dared to say so much had I not observed tentative efforts made here to introduce the principle I have advocated. To succeed, the efforts must be combined, and, my new young friends, they must be co-operative: assistance on your part, hearty and forbearing, must be given, or the experiment will not be a fair one.

The lecturer then took leave of the theatre, where, he said, he had begun to lecture before the plaster was quite dry upon its walls, and where he left one of his first pupils as his successor.

MIDDLESEX HOSPITAL.

THE Introductory Address was delivered by W. CAYLEY, M.D., Physician to the Hospital.

Dr. Cayley began his address by speaking of the sad calamity which had befallen the institution. Dr. Lyell, who was to have lectured that day, had been suddenly struck down by a fatal disease. The blow had fallen upon them so suddenly that they were not yet able to estimate the extent of their loss; but when they remembered Dr. Lyell's great abilities, his untiring industry, which, no doubt, led him far too much to overtax his strength, and his voluminous engagements, they could not fail to understand, to some extent, the nature of the calamity which had overtaken them. They were met together, not only to confer the reward of merit on those who had earned it, but to encourage those who were now in the mid-career of their course and to bid God-speed to those who were leaving them to enter on their profession. Referring to the numerous difficulties which the student would probably have to encounter in his profession, he said that now they were threatened with a new danger—the arrest of experimental research. In ancient times the dissection of the human body was regarded as an outrage to be avoided. That prejudice has passed away, yet in these enlightened days science is threatened by the working of a still more obstructive sentiment. If Harvey had lived under Queen Victoria and the present restrictions, he never would have been able to discover the circulation of the blood. If the anti-vivisectionists had their way, so far from the suffering of the world being diminished, it would be increased.

ST. THOMAS'S HOSPITAL.

THE Introductory Address was delivered by S. J. SHARKEY, M.B., M.R.C.P., Assistant Physician to the Hospital.

After giving reasons for having chosen as the subject of his address, "Some Characteristics of Modern Medicine", Dr. Sharkey referred to the early history of the Art, and to "the ignorance, superstition, and imposture" which resulted from its being entirely in the hands of the priests. He said that notwithstanding the sound scientific methods

ledge at the beginning of this century was not without its influence on the lower grade of the profession, and the association of surgeon-apothecaries was formed with the object of "improving the education of, and rendering more respectable, their own body." This led to the Act of 1815, after which every apothecary was compelled to receive some medical education. As science advanced, it became necessary to prolong the time spent at a medical school at the expense of the period of apprenticeship, and this change has gradually gone on till the system of apprenticeship has finally disappeared. This change having been the result of a series of compromises, has succeeded in producing for the ordinary student a course of study which, at present, but imperfectly follows the loss of scientific education. The standard of knowledge required at examinations has increased proportionately to the advance of science. How, therefore, to enable the student to reach this standard has become a question of no little difficulty. At present the proportion of the rejections is very high, but it cannot be said that this is due to undue elevation of the standard. In some schools, attempts have been made to reduce the proportion of rejections, by submitting the student to a test examination before signing his schedules. This, of course, only conceals the evil, and does not remedy it. The real effort to meet the higher standard must be by improved training, so as to enable the student to think well and correctly. The science of education is founded on the principles, that the mind is as capable of being improved by training as the body; that in a proper system of mental training, the student must pass from the simpler subjects to the more complex, and from the exact to the inexact sciences; and that, in considering the value of any subject in education, we must take into account its influence in mental training as well as its practical utility. The natural faults of the mind which it is the object of scientific education to correct are—imperfect observation, want of generalisation or premature generalisation, undue credulity, want of appreciation of the relations of cause and effect, and want of classification and arrangement of knowledge. The subjects included in the early part of the course of study prescribed by such a body as the University of London, are intended to correct these errors as well as to supply useful knowledge. Chemistry and physics illustrate, in their simplest form, the mode of arriving at truth by observation and experiment. They show the precautions necessary to avoid error and the dangers of premature generalisation, and they impress the mind with the relation of cause and effect. Botany and zoology train the mind in the accurate observation of simple facts, and in classification. The practical utility of chemistry and physics to a medical man can hardly be overrated; that of botany and zoology is infinitely less, but nothing can take their place in mental training. One of them would, however, suffice for the ordinary student, and, for many reasons, botany is the better. A student who has been prepared by such a course of training in science, commences medical study proper with a mind trained in observation, and ready to follow the inductive reasoning upon which medicine is founded. The ordinary student, however, who aspires merely to a licence from the corporations, commences medical study immediately he leaves school, without any previous preparation in science. He frequently commences to prepare for the primary examination at the College of Surgeons at once, and as chemistry does not form part of that examination, he but too often neglects it more or less completely. He begins to learn the art of accurate observation on anatomy, and he attempts to understand physiology without any knowledge of chemistry or physics which form the basis of that science. His introduction to science is, moreover, through an inexact instead of an exact science. Consequently, half his first year is spent in learning how to learn and doing that imperfectly; and the evil habit of thought thus produced will probably stick to him throughout his whole course of study. His examinations in chemistry and botany are frequently deferred till near the end of his time of study, when it is too late for them to be of any use in giving him that mental training, which should have helped him in the early part of his career. The new examination at the College of Physicians may do something to remedy these evils, but it seems to encourage a sort of a modified apprenticeship, and by thus introducing a period of desultory study without proper teaching between school and college, it will probably do as much harm as good. The medical botany, whatever that may be, which is recommended, is not likely to be of any great value as mental training. The efforts made in all medical schools by increased quantity of teaching, and by making instruction more practical and demonstrative, does not seem to have had great success in enabling the student with greater certainty to reach the standard required of him, and it will probably not do so, till the course of study for every student is arranged according to the laws of scientific education, and the examinations made to correspond with the course of study. The objections raised to such a

plan are: first, that it would add another subject to the curriculum. The only subject which it is proposed to add would be physics, but the student is expected now to know all those parts of physics which apply to physiology and pathology, and consequently it can hardly be said to be a new subject. It would merely be taught methodically, and would prove an assistance instead of an increased difficulty. Secondly, that it would prolong the period of medical study. At present the entrance examination may be, and often is, passed at sixteen, and all those students who pass at this age must wait five years before they can get a licence; and although a longer general education is much to be desired, those to whom it is of importance to obtain a qualification as early as possible, might easily dispense with the luxury, and turn their attention to science at the earliest possible age. Lastly, there are still some who doubt the value of mental training, and the utility of science in practical medicine and surgery. To doubt the value of mental training, may almost be looked upon it as evidence of want of it. The fallacy lies in drawing general conclusions as to the uselessness of mental training from the exceptional cases in which it fails to produce the desired effect. Of the practical value of a scientific training to the practitioner of the present day, there can be no doubt. No man can properly fill the post of medical officer of health unless he possesses a good knowledge of chemistry and physics. The wonderful improvement in surgery during the last twenty years is entirely due to the application of science, and the scientific methods of investigation, by which the causes of surgical fever and the nature of spreading and infective inflammations have been discovered, and their prevention rendered possible. Thus while the practical surgeon boasts of the marvellous results of modern operative surgery, he should not forget that it is in reality to the discoveries of modern science that he is indebted for the safety with which his operations are performed. The complaint that a scientific education tends to make the student unpractical, comes chiefly from the general practitioner, who finds him, when he engages him as an assistant, fresh from the hospital, ignorant of pharmacy, book-keeping, and the routine of practice. The remedy for this lies in the hands of the general practitioner. He should refuse to give more than board and lodging to any man who cannot show a certificate of six months' experience in private practice. Another advantage of a proper training in science is that it tends to fit every man to take part in the advancement of medical knowledge by original research should he feel the inspiration so to do; and there are many points in medicine which the general practitioner has better opportunities of observing than the hospital physician or surgeon.

If, then, it be granted that a proper preparation in science is desirable for every student, how could it be carried out? Supposing the entrance examination to be passed at sixteen, the student might at once commence preparation for an examination in chemistry and physics, with botany or zoology, or both, either at school, as is done at Epsom Royal Medical College, or at a college, or if he liked by private study, as this should be passed at seventeen; at nineteen would follow anatomy, physiology, and materia medica, and at twenty-one the remaining subjects. Part of his last year of study might be spent as an assistant to a medical man. But before such a scheme could be carried out, one thing is essential, and that is that the examinations shall be conducted by one body. The conjoint scheme, however, seems still beyond "the range of practical politics." In conclusion, the lecturer briefly traced the history of the three corporations, showing how the Apothecaries became separated from the Grocers in 1616, and did not obtain the right to order medicines as well as to dispense, till 1708; how their ambition and the negligence of the College of Physicians gradually led to their becoming a licensing body of equal powers with the others, and how they allowed the Pharmaceutical Society to displace them from their position with regard to the drug trade. Thus they find themselves now in a position in which they are not wanted, and which it would be almost impossible for them to keep if the two colleges would only arrange a well-considered conjoint examination between themselves. That this is urgently required all acknowledge, not for the protection of the public from ignorant practitioners, which is probably sufficiently done under the present system, but to protect the student from the irregular and unscientific course of study that he is too often allowed to pursue.

WESTMINSTER HOSPITAL.

THE Introductory Address was delivered by Dr. DE HAVILLAND HALL, Assistant Physician.

After a few introductory remarks, Dr. Hall pointed out that, in consequence of the abolition of apprenticeships, most students come to the hospital straight from school, and he warned his hearers that the freedom of the life of a medical student and the absence of the regular

discipline to which they had been accustomed, exposed them to many temptations, and he advised them not to delay in setting to work. He thought that all teachers were agreed that the examination recently instituted by the College of Surgeons at the end of the first year was a step in the right direction, though there was considerable difference of opinion as to the best mode of carrying it out. He next dwelt upon the importance of a careful study of anatomy, as a means of mental training, being of opinion that though of late years much has been done to improve the general education of medical students, still the fact remains that many men come up to the hospital with their powers of observation ill developed, and with an inability to concentrate their attention. But as he pointed out, anatomy, learnt by actual dissection, was the thing required, and not a mere book knowledge of the subjects, and he recommended the students to take advantage of every opportunity they had of dissecting, laying stress upon the manual dexterity thereby acquired.

Dr. Hall advised the first year's students to attend the *post mortem* demonstrations, but thought that they would do well not to devote more time to surgical practice than they were compelled to do by the regulations of the Royal College of Surgeons. He impressed upon his hearers the great importance of all preliminary work being accomplished in the first two years; even then there would only remain two years for the more practical part of education.

In commenting upon the difficulties of obtaining degrees in medicine after the hospital has once been quitted, he advised all students to have a clear understanding as to what qualifications they intended taking. Speaking from his own experience, whilst a student at St. Bartholomew's, of the advantages of lectures, Dr. Hall was distinctly in favour of enforcing attendance at lectures. He also advocated the plan of taking short notes, to be copied out more fully the same evening; and dwelt upon the importance of punctuality and thoroughness. Then turning to the consideration of the physical needs of the body, the necessity of the medical man being in robust health was pointed out, both on account of the demands upon his energy and decision, and of the danger he runs from exposure to disease, and from the irregularity of life as regards meals and rest. Dr. Hall thought that, if students would only work steadily, there would be no occasion to burn the "midnight oil". As a means of preserving health, regular daily exercise was advised, and students were cautioned against frequenting billiard-rooms.

After a few words of caution upon the importance of purity of life and the choice of friends, Dr. Hall proceeded to discuss the different careers open to the medical man. He thought that, if a man were fairly educated, had good health, and were in possession of that invaluable quality, tact, a living, and in many cases a very comfortable one, was to be made out of general practice. In his opinion, one of the pleasantest positions a medical man could occupy was that of a general practitioner in a good country town. He pointed out that the knowledge of disease and method of treatment which students have learnt and seen employed while clerking and dressing at the hospital, though absolutely essential unless they intended to practise as quacks, require to be supplemented by an acquaintance with the necessities of general practice. He therefore advised recently qualified men to act as assistants for at least a year before starting on their own account. The advantages of the medical profession to those who wish to see something of the world before settling down were then alluded to, and the responsible position held by the surgeon to a large emigrant ship was insisted on. Then turning to the public services, Dr. Hall stated that, in consequence of the increased pay and improved regulations, there was a keen competition for all, though the Indian Medical Department still continued the favourite. He thought that, as against the advantages of regular pay, small amount of work (if that be an advantage), and a retiring allowance which the services offer, is to be balanced the difficulty of settling down to general practice after having been accustomed to an easy life; and the majority of those who enter the services must eventually look forward to going into practice, as only a few can rise to the higher posts. The Public Health Department was stated to afford an ample scope for scientific workers who disliked the routine of general practice.

The address concluded with an earnest exhortation to the students to act up to the spirit of the Hippocratic oath, which was quoted *in extenso*.

LONDON SCHOOL OF MEDICINE FOR WOMEN.

The inaugural address of the ninth session of this school was delivered by Dr. DUPRÉ, F.R.S., Lecturer on Forensic Medicine. After a few words of welcome to the students and their friends, the lecturer expressed a hope that what he was about to say would not be out of harmony with any part of his audience. Before entering on

his principal subject, Dr. Dupré alluded to the movement for technical education, which he considered based on erroneous principles, as it was impossible to teach science to an uncultivated person. It was the scientific man directing the ordinary working man which gave the advantage to the foreign manufacturer. After reviewing the objections raised against the opening of the medical profession to women, he said two vital questions presented themselves. 1. Is the want felt by some women for women practitioners in itself a reasonable one? and, 2. Are women capable of becoming efficient medical practitioners? Both questions he answered in the affirmative. In almost all cases of surgical operation, skill more than supplied the place of mere physical strength. Trained skill enabled the possessor to meet difficulties which would otherwise be overwhelming. In his opinion, moreover, the average intellect of men was by no means superior to that of women, and women excelled in certain qualities which were of special value in the medical profession, such as a stronger sense of moral responsibility and self-respect, greater tenderness, and more conscientiousness. They might, therefore, fairly look forward to obtaining an honourable position in the ranks of the profession, even though they might not rival our greatest physicians and surgeons.

QUEEN'S COLLEGE, BIRMINGHAM.

The inaugural address at the annual meeting for the distribution of prizes was delivered by E. RICKARDS, M.A., M.B., Professor of Pathology.

After a few introductory remarks, he gave an outline of the history of the Medical School, which was started in 1828 as the Birmingham Royal School of Medicine and Surgery. The local medical activity, instrumental in its first formation, led to the creation of a second school in 1851, Sydenham College. The two institutions, having served their purposes for many years, became in 1868 merged into one—Queen's College. In 1873, for the purposes of clinical teaching, the practices of the General and the Queen's Hospitals were amalgamated, and students were required to attend each hospital alternately for six months. This arrangement gave them the opportunity of seeing the practice of the staffs of both hospitals, and enabled them to cull their experience from the widest possible field. During the past year a change had been effected in the medical department of Queen's College. An arrangement had been made for its students to receive the strictly scientific part of their education at Mason's College. He went on to say that, to those who had been instrumental in the formation and re-formation of the Birmingham Medical School, this town and district were under a deep debt of gratitude. It was an unquestionable fact that a medical school increased the skill of the practitioners of the district, and developed medical knowledge as regards the prevention and treatment of disease. It had been urged against provincial medical schools that they were unable to offer their students advantages equal to those of the metropolitan schools, and, therefore, decoyed students from the best education but Birmingham, he thought, need not shrink from comparing its school, as at present constituted, with any in the United Kingdom. There was one disadvantage under which its students who purposed taking the degree of Doctor of Medicine still laboured. He had to go elsewhere to pass his examinations, and was even obliged, in some cases at any rate, to complete a period of residence and a course of study at another medical school before he was allowed to present himself for examination. This was why the local medical profession was directly interested in the establishment of an university in the town. Already there were in Birmingham a number of institutions devoted to higher education, each with its staff of professors engaged in teaching literature, languages, mathematics, natural science, fine arts, theology and engineering. Surely these institutions might in some way be affiliated, so as to make the possibility of an university in Birmingham no mere dream. He then proceeded to speak on education, especially in reference to the medical calling. He thought the time was coming when the teaching of natural science would take the place of that of the dead languages in the education of those who were not going to make literature their business in life. In the middle and upper class schools, the boy's mind was already so taxed as to admit of no further strain. The direction of any change in his education must rather be towards altering the subjects taught, than in adding to his school hours. He considered that, as regards the training of the mind to such habits as those of rapid thought, quick observation, free attention, sound reasoning, the teaching of natural science would surpass that of the dead languages, and that the other requisite mental training might be acquired by the study of modern literature, with the help of a knowledge of modern languages. He maintained that by the use of the dead languages as the chief means of training the mind of the young, an amount of time and brain power was expended,

which would be of the greatest possible value if applied to the study of subjects more directly connected with future careers. The early teaching of natural science would not only prepare the mind for a more complete study of its various branches, but would create a desire for advanced scientific knowledge, and for the prosecution of scientific research. He thought that, on the grounds of political economy, natural science should not be restricted to the few, but should be widely taught in public schools. He quoted Professor Huxley, "I weigh my words when I say that if the nation could purchase a potential Watt, or Davy, or Faraday at the cost of £100 000 down, he would be dirt cheap at the money; and remarked that the more labourers there were in the field of science, the greater would be the probability of getting a potential Watt, Davy, or Faraday. He went on to say that when a student entered a medical school, he ought to have acquired a sufficient knowledge of such sciences as physics, chemistry, and biology (not including human anatomy and physiology); that the time usually spent in the medical curriculum was sufficient only for the more strictly medical studies; that under the present system sufficient time was not spent by the generality of students in the wards of the hospitals. In speaking of the modern method of clinical research, he pointed out the value of certain medical appliances. The stethoscope had thrown a flood of light on diseases of the chest; by the aid of the microscope some diseases could only be detected; the laryngoscope had brought into view regions which the unaided eye could not reach; the ophthalmoscope revealed diseases of the brain and other organs, as well as those of the eye; the sphygmograph recorded those finer features of the pulse which the finger failed to detect, and thus supplemented the less accurate sense of touch by the more precise indications which the eye could read. The importance of the clinical thermometer was no longer disputed, there was no trickery about mercury; the temperature could not be feigned or falsified, the thermometer signalled alarm or allayed fear; it often declared the nature of diseases and directed therapeutic efforts. He said that the introduction of these instruments of precision, while facilitating correct diagnosis, had considerably augmented the labour of the student, and had made it imperative that he should devote more time to clinical work than formerly. But, he continued, the student had other objects in view in the wards than fitting on the medical armour for diagnosis—he had to learn the treatment of disease, and here he would find the greatest gap in the science of medicine which had to be bridged over by art. No amount of talent, no bookwork, no systematic lectures could take the place of bedside study in learning the art of treatment. The student must watch the experienced artist at the bedside. Turning to the students, he said they were on the threshold of a noble profession; other callings ministered to the wants of man, when in the enjoyment of that greatest of all blessings, health; there came, however, a time, when all that he possessed, all that he enjoyed, his ambition, his hopes, his plans were all under a cloud, that was the hour of sickness; it was then that they would be called upon to perform the noblest actions which could fall to the lot of man: to combat disease in all its hideous forms, to ease the pain-racked frame, to succour the dying, to console the survivors, were only some of the sacred duties they would have to fulfil. It was a profession which necessitated much self-sacrifice, and even risk to life—the battlefield, the hospitals, the crowded alleys of towns—all in their different ways echoed that truth; they would have to work day and night, paid and unpaid, with appreciation and without it. It was a benevolent profession; to it many of the "medical charities" owed their origin; nor was it unkind of its own; the medical benevolent societies might prevent any medical man, his wife or children, from being destitute. The profession, though rarely leading to the accumulation of fortunes, assured a comfortable competency to all its members; the demand and supply of medical assistance was so evenly maintained, that none need be idle.

He advised the students to work regularly and methodically, so that they might not have to resort to the "cramming" system. They should be advised by their seniors as to their working capacity; they ought not to overwork, squeezing two days' work into one; the midnight oil had put many a prizeman into a premature grave. He urged upon them the importance of practising putting their thoughts on paper, and of cultivating the memory by learning by heart and reciting. He begged them not to let a mere diploma be the goal of their medical curriculum; but that their grand object should be to fit themselves for the grave responsibilities of practice.

THE MEDICAL FACULTY OF UNIVERSITY COLLEGE, LIVERPOOL.

THE introductory address at the opening of the first session of this College was delivered by Mr. MATTHEW ARNOLD, on September 30th, at St. George's Hall, Liverpool.

Mr. Arnold commenced by observing that, instead of the "eminent man of science" who was to have addressed them, they found one who had been described as a nearly worn-out man of letters, with one nostrum for practical application—public schools for the middle classes; and one phrase about "sweetness and light", which had now quite lost the charm of novelty. In several points, that description did not lack truth; but to the one practical suggestion which for years he had been reiterating, that of public schools for the middle classes, he still adhered; and he wished he saw some prospect that, in the term of life which might yet remain to him, that suggestion might become unnecessary and impertinent. What had been the burden of his song hitherto would, probably, remain the burden to the end. He assumed it was because he had talked so much of middle-class education, that their Principal had asked him to deliver that address. As to Liverpool, their elementary schools had a reputation so high, that they might be well ashamed if their provision for secondary or intermediate education was not better than in most of the towns of the country. They had schools of high standing, and considerable enough to come within the influence of public opinion, and they gave very sound guarantees for their efficiency. He did not know that the provision was adequate to their needs; if so, their advantage was still more complete. He would be very glad, however, to see in regard to middle-class schools a similar inquiry and comparison of the needs of the country as had already taken place in regard to elementary education. After the secondary, they came to the high schools with university studies. Until lately, the only direct provision in Liverpool for university studies was the Queen's College, in connection with the Liverpool Institute. For twenty-seven years the college had been at work, but it had now, in fact, been given up, the Council of the College announcing, in their last report, that in no instance had a college like the Queen's College had any material success, except when supported by endowments, so as to render the teachers practically independent of the fees. But, in place of the Queen's College, they had founded the University College, with the view of enabling students to qualify for degrees of arts and science at the universities; and at the same time affording such technical instruction as might be of immediate service in professional and scientific life. Only four years ago, a town's meeting was held to consider the desirability of establishing the college, and already it was at work with a splendid endowment which now exceeded £100,000, and a Corporation grant of land and buildings valued at £30,000; an important medical faculty had been formed in connection with it. They had commenced college work with over 500 students. He had been reproached for always harping on the need of public schools for the middle classes; but he contended that he had proved his case. By public schools, he had been understood to mean State founded, State paid, and State regulated schools only; and he submitted that the State might make some such provision as was now made in Germany. He admitted, however, that the difficulties were much greater than in the case of high schools and universities, which were fewer in number, more imposing, and had much more in them to encourage and gratify the pride of founders. All this should be considered before people denied the expediency of resorting to State aid for middle-class schools. But a man must be a fanatic in his belief in State interference, if he believed that a school could not be a public school unless the State made and maintained it. Any school which was open to the wholesome influence of public opinion, accompanied by proper guarantees, was essentially a public school. The Liverpool College was an instance of this. Returning to the subject of the University College, he said he might have doubted whether the age of endowments had not passed away: for had it not been for that splendid subscription list of theirs, the idea that any institution could draw from private munificence resources equal to those of a State grant never would have entered his head. The Municipal grant also showed more clearly than a State grant, that a local want was being met. The probability was that, if they had got from the State their University College, they would have got something less good and less useful than they now had. He proceeded to warn them against attempting a repetition of the London University, which in his opinion might be described as an "untoward" University, reflecting especially on the low standard of its classical requirements. The matriculation examination was certainly not a good one. The Oxford and Cambridge Local Examinations corresponded in character to the examination in question, with this important difference, that they were not matriculation examinations. He hoped that this college and the new Northern University would keep up the standard of teaching, both in the secondary schools and in their own colleges, by making the passage examination from school to university an adequate one in letters as well as in mathematics and natural science. He must not forget that this meeting was in reality in connection with the Medical Faculty of the University College. To some

causes" to bear upon the practice of Medicine, and, thus, of having diverted the human mind from observation and experiment. A well arranged order of facts, based upon observation and experience, was what was needed at this time, and that is why we are grateful to Hippocrates for what he did for Medicine. He was a simple observer, and an accurate recorder of facts. Amongst his pupils, however, dissensions arose. Methods and theories were thus attributed to Hippocrates which were never his. Theory after theory kept adding to the confusion, reconciliation of system with system became impossible, and, in the end, schools of medicine sprung up elsewhere, schools which based their teaching on the facts derived from a study of practical anatomy. The human body had not as yet been dissected, so that, however great might be the thoughts, and ingenious the theories, as applied to Medicine, that science must have been very imperfect, seeing that Hippocrates and his pupils were utterly ignorant of the groundwork—*anatomy and physiology*. The art of dissection, and the facts recorded by Galen, gave a great impulse to the study of Medicine. At this time, however, Alexander the Great was at the height of his glory.....Having given birth to the city that bears his name, Alexander was not destined to finish his project." Dr. Oliver then spoke of the establishment of Alexandria as a great intellectual centre, by the efforts of Ptolemy and his successors. "This was the epoch during which the medical schools of Alexandria sprung into existence, and soon they eclipsed those of Cos and Pergamos. Like Goethe, these old Alexandrians called for 'light, more light'; they felt the weight of the shadow of ignorance, and they saw that if the secrets of life and death would be known, it could only be by honest thought. In the details of the study of practical anatomy, these men were well versed, and, for a time, all went well. As Alexandria acquired intellectual renown, so, in like degree, prospered the science and practice of medicine; but an evil day came. As in the earlier days of Greece, the people were not content to live in obedience to law, so in Alexandria, when it reached the height of fame, its statesmen and its scholars no longer observed and studied facts for themselves. It was not simply that the Alexandrians were lazy, and indifferent as to the part they ought to play in the affairs of the nation; they scorned the teaching of the past, and wasted their hours in idle discussion. With these men, there was plenty of thought, but they turned it not to good account. Respecting neither the traditions of the past, nor transforming into the actions of their daily lives part of that thought so freely used in argument, they simply wiled away their time. They did not see that thought, to be useful, must be the basis of action; and, in this way, they kept spreading among themselves the seeds of degeneracy. The art of dissection fell into disuse, research was no longer stimulated, and science ceased to advance. It is true that Galen, by his writings on anatomy, has shed a lustre on the Alexandrian epoch. Much of his teaching, and much of the teaching of the schools, was carried back again to Greece. Meanwhile, Alexandria was rapidly falling into decay. Rome, now in the ascendant, was travelling eastward. Julius Cæsar burnt the great library we have described; and, for awhile, the ruin of a marvellous city was all but complete." After the fall of Greek and Roman civilisation, the influence of Mahomet's new creed "united into one form of government and thought, tribes that hitherto had been divided, and rivals. In this way arose a powerful and enthusiastic nation, impelled onwards by an intense love of conquest, and a passion to proselytise. Ere a century had closed in over the teaching of Mahomet, Arabia was undivided as a nation; India, Egypt, and Syria were in the hands of his followers.....Under a system of freedom in education and physical research, the Saracenic empire kept extending in every direction. It was no longer the small piece of land over which the feet of the prophet trod; it included the southern half of Asia, part of Eastern Europe, North Africa, and Spain. Great in territory, it was also great in education, for, in nearly every part of this large empire, colleges existed. In the schools of medicine, good work was done by these Arabians, especially in the departments of *Materia Medica* and *Pathology*. Alexandria no longer occupied the prominent position which had been hers for centuries. The intellectual glories of her earlier days had travelled eastward and westward. To Bagdad, in Persia, and Cordova, in Spain, had her intellect gone; to Damietta, and to Cairo, her commercial greatness and her wealth. Egypt, however, remained the central point of the Moslem power, and against it the Crusaders fought, but, with what result?—only for Moslem and Crusader to recognise in each other the truer attributes of manhood. As the result of these wars, the learning and commerce of the Saracens poured rapidly into Christendom. Alexandria, meanwhile, was declining; but, ere she entered on her decadence, she gave that stimulus to progress which has not yet spent its force in Western Europe."

Dr. Oliver then dwelt on the gradual working of that stimulus in

Christian Europe, aided by the discovery of printing, and innumerable social, political, and economical changes. Whilst Western Europe has reached such an unprecedented stage of civilisation, we can never forget how Greece, Rome, and Saracenic nationalities have fallen. In conclusion, the lecturer spoke as follows on the physiology of national decay, and its relations to medical questions. "We cannot now go into all the points that lead up to national decline. The philosophic Hume says that, no sooner do the arts and sciences reach perfection in any country, than they begin to wane. Admitting this, we may add that, as in the individual, departure from health is, in many cases, arrested; so may it be with national decay. Undoubtedly, the cause of this malady is, that the nation is no longer plying itself with its former vigour—no longer attending to its internal and external adjustments. What is the national but the aggregate of individual life? and how better can we improve the nation than by stirring the hearts of the people to nobler works? This is where the Alexandrians and Greeks of old failed. Both were highly educated. Amongst both, the sciences had reached a high state of development; but, instead of pressing onward, these men, gifted with all the powers of reasoning and subtle argument which their knowledge of philosophy gave them, simply wasted their time in idle discussion. What did all their discussions about life come to, when life itself, with its opportunities, was passing from them? They forgot that life was not some deep problem set them for solution, but a work they had to do; and that living was not thinking to no purpose, but working with a will. Let us profit by their experience, and realise this one fact: that life is for each of us the conscientious performance of those duties to which we are called, and that, if we do these, we not only improve ourselves, but accelerate the progress of our age. To accomplish this, the art of Medicine is not without its influence. While religion raises the heart of man from the finite to the infinite; while education makes him cultured and refined, it is left for Medicine, when rightly employed, to humanise man. In the present day, we see it in the work of the medical missionary. By such men, Medicine is taken to all of every creed and every tongue; giving relief to suffering man and woman; asking for nothing in return but this, the basis of all social religion, that they should go and do likewise—gratitude thus becoming, instead of a mere sentiment of the heart, an energising principle of the life. In this fact I recognise the one great element that will lead up to the unification of mankind; the one influence that will develop and maintain a common brotherhood, emulous to advance the honour, the interests, and the glory of the race."

THE CONTAGIOUS DISEASES ACTS.—Two memorials have recently been addressed to the Lords Commissioners of the Admiralty, from Portsmouth and Plymouth, giving the opinion of several clergymen, magistrates, members of the town councils, medical practitioners, and other residents in those towns as to the working and result of the Contagious Diseases Act. The memorials were forwarded for the information of the Committee of the House of Commons on the subject, and are published in accordance with the proposition of Mr. Warton, in the form of a Parliamentary Paper. The memorial from Portsmouth says:—"We consider that the Acts have been most judiciously and considerably carried out by those to whom their administration has been intrusted, and that no just cause of complaint can be brought against them. We feel assured that the operation of the Acts has been most beneficial in lessening the number of brothels and prostitutes, in improving the appearance and behaviour of the women, and so freeing our town from the sad scenes of evil and disorder with which we were once only too familiar; in checking the progress, as well as mitigating the virulence of disease; and, most especially, in affording the women an opportunity of being reclaimed from their sinful lives. And we deprecate, therefore, even any alteration of the Acts, as tending to diminish these benefits, both to the women themselves, and to the town." That from Plymouth, Devonport, and Stonehouse, says:—"We are decidedly of opinion that, both from a physical and moral point of view, their action has been most beneficial. We believe that, although, if extended, their usefulness would soon be greatly increased and more universally recognised, they have been the means of relieving a great amount of physical suffering, while they have opened the road to reformation to many fallen women who, were it not for the existence of these Acts, would never have had an opportunity of returning to a respectable course of life. We cannot too strongly express our opinion that the repeal of these Acts would be a great misfortune to this district, and to any other community where they exist at present." The Mayors and Recorders of Portsmouth and Plymouth sign, and the other names seem to be those of the most influential inhabitants.

SURGICAL MEMORANDA.

AMPUTATION FOR SENILE GANGRENE.

R. S., able seaman, first came under observation in 1878, when 74 years old, for an attack of senile gangrene affecting the right foot. Spontaneous amputation up to the third joint of the phalanges took place, occupying about eight months in the process, during which period he required a stimulating and nourishing diet. The stump healed slowly and entirely, and he was able to do his work again, which was fishing for eels.

In February 1880, symptoms of gangrene showed themselves in the left foot, which speedily swelled up, and began to putrefy. I feared that this attack would prove fatal, and, after careful consideration, determined to attempt amputation above the line of disease (although I was aware that it was not according to the directions given in our textbooks), as I thought there would not be more risk from an operation than from allowing the process of spontaneous separation to go on for many weeks, perhaps months. A line of demarcation was pretty well defined in March, and about the middle of that month, with the help of my partner and assistant, I removed the foot about six inches above the ankle-joint. The patient took chloroform well, and the only matter of note that occurred during the operation was the fact that the anterior tibial artery turned the edge of the knife. The hæmorrhage was not excessive, and all the ligatures (silk) held well. The stump was dressed, first with terebene-oil, and afterwards, when that appeared to be too stimulating, with carbolic acid. Opium was given as freely as was prudent. The stump had healed entirely in six weeks.

On July 25th, 1882, I saw this patient once more. He said he felt better than he had felt for years, and able to follow his employment with ease. He had a wooden leg, and, with the help of two sticks, walked about easily.

Right leg: An ulcer was present over the middle of the remaining row of phalanges, and he said he felt pain there, and up the leg; otherwise the foot looked healthy.

Left: The stump was still sound, but, just at the extremity, a piece of skin had been knocked off about three months since. This had left an ulcer about the size of a sixpence, but it was healing fast. He expressed a wish that a bit had been chopped off his right leg when the other was done, as he had suffered so little with the leg that was amputated.

In conclusion, I may say that I should not have attempted amputation in this case had I not been ably assisted, and also been able to count upon the capital constitution possessed by my patient. Another factor in the patient's favour was that he lived in a village in which he was able to get plenty of fresh air and no germs.

EDWARD EAST, M.R.C.S., London.

FOREIGN BODIES IN THE AIR PASSAGES.

It has always been to me a matter of surprise that the darts used in playing at "puff and dart," are not more frequently drawn by a sudden inspiration into the air passages. Among the many curious objects which Professor Schrotter of Vienna shows to his *clinique*, there are many pins, but few needles, which have been extracted by him from the air passages and throat. I have usually found in such cases that the pins stick in the pharynx or upper part of the œsophagus, and are readily removed by means of Schrotter's "Griffe." I removed on one occasion a dart, armed with a piece of fluff, which had been drawn into the throat in inspiration, but had been arrested by its point sticking in the mucous membrane external to the right vocal cord, exciting great irritation, and readily removed by the "Griffe." I recollect my friend, Dr Henry Simpson of Manchester, describing to me a similar case, in which the needle dart passed through the rima glottidis, and all efforts to remove it through glottis by means of forceps having failed, Mr. Land performed laryngotomy, and I pushed it into the mouth. It has occurred to me that a wound, whose extremity was a magnet, might be useful in such cases. Dr. Benthall's interesting case strengthens my conviction of the danger of the practice of playing at "puff and dart," and he is to be congratulated on its successful issue.

EDWARD DRUMMOND, M.D., Rome.

THERAPEUTIC MEMORANDA

ON THE TREATMENT OF CHRONIC RINGWORM.

ON many occasions, I have advocated the use of oleate of mercury for the treatment of chronic ringworm; but it does not seem to be gener-

ally known what a very valuable oleaginous preparation we possess in this drug. I constantly see cases of ringworm, which have resisted all forms of treatment for months or even years, yield to a long continued course of oleate of mercury; while, on the other hand, I have never seen a single case cured by any of the numerous remedies which have been proposed for this troublesome complaint (except croton-oil and other irritants), after it has resisted the action of oleate of mercury. The oleate certainly penetrates deeply into the follicles, and this is most essential in the cure of ringworm. The chief drawback to its use is the constant formation of yellow crusts on the diseased patches, and even on the non-infected portions of the scalp. These scabs have to be continually picked and scaled off; and, though they often bring away many diseased stumps with them, yet it is a constant annoyance both to patient and nurse.

Chiefly to obviate this, and also because I think it a more valuable preparation, I have for some months been using oleate of mercury, dissolved in a heavy petroleum oil, instead of in oleic acid; and, from the results I have seen, feel fully justified in recommending this stable and convenient preparation as the most efficacious parasiticide I know of for chronic ringworm; it is made by dissolving ten parts of oleate of mercury in ninety parts of heavy petroleum-oil.* This appears, also, to be less liable to decomposition than the ordinary oleate dissolved in oleic acid. I have, besides, found that this preparation causes much less irritation to the scalp, and that even children under seven years of age can bear the ten per cent. solution well. If the patient be younger than this, it can be diluted, if necessary, with ordinary petroleum or crystal lamp-oil.

There is one point to which I wish to call special attention: viz., that it is useless for us to discuss the value of different remedies for chronic ringworm of the scalp, unless we thoroughly understand what the term "cured" (as applied to ringworm) means. I hold that no case ought to be considered well, as long as a single broken hair or stump can be detected, exhibiting conidia under the microscope. It does not at all follow that any given case is cured because it is certified as being so, for I constantly have children brought to me with chronic ringworm, who have just before been certified as "cured" by medical men of the highest professional standing. Statistics of results, taken from the out-patient rooms of hospitals, are quite useless, as parents will not take their children week after week, when, to their eyes, the disease appears to be cured. Treatment is usually discontinued soon after the new hair commences to grow on the diseased patches, and most medical men then consider the case to be cured, and tell the parents that all will be well if they continue the use of the ointment a little longer. Now, if these supposed cured cases be examined now and then, for one to three months, they will generally be found to relapse. Often, numerous diseased stumps will be seen scattered among the long hairs, and the case may spread again, or, more likely, lapse into the chronic scaly variety, with isolated stumps—generally unknown and uncared for. The patches usually remain scurfy, and the parents are often deluded with the idea that the case is now one of scurf, psoriasis, or of chronic eczema, instead of an inveterate and contagious form of ringworm. Space will not allow me to dilate on the troubles that so often follow in schools and families, from medical men overlooking the existence of chronic ringworm, and calling it eczema or scurf.

For example: Forty children were lately elected by votes to be educated at an institution near London. Notice was then given to each parent that the child would not be admitted unless free from ringworm, or other contagious disease, a medical certificate to this effect being also required. Yet, on examining these forty children, to see if they were free, I found three well marked and easily recognisable cases of chronic ringworm. It seemed to me remarkable that certificates could be obtained to say that such children were free, and fit to mix with others.

Again, a few days ago, I had a boy brought to me who had been under medical treatment for three years, by more than one medical man, for supposed eczema of the scalp; and yet there were over a hundred stumps to be detected in groups, and on scurfy places, mixed with the long hairs.

I trust soon to give the results of the treatment of one of the largest outbreaks of ringworm of the scalp ever recorded, viz., 84 cases out of a total of 92 boys and girls in one school.

In conclusion, let me again advise a trial of this hydrag. oleat. cum petroleo (Cortin), for extensive chronic ringworm. For details of the oleate treatment, I must refer to my paper on the subject in the *Lancet* of January 24th, 1880.

ALDER SMITH, M.B. Lond., F.R.C.S., Christ's Hospital, F.C.

* The oleate of mercury (Cortin) is prepared by mixing 10 parts of

REPORTS

OF
HOSPITAL AND SURGICAL PRACTICE IN THE
HOSPITALS AND ASYLUMS OF GREAT
BRITAIN AND IRELAND.

UNIVERSITY COLLEGE HOSPITAL.

HERPES OF THE TONGUE PROBABLY ARISING FROM IRRITATION
OF THE CHORDA TYMPANI NERVE BY AN AURAL POLYPUS.

(Under the care of Mr. BERKELEY HILL.)

F. B., a healthy labourer, aged 30, was admitted November 29th, 1881. He said that the present illness began two days before, being the first of the kind he had had. He knew no cause for it, and believed himself to have been quite well till then.

There was great swelling of the tongue and floor of the mouth, mainly in the right side, and extending backwards to the root of the tongue. The surface of the mucous membrane was quite healthy, and the parts below the jaw were not at all swollen. Swallowing was almost impossible, but there was little pain beyond a sense of heat and a feeling of fullness or tightness about the tongue and throat. Occasionally there was some slight dyspnoea: temperature 99° Fahr.

The patient was kept in bed, purged, and carefully watched, lest laryngotomy might become necessary. On the 30th, the swelling had greatly increased; the tongue was pushed up to the roof of the mouth by the oedema of the right side in the floor. Speech was no longer intelligible, and swallowing impossible: respiration not obstructed; temperature 101° Fahr. Attempts to examine the throat were so painful that the patient was etherised, and a careful examination made. The swelling was found to be limited to the anterior part of the mouth and tongue. The fauces were not themselves oedematous or inflamed, though closed by the swollen tongue being pushed back against them. The cheeks and soft parts below the jaw were not brawny nor enlarged beyond slight fullness. There were no enlarged lymphatic glands, and breathing through the nose was not impeded. In the forenoon of December 1st, a group of vesicles appeared on the right side of the tongue and floor of the mouth, and the patient made signs that he was somewhat less distressed. Towards evening he managed to swallow beef-tea by spoonfuls. During the night the swelling rapidly diminished, and by December 3rd was almost gone. On December 4th, a purulent discharge was observed to escape from the right ear. This was wiped away, and a pedunculated polypus was found growing from the side of the meatus, and lying against the membrana tympani. The growth was removed with a snare, and the meatus washed with dilute zinc lotion. The patient now recollected that a few weeks before he had had ear-ache occasionally. On December 5th, the mouth was perfectly well, and after a few applications of nitrate of silver to the stump of the polypus, that healed soundly.

The interest of this case lay in the apparently alarming condition of the patient, and in the facility with which the swelling might be mistaken for dangerous inflammation from stings, caustic poisons, other forms of glossitis, or even, at first sight, for suppurative inflammation of the deeper layers of cellular tissue below the jaw, of which the two following cases are examples. This affection is exceedingly rare; it is said that similar cases have been recorded by German aurists.

TWO CASES OF INFLAMMATION OF THE DEEP CELLULAR TISSUE OF
THE NECK (ANGINA LUDOVICI).

(Under the care of Mr. BERKELEY HILL.)

CASE 1.—E. C., coachman, aged 30, was admitted on November 2nd, 1881. On October 29th, swelling began on the left side of the head and neck, which on the second day became painful. Before this, he had had good health, and had felt no soreness in the throat, or toothache. He had not had syphilis.

On admission, there was considerable swelling behind the left angle of the lower jaw. The skin there was dark red, shining, swollen, and tense. Around this area, the skin was bright red as far as the middle line, and tender over the whole side of the neck. The parts below the angle of the jaw were brawny; no enlarged lymphatic gland could be felt in any part; just behind the angle of the jaw, the swelling was elastic, but not quite fluctuating. The second left lower molar was carious and loose, but gave no pain. The jaw was neither thickened nor tender. The left tonsil was slightly swollen, and projected inwards by a swelling outside it, which could be moved by pressure applied to the neck. There was no ulceration or even inflammation of the throat beyond this. The temperature was 102.6° Fahr., but there had been no rigor. The tongue

was coated; appetite good; thirst moderate; swallowing not difficult. The urine was acid, with traces of albumen. Extract of belladonna with glycerine was freely applied to the inflamed surface, with hot fomentations, frequently changed.

On November 3rd, the house-surgeon made an incision, about an inch and a half long and about an inch deep, in the elastic part of the swelling behind the sterno-mastoid; no pus was let out. On the 4th, the pyrexia was unabated; and the swelling, much increased, had become indistinctly fluctuating below the jaw and in front of the sterno-mastoid muscle. Ether having been given, an incision was made half an inch below the jaw, and as much in front of the angle. The skin being divided, the cellular tissue was broken down with a probe, and then pus escaped freely from a cavity extending behind the sterno-mastoid, and also downwards beneath that muscle as low as the middle of the neck. At the lowest point of this abscess, a counter-opening was made for drainage, and the wounds dressed with carbolic gauze. From this time forward, the patient steadily improved. Pain quickly ceased; the redness and swelling gradually disappeared; and the temperature, falling at once to 100° or 101° Fahr., reached the normal range by November 11th. On the 12th, the drainage-tubes were no longer needed; and on November 17th the patient took his discharge, his wounds nearly healed.

CASE II.—A. S., aged 19, was admitted on August 9th, 1880. He said that, about three weeks before, his neck had felt stiff, but it was not painful till August 3rd. He had had no injury to his neck, nor sore throat. His general health had been good for several years.

On admission, there was a swelling with tense red skin extending from the posterior border of the left sterno-mastoid muscle forwards to the angle of the jaw, upwards to the mastoid process, and downwards to the lower border of the thyroid cartilage. In front, the swelling was firm; but at the hinder edge of the sterno-mastoid it was softer and yielding. The throat was normal. Some molars were decayed, but there was no thickening or sign of irritation of the jaw. The scalp was likewise free of irritation. A grooved needle was inserted into the soft part of the swelling, but only blood and serum escaped. Warm fomentations with belladonna were continuously applied. In forty-eight hours, the swelling diminished, pain ceased, and the movement of the jaw got free. On August 15th, the patient left, with hardly any swelling of the neck still remaining. He was seen once since his discharge, in good health. No abscess formed in this case.

These cases are examples of a not very common form of inflammation of the cellular fasciæ of the neck which has been specially described by Ludwig, and hence called "angina Ludovici." It appears to begin in the cellular planes near the wall of the gullet or the tonsil; probably secondary to irritation of the crypts of the tonsil or pharyngeal membrane. In the two cases just recorded, very little evidence was collected to indicate such origin, but in a somewhat similar case of deep cervical abscess, recently in hospital, the patient, a girl, was said to have had diphtheria six weeks before the neck began to swell, and she was supposed to have quite recovered from the faucial affection before symptoms of mischief in the neck appeared. From the usual mode of origin of abscess in the cellular tissue, it is probable that this deep form of cervical abscess arises from irritation of a neighbouring part.

The diagnosis from ordinary lymphatic abscess of the neck depends mainly on the general ill-defined swelling of the side of the neck, the absence of enlarged lymphatic glands, and, when fluctuation is detected, by its being not near the lymphatic glands, but pointing some way in front of the angle of the jaw, and often considerably lower than the lower border of that bone. In treatment, the necessity for speedy liberation of the pus, and the locality selected for pointing by the abscess must be borne in mind, in order that it may be found as soon as possible. The case is instructive by showing that abscess is not an invariable termination of the affection.

LONDON TEMPERANCE HOSPITAL.

A CASE OF RENAL ABNORMALITY.

[Reported by J. A. MCWILLIAM, M.B., C.M., House Surgeon.]

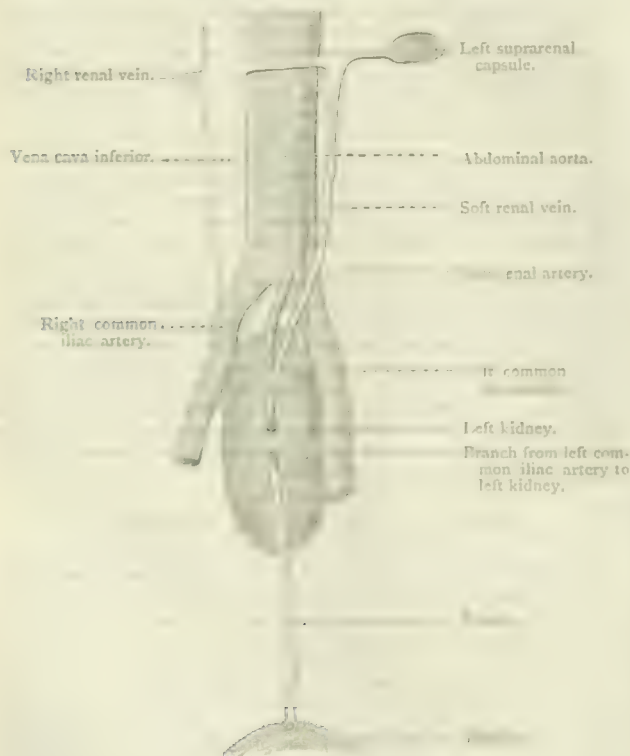
At a *post mortem* examination recently made by me (with the assistance of Mr. G. B. Gorrick) at the London Temperance Hospital, there was found to be a marked abnormality in the situation and arrangement of the left kidney and the structures connected with it. The organ was absent from its usual position in the lumbar region. After a short search, it was discovered, lying imbedded in its usual cushion of adipose tissue, at the brim of the true pelvis. About half the kidney was below the level of the promontory of the sacrum. It was placed in close apposition to the inner border of the psoas magnus muscle, whilst it rested posteriorly on the left common iliac artery,

and on the intervening space between the two common iliacs, its right border being in contact with the right common iliac artery. In front of the kidney lay the rectum; the upper end of the gland was one inch below the bifurcation of the abdominal aorta (which divided at the level of the umbilicus). The organ lay very firmly imbedded, and was placed with its hilum directly in front; it was not of the characteristic uniform outline, but was egg-shaped. It was of average size and weight. The ureter, emerging at the hilum, passed down the front of the gland to the bladder, which it reached after a course of four inches and a half.

The vascular arrangements were also peculiar. The left renal artery arose on the left side of the anterior aspect of the abdominal aorta, three inches below the origin of the right renal artery, and one inch above the origin of the common iliacs. It ran directly downwards towards the kidney, and, at the distance of one inch from the upper end of the organ, divided into two larger branches, one of which passed down the front of the kidney into the hilum, while the other entered the upper part of the gland. Besides these branches, a large vessel (about the size of a small goose-quill) sprang from the left common iliac artery, two inches and three-quarters below its commencement, and one inch above its bifurcation; it ran into the outer aspect of the kidney, a little below its middle. The left common iliac artery was of remarkable length, three inches and three-quarters; the right common iliac artery was also long—three inches.

The renal vein, emerging from the hilum and passing up the anterior aspect of the organ in front of the renal artery, extended upwards for a distance of six inches, parallel with the abdominal aorta, and to the left side of that vessel. Then, receiving a small vein from the left suprarenal capsule (which lay in the lumbar region), it turned transversely across in front of the aorta, after a further course of two inches, and entered the vena cava inferior at a point rather higher up than the entrance of the right renal vein. The left suprarenal capsule was, in this case, placed widely apart from the kidney, with which it is usually so closely associated.

The clinical importance of such an abnormality as has now been described need not here be commented upon. Its significance, with regard to renal colic, nephritic abscess, etc., is sufficiently obvious. Moreover, such an anatomical arrangement would probably influence, in no small degree, the liability of the organ and its vessels to pressure in various conditions of the abdominal and pelvic viscera.



REPORTS OF SOCIETIES.

NORTH OF IRELAND BRANCH.

ORDINARY MEETING, THURSDAY, SEPTEMBER 7TH.

J. MOORE, M.D., President, in the Chair.

The Treatment of Scrofulous Glands of the Neck by Excision.—Mr. FAGAN (Belfast) read a paper on the above subject. After having briefly described the anatomical arrangement of the principal chains of lymphatic glands in the cervical region, he related the histories of four cases out of ten operated on by him. In seven of the ten there was union by first intention. In one case, the swelling, about the size of a pigeon's egg, was placed on a level with the thyroid cartilage, and in the line of the sterno-mastoid muscle. It felt as if it were immediately under the skin, but proved to be very deeply seated, lying close to the carotid sheath. The fibres of the muscle had to be separated, and two layers of the deep cervical fascia divided, before the gland was fully exposed. By careful dissection, it was then removed, very little hæmorrhage following the incisions. The wound was quite healed on the third day, and the child, a girl eleven years of age, was able to go home on the eighth day after the operation.

In another case, Mr. Fagan removed a gland, the size of a small hen's egg, from below the angle of the lower jaw. The patient was a young man, twenty years of age. On the second day after operation, he had a rigor, and diffuse inflammation about the wound, which was united by the first intention. All the sutures were removed, and the uniting medium was broken down by a probe at its most dependent part, to admit a small drainage-tube. After a few days, the inflammation subsided, the wound remaining soundly united. There was a little serous oozing for a few days, but no suppuration. The case progressed most satisfactorily. Mr. Fagan's experience did not lead him to recommend drainage, for in nearly all his cases there was union by first intention; but he strongly urged the relief of tension by removing all sutures and opening up the most dependent angle of the wound on the first appearance of inflammation.

For adjusting the lips of the wound, Mr. Fagan recommended the finest silver-wire sutures, not passed too deeply, and immediately removed on the appearance of the slightest inflammatory blush at their points of exit. In no case should they be left in longer than the third day. The marks that followed from the suppurating track of a suture proved far more disfiguring than the scar from the incision. Rest is a most important factor in the treatment, and it was only by a special contrivance that it could be effectively maintained, especially in the case of children. Mr. Fagan employed a close fitting nightcap, with tapes attached at either side. The patient's head being bent forwards, it can be maintained in that position by fastening the tapes to a binder passed round the chest.

After reviewing some of the recent theories on the etiology and pathology of scrofulous glands, and considering that stage in the affection where drugs should play only a secondary part to pure surgical treatment, Mr. Fagan concluded by saying: "While admitting the value of such surgical means of treatment as Volkmann's spoon, the thermo-cautery, and other appropriate cauteries and caustics, I hold strongly to the opinion that, when disease is limited within a well defined area, and the tissue involved is steadily, however slowly, deteriorating, that its total extirpation is the only rational and effectual mode of dealing with it. This principle, I maintain, is applicable in all cases, no matter what the structure implicated may be, provided anatomical considerations allow of such operative interference."

Notes on Eye-Diseases.—Dr. McKEOWN read a paper on the treatment of some deep-seated diseases of the eye by subcutaneous injections of pilocarpine. He dealt particularly with cases of double optic neuritis, with symptoms of meningitis at the base of the brain. Under the pilocarpine treatment, the head-symptoms rapidly disappeared, and vision improved. In one case of optic neuritis, probably caused by cold, the disc of the right eye was so altered by exudation, that only a single vein could be seen on it, whilst the retina was covered with extravasations of blood and exudations. The left fundus showed similar alterations, save that the veins could be traced on the disc. The whole fundus of each eye became almost normal, the principal change being some diminution of the calibre of the arteries. The vision, which had been reduced to about one-eighth of the normal, improved to two-thirds. Dr. McKeown recommended strongly the use of pilocarpine in the treatment of optic neuritis, and expressed his opinion that it should be used in all cases of optic neuritis, and in all cases of meningitis at the base of the brain, and in all cases of exudation at the base of the brain. He also recommended the use of pilocarpine in the treatment of the retina, and in the treatment of the optic nerve. This was probably

owing to the ages of the patients; for, on looking over all the cases under his treatment, he observed that only the young were greatly benefited, whilst older patients derived no material advantages. He had referred to the paper published by Dr. Dianoux in the *Journal d'Ophthalmologie*, and found that the cases recorded there supported his view. Of the seven patients of Dr. Dianoux, six, who were much improved, were young; and the remaining one, who was practically no better, was old. In one case of atrophy of the optic nerve, which had been treated in Australia and elsewhere, according to the approved method, without benefit, pilocarpine had led to great improvement of vision. When the treatment was commenced, the patient could not go about alone; but, after two months of treatment, he could move about quite well, and even read large type. Although the condition of the disc gave no indications of a preceding neuritis, yet that complication might have existed in some parts of the nervous track. Indeed, the improvement under pilocarpine rather favoured the view of the presence of some localised congestion or exudation interfering with the function of the nerves. The author had not found it at all useful in some affections of syphilitic origin. It is always best in such cases to resort to active anti-syphilitic treatment, using pilocarpine, perhaps, at times as an adjunct.

Puerperal Tetanus: Recovery.—Professor DILL (Belfast) read notes of a case of puerperal tetanus lately under his treatment. The patient was a healthy, active woman, aged 38, the mother of six children. She had an abortion at the third month of pregnancy, accompanied by profuse hæmorrhage, which continued for two or three days in spite of treatment. No ovum was discovered, though the os uteri became open; but he believed it passed away undetected among the clots. On the sixth day she was removed to her country-house, two miles out of town. She did well there until the eleventh day, when she got sore-throat, associated with a sense of suffocation. On the thirteenth day stiffness of the masseter muscles and the muscles of the neck occurred, with acute shooting pains in the articulations of the lower jaw. On the fourteenth day there was complete locked-jaw, and extension of tetanic spasms to the dorsal muscles, so that she was occasionally thrown into well marked fits of opisthotonos. Deglutition was also interfered with, and for a fortnight after this date her mind was affected. She continued in this condition until the forty-fourth day of her illness, when symptoms of improvement began to appear, but convalescence was not fully established until the seventy-second day. Some stiffness in opening the mouth, with rigidity of the muscles of the neck, however, remained for three months. The pulse during her illness ranged between 100 and 140; the temperature 100° to 104.8°.

The treatment embraced purgatives at the beginning, and weak antiseptic injections; quiet of mind and body, appropriate nourishment, sedatives and antispasmodics. Of the latter, chloroform and opium appeared to be the best. He would rely most on perfect nursing and isolation of the patient from everything calculated to disturb or excite. He regards the due fulfilment of these conditions the *sine qua non* of the successful treatment of such cases. In the causation of the disease, three factors may have operated either independently or collectively. First, hæmorrhage with consequent weakness; second, the plugging adopted to restrain it, and third, the state of the uterus after labour, which has been compared to an open sore. He believes that future research will show that puerperal tetanus is due to a poison in the blood, and in this respect it will bear a similarity to puerperal convulsions or eclampsia.

Removal of the Upper Jaw.—Dr. PALMER (Armagh) read notes of a case of this operation, and showed photograph of the patient before and after the operation.

Popliteal Aneurysm.—Sir WILLIAM MILLAR (Derry) read notes of a case of popliteal aneurysm in which he was obliged to tie the femoral artery. A considerable time after the operation, hæmorrhage occurred, and a tourniquet was applied higher up on the vessel, and worn for a long time, until a cure took place. The patient, however, left the infirmary with a contracted knee-joint.

Dislocation of Hip-joint.—Sir W. MILLAR related a case of dislocation of the hip-joint on the dorsum of the ilium, in which great difficulty was experienced in reduction. Chloroform and the pulleys were used, and after considerable effort, it was found that the head of the femur instead of being reduced had slipped into the obturator foramen. From this position it was then reduced.

Desquamation in a New-Born Child.—Dr. CARSON (Portrush) read notes of a case of extensive desquamation occurring in an infant almost immediately after birth. The baby was born on July 11th, after a natural labour; the funis was coiled three times around its neck. Desquamation set in on the next day, and has continued more or less up to the present date—first in branny scales, then in large pieces of one or more square inches. All through this process—with the exception of one day, when the temperature registered 102°—the child has

been in perfect health, and has thriven well. The parents are very healthy, and no case of scarlatina has occurred in the neighbourhood for three years. No cause could be assigned for the desquamation.

Abuse of Tobacco.—Dr. BERNARD (Derry) read a paper on the abuse of tobacco, and referred especially to its evil influence during the active growth of the tissues in youth. He believed that overindulgence in tobacco lowered the moral as well as the physical constitution; that excesses of other descriptions are associated with its abuse; that it interferes with the full mental development of the individual, and that it produces in all a feeling of lassitude, and disinclination for work. The difference of opinion among medical men as to the evil effects of tobacco, was attributed to their experience being limited to different qualities of the article, one quality being more injurious than another.

REVIEWS AND NOTICES.

DIET AND REGIMEN. By HORACE DOBELL, M.D. Seventh Edition, Revised and Enlarged. London: H. K. Lewis, 136, Gower Street. THIS is a curious conglomeration of fact and hypothesis, which we venture to say is hardly worthy of a physician of reputation. The subject is one upon which, naturally enough, there is some little vagueness of knowledge, and upon which, therefore, some little latitude of description might be allowed. But we fail to see how such a sketchy and made-up volume as this can achieve much good. It opens with a preface in which the author's places of abode are carefully stated, and then a certain amount of fragmentary information culled from all possible sources, mixed up with original observations. Some of these are decidedly amusing; for instance, "Unless *cautiously* arranged (the italics are our own) afternoon tea is apt to lead to dyspepsia." Why does not the author say straight out what he would seem to wish to say, that the practice is a bad one? Again we read, "Finally, on going to bed, a tumbler of water should be drank to clean the stomach of the *débris* of the last meal. This will promote a refreshing sleep and a clean mouth in the morning!" We go on, and find various dietaries given, some of which seem to be borrowed largely from the advertisements of a well-known dietetic dépôt, and the volume concludes with an appendix containing reprints and papers by the author, letters from the *Times* and *Daily Telegraph*, etc. The cover of this book is a neat one, but we regret to say that when we read upon it that this is a seventh edition, the inside bitterly disappoints us.

NOTES ON BOOKS.

The Tissues and their Structure. By A. S. KENNY, M.R.C.S.E., Senior Demonstrator of Anatomy at King's College, London (David Bogue, 1882.)—In the preface to this little book, we are told by Mr. Kenny that his "object in this work is to provide, for the use of students, a concise description of the structure and functions of the elementary tissues." That such an object is very laudable, and that it would deserve still greater praise if it did not stop short at the elementary tissues, but would embrace also the different organs, is self-evident. After a careful perusal of the work, we are sorry to have to acknowledge that Mr. Kenny has failed even in the limited attempt. The book contains a concise description neither of the structure nor of the functions of the elementary tissues. The descriptions are superficial, the generalisations are in many instances misplaced, and many details are absolutely incorrect. It will require very careful revision before it will fulfil the purpose for which it has been published.

COMMEMORATION OF CHARLES DARWIN IN PISA.—Some time ago, a meeting was held in the Institution of Higher Studies in Pisa, in honour of the memory of Charles Darwin. It was attended, not only by the professors and students of the institution, but by many of the principal citizens, and a large number of ladies. The office of chairman of the Darwin commemoration committee was discharged by an English gentleman, Dr. E. J. Fairman, a distinguished pupil and graduate in medicine of the University of Pisa. Dr. Fairman, in a few appropriate words, explained the object of the pupils of the Institute in promoting the commemoration; after which, Professor Mantegazza delivered an address on the scientific work of Darwin.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 7th, 1882.

MR. MATTHEW ARNOLD ON MEDICINE.

THE occasion of the opening of the Liverpool University College, last week, and the distribution of prizes to the medical students who had been most successful in the previous session, afforded Mr. Matthew Arnold the opportunity of making some remarks on general and medical education. Mr. Arnold is always interesting. If for nothing else, he would always command an attentive audience for his eminence as a man who has made his mark on the literature of his time. And even more than his literary claims, his eminence as an educationalist for the last quarter of a century entitles him to a respectful and attentive hearing. On the present occasion, Mr. Arnold has spoken specially to a medical audience, or, at least, has given special prominence to medical subjects before a mixed audience; and, for this additional reason, what he says demands our particular attention. In another way, indeed, he still further appeals to the medical public: for we are informed, in the address, that Mr. Arnold at one time had serious thoughts of studying medicine, and of devoting himself to the profession. We should be disposed seriously to regret that he did not carry out this intention, were it not that we fear his labours would have been much missed in the cause of education, and that we do not know anyone who could quite have filled his place. Assuredly, there would have been room for such a man in medicine. Not, perhaps, so much as a scientific observer would he have specially shone; though, in saying this, we are very far from implying that he would have been unscientific. Of scientific observers, however, there never has been any lack in the profession, and, in the generation now coming to a close, less than ever. Rather, therefore, in the work of summing up the labours of other scientific inquirers, and of joining together by the last links of imaginative genius, the various disconnected parts of scientific research, would his peculiar province have been found. Probably, never since the time of Cullen—certainly not since Schleiden and Schwann's elaboration of the cell-theory, and Virchow's adaptation of it to pathology—has such a man arisen in medicine. Had Darwin devoted his magnificent combination of accurate observation and high imaginative power to medical studies, probably medicine would have found her Newton by this time; or, possibly, an Arnold might have filled the place. But, failing the man, there remains to be considered what Mr. Arnold has said about medicine; and next, what stroke of imaginative genius is required to perfect her labours, and enable her to take her place among the positive sciences.

The central idea of the discourse is what the speaker calls lucidity. We scarcely think that the author of the phrase "sweetness and light" has been as happy on the present occasion as formerly in the choice of a term. Had he said reality, we think he would have expressed his meaning more distinctly. It is no doubt true of all professional men who desire to be masters of their art, that they must not rest satisfied with the appearances of things, but must, by all means, strive to know the reality. The theological phrases concerning "the root of the matter," and the philosophical discussions about things in themselves, are striking instances of this. And so the medical man who wishes to

facts. This reality ought to be more easily attained in medicine, since the patient is himself interested in aiding the doctor to discover the truth. As no man is a hero to his valet, so none but a fool would, by sacrificing any part of the truth, attempt to impose upon his medical man. Mr. Arnold has, therefore, shown true insight in holding up lucidity as the goal of medical inquiry. To this end all medical study ought to be directed. The advice of Sir Astley Cooper, to prosecute dissections, not caring for what people may say; of John Hunter, that young medical men should not waste time in speculation, but should patiently pursue their work; of Dr. Hughlings Jackson, on a recent occasion, to obtain *post mortem* wherever practicable, are only different expressions of the same thought. If, as Mr. Arnold defines it, lucidity is "the perception of the want of truth and fitness in things, the perception that they are no longer possible, that their time is finished, that they can serve us no longer," then those medical men who really pursue this object, will be the readiest to perceive the advisability—nay, the necessity—of discarding old methods which have served their day; will be unwilling to sneer at remedial agents because they are new, or to despise theories because they have not been broached before. Similarly, they will be willing to adopt new and scientific terms, whose form expresses their meaning, and to discard old names when they tend to obscure the nature of the diseases which they symbolise. If these suggestions convey to some minds the idea of danger and of revolution, it may be replied that all such fears may be obviated by an honest effort after lucidity before they are adopted. In any case, however, an error in the direction of progress is preferable to stagnation, and, like a hypothesis waiting for verification, is often itself the means of advancement. The one safeguard against error, in the direction either of revolution or of stagnation, is to be found in a logical and philosophical training. If all medical men were possessed of this, as we hope they will be before long, there would be less danger of mistaking appearance for reality, symptoms for pathological changes, or functional derangement for structural alteration. There would also be less danger, on the one hand, of a weak trust in the strength of traditional lines, or, when the camp is struck and the forward march determined on, of being carried away by the glamour of superficially resting on too narrow an induction of facts into an advance which can end only in disorder and disaster.

If, having now considered the words of Mr. Arnold while he is still only a potential student of medicine, we were to proceed to attempt to suggest what he might have said to us had it been our lot to discuss advice of his given as a practitioner of forty years' standing, a much more difficult task would await us. It must, indeed, appear presumptuous, in the absence of the appearance of the master-mind, even to speculate on what he might have said to us, had it been our good fortune to hear him. But there are already some things fixed and determined in medical science; and these, it is certain, he would not have altered. The course, or natural history of human disease, is now well known. True, an amplification remains to be made in the direction of comparative or evolutionary disease, and very likely a master-spirit would have attempted the investigation of this domain before addressing his fellow-workers. But, inasmuch as human is only a special form of general organisation, it is almost certain that any mode of action, found to be fundamental and invariable in human phenomena, will also be found to obtain in comparative pathology. Physiology has already advanced far enough to have established this truth so far as her domain is concerned. In the investigation of disease, it has been gradually realised that, if it is not sent by fate, neither does it depend, as a rule, on mysterious and obscure causes; but that, on the contrary, the most powerful causes of disease are just those agents which, because they are so universal, act on the organism continually, the air, the food, the temperature, the work, the worry—in short, the general conditions under which life is lived. A point on which such a mind would have insisted would probably have been this, that causes acting continuously do not manifest their effects by continuous results, but that the effects of long-continued causes are shown by the induction in the organism

of a series of leaps and bounds. Health itself is not a continuous progression, but a series of variations, the only difference between health and the beginnings of disease being that, in the former, the variations are within narrower limits. When disease tends to recovery, the leap towards death is less powerful than the bound towards health, but when it tends to death, the opposite is observed. Probably such a mind would have shown, in the next place, that in the domain of therapeutics, remedies follow the same law of action, and that the leap taken by the economy under the action of a remedy is always followed by the bound of reaction. He might even have suggested, or attempted to prove that, fundamentally, all actions, healthy and diseased, were referable, either actually or analogically, to the ultimate swelling and shrinking which are observed to occur in the cell, or protoplasmic mass. The next step would probably have been to show that certain remedies, by inducing swelling and shrinking, or shrinking and swelling in certain parts, were capable of combating the corresponding actions in the parts induced by what is called disease. A refinement on this step, but one which it would be absolutely necessary to take, would be the determining of the arithmetical ratios between the resistance of different organisms, and the power of remedies to modify their actions. Of this step, but a faint scintillation is observable as yet; but the positive era of medical science would have begun to dawn if some advance had been made towards realising it. A higher advance, however, even than this, and one which may possibly even obviate its necessity, would be attained if, the causes of disease being known, and their powers mathematically stated, efforts were directed to placing the organism in such conditions as would enable it to live to its full term, and so to obviate disease. In this direction, some considerable steps have already been taken, and the sanitary and preventive service of the country is the one from which, beyond all others, much is expected, and which will probably least disappoint expectation. As has been already said, at one of the addresses delivered at the opening of the various medical schools last week, "diseases are sown and reaped, like corn-crops, as the direct result of human conduct", and, therefore, a modification of human conduct, by preventing the sowing of the seed, may entirely obviate or destroy the crop. Fuller powers to sanitary authorities, with proper safeguards to liberty, will probably, therefore, be the therapeutic armamentarium of the future, and from such tools great work may reasonably be expected.

The remarks made by Lord Derby at Liverpool, and which have been heard before from his lordship, on the amount of gratuitous work demanded from doctors, are worthy of serious consideration. Space forbids our dealing with them at length, but in two essential points we must express our thorough concurrence with his remarks. We agree with him, that if it is highly creditable to the medical profession that they are always ready to give gratuitous service to the public, even at the cost of their health and life; it is scarcely so to the public, that such services should be demanded. We also feel with his lordship, that never has the profession failed as a whole to respond to the demands laid upon it, and very rarely does even the individual medical man fail when so required, even when he may feel that the exactions laid on him are unreasonable.

THE STUDENT, IN RELATION TO CONTEMPORARY MEDICAL EDUCATION.

THE large body of students who commence their medical career at the beginning of this month will, in the course of some few years' study, undergo certain tests of proficiency based on regulations which are in a state of transition, and which will, at least, not entirely apply to many of their future junior colleagues. The sceptic in questions of technical education will lay no stress on this fact, since he places no confidence in legislation, and believes that an industrious youth will succeed under all circumstances, that the artificial value set on a weak man by the possession of a diploma gained by judicious supervision and cramming, is a snare to society, and that the sooner a bad student goes to ruin the better.

This kind of scepticism ignores all moral responsibility. We must not act, in policy nor in legislation, on the principles of natural selection, involving the survival of the fittest without any assistance to the weaker, from the older and wiser, against deteriorating influences. To leave the student to shift entirely for himself, is little better than the practice of exposing sickly children, not unknown in barbarous states of society. Weakly children may become strong men, inferior students may develop into sound practitioners. Much talent was wasted under the old system of "walking" London hospitals and hunting over several metropolitan schools, all at that period badly organised, for a good lecturer. The deterioration of youthful enthusiasm, and thirst for knowledge and practical work, is very serious when demonstrators adopt a clumsy or careless method of distribution of subjects in the dissecting room, hampered by a "famine," or by defects in the Anatomy Act. Hundreds of young men, apparently weak, and absolutely idle at the onset, have been made into industrious, active and competent physicians and surgeons, by the energy and good management of teachers in good medical schools. As for "giving rope" to incorrigibly idle or unprincipled students, that implies the ruin of a large number of weaker men through the force of bad example, and hospital authorities are sadly in want of legal power to eject black sheep from their folds. Whilst the sceptic is thus tolerating an evil state of affairs, there are others who place their faith in legislation as though it were a talisman. Such persons hardly believe that any good can come to students until the conjoint scheme becomes law. When it is enforced, they feel almost certain that all the present evils of neglected diligence and uncontrolled idleness, repeated rejections and unjust examinations will pass away for ever, or be completely neutralised, just as some politicians are at present actively engaged in promulgating a doctrine that all poverty and social inequality will be banished by turning the State into a universal landlord, and making rent into income-tax.

The future increase or limitation of legislation are, however, questions that affect the first year's student of 1882 only in the same sense as they concern qualified men. They will be interested in future reforms or alterations in the curricula, but they will be educated under older rules, patched up, it is true, by certain important amendments, some less than a twelvemonth old. There is now a peculiarly good chance for the medical legislator to study the practical working of medical education under its present aspects, and storing all information, to make invaluable comparisons between medical teaching ten years hence, and that now to be obtained in these isles.

Three types of the first year's student may be distinguished, if we classify on a purely educational basis. The first kind is the student who has served a legalised apprenticeship or who knows something of dispensing and prescribing through less official means. This type, once so common, is undergoing extinction. The second variety is the student from a resident university. The third is the commonest form of student at the present day, the youth almost fresh from school, who begins his technical education at his hospital.

Not without grave deliberation must the practical extinction of apprenticeship be hastened, however strongly and however justly Dr. King Chambers, Mr. Marcus Beck, and others, may have condemned the system, in the course of their introductory addresses. We must not compare the medical student of forty years ago, when apprenticeship was the rule, with his homologue of to-day, when the rudiments of medicine are first taught at a hospital. The worst features of the student of the past were mostly related to habits which he shared with his elders, and not to any evil essentially arising from apprenticeship. In the report of the Committee of Council of the British Medical Association on Medical Education, published in January 1881, this subject is carefully discussed. The opinions of a large number of hospital teachers and general practitioners were consulted by that Committee. A large proportion of the practitioners expressed their conviction that there is a want, in the education of medical students, in instruction on the art of prescribing,

and that a thorough knowledge of pharmacy is indispensably necessary to the general practitioner. Qualified men beginning practice constantly prove highly inexperienced in its routine, often to their personal discredit and to the great annoyance of partners and employers. "Lastly," said the above mentioned report, "it is argued that no inconsiderable number of recently qualified medical men have no idea of the real nature of the duties of general practitioners until they are actually engaged in practice; many of them then discover that their work is hardly that which they had anticipated." The opinions of a large proportion of past and present teachers in metropolitan and provincial schools were not in favour of a return to the system of apprenticeship "even in a modified form"; and, as most of these "past" and some of the "present" teachers had enjoyed opportunities of practical experience of apprenticeship in their youth, this objection is of great weight in any future deliberation on the question. The objections are well known, and therefore need not be here discussed at length. The student entering on his studies at a hospital after serving an apprenticeship is often not in that frame of mind most suited for hard work in the dissecting-room, and his idea of disease is apt to be associated with remedies, or with trivial subjective symptoms. "What's the good of getting up the *cœliac axis*?" said a student once in the dissecting-room of a London medical school, "the governor" (that is, of course, the medical practitioner to whom he had been apprenticed) "has a rattling practice, and does not know a tarsal from a carpal bone." "Bronchitis," said a young gentleman of the same type, reading an announcement of the subject of a clinical lecture nailed on a notice-board, "that's tightness of the chest, frothy expectoration turning yellow; pil. ipecac. cum scil. every night and carbonate of ammonia and tincture of senega, *quartis*!" After all, this was a very clear exposition of the precise ideas of any student who has attempted to learn practice before he has acquired any knowledge of the science of his profession. How, on the other hand, might it be, if the student served an apprenticeship after his anatomical and clinical studies? The report of the Association Committee has considered this question. "A student," we read, "before being granted his licence to practise, should work for a time under a general practitioner, or at a public institution where he has personal charge of patients at their own homes." In more than one of the introductory addresses delivered last Monday afternoon, we find an arrangement of this kind strongly advocated. One difficulty yet remains. It is not easy for examining boards to be sure of the efficiency of all organised medical schools. How can they trust, then, the value of a private practitioner's certificate, seeing that he may be most skilled in treating his patients, but not necessarily a judge of the merits of a pupil?

The university undergraduate enters a medical school with certain advantages, for he is always more or less accustomed, already, to methodical study. Taken as a whole, however, the student who has never been to any university, nor served an apprenticeship, is most favourably circumstanced when he begins his hospital studies. Love for his particular hospital is a sentiment far stronger in this than in the other two types of student. Sentiment is, in all worldly affairs, a factor that must never be left out of consideration; and this particular sentiment has proved to be of high importance in medical education. The eagerness for a good hospital pass-list is a powerful incentive to hard work. It is this question of passing examinations that will more particularly affect the student who enters his hospital this week for the first time. We will not recur to the lengthy arguments, discussed in the *British Medical Journal*, with regard to certain new regulations of the Faculty of Surgeons, destined to exercise great control over the amount of time which should or should not elapse between the first, second, and final examinations. We shall soon see whether these regulations will be rigidly enforced, and whether they will remove the cause of chronic studentism, without hindering the diligent, and thereby increasing the number of qualified medical men. There will be not the least doubt that the student of 1882.

THE EXAMINATIONS OF SOME OF THE ENGLISH LICENSING BODIES.

THE report lately published by the visitors of the examinations of the Medical and Surgical Corporations is most valuable. The spirit in which it is conceived, no less than the matter it contains, reflects the greatest credit on its authors. At page 58 of this report, we find the following remark: "the effect of an examination must be to guide education and study; and, secondly, that in emphasising all the good points of the various examinations inspected, the visitors have had in view the practicability of the suggestions offered as the basis of a future scheme for examinations." We believe that the future scheme for medical and surgical examinations has already been settled by the Royal Commissioners appointed to inquire into the Medical Acts, and that, before long, Parliament will confirm these recommendations. It is, however, natural to suppose that the Commissioners would not have arrived at a conclusion regarding a scheme for examinations, without having considered the subject in relation to the changes which any such scheme was likely to produce on the system of education. The truth is, that underlying the voluminous evidence, to be found in the pages of this blue book regarding the functions of the Medical Council and the Corporations, it is obvious that the majority of the Commissioners considered these subjects important, in proportion as they affect the system of medical education. The Chairman of the Commission and the Master of the Rolls were especially careful to elicit information from those witnesses who were known to have paid particular attention to the subject, as to what alterations in the present course of study they thought most necessary; and if these changes could be effected through means of the existing nineteen licensing bodies.

We are convinced that the feeling which has agitated the profession during the past fifteen years, was not excited simply because general practitioners are not adequately represented on the Medical Council. We doubt if the inequality in the examinations of our licensing authorities, great as this is evil, would have been sufficient to move the professional mind. The root of the whole matter is, that the profession are of opinion that our medical students are not properly trained for the work of their calling, and they hold the Corporations responsible for the existing state of things. Sir William Jenner spoke but too truly when he remarked (Q. 2439) "the profession as a whole has nothing to do with the Corporation, or very little. I left the College of Physicians as a Member, and I went down stairs. I asked what business I had to come again, and was told none at all; nor had I, till I was elected a Fellow. A member of the College of Surgeons may go into the library and read, and into the museum, but he has nothing to do with the management of the College of Surgeons; he has no voice in that at all, and therefore I maintain that the College of Surgeons does not represent the profession." The Corporations, however, rule absolutely over the course of study, and the examinations through which our students have to pass.

We believe, on the whole, that the scheme of the Royal Commissioners is the best that can be adopted; nevertheless, it is obvious the divisional boards they propose creating, will simply perpetuate the authority of the licensing corporations, and if any really beneficial changes are to be effected in the existing system of education, it will have to come from the controlling influence of the Central Medical Council. It is clearly, therefore, very important, not only to persist in our demand for direct representation, but also to be careful to elect strong men to the Council. We may learn something of the nature of the changes in our system of education to which the future council will probably incline, by studying the evidence of those witnesses examined by the Commissioners whose opinion must influence this Council. Dr. Acland remarks (228), "One of my reasons for wishing to have national boards is not for the sake of making these examinations more severe, but making them more reasonable. By making them more reasonable you will ensure better teaching for the real purpose which is to be had in view, namely, the making of practitioners." Dr.

Acland indicates the lines upon which this improved teaching should advance (250 and 64), he remarks: "The rules of study may be well left to the educational institutions, so long as rules or methods of examination are in the hands of a controlling body which is to harmonise all. There is a middle course between extreme detail of regulation as to the number and course of lectures, and the letting go the system of certificates and regulations entirely. There is a medium course between the two, which is the right one." Sir J. Paget, on the same subject, remarks (2460), "I would hesitate in making stringent rules according to which all lecturers must act. For example, I may say generally that I think no scheme of education, however important, but that certain teachers should be left to teach in their own way. I would not have the rules too stringent. The great advantage to students is to learn how to learn, and not to learn this or that dry fact." Professor Humphry remarks (2656), "I would allow students to be educated and instructed in any school as to which there is reason to think good education is given. I do not think we can trust to examinations alone—men may be crammed up to a minimum standard." We shall not quote from the evidence of any of the other witnesses on this subject, but would refer our readers to the answers given by Messrs. C. Macnamara, Marshall, and Morris. Most of the influential witnesses examined by the Commissioners express their conviction that considerable alterations should be made in the curriculum and the examinations through which our students have to pass. They are disposed to grant greater latitude, as to how and where students acquire their knowledge of medicine and surgery in all their branches, including hygiene. They are not inclined entirely to discard lectures, but they are clearly disposed to leave these matters very much in the hands of the schools' authorities. At the same time they would demand the clearest possible evidence as to a student's having efficiently dissected and worked diligently in the wards of one or more hospitals, and lastly, of having attended courses of instruction in properly appointed physiological and pathological laboratories. In addition to evidence of a student having gone through a course of practical training of this kind, his knowledge must be tested by properly conducted examinations. But we must defer the consideration of this subject until next week.

THE inaugural address of the Midland Medical Society for the session 1882-3, will be given by Dr. Andrew Clark at Birmingham, on Wednesday evening, November 8th.

DR. SYDNEY RINGER has been appointed consulting physician to the North-west London Hospital, 18 and 20, Finch Town Road, in conjunction with Dr. Andrew Clark.

IN consequence of the prevalence of small-pox in South Africa, the Legislative Council of Natal has passed a compulsory vaccination law. Lymph has been sent to the clergy and missionaries in the native districts, with a request that they would vaccinate the Kaffir population. A first batch of 200 on the Church lands at Bishopstowe have been vaccinated.

A COMMUNICATION has been received by the St. John's Ambulance Association, from the Chief Commissioner of the Dublin Metropolitan Police, enclosing a report from one of the surgeons to the effect that Constable Brangan, 145 A, who holds a certificate of the association, had rendered first aid in a case of gun-shot wound, and by his knowledge had probably saved the life of the injured man.

THE first meeting of the New West London Medico-Chirurgical Society will be held this (Friday) evening at the West London Hospital at 8 P.M., when Dr. Burney Yeo has consented to give an address on "The Antiseptic Treatment of Lung Diseases." The President,

Dr. Hart Vinen, will also give a short introductory address. Specimens of the bacillus tuberculosis and other examples of bacteria will be exhibited.

AN inquest has been held at Keighley into the circumstances attending the death of a man named Riley, who was supposed to have died from lead-poisoning, caused by using the town's water. The West Riding analyst gave evidence as to the amount of lead absorbed by the water, which was so great as to be dangerous for domestic use. Dr. Meymott Tidy asserted that the deceased had not died from lead-poisoning, but from kidney-disease. The jury returned a verdict to the effect that the deceased had died from lead-poisoning.

THE spread of small-pox in Cape Town continues, and, according to a Reuter's telegram of September 12th, we learn that it is now spreading more among the European population than at any previous period during the outbreak. There are reported to be over one hundred cases at the small-pox hospital which are beyond the reach of recovery. From August 7th to the 6th of September, ninety-one deaths were registered; but it is thought that numbers of Malays have died, and been secretly buried at night. Provisions are being made to prevent secret burial.

MR. JOSEPH COWEN, M.P., is of opinion that there are two obstacles which the advocates of sanitary reform have had to combat, a general dislike of centralisation, and the popular dread of taxation. He shares the wholesome British prejudice against over-government. It is always emasculating, and sometimes demoralising. But over-government and centralisation are two different things. Centralisation, when it is only used to systematise, stimulate, and strengthen local authority is beneficial; but when it is made the means of multiplying functionaries, and when it concentrates in Government officials powers that should belong to the people, then centralisation becomes highly objectionable. The former gives symmetry, cohesion, and force to natural life; the latter emasculates it. But gradually, more enlightened views of taxation, its purposes and scope, were becoming entertained; and in time it will come to be acknowledged that from none of their imposts did the British people get better value than that which secured them the essentials of healthy existence.

THE PRINCESS LOUISE.

WE understand that Dr. Burnet, Physician to the Great Northern Hospital, has been specially retained to attend on H.R.H. the Princess Louise in her tour through Canada, and is now accompanying Her Royal Highness on the journey.

THE MEDICAL SOCIETIES.

THE first meeting of the Obstetrical Society took place on Wednesday last; the opening meetings of the other chief societies will be held in the following order, viz.: Hunterian, Wednesday, 11th instant; Ophthalmological, Thursday, 12th; Clinical, Friday, 13th; Medical, Monday, 16th; Pathological, Tuesday, 17th; Harveian, Thursday, 19th; and Royal Medical and Chirurgical, Tuesday, the 24th.

THE TYPHOID EPIDEMIC AT BANGOR.

THERE is not the slightest indication of any cessation in the outbreak of typhoid fever, which has now raged here for the last six months. For the week ended on Monday last, fifty-nine fresh cases were reported, and seven deaths, including two at Llandegai, which is just beyond the local board district. The relief fund for the poorer class of patients has reached £1,250, £250 of which was given by the Bishop, who has also permitted the erection in his park of the tent-hospitals. The sewers are being fumigated with hydrochloric acid.

MORTUARY ACCOMMODATION IN LONDON.

At a recent meeting of the Marylebone vestry, a communication was read from the Local Government Board respecting the nature and extent of the mortuary accommodation provided within the area of the metropolitan police district, and referring specially to the public mortuary of St. Marylebone, in Paddington Street. The complaint against the latter was that, in addition to there not being sufficient accommodation for the reception of the dead bodies, in comparison with the requirements of such a district, there was no arrangement for making *post mortem* examinations, or provision for holding coroner's inquests. After a discussion the matter was referred to the Sanitary Committee, and a special committee appointed in January last, but which had taken no steps in the matter, was dissolved.

POISONING BY ACONITE ROOT.

A CASE of poisoning by aconite root which recently came under observation, discloses the existence of a degree of carelessness in dealing with crude drugs, which is hardly conceivable. It appears that a young man saw something drop from a Pickford's van passing through the streets, and picked up what he thought was a piece of horse-radish. He tasted it, and finding it palatable, ate some, and gave a piece each to three other young men, one of whom gave a portion to his sister. In a short time alarming symptoms of poisoning appeared, and the sufferers, five in number, were taken to the Poplar Hospital, where they were seen by Mr. Baker, the house-surgeon. They all complained of a numb burning sensation in the mouth and throat, and there was partial paralysis of the arms and legs. For some time the issue was doubtful, but artificial respiration was maintained for four hours, and gradually the symptoms passed off, the patients all recovering. The supposed horse-radish was found on examination to be aconite root.

SCARLET FEVER IN LONDON.

At the meeting of the Metropolitan Asylums Board on the 30th ultimo, Mr. E. Galsworthy presiding, Sir Edmund Hay Currie drew attention to the fact that there were at the present time 500 cases of scarlet fever in the Homerton, Stockwell, and Deptford Asylums—cases brought from all parts of London—and he moved that the Local Government Board be requested to give its permission to the opening of the Fulham and Hampstead Hospitals for the reception of cases, more especially of those which might arise in the parishes and unions near those asylums. The chairman suggested that the Board should proceed in regard to one hospital at a time, and it was agreed to ask the Local Government Board to permit the opening of the Fulham Asylum for fever cases. In consequence of the continued increase of fever, an emergency meeting of the managers was held on Thursday, October 5th, when it was resolved to open the Hampstead Hospital at once, subject to the consent of the Local Government Board.

THE GREAT NORTHERN HOSPITAL.

The report of the Great Northern Hospital for the year ending June 1882, is of special interest. It appears that a public meeting, presided over by Earl Cowper, K.G., was held on July 19th, 1882, in the High-bury Athenæum for the purpose of considering the position of the hospital and the need for increased hospital accommodation in the Northern districts. Earl Cowper considered that the hospital accommodation in the North of London was far too limited, and quoted figures showing that three-fourths of the London Hospitals were within a mile-and-a-half radius of Charing Cross, leaving the more thickly populated and poorer districts very inadequately provided for. A resolution was then carried to the effect that, the meeting being convinced of the necessity for increased hospital accommodation in the district, approved of the extension of the Great Northern Hospital, and would use its best efforts to carry out such extension. We trust the committee of the hospital may soon be able to enlarge the hospital. It is in the midst of a large,

poor, and thickly populated district, and has long been recognised as one of the most important and valuable charities in the metropolis.

A NEW HAIR-DYE.

THE disadvantages attending the use of hair-dyes containing lead, and the positive danger attending their use, has induced M. Naquet to search for a liquid which may be used for dyeing the hair, and yet be innocuous. He describes, in the *Moniteur Scientifique*, a dye which is said to have a progressive action, to produce all shades up to a deep chestnut colour, and yet to be free from all deleterious action. The base of the dye is bismuth. The following is the formula. Bismuth is dissolved in the smallest possible quantity of nitric acid—nearly three parts—and to this liquor a solution in water of tartaric acid, equal in weight to one-fourth of the bismuth used, is added, and then a large quantity of water, so as to ensure thorough precipitation of the bismuth. The precipitate is filtered off, and washed with water until the washings have lost all acidity. The precipitate is dissolved in a solution of ammonia; and for this rather more than a fluid ounce of solution of ammonia will be required for each ounce of bismuth used. Hyposulphite of soda—three-fourths of the weight of the bismuth employed—is then added, and when the salt is dissolved, the mixture is filtered, and preserved in well-closed bottles. The dye should contain about one-twentieth of its weight of bismuth. Such a mixture is said to form an admirable dye, which loses ammonia on exposure to air, and deposits sulphide of bismuth.

A HEAVY BRAIN.

DR. HALDERMAN of Columbus publishes, in the *Cincinnati Lancet and Clinic* of July 22nd, 1882, the following record of a man possessed of an abnormally heavy brain: "The subject was a mulatto man, named Washington Napper, aged 45, who died recently in St. Francis Hospital (Cincinnati), of blood-poisoning, induced by abscess of the thigh. He was a native of West Tennessee, and was a slave till 1862, when he deserted his master, and afterward came north with the Forty-Sixth Ohio Infantry to this place, which he made his home until the time of his death. His brain was found to weigh sixty-one ounces. He was about six feet in height, and of rather ungainly build; had long ape-like extremities, massive head, and coarse physiognomy, thick lips, protuberant lower jaw, high cheek-bones, but lofty and expanded frontals. He was never regarded as of much intellectual brightness, but is spoken of as having been of rather reserved and thoughtful disposition; and, later in life, to have become of quite a moral and religious turn of mind. He was illiterate, but managed, by industry as a common labourer, and by close economy, to accumulate some little property, which, on his death-bed, he bequeathed to his church and to the Sisters of the Poor, in return for their care of him during his fatal illness. It will be observed that but two brains, whose weight are credited by scientists, are on record heavier than this, namely, those of Cuvier and Abercrombie: the former, as is well known, weighing 64.33 ounces, and the latter 63 ounces. So that if, as is held by some, intellectual greatness lies in the quantity of brain-substance alone, who knows but with this man passed away another whose

' Hands the rod of empire might have swayed,
Or waked to ecstasy the living lyre?'

THE CONGRESS OF THE SANITARY INSTITUTE.

IN the section of this Congress devoted to sanitary engineering and architecture, Professor Henry Robinson, C.E., delivered an elaborate and carefully-prepared address, dealing with many important points connected with these subjects. Mr. W. Eaisie, C.E., explained the necessity for grease-intercepting chambers in the drainage arrangements of large institutions and dwelling houses. Mr. James Lemon of Southampton, read a paper on the "Separate System of Drainage," in which he endeavoured to establish the principle of partial separation of the rainfall from the sewage in certain towns. Mr. E. G. Robins described the original experiments of Dr. Renk of Munich with regard

to sewer gas, and the mode of its seclusion from dwelling houses, which are fully described and illustrated in the *Sanitary Record* for July 15th, 1882. Mr. John Price of Newcastle, read an interesting paper on "Industrial Dwellings from a Sanitary Point of View," and Mr. George Laws made a communication on the important question of sewer ventilation; in it he proposed to ventilate sewers by "gas chimneys" built into the ordinary chimney stacks, so as to deliver the sewer gas above the level of all openings, and above the passengers' level, and thus secure its dissipation or ample dilution. Professor de Chaumont gave a popular lecture in the Town Hall on "Food and the Energy of Man," in which he set before his audience the results of our present knowledge of the value of foods and stimulants. Dr. Richardson also gave a popular lecture entitled "Next to Godliness," in which he showed the value of the virtue of cleanliness in promoting health and averting disease. The proceedings of the institute were concluded with the usual general meeting, and votes of thanks to the hospital authorities of Newcastle-on-Tyne, and to the gentlemen who have contributed to the success of the meeting by their able and interesting papers on sanitary questions.

INSPECTION OF BAKEHOUSES.

A GREAT deal of public attention has lately been bestowed on this subject, in consequence of certain revelations that have been made respecting the present condition of many of these premises, and of the asserted rarity with which they have been inspected. The inspectors appointed by the Government are said to be so few, that, after attending to their other duties, they can only visit each once in three years, as against the frequent visits paid by the officers of the vestries and district boards before the passing of the late Act. The Vestry of St. Pancras have sent round a circular on the subject, requesting the co-operation of other sanitary authorities of the metropolis in obtaining a new Act to restore the powers they formerly possessed. To this several vestries have objected, on the ground that their officers can inspect the bakehouses under the Nuisances Removal and Sanitary Acts, and that in many parishes this has been done. The Vestry of Marylebone specially objects to the power being restored, on the ground that it would lead to more expense to the ratepayers (and yet they state in the same breath that a systematic inspection is already made in their parish); and all because it would lead to conflict of jurisdiction. Both these are clearly errors, as is shown in the first place by their own statement as regards the expense, and in the second by the admirable way in which the double jurisdiction for cow-sheds and slaughter-houses has worked for several years. There is no doubt that in most parishes the inspection is carried out by the local inspectors; but their powers of entry are doubtful, and, if the bakers object, cannot well be enforced, and, even after they have obtained admission, the power of issuing orders for the abatement of any nuisances found on the premises is confined to that given by the Nuisances Removal Acts. There cannot, therefore, be any objection whatever to the course proposed, whilst there are many reasons in favour of its being adopted.

THE INCIDENCE OF SMALL-POX AT DIFFERENT AGES.

In his report on the sanitary condition of Hackney during 1881, Dr. Tripe gives some interesting statistics as to the incidence of small-pox at different ages, especially as regards its relation to vaccination. The total number of cases reported during the recent epidemic was 1,306; of these 1,075 were said to have been vaccinated, and 160 unvaccinated; no information being obtainable as to the vaccination in 71 cases. Of the total number of cases amongst those who were reported to have been vaccinated, 6.5 per cent. occurred among children under five years of age; the proportion of population at that age being 12.9 per cent. of the whole. At the age period of five to ten years, the vaccinated cases were 10.9 per cent. against 11.1 per cent. of population; at ten to fifteen years of age, the percentages were 16.0 of cases against 10.0 of population; at fifteen to twenty-five years of age, they were 33.9 and 20.4 respectively; at twenty-five to thirty-five years of age, there

were 19.2 per cent. of cases and 15.8 per cent. of population; at thirty-five to forty-five years of age, there were 8.8 per cent. of cases to 11.5 per cent. of population living at that age-period. Above forty-five years of age, there were 18.3 per cent. of population against 4.7 per cent. of cases. Dr. Tripe thinks that these figures show most conclusively that unless children have three or more good vaccination marks, they should be re-vaccinated at or before ten years of age; indeed, he thinks seven years is, under these circumstances, by no means too early. The greatest proportion of cases amongst the unvaccinated occurred during the first five years of life, as no less than 49.4 per cent. of the total cases among these persons reported to Dr. Tripe, occurred at that age-period; whilst 20.6 happened between five and ten years of age, making 70 per cent. of the whole amongst children under ten years of age. The contrast of 49.4 per cent. of all the cases amongst the unvaccinated at 0.5 years of age, against 6.5 at the same age amongst the vaccinated, is very striking. Referring to the subject in his report on the Deptford Hospital, Dr. John MacCombie observes that as regards the vaccinated and the unvaccinated admissions in the first ten years of life, it is instructive to note that, while only 10 per cent. of the vaccinated were under ten, 58 per cent. of the unvaccinated were under that age, and the mortality is 3 and 54 per cent. respectively.

TYPHOID FEVER AND POLLUTED WATER.

A very clear case of an epidemic of typhoid fever due to polluted water has recently been reported by Dr. Mitchell Wilson to the Goole Rural Sanitary Authority. At a place called East Cowick, with a population of 219, living in 57 houses, a child was taken ill with typhoid fever, the origin of which is at present unexplained. Other cases subsequently occurred in two houses inhabited by the relations of this child. The drainage from these houses was carried off by a drain, which, only a few feet from the public well, joined the drain carrying off the waste water from the gully against the pump of the well. A leak was distinctly seen to go into the well from this gully, and it was also partially blocked up. One privy was used by both houses, connected with an uncovered ash-hole, twenty yards distant in a straight line from and on a somewhat higher level than the town's well, so that there was a possible fouling of the public water-supply from that source, as well as from the house-drains. The public pump was used either for drinking or other household purposes by 33 out of the 57 families in the village. Of those using the water, 24 had one or more cases of fever in the house; in four others, cases of doubtful sickness occurred; and in five houses, the use of the well-water caused no illness. Thus 72 per cent. of the families using the water were attacked with fever, or, including the doubtful or mild cases, 85 per cent., while only 15 per cent. escaped. Of the remaining 24 houses not using the town's water, cases of fever only occurred in three houses, or 12 per cent. The mode in which the infection was conveyed to these houses is, however, capable of explanation. In the first, the child who was attacked lived at a house where water from a private well was used, but frequently visited its grandmother in the village, at whose house the town's water was probably drunk by the child. In another, the infection was probably caught from a relative, who was brought when ill to the house; the daughter who waited upon the patient was afterwards taken ill. In the third case, two daughters and the mother were attacked within a few days of each other; the latter had assisted at the washing of some linen from the earliest cases before any disinfectants were used; the former had also assisted in nursing the young children at one of the houses where fever cases were. As confirming the theory that the public well-water was the medium of spreading the fever, it was found that 39 of the cases had been seized previously to May 30th, and eight additional cases took ill up to June 14th. The well was closed on May 31st, but the water used up to that date might reasonably be considered capable of causing fever up to the middle of June. The cases occurring afterwards, must be considered, Dr. Wilson thinks, as due to infection, caught from the excreta of previous cases, as he believes there is considerable risk in acting upon the belief that enteric, typhoid, or gastric fever is

little or not at all infectious. Of the 61 cases which occurred, five died: one, aged 20, after 10 days' illness; one, aged 18, after 21 days' illness; one, aged 27, after 14 days' illness; one, aged 8, on the seventh day after admission to hospital; and a fifth, aged 4, on the third day after admission. Many of the younger persons attacked suffered very much from irritation caused by *ascaris lumbricoides*, and it is stated that for many years there has been an unusual amount of that complaint among the children in East Cowick, believed by surgeons to be due to the water from the public pump.

THE BREEDING AND DISEASES OF ELEPHANTS.

The birth of a baby-elephant and the importation of Jumbo have greatly excited popular interest in America. Taking advantage of this, the *Journal of Comparative Medicine* has published an article upon the breeding of elephants, as well as an editorial note upon the diseases of this animal. The subject of elephant-breeding is treated by Mr. Arsting-stall, Barnum's trainer, who was present at the birth of the only two elephants ever born in the United States. The elephant, he says, rarely breeds in captivity, largely because he is kept on a low diet. If properly fed, the male and female can hardly be prevented from copulating. The evidences of heat are a slight swelling and congestion of the vulva. The period of pregnancy is between twenty and twenty-one months. Within three months, the mammary glands begin to swell, and by the end of pregnancy they are as large as those of a cow. An elephant may conceive when it is only fifteen years old. In that case, it will often grow very rapidly during pregnancy. The elephant, "Queen", which gave birth to a "baby" at Bridgeport in the spring, exhibited no signs of disturbance up to a few hours before the act of parturition. There was then some uneasiness, and the animal was isolated and chained. The infant was delivered rapidly, and without any apparent suffering on the part of the mother, who stood with the posterior extremities somewhat separated. The fetus came out head and feet foremost, enclosed in its membranes. As soon as it was dropped, the mother crossed the hind legs, and by rubbing them together severed the cord. Her subsequent proceeding showed a remarkable instinctive sagacity. The little one lay quietly in its sac—not breathing, and apparently lifeless. The mother, as soon as the cord was broken, turned around, and with one of her fore-feet struck the membranous sac quite forcibly. It broke with a loud report (so says the trainer). After rupturing the membranes, she placed her foot on the thorax and pressed it with the appearance of much force, raised it, and pressed it again, until the baby began to breathe and show signs of life. The elephant mother appeared to understand the principles of Sylvester's method as well as if she had taken a course at the First-Aid-to-the-Injured Society. The placenta was delivered in about two hours, the animal suffering considerably meanwhile. Five hours after birth, the baby was able to stand on its feet. It walked to its mother, turned its trunk over its head, and began to nurse. Some facts are given editorially regarding the diseases of elephants. The more prominent affections are meningitis and apoplexy, vomiting, colic, and enteritis, hamaturia, tetanus, pneumonia, foot-and-mouth disease, and anthrax. A work on the diseases of elephants is being written.

EXPERIMENTS WITH VACCIN CHARBONNEUX.

DR. KLEIN has made the following communication to the Veterinary Department of the Privy Council through the Local Government Board. "Vaccin charbonneux is to be obtained, and is announced to be obtainable (in the *Farmer*), from M. Bontroux, agent of M. Pasteur in Paris (applicants to M. Pasteur are referred to M. Bontroux), and, as I happen to know, it is brought over, and sold, and used in considerable quantities. The 'vaccin' is sold in tubes (each containing enough lymph for the inoculation of 100 sheep or 50 cattle) as 'Premier vaccin charbonneux' and as 'Deuxieme vaccin charbonneux'. The 'premier vaccin', according to the printed directions accompanying each lot, is inoculated first; after a lapse of twelve to fifteen days, the 'deux-

ieme vaccin' is used in the same manner. The animals thus twice inoculated are supposed to enjoy immunity against fatal anthrax. I have obtained, through two independent sources, two lots of this vaccin charbonneux (premier and deuxieme), and have tested them by experiments. The results of these experiments enable me to say: (a) animals inoculated with this 'vaccin' (premier and deuxieme) are not made immune against fatal anthrax; and (b) both the first and second vaccin may produce fatal anthrax. The following facts prove these propositions. 1. *Experiments with Lot A.*—Inoculated with 'premier vaccin', two sheep, two guinea-pigs, and two mice; no change in any animal. Inoculated with 'deuxieme vaccin', the two above sheep and the two above guinea-pigs. One of these sheep showed rise of temperature, and falling off in food for the first two days after this second inoculation, but was all right again after three days. The two guinea-pigs were dead of typical anthrax within forty-eight hours. The four above mice were inoculated with the blood of one of these guinea-pigs; all four mice were dead of typical anthrax within forty-eight hours. The two sheep, having been inoculated with the premier and deuxieme vaccin, ought to have been immune against fatal anthrax. Now see what happened; according to M. Pasteur, the *Bacillus anthracis* of blood of an animal dead of anthrax, when cultivated at 42° to 43° Cent. for twelve days, loses all virulence, and becomes thereby converted into 'vaccin'. I had grown the *Bacillus anthracis* of blood of a guinea-pig dead of anthrax, at a temperature of 42° to 43° Cent. for twenty-one days, and with this culture I inoculated the above two sheep. The result was that both animals were dead of typical anthrax within forty-eight hours. 2. *Experiments with Lot B.*—Inoculated with 'premier vaccin' four guinea-pigs and six mice. Within forty-eight hours, three of the guinea-pigs and three of the mice were dead of typical anthrax. My method of using the fluids for inoculation absolutely precludes any accidental contamination, and hence these must be accepted as perfectly reliable. This country is comparatively free from anthrax; and, therefore, the introduction and use of this so-called 'vaccin charbonneux' seems to me most dangerous, and capable of producing incalculable mischief."

PULMONIC SURGERY.

DR. KOCH of Dorpat communicates (*Deutsche Med. Wochenschr.*, 1882, No. 32) the results of two cases in Leyden's Clinic, in which he had operated for chronic putrid bronchitis, with bronchiectasis. The first case was that of a man, aged 24, with the physical signs of contraction of the right lung, cavities in the right base, and catarrh of the right apex. The sputum indicated gangrene of the lung, and was unaffected by treatment. On June 26th, part of the right sixth rib was resected, and after it had been ascertained that the two layers of pleura were completely united, the thermo-cautery was gradually pushed through the lung to the mediastinum. It opened a cavity of the size of a child's fist, about three fingers' breadth from the surface of the lung. The sputum expectorated sank at once from 400 to 120 cubic centimètres daily. On June 30th, part of the eighth rib was resected and the thermo-cautery passed through the base of the lung, without, however, entering any considerable cavity. Exploratory puncture with a syringe showed a purulent collection in front of the vertebra; and on July 11th this was laid open, between the eighth and ninth ribs, below and internal to the angle of the scapula. The condition of the patient at the date of publication (August 5th) was most satisfactory, although the expectoration had not quite ceased; and it was purposed to explore still further the base of the lung. The second case was that of a woman aged 29, brought into hospital with jaundice, and a putrid expectoration, amounting daily to between 800 and 1000 cubic centimètres. After a preliminary aspiration of the right thoracic cavity on July 15th, four inches of the sixth rib was resected; and, a hollow needle having been passed through the anterior axillary line, in the direction of the right auricle of the heart, the thermo-cautery was pushed in the same direction. Two inches from the surface of the lung it entered a cavity, about the size of the closed fist; and, on pushing it upward and back-

ward from this cavity, as guided by exploratory puncture, it entered another cavity, of the size of a child's head, and containing one thousand cubic centimètres of putrid fluid." The cavities were washed out with thymol solution, and three thick drainage-tubes inserted. The patient collapsed after the operation but remained alive for a week, during which time the expectoration was completely absent, and *post mortem* the surfaces were found covered with healthy granulations. The cause of death was less the operation than a phlegmonous inflammation of the portal vein, a lobular bronchopneumonia of the base of the left lung from the presence of a foreign body, and a chronic septicæmia, which had existed for some time. The writer promises a further communication on the subject, in conjunction with Dr. Hiller, who is at present making extensive observations in Leyden's clinic. Meanwhile, he considers that operative interference is indicated in cases of single cavities, especially if near the surface, in cases of acute gangrene, and also in cases of foreign bodies not removable by the trachea, in putrid bronchitis, and in the rare cases of localised tuberculosis of the lung.

ANTHROPOMETRIC LABORATORIES.

AN endeavour was made, at the very pleasant *soirée* which was held at Guy's Hospital last Monday, to put in practice to some extent the scheme propounded recently in the *Fortnightly Review*, by Mr. Francis Galton, for the purpose of obtaining "Family Chronicles", consisting of periodical records of observations on the physical conformation and physiological functions of individuals, together with biographical notes, including short records of illnesses. As pointed out in papers distributed at the *soirée*, "a comparison of several successive observations would indicate the effect which habits, occupation, and disease were producing in his physical economy. The 'Chronicles' would contain life-histories of the individual and of his diseases; they would be guides to his doctors during his own life, and, as family histories, would forewarn his descendants of dangers to be guarded against, as well as encourage them by the records of difficulties overcome." The desirability of establishing in infancy and maintaining throughout life such "Chronicles" will be apparent; but by no class of persons will it be more appreciated than by medical men, who would often be pleased to have for perusal a reliable short account of a patient's previous illnesses, instead of the vague accounts of those ailments, which are too often furnished by the patient or his friends. At the end of an illness, too, the medical attendant might be expected, for a consideration, to furnish a succinct account of its course, cause, bearings, and result, which might be interpolated in the "Chronicle." To make the record perfect, it would be necessary to give also an account of the physiological functions in health, and these could be tested in "Anthropometric Laboratories" at a small charge. At Guy's, it was shown how some of the functions might be examined by accurate instrumental methods, to which the visitors were invited to submit themselves. The functions thus tested, included the breathing capacity, power of grasp, power of pull, sensation of touch, acuteness of vision for form and for colour, acuteness of hearing for high notes, the hearing power as compared with sense of touch, the rapidity of reaction to the stimulus for touch, sight, and sound, enumeration of the blood corpuscles, estimation of blood colouring matter, and the tracing of the pulse. To these physiological inquiries, suitable to a public room, others possibly more important to the individual himself, relating to the kidney secretion, etc., might, of course, be added in a private laboratory. As it was, the subject was heartily taken up by many of the visitors to Guy's, who carefully attended at each table in succession, and had the results of each examination carefully recorded on the paper supplied with the programme of the evening's entertainments. Several of the tables, particularly that for testing colour-blindness, were thronged throughout the evening; and the members of the staff at Guy's, with their assistants, who conducted the various testings, thereby contributed much to the popularising and practical exposition of Mr. Galton's useful proposal.

LONDON AND COLONIAL HOSPITALS.

"THE conduct of the great London hospitals is at once a scandal to the country and a reflection on the fair fame of the London population. If the system had been expressly designed to facilitate malfeasance, to conceal wrong, and reduce the benefaction of founders to a minimum, it could not have been more successful." These words are quoted from a paper on the Management of Hospitals, read at the beginning of this year by Dr. Belgrave of Sydney, New South Wales. Dr. Belgrave's views and criticisms are founded on the belief that London hospitals are the "prey of cliques more intent on indirect business advantages than on the recovery of patients and the promotion of medical science." Dr. Belgrave further states that all these evils will be prevented, and all will go well, providing steps are taken to secure, in London, that at every hospital the medical element shall be absolutely supreme." It is profitable at times to see ourselves as others see us; but we are bound to state that the statements and accusations of Dr. Belgrave do not touch the real abuses from which the London hospitals suffer, and that some of them are founded on imperfect information. For instance, however great the abuses existing at the Royal hospitals may be, all competent and fair critics will admit that, when Dr. Belgrave accuses the present governors of robbing these noble charities of a portion of their funds, and speaks of "the facility with which tradesmen and contractors can make use of their position in the directorate for the purpose of indirectly promoting their own special interests," he speaks of things which have not only not become notorious in this country, but of which there is no evidence even of their existence, save in imagination. It may, however, be observed that, whereas the medical element should be fully represented on the governing bodies of all hospitals, experience proves that, as a matter of fact, it is far better for the profession and the public that the financial arrangements should be left in the hands of laymen, who have more time and experience for and in the management of such details. Dr. Belgrave's paper would not have been written in its present form had he possessed a full knowledge of the subject with which he has attempted to deal. Of colonial hospitals, and especially with reference to the management of the Sydney Infirmary, Dr. Belgrave may speak with some authority. His condemnation is certainly vigorous, and we hope the facts upon which it is based are more trustworthy than those to which we have already alluded. For instance, he states that the Sydney Infirmary is a sort of adjunct to the Police Department; that is to say, the Colonial Secretary sends very numerous cases for immediate admission, which mainly consist of "those suffering from delirium tremens, extreme drunkenness, the subjects of undefined illness occurring through wilful self-abandonment and personal neglect;" and, in consequence, the Sydney Infirmary is at the present time "availed of by the majority of these characters simply as a temporary refuge, to enable them to recover from one debauch and to prepare them to enter on another." We quite agree with Dr. Belgrave that the admission of such cases as the above is an abuse of charity and an encouragement to intemperance and its consequences; and we endorse his recommendation that it is time special reformatories were opened by the State for the accommodation and punishment of these victims "of intemperance and vagabondage." At the present time, the Sydney Infirmary appears to be mainly a Government institution, and is only to a small extent supported by voluntary contributions. Dr. Belgrave objects to its becoming wholly a Government institution; and in this we agree with him, because, if the majority of the patients sent by the Government are such as he describes, it must be evident that such a system of administration can only tend to demoralise and pauperise the people. If the voluntary element were largely introduced, there can be no doubt that public interest would be much more excited in the infirmary, and by this means both the administration and the management must necessarily be improved.

UNQUALIFIED ASSISTANTS.

MR. E. CARTTAR held an inquest at Deptford, on October 2nd, on the body of George Frederick Parker, aged two years and a half. Edward Parker, of 62, Edward Street, Deptford, said the deceased, his

child, was taken ill about a fortnight ago, and his wife took it to Mr. Bowden, of Amersham Vale. The next morning Mr. Bowden called, and said the child was suffering from scarlet fever, that it must be kept warm, and bran and vinegar poultices applied to it, as there was congestion. The child became delirious the next night (Tuesday), and seemed in great agony, and that continued until Friday, his wife saying the doctor told her it was going on all right. Witness thought the child seemed dying, and said he did not think the doctor understood the case. He then went to see Mr. Bowden, who repeated to him that the child was going on all right. Witness told him that he thought it was acute inflammation, and not scarlet fever, whereupon he said there was no inflammation, but he promised to come round in a quarter of an hour. When witness went home his wife told him the doctor had been, and said a great change had taken place in the child's condition, and said there was no hope for it. Witness again went to Mr. Bowden, who told him the child could not live, whereupon witness went to Dr. Kelsey, who subsequently called to see the child. Witness told him that Mr. Bowden had been attending the case, and he replied, "Are you aware that man is not a doctor?" He further said that the child had been improperly treated, and that it was too late to save it. It died on Thursday. Witness and his wife fully believed Mr. Bowden was a doctor; he had a red lamp outside his house. Hubert Baynes Scott, M.D., informed the coroner that the Mr. Bowden referred to was his assistant, and did not represent himself as a doctor. The Coroner: What is your qualification? Mr. Scott: I am L.S.A. The Coroner: Do you therefore consider yourself entitled to put "M.D." on your card? Mr. Scott: I am a Doctor of Medicine, United States of America. Mr. Parker said he considered it a shame that such men should be on the market to fleece poor men out of their money and destroy their children. The Coroner said the matter would be fully inquired into. The mother of the deceased gave evidence corroborative of that of her husband. Mr. William Kelsey, M.D., said he was called to see the deceased at midnight on Friday, 22nd ultimo. Having described the features of the case, he added that he believed he could have saved the child's life if he had been called in earlier, but the improper treatment had been going on for a week. Witness was given to understand that two aperient powders had been given shortly before he was called in; that would be highly improper treatment. He believed the immediate cause of death was exhaustion from diarrhoea. William Bowden, sworn, said he was an unqualified medical assistant to Dr. Scott, who resided at Amersham Road; witness living at 69, Amersham Vale. He then described the treatment of the child, and added that he reported the case daily to Dr. Scott, who had arranged to see the child on the Saturday, but other medical aid was called in on the Friday night. Witness's name appeared on the door outside the house in Amersham Vale, but Dr. Scott's was on the door of the consulting-room. There was a red lamp. He had been engaged in the medical profession for nine years. By a juryman: Could not say it was customary for medical assistants to have their names on the door. He never told the parents of the child that it was a case of scarlet fever. Mr. Alexander Forsyth, surgeon, of Greenwich, said he had made a *post mortem* examination of the body, and found death to be due to pleuro-pneumonia. It was a case which a qualified medical man ought to be able to diagnose. Mr. Bowden's opinion was worthless, as he did not diagnose. The medicines given and treatment were highly improper for inflammation. It was a fatal case at the time Mr. Kelsey took it. The Coroner, in summing up, said it was a great pity to allow prescriptions to be made up on the diagnosis of an incompetent man, sailing under false colours. He pointed out that, although he might be morally, Mr. Bowden was not to be held criminally responsible, if it was thought he had acted to the best of his ability. The jury, after deliberating in private, returned a verdict of death from pleuro-pneumonia. The Coroner then told Mr. Bowden that the jury could not help feeling that in some measure it was due to his treatment of the case. He strongly advised him to try and qualify, and not to sail under false colours. Addressing Mr. Scott, the Coroner said the jury held him in a measure

responsible for allowing an unqualified man to prescribe in a critical case. People should not be led away entirely by red lamps, without making inquiry as to the medical man they employed. We commend this important case to the consideration of the Society of Apothecaries. It is in their power to put a stop to such scandals by instituting proceedings against Mr. Bowden, and any others who act as assistants to apothecaries without having obtained the proper licence from their society. It is also clearly their duty to admonish Mr. Scott that his conduct has not been such as becomes one of their licentiates, and that, if it be continued, they will be obliged to visit it with condign punishment. There are those who think that the *role* of the Apothecaries' Company is played out, and that, when the conjoint board is established, it may be permitted quietly to disappear; but, if its directors would only wisely use the powers committed to them by Act of Parliament, and remember that special privileges conferred involve corresponding duties to be performed, they might fairly hope to renew for another generation the lease of life of a body which in the past has certainly deserved well of the profession and the public.

THE PERILS OF THE SEASIDE.

WHEN the late Mr. Accum determined to attract public attention to the perils which are incident to the incautious consumption of unwholesome comestibles, he prefaced his discourse with the somewhat alarming title of "Death in the Pot." The sanitary prophet of the present day might not inappropriately take a leaf out of his book, and enforce the dangers which beset unwary health and pleasure-seekers, from the text of "Death in the Lodging-house." The necessities of the journalist during the "silly" season compel him to ventilate many grievances which have but a scant chance of a hearing so long as his columns can be filled with the more stirring details of parliamentary and legal contention. And this is probably one reason why, at this time of the year, the papers always bristle with a regular fusillade of letters from correspondents, who, in their ingenuous search for health at the seaside or elsewhere, have incontinently tumbled into pest-holes from which they or their belongings too often emerge, only with sore loss both to purse and person. It is then that we hear indignant complaints of the defective drainage of Stinktown-by-the-Sea, and plaintive remonstrances from paterfamilias, who took his tribe of young barbarians down to renew their strength amid the briny breezes of Hygieopolis-on-the-Mud, and found, to his sorrow, that he had berthed them in a lodging-house which had only just been evacuated by a patient convalescing from scarlet fever. Then, too, arises a chorus of suggested remedies for the evils which are thus so forcibly illustrated. One correspondent wants to know why the sanitary authorities do not inspect lodgings and warrant their habitability before they are allowed to be let. Another suggests a new plan, which he has designed all out of his own head, for disposing of the emanations from offensive gullies, by carrying them into the public lamps and consuming them in a sort of sanitary *auto da fe*. A third is of opinion that the true cure for the disease is to impose a heavy fine on parents who convey their infected offspring to the seaside for change of air, and on doctors who collude in such a nefarious practice. And so on. Meanwhile, the sanitarian, who has long had his eye on this special preserve of disease, and who has, perchance, on more than one occasion done his best to awaken attention to the mischiefs which spring from it, looks on, with a certain grim curiosity, to learn how much longer society will tolerate its existence, and how soon it will please our legislators to make some provision by which the lives of human beings shall be at least as well protected in this respect as are those of beasts; or, at any rate, to take care that the sanitary welfare of the well-to-do visitors to lodgings or hotels shall be not less cared for than is that of the casual occupant of a twopenny "gaff." Perhaps in the good time coming, after the forthcoming adjourned session of Parliament, when measures are to be adopted for the effectual putting to silence of bores and obstructives, we may hope that some attention will be given to matters which so seriously affect the public health; but it is useless to shut our eyes to

the fact that even under the most favourable conditions there will be a terrible struggle for existence for some time to come amongst the numerous claimants for parliamentary attention, and it will require all the energy that can be brought to bear on the Government to get it to deal effectively with the serious arrears in this department of its work. Nor must it be forgotten that, although there are, in regard to this special evil in particular, certain remedial measures, about the general efficacy of which all competent authorities are thoroughly agreed, great difficulties are connected with their legislative enforcement, which it will need all the care of those who undertake to deal with them to guard against. At the onset there is the thorny question of notification, about the precise form of which the profession are, as the Worcester meeting showed, very greatly divided. But the mere question of whether the act of notification shall be legally compulsory on the medical attendant in a case of infection, or not; and if so, upon whom he shall be liable to serve the notice, only lies at the threshold of the debateable points with which the subject bristles. After that comes the grave consideration, of how infectiousness is to be so distinctly recognised in all cases, as to make its diagnosis so certain as it must be made, if the omission of notification is to be enforced by penal consequences. Then comes the inquiry into the reciprocal responsibilities of the householders and the sanitary authority. Hitherto the pressure of public opinion has been mainly directed against the shortcomings of the former, but the time must come when it will be recognised that, if the householder has duties towards the public, the public, as represented by the sanitary authority, owe equal obligations towards him. We are, of course, aware that these and other considerations of the kind have been conveniently ignored in the numerous private Acts which have been obtained by various municipalities within the last few years, and that these Acts have been brought into practical operation with more or less success, according to the tact of those by whom, and the favourable nature of the local conditions under which, they have been worked. But this happy-go-lucky style of legislation will not do as a model for a general statute, unless it be desired to precipitate the matter into a veritable chaos of embarrassments. In view of this prospect, we can only hope that the President of the Social Science Association, who at Worcester, and still more recently at Nottingham, has shown the deep interest which he has in this question, will succeed in getting Parliament to appoint a Select Committee for a thorough investigation of the whole matter. Indeed, we should feel that the question would be placed on a better footing still if Mr. Hastings would be persuaded to take up the entire section of the Public Health Act referring to infectious disease, and recast it *en bloc*, in the light of the experience which has been gained in regard to its working since that measure was passed. We feel assured that this is the only way in which its various entangled relations can be satisfactorily dealt with; and, if a Parliamentary Committee is to take the trouble of thoroughly inquiring into the question of notification, it would not involve much more labour if it were to include in its purview the various other aspects of the subject from which notification cannot, without doing mischief, be detached.

SCOTLAND.

GREENOCK EYE INFIRMARY.

FROM the report presented at the annual meeting of the trustees of the Ferguson Eye Bequest, we find that, during the year just elapsed, 3,283 patients received surgical and medical treatment; of whom 3,210 were out-door patients, and 73 were admitted into the hospital. Of the 3,283 new cases treated, 3,126 were discharged cured, 95 partially cured, and 32 were dismissed as incapable of relief. The report shows that a very large proportion of those applying for advice are children of tender years, no less than 1,271 children having been brought in suffering from various forms of eye-disease. During the past year, additional outlay had been incurred in the furnishing and fitting-up of

the wards for the in-patients; but the financial statement submitted was of a satisfactory nature.

PREVALENCE OF FEVER IN DUNDEE.

THE Sanitary Committee of the Police Commission, Dundee, have agreed to open the Fever Hospital at the back of the Law (a hill behind Dundee), and, if necessary, also to establish a small-pox hospital. At the meeting at which this resolution was arrived at, a report was submitted by Dr. Anderson as to the prevalence of fever in the town; and it was also resolved that a committee should wait upon and learn from the directors of the Dundee Royal Infirmary what amount of accommodation that institution could furnish for fever patients.

THE EDINBURGH ROYAL INFIRMARY.

DURING the financial year just completed, there has been paid to the managers of the Royal Infirmary, Edinburgh, the sum of £22,137 2s. 11d. in donations and legacies. The sums vary from £90 up to £13,250 from the executors of the late Dr. Thomas Hunter, Deputy Inspector of Hospitals. This is certainly a handsome sum from a deceased member of the profession; among other benefactors, there are two other medical men, who have bequeathed sums of £150 and £200 respectively, while the sum of £100 was bequeathed by a deceased city missionary.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending September 23rd, it appears that the death-rate in the eight principal towns was 18.1 per 1,000 of estimated population. This rate is 0.1 below that for the corresponding week of last year; and 2.8 below that for the previous week of the present year. The lowest mortality was recorded in Greenock, viz.: 8.9 per 1,000; and the highest in Perth, viz.: 22.4 per 1,000. The mortality from the seven most familiar zymotic diseases was at the rate of 3.5 per 1,000, or 0.9 below the rate for the previous week. There was a considerable decrease in the number of deaths from whooping-cough and diarrhoea. Acute diseases of the chest caused 72 deaths, or 2 more than the number registered during the previous week. The mean temperature was 51.5°, being 0.8° below that of the week immediately preceding, and 1.6° below that of the corresponding week of last year.

NEW HOSPITAL FOR LARGS.

THROUGH the great liberality of Mr. John Clark, there has just been presented to the town of Largs a very thoroughly-equipped and handsome hospital, which is intended for the care and treatment of the poor when suffering from disease or accident. There are two principal wards, each of which contains four beds, but adjoining them are smaller wards; and the building has been so planned that it can easily be distinctly divided into two portions—namely, accident wards and places for the treatment of infectious diseases. All of the wards are lofty, roomy, well lighted, and cheerful, and are complete with every modern improvement. Every attention has been paid to the sanitary arrangements of the building, and the accommodation for the officials connected with the institution is most comfortable and complete. The hospital has been thrown open for inspection, and is now ready for receiving patients.

A PAUPER LUNATIC ASYLUM FOR ABERDEEN.

SUBJECT to the approval of the Board of Supervision, the ratepayers, and the Board of Lunacy, the St. Nicholas Parochial Board of Aberdeen have resolved to erect and maintain a lunatic asylum capable of accommodating 250 to 300 inmates, and sufficient for the requirements of the pauper lunacy of the parish; the proposed building to cost from £12,000 to £15,000. The reason of this resolution is, that the board have learned from a number of other large parishes in Scotland which possess pauper lunatic asylums, that in them the cost per head of each patient is £22 *per annum*, while, in the Aberdeen Royal Lunatic Asy-

lunatic, each patient costs the board £26 10s. *per annum*. The number of pauper lunatics belonging to the parish of St. Nicholas has increased greatly of late years, and now there are no less than 179 chargeable to it.

WEST OF SCOTLAND CONVALESCENT HOMES.

At the thirteenth annual meeting of the supporters of the West of Scotland Seaside Homes, Dunoon, held on Monday in Glasgow, and presided over by Sir Peter Coats, the report submitted showed that, at the date of last report, 124 convalescents remained in the homes. Since then, 2599 had been admitted (an increase of 232 on the previous year's admissions), and consisting of 1,343 men, 1,067 women, 99 boys, and 90 girls. Of this large number, 2,308 were restored perfectly to health, 120 were much improved, 41 received some benefit, 115 were not benefited, and 2 died, thus leaving 137 in the homes. The total outlay for the year was £4,344, and consisted of ordinary expenditure, £3,801, and the extraordinary expenditure, £543. The income for the year was made up by £1,040 of legacies and donations, ordinary revenue £4,563, and the munificent sum of £5,286 as an allotment from the receipts of the Glasgow Bazaar. During the thirteen years that the homes have been open, no less than 21,259 convalescents have enjoyed their benefits.

HEALTH OF GLASGOW.

THE report of the medical officer of health for the fortnight ending September 16th states that 439 deaths were registered, representing a death-rate of 22 per 1,000 living. This year still compares unfavourably with the last as to child-health, from the prevalence of diarrhoea and whooping-cough. The number of deaths of persons aged below one year was 125, and of persons aged sixty and upwards, 52. From pulmonary diseases there were 105 deaths, giving a death-rate of 5 per 1,000 living, and constituting 24 per cent. of the total deaths. The number of deaths from fever was 11—viz., 8 from enteric fever, 2 from typhus, and 1 undefined. There were 40 deaths from infectious diseases of children—viz., 31 from whooping-cough, and 9 from scarlet fever. There were no deaths from measles, a circumstance which has not occurred since November 1879. Whooping-cough continues to accumulate what will prove to be a large aggregate in the deaths of this year, and its steady increase during the last six weeks is ominous for the winter. The number of cases of fever registered was 67, of which 64 were enteric, and 3 typhus. There were also 100 cases of scarlet fever, 73 of whooping-cough, 21 of measles, and 21 of diphtheria registered, of which 53 were removed to hospital, and the remainder supervised at home.

STATISTICS OF VACCINATION IN SCOTLAND.

UNDER the authority of the Registrar-General, a supplement to the monthly and quarterly returns has been published. It contains much valuable and interesting information, and it has along with it the seven-yearly annual report on the vaccination of children, namely, of those who were born in 1880. In Scotland during that year, 124,674 children were born, and of these 87.734 per cent. were successfully vaccinated. By medical authority, 1.126 per cent. of the children had the vaccination postponed, while 514 children (0.412 per cent.) were found to be insusceptible of vaccination. No case of previous small-pox was mentioned as a cause of this insusceptibility. As many as 11,016 (8.836 per cent.) children died unvaccinated under the age of six months. Only 1.892 per cent. of the children were removed from the districts in which they were born, or were otherwise unaccounted for. As to the children who lived to be over six months of age, of whom there were 113,058, 90,297 were certified as successfully vaccinated, in 1.235 per cent. the vaccination had been postponed, and in 0.452 per cent. insusceptibility was certified. A point worth noticing is that in 359 out of 514 such insusceptible cases the insusceptibility was due to incapacity of signing proper certificates, while only 155 cases were said

to be constitutionally insusceptible. Two facts are noticeable regarding 1880. One of these is that the postponements are greater than in any previous year, and are even twice as great as in 1866; the other is, that there is only one year (1877) in which there has been such a small number (2359) of children who have attained the age of six months, of whose vaccination there is no record. The report also gives some valuable returns regarding small-pox in Scotland, to which we may return in a subsequent number of the JOURNAL.

IRELAND.

AN outbreak of scarlet fever has broken out in the district of Kells, County Antrim, and in order to prevent the spread of the disease, the public schools have been closed.

MEASLES is at present very prevalent in Dundalk, but generally of a mild character. It also prevails in Wexford district, but although severe, no deaths have yet occurred.

TWO fresh cases of small-pox were admitted to Clonmel Workhouse Hospital last week, but the disease, so far, has not prevailed to any great extent.

HUNTER HAMILTON COLAN, Brigade-Surgeon, A.M.D., died on the 23rd ult., at his residence in Ringaskiddy, of paralysis, aged 44.

COUNTY ANTRIM INFIRMARY.

At a meeting of the subscribers to the County Antrim Infirmary, Lisburn, on October 3rd, Dr. George St. George was elected as successor to the late Dr. Thompson. There were six candidates for the appointment.

ROYAL COLLEGE OF SURGEONS.

THERE will be an election of six examiners to examine candidates for the dental diploma of this college on Thursday next, October 5th. Three of the examiners must be Fellows of the College, and the remainder dentists, registered under the Dentists' Act, to examine in mechanical dentistry.

ELECTION OF MEDICAL OFFICER TO PORTAFERRY DISPENSARY.

A SPECIAL meeting of the Portaferry Dispensary Committee was held on September 20th, to fill up the vacancy created by the death of Dr. Filson. There were four candidates for the appointment, Drs. Crookery, Hastings, Smith, and Dunne. In the first poll, Drs. Dunne and Smith had the highest number of votes; but, on the final poll being taken, Dr. Dunne, Assistant-Surgeon to Down Infirmary, was elected by a majority of one vote.

HEALTH OF IRELAND: QUARTERLY REPORT.

THE births registered, during the quarter ended 30th June last, amounted to 32,679, being equal to an annual ratio of one in every 38.9, or 25.7 per 1000. The deaths numbered 22,874, or one in every 55.6, or 18.0 per 1000. The birth-rate was 1.8 per 1000 under the average, and the death-rate 2.4 under the average, for the corresponding quarter of the past five years. The returns for the quarter were favourable; but there was a general increase of fever, as compared with the preceding quarter. The prevalence of measles in Dublin, and small-pox in Belfast, has substantially diminished. As regards zymotic diseases, small-pox caused 33 deaths, against 83 in the previous quarter; measles 298, against 567; scarlet fever 241, against 306; whooping-cough 160, against 183; and diphtheria 82, against 120. Fever caused 200 typhus 287, enteric 220, simple continued 120, against 519; while cholera and cholera, taken together, produced 316 deaths—a number considerably below the average.

LUNATICS IN LIMERICK WORKHOUSE.

DR. NUGENT, an Inspector of Asylums, has recently visited this workhouse, and reports that there is located there an aggregate of 110 patients, essentially composed of persons helplessly demented, idiots, and epileptics. The inmates are fairly treated, but the accommodation is utterly unsuitable, and their condition is necessarily unsatisfactory. The females are about to be transferred to another part of the workhouse, a change which he does not consider an improvement. Dr. Nugent recommends as the wisest and most economical procedure the board of guardians could adopt would be, to erect, as at Belfast, a new building, altogether in a new locality, with a few acres of ground around it, to accommodate the insane at present located in the Limerick Workhouse.

ARDMORE DISPENSARY DISTRICT.

DR. CASHIN having joined the Navy Medical Service, has resigned the post of medical officer to Ardmore Dispensary. The district is a large and poor one, which explains the fact that about half a dozen vacancies have taken place within the past five years. At a late meeting of the Dispensary Committee, the following resolution was unanimously adopted:—"That we accept Dr. Cashin's resignation, and that the members present do gratefully thank Dr. Cashin for his skill and ability in the treatment of those with whom he had to do, and was most successful in all the cases under his charge; and they exceedingly regret his departure from amongst them." Dr. Williams has been elected as a successor to Dr. Cashin, at a salary of £120 *per annum*, exclusive of fees.

COTTAGE HOSPITAL, BALLYMENA.

THE first annual meeting of the friends and supporters of this hospital was held in the Ballymena Town Hall on Friday, September 29th. The secretary's report showed that forty-four patients had been received and treated in the establishment during the year, and, with the exception of two deaths, all were either cured or relieved. The amount received from patients was encouraging, and there was an evident desire exhibited by them to contribute to their own support. The statement of accounts showed that the receipts for the year had been £874 12s. 2d., and the expenditure £315 19s. 11½d., leaving a balance in hand of £558 12s. 2½d. This balance the committee asked for, and received power to allocate as a nucleus of a building fund for erecting a new and more commodious hospital on the beautiful site so generously presented by Lord Warency.

HEALTH OF BELFAST.

FROM the report of Dr. Browne, superintendent medical officer of health, for the last four weeks, it appears that 38 cases of zymotic diseases were reported by the medical officers of health as occurring among the poor. There were: typhus fever, 14; typhoid, 3; measles, 6; scarlatina, 10; and small-pox, 5 cases. Every precaution was taken in all these cases to prevent the spread of the contagion. The Registrar-General's return for the four weeks ending September 25th showed 74 deaths from zymotic diseases in Belfast, viz.: measles, 15; scarlet fever, 15; diphtheria, 2; whooping cough, 9; typhus fever, 2; typhoid fever, 1; diarrhoea, 30 deaths. There were 51 fatal cases of phthisis, and 54 from diseases of the respiratory organs, making 105 deaths from chest-affections. The total births in the four weeks were 461, and the total deaths 355, showing a natural increase in the population of 106 individuals. In the public institutions, 64 persons died, and 17 through accident or violence. The deaths of children registered for the same period under one year were 89, and of persons at or above 60 years of age, 50. The average death-rate from all diseases in the four weeks referred to was 22.1. The death-rate from lung-affections averaged 6.5, from zymotic diseases 4.6, out of which diarrhoea showed a death-rate of 1.9, and measles and whooping-cough a rate of 1.5. The average reading of the barometer, taken at 11 A.M., was 30.12°. The average maximum temperature was 63.3°.

THE EGYPTIAN EXPEDITION.

THE ALLEGED BREAK-DOWN IN THE HOSPITALS IN EGYPT.

PAINFUL public and professional interest has been excited by the statements telegraphed by most of the special correspondents in Egypt with regard to certain deficiencies in the arrangements for the management of the wounded in that country. General loosely-worded charges of inefficiency were made, and certain circumstantial stories were related, with many harrowing details. We read of officers being left to starve in the hospitals, of perfunctory discharge of their duties by medical officers, and by the men of the Army Hospital Corps, and of a terrible deficiency in drugs, medical comforts, and the necessities of life. We have made searching inquiries, both from our many correspondents on the spot, and from the best authorities at home, and the results are such as may dissipate any painful emotion of regret or disappointment. "Will it be believed", asks the correspondent of one journal, writing from Cairo under date of September 18th, "that at Ismailia—at the base—a Life-Guardsman's arm had to be removed at the shoulder, without chloroform, because there was none forthcoming?" We reply, most emphatically, "No, it will not be believed". What are the facts? Happily, a speedy contradiction of this mischievous story, calculated not only to bring into discredit a branch of the service which has deserved well of the country, but to cause a needless amount of suffering to those who have friends and relatives among the wounded in Egypt, has been given by Brigade-Surgeon Veale, who was principal medical officer of the base hospital at Ismailia, but who has recently returned to England, invalided. The only Life-Guardsman at Ismailia whose arm was amputated at the shoulder was Trooper Stevenson, belonging to G Troop, of the 1st Life-Guards; and, with regard to this case, Dr. Veale has officially stated that the man was under the influence of chloroform, since he himself saw him, in consultation, before the operation, and himself supplied to the surgeon who was administering the anæsthetic, a large bottle of chloroform, just before the operation itself was commenced. Thus the only story related with sufficient detail to allow of the facts being recognised by those connected with the service who are now in England, is seen to be entirely devoid of foundation. There never was any dearth of chloroform, or of other important drugs, sufficient to interfere with the treatment of the medical officers, or the comfort of the patients.

Other stories, too, are in circulation which tell how officers and men were neglected and starved; and we read about hardships "such as recall the experiences of the Crimea". Old soldiers who have really learnt in the Crimea or India what campaigning means, can afford to smile at such talk; but the public ought to be made aware of the real facts. As everyone knows, Sir Garnet Wolseley's movement from Alexandria to Ismailia, which involved an entire change of base, was effected suddenly and without warning; it was of its essence, as a military stratagem, that it should be sudden, and unsuspected by the enemy. Every general who makes such a movement must know that it cannot be made except at a certain cost; no man than Sir Garnet himself is better able to count that cost. All stores, all the apparatus and impedimenta of an army had to be suddenly transferred several hundred miles; of absolute necessity it follows that this transference must take some considerable time. The Commander-in-Chief, therefore, carried with him down the Canal a field-hospital (No. 3), and this hospital had to take charge of all wounded sent down to Ismailia until the arrival of the *Carthage*, which occurred as soon as the crowded state of the Canal and the exigencies of war permitted. On the arrival of the *Carthage*, the field-hospital moved up the country, and there was handed over to the officers who were to form a base-hospital at Ismailia, in the Khedive's palace, a large oblong, two-storied building, absolutely bare of furniture, beds, utensils, or stores. At page 647 of our last number (September 30th) will be found a graphic description from one of our correspondents at Ismailia of the difficulties which had to be contended with, and how they were overcome; "latrine barrows" for removal of the excreta, on the dry earth system were improvised, and untiring efforts were made to land stores, and to provide for the comfort of the sick. Native labour there was none, or very little; everything had to be done by the men of the army hospital corps, working under the direction of the medical officers. Frequently the men of this corps, after working all day at landing stores and attending to the sick and wounded, had to devote the hours which ought to have been given up to well-earned repose, to bringing in the wounded. Late at night, a message would arrive that a batch of wounded men were on their way to the base. The men of the Army Hospital Corps would turn out with their litters, and wait at

the railway-station until the train came, at whatever hour that might be, and often the waiting was prolonged. As soon as the wounded arrived at the station, they were carried to the palace, and into the large central hall; there they were seen by the medical officers, who shortly examined the men, and ordered their removal, the sick to the wards in the ground-floor, and the wounded to the wards on the upper storey. While these preliminaries were being adjusted, brandy, beef-tea, and other comforts, were administered. No doubt the organisation of the base hospital entailed great labour on those responsible for its efficiency, and some temporary hardship on the sick and wounded. Nothing else is possible. A hospital to contain from two to three hundred patients cannot be got into working order by a stroke of the pen: food and medical stores for an army of seventeen thousand men cannot be landed with the speed that a practised correspondent can write a graphic letter, even where labour is plentiful. We have, however, the best authority for saying that in no case and at no time was there at the base hospital any real deficiency in necessities; food, drugs, and medical comforts were landed daily and in sufficient quantities. Men went down to the base, and hearing that the hospital was established in a palace, perhaps expected some of the luxuries which we are accustomed to associate with such a residence. The food, perhaps, was not varied, or very luxurious; but ample dinners of fresh roast beef could be provided for those who were well enough to eat solid food; beef-tea, preserved milk, etc., were obtainable in sufficient quantities; and the supply of ice and grapes was regular and good. The most crucial test is the result, as tested by the health of the patients; and this has been most satisfactory. No epidemics have occurred in connection with the hospital; and this, although it was quickly found to be too small to accommodate all the sick and wounded, and tents had to be pitched wherever a suitable spot could be found in the palace garden.

We hear that an inquiry has been applied for with regard to the alleged insufficient supply of food to the troops, and we hope that the truth on this question, which is considerably exercising the public mind, may be elicited. The Army Medical Department has nothing to fear from such an inquiry; it has no duties as to the supply of food except to its own patients, and that, as we have stated, was, to the great base hospital of which alone we have at present certain information, quite sufficient to meet all requirements. We are confident, and we know that we have good grounds for our confidence, resting as we do, not only on the relation of many facts which have come to our knowledge, but on the high character of the service itself, that, whoever may be found worthy of blame, if there be any blameworthy, it will not be those members of our noble profession who have taken part in the expedition to Egypt. They will be found to have exhibited not only valour on the field of battle, but a power of endurance of labour and privation, a persistency in well doing through good report and evil report, and an unquestioning devotion to their duty, which their critics might well envy.

THE *Orontes*, troopship, Captain H. G. Andoe, has arrived at Portsmouth with wounded and sick from the late war in Egypt. The ship left Ismailia on September 18th, and Port Said on the following day, reaching Malta on the morning of the 23rd, and leaving in the evening. On her arrival at Gibraltar, the list of officers, the number of men, and other details were telegraphed to the War Office by the principal medical officer, and the official telegram appeared in the *Daily News* on Saturday last. It is only necessary, therefore, now to state that there were nineteen military officers and 167 men of the army, and one naval officer and twenty-nine seamen and marines on board. The ship made a very good voyage, with fair winds, and only an occasional fog. The majority of the wounds were those of gunshots or splinters of shell; but all the patients have done exceedingly well, and the majority are expected to be convalescent in a week or ten days. Only one death occurred, that of a seaman from dysentery. Among the military officers of the army was Lieutenant Wolff, of the Irish Fusiliers, the son of Sir H. D. Wolff, one of the members for Portsmouth. The hilt of his sword was struck by fragments from a shell at Tel-el-Kebir, and two of his fingers were injured. The only naval officer on board was Lieutenant Purvies, of the *Penelope*, whose right arm was cut away. A second operation had to be undertaken on his arm, but it went on favourably, and he is now in Haslar Hospital. Admiral Ryder, the naval commander in chief, and the other members of the fleet, the general commandant, and other naval officers, were on board, and, when the ship left, the military and naval stores were removed, the military by the *Orontes*, and the naval by the *Penelope*, and men in a gunboat to Haslar. The medical staff of the hospital were exceedingly detective. The wounded crossed the harbour from

the *Orontes* to the hospital, drew too much water to admit of her going alongside the steps at the landing-stage. The patients had, therefore, not only to be conveyed over a lighter, which was lying alongside, but hauled some eight or ten feet up an incline of nearly forty-five degrees. When, too, they were ashore, it was found that the tram-cars in which they were to be conveyed from the landing-place to the hospital were so narrow, that the stretchers had to be slanted before they could gain admission. The patients, however, who had been treated from the moment they were injured with the utmost care, at length found themselves safely in the wards, with every prospect of a speedy recovery.

ACCORDING to a Reuter's telegram from Cairo, under date October 4th, the health of the British troops, which was rather unsatisfactory after their arrival at Cairo, has considerably improved during the last few days.

THE ANNUAL MUSEUM OF THE BRITISH MEDICAL ASSOCIATION.

[Continued from page 652.]

MR. BENNETT MAY (Birmingham) exhibited specimens of a Tongue and greater portion of the lower Jaw and Floor of the Mouth, removed for Epithelioma.

Messrs. Mayer and Meltzer had a display of their Patent Clinical and Surface Thermometers, their Patent Trusses, Pudgen's Pocket Sphygmograph, Bigelow's Lithotrites and Evacuating Apparatus, Clover's Portable Ether and Gas Inhalers, Morell Mackenzie's Laryngeal Instruments, etc.

Mr. David Marr (London) exhibited his well known Surgical Instruments and Steam Spray-Producers.

Messrs. Mottershead and Co. (Manchester) showed and distributed specimens of their Benger's Liquor Pancreaticus, Liquor Pepticus, and Benger's Peptonised Beef-jelly and Self-digestive Food. We have already had occasion to speak favourably of these dietetic preparations, which we are pleased to hear continue to advance in public favour.

Dr. Neale exhibited his new Chemical Lung and Pankah for sick rooms, hot climates, crowded buildings, and railway tunnels. This was shown in action, and was described and shown by Dr. Neale in the Public Health Section on Wednesday, August 9th.

Messrs. F. Newbery and Sons exhibited specimens of Messrs. W. R. Warner and Co.'s preparations, including Ingulin from the Ventriculus Callosus Gallinaceus, indicated in cases of vomiting in pregnancy, marasmus, sea-sickness, gastralgia, etc., and their soluble and permanent sugar-coated pills.

Messrs. Packham and Co., Limited (Croydon), showed samples of their improved Non-alcoholic Beverages for dietetic purposes, prepared wholly with distilled water.

Messrs. Parkes and Son (Birmingham), exhibited their new English Medical Microscope, of excellent make, complete, with A and B eye pieces, a superior $1\frac{1}{2}$ and $\frac{3}{4}$ rd inch, and also a first-class $\frac{1}{6}$ th inch object glass of 95° aperture in mahogany case, at the moderate price of £6; also a portable Histological Class Microscope, one eye piece (either A or B); a high class 1 inch object glass of 18° aperture; a high class $\frac{1}{8}$ th inch of 75° aperture, at £4 5s. They further showed their new Freezing Microtome, and Microscopic Apparatus and Specimens.

Messrs. Pickard and Curry showed Mr. McHardy's Registering Perimeter, which is said to be the most perfect perimeter yet constructed. The firm have published a pamphlet, written by Mr. McHardy, giving full instructions for the use of the instrument. The pamphlet is sent free to applicants. The display consisted also of Oculists' Trial Cases and the Ophthalmoscopes of Couper, Purves, Loring, the Westminster, Gowers, De Wecker, Landolt, etc.; Medical Microscopes, Optometers. Test-types for distant and near vision, Holmgren's Wools, and every instrument required for refraction tests. This firm was the only recipient of the First Class Award for English optical instruments at the late International Medical and Sanitary Congress.

Mr. Pilscher exhibited, as in previous years, his well-known forms of Students' and First Class Microscopes and Apparatus. Of the former, we have particularly to mention his "International" microscope as a handy, inexpensive, and thorough good instrument for histological work, and for having been lately further improved, both in mechanical and optical details. Amongst Mr. Pilscher's extensive collection, we also observed different kinds of ophthalmic instruments with latest improvements, such as used in modern ophthalmology; Ophthalmoscopes of De Wecker, Landolt, Gowers, Loring, etc.; Tweedy's Improved optometer for estimating the degree of a normal and regular astigmatism; Förster's Cones for acute myopia; some

very fine specimens of Artificial Human Eyes; and Oculists' Test-Cases, with complete sets of lenses on the dioptric, metric, and old systems. On careful examination, we can speak in the highest terms of the quality and workmanship of the instruments produced at moderate prices by this firm.

Mr. J. F. Pratt (London) showed Mr. A. Willett's improved Baker's Stays for some cases of spinal curvature; Magneto-electric Apparatus for restoring suspended animation after chloroform; a simple apparatus for making an Electrical Bath; medical batteries; Stohrer's continuous and interrupted, Pratt's twenty and thirty-cell portable Battery; Thermometers; hypodermic syringes; and spinal and ovariectomy instruments of various and improved kinds; also a good selection of midwifery bags; midwifery instruments; Higginson enema; drainage tube, and celluloid catheters.

Mr. J. B. Reynolds (Worcester) exhibited a model of his "Invalid's Help," or Anti-arthritis Couch.

Messrs. J. Richardson and Co. (Leicester) had a choice display of their various specialities. There were their soluble Pearl-coated Pills, the superiority of which has received general recognition; their Liquor Secalis Ammoniatum; Thymolodyne; Syrup of the Hypophosphites; Liquor Cinchonæ Flavæ; their Cod-liver Oil and Cod-liver Oil Emulsion; as also their Thymol Jelly. This latter is said to be a most convenient and valuable adjunct in midwifery practice, and a preventive against puerperal fever. Of Richardson's liquor secalis ammoniatum, it is, perhaps, only necessary to state that it has been awarded no fewer than eight high class medals, and has been pronounced by eminent medical authorities as "taking precedence of all other preparations of ergot."

Mr. Charles Roberts exhibited an interesting Map showing the average Stature of the Adult Male Population of the British Isles (age from 23 to 50 years). The highest stature was indicated, and the following were explained as the chief points of interest. The greatest stature prevails in Scotland and the North of England, where the population is descended from the ancient Pictish or Cimbro-British (Galloway), the Caledonii (Perthshire), the Anglo-Danish and Norse (North and East Yorkshire, Cumberland, Westmorland, Lincoln, and Norfolk), and the more purely Anglian tribes (Lothians, Berwickshire, and Northumberland). On the other hand, the shortest stature is found in Wales, and the South-west of England, where there is a large admixture of Welsh blood with that of the Saxon. The districts occupied by men more purely Saxon are of medium stature. Allowing for racial distinctions, the inhabitants of elevated or hilly districts possess a greater stature than that of alluvial plains. The river valleys of the Severn, the Thames, the Dee and Mersey, the Trent, and the fen country of Cambridge and Huntingdon, show a lower stature than those of the surrounding counties of a similar race. Stature is greater in the north and cooler, less in the southern and warmer parts of the island. There is a fringe of higher statures all round the coast, indicating the sanitary advantages of sea-air. It is probable that the low statures of the river-valleys indicate a less healthy condition than in those of elevated positions. The low position of the West Riding is due to the existence of a large town population, and that of Durham to a large mining population. The very low position of the home counties—Hertford, Surrey, and Middlesex—is due to their proximity to London, which absorbs the more vigorous population and casts out a degenerate class upon them.

Mr. Bernard Roth exhibited three Photographs of a case of Torticollis, treated by Tenotomy and "Medical Gymnastics" combined.

Messrs. Salt and Son (Birmingham) contributed, as usual, a large and varied collection of novelties, conspicuous among which may have been noticed a very ingenious instrument of their construction, at the suggestion of Mr. W. D. Bowkett, for determining and recording on permanent diagrams the varying temperature of a patient during twenty-four hours. This is accomplished by utilising the expansive power of ether when affected by heat, so as to control the movements of a small writing lever, which rests upon a dial rotated by a watch movement within the instrument once in twelve or twenty-four hours. An accurate tracing is thus obtained, which records, not only the extent of the variations of temperature, but their duration and the hours at which they occur. The Thermograph is scientific in design and unique in construction. Dr. Dudgeon's Pocket Sphygmograph excited considerable interest. Messrs. Salt and Son also exhibited a great variety of their neat and portable Hypodermic Syringes, Pocket Dressing Cases, and Urinary Test Sets in Aluminium Cases, and a number of Appliances in Celluloid or Xylonite. Messrs. Salt and Son, the local agents for Mr. Cocking's Poroplastic Felt Jackets and Splints, exhibited an interesting collection of these, to show the many and varied purposes to which the material may be applied.

The display of Messrs. Southall Brothers and Barclay (Birmingham) contained their Sea-Salt, used at the Aston Aquarium. It contains all the saline matter in the proportions in which they exist in sea-

water. It has been largely used, and is recommended by them for baths when the sea-side is not attainable. The Laxative Senna "Jujubes," shown by this firm, were very palatable; no nauseous taste whatever was perceived. They are nicely finished, and are likely to be appreciated by ladies and children. Southall's Soluble Meat is a well prepared extract of the nutritious portion of lean beef, being moderate in price and agreeable to taste. Other proprietary articles of this firm were also exhibited, as the Ladies' Sanitary Towels, Antiseptic and Absorbent Dressings, Prepared Millboard Splints and Tenax. The pharmaceutical preparations were of a high-class character. Besides several Tinctures, Liquid Extracts, and Solutions, there were some Powdered Extracts, being equivalent in strength to the soft extracts of the *Pharmacopæia*. There was also a choice collection of rare drugs and chemicals.

Messrs. T. Walter and Co., among other specialities, showed their Palm Lint, a new dressing made from the leaves of the palm-tree, said to be much more absorbent than any kind of lint now in use. Howard's Nasal Plug, for stopping bleeding of the nose, consists of an India-rubber bag, which is introduced along the floor of the nose; it is then inflated by means of an India-rubber ball, and fills both the posterior and the anterior nares; and they also showed Jackman's Vaginal Speculum, which can be easily regulated, and the blades of which can be made to come even with each other at any point of expansion; and Gervis's Anteversion Pessary, made of celluloid.

Messrs. James Woolley, Sons, and Co. (Manchester), exhibited several remedies of comparatively recent introduction, including Solution of Hydrofluoric Acid, of the strength recommended by Dr. Woakes in bronchocele, Cinnamic Acid, Tartrate of Chinoline, Resorcin, Iodate and Salicylate of Quinine, Salicylic Camphor, and Professor Barff's Boroglyceride; also Boracic Acid in impalpable powder and other forms for external application, and a Sanitary Rose-scented Nursery Powder, into the composition of which very finely divided Boracic Acid largely enters. Amongst other novelties exhibited by this firm, were a Concentrated Mixture for the extemporaneous preparation of the Lactic Acid Lemonade, recommended by Dr. Saundby as a beverage for diabetic patients, and Collodion, with 10 per cent. of Iodoform, as introduced by Mr. Walter Whitehead of Manchester. Messrs. Woolley's display also comprised white and yellow varieties of their Hydrocarbon Ointment-basis; Mineroline, and several ointments, termed minerols, made therewith, of which the principal were the minerols of Capsicine, Eucalyptol, Iodoform and Oleates of Mercury and Zinc, and the following specialities for internal use:—Maranhu, a sodium-compound of the active resin acids of copaiba; Akolethe, a solution of the sedative principles of opium; "Extra Pale" Cod-Liver Oil, an emulsion of cod-liver oil sweetened with glycerine in place of sugar (for diabetic patients); Extract of Malt, with diastase prepared *in vacuo*; Tasteless Coated Filules of Phosphorus; and other remedies.

The display of the Sanitary and Economic Supply Association, Limited (Gloucester) included Dr. Bond's patent Euthermic Water-heater and Ventilating Gas-Stoves, to which a medal was awarded at the recent Smoke Abatement Exhibition at South Kensington; Aerating and Regulating Filters; Crossley's and Dr. Bond's Ventilators; Gill's Sanitary Closet; and other appliances of known utility.

The Sanitas Company, Limited, exhibited their well-known "Sanitas", which has met with wide recognition and approval as a valuable disinfectant and antiseptic. In the hospital as a disinfectant, and in the surgery as an antiseptic, "Sanitas" is equally valuable. As an air-purifier in barracks, workshops, schoolrooms, and in dwelling-houses, it renders signal service; while it has been found of the greatest use by medical officers for disinfecting dairies, slaughter-houses, cattle-sheds, and the like. It has the great advantages of possessing no unpleasant odour, of being perfectly non-poisonous, and produces no stain, and mixes readily with water. The Sanitas products consist of Sanitas oil, fluid, powder, ointment, and soap, all of which are of value for their several uses.

Mr. Thomas Sansome (West Bromwich) exhibited twenty-two specimens of Vesical Calculi. Of twenty-two operations, one only had proved fatal, death in this instance having resulted from pelvic cellulitis fourteen days after operation.

Some new patterns of the Silicated Carbon Filters were shown. These filters received a first award at the International Medical Exhibition, and have the advantage that every part is movable for cleansing purposes, and can be recharged with new silicated carbon at any time in a few minutes.

Messrs. Symes and Co. (Liverpool) showed specimens of their Medical Batteries, Urethral Irrigators, Urinary Test Stand, Steam and Chloroform Inhalers, etc.

SOCIAL SCIENCE CONGRESS AT NOTTINGHAM.

HEALTH DEPARTMENT.

At the meeting of the Health Section, on September 21st, Mr. THOS. M. DOLAN, F.R.C.S., read a paper on the question, "How does the Employment of Mothers in Mills and Manufactories influence Infant Mortality? and ought any, and if so what, Restrictions to be placed on such Employment?" In it he said: Since the publication of a small pamphlet, in 1872, on this subject, he had given increased attention to this question, with the result of convincing himself that infant mortality was favoured by the employment of women in factories during the last days of gestation, and by a too early return to work. By the latter custom, the new-born infant was deprived of its natural support at a period when it most required it. Improper feeding and bad nursing, the result of ignorance, accounted for the large number of infants who died, and for the arthritic diseases of infancy. Some steps should be taken to limit the employment of women. We had a precedent to guide us in the action taken by M. Jean Dolfus of Mulhouse. Women in his employment lost 40 per cent. of their children. M. Dolfus paid six weeks' wages to his operatives during the time they were absent owing to confinement. After three years, the mortality decreased from 40 to 25 per cent. Six other manufacturers in Alsatia adopted a modification of M. Dolfus's plan. They allowed the female operative six weeks' absence, but they established a fund to which the operative contributed. M. Dolfus had indicated the lines on which reform should proceed. The writer was in favour of six weeks as the period of absence to be allowed to parturient women. As regards payment of wages, the husbands should make provision, by payment into a fund to be managed and provided for the purpose, either by employers or the employed. A reform of this nature should be carried out, not by the Legislature, but by those who are immediately interested. A committee should be appointed by the Social Science Congress to collect statistics. As much ignorance prevailed on the subject of infant feeding, a short code of rules should be drawn up and distributed. This might be done by printing these rules on the vaccination paper, given by the registrar of births. Various supplementary agencies should be considered in their bearing on the reduction of infant mortality, as midwives, popular lectures, and instruction in Board schools, on the principles of nursing. As thousands and tens of thousands perish annually in England from inattention to the ordinances of nature, every well-meaning attempt to diminish such an evil should be welcomed.

Dr. MARTIN, in the course of a paper, asked whether any restriction ought to be placed on the employment of women in mills and factories. They had seen that it led to loss of health, much suffering, in not a few instances to loss of life. Society was bound to take the necessary means of putting a stop to such an inhuman and unnecessary state of things.

Mr. WHATELEY COOKE TAYLOR read a similar paper on the question concerning the employment of mothers in mills and manufactories, the influence on infant mortality, and what restrictions should be placed on such employment." The paper was composed under the impression that the late Professor Jevons was to write upon the other side, and has had, therefore, to be somewhat altered since his death. It commenced with a review of past legislation on the subject of limiting women's employment. The first statute undertaking to do so was the Mines Act of 1842, and the most recent the Factory Act of 1878. Under either of these, or of intermediate statutes, women were forbidden to be employed in almost any manufacturing process except under strict Government supervision. But a critical time was now approaching. "Emulative of the honours which the fathers of the factory system won, certain competitors in philanthropy were emboldened" to promulgate more or less.

Mr. F. S. POWELL moved, "That the Council be informed that the section, having carefully considered the question of the employment of mothers in mills and factories, is of opinion that it is not competent for the Legislature to be placed by statute on the employment of mothers in mills and manufactories."

The resolution was carried *unanimously*.

On September 24th, Dr. T. Gilbert-Smith read a paper on "What reforms are desirable in the administration of hospitals?" The writer expressed the opinion that the intention to deal with matters of hospital administration, and more especially the metropolitan hospitals, and more particularly with the London hospitals, by a Royal Commission, was a laudable one. He pointed out some of the most important points for consideration, and suggested some reforms, and suggested some administrative, medical education, registration, nursing, and medical hospitals. The different systems of management at present observed were stated, and were shown to be in a state which with difficulty be worked con-

sistently with the advances recently made in public opinion regarding hospital administration. An uniform system of keeping the books and accounts was recommended, and the necessity for a properly conducted public audit, in order to secure a right distribution of medical relief, and as a guarantee of economy to the benevolent, was made evident. The important part played by the metropolitan hospitals in medical education was also considered at some length, and the education of medical men, involving matters of vital interest in every department of the State, was shown to suffer for want of an intelligent recognition of their responsibilities in the matter on the part of hospital governors. Relative to the nursing department many desirable reforms were discussed, such as the appointment of a nursing committee, on which the medical staff should be duly represented, which should meet frequently, and whose executive officer would be the matron. The author showed that the interests of the hospitals demanded that these departments should not develop into nurse-training institutions, save so far as might be requisite to feed their own requirements. Reforms were also considered in connection with night nursing, and domestic arrangements and allotment of beds to the sisters. The system of transferring nurses from ward to ward was strongly condemned. The indiscriminate institution of special hospitals was shown to be harmful to charity and to science. Dr. Gilbert-Smith laid down a number of propositions which dealt with the question in definite terms. Dr. Gilbert-Smith concluded his paper as follows. "Having regard to the complications and difficulties which surround this question, and to the necessity for efficient reorganisation, there can be but one opinion, namely, that a full, wide, and searching inquiry into all its bearings can only be obtained by the appointment of a Royal Commission. This has been the unanimous opinion of the influential deputations which have waited upon successive Home Secretaries in connection with the English hospital system. The duty of this Commission would be to examine into the whole subject, to fully ascertain the needs of the sick poor in the metropolis, to review the means at present available for their relief, and to report on their adequacy or inadequacy for the purpose: to examine the charters regulating endowed institutions, with a view to their revival if needed; to inquire into the relations of hospitals to medical schools; to obtain evidence as to the working of all departments, administrative and executive, of these charities; and, in the event of its appearing needful or desirable, to devise and recommend a scheme for effectually placing medical relief in the metropolis upon a satisfactory foundation. The appointment of such a Commission in no sense implies the handing over of our public and charitable institutions to the management of Government. Such would not, in my opinion, be for the advantage of the metropolis. I am in accord with those who are convinced that a favourable time has now come for the institution of a full and impartial inquiry into the accommodation afforded by, and the present system of management and administration of, the metropolitan hospitals and other institutions for the medical treatment of the sick."

Mr. F. S. POWELL (Bradford) moved the following resolution:

"That this department, deeply convinced of the necessity of reforms in the administration of metropolitan hospitals and other institutions for the medical treatment of the sick in the metropolis, requests the Council to continue their exertions to obtain the appointment of a Royal Commission with a view to obtaining reliable data upon which reforms in such establishments should be based, and to make such recommendations as may appear desirable."

Dr. CAMERON (Medical Officer for the City of Dublin), in seconding, spoke of the large number of hospitals to be found in Dublin, a number quite out of proportion to the population; and he strongly deprecated too much legislative interference with these institutions, which really were private establishments. He believed there were many matters which ought to be inquired into by a Royal Commission, although in Dublin some defect in sanitary arrangements or mismanagement might be dealt with under the Public Health Act by the present Council of the Corporation.

Mr. W. H. WATSON, M.P. (Glasgow), said that the question of hospital management was an important one, and that the subjects of modern times. He believed it was the duty of their attention should be directed to the question, not merely of the buildings, alteration, and improvement of hospitals, but also of the state of the wards and floors should be put in a state, and the treatment of the cases of patients received in these hospitals was more or less. A large number of people went to these hospitals who were not there for medical advice, and who were contented to pass through the physical dispensary or infirmary, for the purpose of obtaining what they required. Reform was necessary in the management of these hospitals, and he suggested that the election should be made by the managing committee of hospitals.

Mr. II. H. COLLINS (London), speaking as an architect, said that medical men were so divided in opinion themselves, that the architect and the builder really did not know what to do to meet their views. Absolute cleanliness, light, and plenty of air were the chief things to be sought after. Alluding to the want of accommodation for out-patients at hospitals, he described their condition, waiting hour after hour to see the medical man, as being simply miserable; and pointed out the danger there was of dangerous diseases being contracted in the waiting-rooms.

Dr. WHITE (Nottingham) strongly supported the resolution, recommending the appointment of a Royal Commission.

A communication from Dr. Ogle, Physician to the Derbyshire Infirmary, was read by Dr. GILBERT-SMITH. In the course of his paper, Dr. Ogle defined hospitals as being institutions for the care, and, if possible, for the cure of severe sickness, whether medical or surgical; and for such cases, only not severe, as would, if left at home, be a source of peril to others. One of the most notorious defects in our hospital system was the overwhelming number of out-patients; and he thought, if hospitals were restricted to the reception of severe cases of sickness, nine out of ten, if not nineteen out of twenty, out-patients, would go elsewhere. The nine or the nineteen, he would follow to their homes, and inquire what other active measures should be taken for improvement of home medical aid. Great advances had been made in late years in the departments of Poor-law practice, club practice, and dispensary practice, but much remained undone. He enforced the necessity of a well-organised nursing department in every hospital.

The Rev. V. D. DAVIS (Nottingham) said he was surprised that no more serious efforts had been made to get a provident dispensary established in Nottingham. The only feasible plan he could see was to convert the present free dispensary into a provident dispensary.

The CHAIRMAN said it was not only the care or cure of the sick which they had to provide for in hospitals, but they had also to provide means of education for the medical men who would have charge of the health of the nation in a few years. These many and various matters, he believed, could best be dealt with by means of the appointment of a Royal Commission.

The resolution proposed by Mr. Powell was unanimously adopted.

On the 23rd instant, Sir JOHN POPE HENNESSEY read a paper on the "Chinese System of Sewerage," in which he said that the Chinese nation had preserved its health and longevity longer than any other nation on the face of the earth, and owed their prolonged vitality and energy to their method of dealing with sewerage. Disease arising from sewage gas, so destructive in England, was almost unknown in China, and during his period of government in Hong Kong he found the only cases of typhoid fever that occurred were in houses where the western system of drainage was adopted—underground drains and water-closets. The Chinese had no such system, but returned as promptly as possible to the earth the matter thrust from their houses. When investigating the cause of the great mortality which prevailed amongst the troops at Hong Kong, he found that the barracks in which they lived were drained according to the western system. The waves of cholera, which, sweeping over Russia and India, were so devastating, did but little damage in China, and he attributed that to the mode of dealing with sewage. He commended to the consideration of English sanitists the Chinese method of dealing with the excreta from their houses and other refuse matter.

Dr. WHITTLE (Liverpool) asserted that some years ago typhoid fever was almost unknown in Liverpool, but since the introduction of the modern system of drainage it had become greatly prevalent.

Dr. HILL pointed out that typhoid fever had of late years decreased in all the large towns of England, it having fallen from the figure of 70 to 30. He believed the water-closet system well carried out was perfectly safe.

Dr. HATHERLY (Nottingham) read a paper written by Dr. William A. Guy, F.R.S., on The Small-pox Epidemic as Affected by the States of War and Peace. The author of this paper had, in 1875, 1877, and 1881, brought forward the subject of animal vaccination before the notice of the Medical Society of London. At first, he had merely asserted that this new practice was of great importance, in that it afforded an unlimited amount of good lymph in times of great epidemics of small-pox, when arm-to-arm vaccination failed to suffice; and also that it was free from the reproach of sometimes communicating specific disease from diseased to healthy infants. He had, therefore, in his earlier papers recommended that the State should, if it made vaccination obligatory, give a choice to all to have recourse to animal vaccine instead of humanised. As time passed, however, it began to be ascertained that animal vaccination had far higher recommendations than even these. Thus, it was stated by Martin, in 1877, that erysipelas, one of the dangers in arm-to-arm vaccination, was unknown when

animal vaccine was used; and latterly, in 1880, it had been given in evidence by Dr. Warlomont of Brussels, Dr. Martin of Boston, and Dr. Meares of San Francisco, that animal vaccination was a perfect preservative against small-pox. Of 80,000 vaccinations made by Dr. Meares, not one was taken with small-pox in the epidemics which attacked so many, and proved fatal to so many of those who were supposed to be protected by having been vaccinated with long-humanised lymph. Dr. Drysdale remarked that he had witnessed the great difference in the appearance of the scab when humanised and animal lymph were used. In the former case, the crusts fell before the fifteenth day, and the scar was often extremely slight; in the latter, the crusts often remained on four weeks, and the scar was like that described by Jenner in his early cases. Humanised lymph was not now nearly as productive as it was at the commencement of the century. Then it was supposed to protect for life. Now, one-tenth of the vaccinated, when attacked with small-pox, died. He concluded that there was no longer any doubt on this question, and that humanised lymph should be entirely abandoned, as it had been in Belgium, Holland, and the United States, in favour of calf-lymph. The State should, as soon as possible, have stations in the United Kingdom, and dispense gratuitously animal vaccine, as it now does humanised.

Mr. W. H. MICHAEL, Q.C., read a paper on the Notification of Infectious Disease, and at the outset pointed out the terrible consequences which frequently resulted to the working classes from the use or consumption of articles made in rooms where infectious diseases existed. But whilst this class suffered most it really punished the rich as well as the poor. He instanced a case of small-pox which occurred in Westminster, and from the circumstances strict isolation was sought to be enforced, but without effect, and the result was that fifty cases occurred in the same street. Under existing circumstances the wonder was not that infectious diseases were spread, but that their fatal energy ever came to an end. Diseases were now spread in a way which was a disgrace to humanity. Opposition to the registration of infectious diseases had arisen from a quarter least to be expected—from a portion of the medical profession who claimed to be put in the position of priests, and to these medical men he would say, would you like to eat meat pies or pastry made by infected hands, or would you allow your children to wear garments worked in houses where fever existed? In conclusion, he urged the medical men to support the registration of infectious diseases, so that isolation and prompt relief might be afforded, so as to give the lives of those whom, if they would, they could do much to save.

Dr. H. D. LITTLEJOHN (Medical Officer of Health for Edinburgh) read a paper on the same subject in which he stated the import of the clause in the Act obtained by the Corporation of that city for the prompt dealing with infectious diseases. He then proceeded to describe the results of this provision, and stated that in February last two hundred cases of measles were reported, and one morning thirty cases were reported, and steps were at once taken in the hospitals to provide beds for these patients. Thus the state of public health was ascertained in Edinburgh every morning with perfect accuracy.

Dr. BROOKHOUSE (Nottingham) said, after discussion, the medical profession in Nottingham had decided against the principle of the notification of infectious disease. Nevertheless in Nottingham they had notification imposed upon them. Now, notification in the abstract, could serve no good purpose, unless backed up by compulsory removal. And what right had the State to expose a person suffering from infectious disease to the unavoidable risks consequent upon exposure in removal. What right also had the State to interfere with the personal liberty of the subject?

Dr. WHITTLE (Liverpool) opposed the notification of diseases, first of all on the ground of the public health, because he was convinced that so far from preventing the spread of these diseases it would tend to sow them broadcast. At Bolton typhoid fever had increased threefold in consequence of notification, because notification was not given until death was imminent. In conclusion, he said he regarded this as a declaration of war to the knife against the medical profession.

Dr. ALFRED HILL entirely supported the views expressed for the compulsory notification of disease.

Dr. JACOBS (Dublin) strongly opposed notification, and regarded it as an infringement of individual rights, and a breach of the constitution.

Dr. CAMERON (Dublin) said he felt somewhat humiliated at the selfishness which had induced certain members of the medical profession to take up a position which he regarded as certainly a false one. As the doctors were the first to become aware of small-pox and fever, they ought to be the men who gave the information.

Mr. CHADWICK spoke in favour of compulsory notification.

Alderman FORD said, if in the early stages of the outbreak of small-

pox at Nottingham, they had had notification of the disease, it would have been stamped out before they had a dozen cases, whereas some 500 cases had been reported, the disease having become widespread. They found that one medical man had seven cases where he had never recommended isolation or revaccination, and the result was that the disease was spread far and wide. They had only had compulsory notification for a short time in Nottingham, but they had experienced the great advantage of it since they had had those powers. Notification was acting exceedingly well, and in no case had the public expressed any dissatisfaction.

Dr. WHITE (Nottingham) said, in practice he had not known a single instance in which there had been a single objection raised to the notification of infectious disease on the part of the friends. In Nottingham the notification had been thrown rather upon the householders than upon the medical men, but as soon as the matter had been mentioned to them the householders had at once asked the medical man to undertake the responsibility of it.

Dr. RANSOM (Nottingham) thought one of the most important results of the notification of disease would be improved knowledge of the maladies which were in existence. He might assume that some kind of notification was desirable, and it was evident that it would certainly be useful in proportion as it was complete. But with respect to poorer persons, there would arise the question of interference with the means of their subsistence. If a man's business was stopped by the requirements of the public, it was evident that the community must compensate that individual.

Dr. HATHERLEY (Nottingham) strongly supported compulsory registration, and said the interests of the individual should be subservient to the interest of the community. In no instance had he known any objection raised by patients to notification.

Dr. SEATON (Nottingham) referred to a few points which were of special importance in the discussion of the matter. In the first place there had been a decided attempt to imply that the question of compulsory notification of disease was the same as the question of compulsory removal to hospitals. Now that position he objected to strongly. They required compulsory notification for a variety of reasons; amongst them was to enable them to persuade if possible persons who were not properly isolated at home to be removed to hospital. He would be no party to compulsory removal to hospitals, and they could do a great deal of good by notification without removal at all. They had been able to do a great deal of good by vaccination in districts where small-pox had broken out, of which they had become aware by notification. That was one of the most important results accruing from the notification of diseases. In the case of typhoid fever the question of removal to a hospital really never entered into the heads of the sanitary authorities, but they prevented it by other means—such as drainage. In many instances it was communicated by a contaminated food supply, and many fearful outbreaks would have been stamped out had a certain supply been stopped. A challenge had been given as to what were the results of notification, but Dr. Littlejohn's paper had answered that. They had had an epidemic of small-pox in Nottingham, commencing in November last, and was not complete now, as it was still alive. Between 500 and 600 cases, and 50 deaths had occurred. Now, ten years ago there was an epidemic of the same kind, and although the population of the town was not half what it was now, there were no less than 400 deaths. In the present epidemic they had only 50 deaths, and he attributed the fact that it had not spread to a large extent to the compulsory system of notification which they now had in Nottingham. There was another important point, and that was that it would lead to the existence of disease being kept secret. But that he denied, unless the measure was associated, as it had been in one or two towns, with strong measures for compulsory removal to hospital. Then it would lead to secrecy; but, in Nottingham, he had paid special attention to see whether there was any case where a doctor had not been called in where he ought to have been; and he could say he did not think there was any fear on the part of the people from the results of notification. Now, as to the question of breach of confidence, he believed, in Nottingham, that they had the best system of notification, which put it upon the householders to transmit the certificate of disease after it was signed by the medical man. In practice, of course, the certificates were generally sent direct by the medical men, and in nine cases out of ten the householder wished that to be done. Occasionally, it might happen that householders having strong views on this matter might object. He thought the method pursued in Nottingham was about as unobjectionable as it could be to the medical men. Recently, the Health Committee passed a resolution to the effect that, in answer to inquiries, the Chairman of the Health Committee of Liverpool be informed that the Health Committee of Nottingham found that the notification of infectious diseases

had been most successful in arresting the spread of disease, and that the system of indirect notification by the medical men had proved effectual.

Mr. POWELL moved the following resolution: "That this department considers it highly desirable, in the public interests, that the Legislature should, at the earliest possible opportunity, pass a general enactment for the compulsory notification of infectious diseases on the principles of the Bill introduced into the House of Commons in the present year by Mr. Hastings."

Mr. MICHAEL replied to the objections raised, and the resolution was carried by 46 votes against 16.

Dr. GUY read a paper on Two Hundred and Fifty Years of Small-pox in London, in which the facts were the same as those stated in a paper read before the Statistical Society, of June 20th, 1882, of which an abstract appears in the BRITISH MEDICAL JOURNAL of

THE OPENING OF THE MEDICAL SCHOOLS.

HOSPITAL DINNERS AND CONVERSAZIONES.

ST. BARTHOLOMEW'S HOSPITAL.

THE annual dinner of old students was held in the great hall of the hospital on Monday evening, October 2nd; Dr. Martin in the chair. About 150 old students and guests were present. Returning the chairman's toast of "The Army, Navy, and Reserve Forces," Director-General Crawford, representing the Army, made some important statements, delivering the Army Medical Department from all the charges recently brought against them in certain daily journals; and read a telegram from Sir Garnet Wolseley, stating that that department had performed all its duties satisfactorily; that abundance of all necessary medical material was always at hand in both field and base hospitals throughout the campaign; and that the report that an amputation had been performed without chloroform was entirely unfounded. Dr. Reid, Director-General of the Naval Department, returned Dr. Martin's toast on behalf of the Navy, and Mr. Thompson of Westerham spoke for the Volunteers. Sir James Paget proposed "The Visitors," and made a pleasing reference to Mr. T. M. Stone, who was present, observing that Mr. Stone was one of the few human beings who could boast of fifty years' service in their particular duties.

CHARING CROSS HOSPITAL.

IN consequence of the death of Dr. Silver, and domestic affliction in the families of several members of the staff of the hospital, no introductory ceremonies or festivities were held at the opening of the school.

GUY'S HOSPITAL.

THE beginning of the winter session was again celebrated this year by a brilliantly successful soiree, held in several of the wards of the hospital, which were tastefully fitted up for the occasion; the walls were adorned with paintings, etchings and drawings, the windows and archways were hung with Oriental curtains and portières, and Chinese vases, and Japanese screens met the visitor's eye at every turn. These works of art were lent in part by the staff of the hospital, in part by the well known firms of Gillow, and of Phillips and others. Demonstrations of the various instruments now used in medicine were given during the evening and seemed to be a source of much interest to many of the guests. Crowds of ladies were constantly to be seen around the counters where the many-coloured wools were in use for testing their powers of colour-vision, and the spectroscopes, the ophthalmoscope, and the numerous displays of microscopes attracted much attention; perhaps the most hilarious audience was to be found where a demonstration of the "motor points" was given, each point being clearly indicated by a patch of pigment, and the result of the electric stimulation of the muscles at each point exceedingly well seen. A novelty, so far as we are aware, was afforded by the "Anthropometric Laboratory." It was an attempt to popularise the idea enlarged upon by Mr. Francis Galton in the pages of the *Fortnightly Review*; he pointed out the great interest that would attach to properly kept "Family Chronicles," in which at periodic intervals a record of the physical conformation and physiological functions of the individual would be entered; such records could only be correctly made in properly appointed laboratories, and such a one had been prepared in one of the wards at Guy's. An account will be found, at page 693 of our present number, of certain practical experiments, in relation to this subject, in which the visitors freely took part.

During the course of the evening, the Right Hon. Lord Justice Bowen distributed the prizes which had been gained in the school during the sessions of the past year. A list of the successful competitors will be found in another column. Sir Charles Bowen, after congratulating the prize winners, and thanking the numerous and brilliant audience for the interest evidenced by their presence, referred to the long and useful career upon which Guy's Hospital might look back, and cast a hopeful glance toward the future. Guy's had become not only a centre of usefulness for the immediate neighbourhood, but, whenever and wherever humanity needed the aid of skilled helpers, these men who had been educated within these walls would be found; thus, among those who had worked and suffered for their countrymen in Egypt were many old students of Guy's.—Dr. WILKS, in proposing a vote of thanks to Sir Charles Bowen, referred at some length to the unfortunate publicity which had been given to certain domestic events in the hospital; a false construction had been put on much, and great mischief had been caused by certain officious persons, by one lady in particular, who drew a picture of Guy's Hospital utterly unlike the reality; the verisimilitude of her picture was at once and authoritatively denied, but the denial had not been entirely credited by the public. He wished most emphatically to state that Guy's Hospital was, at the very time this lady wrote, at the height of its prosperity, the nursing was then efficient, and the whole management of the hospital was open to inspection. As a proof of the efficiency of the nursing, he referred to the success with which a large number of cases of typhoid fever were then dealt with in the hospital, so that in his own wards he had not a single fatal case; to the rapidity with which the complicated details of the antiseptic method of dressing wounds were learnt and practised; and to the fact that, when the Nursing Home was established in Devonshire Square, most of the nurses were trained at Guy's. The medical staff and the governors were actuated by the same desire to maintain and extend the usefulness of Guy's, and worked together in perfect unison. There seemed to be an impression abroad that the old system in the hospital had been changed: this was erroneous; the old system, which was found efficient, was continued as a whole. If he were asked, and he was very often asked, "How are you getting on at Guy's?" he would answer—"Prosperously. The hospital and the school have been great and useful in the past; injudicious people unacquainted with the real working of the hospital have temporarily prejudiced the public mind, but Guy's will once again rise, like the Phoenix from its ashes." Mr. BRYANT briefly seconded the vote of thanks, and the proceedings terminated.

ST. GEORGE'S HOSPITAL.

THE usual annual dinner was held this year in Willis's Rooms, on Monday last, October 2nd. The chair was taken by Mr. William Fuller, and the attendance of past and present students of the hospital was considerable.

KING'S COLLEGE HOSPITAL.

THE usual annual dinner was held at Limmer's Hotel, Conduit Street, on Monday evening last. The chair was taken by Professor Bentley, and he was supported by many of the representatives of the governing body, of the medical staff, and of the old students of the College. Reference was made to the improvements which had been carried out in the hospital during the past two months, and which had rendered the closure of the hospital necessary. These alterations were completed by the end of September, and the hospital is now again in full working order.

LONDON HOSPITAL MEDICAL COLLEGE.

THE ninety-eighth session of this school was opened by a *conversazione* held in the college on Monday evening, October 2nd.

The introductory address, by Mr. Jonathan Hutchinson, F.R.S., was delivered in the dissecting-room, which had been so transformed by bunnings that its proper functions were hardly suspected. After the address, a concert given in the same room was attended by a crowded audience. The room was illuminated with Crookes's Incandescent Lamps by the Gülcher Electric Light and Power Company, and the result was eminently satisfactory, the light being brilliant and steady. By the kind permission of W. S. Gilbert, Esq., and the United Telephonic Company, the anatomical theatre was placed in communication with the Savoy Theatre, enabling the audience to hear *Patience*. A similar mode of communication was established, not only with the concert in the dissecting-room, but also with a concert which was being given simultaneously at Guy's Hospital, that hospital being likewise enabled to hear the concert given at the London Hospital. In the chemical theatre, scientific experiments were elaborately conducted by Dr. C. Meymott Tidy; views in Egypt, etc., and transparent pho-

tographs for lecture illustration on the new diaphanic screen, were produced by the oxyhydrogen light by Messrs. How and Co. Among the microscopical demonstrations given may be particularised the *Bacillus tuberculosis* in sputum, and the *Bacillus anthracis* in lung. In the library, reading-rooms, and museum, there were exhibited painted plaques, centre-pieces for floral decoration, and *vases pâte sur pâte*, by Messrs. W. and G. Phillips. A variety of modern instruments for the diagnosis and treatment of disease, and new and important drugs and specialties were shown; among which may be mentioned the rarer alkaloids, some new American remedies, Leiter's temperature regulator, a new anæsthetic apparatus by Krohne, Jennings's syphon for intravenous injection and cephalotribe, numerous kinds of thermometers and barometers, etc. The *conversazione* was largely attended by the hospital staff, the committee, and by past and present students of the hospital.

THE MIDDLESEX HOSPITAL.

THE members of the staff of this hospital, and the students who re-assembled on the 2nd instant, at the distribution of prizes, were saddened by the news that, only a few hours before, there had passed away their colleague and teacher, whose duty it would have been to have delivered the introductory address. The regard and affection in which Dr. Lyell was held, the terrible brevity of his fatal illness, and the fact that, up to within a few hours of its termination, hope of recovery had not been abandoned, all combined to deepen the sadness that tinged the proceedings of the day. The first and natural feeling was that these proceedings should be abandoned, but this was found to be impossible, and they were carried on as well as could be under the peculiarly mournful circumstances. Dr. Cayley, senior physician, who had undertaken the duty at so short a notice, delivered an introductory address, in every respect most appropriate, which is published in our present number; and the prizes obtained in the previous year were distributed by Mr. P. W. Nunn, one of the consulting surgeons. In the evening, the annual dinner of the past and present students and their friends took place in St. James's Hall, Dr. Cayley in the chair; and, in deference to the expressed wish of the staff, the musical programme, which had been arranged by Mr. Cassen, was in great part omitted. Mr. Bell Sedgwick, Vice-Chairman of the Weekly Board, responded to the toast of the Middlesex Hospital; that of the Middlesex Hospital Medical School was proposed by Dr. Cobbold, and replied to by Mr. G. Lawson. The "Past and Present Students" was given by Mr. Clark, Mr. Chaldecott of Dorking replying on behalf of the former, and Mr. Tate, Broderip Scholar, for the latter. Mr. Nunn proposed the health of the Chairman, and Dr. Edis that of the Visitors; and the company, which numbered about 120, separated at an early hour.

ST. MARY'S HOSPITAL.

ABOUT seventy of the staff and old students of St. Mary's dined together in the board-room of the hospital on Monday evening, October 2nd. As in the past two years, there was again a very generally expressed opinion in favour of this dinner being held within the hospital walls; this is especially felt by old students settled in the country, who, able to spare but little time from their practices in which they can run up to town, are thus enabled to renew their friendships with their old fellow workers upon the very scenes of their past labours. The chair was taken by Mr. A. T. Norton, surgeon to the hospital, and a very pleasant evening was spent; no small contribution to the general enjoyment being the excellent glees and songs given by the chairman and several others of the company.

ST. THOMAS'S HOSPITAL.

THE annual dinner was held in the governors' hall of the hospital on Monday evening, October 2nd. Dr. Leonard Sedgwick occupied the chair, and was well supported by a large attendance of the staff of the hospital and the past and present students.

UNIVERSITY COLLEGE HOSPITAL.

A DINNER in connection with this hospital was held for the first time this year. Between forty and fifty gentlemen, past or present students, attended, the chair being occupied by Dr. Silcock.

WESTMINSTER HOSPITAL.

THE dinner at this medical school was held on Monday evening, October 2nd, at St. James's Hall, when between sixty and seventy sat down. There was a good attendance of old Westminster students, and amongst the visitors there were, as usual, several of the governors of the hospital. The increasing interest thus shown year by year in the work of the medical schools, is an interesting feature of these gatherings, and was alluded to by more than one speaker. The chair was taken by Dr. Allchin, the Dean, who bore testimony to the growing prosperity of the school.]

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Summer Session.—**Materin Medica:** Gold Medal, J. H. E. Brock; 1st Silver, J. W. Carr; and Silver, E. H. Thane and H. R. Woolbert (equal); Certificates, *5. L. Barnett, H. P. Birch, W. T. Cocking (equal), *8. W. A. McCabe; Second Class, C. Andrews, C. J. Arkle, W. P. Barrett, J. S. H. Roberts, P. D. Turner, A. F. Voelcker; Third Class, J. M. France, W. Hurst, G. M. Jones, S. C. Jones, W. H. Paine, W. J. E. Sumpter. **Botany:** Silver Medal, H. J. Webb; Third Class, R. W. Boyce, H. W. Fox, J. N. Lewis. **Practical Chemistry:** Gold Medal, H. F. Herring; 1st Silver, H. R. Norris; and Silver, W. Permevan; Certificates, *4. H. E. L. Canney; *5. F. W. Oliver; *6. E. N. Joly; *7. M. P. Karegat; Second Class, C. P. Jones; Third Class, P. Edwards, J. Melhuish, W. H. Paine, H. H. Phipps, L. W. Powell, E. B. Randall, J. O. Tunstall, E. H. Young; Senior Class, Gold Medal, H. H. Brown; 1st Silver, C. Andrews; and Silver, R. Johnson; Second Class, E. L. de Chazal, J. M. France, J. S. H. Roberts; Third Class, J. R. Bradford, E. F. Bright, E. R. St. Clair Corbin, W. G. Earle, J. Hamel, F. Hinds, S. C. Jones, A. F. Voelcker, J. J. Weaver. **Midwifery:** Senior Class, Gold Medal, E. W. von Tunzelmann; Silver, R. H. Marten; Certificates, *3. H. R. Spencer; *4. T. F. Gardner; Second Class, J. R. Barefoot, T. P. Gostling; Third Class, F. E. Pearce; Junior Class, Silver Medals, W. H. Brown and P. E. Maidland (equal); Certificates, *3. R. de Cordova and T. Rushbrooke (equal); Second Class, J. E. Jeffers, W. Shand, M. S. Whish; Third Class, S. L. Clift, W. H. Evans, F. G. Oliver, H. S. Walker. **Medical Jurisprudence:** Gold Medal, W. A. Gostling; Silver Medal, R. H. Marten; Certificate, *a. P. E. Maidland; Second Class, R. Hill, A. J. Turner; Third Class, E. O. Croft, W. J. Tilley. **Pathological Anatomy:** Filler Exhibition of £30, W. A. Gostling; Silver Medals, H. Littlewood and T. Wilson (equal); Third Class, W. H. Brown, A. J. Turner, H. H. Wigg. **Practical Physiology:** Gold Medal, F. Hinds; Silver, E. F. Bright; Certificate, *3. R. Johnson; Second Class, H. H. Brown; Third Class, J. R. Bradford, E. L. de Chazal, E. R. St. Clair Corbin, J. Hamel, C. E. Sunder. **Ophthalmic Medicine and Surgery:** Silver Medal, E. W. von Tunzelmann; Certificate, *a. J. R. Barefoot. **Hygiene:** Silver Medal and Prize, E. W. von Tunzelmann; and Prize, W. R. Smith; Second Class, A. MacLachlan; Third Class, J. A. McWilliam, W. W. Wescott. **Clinical Medicine:** Junior Class, Fellowes Silver Medal, T. Rushbrooke; Certificate, *2. E. F. Ross; Second Class, J. Schade, F. S. White; Third Class, H. T. Bury, W. Washbourne. [*Obtained number of marks qualifying for a Prize.]

WESTMINSTER HOSPITAL.—**Entrance Scholarship,** £40, W. W. Bell; £20, E. A. Thompson. **Exhibition in Anatomy and Physiology,** A. Hardwick; **Scholarship in Anatomy and Physiology (President's Prize),** W. Weaver; **Frederic Bird Medal,** C. H. Wise; **Chadwick Prize** (no award).

NATIONAL DENTAL HOSPITAL AND COLLEGE.—**Sessions 1881-82.** **Rymer Medal:** A. H. Mountford. **Dental Anatomy:** Prize, M. Hughes; Certificate, A. H. Mountford. **Dental Mechanics (1881):** Prize, W. J. Pidgeon; Certificate, M. Hughes. **Dental Surgery:** Prize, W. J. Pidgeon; Certificate, M. Hughes. **Metallurgy:** Prize, A. P. Penrose; Certificate, C. Rose. **Operative Dental Surgery:** Prize, A. H. Mountford; Certificate, M. Hughes. **Dental Mechanics (1882):** Prize, A. P. Penrose; Certificate, C. Rose. **Elements of Histology:** Certificate, M. Hughes. **Mechanical Work:** Prize, H. C. Carter.

QUEEN'S COLLEGE, BIRMINGHAM.—**Winter Session, 1881-2.** **Medicine:** Medal and First Certificate, S. C. Lawrence; Second Certificate, J. H. North. **Surgery:** Medal and First Certificate, J. H. North; Second Certificate, S. C. Lawrence. **Pathology:** Medal and First Certificate, S. C. Lawrence; Second Certificate, J. H. North. **Physiology:** Medal and First Certificate, C. H. Purslow and G. H. Melson; Second Certificate, A. F. Messiter. **Practical Physiology:** Medal and First Certificate, G. H. Melson; Second Certificate, C. E. Purslow. **Anatomy:** Medal and First Certificate, C. E. Purslow; Second Certificate, G. H. Melson. **Junior Anatomy:** Medal and First Certificate, W. B. Featherstone; Second Certificate, C. E. Oldane. **Practical Anatomy:** Medal and First Certificate, C. E. Purslow; Second Certificate, A. F. Messiter. **Junior Practical Anatomy:** Medal and First Certificate, W. F. Emery; Second Certificate, C. D. Fitch. **Chemistry:** Medal and First Certificate, W. Aston; Second Certificate, F. W. Richards, W. B. Featherstone.

UNIVERSITY COLLEGE, BRISTOL: MEDICAL SCHOOL.—**Summer Session, 1881.** **Botany:** Prize, W. G. Thorold; Certificates, A. J. Gibbons, F. J. Wethered. **Practical Chemistry:** Certificates, W. H. Stevens, F. J. Wethered. **Practical Physiology and Histology:** Prize, W. G. Thorold; Certificates, H. J. Capron, R. G. Cookson, C. J. S. Shaw, A. M. Gray and G. C. Helps (equal), W. Basset, E. J. Hawkes, A. R. Aubrey and L. H. Williams (equal), A. Bulleid, H. A. Spencer, R. W. Councill and W. H. Stevens (equal). **Materia Medica and Therapeutics:** Prize, H. J. Capron; Lecturer's Prize, A. R. Aubrey; Certificates, W. G. Thorold, R. G. Cookson, E. J. Laurence, R. W. Councill. **Obstetric Medicine:** Prize, W. J. T. Barker and E. A. Hughes (equal); Certificates, H. H. Tomkins, W. A. Jones, W. C. Lysaght, H. W. Aubrey, H. C. Thurston, H. Simmons. **Operative and Practical Surgery:** Prize, H. T. Rudge. **Operative Surgery:** Certificate, J. Jenkins. **Practical Surgery:** Certificates, H. H. Tomkins, E. A. Hughes, W. J. T. Barker, H. C. Thurston, W. C. Lysaght and H. Simmons (equal), F. W. Weir. **Pathology and Morbid Anatomy:** Prize, H. T. Rudge. **Medical Jurisprudence:** Prize, L. E. A. Salmon. **Winter Session, 1881-82.** **Anatomy and Physiology (Junior):** Prize, A. J. Tomkins. **Anatomy:** Certificates, A. J. Tomkins, C. J. S. Shaw, L. H. Williams, H. J. Pocock, W. C. Swayne. **Physiology:** A. J. Tomkins, L. H. Williams, H. J. Pocock, W. C. Swayne, C. J. S. Shaw, A. R. Aubrey. **Anatomy (Senior):** Prize, A. N. Little and W. G. Thorold (equal); Certificates, P. W. Williams, W. Basset, H. J. Capron, F. J. Wethered, G. C. Helps. **Physiology (Senior):** Prize, W. G. Thorold; Certificates, P. W. Williams, A. N. Little, W. Basset, H. J. Capron, F. J. Wethered, A. M. Gray. **Practical Anatomy:** Prize, P. W. Williams; Prosector's Certificates, A. N. Little and P. W. Williams (equal). **Chemistry:** Prize, W. C. Swayne; Certificates, C. J. Glasson, W. T. Ord. **Medicine:** Prize, H. H. Tomkins; Certificates, H. C. Thurston, E. A. Hughes. **Surgery:** Prize, E. A. Hughes; Certificates, H. Simmons, W. J. T. Barker, H. C. Thurston, H. H. Tomkins. **BRISTOL ROYAL INFIRMARY.** **Suple's Surgical Prize,** H. C. Thurston; **Clarke's Prize,** E. A. Hughes; **Tibbitts' Memorial Prize,** H. Simmons; **Pathological Prizes,** L. E. A. Salmon, E. H. Meaden. **BRISTOL GENERAL HOSPITAL.** **Martyn Memorial Entrance Scholarship,** W. T. Ord; **Clark Scholarship,** E. W. Weir; **Sanders Scholarship,** H. T. Rudge; **Lady Habersfield Prize,** H. T. Rudge; **Pathological Clerkship Prize,** H. T. Rudge.

LEEDS SCHOOL OF MEDICINE.—**Hardwick Prize,** J. Dacre; **Surgeons' Prize,** J. Dacre. **Medicine:** Medal, J. Dacre; Certificate, T. Horsfall. **Surgery:** Medal, J. Horsfall; Certificate, J. Dacre. **Forensic Medicine (Thorp Prize):** 1. J. Dacre; 2. A. A. Ward and J. N. Haytin. **Anatomy (Senior),** Certificates, R. W. Green, G. H. Scott. **Anatomy (Junior):** Medal, C. W. Turner; Certificates, 1. A. Street;

2. H. Herbert. **Physiology:** Medal, O. Scattergood; Certificate, G. H. Scott; **Lecturer's Prize,** R. W. Green. **Practical Physiology:** Medal, C. Nicholson; Certificate, J. T. Simpson. **Pathology:** Medal, J. Dacre. **Botany:** Medal, C. Nicholson; Certificate, J. Holt. **Chemistry:** Medal, C. Nicholson; Certificate, H. Thirkill. **Practical Chemistry:** Medal, C. Nicholson; Certificate, J. Thirkill. **Midwifery:** Medal, G. F. Stericker; Certificate, J. L. Atkinson. **Materia Medica:** Certificates, W. E. Bennett and G. H. Oliver. **Hygiene (Thorp Prize),** J. Dacre.

UNIVERSITY COLLEGE (LIVERPOOL) ROYAL INFIRMARY SCHOOL OF MEDICINE.—**Lyon Jones Scholarships:** F. C. Larkin, F. H. Barendt, J. Walker, A. A. Kanthack. **Derby Exhibition:** A. H. Wilson. **Winter Session.** **Third and Fourth Years' Subjects (Medicine, Surgery, Pathology, and Obstetrics):** Silver Medal, J. R. L. Dixon; Certificate, G. G. Jones. **Second Year Subjects (Advanced Anatomy and Physiology)** Torr Gold Medal: A. W. Collins; Bronze Medal, G. S. Wild; Certificates: 1. F. H. Barcutt; 2. T. M. Angior; 3. C. B. Cooper. **First Year Subjects (Elementary Anatomy, Physiology, and Chemistry)** Gold Medal: G. L. Travis; Bronze Medal, F. Tyndall; Certificates, 1. B. Sumner; 2. F. J. Knowles; 3. C. Barlow. **Histological Prizes:** H. E. Broderick, F. H. Barendt, T. G. Laslett. **Special Prizes in Obstetrics:** Silver Medal, H. A. Bredin; Bronze Medals, W. O. Travis and J. Walker (equal). **Summer Session, 1882.** **Medical Jurisprudence and Toxicology:** Silver Medal, A. E. Y. Hughes. **Materia Medica:** Silver Medals, B. Blower and F. H. Barendt; Certificates, T. M. Angior, T. G. Laslett, and C. E. Solomon. **Botany:** Silver Medal, A. A. Kanthack; Certificate, J. Garth. **Practical Chemistry:** Silver Medal, C. Barlow; Certificates, 1. A. A. Kanthack; 2. J. H. Abram; 3. W. J. Neale. **Pathological Histology:** H. Robinson. **Dental Surgery, J. Battersby.** **Students' Debating Society's Prizes:** First Essay, J. R. L. Dixon; Second Essay, 1. J. E. Nevins; 2. J. Cunningham; Reports of Medical Cases, H. A. Bredin; Reports of Surgical Cases, B. Blower; Debating Prizes, 1. A. W. Collins; 2. F. C. Larkin.

OWENS COLLEGE.—**Turner Scholarship,** £25 (no competition). **Dumville Surgical Prize,** £20, J. M. Beverley, J. S. Withers. **Platt Physiological Exhibitions,** £15 each, Second Year (no competition); First Year, R. B. Wild. **Prox. acc. W. G. Little, M.A. Dauntsey Entrance Scholarship,** £100, R. B. Wild. **Class Prizes:** Third Year, Medicine, W. Thorburn; Midwifery and Diseases of Women and Children, R. Jennings, E. S. Reynolds. **Prox. acc. G. L. Barritt, J. H. Jones;** Pathology and Morbid Anatomy, W. Thorburn; Medical Jurisprudence, W. J. Black; Hygiene, W. Thorburn; Practical Surgery, J. H. Jones; Ophthalmology, W. Thorburn. **Second Year, Anatomy,** A. W. H. Walker, R. T. Williamson; Physiology, O. J. Kauffmann; Surgery, E. Somers; **Materia Medica,** R. T. Williamson. **First Year, Anatomy,** G. F. W. Braide, Physiology, R. B. Wild; **Practical Physiology,** B. Melland; **Practical Chemistry,** J. W. Talent; **Botany, Lectures,** J. Beard; **Practical,** J. E. Thompson.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-ON-TYNE.—**Tullick Scholarship,** T. S. Revely. **Charlton Scholar,** S. Brookfield. **Gibb Scholarship,** Anthony Dodd. **Dickinson Scholarship,** Samuel Brookfield. **Winter Session, 1881-82.** **Anatomy (Senior):** Medal and First Certificate, J. S. Revely. **(Junior):** Medal and First Certificate, F. Proud; Certificates, 2. J. W. Dalgleish; 3. W. Baigent; 4. H. T. Platt. **Dissections:** Medal and First Certificate, T. Clifford. **Physiology (Senior):** Medal and First Certificate (not awarded). **(Junior):** Medal and First Certificate, A. Green; Certificates, 1. W. E. Fellowes and W. Rawes (equal); 3. F. Proud. **Medicine:** Medal and First Certificate, S. Brookfield. **Surgery:** Medal and First Certificate, C. H. Milburn. **Public Health:** Medal and First Certificate, S. T. Pruen. **Summer Sessions.** **Therapeutics:** Medal and First Certificate of Honour, A. Dodd. **Botany:** Medal and First Certificate of Honour, F. Proud; Second Certificate of Honour, R. Crosier. **Medical Jurisprudence:** Medal and First Certificate of Honour, W. M. Buxton; Second Certificate of Honour, J. M. Robson, B.A. **Practical Physiology:** Medal and First Certificate of Honour, F. Proud; J. W. Dalgleish and B. C. Simpson (equal). **Midwifery:** Medal and First Certificate of Honour, L. Robinson; Second Certificate of Honour, S. Brookfield. **Pathology:** Medal and First Certificate of Honour, A. Dodd. **Materia Medica:** Medal and First Certificate of Honour, W. Rawes; Second Certificate of Honour, R. Crosier. **Practical Chemistry:** Medal and First Certificate of Honour, W. Rawes; Second Certificate of Honour, R. Crosier. **Chemistry:** Medal and First Certificate of Honour, R. Crosier; Second Certificate of Honour, H. B. Page.

UNIVERSITY OF ABERDEEN.—**Anatomy—First Year's Students (Winter Beginners):** First Class Certificates, Francis G. Jones (Prize), George A. Gruer, Alfred William Alcock; Second Class Certificates, G. S. H. Milne, Joseph M. Barnes, John Mackenzie. **First Year's Students (Summer Beginners):** First Class Certificates, William Ronaldson Clark, Patrick Whyte Rattray (equal Prizes), John M. Lamb, Thos. George Paterson (equal Prizes), John S. Davidson, George Henry, James Murray, Alex. G. Davidson; Second Class Certificates, Arthur Patterson, Charles Anderson, Leslie Durno, John Irvine, Alex. Milne (four equal), William Robertson, John Barclay, David Simpson (two equal), John Malcolm, James B. Milne, William Coutts (three equal). **Second Year's Students:** First Class Certificates, David Prain (Prize), James Bett, George Duffus, Herman Thiele (three equal), Stuart Macdonald, Thos. B. Gibson, John Gordon, Robert D. Presslie, Alexander Rennie, James Will (five equal); Second Class Certificates, George Battiscombe, Walter Elmslie, Francis Falconer, John Stenhouse (four equal), Joseph Anderson, Francis Benner (two equal), Alex. Duguid, Frank I. Mackintosh (two equal), John Russell, George B. Currie, James Munro (two equal), Alfred E. Roberts, John W. Hutcheon, Arthur Inglis, James Mitchell (three equal). **Advanced Students:** First Class Certificates, Arthur G. Smith (Prize), David Ireland (Prize), John Matheson, William L. Ruxton (equal), James Struthers, John McCombie, William Kely, John Baker, William Scott (equal); Second Class Certificates, William Allan Stewart, G. Cardno Still, James Taylor (equal), John Gordon, Arthur M. Whitehead (equal), W. J. H. Sinclair, John Turner (equal), George Buchan, Andrew Hosie, George Vincent, George Johnston, Richard Rees. **Chemistry—First Year's Students:** Prizemen—1. John Duncan Thomson; 2. James Murray and John Marshall Lamb (equal); 4. George Clark Grant and Patrick Whyte Rattray (equal); 6. Thos. and Geo. Paterson and David Simpson (equal); 8. John Stuart Davidson and John Charles Grant Duffus (equal). **First Class Certificates,** William Vincent Morgan, James Galloway, Francis Grace Jones, James Shirran Walker, George Nicol Henry. **Second Class Certificates,** William Henry Gray, Alfred William Alcock, Philip James Lumsden, Matthew Anderson. **Second Year's Students:** Certificates, Joseph Anderson, Geo. Milne, John Russell. **Materia Medica:** Prizeman, James Savage. **Institutes of Medicine—Senior Division:** Medallists, David Ireland and W. A. Stewart (equal); **First Class Certificates,** John Drew Moir and William Sutherland (equal); **Second Class Certificates,** Louis Joseph, John G. Scroggie, John Turner and Albert G.

THE DISSECTING ROOMS OF THE LONDON MEDICAL SCHOOLS.

THROUGH the kindness of the teachers of anatomy at the various schools, we are able to give the following details with regard to the present condition of the dissecting rooms and the supply of subjects. Work has been commenced with commendable punctuality, but we regret to learn that the number of bodies available for dissection has this year fallen far below the average supply at this time of the year. Efforts have been made during the vacation, by injecting preservative fluids and by immersing the bodies in similar agents, to meet a difficulty that was partially foreseen, but in many cases the supply is entirely inadequate to the demand. We have been informed, but we cannot vouch for the accuracy of the statement, that there are about one hundred bodies less this session in the dissecting rooms of the London Medical Schools, than there were at the beginning of the last winter session; and another report mentions seventy-seven as the precise number. This dearth of subjects for dissection is a very serious difficulty, which is perplexing the teachers and demonstrators of anatomy not a little. For the last few years it has existed more or less, with the exception, perhaps, of last year, but matters have never been so bad as they are at some schools this year.

GUY'S HOSPITAL.—Anatomical work has been commenced at this school with thirteen subjects. Unfortunately, of this number, small as it is, all are not available for complete dissecting, inasmuch as upon many *post mortem* examinations have been held. This difficulty is one which is becoming yearly more pressing, as year by year the number of necropsies made by the medical officers of the workhouse infirmaries become more numerous. This is satisfactory from one point of view, as showing that the large clinical field afforded by the infirmaries is being better tilled, but seriously interferes with dissection for the purpose of anatomical instruction in the schools. The bodies that have been kept for any length of time at Guy's Hospital School have been injected with glycerine, then with arsenic, and are preserved in tanks of spirit.

KING'S COLLEGE SCHOOL.—The supply of subjects is very limited, and it has been necessary to begin dissection with only three bodies, while thrice this number would not meet the wants of the class. At this school also, much difficulty has been encountered, owing to the fact that on many of the bodies *post mortems* have been performed.

ST. MARY'S HOSPITAL.—The supply of subjects for dissection is, at this school, even worse than it was last year, when it had fallen considerably below the demand. By dint of good management, however, it was possible to let the students begin dissection on the first day of the session.

MIDDLESEX HOSPITAL.—At this school the number of bodies ready for dissection was five, and work was commenced on the first day of the session.

UNIVERSITY COLLEGE.—The supply of bodies at this school is small in quantity and bad in quality. Dissection had to be commenced with only nine bodies, and several of these were imperfect.

CHARING CROSS HOSPITAL.—No bodies had been received at this school four days before the commencement of the session, but since that date two have been obtained, and dissection was commenced on the first day of the session.

ST. THOMAS'S HOSPITAL.—This school is in somewhat better case than many others, four subjects, in excellent condition, having been ready for dissection at the beginning of the session. Work was commenced on October 2nd.

WESTMINSTER HOSPITAL.—Dissection was commenced on the first day of the session; two bodies were available.

ST. GEORGE'S HOSPITAL.—The demonstrators at this school were fortunate enough to be able to begin dissection on the first day of the session with four bodies. A very effectual mode of preservation is in use here, the subjects after injection being immersed in a preservative fluid, which maintains the tissues in a condition highly suitable for dissection.

ST. BARTHOLOMEW'S HOSPITAL.—The supply of subjects here is good. Dissection began about ten days before the commencement of the session. The first year's students began to dissect, in some cases, on October 5th. Ten bodies are at present on the tables, and about fifteen more are in reserve.

THE ENTRIES AT THE MEDICAL SCHOOLS.

It is impossible as yet to speak with accuracy as to the number of students who will enter this winter session at the Metropolitan Medical Schools, owing to the fact that the period during which students can be entered for the entire winter session does not close until the 15th inst.

No accurate idea of the number of students can be formed until the entries have been closed and the results analysed, and we give the following figures, for which we are indebted to the kindness of the deans and secretaries of the schools as approximate only. On the whole, we believe the numbers have been satisfactory up to the present date. At St. Bartholomew's it is thought that last year's high entry will be maintained; at St. Thomas's about 80 have already entered; at the London Hospital 79 students have entered for the whole curriculum, and 37 for special courses; at Charing Cross 49 have entered, made up as follows—34 for the whole curriculum, 12 for special courses, and 3 as dental students; at the Middlesex Hospital 26 gentlemen have entered as first year's students, 5 for special courses, and 9 as dental students, making a total of 40; at the Westminster the total is 24, and of these 4 have entered for special courses, and 1 as a dental student. We believe that about 24 students have entered at St. Mary's Hospital.

THE COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES.

THE members of the medical profession in Chester have recently had their attention directed to the proposal inserted in the new Improvement Act, to the effect that medical attendants shall in future give notice to the Health Committee of the Town Council of the existence of infectious disease at the houses of their patients. The profession duly considered the matter; and, as the result of their deliberations, forwarded the following communication to the Town Council.

"At a meeting of the medical practitioners resident at Chester, called for the purpose of considering the clauses relating to the compulsory notification of infectious diseases, as contained in the Chester Improvement Act, 1833, it was resolved to memorialise the Town Council of Chester against the insertion of such clauses in the said Act, by respectfully submitting to it the following resolutions, which had been unanimously agreed to: 1. Whilst earnestly desiring, on sanitary grounds, the early and compulsory notification of the existence of infectious diseases in the city, we wish to express our opinion that the compulsion to notify should be placed upon the householder or other person having charge of the infected case or premises, and not upon the medical attendant; and as we most strenuously protest against the principle which would, under a penalty for refusal, compel a man to assume towards his patients the attitude of a private detective or informer. 2. We feel assured that the most efficient sanitary benefit could be fully secured without violation of the confidential relationship which ought to exist between doctor and patient by the Town Council inviting—what will be accorded to it—the cordial co-operation of medical men in obtaining notification of such diseases, and in such manner as might be agreed upon in conference by the members of the profession and of the Council's Health Committee.—(Signed) T. DAVIES-COLLEY, chairman."

Mr. W. BROWN said the Council were much indebted to the medical practitioners for calling their attention to any points in the Bill. No doubt the committee would carefully consider their suggestions. He moved that the letter be referred to the Health Committee for consideration.—Mr. T. SMITH seconded the proposition, which was agreed to unanimously.—Mr. H. R. BOWERS, as chairman of the committee, remarked that any recommendation of that kind would receive every consideration from the committee, who would advise the Council thereon.

BEQUESTS.—From the estate of the late Mr. Andrew Steele, Edinburgh, the following bequests have been made to Scottish medical charities:—The Royal Edinburgh Infirmary, £100; the Forfar Infirmary, £50; Edinburgh Association for Incurables, and Society for Relief of Destitute Sick, each £25. The munificent founder of the New College, Dundee, the late Dr. John Boyd Baxter, has left instructions to pay to the Dundee Royal Infirmary £1,000, besides empowering his trustees to make grants to such charitable objects as they may consider best; and with regard to giving further assistance to the college, he leaves them discretionary power.

PICNIC ON GRIANAN MOUNTAIN.—During the recent meeting of the North of Ireland Branch, in Derry, Dr. Walter Bernard of Londonderry, who has devoted both time and expense to the preservation of many instructive memorials of the past, invited his professional brethren to a picnic on the summit of the historic Grianan of Aileach, the site of the notable remains which he some years ago restored. The favourable state of the weather, and the great interest attaching to this historic place, drew a large number of visitors together, who greatly enjoyed the splendid view which Royal Aileach affords. A *récherché* luncheon was served in a spacious marquee, and a most enjoyable day was spent.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL:

NOTICE OF QUARTERLY MEETINGS FOR 1882: ELECTION OF MEMBERS.

A MEETING of the Committee of Council will be held on Wednesday, January 17th, 1883. Gentlemen desirous of becoming members of the Association must send in their forms of application for election to the General Secretary not later than 21 days before the meeting—viz., December 27th, 1882, in accordance with the regulation for the election of members passed at the meeting of the Committee of Council of October 12th, 1881.

FRANCIS FOWKE, *General Secretary.*

COMMITTEE OF COUNCIL.

NOTICE OF MEETING.

A MEETING of the Committee of Council will be held in the Council Room, Exeter Hall, Strand, London, on Wednesday, the 18th day of October next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

161A, Strand, London, September 12th, 1882.

BRANCH MEETINGS TO BE HELD.

WEST SOMERSET BRANCH.—The autumnal meeting of this Branch will be held at the Railway Hotel, Taunton, on Thursday, October 26th, at five o'clock. Dinner (5s. a head, exclusive of wine) will be served at 5.30 punctually. The subject, as settled by the Council, for the meeting to discuss after dinner is, The Treatment of Acute Rheumatism. Gentlemen intending to read papers or be present at the dinner, should inform the Honorary Secretary before the day of meeting.—W. M. KELLY, M.D., Honorary Secretary.—Taunton, September 26th, 1882.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The autumn meeting will be held at Aberdare, on Thursday, October 26th. Members desirous of reading papers, etc., are requested to forward titles to Dr. Sheen, Cardiff, before October 14th.—A. SHEEN, M.D.; D. A. DAVIES, M.B., Honorary Secretaries.

THE NINTH ANNUAL MEETING OF THIS BRANCH will be held at the Royal Hotel, Taunton, on Thursday, October 26th, at five o'clock. Dinner (5s. a head, exclusive of wine) will be served at 5.30 punctually. The subject, as settled by the Council, for the meeting to discuss after dinner is, The Treatment of Acute Rheumatism. Gentlemen intending to read papers or be present at the dinner, should inform the Honorary Secretary before the day of meeting.—W. M. KELLY, M.D., Honorary Secretary.—Taunton, September 26th, 1882.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting will be held at the Royal Hotel, Taunton, on Thursday, October 26th, at five o'clock. Dinner (5s. a head, exclusive of wine) will be served at 5.30 punctually. The subject, as settled by the Council, for the meeting to discuss after dinner is, The Treatment of Acute Rheumatism. Gentlemen intending to read papers or be present at the dinner, should inform the Honorary Secretary before the day of meeting.—W. M. KELLY, M.D., Honorary Secretary.—Taunton, September 26th, 1882.

SOUTH-WESTERN BRANCH.—The next quarterly meeting will be held at the South Western Hotel, Exeter, on Thursday, October 26th, at five o'clock. Dinner (5s. a head, exclusive of wine) will be served at 5.30 punctually. The subject, as settled by the Council, for the meeting to discuss after dinner is, The Treatment of Acute Rheumatism. Gentlemen intending to read papers or be present at the dinner, should inform the Honorary Secretary before the day of meeting.—W. M. KELLY, M.D., Honorary Secretary.—Taunton, September 26th, 1882.

THAMES VALLEY BRANCH.—The next ordinary meeting of this Branch will be held at the Royal Hotel, Taunton, on Thursday, October 26th, at five o'clock. Dinner (5s. a head, exclusive of wine) will be served at 5.30 punctually. The subject, as settled by the Council, for the meeting to discuss after dinner is, The Treatment of Acute Rheumatism. Gentlemen intending to read papers or be present at the dinner, should inform the Honorary Secretary before the day of meeting.—W. M. KELLY, M.D., Honorary Secretary.—Taunton, September 26th, 1882.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH EAST DISTRICT.—The first meeting of the fifth session of the above District will be held at the Royal Hotel, Taunton, on Thursday, October 26th, at five o'clock. Dinner (5s. a head, exclusive of wine) will be served at 5.30 punctually. The subject, as settled by the Council, for the meeting to discuss after dinner is, The Treatment of Acute Rheumatism. Gentlemen intending to read papers or be present at the dinner, should inform the Honorary Secretary before the day of meeting.—W. M. KELLY, M.D., Honorary Secretary.—Taunton, September 26th, 1882.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.—The next meeting will be held at the Royal Hotel, Taunton, on Thursday, October 26th, at five o'clock. Dinner (5s. a head, exclusive of wine) will be served at 5.30 punctually. The subject, as settled by the Council, for the meeting to discuss after dinner is, The Treatment of Acute Rheumatism. Gentlemen intending to read papers or be present at the dinner, should inform the Honorary Secretary before the day of meeting.—W. M. KELLY, M.D., Honorary Secretary.—Taunton, September 26th, 1882.

SHROPSHIRE AND MID-WALES BRANCH.—A meeting of the above Branch will be held at the Salep Infirmary, Shrewsbury, on Tuesday, October 10th, at 2.30 P.M. Dinner will take place at 4.30 P.M., at the Lion Hotel. Gentlemen intending to

read papers or relate cases are requested to communicate with the Honorary Secretary at their earliest convenience. The following papers have been promised: 1. Lawson Tait, Esq.: The Surgery of the Fallopian Tube. 2. Dr. Edwyn Andrew: Remarks on a Case of Intestinal Obstruction. 3. William Eddowes, Esq.: Notes on some Surgical Cases. 4. Dr. Alfred Eddowes: 1. Compound Fracture of Patella; 2. Hydatids in Pleural Cavity.—H. NELSON EDWARDS, Moreton House, Shrewsbury, Honorary Secretary.

NORTH OF ENGLAND BRANCH: AUTUMN MEETING.

THE autumnal meeting of the above Branch was held on Wednesday, September 20th, in Bishop Cosin's Library, Durham.

In the unavoidable absence of Dr. EMBLETON, the President, the chair was taken by Dr. PHILIPSON. About twenty members were present.

New Members.—The following gentlemen were elected members of the Association and Branch, viz.:—Samuel McBean, L.R.C.P., Newcastle; John Burdon, L.R.C.P., Willington Quay; T. Coke Squance, M.B., Sunderland; John Currie Steele, M.B., Murton Colliery, Sunderland.

Papers.—The following papers were read:—

1. Dr. Philipson: On Perihepatitis.

2. Mr. Ellis: On Some Points in Aural Surgery, with reference to a Register of Four-Thousand Ear-Cases.—A discussion followed, in which the chairman, Dr. Gibbon, Dr. Oliver and Mr. Williamson took part. The points especially discussed, were Aural Polypi and Ménière's disease. Mr. Ellis replied.

3. Mr. Williamson read a Note on Retinoscopy, and demonstrated on the artificial eye the mode of employing the method. Dr. Cowan made some remarks on the paper.

4. Mr. J. F. Le Page, read a paper on Transfusion, and exhibited his transfusion apparatus. By the chairman's permission, Mr. Jennings of the London Hospital also exhibited a transfusion apparatus recently invented by him. A lengthened discussion on transfusion and the best method of employing it followed, in which the chairman, Drs. Murphy, Oliver, Williamson and the Secretary, took part. Mr. Le Page replied.

5. Dr. Drummond read a Note on the Pathology of Pulmonary Phthisis, and demonstrated the bacillus of tubercle, stained after Gibbs's method, in sections of hardened lung and sputum.

Votes of thanks to the Trustees of Bishop Cosin's Library, and to the chairman, brought the meeting to a close.

Dinner.—The members and their friends afterwards dined together in the County Hotel.

SOUTH MIDLAND BRANCH: AUTUMN MEETING.

THE autumnal meeting of the members of the South Midland Branch of the British Medical Association was held at the Royal Hotel, Kettering, on Thursday, September 28th. Present: Mr. C. J. Evans (president), Mr. G. F. Kirby Smith (hon. sec.), Dr. J. M. Bryan (hon. treasurer), Dr. Frank Buszard, Dr. David Bower, Dr. A. H. Jones, Dr. W. W. Clark, Dr. More, Dr. G. P. Goldsmith, Dr. E. J. Blacker, Mr. J. W. Orr, Mr. F. W. Thurnham, Mr. H. H. Tidswell, Mr. J. W. Dryland (visitor), Dr. Young (visitor), Mr. W. J. Mackie, Mr. R. H. Coombs, and Mr. W. H. Walker. Luncheon was provided at two o'clock. The President drew the attention of the members present to the desirability of forming a Sub-Committee in connection with the Collective Investigation Committee of the Association. It was resolved that such a Local Committee should be formed, and the following gentlemen were selected to act as members: Mr. W. H. Cook, Dr. Frank Buszard, Dr. G. P. Goldsmith, Mr. R. H. Kinsey, Mr. G. H. Jones, Dr. J. More, and Mr. G. F. Kirby Smith (hon. sec.). Dr. Buszard then read a paper entitled "On the Pathology of Acute Disease of the Spinal Cord." A discussion followed, in which the President, Dr. Bryan, Dr. Bower, and Dr. Goldsmith took part. Dr. Bower next read an interesting paper on "The treatment of the treatment of Mental Disease in the Upper Classes." A discussion followed, in which the President, Dr. Bryan, Dr. Bower, and Dr. Goldsmith took part. Dr. Bower led to a short discussion. Dr. Goldsmith then read a paper entitled "Short Notes on a Hospital Case of Scarlatina." Mr. W. J. Mackie described "Two cases of Scarlatina in Scarlatina Pharyngitis." The last paper closed a very interesting discussion, in which the President, Dr. Bryan, Dr. Bower, and Dr. Goldsmith took part. Coffee was served at 4.30 P.M., and the meeting closed. The President and speakers brought an excellent report of the meeting.

LIBRARY AND DONATIONS.—Mr. S. J. Montagu has given 100 to the Kettering branch of the Metropolitan General Dispensary.

—Mr. R. C. L. Bevan has given 100 to the British Home for Incurables.—Mr. Charles Patrick Stuart of Sunning Hill bequeathed £50 to St. Mary's Hospital, and £50 to the Western General Dispensary.

CORRESPONDENCE.

QUARANTINE.

SIR,—In the article in the *BRITISH MEDICAL JOURNAL*, of the 16th ultimo, on the above subject, Dr. Imlach quotes various cases and authorities (especially Inspector-General Lawson) in disproof of the contagiousness of yellow fever, and the utility of quarantine. Not many naval medical officers will, I think, agree with this; and I request attention to the following facts.

In 1869, Her Majesty's ship *Barracouta*, whilst stationed among the West India Islands, got yellow fever among her ship's company; and, in compliance with the representations of her surgeon, was ordered north—all naval experience proving that cold weather invariably stamps out the disease. Unfortunately, her captain persisted in putting in to Bermuda, when the ship was quarantined, and the sick landed and treated at the Quarantine Hospital on Port's Island, which is well isolated and uninhabited, save by a negro caretaker. The disease, however, continued to spread among the ship's company; and, finally, the sick had to be embarked, and the ship to leave for the colder climate of Halifax, where the epidemic at once ceased. The Bermuda Islands have several times been devastated by severe epidemics of yellow fever; but, previous to the arrival of the *Barracouta*, I believe a single case had not occurred for five years, the visitation then being traced to blockade-runners from the Confederate States, during the American war.

But now for the point of my story. About six weeks after the departure of the *Barracouta*, a number of marines were sent from the dockyard to Port's Island to clean out the hospital; but, sad to say, several of these men, as well as the surgeon who was called in to attend them, contracted the disease, and died; and this second outbreak was only stamped out by shipping off all the remaining sick and exposed to Halifax. No other case occurred among the civil, naval, or military inhabitants, either then, for years before, or years after—indeed I think I may say, up to the present; and there is no other explanation but that the sick of the *Barracouta* infected the hospital, and that the hospital, several weeks later, fatally infected the marines and medical officer.

I was not in Bermuda at the time, but I can vouch for the substantial accuracy of the above facts; and which are, no doubt, fully recorded in the Naval Medical Director-General's office.

The conflict of evidence as regards the contagiousness of yellow fever is, I think, due to the difficulty of diagnosing it from the severer forms of remittent fever, endemic in many of the places mentioned by Dr. Imlach; and the insufficient recognition of the established fact, that a moderately low temperature will, at once, destroy the vitality of the contagion.—Your obedient servant,
R. N.

THE METROPOLITAN WATER-SUPPLY.

SIR,—Considerable astonishment seems to have been caused to many minds by the discrepancies observed in the respective analyses of London drinking-water, by Dr. Frankland on the one hand, and Messrs. Crookes, Odling, and Tidy on the other. Dark hints have even been made, suggesting, as an explanation of such discrepancies, that the work of the latter gentlemen was undertaken "in the interests of the water companies."

As a matter of fact, however, the analyses in question are known to have been conducted, not only by different workers, but, as regards some of their details at all events, by men pursuing different methods of analysis. And when it is remembered that the most sanguine of chemists dares not hope for more than an approximation to the truth in his analyses; that it is rare for any two methods of analysis, even of comparatively simple substances, to yield precisely identical results; and that the exact determination of the organic impurities in water is one of the most difficult sanitary problems which the chemist of the day has to deal with, no surprise or disappointment should be occasioned by the absence of complete concord in the reports on the quality of the London water-supply made by the distinguished chemists I have mentioned above. Still less is the slightest justification afforded for any suspicion that either report has been, in the minutest degree, modified by personal bias of any kind. On the contrary, there is no reason to doubt that both the reports in question represent faithfully the results of laborious experiment and careful work.

But is this slight discrepancy of any practical importance? Those who uphold the theory that drinking-water should be judged according to a "rigid standard of purity" may perhaps be inclined to think so. But such enthusiasts must give up drinking river-water altogether, for the laws of nature prohibit the possibility of such water maintaining a

constant composition. "No man ever put his foot twice in the same river" is the truest of paradoxes. Every shower of rain alters the composition of its waters, every tributary stream that enters it; evaporation from its surface is constantly altering the density of its contents; even the living beings which inhabit it, and which, for the most part, are only found in its purest portions, contaminate it with their excreta. "But," say the 'rigid standard' men, "if the water has less organic impurity than our standard fluid, we will recommend it as a wholesome beverage." They seem blind to the fact, so often reiterated, that it is not the quantity, but the quality, of the organic matter in the drinking-water that is the all-important question. One draught of water may contain only one-tenth of the quantity of organic matter that is present in another; yet the first may produce an attack of typhoid or cholera, whilst the second is taken with impunity.

Chemists and pathologists alike acknowledge their inability to discover the germs of disease in water. Is science, then, powerless to help us in this all-important matter? Surely not.

The evil we have to guard against is the contamination of our drinking-water with sewage. Now the water supplied to a town like London could only be highly diluted sewage. Anything less carefully purified would not be tolerated for a moment. Chemical analysis is not able to assert with authority whether the organic matter in such water as this is of cloacal origin or not. We have at present no delicate chemical test for highly diluted sewage. But chemical analysis is perfectly capable of detecting sewage contamination when present in a more concentrated solution. Instead, therefore, of fixing arbitrary standards of purity, and recommending or condemning waters for domestic use, according as they approach or recede from this standard, when clearly the only perfectly safe standard is that unattainable one of absolute freedom from organic matter of all kinds; instead of expending infinite time and labour in making careful analyses of water as it is delivered for use, why not, in the case of river water at all events, make analyses of the waters of the various tributary streams which feed the main current, especially in the neighbourhood of human habitations, villages, etc. Wherever sewage or organic refuse of any kind is being thrown into the river, let it be diverted unless it can be proved to have been rendered innocuous by some process to which it has been subjected previously. Let every stream which can by any possibility carry organic germs from diseased intestines into the river be purified, and the river itself will remain pure. It is impossible to detect these impurities after their abundant dilution, but in their concentrated form no chemical analysis is necessary. If the present plan of testing the water before drinking it be adhered to, we must look to pathological chemistry for tests of sufficient accuracy and delicacy to detect the presence of germs which even the microscope cannot reveal. There is a wide field here for patient and laborious investigation. It is probable enough that each specific disease-producing germ is capable of effecting some definite chemical changes and reactions peculiar to and characteristic of itself, did we but know the proper conditions favourable to their production. And it is in some such direction as this, the elaboration, namely, of some qualitative test of infinite delicacy, by means of which one or two typhoid germs may be at once recognised and distinguished from one or two cholera germs, etc., and not in the elaboration of laborious quantitative analyses, that the sanitarians of the future must look for help to destroy the many-headed Hydra which bears the dreaded name of the Propagation of Specific Diseases by Drinking Water.

G. STILLINGFLEET JOHNSON.

11, Savile Row, W., Oct. 1st, 1882.

MILITARY AND NAVAL MEDICAL SERVICES.

THE ARMY HOSPITAL SERVICE IN EGYPT.

THE following correspondence has taken place between the Director-General of the Army Medical Department and the editor of the *Daily Telegraph*, with reference to a statement published in that journal, in the report of one of their special correspondents in Egypt, that an amputation at the shoulder-joint had been performed in the base hospital at Ismailia without the use of chloroform.

"To the Editor of the *Daily Telegraph*. Sir,—In your issue of the 28th instant it is stated (by your Special Correspondent) that 'at Ismailia—at the base—a Life-Guardsman's arm had to be removed at the shoulder without chloroform, because there was none forthcoming.' As this statement is calculated to give unnecessary pain to the many friends of the wounded in Egypt, I am permitted to transmit for your perusal, and favour of publication in the *Daily Telegraph*, a copy of a letter which I have just received from a medical officer who was in charge of the base hospital at Ismailia at the time, and who was subsequently obliged to return home on account of illness.—I have the honour to be, sir, your obedient servant, T. CRAWFORD, Director-General A.M.D.—Army Medical Department, 6, Whitehall Yard, S.W., September 30th."

"From Brigade-Surgeon H. Veale, M.D., to the Director-General Army Medical Department. Sir,—The accompanying extract from the letter of the correspondent of the *Daily Telegraph* in Egypt, which appears in yesterday's issue of that paper, was brought to my notice last night; and as the statement is sufficiently precise to enable me to identify one of the cases referred to, I have the

honour to lay before you what I know regarding it. The only Life-Guardsman whose arm was amputated at the shoulder up to the date of my departure from Ismailia was Trooper Stevenson, belonging to G Troop of the 1st Life Guards; and he must, therefore, be the patient that is said to have been operated on 'without chloroform, because there was none forthcoming'.

"The facts of this case are as follows. On the morning of the operation, I was asked by Surgeon-Major Ramsay, who was in immediate charge of Trooper Stevenson, to consult with him regarding the treatment that should be adopted for the case, and I immediately complied with his request. The patient was on the table in the operation-room, and already under the influence of chloroform for the preliminary examination of the wound. After this examination had been completed, and we had agreed as to the operative measures that should be had recourse to, I was on the point of leaving the room to attend to other very urgent matters when I heard some one remark that there was not sufficient chloroform, and that there was no more to be got. I turned and said, 'I think you must be mistaken. There is surely more in the surgery; but, at any rate, I will see.' I immediately went into the surgery, which was within a few feet of the operation-room, and in less than one minute I returned with a bottle containing, I should say, from twelve ounces to a pound by weight of chloroform. This I handed to one of the medical officers present, with the remark that the quantity was sufficient for every purpose. The patient was of course still unconscious, and the actual operation had not at that time been commenced. I was unable to stay to take any further part in it, but later in the day I received a verbal report as to the details of the operation, which must have been performed under chloroform, because I myself saw the patient again shortly after its completion, and he was still under the 'chloroform sleep.' I may add that this was the only occasion on which, whilst I was at Ismailia, it ever in any way came to my knowledge that there was, even momentarily, supposed to be a deficiency of chloroform for operations at the base hospital. I trust that the foregoing statement will be considered sufficient to disprove that portion of the allegations of the *Daily Telegraph's* correspondent, concerning which I was in a position to know the actual facts.—(I have the honour to be, sir, your most obedient servant. (Signed) H. VEALE, M.D., Brigade-Surgeon, late Principal Medical Officer of the Base Hospital, Ismailia.—Netley, September 29th.)

APPOINTMENTS.—Fleet-Surgeons H. Hadlow additional to the President, and John Mulvany to the *Constance*; Staff-Surgeon Alexander Mitchell to the *Dragon*; Surgeon Charles James to the *Royal Adelaide*, vice Bennett.

SURGEONS-MAJOR J. L. Natter and R. Jackson, and Surgeon P. J. Dempsey, now under orders for India in the ordinary course of relief, have been selected for medical charge of the troops on board the first troopship leaving this country on the 15th instant.

ARMY MEDICAL SCHOOL AT NETLEY.

THE winter session of the Army Medical School was opened on Monday, the 2nd instant, the introductory address being delivered by Professor Longmore, C.B. Fourteen surgeons on probation, of the Army Medical Service, and eight of the Indian Medical Service, had arrived to go through the courses of instruction.

PUBLIC HEALTH

AND

POOR-LAW MEDICAL SERVICES.

NOTIFICATION OF INFECTIOUS DISEASE.

"If some system could be devised by which every occurring case of infectious disease could be certified without delay to the health-officer of the district, whose duty it would thus become to satisfy himself that proper isolation and disinfection were secured, the occurrence of epidemics would in great measure be prevented." With the above opinion of the *Times* newspaper, most people, medical and lay, will fully concur. The necessity of commencing the sentence with an "If," however, of course implies a doubt in the writer's mind of the possibility of such a system being practically attainable.

Yet the very expression of belief, not merely in the *Times*, but, in one shape or another, in all the great organs of public opinion, as they pass under the eyes of the Sanitary Association and of the Public Health Department of the Social Science Congress, indicates a decided advance. It points to the fact that the national attention is becoming awakened to the necessity of some further effort being made to check the spread of infectious diseases; and, when the English mind is fairly brought to the contemplation of a certain end, its attainment is sure not to be far distant.

There can, therefore, be an unfavourable time, therefore, for noticing the progress of actual operation for bringing to the knowledge of those responsible for the public health early intimation of infectious disease; for the fact is, that the public mind is now in a position to recognise the necessity of such a system, and for appraising, so far as evidence goes, the results attained.

The fact is, that the public mind is now in a position to recognise the necessity of such a system, and for appraising, so far as evidence goes, the results attained. The fact is, that the public mind is now in a position to recognise the necessity of such a system, and for appraising, so far as evidence goes, the results attained. The fact is, that the public mind is now in a position to recognise the necessity of such a system, and for appraising, so far as evidence goes, the results attained.

tion that, in a very large number of cases—probably in the great majority—infectious disease could be adequately controlled by the private medical attendant, without any assistance from the sanitary authority, or, at any rate, without such assistance in the early stages of the disease. There can be no question also that, where compulsory notification by the medical man has prevailed, cases of great individual hardship, both to the persons affected with disease and their families, have occurred. Trade has been diverted, and businesses ruined, owing to the action of medical officers of health, founded on the notification sent to them. There can be no question, again—for every medical man must have abundant experience of the fact—of the hesitation that is felt by many, even where compulsory notification is not the law, to call in professional aid when the disease is thought to be infectious. These facts, then, suggest serious difficulties. If hesitation exist where the medical man, on being summoned, is not obliged to notify, what will be the case where it is known beforehand that he must do so? It is unnecessary to point out that concealment to a very much larger extent than at present would prevail, and that the concealment would be in a class that would render it peculiarly dangerous.

The non-medical mind has an immediate remedy for such a contingency. Fine or imprison the person guilty of concealment, and it would soon be checked. But is there any instance on record, or more than the very fewest instances, of anyone having ever been fined or imprisoned for not notifying a case of infectious disease when no doctor had been in attendance to diagnose it? Patients and their friends are not diagnosticians, and it would be impossible to fine or imprison a person for ignorance; and we need not remind our readers that there is no law to compel those who are sick to summon medical aid.

But there is another and little thought of difficulty, one which requires to be alluded to very delicately, but which it would yet be foolish to leave out of consideration. There can be no doubt whatever that, without the thorough co-operation of the medical profession, the notification of infectious diseases might have very little effect beyond that of rendering still more loose and general than they are at present the admittedly loose and general, though for many purposes most valuable, returns of deaths published by the Registrar-General.

That this might be so, is rendered probable by a consideration of what is year after year occurring in our midst. From many sources, all of which mutually illumine each other, it is well nigh certain that from 45,000 to 50,000 persons die annually in England from the direct effects of personal intemperance, yet from 7,000 to 10,000 alone appear on the register in any one year. Many, who ought to be competent to judge, maintain also that the Registrar-General's returns are useless as indicative of the extent to which syphilis prevails, consideration for the feelings of survivors, and other equally humane principles, being thought to influence medical men in returning the deaths as due to secondary and remote causes that may have occurred independently of those agencies. And does the Registrar-General or anyone else ever dream of calling in question the correctness of the returns in either case? Considerations of humanity obviously justify in their own eyes those who adopt this course, just as similar considerations, and not any increase of insanity on the one hand, or of the power in the popular mind to investigate obscure mental phenomena on the other, may be supposed to justify juries in invariably returning a verdict of temporary insanity rather than that of *felo de se*. We need not allude to this difficulty further. It will probably at once be recognised, and varying degrees of importance attached to it.

Coming to practical results, there does not as yet, at any rate, seem to be reliable evidence that greater sanitary progress has been made, or a greater diminution in the general death-rate reached in those towns which have hitherto had Acts for compelling medical men to notify, than in others which have had to rely simply on general sanitary agencies. Bolton's published returns, on examination, seem to fall short of proving what we expected from them. This is a sad confession to have to make, and would appear fully to justify our Association in withdrawing its sanction from a principle which has seemed so little fruitful in hoped for result hitherto, and to fall back on the only remaining one open to adoption, viz., that of imposing compulsion on the householder, a principle which the experience of Greenock seems to have shown not to be deficient in advantage.

It is scarcely correct, however, to speak of this as the only alternative method, since we last week published proposals, which are being made by the profession in Liverpool, for combining the two; and it may be fairly open to question whether both parties, viz., those who think it desirable to impose the obligation of notifying on the medical men, and those who would place it on the householder, may not find common ground in the proposal, based as they are on what must be regarded as a fair assessment of the existence of a careless and improvident, and of a careful and provident, class, requiring dif-

ferent treatment, and capable, on the whole, of being clearly separated from each other.

MR. GEO. G. D. WITTEN, M.R.C.S., L.S.A., has been appointed medical officer to the No. 2 District of the Bristol Union.

OBITUARY.

ROBERT WISHART LYLELL, M.D., F.R.C.S.

BORN in London in 1849, Mr. Lylell received his early education at St. Olave's Grammar School, Southwark, from whence he entered King's College, London, as a medical student, gaining a Warneford Scholarship. His career at King's was marked by great diligence and ability; and, in 1871, he graduated in honours at the University of London. Determining to devote himself to the practice of Surgery, in 1875, he became Surgical Registrar to the Middlesex Hospital; and, having taken the Fellowship of the Royal College of Surgeons of England, was, on the occurrence of a vacancy in 1878, elected to the post of Assistant-Surgeon, which, together with a similar appointment at the Royal London Ophthalmic Hospital, as well as at the Great Northern Hospital, he held up to the time of his death.

For some years, he has also been tutor at the Middlesex Hospital, and will not easily be forgotten by those who had the benefit of his teaching. Owing to his retiring disposition, the amount of work he did was unknown, even to some of his most intimate friends; and it is probable that his devotion to his profession, and desire to perform efficiently the numerous duties he had undertaken, so undermined his constitution, that he was unable to cope with the severe illness to which he succumbed. On his return from the hospital, on Saturday, the 23rd ultimo, he was seized with a rigor; but even, on the following Monday, when his temperature was over 103°, would not give up. On the Tuesday, when the physical signs of pneumonia were evident, he was persuaded to take to his bed; but, notwithstanding constant attention and all human efforts on his behalf, he died on the 2nd instant, the very day on which he was to have delivered the introductory lecture at the medical school, where his premature death has created a blank so sudden and so lamentable. The interment will take place on Saturday, October 7th, at Nunhead Cemetery, at 3.30 P.M., after the service, which will be held in St. Andrew's Church, Wells Street, at 1.30 P.M.

THEODORE E. D. BYRNE, L.R.C.P. Edin., M.R.C.S. Eng., J.P. MR. BYRNE, whose death took place on September 9th, at Salcombe, South Devon, whither he had retired in failing health, commenced the practice of his profession as assistant-surgeon in the Royal Navy, but resigned his commission at the close of the Crimean war. He subsequently practised with much success at Newcastle-on-Tyne, until the death of his father in 1876, when he removed to the family estates of Elshieshields, near Dumfries. He possessed a spirit of indomitable courage and perseverance, and, even amidst the active duties of his profession, never flagged when kindness was to be done, or an abuse redressed. His work on *Law and Lunacy*, published in 1864, showed the power with which he advocated the cause of those in distress; and the kinder treatment now afforded the insane is in a measure due to him. He was a candidate, in the Conservative interest, for the representation in Parliament of the Royal burgh of Dumfries; but, although a remarkably apt platform speaker, and commanding the hearty good will and admiration of the majority of those who knew him, he failed to secure many votes. The papers published in Dumfries, referring to his death, express very clearly the esteem in which he was held there. He leaves a widow and seven children.

THOMAS WEBB, M.R.C.S., L.S.A.

MR. THOMAS WEBB of Cheadle, Staffordshire, died on Wednesday, September 27th, very suddenly. After a brilliant career as a student at St. George's Hospital and the Grosvenor Place School of Anatomy, he became master of a large and lucrative practice, and died highly respected by all who knew him. Of a kind, genial and merciful disposition, courteous alike to rich and poor, he will be much missed in Cheadle and a large surrounding district for a long time to come. He leaves three sons, one of whom, Mr. H. L. Webb, M.R.C.S., L.S.A., succeeds to his practice.

BEQUESTS.—The Belfast Royal Hospital has received £150 from the late Hugh Graham, which, with sums previously received, makes a total of £1,000 given by that gentleman to the funds of this hospital.

UNIVERSITY INTELLIGENCE.

AN examination will begin at Exeter College, Oxford, on Wednesday, October 11th, at 9.30 A.M. for the purpose of filling up a natural science scholarship. The scholarship is tenable, in the first instance, for two years, and will be prolonged for two years more if the Rector and Fellows are satisfied with the industry and good conduct of the scholar. For special reasons it may be prolonged for a fifth year. The examination will be in biology, chemistry, and physics. Candidates will be expected to show proficiency in, at least, two subjects, and the scholar will be required to read for honours in biology and the Natural Science School. Candidates must not have exceeded nineteen years of age on the day of the election, and they will be required to show that they will be able in due course to pass Responsions. The examination will be held at the same time and place as the examination for a natural science scholarship at Trinity College. The Rector will receive the names of candidates on Tuesday, October 10th, between 8 and 9 P.M.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentleman passed his Examination in the Science and Practice of Medicine, and received a certificate to practise, on Thursday, September 21st, 1882.

Pittard, Marmaduke, Guernsey.

The following gentlemen passed on September 28th.

Brinton, Roland Danvers, College Terrace, Belsize Park.
MacDonogh, William Frederick, Clapham Park Road, S.W.
Plimmer, Henry George, Anerley Road, Upper Norwood.
Rigby, Percy Alfred, Westroby Terrace, Earl's Court.
Smith, William Herbert, Weston, Bath.

The following gentleman passed the Primary Professional Examination on September 21st.

Hill, George Birnie, University College.

The following gentlemen passed on September 28th.

Bassett-Smith, W. P., Middlesex Hospital.
Ogle, Arthur, Middlesex Hospital.
Sparkes, Claude S., King's College.

MEDICAL VACANCIES.

The following vacancies are announced:—

ARDWICK AND ANCOATS DISPENSARY AND ANCOATS HOSPITAL, Mill Street, Manchester.—Honorary Secretary. Apply to Alexander Forrest, Honorary Secretary, Holt Town, Manchester.

AUCKLAND UNIVERSITY COLLEGE, New Zealand.—Two Professors, one for Chemistry, and the other for Natural Science. Applications by October 31st.

BELGRAVE HOSPITAL FOR CHILDREN, Gloucester Street, S.W.—House-Surgeon. Salary, £30 per annum. Applications by October 15th.

BRISTOL EYE HOSPITAL, Lower Maudlin Street.—Honorary Surgeon. Applications by October 7th.

BURTON-ON-TRENT INFIRMARY.—House-Surgeon. Salary, £130 per annum. Applications by October 16th.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane Square, S.W.—Surgeon. Applications by October 12th.

CROYDON UNION.—Medical Officer and Public Vaccinator for No. 9 District. Salary, £90 per annum. Applications by October 16th.

GRANARD UNION.—Medical Officer for Finnea Dispensary District. Salary, £100 per annum, with £14 per annum as Medical Officer of Health, registration, and vaccination fees. Election on October 14th.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £70 per annum. Applications by October 14th.

MALDON UNION.—Inspector of Nuisances. Salary, £200. Applications to A. C. Freeman, Clerk to the Guardians, Maldon, Essex.

MELKSHAM UNION.—Inspector of Nuisances. Salary, £40. Applications before October 7th to Philip Phelps, Clerk to the Guardians, Melksham.

NORTHAMPTON GENERAL INFIRMARY.—Physician.—Applications to be addressed to the Secretary not later than October 27th.

NORTH-WEST LONDON HOSPITAL, 18 and 20, Kentish Town Road.—Ophthalmic Surgeon. Applications by October 28th.

ONGAR UNION.—Medical Officer of Health. Salary, £60 per annum. Applications by October 9th.

OWENS COLLEGE, Manchester.—Junior Demonstrator of Anatomy.—Salary, £125 per annum. Applications by October 9th.

PARISH OF BIRMINGHAM.—Physician. Salary, £150 per annum. Applications by October 23rd.

SEAMEN'S HOSPITAL (late Dreadnought), Greenwich, S.E.—Resident House-Surgeon. Salary, £50 per annum. Applications by October 7th.

THORNTON LOCAL BOARD.—Reappointment of Sanitary Officer and Medical Officer of Health, and Inspector of Nuisances. Applications before October 11th to Raywood M. Stansfield, Solicitor, Board Room, Thornton, Yorkshire.

TORBAY HOSPITAL AND PROVIDENT DISPENSARY, Torquay.—Senior House-Surgeon and Senior Provident Medical Officer. Salary, £700 per annum. Applications by October 16th.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopaedic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 5 P.M.

WEDNESDAY.....St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopaedic, 10 A.M.

THURSDAY.....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.

FRIDAY.....King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu., F., 1.30; Skin, M. Th., Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th., 1; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear, and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopaedic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p. Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopaedic, W., 2; Dental, Tu. S., 9; Th. 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., Tu. F., 2; Eye, Tu. F., 9.15; Ear, M. Th., 2; Skin, Tu. Th., 1.30; Throat, M. Th., 1.45; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. T., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S. 9.15; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Hunterian Society, 7.30 P.M., Council Meeting. 8 P.M., Address by the President (Dr. J. Hughlings Jackson, F.R.S.). Mr. Rivington: The Symptoms, Diagnosis, and Treatment of Rupture of the Urinary Bladder. Mr. Jennings: Transfusion Apparatus.

THURSDAY.—Ophthalmological Society of the United Kingdom, 8.30 P.M. Dr. Stephen Mackenzie: Case of Chronic Tubercle of the Choroid and Brain. Dr. Embley: Case of Large Tubercle growing from near the Optic Disc. Dr. Warner: Case of Miliary Tubercle of the Choroid and Lung, without Meningitis. Mr. Nettleship: On certain Cases of Destructive Ophthalmitis in Children. Living specimens at 8 o'clock.

FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. C. T. Williams: Case of Phthisis treated by Residence at High Altitudes. Mr. Golding-Bird: Case of Excision of Tonsil for Epithelioma. Mr. Clement Lucas: Case of Excision of Base of Tongue, Tonsil, and Soft Palate, for Epithelioma. Mr. Walsham: Case of Gunshot Injury of the Lower Jaw.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with Duplicate Copies.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

TEA-GOWNS.

DURING the last five years, one more article of attire has become indispensable in a well appointed wardrobe—the tea-gown. Some months ago, there was an exhibition of ladies' hygienic clothing. Foremost among this should have been the tea-gown. We would draw the attention of those who lecture, for the National Health Society, on clothing, dress, and deformities, to this garment. The custom now is, among ladies of "ton", to wear a tea-gown, which, it may be explained for the uninitiated, is nothing more than an elegant form of dressing-gown, the whole afternoon, and even when *en famille* to dine in it. As its use usually enables the wearer to dispense with the corset, the hygienic value of the tea-gown is apparent. It has been stated that some ladies wear corsets even beneath the tea-gown, but they are in a small minority. If the tea-gown be the pioneer of other garments which may expunge corsets from the list of ladies' clothing, it should indeed be welcomed. This, however, is unlikely. Still, the wearing of it is a fashion which it may be hoped for the sake of those who follow it, may be more than a passing fancy.

PROVIDENT DISPENSARIES.

SIR,—Can a reader of the JOURNAL give me particulars of the scale of fees usual in London dispensaries, and the way of setting about the establishment of one?—Your obedient servant,

THETA.

. In the best provident dispensaries, the members' subscription for adults varies from fourpence to sixpence per month; for children, from twopence to fourpence; and for families, from eightpence to a shilling. In order to make these payments remunerative, they require to be supplemented by at least twenty-five per cent. of subscriptions from non-members. Copies of suggested rules and members' cards may be had from the Charity Organisation Society, Puckingham Street, Adelphi, price one penny.

ACCORDING to the *Natal Witness*, ostriches, which digest tenpenny nails, cannot stand tobacco. This journal states that a farmer, living near Zuurbron, was standing in one of his ostrich camps smoking a meerschaum pipe, when one of his most valuable breeding birds came up and snatched the pipe from his mouth, and swallowed it. In a very short time the bird was dead, having been poisoned by the nicotine in the pipe. (Query, Nicotine or pipe?)

SICK CLUBS FOR MEDICAL MEN.

SIR,—Can you, or some of your readers, inform me if there are any clubs for medical men, clergymen, etc., which grant sick pay for cases of illness? and, if so, what is the rate of payment *per annum*? I inclose my card, and remain, sir, truly yours,

INQUIRER.

. We have made inquiries, and cannot find that there are any such clubs in existence; the nearest approach to one is a sick fund for the benefit of clergymen and schoolmasters in connection with the Church of England Insurance Institution, to which, however, no new members are being taken. The experiment of having one as a part of our own Association appears to have been fairly tried in 1864-66; and though the scheme was based on the advice of Mr. Tidd Pratt, and started by donations to an auxiliary fund, it had to be given up for want of sufficient support from the members of the Association. (See BRITISH MEDICAL JOURNAL, June 10th, 1882, pp. 866-68.)

A LONDON STUDENT.—Inquiry shall be made, but we believe no day is fixed.

AN EXTRAORDINARY SURGICAL OPERATION.

SIR,—With regard to an article recently published in your JOURNAL, I beg to state that neither Dr. Hinds, Dr. Cullen, nor myself had, directly or indirectly, anything to do with the production you so justly censure ("Extraordinary Surgical Operation"). We were all considerably disgusted when, a week or so after its appearance, our attention was directed to it. None of us are subscribers to the paper in which it was published. I have ascertained that the article in question was written by a very young apothecary's assistant and embryo medical student, ignorantly, but with the best possible intentions. I at once remonstrated with the editor on his having published the article without consulting me, but thought it best to let the matter drop there.—Truly yours,

BAPTIST GAMBLE.

Fermanagh Club, Enniskillen, September 23rd, 1882.

SIR,—A *locum tenens* gives evidence before coroner or magistrate; to whom is the fee due, the principal or the *locum tenens*? If to the former, what should be the arrangement if the case is adjourned until after the latter's time has expired?—I am, sir, yours truly,

N. A. P.

DR. HARKIN'S PAPER ON RHEUMATISM.

SIR.—Dr. Gowans has already shown that the treatment of rheumatism by fly-blisters is not new, and I myself saw it used at Guy's Hospital at some time before the year 1868. The three conclusions which Dr. Gowans draws make it tolerably clear—as, I think, it has been made clear before—that the action of the cantharides in acute rheumatism is constitutional and not local; and I beg leave to bring forward the following very short account of the result of an investigation which I made formerly of the effect of the internal administration of tincture of cantharides in that disease and in rheumatism. The probable value of this preparation was argued from observation of the apparently constitutional effect of blistering, and suggested to me by Dr. John Brunton. I considered that the argument received support from the fact that blistering with other things—with the acetum lythe, with carbolic acid, or with mustard—has no specially good effect even upon the state of the joint over which it is done. I therefore began to give tincture of cantharides internally, in doses of ten or fifteen minims every four hours, and almost always uncombined with any other drug or treatment.

I came to the following conclusions after five or six years' careful observation of cases under my own care only. 1. If treatment be begun early enough, the subject will not suffer from carditis. ("Early enough." I gathered observations tending to show that carditis does not happen if the treatment have forty-eight hours' start. I am not sure of this, but think it will probably be found to turn out so.) 2. Pain is often entirely removed, and always lessened. 3. The average duration of illness drawn from the whole number of attacks observed was not lessened. 4. The average severity of collective symptoms, of illness, is very greatly lessened. 5. In rheumatism, this treatment is of no avail. 6. Dysuria is produced by this treatment of acute rheumatism only exceptionally. (Occasionally, that is, two or three times during the observation of many cases.)

I am acquainted with no report of this treatment, which I have no reason to believe has ever been systematically used by any but myself; but I trust that in such a case it is not necessary to burden your columns with long clinical details in order to recommend it to the profession.—I am, etc.,

J. ASHBURTON THOMPSON, M.D.

SIR.—In his paper on the treatment of rheumatism by the application of blisters over the cardiac region, Dr. Harkin would have us to believe that its efficacy is due to its topical action on the heart. But is there really any necessity for conjuring up such a shadowy theory for which there is little or no proof? Is not the vesication in its action constitutional rather than local? For how can we account for the fact that rheumatism is as much benefited by the application of blisters to the joints or any other part of the body? Blistering acts much in the same manner as an alkali does, and tends to neutralise the morbid acid material which exists in the blood of the rheumatic patient, and changes in a few days the acid urine to a neutral or alkaline state.—Yours faithfully,

JOHN COLLIER, M.D.

UNCLEANLINESS.

SIR.—Allow me to draw the attention of your readers to a question which affects the wellbeing of almost every town of any magnitude. I allude to the general disregard of personal cleanliness indulged in by the lowest class of residents. No medical man can doubt for a moment that that portion of a town's population not only runs great personal risk of originating infectious disease, but also of disseminating the same among the neighbouring inhabitants. This surely should constitute a sufficient ground for conferring on local authorities the power to compel what might be termed rudimentary cleanliness, not of house and premises merely, but of clothing and person also.

The general population of a town have a natural right to be protected against the consequences arising from the gross personal negligence of a minority of the people. The only arguments I expect to be raised against the proposition will be of a legal character; but the question is, can they not be set aside by further legislation on the ground of necessity?—I am, sir, your truly,

MEDICUS.

SIR.—A patient, having engaged me to attend her confinement, sent one evening by the nurse begging me not to be out of the way, as the event was expected to come off at any time during the night. It came off, but I was not sent for, but visited her a couple of times afterwards. The husband refuses payment, on the ground that I was not present at the time. Has not this question been often decided in favour of the medical man; and, if so, where may cases in support be found?—Yours faithfully,

M. B.

* Assuming that our correspondent's statement be literally correct, and can be borne out in a county court, there is no doubt whatever that he can recover his fee by legal process. Cases of the same kind have frequently cropped up in the Westminster County Court, and Judge Bailey has invariably decided in favour of the medical gentleman; and we learn, on inquiry, that his judgments have never been set aside. Similarly, he has decided that a monthly nurse can claim payment if, after being engaged, her services, through caprice or otherwise, be not required.

CHRONIC INTERMITTENT ALBUMINURIA.

SIR.—Since the paper published by Dr. Moxon on Chronic Intermittent Albuminuria, and some subsequent notes on the same subject by Drs. George Johnson, Rooke, and Dukes, no more publications have appeared on the subject, that I can find, either in the English or French journals. Could you, or any of your correspondents, tell me if any such are reported, and where? As I am engaged just now in the study of this interesting, and somewhat rare malady, I shall be greatly obliged to any medical man who will furnish me with reports of unpublished cases, or references to any that have already appeared, but which I may have failed to notice.—I am, sir, your obedient servant,

STANLEY M. RENDALL, M.B., C.M.

46, Charlotte Square, Edinburgh, September 18th, 1882.

The following incidents in the life of Dr. Waller Lewis, chief medical officer to the General Post Office, are related in the *World*. During the cholera scare of 1854, on the death of his connection, Lord Jocelyn, who fell a victim to the scourge, Lord Palmerston became somewhat alarmed, and sent to the Board of Health to secure the services of a resident physician, who should accompany him and Lady Palmerston to Broadlands. Waller Lewis was the next medico on the roster for active service, and was despatched accordingly. He ingratiated himself so well with the Premier that, on the death of Dr. Hector Gavin, he obtained the Post Office appointment. He was a man of a most kindly and charitable disposition, like many leading men in his profession, a gourmet of taste and experience, and at one time a champion whist-player.

VACCINATION.

SIR.—Having vaccinated for over twenty years, and seeing cases recently recorded of ill effects from vaccination, I have thought a great deal on the subject; and I venture to say that the vesicles, in many instances, are far too large for arm-to-arm vaccination. If the vesicles occupy above a certain area, the epidermis covering them, being very delicate, breaks or gives way in the centre; consequently, there is admission of air, and the contents, instead of being lymph, partake more of the character of pus. If, on the contrary, the vesicles be of a moderate size, the epidermis remains intact and perfectly free from crust, the lymph being clear, the operator, without drawing blood, may, without fear, vaccinate any number of children. I certainly (from experience) prefer puncture to scarification, because the latter, being superficial, allows the clothing to irritate it, while, in the puncture, the lymph is drawn in by capillary attraction, and the clothes cannot possibly have the same irritating effect. The vesicles, in this case, are round and white in appearance, clearly showing the contents to be pure vaccine lymph, and the surrounding inflammation is only what takes place from the operation, with less liability for it to be increased by mechanical irritation.

I have seen many instances where children have been vaccinated from half-suppurating vesicles. The arm has been very indurated, and the inflammation of an erysipelatosus character. Take the distance from the acromion to the olecranon of an infant eight or ten weeks old (it is not more than three inches), and place four large pocks upon that space by scarification, and subjected to the rough handling of the nurses to which children of the operative class are necessarily subject, and we shall find, instead of a nice rounded vesicle, one depressed in the centre, marked by a crust; and the margin from which the lymph is drawn will be found to have the appearance more of producing a sore than a healthy vaccine vesicle.

I have great faith in vaccination as being the only preventive of small-pox; and in the district for which I am public vaccinator, I am pleased to say that I meet with no objections; and I am equally pleased to state that no child is brought to the station subsequently for any unfortunate consequences that have occurred. I merely write in preference of puncture over scarification, and vesicles of moderate size over large ones; but would always place four on the arm.—Yours faithfully,

A PUBLIC VACCINATOR.

SIR.—In reply to "Surgeon and Physician," who desires to know how to go about obtaining an appointment in the Peninsular and Oriental Company's service, I may tell him that such appointments are made by the managing directors of the company, to whom application can be made, either personally or by letter. The name will then be entered on the list of applicants for the post, and an appointment will come sooner or later, according as vacancies occur and the amount of interest the applicant has amongst the directors or the Post-Office officials in London.

In reply to the "Member" who wishes to be informed of some home where a young man of intemperate habits can be received, I will be happy to give him some information if he will communicate with yours faithfully,

W. ARNOLD THOMSON.

DEATH-CERTIFICATES.

SIR.—In the *Standard* of August 30th, there is a report of an inquest held by Mr. George Collier, Deputy Coroner for East Middlesex, on the body of a child, aged 3 weeks, in which the coroner is reported as having censured the medical attendant for having given a certificate of "cause of death," when he (the medical man) had only seen the deceased once; and the coroner also refers to a case lately decided by Mr. Chance against a medical man for having given a certificate after the same period of attendance, with a fine of £2, and £2 2s. 6d. costs. It would be interesting to know where we are to look for a legal definition of the term "medical attendance during the last illness"; as, in a case of apoplexy, or something of that nature, a medical man might not have the opportunity of seeing the patient more than once; and, if the "chance" definition of the term is to be held as legal and correct, he would be liable to a heavy penalty and costs for giving the usual certificate. In my opinion, the Medical Alliance Association could much better employ their time and talents in bringing before the notice of the public cases of grocers and other shopkeepers (not chemists) selling all sorts of drugs and medicines, and selling laudanum and other deadly poisons to persons in large quantities, without going through the legal formula; or (perhaps) even asking the person's name.—I remain, yours obediently,

COUNTRY PRACTITIONER.

M.R.C.S. will be entitled to charge for two days, and his expenses. Further than this, we can offer no opinion. The value of a practitioner's day varies according to local and individual circumstances, so that it is impossible to lay down a hard and fast rule. The tariff of charges which has been published by the Shropshire Ethical Branch of our Association might aid "M.R.C.S." in fixing his fee.

MEDICAL COLLEGE OF FORT WAYNE, INDIANA.

SIR.—In the *Journal* of June 3rd, 1882, under the heading of Letters, Notes, etc., you say, in reply to a correspondent: "The University of Fort Wayne, Indiana, is unknown in this country." As this is rather an unfavourable comment on a very deserving medical college, I know you will pardon me if I inform you that the Medical College of Fort Wayne, Indiana, is a first class college in every respect, numbering among its graduates many physicians of prominence both at home and abroad, this college being also a member of the American Medical College Association, which admits to membership only such colleges as require the highest standard of proficiency from their graduates. In conclusion, permit me to state that I am not a graduate of this college, or interested in it in any way, but simply request the publication of this communication as a matter of "fair play," which I am satisfied you will gladly accord me, judging from the uniform courtesy extended me by English physicians while on a tour through the hospitals abroad.—I am, sir, your obedient servant,

EDMUND J. DOERING, M.D.,

Late Surgeon United States Marine Hospital Service. Chicago, Ill., U.S.A., September 15th, 1882.

THE VALUE OF A PRESCRIBING DRUGGIST'S TREATMENT.

SIR.—As the question of druggists' prescribing has lately been discussed, the following anecdote may be interesting. My wife's little dog was run over lately; she picked it up, and went into the nearest shop to inquire the name of the owner of the carriage. The shop was a druggist's, and the proprietor advised her to take the dog home, and give it a strong dose of castor-oil. I think this one fact is enough to settle the question.—I am, yours truly,

A MEMBER.

MIDWIFERY ENGAGEMENTS.

SIR.—I tested this question in the county court at Liverpool, before Sergeant Wheeler, in the year 1868. The decision of the learned Sergeant was, "that there was no legal contract, inasmuch as the defendant had not paid any deposit at the time of the engagement." I was accordingly non-suited.—Yours, etc.,

31, Everton Crescent, Liverpool, September 25th, 1882. D. W. PARSONS.

CAUTION.

L. Y. Z.

A MEMBER.

4. Huxley's *Manual of the Comparative Anatomy of the Vertebrata*; especially the earlier portion treating of development. For an elementary knowledge of the invertebrata, F. J. Bell's translation of Gegenbaur's *Comparative Anatomy* will be found best for "A Member's" purpose.

"I bow to your decision, as expressed to 'An Innocent Abroad.' Upon medical etiquette; at the same time, it seems to me very hard lines. I imagine an old practitioner, long resident in some isolated village. Suddenly appear before him two persons of great fame and fortune, who, of course, have a right to be treated as he likes. He is to call upon them, and bid them to be seated, when he knows that every patient they acquire must be taken first to him. If they refuse, he would feel bound to receive them with all due courtesy, as brethren; and this is a decision which I remember to have been made by a practitioner twenty years ago; his words were: 'The newcomer is to be taken to the house of the old, or the established practitioners.'—I am, etc.,
 EDWARD GARREWAY.

EDWARD GARRAWAY.

STH.—I notice that attention has been called to the value of iodine as a topical application in the treatment of the skin. I have used it for the past seven years for that purpose, and with the most successful results, and I must confess that it is quite universally used in the practice of our best dermatologists.—Yours, etc., Geo. A. Macfarlane, M.D.

Geo. A. HETHBRINGTON, M.D.

179, Union Street, St. John, N.B., September 11th, 1882.

of the use of the word "form" in the above paragraph is not to be taken as a recommendation of the use of the word "form" in the above paragraph. The use of the word "form" in the above paragraph is not to be taken as a recommendation of the use of the word "form" in the above paragraph.

Mr. Samuel T. ... Mr. J. ... Mr. W. Watson
Dr. Andrew Jas ... Mr. W. and A

Gilbey, London; Dr. Church, London; Mr. A. Craske, London; Dr. Heron, London; Dr. Fairlie Clarke, Southborough; Mr. Neison Haruy, London; Mr. H. Hutchinson, Seaham Harbour; Mr. C. Pridham, London; Dr. Keith N. Macdonald, London; Dr. Dutton, Chichester; Our Dublin Correspondent; Dr. John Collier, Lincoln; Mr. Stanley Haynes, Malvern; Our Glasgow Correspondent; Dr. Coupland, London; Mr. E. A. H. Cooke, Fowich, near Worcester; Mr. Jas. Startin, London; Mr. Jas. Rankin, Kilmarnock; Dr. Richards, Birmingham; Mr. Edwin J. Ball, Birmingham; Mr. A. Mess, London; Dr. Mackie, Chester; The Registrar of Owens College; Dr. Oliver, Newcastle; Dr. Luke Armstrong, Newcastle; Dr. Alder Smith, London; The Registrar of the Carmichael College of Medicine, Dublin; Dr. Edward Seaton, Nottingham; Messrs. Wileys and Co., Coventry; Mr. Basil J. Morison, London; Spence; Dr. S. Rees Philipps, Exeter; Mr. T. L. Walford, Reading; Miss E. Waty, Colechester; Mr. Morton Smale, London; Dr. Drummond, Rome; Mr. J. Dysart McCaw, London; Mr. J. Molineux Knapp, Ross, Herefordshire; Dr. Harkin, Belfast; Dr. de Havilland Hall, London; Dr. Wm. Carter, Liverpool; Dr. Connolly, Bristol; Dr. Murrell, London; Mr. T. Howard D. Williams, London; Mr. J. H. Harrison, London; Dr. Cordwent, Milventon; Dr. Dabbs, Shanklin, I.W.; Mr. R. C. Shettle, Reading; Mr. T. V. Lister, London; Dr. Goodhart, London; Mr. K. W. Millican, Kineton; Mr. Sangster, London; Mr. T. S. Smith, Brighton; Mr. J. Ashborton Thompson, London; Mr. W. Eddowes, Shrewsbury; Messrs. Arnold and Sons, London; Mr. J. W. Riley, Newport; Mr. E. Thompson, London; Miss Mary Prankam, London; Dr. J. Gischer, Jena; Dr. E. J. Doering, Chicago; Mr. C. G. Wheelhouse, Leeds; The Secretary of the North of England Branch; Mr. A. Jackson, Sheffield; Dr. F. Thorne, Leamington; Dr. Watney, London; Mr. Hutchinson, London; Dr. Thin, London; Mr. Lawson Tait, Birmingham; Dr. Crichton Browne, London; The Secretary of the Pharmaceutical Society; Dr. J. T. Arlidge, Stoke-on-Trent; Dr. Brailey, London; Dr. E. A. Cook, Richmond; Mr. J. Broadbent, Liverpool; Dr. James McNaught, Newchurchin, Lissendale; Mr. Joseph Hinton, Warminster; Mr. Robt. Robertson, Ventnor, I.W.; Dr. Christy, St. Michel, France; Mr. F. A. Hallsworth, Atherstone; Dr. Arison, London; etc.

A Medical Formulary based on the United States and British Pharmacopœias: together with French, German, and Unofficial Preparations. By Laurence Johnson, A.M., M.D. London: Sampson Low, Marston, Searle, and Rivington. 1882.

Practical Medical Anatomy; a Guide to the Physician in the Study of the Relations of the Various Organs of the Human Body to the Functions of the System of the Circulation, Nutrition, and Secretion. By HUGHES, J. W. M. D., F. R. C. S. (Lond.). London: Saunders, 1894. Pp. 120. 1s. 6d.

Artificial Anæsthesia and Anæsthetics. By Henry W. Lee, A.M., M.D. London: Sampson Low, Marston, Searle, & Co.

[illegible]

General Medical Chemistry for the Use of Practitioners of Medicine. By R. A. Wüthaus, R.M., M.D. London: Sampson Low, Marston, Searle, and Rivington. 1882.

A Treatise on Diseases of the Eye. By Hen. D. Noyes, A.M., M.D. London: Sampson Low, Marston, Searle, and Rivington. 1832.

The International Journal of Plastic and Reconstructive Surgery. Edited by John Ashurst. Vol. II.
London: Martin Dunitz, 2001.

A Practical Treatise on the Diseases of Children. By J. Forsyth Meigs, M.D., and W. H. Storer, M.D., LL.D. Seventh Edition, revised and enlarged. London: H. K. Lewis.

A Treatise on Diseases of the Skin. By L. A. D. Third
 Edition, revised and enlarged. Philadelphia: J. B. L.
 Co. 1892.

Students preparing for
burgh: Young and Pent.

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When a series of insertions is made, a discount is allowed on the above scale for portions, beyond which no reduction can be allowed.

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Mr. Samuel T. ... Mr. J. ... Mr. W. Watson
Dr. Andrew Jas ... Mr. W. and A

REMARKS

ON

ANTISEPTIC MIDWIFERY: EXPERIMENTS
WITH LOCHIAL FLUID.

AN EXAMINATION OF BRAIDWOOD AND VACHER'S CONCLUSIONS.

By NEIL MACLEOD, M.D. Edin., Shanghai.

THE results of the following experiments with lochial discharge contrast so strikingly with those of Braidwood and Vacher, detailed in their "Reports to the Scientific Grants Committee of the British Medical Association, Third Contribution to the Life History of Contagium," that I hope they are of sufficient interest to obstetricians to justify publication, few though they may be in number.

In the JOURNAL of February 4th, 1882, page 145, Braidwood and Vacher state, as the result of their experiments:

"a. Normal* human lochial discharge of the fourth* day after delivery, is septic to rabbits.

"b. It invariably* induces in them septicæmia, as proved by post mortem examination.

"c. The fatal dose of the aqueous solution we employed, the method for preparing it having been already described, is from half a drachm to a drachm, according to the size of the animal operated on.

"d. When allowed to putrify, it induces local suppuration, like other irritant, putrid, organic fluids, as well as its own special characteristic visceral formations.

"e. No special constitutional symptoms indicate the important systemic changes which are going on.

"f. The surest method of inducing the constitutional alterations termed septicæmia by inoculation with lochial solution, is to bring it into contact with the pelvic peritoneal cavity, by injection *per vaginam* or *per perineum*.

"g. Antiseptic solutions, mixed with the septic lochial fluid, do not appear to modify its lethal influence.

"h. Micrococcus organisms are not present in, nor are they necessary for, the septic potency of the septic fluid."

From conclusion d, Braidwood and Vacher evidently consider they have proved that, in addition a property acquired by putrefaction, like that of "other irritant, putrid, organic fluids," and which almost everyone will allow, the lochial discharge has another, a special septic property, which they regard as "normal."

This is a question of very material interest to all who are practising antiseptic midwifery. During the last four years, I have treated every case of confinement, both during and after labour, with one of these same "antiseptic solutions," in the strong hope of preventing the infection of the lochial discharge with septic matters from without, or of destroying and diluting them when they had entered; also, being sceptical as to the existence of a special septic property in the discharge, or, at all events, considering it not proven, I trusted, if it did exist, that the antiseptic might, even then, be of some avail.

The following table shows at a glance Braidwood and Vacher's experiments with lochial fluid collected on the fourth day after delivery, and injected into the pelvic peritoneal cavity of rabbits. The lochial fluid used in these experiments was taken from patients not treated in any systematic antiseptic manner.

	Fluid.	Result.
1	½ drachm injected pure	Died in 8 days.
2	" " " " " " " " " " " "	" " " "
3	" " with ½ drachm of a saturated solution of cupralum ..	" " 9 hours.
4	" " after being dialysed, and having been in dialyser 3 days ..	" " 20 days.
5	" " the undialysed portion of the last, also in dialyser 3 days ..	" " 3 "
6	" " dialysed, and after being kept in dialyser 7 days ..	" " 3 "
7	" " the undialysed portion of the last, also in dialyser 7 days ..	" " 5 "
8	" " injected pure	Recovered.
9	" " with ½ drachm of a 5 per cent. solution of carbolic acid in water ..	Died in 36 hours.
10	22½ minims, with 22½ minims of a 5 per cent. solution of carbolic acid ..	Recovered.
11	½ drachm injected pure	Died in 9 days.
12	" " " " " " " " " " " "	Recovered.
13	" " " " " " " " " " " "	Recovered.

Note.—The experimenters do not, either in their tables or elsewhere, say what time elapsed between collection and injection of the fluid in Nos. 1, 2, 3, 8, 9, 10, 11, 12, and 13.

* These italics are mine.

The fluid used in the experiments about to be described was collected from patients treated after the following method, which I have practised for more than four years with a few slight modifications, as these have suggested themselves, and which I need not detail here. A five per cent. solution of carbolic acid in water is used for washing the hands before each examination during labour, and for washing instruments when these are needed. If the hands are dried, a clean towel is used, and the fingers dipped into carbolic oil (1 to 20) before examining again. The bloody or mucus stained fingers are not washed in the solution. During the third stage of labour, I avoid, if possible, the introduction of the fingers into the vagina, and express the placenta with the left hand on the fundus uteri. Shortly after the termination of labour, I syringe out the vagina with a 1 to 30 solution of the acid, slightly warmed, and cleanse the external parts with a clean napkin dipped in a five per cent. solution of the same.

Daily Routine.—The vagina is syringed daily at 8 A.M. and 8 P.M. with a 2½ per cent. solution of the acid, after which, and at noon and 4 P.M., the external parts are swabbed with a piece of clean old linen, dipped in a five per cent. solution, each rag being thrown away after having been used once; a clean napkin is then applied, and changed about every three hours, except during sleep—oftener, if necessary, during the first twenty-four hours. (In cases of ruptured perineum, I purpose using salicylic cotton pads.) The syringing is done once daily usually from the fifth day; but this is regulated by the amount and character of the discharge. Should there be any smell or suspicion of such in the napkins, a five instead of a two and a half per cent. solution is used, and thrice daily.

Collection of Fluid for Experiment.—The discharge was collected (the same precautions being used as in Braidwood and Vacher's experiments) in each case immediately before the evening syringing, i.e., twelve hours after syringing with carbolic acid. The materials used were absorbent cotton, a large test tube, and a new syringe, the two latter first washed carefully with a five per cent. solution of carbolic acid, and then repeatedly washed out with freshly prepared distilled water. (In addition, for the first two experiments, I heated the test tube.) The patient, lying on her left side, the external parts were cleansed with the absorbent cotton dipped in the distilled water, a fresh plug of cotton was then inserted into the vaginal orifice, soaked with lochial fluid and removed. Two ounces of distilled water were next thrown into the vagina by means of the syringe, and what fluid escaped from the vagina was caught in the test tube, which was immediately plugged with the cotton already soaked with discharge. All the fluid that could be expressed from the plug after repeated soakings in that of the test tube, was mixed with the latter, before injecting.

Method of Injection.—The fluid was injected as soon after collection as possible, with a new hypodermic syringe, which was cleansed as before described, both before and immediately after injecting. As I could not obtain a syringe large enough to contain more than 25 minims, I had to disconnect from the needle and refill it in every instance, and it is possible that a little air was injected in consequence. The animal being chloroformed and laid on its back, the syringe needle was passed into the vagina, as far as it would go along the right wall, which it was then made to pierce, and so to enter the pelvic peritoneal cavity. On disconnecting the syringe to refill it, in no case did any fluid escape from the needle.

Mrs. S., from whom the fluid for the first two experiments was collected, was a primipara, very fat, delivered on 18th March 1882, with long forceps; her labour was complicated by the worst laceration of the perineum I have ever seen, the vaginal wall being split from within outwards, about two inches, the rectal wall one inch. Carbolic silk stitches were introduced immediately after the third stage terminated, two in the rectal and two in the vaginal mucous membrane; also three deep perineal, and five superficial skin stitches. The mouth temperature on the evening of that day was 100.2°. Next morning it was 99°; evening, 100°. On the third morning, 98.5°; evening, 99.4°. On the fourth morning, 97.8°; evening, 99.7°. The napkins till the fourth evening free from odour, then smelt distinctly of faeces, and I found that Mrs. S. had taken a dose of castor-oil contrary to instructions; had had a large motion, and had passed wind *per vaginam*. The perineum healed by first intention, excepting the upper part of the slit in the vaginal mucous membrane which had not been sutured; there was no recto-vaginal fistula, and the patient made a good recovery.

Experiment 1.—On the 21st March 1882, a female rabbit, weighing 4 lbs. 3 oz. was injected with 50 minims of fluid; half an hour after it was collected from Mrs. S., eighty-four hours after her delivery. The fluid in the test tube smelt slightly of faeces, and examined an hour after injection with a quarter-inch objective, by artificial light,

could be seen blood discs, epithelium, and numerous small single and double bright refracting bodies. With a more powerful eyepiece, movement could be made out in the field.

Next day the rabbit did not eat quite so well as usual, but did not refuse food; on the 23rd she was apparently all right. On the 27th she gave birth to a litter of five; on April 8th she weighed 3 lbs. 11 ozs.; May 30th, 3 lbs. 11½ ozs., when with the others she was removed from the hutch and allowed to burrow in the garden. June 25th, she weighed 4 lbs. 3 ozs., after which she had another litter of, I think, six. On 11th August she was quite well.

Experiment 2.—A doe, weighing 4 lbs 2½ ounces, was injected with fifty minims of the same fluid, and at the same time as the last rabbit. She did not appear to be disturbed in any way, ten days later weighing 4 lbs. 2 ozs. On April 7th she had slight diarrhoea, on the 8th she weighed 4 lbs. 2½ ozs.; on May 30th, 3 lbs. 7 ozs. For about a fortnight at this time we had very hot, sultry weather, and the rabbits were then in a small hutch only open in the front, and in a back verandah opening into a closed court admitting sun but no breeze. Two other rabbits looked out of condition at the same time, one of these being unaffected. I then removed the hutch to the garden, and allowed the rabbits to run at large and burrow, when the health of all improved. On June 25th she weighed 4 lbs. 10 ozs., and on July 9th gave birth to a litter of six. On August 11th she was quite well.

Four rabbits were injected with fluid collected from Mrs. T., a primipara, who had a tedious labour, was delivered on May 26th, 1882, with short forceps, and had a slight tear of the perineum into which two superficial carbolised silk stitches were introduced, though some might have considered these unnecessary. Healing took place by first intention. On the second evening, the mouth temperature was 99°, third morning, 99.2°; evening, 99.8°; fourth morning, 99.2°; evening, 98.6°. No odour was perceptible in the napkins at any time, and convalescence was good.

Experiments 3 and 4.—Sixty-five minims of fluid collected seventy-three hours after delivery from Mrs. T. were injected into these animals three-quarters of an hour after collection. The fluid was red, odourless, and exhibited under a quarter inch objective, a few epithelial cells, blood discs, granular matter looking like oil globules, and no moving particles were visible. These rabbits seemed in no way influenced by the operation. One weighed, on May 29th, 3 lbs. 8 ozs., and on June 21st gave birth to a litter of four, and on the 25th weighed 3 lbs. 15 ozs.; while the other weighed 3 lbs. 14 ozs. on May 29th, on June 25th, 4 lbs. 10 ozs.; and gave birth to a litter of six on July 6th. On August 11th they were both well.

Experiments 5 and 6.—On May 30th, 1882, sixty-five minims of fluid, collected ninety-five hours after confinement from Mrs. T., were injected into these two animals an hour after collection. The fluid was reddish, odourless, and presented under a quarter inch objective, epithelial cells, broken down blood discs and granular matter—no movement was visible in the fluid. Next day both animals ate well, and were as active as ever; one gave birth to a litter of seven on June 9th, and to a litter of six on July 10th, whilst the other gained flesh greatly. Neither being in any way, apparently, influenced by the injection. Both were well on August 11th.

I injected eleven rabbits in all, but as five of these were with fluid collected on the second and third days after delivery, I shall omit them, though in doing so I weaken my case. I would call attention to the fact, that the conditions were somewhat more trying than those which accompanied Braidwood and Vacher's experiments. The fluid was not dialysed or mixed with any antiseptic in my case before being injected, in four cases it was collected during much hotter weather than occurs in England, the dose injected in every instance was larger, and both cases supplying the fluid were complicated with perineal rupture and the use of forceps.

It seems to me that the result of these six experiments, at least, throw a large amount of doubt upon Braidwood and Vacher's conclusions *a, b, c, and f*. It may be said, that in any experiments, some of the carbohc solution from the morning syringing remained in the vagina twelve hours. This is possible, but I reply that I habitually pressed the hypogastrum to squeeze out any blood or fluid that might have lodged in the vagina; that the solution used was a 2½ per cent. one; that there was not the faintest odour of carbohc acid in the lochial fluid collected, that if there had been any acid in the vagina, it must have been well diluted with the distilled water which was used to wash out the discharge. And, finally, Braidwood and Vacher cannot raise this objection, as they, in concluding, say, "antiseptic solutions mixed with the septic lochial fluid do not appear to modify its lethal influence."

The table at the commencement of this paper records thirteen expe-

riments. Braidwood and Vacher performed many others* with the lochial fluid; but I have rejected—

1. All that were injected with fluid other than that of the fourth day. (See Conclusion *a*.)

2. All experiments with other animals than rabbits. (See Conclusion *a*.)

3. All that were treated otherwise than by injection into the pelvic peritoneal cavity. (See Conclusion *f*, where it is stated that this is "the surest method".)

The numbers bracketed together in the table were injected with fluid collected from the same patient. It is of "normal" lochial fluid that the production of septicæmia is predicted. Nos. 4 and 5 were injected with fluid which had been kept in a dialyser for three days, and Nos. 6 and 7 for seven days, after collection. I do not suppose that the experimenters assume fluid thus treated to be "normal". Again, No. 3 had thirty minims of a saturated solution of cupralum; No. 9 thirty minims, and No. 10 twenty-two and a half minims, of a 5 per cent. solution of carbohc acid injected along with the lochial fluid—mixtures which are not "normal". Deducting, therefore, seven cases as abnormal, there were six rabbits injected with normal lochial fluid of the fourth day, with three deaths and three recoveries—a ratio which cannot surely warrant the use of so strong a term as "invariable", particularly when the proof of septicæmia is stated to be a *post mortem* one. Conclusion *b* runs thus: "It invariably induces in them septicæmia, as proved by *post mortem* examination." Braidwood and Vacher use the expression "normal lochial discharge" without defining the term normal.

From the six experiments which I have described, it is safe to infer that human lochial fluid, collected on the fourth day after confinement from patients treated after the antiseptic method described, is not septic to rabbits, when it is injected into the pelvic peritoneal cavity of these animals soon after its collection in the manner described, and in doses of sixty-five minims and less; and this affords at least a presumption that the septic influence (when present) of the discharge on patients so treated is lessened, and, it may be, destroyed.

From the experience of the last four years, I am in a position to claim the following advantages for the antiseptic (would that we could call it aseptic!) method of procedure described.

1. The shorter duration of the discharge; there being only bloody and serous, instead of red, green, and white stages.
2. Its lessened amount while it lasts.
3. Its freedom from odour.
4. Increased comfort to the patient from the above three, and its anæsthetic effects on the parts.

These points have been remarked by the patients as well as by myself; and, even if there were no other and supposed greater advantage, they alone would, in my opinion, much more than compensate for any disadvantages. Besides the trouble involved, the only drawbacks that I have observed are the sensation of burning when the patient is syringed, most pronounced when there is breach of surface; and twice I have remarked giddiness immediately after syringing. The former feeling passes away almost before the washing is over, and the recurrence of the latter can be avoided by diluting the solution. These objections only apply to the antiseptic used, and not to the principle involved. I have had no case of puerperal fever since I began the systematic practice described. But there is no branch of the healing art in which the fallacy of "a run of cases" is so common as in midwifery; and no statistics, unless those dealing with large numbers, can be of any use in a matter such as this.

SALICYLATE OF SODA (1) IN TONSILLITIS, AND (2) AS A LOCAL APPLICATION IN GOUT.

By EDWARD MACKEY, M.D., Brighton.

(1) A PAPER by Mr. Hormazdji, recently published in a contemporary, treats of a clinical point deserving, I think, more attention than it has yet received—I refer to the value of salicylate in tonsillitis. The good effect of these salts, when prescribed for that complaint, has been illustrated by the clinical records of Fowler, L. Browne, Hunt, and others, in the JOURNAL of one or two years back; but is not yet so widely recognised as to be independent of further evidence. My personal experience is not large, but is based upon several very severe and acute cases in which operation had occurred before salicylate of soda had been administered. It was then given in ten-grain doses every two to four hours, and in each case I

* MEDICAL JOURNAL, January 29th, 1882, pp. 108-11, Table of Septic

was struck, not only by the lessening of the pyrexia, but also by the relief credited by patients themselves to each dose of the remedy—much as one almost expects to hear of it in acute rheumatism. One surgeon, himself a sufferer, notes marked relief within twenty minutes (*Mid. Med. Miscel.*, No. 6).

Hormazdjí recommends twenty-grain doses; and, having noted relief in fifty-seven cases of tonsillitis caused by cold and damp, concludes that such cases give the best results, and that, when the malady arises from bad air or drainage, it is less amenable. This seems reasonable, but is not exactly my experience. For instance, of a family of nine children living in a house too small for them, and defective as to drainage, five in succession got severe acute tonsillitis, several having a temperature over 103° Fahr., and nocturnal delirium, and all going on to more or less ulceration. The earlier cases got a calomel purge, small frequent doses of aconite and potash-chlorate, sulphurous spray, a benzoïn inhalation, and ice; later, iron; they were relieved within thirty-six hours, but all relapsed on the third day. It was only when the sixth child—a delicate one—was attacked, that I had become aware of this use of the salicylates, when I found him suffering with severe throat-symptoms like the others. I ordered, after his purge, five grains of the soda-salt every two hours in liquor ammoniæ citratis. The boy, who expected the same illness he had seen his brothers and sisters go through, expressed, with surprise, relief from the first few doses, was free from pain in twenty-four hours, had a very slight patch of ulceration, and no relapse. (The above prescription, which I gave this patient, should form a clear colourless solution, which agrees well, but, when dispensed by some chemists, I have known it turn brown, and cause irritation and vomiting; for this I have no satisfactory explanation.) Since this note was written, some half-dozen other cases of ulcerative tonsillitis have shown similar good results with the same remedy; of course, when actual suppuration (quinsy) has occurred, equal relief will not be expected.

(2) N., a man nearly 70, with what he called "compressed gout," showed an inflamed and swollen great toe, and complained of characteristic burning pain and tension in it and in the whole foot. He had several attacks before, never so bad as this; and had no sleep for three nights; overworried lately, he had probably exceeded in sherry; he was thin, weakly, and subject to diarrhoea. I ordered a lotion containing salicylate, two drachms to eight ounces of water with one or two drachms of laudanum, to be applied warm on lint with oiled silk; also ten grains of the salt internally every four hours. The lotion arrived first, 9 P.M., and was applied at once; in ten minutes the pain was relieved, the patient went to sleep, and had a good night; the medicine was not commenced till next day. He kept in bed, as ordered, three days, and had no severe return; he went out too soon, and ten days after got a partial relapse, which yielded to the same remedy.

Another gentleman, also nearly 70, and long subject to irregular gouty attacks, got a sudden acute development of the malady in one finger and an elbow-joint, a slighter one in the big toe; for twenty-four hours, he objected to any local application, as too troublesome, and took iodide of potassium with magnesia, etc.; on the second day, however, he was glad to apply the salicylate lotion, and reported quick and marked relief from it. Since the date of these cases, similar ones have been recorded by other observers.

In a third case, of a young married lady with very marked gouty family history, the immediate cause of desiring advice was an eruption of lichen planus on one arm. A salicylate lotion, containing also a little prussic acid, suited this patient extremely well; though, in a more chronic case of the same kind, but with extensive systemic disturbance (as usually associated with this eruption), it proved of no more service than other remedies. Its specialty lies in relieving gouty and rheumatic joints, which it seems to do even better than the ordinary alkaline compounds.

THE CAROTID PULSE IN AORTIC INCOMPETENCE.

By JAMES T. R. DAVISON, M.D. Edin.,
Second House-Surgeon, Royal Southern Hospital, Liverpool.

ON feeling the pulse in the carotid arteries in a case of aortic incompetence, I accidentally found, one day, that there was a difference in the strength of the pulsations on the two sides. Since then, I have examined the carotid pulses in every case of aortic incompetence that has come into hospital, with the following result. Out of ten cases, in one group A, consisting of six cases, the right carotid pulse was distinctly stronger than the left; in another, group B, consisting of two cases, both were of the same strength; while in the third group C, consisting of the remaining two cases, the left carotid pulse was distinctly the stronger. In every instance the radial pulses were of equal strength.

The best method to examine a patient is to get him on to a chair, or if this be not possible, to make him set up in bed, his head being slightly reclined backwards; then to place oneself behind him, and feel the carotids about the lower level of the thyroid cartilage. It is necessary not only to use the same pressure, but also to keep the same relation between the fingers and the artery on each side; for if the artery be felt in front of the finger a different impression will be produced from that which is perceived when it slips to its side.

In trying to ascertain what was common to each group of cases, I found that neither the degree of ruptured compensation, the conditions of the pulse, the presence of mitral regurgitation, nor yet the degree of aortic obstruction could be identified with any of them. One condition appeared to distinguish the groups, and that was the relative size of the heart. The two cases in which the left carotid pulse was the stronger had the largest hearts. The two cases in which the pulses were equal had very large hearts. Of the six cases, in which the right carotid pulse was the stronger, four had hearts smaller than any of the preceding ones; one, whose heart I did not percuss before death, had a heart weighing only twenty ounces; and the last had a heart slightly larger than either in group B, but less than either in group C.

In health, the carotid arteries pulsate equally strongly, so that we cannot regard these differences which occur in disease of the aortic valves, as mere accidents, depending upon differences in the lumen of the arteries. And this is borne out by the fact that these differences of strength in the carotid pulses are subject to occasional variations in the same subject. I only had opportunities of examining a few of the cases on more than one occasion, and the variations observed were, that where the right carotid had been the stronger, it became of the same strength as the left; and where the left carotid had been stronger, it became of equal strength with the right. I never found that where either carotid had been the stronger, it ever became the weaker. Normally, when the left ventricle contracts, it sends forth its wave of blood into an aorta whose coats are distended by the blood-pressure within it. Therefore this wave, by simply increasing the blood-pressure, will act equally on each carotid. When, however, aortic regurgitation is present, immediately before the ventricular systole, the coats of the aorta and carotids are to a certain extent collapsed, and those of the right carotid more so than those of the left, because its axis lies more in a line with that of the aortic orifice, and thus the right vessel will be more fully emptied than the left during the diastole. When the ventricle now contracts, its wave will no longer act simply by increasing the blood-pressure, but has first to distend the walls of the partially-collapsed arteries. In effecting this, the wave goes straight up to the right carotid, but before it reaches the left carotid it loses a portion in distending part of the transverse arch. Thus the right carotid with each ventricular systole will receive more blood than the left. Hence the greater strength of the right carotid pulse, and this greater strength will be the more apparent to the touch; that the right carotid is more fully emptied than the left during the diastole. We have seen that this condition obtained in six out of the ten cases. When the heart is very much enlarged, it may drag down the ascending aorta with it, and, by so doing, will bring the axis of the left carotid more in a line with that of the aortic orifice, so that the axial relations of the carotids to the aortic orifice will be about equal on either side. Under these conditions, we would expect that the carotid pulses would be equal, and this is what we find in group B, where the hearts are very much enlarged. Again, in group C, where the hearts are still more enlarged, a more extended change in the axial relations of the carotids and aortic orifice may explain the greater strength of the left carotid pulse, while the variations occasionally met with may be due to temporary slight displacements of the heart, brought about by flatulence, etc. Whether this be the true explanation or not, the fact remains that differences in the strength of the carotid pulses are very common in aortic incompetence. This fact is important as an aid in the diagnosis of this disease, but chiefly as a possible source of fallacy in the diagnosis of aortic aneurysm.

A CORRESPONDENT of a contemporary draws attention to the unsatisfactory method in which dust is collected in the City. He writes, "Coming down Broad Street every morning about nine o'clock, after inhaling the invigorating air of the suburbs, one finds the salutary effects of such inhalation sadly deteriorated by clouds of dust scattered in all directions by the employés of the City dust contractor in clearing the deposits from the several houses—which, I may add, are in boxes placed at the edge of the kerb, to the imminent danger of foot-passengers." These practices, which are as unsanitary as they are unpleasant, certainly merit the attention of the National Health Society, or some similar body.

BRITISH MEDICAL ASSOCIATION.

FIFTIETH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

ANEURYSM OF BOTH POPLITEAL ARTERIES :

ONE CURED BY PRESSURE; THE OTHER BY MEANS OF DR. FLEET SPEIRS'S ARTERY-CONSTRUCTOR, AFTER THE FAILURE OF ESMARCH'S BANDAGE, THE OPERATION BEING CONDUCTED UNDER STRICT ANTISEPTIC PRECAUTIONS.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By THOMAS BRYANT, F.R.C.S.,
Senior Surgeon to Guy's Hospital, etc.

HENRY B., a stonemason, aged 48, was admitted into Guy's Hospital on February 25th, 1882, under my care, for double popliteal aneurysm. The patient had been a hard drinker, and had had syphilis thirty years before. He was married, and the father of seven healthy children. He had enjoyed good health up to two years before his admission, when he became an out-patient at the hospital for pain in the chest. He remained under treatment for two months, and left relieved; during this time, he followed his occupation.

Six months ago, the pain returned; but, by obtaining lighter work, he could get on, and it was not until twelve days before his admission that he was obliged to give up work. He had discovered a swelling in the right popliteal space six months before admission, his attention having been drawn to the part through pain. He likewise discovered a like swelling in the left space at the same time; but in it there was no pain. He had had a cough for some months, but no expectoration. He had also a right inguinal reducible hernia.

On admission, he presented a pale emaciated appearance, with an anxious countenance. He had a pulsating swelling in each popliteal space; and the pulsation was readily controlled by pressure upon the femoral artery above. The aneurysmal sacs were firm, and could not be much emptied. The femoral arteries were large and rigid. The heart's action was far from healthy, and gave a harsh loud diastolic *bruit*. The area of the heart's dulness was enlarged. The pulse was only 44 in the minute, and irregular; it was full and splashing. No thoracic aneurysm was made out; but all the arteries of the body were more rigid than normal. He had a harsh cough, like that found in aortic disease.

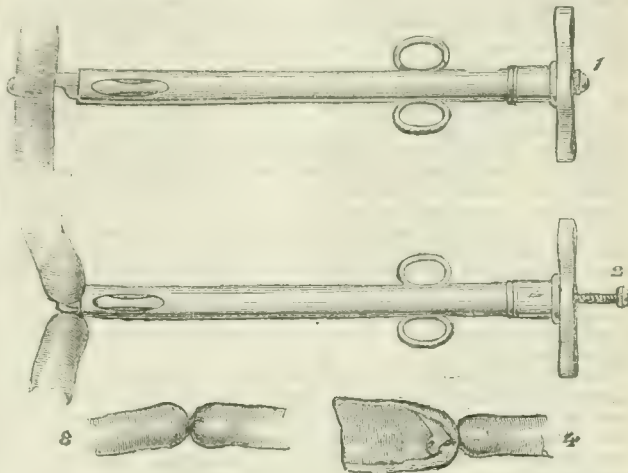
The man was put to bed, and allowed moderate diet, without stimulants. On February 28th (third day), digital compression, aided by a weight, was applied to the right femoral artery; and the pressure was maintained for thirteen hours. On the following day, pressure was applied for eight hours; on the third, a Reed's tourniquet was adjusted and kept on for forty hours. Little good was produced by this treatment, although the sac was possibly a little harder than it had been. The man's condition was, however, unsatisfactory; all local treatment was, therefore, suspended for three days.

On March 8th, the tourniquet was reapplied, and kept on for fourteen hours. On March 10th, digital pressure was recommenced, and kept well applied for twenty-four hours, at the end of which time the sac was hard, and pulsated but little. On the 11th, 12th, and 13th, pressure was kept up by means of a tourniquet for some hours daily, with but little change. On the 14th, 15th, and 16th, digital compression, supplemented with a weight, was reapplied; and on the 17th the aneurysm was hard and non-pulsatile. It was evidently cured.

The treatment had been carried out for eighteen days, with three days' interruption; but the result was good. During the period of treatment, the patient had repeated hypodermic injections of morphia, but never more than one-eighth of a grain at a time.

The man was then left alone for ten days, during which time the cured aneurysmal tumour much contracted, and the patient's general condition improved. At the end of that time, the left aneurysm was taken in hand, and treated as the right had been—that is, by digital compression, when it could be obtained, supplemented by weights, and by means of Reed's or Skey's tourniquet, during the intervals. Little or no good was, however, derived from the treatment; and, after ten days' trial, an Esmarch's bandage was employed, the pressure of the bandage being so arranged as to allow the sac to be well filled with

blood, and the circulation in the supplying and efferent arteries arrested. The bandage was kept on for one hour; but the action of the heart became so disturbed as to excite a fear that it would stop; and it is a great question whether life would have been preserved, had the bandage not been removed when it was. Moreover, no good effect was produced on the aneurysm. The patient was then left entirely alone, and in a few days he was himself again. The treatment by pressure was, however, given up, and the obstruction of the artery by a cutting operation determined upon.



The operation was performed on May 12th, and consisted of four stages: 1. The exposure of the artery by a clean incision; 2. The constriction of the artery with the largest sized loop of a Speirs's constrictor (*vide* Fig. 1); 3. The obstruction of the lumen of the artery by breaking up its inner and middle coats by means of the constrictor (Fig. 2) and the subsequent formation of a blood-clot at the injured spot; and 4. The washing of the wound with an antiseptic lotion composed of three drachms of liquor iodi to a pint of water, and the careful adaptation of its edges with its subsequent dressing. It should be added that the artery was very large, and apparently thickened.

The operation proved eminently successful. The artery was as easily obstructed by means of the instrument employed as by the application of a ligature. All pulsation ceased at once in the aneurysm after the removal of the instrument, and never returned; and when the dressing was first removed on the seventh day, the wound had entirely healed. There was no more secretion from the wound after the operation than enough to stain, not saturate, the dry dressings that had been applied: there was no pain in the part throughout the process of repair; and the temperature of the patient never rose above normal. Subsequently, the aneurysmal sac rapidly contracted, and convalescence was established. The man was kept in bed for three weeks after the operation, as a matter of precaution; and, when he left the hospital, he had complete use of his legs, and both aneurysmal tumours had contracted down to masses about the size of walnuts.

REMARKS.—If this case had been nothing more than an example of double popliteal aneurysm cured by treatment, it would have been worthy of record; but since it illustrates many important points in surgery, I have deemed it worthy of being brought before this meeting.

1. It demonstrates how, in the same patient, one of two aneurysms similarly placed may be cured by digital and instrumental pressure, while the second, although subjected to the same treatment, and by the same hands, will fail to be so affected. The fact fairly demonstrates the truth of what is now generally accepted by surgeons, that the cure or non-cure of an aneurysm by pressure is determined more by the relations of the aneurysmal sac to the artery, and the nature of the orifice of the aneurysmal sac, than by anything else.

2. It illustrates one of the dangers of the treatment of an aneurysm by Esmarch's bandage; and shows how, throwing back upon the general circulation the blood that would have been coursing through a lower extremity, is a real source of danger; more particularly when the valvular arrangements of the heart are at fault, as they clearly were in the case now under consideration, or when the organ is fatty. This danger was fully recognised by me when the case first came into my hands for treatment; and it was from its recognition that this method of treatment was not primarily employed. I was led to give the

He, however, remained in hospital, and I then tried for some time the iodide of potassium treatment, but without any appreciable result. The pulse still continued high, and the tumour increased in size; while the pain in the arm was combated by frequent hypodermic injections of morphia.

The patient suddenly took his discharge on March 30th, as he said he had "private business" to transact. He once visited me at my house some weeks afterwards. The tumour had then grown to a considerable size, passing upwards in the neck. The pain kept him from sleeping, for he had now no hypodermic injections. The hand was quite numb and oedematous. There was no pulsation to be felt in the radial or brachial arteries. He promised to come into hospital next day, but he did not return until May 22nd. He now stated that, during the preceding night, the tumour ceased to pulsate for over an hour. When I saw him, pulsation was as violent as ever; all the local symptoms were aggravated, but the pulse had fallen to 100°. Measured by the callipers, the tumour now marked three inches and a quarter in diameter in all directions. A further consultation was held, and ligature was again determined upon, but on the 29th, the day but one fixed for operation, I was sent for to see the patient. All pulsation had stopped in the aneurysm, which was now hard and tense. I resolved, therefore, to postpone any operative interference. The pulsation returned after about ten hours, and next morning was as bad as before. He had now three minim doses of tincture of aconite every three hours, but the pulse was not affected.

On the 31st, pulsation stopped for fifteen minutes, but then returned, accompanied by great pain. He was now ordered three-minim doses of tincture of aconite every hour for twelve hours, the effect to be watched. The pulse-rate, which had been 116, was reduced to 96; but next morning the pulse was full and bounding at 100.

On June 4th, the patient said the tumour had ceased to beat several times, but this was not verified by the resident pupil. The pulsation was, however, feebler. During all this time, in which I had the benefit of daily conference with my colleagues, the tumour continued to grow in size, until it reached three inches and a half in diameter at the base. The movement of pulsation was observed over a large area. When he sat up, the shoulder and the whole scapular region rose and fell with each pulsation of the aneurysm. The hope which we entertained of spontaneous cure did not appear likely to be fulfilled; and, in face of the fact that the disease was progressing, we unanimously agreed that operation should not longer be delayed.

Accordingly, on June 9th, the patient was brought into the theatre. I was favoured by the presence of many eminent surgeons—amongst them, Mr. Stokes, Mr. Thornley Stoker, Mr. A. H. Corley, and Dr. Gordon, my colleagues. The patient, being deeply anæsthetised, was placed in the usual position on his back, with the head thrown well towards the left side. I made a free incision along his clavicle, from the anterior border of the sterno-mastoid outwards, and joined its inner extremity by an incision along the anterior border of the same muscle. The clavicular attachment of the muscle was divided, and turned up, and then the sterno-hyoid and sterno-thyroid were cut to discover the carotid, carefully avoiding the branches of the omo-hyoid plexus, which could be seen. The vessel was of very large size, so much so, indeed, that some of those present thought I had arrived at the innominate. This belief was encouraged by the fact that, at first, pressure upon it with the finger stopped pulsation in the carotid higher up, and also in the tumour; but this did not always occur, and was evidently the result of a pressure communicated from a distance to the subclavian. I now went further down, in search of the bifurcation; but this was an extremely tedious and anxious proceeding, and I was compelled to divide nearly the whole of the sternal attachment of the sterno-mastoid. Coming at last upon it, the origins of the subclavian and the carotid, at what was an alarming depth, the difficulty of reaching the innominate beyond was increased by the occurrence of a heavy thundercloud, which seem to shut out all the top light. A mirror was then used to throw light into the wound, but without much good result, and I was here much delayed. The sheath of the innominate was at last slowly scraped through; and, using an ordinary aneurysm needle for this purpose, I succeeded in passing it under the vessel, which appeared to be healthy. I then determined to thread it with ordinary silk, and to use this to draw back the tape ligature, which Mr. Barwell had been good enough to send me. But failing in this, as the opening between the sheath and the vessel was too small, I withdrew everything; and, threading a special needle (invented by Mr. Barwell), with the curved portion movable by a lever, I introduced this with comparative ease. I then, before tying, tested the effect of pressure upon the vessel between my finger and the tape, lifting the vessel freely from its bed; and, finding that all movement ceased in the aneurysm and in the carotid, I secured the ligature with three knots, drawing the ends with moderate firmness.

The edges of the wound were brought together, and a drainage-tube having been introduced into the lower part, an antiseptic dressing was applied and fixed by means of an elastic roller. The arm and shoulder were also swathed in sheets of wadding, which had been previously heated. He was at once carried to bed; and I saw him again in about half an hour. The left side of the face was cold, but the pupils were equal. He was only recovering from the effects of the ether; but I noticed that, when he attempted to ask me some questions, he always broke down in the middle of the sentence, and then seemed to be trying to recollect what he wished to say. This was the only symptom of brain-disturbance that ever presented itself; and, in the evening, he seemed to have his mental faculties perfectly unimpaired. He was ordered ice, milk, soda water and beef-tea. Two hours after the operation, the patient complained of pain in the shoulder, and had one-third of a grain of morphia hypodermically; this was repeated in two hours. He slept for three hours during the evening. The evening temperature was 100.6° on the right side; 99.4° on the left; pulse 136. At eleven o'clock, the temperature was 99.6° on the right side; 99° on the left; pulse 120. He had no pain.

June 10th (second day). At three o'clock this morning, the patient was seen by Mr. Kidd, house-surgeon. He complained of slight pain over the region of the stomach. A hypodermic injection of morphia was given; and he slept for several hours. In the morning, when I visited him, I found that the stomach was much distended with flatus. Turpentine stipes and a carminative were ordered. The temperature at 8.30 was 99 on both sides; pulse 120. The abdominal symptoms were relieved. At 3.30 P.M., the respirations were shallow and rapid, 44. He had no pain. Finding that the temperature was then only 99°, and believing that the dyspnoea was caused by compression, I at once loosened the elastic bandage of the dressings, which gave much relief. In the evening, the temperature was 99.8° on both sides; pulse 132. The same diet as before was given.

June 11th (third day). At 12.15 A.M., he had severe pain in the right shoulder. Pulse 148. The pain was relieved by morphia. He passed a very good night. Morning temperature 99.4°; pulse 128. The respirations were normal. The wound was dressed under spray. There was slight serous discharge. The edges were uniting. The drainage-tube was cleansed. He had much pain in the arm after the dressing; a hypodermic injection of one-third of a grain of morphia was therefore given. He slept nearly all day. Evening temperature 100.4°; pulse 128.

June 12th (fourth day). Morning temperature 99°; pulse 120. The patient passed a good night, and was looking remarkably well to-day. There was no radial nor temporal pulse; the carotid pulse was still felt. The tumour was decidedly smaller, the wrinkles beginning to return in the hitherto tense skin. He had no pain until the evening, when there was a slight recurrence of it in the right arm. Evening temperature 98.8°; pulse 124.

June 13th (fifth day). Morning temperature 99°; pulse 120. During the early part of the night he complained of difficulty of breathing and pain on swallowing, but afterwards passed a good night, sleeping soundly. The wound was healed, save at the drainage opening. The tube was cleansed and returned. There was a slight serous discharge. Evening temperature 98.6°; pulse 124.

June 14th (sixth day). Morning temperature 98.6°; pulse 112. He had had a good night, and was very easy during the day. Respirations were normal. Evening temperature 98.8°; pulse 116.

June 15th (seventh day). Morning temperature 98.6°; pulse 108. The wound was looking well and firmly closed up to the drainage-tube, which was removed and replaced by a few strands of catgut. The patient was a good deal troubled with tenesmus; an enema did not relieve him, and he was ordered a mild saline aperient, which was effective; the bowels were moved twice. Evening temperature 98.4°; pulse 116.

June 16th (eighth day). Morning temperature 98.4°; pulse 132. He was ordered to have a mixture containing tincture of digitalis, in five minim doses, and sulphate of quinine, in two grain doses, every fourth hour. Evening temperature 98.4°; pulse 116.

June 17th (ninth day). Temperature 98.4°; pulse 120. The wound was dressed; some healthy pus escaped from the sinus. He could feel when the right hand was pinched. He had a very quiet day. Evening temperature 98.6°; pulse 104.

June 18th (tenth day). Morning temperature 98.4°; pulse 100. The wound was dressed with boracic lint. The patient only complained of being tired, through remaining in one position. He expressed himself as otherwise well. Evening temperature 98.4°; pulse 108.

June 19th (eleventh day). Morning temperature 98.4°; pulse 104. The wound was syringed with carbolic lotion (1 in 40). Only about a teaspoonful could be injected. The discharge seemed to come from above the apex of the flap. Evening temperature 98.8°; pulse 108.

June 20th (twelfth day). Morning temperature 98.8°; pulse 104. The discharge of pus was small in quantity; it was quite healthy. The temperature, which had been normal for seven days, rose to 99.6° this evening. He had a good deal of stinging, burning pain in the hand this afternoon. The tumour measured in one diameter $2\frac{1}{2}$ and in the other $2\frac{3}{4}$ inches, showing an altered form, and giving a reduction of one inch in one direction and of half an inch the other. Evening temperature 99.6°; pulse 108.

June 21st (thirteenth day). Morning temperature 98.6°; pulse 100. He passed a very quiet night. Sensation was good in the arm, but still very imperfect in the forearm. There was still no radial nor temporal pulse. The temperature of the arm was very good. Swallowing was again very painful. Evening temperature 99.6°; pulse 100.

June 22nd (fourteenth day). He was going on remarkably well. There was pain in the right hand for a time.

June 23rd (fifteenth day). Morning temperature 98.2°; pulse 100. The patient had pain in the right eyeball, and occipital headache. He was ordered 20 grains of bromide of potassium, which had the effect of relieving him. The pulse fell to 96 in an hour and a half. He had pain in the right hand as before for a short time. In the evening, the pulse rose to 116 and the temperature to 101°. As there was no apparent cause for this, I was at once sent for, and saw the patient with Mr. Corley. The wound was examined, but nothing there could be found to account for the increased fever. He was ordered 20 grains of bromide of potassium, and ice. Deglutition was not so difficult as on the previous day.

June 24th (sixteenth day). Temperature 98.4°; pulse 108. He passed a good night. A purgative was given. He had pain in the right hand and arm at intervals during the day. The wound was healthy. He was ordered $1\frac{1}{2}$ grains of quinine in a pill, and a mixture containing 20 grains of bromide of potassium and $1\frac{1}{2}$ drachms of infusion of digitalis, three times a day. The pulse and temperature at night again increased. The pain in the hand being severe, a hypodermic injection of morphia was administered.

June 25th (seventeenth day). Morning temperature 98.8°; pulse 108. The pain in the head and eye returned. The temperature was almost normal during the day; but again increased at night to 101°, after a severe attack of pain in the hand.

June 26th (eighteenth day). Morning temperature, 98.4°; pulse, 116. The patient was rather depressed this morning for the first time since the operation. The sinus was syringed with carbolic lotion (1 in 40). A piece of ligature about two lines long by a line broad, with some already slough was washed out. This, on subsequent examination under the microscope by Mr. P. Abraham, proved to be yellow elastic tissue. Presumably it was one of the cut ends beyond the knot, as it was sharply defined, and in the microscope at one part the fibres were suddenly turned upon themselves as if forming part of the knot.

June 27th (nineteenth day). Morning temperature, 98.8°; pulse 100. The patient looked very well and had passed a good night. The sinus was surrounded with granulations. There was no pain in the hand until towards evening, when it became severe. The temperature was taken three times, when it was found to be 101.4° in the right axilla, and 100.4° in the left. He complained of the heat in the right arm. A hypodermic injection was given, after which he slept for two hours, and awoke without pain. The temperature in the right axilla, 99.6°; in the left, 99.4°.

June 28th (twentieth day). Morning temperature, 98.4°; pulse, 104. He passed a good night. The wound was easy. About half a drachm of pus was discharged from the sinus. Some shreds of yellow elastic tissue were washed out. He again had pain in the arm, but not so severe as on the previous day. Temperature, right, 100°; left, 99.4°. A purgative was given, and the wound was dressed with carbolic lotion.

June 29th (twenty-first day). The temperature of the arm was of the normal type. A few drops of pus escaped. Temperature, right, 99.4°; left, 99.4°.

June 30th (twenty-second day), the sinus was closed. The pain in the

the sinus was opened, and half a

The temperature rose to 100° in the

Pulsation was visible at the apex of the

amount of blood lost was about three ounces. A hypodermic injection of morphia was given, and ice was ordered.

July 9th (thirty-first day), he passed a good day, with no bleeding. Ligor ergotæ was ordered; morning temperature, 98.6°; pulse, 100; evening temperature, 100.4°; pulse, 104.

July 10th (thirty-second day). He had a very quiet day. One hundred and twentieth of a grain of atropia was ordered to be given every fourth hour. A small quantity of pus escaped.

July 11th (thirty-third day). Some minute sloughs were discharged, on syringing.

July 14th (thirty-sixth day). He said he was very well; morning temperature, 98.6°; evening, 100°; sulphide of calcium was ordered in quarter grain doses three times a day.

July 16th (thirty-eighth day). The patient said he had not felt so well since the operation. Morning temperature, 98.2°; pulse, 96; evening temperature, 100°; pulse, 104. A few drops of pus escaped.

July 17th (thirty-ninth day). At half-past three this morning a very severe hæmorrhage took place. When Mr. Maher saw the patient it had stopped; but the clothes were saturated, and the blood lay in a large clot on the floor. The patient was greatly blanched and collapsed. Mr. Kidd gave a hypodermic injection of ether. He had a cold, clammy sweat, and flickering pulse. His voice was a mere whisper. He did not lose consciousness, but said he could not see. Mr. Thomson was summoned. The patient had then rallied somewhat, and complained of pains in his head and limbs. Increased pressure was made with shot-bags, the dressings not being disturbed. Warm jars were applied to the feet and body. Further stimulation was prohibited. Ice and beef-tea in small quantities were ordered.

July 18th (fortieth day). There was no bleeding; he was very weak; the treatment was continued as before. The pain in the limbs was treated with morphia.

July 19th (forty-first day). He had rallied considerably. His expression was much improved; colour had returned to his face, and his pulse was stronger but jerky. He had pain in the limbs. As his bedding had not been disturbed since the hæmorrhage, he was carefully lifted by seven assistants, and a clean mattress, etc., were substituted.

July 20th (forty-second day). He complained of difficulty of breathing at 2 A.M., and much pain. Half a grain of morphia was given subcutaneously. He slept for some time, and died quietly at 8.15 A.M. There was no recurrence of bleeding.

Post mortem Examination.—A necropsy was made a few hours afterwards by Dr. Woodhouse, pathologist and assistant-physician, and myself; but, as any interference had been forbidden by the patient's son, this had to be done to a limited degree. Only the parts actually involved in the disease and the operation could be removed. A small opening in the skin was the only part that was unhealed. The rest of the incisions were firmly cicatrized. The diameter of the tumour was $2\frac{1}{2}$ by $2\frac{3}{4}$ inches. When the skin was reflected, there was no trace of infiltration of parts; and no sign of blood. The opening in the skin led into a small cavity containing about a drachm of pus. When this was removed, the cavity was found to be about three-quarters of an inch in depth above and slightly behind the right sterno-clavicular articulation, and pointing downwards, backwards and inwards. It received the end of the little finger, like a thimble. The tumour itself was covered by skin and platysma, and some outer fibres of the sternomastoid muscle; the omo-hyoid was stretched across it.

The phrenic nerve passed along the inner side, came off by the anterior scalenus. The muscle was bulged forward, but the nerve did not seem to be pressed upon. Across the whole surface of the tumour were, highly stretched and flattened, large red and white branches of the brachial plexus. In the anterior inferior triangle, the branches overlying the great vessels were united together, and the vessels were dissected with difficulty. The lower part of the tumour, the internal jugular vein was included. The common carotid artery was cut and firm to the sternomastoid muscle. The subclavian vein was empty, and was tightly stretched along the lower and anterior part of the tumour. Its ends were tied, and in two places, near the point of the internal jugular, there were small transverse perforations, the vessels were thinning out at the internal jugular. A few drops of pus escaped from the lower end of the internal jugular, which had been cut. On turning forward the sternomastoid muscle, the tumour was found to involve the lower part of the artery. The tumour was removed from the first rib, and pushed up to the clavicle in front. The vessels were removed, the artery was attached to the sternomastoid muscle, and the vein to the internal jugular. The tumour was then removed, and the wound was closed.

The tumour was found to be a sarcoma, and the vessels were found to be involved. The tumour was removed, and the wound was closed.

constricted. Its clavicular portion measured $2\frac{1}{8}$ inches antero-posteriorly; its basal $2\frac{1}{4}$.

The artery was elsewhere normal in size. It formed a cord from which the tumour sprang. The axillary portion, so far as it could be removed, was firmly plugged. All the vessels of the first stage were traced, and were pervious.

The ulceration, which was somewhat larger than a sixpence in area, was situated at the bifurcation of the innominate into the subclavian and carotid arteries. It involved the anterior portion of the three vessels, and looking into it, the clots blocking the three vessels could be seen. The surface was grey and shreddy. There was no staining of blood visible. The vessels were partly slit, and a syringe was used to force water through in the direction of the ulcer, but although this was carefully tried with each vessel, not a drop passed through. The incisions were extended along the vessels towards the ulcer.

The wall of the innominate was thickened almost from its origin, and this thickening increased gradually as the side of the ligature was approached until the depth was about two lines. The clot was firmly adherent to the walls, and extended backwards through the greater extent of the vessel. At its cardiac side was a small tongue of organised clot rather loosely attached; and between it and the firmly adherent clot were some retiform bands of fibrous tissue deeply stained with blood.

The subclavian was found to be empty, except at its cardiac end, which was well blocked with a firmly adherent clot. This projected towards the aneurysm for about half an inch. No water could be forced through.

The common carotid felt solid, but on opening it, it was found that the centre of the clot had degenerated, and was occupied by pulpy purulent material. The walls of the vessel were thickened. The clot terminated near the bifurcation into the external and internal carotids.

The aorta was thickened, atheromatous and, in patches, calcareous. The lung and pleura as seen on the right side were healthy.

An incision was made into the aneurysm from summit to base. It contained about half an ounce of dark thick blood, and in the centre was some passive clot occupying a cavity about the size of a walnut. The process of cure was evidenced by fibrinous layers upon the walls to the extent of a third of an inch, and on the inner sides of this coating were masses of coagulum less firm, but evidently undergoing consolidation.

A prolonged and careful search was made for traces of the ligature, but none could be found. On the posterior of the innominate, opposite the ulceration, was some fatty tissue intimately adherent to the wall, which could with difficulty be cleaned.

A more minute examination of the parts was subsequently made. The vessels were all divided into the ulcer. This showed that the innominate had been constricted at about a quarter of an inch from the cardiac margin of the ulcer. The walls were not divided, and the ulcer had not taken origin at the seat of the ligature. The vessel was not occluded by adhesion of the inner surfaces, but a chink remained at the ligatured portion through which the clot continued, and had been united to the clots in the subclavian and carotid. The clot in the subclavian was well established. The ulcer had eaten into the clot in the innominate at its centre, and had in this way caused the hæmorrhage.

In order to search for the ligature, an inch of the posterior wall of the innominate was cut out, and several sections of it were made by Mr. P. S. Abraham, Curator of the Royal College of Surgeons' Museum, but no trace of it could be found. The coats of the vessel were undivided.

REMARKS.—In dealing with this case, we were fully impressed by the gravity of the decision to which we ultimately came. The various plans of medical treatment were considered and set aside as unsuitable, and the question of operative measures resolved itself into a consideration of 1, distal ligature; 2, amputation at the shoulder-joint; 3, ligature of the subclavian in its first stage; and 4, ligature of the arteria innominata. The first was disposed of at the outset by the fact that no pulse could be found in the brachial or axillary arteries, so that distal obstruction already existed. Amputation, although anxiously discussed, did not seem to hold out any additional hope, because it was evident that a collateral circulation had already been set up, in which the vessels on the cardiac side of the aneurysm were largely engaged. The removal of the limb would not, therefore, have relieved the tumour of much of the blood which had access to it, as all the collateral vessels were enlarged. Ligature of the subclavian in the first stage was contemplated when the patient first appeared; but on his second visit to hospital the aneurysm had obviously progressed inward, and had probably invaded the artery close to its origin. But a fuller consideration of that method led me to abandon it. It also had been uniformly

fatal, and I believed that greater probability of success lay in tying the innominate, than in placing a ligature in close proximity to the large number of branches which come off from the subclavian in its first stage.

It remained, therefore, that we had only two courses to choose from—to abandon the case altogether, or to give the patient the chance, slight though it was, of tying the innominate. In view of the history of the operation, it appeared to me, and those who gave me the benefit of their opinions, that the latter course was the one which, in justice to the patient, ought to be taken. The cessation of movement in the tumour stayed operation for twelve days; but the character of that cessation, very intermittent and of short duration, while the aneurysm was increasing in growth, and was very thin-walled, urged upon us that we had given the utmost limit to delay, and that ligation ought to be undertaken.

Many writers on surgery have left us in no doubt as to their opinion upon this operation. At best its execution is surrounded by the greatest danger. Erichsen says "The difficulties of the operation are in themselves of serious magnitude;" and he declares that "it should, without doubt, be banished from surgical practice." While Gross has words of admiration for the "intrepid skill" of Mott, "which could execute so daring and brilliant a feat," he observes that obstacles meet the surgeon "in every direction, even if he should be so fortunate as to get his ligature around the vessel, which, however, is by no means always the case."

Velpéau says: "Six trials of six different surgeons, of different countries, have ended in six fatal results. Is it not enough to enable us to pronounce an inexorable verdict upon such an operation? At the present day, therefore, I do not hesitate formally to proscribe it." Heath, in his operative surgery, does not even tell how the operation is to be performed.

Before an arrayed opposition such as this, it requires, perhaps, more courage to defend and justify what was done, than was needed in the doing of it. And I may be permitted to say, in the first place, that while I have the greatest respect for the opinions coming from such high authorities, I think it will be admitted, on consideration of the whole subject, that they are more vehement than justified.

Death occurring through a series of cases is no reason why we should desist from repeating an operation which, although attended by enormous difficulties, is, under the present conditions of surgery, by no means hopeless. The operation which now-a-days is amongst the most successful in surgery, which is done freely by surgeons of small experience as well as large, and in which the mortality has been reduced to three or five per cent., was, at one time, denounced as simple murder, because death seemed to be always inevitable.

I believe that ligature of the arteria innominata may be safely done. A careful study of the cases which have been published will show how very near many of them came to success. Mott's case, and Gräfe's, were up walking about before the wound was absolutely closed, and it was owing to some indiscretion that the recent adhesions were torn, and that hæmorrhage was set up. In Gräfe's, Mott's, Lizar's, Gore's, Bland's, and Bickersteth's cases, the innominate was more or less occupied by firm clot. The carotid was occupied by a clot in Gore's, Arendt's, Mott's, Lizar's, and Bland's cases. The subclavian was closed in Smyth's case (after ligature of the vertebral), almost up to the thyroid axis; and in Arendt's. It is to be observed, with reference to these facts, that in some of the reported cases, details are not given; and that in others the patients did not live long enough for such processes to be set up effectively. Here, at all events, in a considerable proportion of cases, we have that condition present which is regarded as one of the essentials of success in deligation of an artery in its continuity. The clot is found to be present, not only in the innominate, but also in the two large vessels which branch off from it. Death in the majority of cases, however, resulted from hæmorrhage, and this chiefly from ulceration of the ligature through the vessel, and an absence of sufficient adhesive power in the tissues so divided, to make closure permanent. It was an accidental result, if I may call it so, not a result to be looked for as a necessity. The possibility of obtaining obliterating clots in the innominate subclavian and carotid, or in the innominate and the carotid being shown, it only remains that, to make a long stride forward to success, we should use an antiseptic animal material which will not divide the vessel, but only keep its walls approximated for a sufficiently long time. So we find Mr. Lister declaring that, using such a material, "for my own part I should now, without hesitation, undertake ligature of the innominate, believing that it would prove a very safe procedure" (*Lancet*, April 3rd, 1869). It was with a like belief that I undertook this operation.

It is true, I regret to say, that, in my case the old tale of hæmorrhage was repeated; but there can be no doubt that it was not here set up by

the ligature cutting through the vessel. The position of the ligature is only marked by a constriction, and the margin of the ulcer does not come within more than a quarter of an inch of that line. The coats are not divided, and the ligature appears to have done its work by gripping the vessel until a well organised clot was formed. The clot had also formed on the distal side, so that the ulcer, as in most cases, had for its lateral walls nothing but organised clot in the three vessels. This clot was gradually thinned by the ulcerative process, and at last, as I believe, a weak spot in the portion in the innominate yielded to pressure, and gave way. It may be said here that the purulent degeneration of the centre of the clot in the carotid, was probably due to the access of pus from the ulcer.

But, it will be asked, what produced the ulceration, and why did my case fail if I used the precautions which I have faith in? My answer is, that the ligature did not fail. It held the vessel until a firm organised clot was formed; and that if an ulcer had not formed, at a distance from the ligature be it remembered, the patient would have recovered. The history of the ulcer is associated with the use of the drainage-tube. This I left in for about six days, except when it was removed to be cleaned. When it was finally removed, it left behind it a sinus leading down to the bottom of the wound. The wound was then perfectly aseptic, the patient's temperature normal, and everything going on well. But this track, holding some discharge, provided a nest for septic organisms when these unhappily got access. From that on, the vessel was subjected to the eroding action of pus, small in quantity though it was, as it lay in a pocket on the face of the vessel. Knowing what had happened in Mott's case, I correctly feared that an ulcer had formed; and although I did all that I could, its action could not be stayed. How the evil originally arose, I can only surmise, but I believe it was owing to the difficulty of keeping the dressing in accurate position at the neck.

Judging from my experience, I should certainly, in another case, remove the drainage-tube early, and endeavour to get speedy closure of the wound in its deeper parts. It is to be borne in mind that there is much retraction of the tissues, and that a large hole is left after the operation is terminated. The skin is brought together, and healed more quickly than the deeper parts, which are not approximated in the same way. The clavicle also assists in keeping the soft parts from falling together, and getting an early closure. This has been the case in every case on record, and it adds enormously to the risk. To overcome this, I should, in another case, apply carefully adjusted dressings, and over these place light shot-bags (a few ounces) secured that they would exert constant and moderate pressure on the wound. The head should also be brought well over the shoulder, so as to relax the tissues, and by that means an effort be made to aid the rapid consolidation of the parts.

It has been suggested by some surgeons that, in such an operation as this, the carotid ought to be ligatured at the same time, with the object of cutting off the reflux current of blood from contact with the internal surface of the innominate. Thus Barwell (*On Aneurysm*, p. 100) says, "It demands of necessity an affirmative answer, that, once, when the innominate alone is ligatured, the carotid should be cut into the subclavian in quantity large enough to insure the cure. The ligature on the carotid does not aid the operation, nor add to, indeed, it rather subtracts from the safety of the cure."

But, as a matter of fact, the history of the cases shows that this is not the case. In a large number, as in my own, a clot had formed in the carotid, and occluded it. In some cases, after ligature of the vertebral, he had the carotid secured, but that did not prevent the formation of a clot in the carotid. It was only when the vertebral was secured on the fifty-fourth day that he relieved his patient from the danger of a return circulation had been set up.

It is true, that, as it was likely a clot had not formed in the carotid, in consequence, the securing of this vessel would have been of no use. In other vessels in the neck, the same result would have been produced. The patient was kept in bed for a long interval after the operation, and I did not feel that it was safe to have been up. It is true, that, as the patient was in bed, the danger of a return circulation had been brought on fatal hemorrhage. As the patient showed, no further operation would have been

herent. "The operations on the vessels behind the clavicle and sterno-clavicular joint," says Barwell (p. 55), "are among the most arduous in surgery, requiring both steadiness and a certain courage. Given, however, that the operation have been performed in a moderately short period, and have been properly selected, there is no reason why the patient should not get well, provided the ligature have not divided any of the arterial coats." The non-division of the coats by the ligature is certainly established satisfactorily in this case. The non-adhesion of the coats is also worthy of comment. This may be effected in smaller vessels without difficulty. But in such a large vessel as the innominate there must be a certain amount of crumpling of the vessel within the ligature loop, when that is drawn tight. Upon this circumstance, the same writer observes: "It would seem that the tube, puckered and narrowed to a mere rift by the ligature, would afford an excellent surface for, and would soon get occluded by, blood-clotting." The *post mortem* examination in my case shows this condition to be actually present. Although the ligature was drawn home, a chink still appears to have been left, but that chink is closed by a firmly organised clot, which projects through it towards the carotid and sub-clavian arteries. These vessels were indeed closed by a clot, which was throughout continuous with the large mass which occupied the cardiac portion of the innominate.

Two questions may be raised in connection with this subject, namely, whether it is necessary that the middle and internal coats of a vessel tied in its continuity should be divided so as to make an internal wound; and, second, whether the formation of a clot is essential to the perfect closure of a vessel so treated.

As to the first, it may at once be stated that it is a doctrine which receives very general acceptance, based upon the admirable experiments carried out by Mr. Jones, and published in 1810. That author states: "It appears that, to induce a sufficient degree of inflammation, to occasion an effusion of lymph from the internal surface of an artery, it is necessary that these coats should be completely cut through." And he goes on to observe that, in any cases examined soon after the ligature had been applied, "although the internal surface of the artery appeared inflamed a little way above the part at which it adhered, yet in no instance did it exhibit the appearance of lymph having been effused on it, except on the part which had been cut; and the point of adhesion was never more than a line's breadth; in short, the artery seemed to adhere only at its cut surfaces. From these facts, I think we may fairly conclude that if the ligature does not completely cut through the internal and middle coats all round the artery, adhesion cannot take place between its internal surfaces, and therefore secondary hemorrhage will take place as soon as the ligature has ulcerated through any part of the parietes of the artery" (pp. 169-70).

But this doctrine is not absolutely true. There can be no doubt that vessels have been obliterated permanently by the pressure of tumours. Scarpa, seeking to avoid hemorrhage, used a tape ligature with intervening linen pad, and removed the constriction in four days, with the result of complete closure of the artery in several cases. A protest against the principle of division of the vessel's coats was made by Sir Charles Bell so late as 1842, in his lectures at Edinburgh. Referring to the subject, he observes: "At the time when writers on surgery imagined that the ligature brought the inner coats of the artery into the state of an inside wound, I foresaw what follies would be committed, and proved to the large class of intelligent students I then had that, by placing a circular ligature around the artery, letting it lie in contact with the proper coat of the artery, without drawing it at all, the artery stopped by a clot. It is not necessary to draw the ligature so as to cut the inner coats; and it is not safe, unless in young and healthy subjects and in amputations."

That was, however, in the days when no animal ligature had been adopted by surgeons, and when their hopes of success rested upon hemp and silk. It was necessary that these substances should make their way through the thickness of the constricted vessel in course of time; and it was no doubt a matter of importance that the occlusion should be hastened by section and cicatrization of the inner and middle coats. With the introduction, however, of catgut, the conditions have been changed, because it is no longer desirable that the vessel should be cut through, but that the closure of the ligature should remain long enough to secure obliteration only. This fact was admirably demonstrated by Mr. Lister in 1869 (*Lancet*, March 27th, 1869, p. 452). He applied a catgut ligature to the carotid of a calf, and thirty days afterwards the animal was killed.

"The catgut threads had been so gently produced any rupture of the internal and middle layers, and their presence, and the constriction which they occasioned, whatever may have been their effect in the first instance, had left no permanent mark of disturbance; these appearances are calculated to revive, under a new aspect, the old ques-

tion, whether it would not be better always to avoid rupture of the internal and middle coats, which could easily be done by using a pretty thick piece of catgut softened by steeping it in a watery solution of carbolic acid."

As to the second point, experiments show that the clot almost always occurs, not only in vessels ligatured in their continuity, but in those which have been secured at a divided extremity. It is the natural result of the projection of a roughened surface into the cavity of the vessel, and in the great majority of cases a coagulum may be expected.

But here, again, we find the doctrine not absolutely true. Jones, in at least one experiment, found that no clot formed, although the vessel was successfully ligated. Mr. Spence, in his *Lectures on Surgery*, vol. i, p. 427, second edition, mentions that he used to hold the opinion expressed by Manec, that "the presence of a coagulum within the vessel, filling up its canal for some distance, and ultimately becoming adherent to and incorporated with its parietes, was an essential to perfect obliteration, and the principal obstacle to secondary hæmorrhage at the decidence of the ligature. My experiments showed me that, however common the presence of a clot, or however valuable as an accessory it might be when present, it was not an essential in the process."

"Thus, in two preparations, where the dogs had been killed about two months after ligature of both carotids and both vertebrals, I found that, in both instances, the vertebrals and one carotid were pervious close up to the delegated points; whilst, in each of them, one carotid (in the one instance the right carotid, in the other the left) exhibited the presence of a considerable clot. In the stump of a leg which I dissected six weeks after amputation, I found the anterior and posterior tibial arteries pervious to common wax injection up to the point tied, and contracted in calibre, but presenting no appearance of clot."

Thus an introduction of the antiseptic catgut ligature in the tying of vessels in their continuity may demand a revision of the received views upon the essentials to success. It is abundantly proved that this material need not cut through the artery; that it need not sever the internal coats; and that the simple irritation caused by the surgical closure of the artery is sufficient to render that closure permanent.

But, on the other hand, it is no less clear that division of the inner coats does increase the rapidity of the adhesions by presenting cut edges within the artery. Is it possible, then, to secure this effect, and at the same time to use a ligature that will not wound or sever the outer tunic. I think it is Dr. Robert McDonnell has shown that, in the limited torsion of arteries, the application of a silk ligature with a single knot, drawn until the thread breaks, accurately cuts the middle and inner coats, and allows us to twist the distal part with perfect security. Now the same plan might, I believe, be followed in the ligature of arteries in their course. A suitable silk ligature so applied would give us all the advantage of the internal wound; it should then be at once removed, and replaced by a permanent broad catgut ligature, drawn only tight enough to bring the wounded parts into close apposition, and to keep them there until union was perfect. But this ought only to be tried in a fairly healthy artery. In a vessel having much atheromatous or calcareous deposit, it would probably seriously damage all the coats, and lead to hæmorrhage.

If it be also true that the presence of a clot in a tied artery is not a necessity, the area of operative procedure may, perhaps, be widened, with less fear than we might anticipate. The rule that we should avoid ligation in the neighbourhood of collateral branches, is based upon the belief that no clot would be likely to form there, because of the recurrent circulation, and that secondary hæmorrhage would almost inevitably occur. The danger is specially pointed out as one of the objections to ligature of the innominate artery by non-closure of the subclavian; and it is urged that the carotid, and perhaps the vertebral, should be secured at the same time. The carotid was so treated in Smyth's case, so as to avoid the possibility of the return current preventing the formation of the clot. As a matter of fact, the carotid has been frequently found closed when the innominate only was tied. Seeing, then, that arteries may be occluded without wounding them, it would appear that there is nothing to be gained by these precautions.

It was in the article which I have just referred to that Mr. Lister first called attention to the advantages of the antiseptic ligatures in the treatment of aneurysm. His own successes were followed by others, and these have been so multiplied, that the practice is now an established one. No ligature such as this had, however, been applied to an artery of such size as the innominate before this. I knew that secondary bleeding had occurred after the ordinary catgut material. And with the dismal record of death from hæmorrhage before me, in cases similar to mine, I determined to use the material introduced by

Mr. Barwell, viz., the oxaorta tape ligature. The principle is not altogether new. Scarfa, as we have seen, used a tape as a temporary constrictor. Hunter used it as a permanent ligature, and all his cases had secondary hæmorrhage; but there the material was textile. Jamieson of Baltimore, United States, used "a soft buckskin ligature, a little broader than the thickness of the skin, taking care not to tie it too tight." He believed that this material would be dissolved before it could cut through the vessel. By this method he tied the femoral iliac and other arteries, and never had secondary hæmorrhage. To Mr. Barwell, however, belongs the credit of having combined the two principles—ligature, with a tape of animal tissue, guarded by antiseptic precautions—and of having established the practice upon firm ground.

Mr. Barwell observes, in his book on *Aneurysm*, that his attention was first turned to a new material by reason of certain failures with the catgut, attributable to the method of preparation. Sometimes it was weak, or breakable with slight tension; or it dissolved so quickly, that pulsation returned in a few hours. "The only form of ligature," he says, "as far as my experiments go, which can be relied on not to divide arterial coats—that is to say, which can be firmly tied round an artery, and yet will leave it uninjured and hæmorrhage-proof—is a flat or tape-like band. Such a ligature must not dissolve too quickly, must not excite inflammation, and must bear a secure and reliable knot." Believing that arterial tissue would be the best material for ligature, he procured the aorta of an ox, and experimented with it. The preparation is simple. The outer cellular coat is peeled off; then, with a scissors, cut the middle and inner coats spirally round, taking care to keep the breadth equable. The elasticity is eliminated by suspending the cord, and hanging to it a weight of from two to four pounds according to thickness. "Thus treated, the ribbon dries in about six hours into a horny or vellum-like substance; any previously neglected irregularities may be scraped off with a sharp penknife; then the cord may be stored in antiseptic gauze until wanted. About fifteen or twenty minutes before the operator is ready to pass the needle, a sufficient piece of the material is to be soaked in a 3 per cent. solution of carbolic acid, when it will become quite soft and easy to tie."

With this ligature a large number of arteries have been tied, and in no case has there been hæmorrhage from the included vessel. Indeed, I believe, except in my own case, the wounds healed throughout, and no trace of the ligature was ever seen.

It is of interest to be able to record the after-appearances of the ligatures and of the vessels so treated. In a case of Mr. Barwell, in which the patient was cured of an aortic aneurysm by tying the carotid and subclavian arteries on August 14th, and died on November 24th, of pneumonia, the vessels were examined. The innominate, subclavian, and carotid were obliterated, firmly plugged with coagulum. On the subclavian, the remnants of two ligatures might be seen, like delicate shreds of connective tissue. There was no wound or scar on the outer coat of the vessel. The same may be said of the right carotid. A woman in whom the same arteries were tied on December 6th, 1877, died in May 1879. Here the right carotid was occluded; the subclavian patent as far as removed, but small. The innominate also seemed much diminished in size. (Barwell, *On Aneurysm*, 1880.) In the first case, nearly three months after the introduction of the ligatures, traces of them remained; and in the second one, ligature failed to procure obliteration of the artery. The operation, however, had cured the aneurysm on the aorta.

I have made a very full search into the literature of this subject, and I have succeeded in obtaining verification of fifteen cases in which the innominate has been tied for subclavian aneurysm. I have referred to the original reports of these cases; and I have made an abstract of most of them, so as to give as complete a history as possible of the operation. The records which appear in some of the books are not accurate. Peixoto's case was not a ligation at all. In a case of secondary hæmorrhage, he passed a ligature round the innominate as a precaution; but the cord was not tied, and it was withdrawn in a few days. Hutin ligatured the innominate also for secondary hæmorrhage; Partridge for the same; Lynch for gunshot-wound. The operation is said to have been done twice by Bugalski in St. Petersburg; but, although I wrote to the professor of surgery in that university, giving the reference, and asking him to verify it, I have not received any reply. Erichsen does not include these cases, being unable to verify them; and I omit them for the same reason.

In one case—that of Mr. George H. Porter of Dublin—a clamp was placed upon the innominate, and kept there for about fifty hours. The effect upon the aneurysm was satisfactory for that time. All movements ceased; but, when the instrument was removed, the tumour again pulsated, and the patient ultimately died of hæmorrhage from the tumour.

In three cases—those of the late Professor W. H. Porter of Dublin, Aston Key of London, and Hoffman of New York—the operation was commenced, but no ligature was applied, for various reasons. Porter thought the vessel too atheromatous; Key was unable to pass a ligature owing to an extension of the aneurysm.

The only case in which success followed is Smyth's of New Orleans. In that instance, following the suggestion of Mott, he ligatured the carotid artery also. There was profuse hæmorrhage; but, after ligation of the vertebral, the patient recovered, and lived for ten years.

Thus the innominate alone has been ligatured in eighteen verified cases, all followed by death—a result which, I admit, is terribly disheartening. With such a record, one may well ask, Is ligation of this vessel justifiable under any circumstances? That is a question to which I say, Yes, fully realising the responsibility. Let there be a balance on of the evidence which so many defeats have provided, and I am sure it will go in strong support of that opinion. I believe that it is possible to tie the artery with a ligature that will not divide its coats; that it is possible to occlude it and its branches with permanent clot, to have an aseptic wound, and to avoid secondary hæmorrhage. If I had not believed this, I should not have attempted the operation at all. It is a poor ambition that can only hope to add to a list of remarkable failures. The history of my case shows how very nearly it reached success, surviving as it did for a period second only to Gräfe's. It teaches us that the method is right in principle, and that its failure in this instance was but one of those calamities of surgery to which we are all liable. I am sure that it will give others hope, as it has given me; and, to stimulate that feeling, I cannot do better than quote the words of the distinguished surgeon—Mott—who first performed this operation. "If the primitive iliac, when tied, will heal, and we by this operation save the patient's life, why may we not with perfect propriety yet hope that some one is destined, in the brilliant march of surgical triumphs, to obtain the like happy result from a ligature on the innominate? The force of the circulation must be as great as direct in the primitive iliac, from its proximity to the aorta, as it is in the brachiocephalic trunk. My hopes are not at all dampened (*sic*) by the hitherto results of this operation; and I fondly anticipate that the day may come when some one of my countrymen may yet be heralded as the successful operator." (Velpéau, New York edition, vol. ii, page 288.)

Table showing Cases in which the Innominate was Ligatured for Subclavian Aneurysm.

Patient.	Date of Operation.	Date of Hæmorrhage, if any.	Time of Death.
1. Mott, New York.	1846.	18th day.	18th day.
2. Gräfe, Berlin.	1847.	18th and 19th days.	18th day.
3. Norman, Bath.	1848.	18th day.	18th day.
4. Lizar, Edinburgh.	1848.	18th, 20th, and 21st days.	18th day.
5. Gore, Bath.	1848.	18th day.	18th day.
6. Pirogoff.	1848.	18th day.	18th day.
7. Mott, New York.	1848.	18th day.	18th day.
8. Mott, New York.	1848.	18th day.	18th day.
9. Mott, New York.	1848.	18th day.	18th day.
10. Mott, New York.	1848.	18th day.	18th day.
11. Mott, New York.	1848.	18th day.	18th day.
12. Mott, New York.	1848.	18th day.	18th day.
13. Mott, New York.	1848.	18th day.	18th day.
14. Mott, New York.	1848.	18th day.	18th day.
15. Mott, New York.	1848.	18th day.	18th day.
16. Mott, New York.	1848.	18th day.	18th day.
17. Mott, New York.	1848.	18th day.	18th day.
18. Mott, New York.	1848.	18th day.	18th day.

Cases in which the Innominate was Tied for Secondary Hæmorrhage.

Patient.	Date of Operation.	Date of Hæmorrhage, if any.	Time of Death.
1. Mott, New York.	1846.	18th day.	18th day.
2. Gräfe, Berlin.	1847.	18th and 19th days.	18th day.
3. Norman, Bath.	1848.	18th day.	18th day.
4. Lizar, Edinburgh.	1848.	18th, 20th, and 21st days.	18th day.
5. Gore, Bath.	1848.	18th day.	18th day.
6. Pirogoff.	1848.	18th day.	18th day.
7. Mott, New York.	1848.	18th day.	18th day.
8. Mott, New York.	1848.	18th day.	18th day.
9. Mott, New York.	1848.	18th day.	18th day.
10. Mott, New York.	1848.	18th day.	18th day.
11. Mott, New York.	1848.	18th day.	18th day.
12. Mott, New York.	1848.	18th day.	18th day.
13. Mott, New York.	1848.	18th day.	18th day.
14. Mott, New York.	1848.	18th day.	18th day.
15. Mott, New York.	1848.	18th day.	18th day.
16. Mott, New York.	1848.	18th day.	18th day.
17. Mott, New York.	1848.	18th day.	18th day.
18. Mott, New York.	1848.	18th day.	18th day.

Case in which the Innominate and the Carotid were tied for Subclavian Aneurysm: Recovery.—A. W. Smyth, New Orleans. Patient operated on May 15th, 1864. Hæmorrhage on fourteenth and fifteenth days; ligature of vertebral; recovery.

Case in which the Ligature was passed round the Artery, but not tied.—Plexoto.

Case in which Temporary Occlusion of the Arteria Innominate was effected by a Clamp.—George Henry Porter, Dublin.

Cases in which the Innominate was exposed, but not tied.—Professor Henry Porter, Dublin; Hoffman, New York; Aston Key, London.

The innominate appears to have been ligatured for various causes in all eighteen times previously to this case. The results have been—deaths, 17; recovery, 1. As to the periods at which death occurred they stand in this order: Gräfe's, 67th day; Thomson's, 42nd day; Cooper's, 34th; Mott's, 26th; Lizars, 21st; Bland's, 18th; Gore's, 17th; Lynch's, 12th; Cooper's, 9th; Arendt's, 8th; Bickersteth's, 7th; Hall's, 5th; Norman's, 3rd; Pirogoff's, 2nd; O'Grady's, 20 hours; Hutin's, 12 hours; Partridge's, 1½ hours. The ligature separated in Mott's case on the 14th day; in Gräfe's on the 14th; Smyth's on the 17th; Lizars on the 19th. Hæmorrhage occurred as follows: Bickersteth's, 8th and 9th days, when there were three; Gräfe's on the 14th; Smyth, 14th, 15th, 16th, 33rd and 51st; Gore's, 17th; Blair's, 17th and 18th; Lizars, 22nd, 23rd and 24th; Mott's, 23rd, after that "frequent;" Thomson's, 30th and 39th days.

Valentine Mott's Case.—The patient was a sailor, aged 57, who was admitted to the New York Hospital on March 1st, 1848. He had a week before fallen on his shoulder, and two days afterwards there was much pain, followed by great swelling of the arm. A swelling was detected above and behind the clavicle, but it was thought to be a common in-dolent tumour, and was repeatedly blistered. At length a faint pulsation was perceived. On May 3rd, the patient felt something give way in the tumour, which rapidly increased in size, and pulsation became distinct. There was no difference in the arterial pulses at the wrists. As the growth of the aneurysm increased rapidly, Mott operated on May 11th. It was his intention to tie the first stage of the sub-clavian, which had at that time been tied once (G. A. Colles, of Dublin) with fatal result; but as the vessel appeared to be diseased, he resolved to tie the innominate. A silk ligature was accordingly placed round the artery, half an inch below the bifurcation. The operation lasted one hour, and at its close the patient declared that he felt himself in no way "different from common." The pulse was 69. He passed a good night, and on the next day the radial artery could be felt full, and there was an evident pulsation in the anterior branch of the temporal artery. The ligature was found loose on the fourteenth day, and he was allowed to sit up. On the sixteenth day he was able to walk about, and on the twentieth he was passed down two flights of stairs and walked several times across the yard. On the twenty-third, while the patient was lying on his right side, something caused him to turn his head suddenly to the left, and this was followed by a gush of blood. Dry lint was pressed into the wound, and the bleeding was arrested, but it recurred frequently, and the patient died on the twenty-sixth day after operation. *Post mortem*.—A probe passed into the innominate from the aorta entered the cavity of the ulcer resulting from the original wound. The internal coat was smooth, but for half an inch below where the ligature had cut through the artery it showed appearances of inflammation, and there was a coagulum adhering with considerable firmness to one of its sides, showing that nature had made an effort to plug up the extremity of so large a vessel after the adhesion, which had no doubt been effected by the ligature, was swept away by the destructive process of ulceration. The ulcer was twice the size of the wound in the neck. The tripod of great vessels, consisting of the innominate subclavian and carotid arteries, to the extent of nearly an inch, was dissolved and carried away by the ulceration. The extremities of the two latter vessels were found also to open into the cavity of the ulcer. The carotid was lined with a coagulum more than twice the thickness of the coats, and extended above the division into the external and internal, inasmuch that a probe could hardly be introduced. The sub-clavian, internally and externally to the disease, was pervious. The tumour was much reduced and contained coagula.

Professor Gräfe's Case.—The report of this case does not appear to have been published by Gräfe. What we know of it is contained in a letter to Dr. Macleod of London by Professor Wagner of Berlin, and printed in the *Medical and Physical Journal* for 1823, page 475. The patient was a sailor, aged about thirty, who had an aneurysm of the right subclavian artery. The incision was a longitudinal one, "near the anterior edge of the sterno-mastoid muscle down to the sternum", which first exposed the carotid. "No alarming symptom ensued, and the ligature, which was considerably broad, came away about a fortnight after the operation, carrying out just that portion of the artery, where the innominate is divided into the carotid and subclavian artery. Something afterwards, however, a hæmorrhage suddenly arose, which, though considerable, was soon stopped by the application of cold water and pressure. The patient then complained of pains in the tumour

formed by the aneurysm, in which fluctuation was distinctly to be felt; and this determined Dr. Gräfe to make an incision into the aneurysmal sac. A considerable quantity of pus and grumous blood was thus evacuated; and matter continued to be discharged daily from this opening, whilst the other was filled with granulations, and went on exceedingly well. The patient, however, got into a state of fever, began to spit blood, and to throw up matter; and so he died on the sixty-eighth day after the operation had been performed. On dissection, the lungs were found in a diseased state; and in the arteria innominata a clot had been formed, extending from its origin to where the ligature had been applied. By an injection made into the aorta, the arteries of the right arm and right side of the head were entirely filled; the circulation in these parts having been fully re-established by anastomosing branches."

M. Arendt's Case.—The patient was a countryman, aged 36, of seemingly strong condition, who presented himself at the Ivanhoff Hospital, St. Petersburg, on December 3rd, 1827. He complained of pain in the right upper arm, which rendered the limb useless. The arm was swollen and inflamed. A pulsating swelling, the size of a goose's egg, lay behind the clavicle, especially at the upper and inner part, extending from the sterno-mastoid outwards. A year previously he had received a blow on the shoulder, followed by pain and swelling. Operation having been agreed upon, an incision three and a half inches in length was made along the inner border of the sterno-mastoid to half an inch below the border of the sternum. The muscle was drawn outwards, and the operator passed his finger along the outer border of the sterno-thyroid and drew it inwards, giving room to pass the right forefinger under the sternum into the thorax, where, following the trachea, he arrived at the innominate. After much trouble the needle was passed, but in bringing the point out it broke off, and a second had to be used. On the evening of the day, December 24th, there was much fever, and the patient was bled to twenty ounces. There was difficulty of breathing. The tumour decreased in size, but the symptoms did not improve. There was much pus from the wound, and the patient died on the eighth day from "exhaustion." *Post mortem* there was found puriform infiltration among the cellular tissues of the muscles, trachea, and bronchi of right side. There was serum in the pleura; and the lower lobe of the right lung contained fibrinous exudation. The sac commenced an inch from origin of the subclavian artery. It was seated upon the first two ribs, which were partly absorbed. The ligature had cut through the inner coats of the vessel. The carotid and subclavian arteries were closed. (*Guy's Hospital Reports*, vol. xvii, page 126.)

Dr. J. Hall's Case.—The patient was a labourer aged 52, big, athletic, always in good health. From the first months of 1830, he had noticed a pulsating tumour formed on the right side above the clavicle. There were pain, almost complete paralysis of arm, and oedema. The pulse was full and frequent at both wrists. He was admitted into the Baltimore Hospital, and ligature of the innominate was proceeded with on September 7th. The parts about the artery were indurated; had morbid adhesions. The artery was manifestly diseased and dilated. Careful detachment of adhesions. There was slight flow of arterial blood, without jets; but this soon became copious, and was arrested by compressing the innominate against the sternum. The vessel was tied, but when returned to its place the bleeding recurred. The wound was plugged with sponges, and the hæmorrhage arrested. After two hours, the beating of the right carotid and subclavian equalled that of the left side. On the 9th, the pulse being full at both wrists, he was bled to fifteen ounces, and purged. On the 10th, the patient got up, walked about the ward, went into the yard, and talked of going home. On the next day, he again got up; but in the evening, there was much dyspnoea, pain about sternum, bloody serosity from wound, difficult deglutition; and the patient died at 4 A.M. on the 12th, six days after operation.

The *post mortem* examination showed cellular tissue over the pericardium inflamed and thickened, the arch of the aorta at least half as large again as natural. The ligature remained in its place passed across two holes in the thickness of the coats of the artery. These holes, of two or three lines diameter, were situated at the anterior or internal part of the vessel; they were nearly at the middle of the length of the innominate. The inner coats of the aorta, innominata, right carotid, and subclavian, were beset with atheromatous deposits. The aneurysmal sac contained a dense clot. (*Baltimore Medical and Surgical Journal and Review*, 1833, i, pp. 125-132; *Guy's Hospital Reports*, vol. xvii, p. 127.)

Mr. W. Bland's Case.—The patient was aged 31, and was admitted an inmate of the Benevolent Asylum, Sydney, New South Wales, in March 1832. Two years before, he noticed a small throbbing tumour above and about midlength of the right clavicle. It had been treated by bleedings, the application of cold water dressings to the tumour, and

aperient pills. The size of the aneurysm when seen by Mr. Bland is not stated. The patient suffered from great pain, and had an "arid tongue". The operation was performed by Mr. Bland on March 26th, 1832. "An incision was made through the integuments, extending upwards about two inches from the atlantal edge of the sternum in the direction of the fibres of the subjacent sterno-thyroid and thyroid muscles, and about one inch and a half downwards below the atlantal margin of that bone. The sternal insertion of the mastoid muscle was now divided, and the dissection further prosecuted by the careful separation of the fibres of the sterno-thyroid and hyoid muscles, in their longitudinal direction, partly with the edge and partly with the handle of the scalpel. The forefinger was now cautiously insinuated through the cellular substance and down to the arteria innominata; and that vessel having been separated from the adjacent nerves, the needle was slowly and deliberately introduced. The ligature, consisting of two threads, was now tied with much care, and with sufficient firmness, it was conceived, to cause the division of the inner coat of the vessel, and the wound was covered with light dressings." He was bled to eighteen ounces in the evening, and next day to ten. On the 28th, the tumour was rapidly reducing, pulse 126. Bleeding to eighteen ounces occurred, and in the evening to eleven ounces. On the 29th, the tumour was one-third less, and there was no perceptible pulsation in any of the branches, either of the right carotid or the right subclavian. He had perfect use of both arms. On April 10th (fifteenth day), there was soreness of throat and some dysphagia; pulse 108; discharge slightly sanious. Up to this, the patient had gone on very satisfactorily. On the seventeenth day, there was hæmorrhage from the wound to the extent of four or five ounces. It ceased spontaneously. In the evening, a second bleeding took place, and a few ounces were lost. Obscure pulsations or faint irregular thrilling motions were now perceptible in the tumour, which increased in size from a transverse measurement of $2\frac{3}{4}$ inches to $3\frac{1}{4}$ inches since morning. He was bled three times during the day, to the amount of six, fourteen, and twelve ounces respectively. Next day, the eighteenth, there was "slight bleeding", which immediately ceased; and later on, ten or twelve ounces were lost. The pulse was weak, contracted, intermitting, and irregular. He gradually sank and died, without any recurrence of hæmorrhage, on the same evening. It is interesting to note, in this case, that the number of venesections amounted to eighteen, and the quantity of blood abstracted to 6 pints $12\frac{1}{2}$ ounces.

At the *post mortem* examination, the following circumstances were observed. 1. The pleura and contiguous cellular substance had been in no way injured by the operation. 2. The wound had been almost entirely closed from its fundus up to the surface, so that no more than about a teaspoonful of matter was found in its cavity. 3. The ligature which encircled the artery close to its grand division into the right subclavian and carotid had almost completed the division of the artery. 4. The carotid had become closed throughout its entire extent by solid coagula, and that about two-thirds of the arteria innominata itself had become closed by a solid plug of coagulum adhering to its walls, while, on the contrary, the subclavian, from its commencement up to the aneurysmal tumour itself, still remained pervious, and whence alone, no doubt, the fatal hæmorrhage had proceeded. (*Lancet*, October 20th, 1832.)

Cases referred to by Dupuytren.—This case is incorrectly attributed to Dupuytren himself. I have been unable to find any report of it in any of the French journals. In Dupuytren's *Leçons Orales de Clinique Chirurgicale* (page 611; Paris, 1834), the allusion which he makes to the subject is in these words: "We have seen, in the details which we have given of the necropsy of our patient, that the brachio-cephalic trunk, although very large, was healthy; the ligature could have been placed upon it; but we have already remarked that the two operations of this kind, by Mott in America, and by Gräfe in Prussia, have not been fortunate. A third, practised more recently in Paris, was not more so; the patient died of hæmorrhage. These reverses are not encouraging. Nevertheless, in order to be consistent with ourselves, and to reason always upon the principles which we have laid down in treating of the method of Brador, far from blaming we ought rather to commend those who, in desperate cases, would have recourse to this bold operation."

Mr. Lizars's Case.—The patient was a carter, aged 30, and was admitted to hospital on May 28th, 1837, complaining of pain and stiffness in the right arm. A pulsating tumour, of the size of a small egg, was found above the clavicle towards the sternal half of the bone. There was indistinct pulsation in the radial and ulnar arteries. On May 31st, ligature of the innominate was performed with great facility. On June 3rd, pulsation returned in the tumour; but next day it felt quite hard, although pulsation was felt in the radial and temporal arteries. On the 5th, there was very distinct pulsation in the brachial

artery. On the 16th, the knot of the ligature was found in the dressings. Next day, he had pain in his right side, was very feverish, and was leeched freely. On the 19th, he had a severe fit of coughing, which was followed by hæmorrhage from the wound. It was easily commanded with the finger until a narrow strip of lint was stuffed into the wound, and a compress placed over it. Eight ounces were lost, and twenty more were taken by venesection. On the 20th, there was a further loss of four ounces of blood. It recurred next day, and was restrained from escaping by the wound; but it was evident that there was internal hæmorrhage, from the tumefaction of the neck and occasional spitting of mouthfuls of blood, accompanied with frequent cough and considerable dyspnoea. The patient gradually sank, and died on the 21st day. The *post mortem* examination showed pleuritis on the right side. "Some coagulated blood extended a short way into the aortic portion of the innominate, and upwards into the carotid, but none into the commencement of the subclavian. The vertebral, thyroids and internal mammary, and the transverse cervical arteries, were all pervious, without coagula. The aneurysmal tumour was collapsed, and full of coagula, as was also the subclavian beyond it." (*Lancet*, 1837, vol. ii, pages 445 and 602.)

Mr. R. T. Gore's Case.—The patient was aged 52, and is described as a well formed muscular man. He was admitted to the Bath Hospital on September 22nd, 1856. Three years before, he had noticed a small swelling in the axilla, about the size of a walnut. It remained stationary until the spring of 1856, when it began to increase rapidly, and was observed to pulsate. On admission, the tumour was found to occupy the right axilla, extending upwards beneath the pectorals and the clavicle until it came in contact with the scalenæ. The pulse was 80. Ligature of the innominate was performed on September 24th. The usual incisions were made, and the sternal attachment of the sterno-mastoid muscle was divided. The vessel was tied with a hempen ligature. He had a rigor on the night of the 27th. There was slight cough, and the wound had a blush of redness. There was free discharge. On October 1st, the cough was nearly gone. On the 5th of August, there were more rigors; on the 8th, the unfavourable symptoms had disappeared; but it was noticed that the ligature had an impulse communicated by each action of the heart. He went on fairly until October 10th, the seventeenth day after the operation, when, during a fit of coughing, a clot, of dark colour, escaped from the wound, and was followed, in fifteen minutes, by a stream of arterial blood, which continued to flow until his death, within an hour from the beginning of the attack. It is not stated what means were taken to check hæmorrhage. The *post mortem* examination showed that the arteria innominate was partially cut through by the ligature, which was firmly attached to it. The cardiac extremity was scarcely at all constricted, but was partially plugged by a firm clot, three-quarters of an inch long. The tumour, now very much reduced in size, was filled by a firm coagulum, occupying the subclavian, axillary, and upper part of the brachial artery. The carotid was blocked up as far as the bifurcation by a firm clot. The right subclavian vein was attached to the tumour, and obliterated. Extending from the wound into the anterior mediastinum was a large cavity, stretching upwards into the neck under the sterno-mastoid muscle, and filled with offensive pus. Mr. Gore adds his opinion that, under favourable circumstances, the operation is, in certain conditions, justifiable and advisable; and that, with the improved methods now available, it may yet be followed by favourable results. (*Lancet*, July 27th, 1878.)

Case.—A patient of middle age, and strongly built, came to the hospital with a swelling of the size of a pigeon's egg in the right axilla. He had suffered from an abscess in the infra-clavicular region twelve years before the appearance of the aneurysm, and had also been affected with chronic cough. He attributed the origin of the tumour to a squeeze in the shoulder several years previously. The pulses in both arms were equal. There was pain along the whole arm. Ligature of the innominate was performed without difficulty. Diminution of the tension and pulsation of the tumour undoubtedly ensued. Some hours after the operation, the patient complained of acute pain in the right side of the chest, attended with difficulty of breathing and swallowing. Next day, there were bronchial symptoms on the right side. There were deafness and change of features, and the left side of the face was paralysed. Symptoms of œdema and abscess of the lungs set in, and he died forty-eight hours after the operation. After death, there was found deep-seated acute purulent inflammation of the arterial sheath, with œdema of the surrounding parts extending to the mediastinum and pericardium. There was plastic exudation on the right pleura, and lobular hepatization in one or two places in the lungs. The state of the parts after death was not mentioned. (*Guy's Hospital Reports*, vol. xvii, p. 137.)

Dr. E. S. Cooper's Case (San Francisco).—The report of this case is very brief, occupying little more than one page of the journal from which it is abstracted. No mention is made of the patient's age, occupation, or of the history of the tumour or tumours; for there were found two aneurysms—one on the carotid, and one on the subclavian—their walls being united by adhesions of a firm character. The incisions were, one four inches long in a line parallel to and half an inch above the upper margin of the clavicle, commencing internal to the sterno-clavicular articulation, and terminating near the anterior margin of the trapezius. A transverse incision was now made, commencing a little to the inner side of the centre of the first, and, extending upwards external to the sterno-cleido-mastoideus muscle, terminated two inches and a half above. The tumour extended beneath the clavicle, and pressed upon the posterior surface of the summit of the sternum. Finding it impossible to reach the innominate, the operator removed the summit of the sternum and the sternal end of the clavicle. Even this procedure barely made room sufficient. One-third of the innominate was dilated by the aneurysm, and the vessel had to be ligated with three-fourths of an inch of the aorta. The patient was comparatively comfortable for five days. "After that time, however, he became restless, had dyspnoea, retention of urine, and gradually sank, until the ninth, when he expired." At the *post mortem* examination, the right kidney contained pus. It is to be regretted that no mention whatever is made of an examination of the parts involved in the operation, or of the condition of the aneurysmal tumours. (*American Journal of the Medical Sciences*, N. S., vol. 38, 1859.)

E. S. Cooper's Second Case.—The disease for which the ligature was applied is not stated, but it was probably aneurysm. In this case also he removed the upper portion of the sternum and inner part of the clavicle. The patient went on well for several weeks, and could walk about his room. Secondary hæmorrhage supervened, which was at first arrested by compression, but afterwards it could not be controlled. The patient considered that nothing more could be done for him, and, when alone, he removed the bandages, and allowed himself to bleed to death, which occurred about the thirty-fourth day after operation. No further detail. The source of the hæmorrhage was considered to be probably from the peripheral end. (*San Francisco Medical Press*, January 1861; and *Guy's Hospital Reports*, vol. xvii, page 136.) This report is also very unsatisfactory.

Mr. E. R. Bickersteth's Case.—The patient was a vigorous man, employed as a dock porter, and was admitted to the Liverpool Royal Infirmary on April 15th, 1868. Three weeks previously he had strained himself in lifting a bale of cotton, and in a few days a swelling above the collar-bone appeared. It was about the size of a hen's egg, its inner margin reaching to the outer edge of the sterno-mastoid. On the 5th of May, Mr. Bickersteth cut down upon the arteria innominate, with the intention of temporarily compressing the vessel with a leaden wire passed under it, the pressure being regulated by a screw and india-rubber accumulators, set in a small framework. On the 7th pulsation returned in the aneurysm, and, on examination, it was found that the wire had given way. It was resolved not to replace the clamp. A double silk ligature was now passed beneath the vessel at the same part where the wire had been, and was tied firmly at two points, very slightly apart from each other, above and below, where the wire had been applied. The tumour became smaller, and all went well until the 13th, when, during a fit of coughing, some hæmorrhage took place from the wound, and was controlled by pressure. Next morning there was an attack of bleeding, lasting a quarter of an hour; later on another one, lasting eleven minutes, and in the evening a "fearful gush" occurred. The patient died in an hour, on the seventh day from the application of the ligature. The bleeding was treated by filling the cavity of the wound with loose shot.

Post mortem Examination.—The aorta was atheromatous. The innominate, from its origin to the ligature, was filled with a firm, closely fitting plug of fibrin—was, in fact, most satisfactorily occluded. Above the ligature, to its bifurcation, the vessel was quite empty, while the common carotid and the subclavian, as far as the aneurysm, were quite empty, and did not contain a trace of clot. The aneurysm had diminished, and was quite filled with firm, laminated clot. The rest of the subclavian beyond the aneurysm, and first part of the axillary artery, were nearly, but not quite, filled with clot. The hæmorrhage was seen to have proceeded from the distal side of the upper of the two ligatures, which had partially cut through the vessel. (*Medico-Chirurgical Transactions*, vol. lvi, 1873, page 129.)

Mr. J. S. O'Grady's Case.—The patient was a cabinet maker, who had worked hard, and who used his right shoulder much as a motive power against the handle of the chisel. The tumour, which had existed for three years, was large, and extended above the clavicle and into

the axilla. In order to get at the innominate, it was necessary to remove the two inner inches of the clavicle, the sense of touch being alone available for the deeper steps of the operation. The needle was introduced from the tracheal side most easily, but the point slipped up so as to include the common carotid, which was then secured. The innominate was then tied. The patient died in 20 hours. The cerebral ventricles were distended with serous effusion. (*Power of the Arteries*, 3rd edition, p. 49.)

Mr. Hutin's Case.—A soldier at Oran, in fighting a duel, was wounded in the right axilla by a novel species of weapon—a scissors blade tied to the end of a stick. Severe hæmorrhage ensued, but was speedily arrested by handkerchiefs stuffed in the armpit. As the hæmorrhage did not return, a simple dressing was applied. On the fourth day, blood again escaped from the wound, and during the following eight days bleeding took place three times. The axilla became swollen and crepitant. Hæmorrhage again took place, the jet equaling that of a quill. The subclavian was tied in the third stage. On the sixth day, while straining in the closet, there was a fresh gush from the axilla, which was arrested by cold. On the ninth day, the ligature came away, and was followed by repeated bleedings, so that on the same night Hutin ligatured the innominate. The operation was long and painful. A flat ligature was carried round the artery, with an additional ligature of reserve. The patient died at eleven next morning. At the *post mortem* examination, the ligature was found to have been properly applied; but contrary to what was expected, the axillary artery was found uninjured. One of its branches, the inferior thoracic, had been completely divided at about three lines from its origin. (*Archives de Chirurgie française et étrangère*; and *Lancet*, May 14th, 1842.)

Mr. S. B. Partridge's Case.—This case was communicated by Sir Joseph Fayrer, to whom I am indebted for a copy of the report, written by Baboo Preonath Bose. Ramchum Chunder, a native hawk, was admitted into the Medical College Hospital, Calcutta, on April 17th, 1870, under the care of Mr. S. B. Partridge, second surgeon. The patient had noticed a swelling near the middle of the neck, about a year and a half prior to his admission. The tumour was an aneurysm of the right carotid. The common carotid was tied below the omohyoid with marked beneficial effect upon the aneurysm. The ligature separated on May 2nd, thirteen days after operation. The patient was feverish and much harassed with cough, and about 10 P.M. there was a sudden gush of arterial blood. The bleeding was controlled until Mr. Partridge placed a ligature round the innominate, just below its bifurcation. The patient, however, died of shock, about an hour and a half after the operation. (*The Indian Annals of Medical Science*, vol. xiv, page 222.)

Lynch's Case.—The innominate was tied by this surgeon in 1867, for a gun-shot wound of the internal carotid and the vertebral arteries. The common carotid had been tied a month previously. Hæmorrhage occurred on the twelfth day, and the patient died soon after. Partially organised clots were found in the cardiac end of the artery.

Dr. A. W. Smyth's Case.—The patient, William Banks, a mulatto, a steamboat steward, was admitted to the Charity Hospital, New Orleans, on May 9th, 1864. The aneurysm occupied the posterior inferior triangle of the neck, was the size of an orange, and had existed for four months. In the month of February, he had strained his arm in efforts to save himself from drowning in a collision at sea. On May 15th, a ligature was placed upon the innominate artery, a quarter of an inch below its bifurcation; and a ligature was also applied to the carotid, an inch above its origin. In forty-eight hours, slight pulsation was discovered at the wrist. On May 28th, the ligature came away from the carotid; and on the 29th (fourteen days after the operation), a severe hæmorrhage took place, causing syncope, and ceasing of itself; sixteen ounces of blood were lost. On the two following days, there was slight bleeding. On June 1st, Dr. Smyth filled the wound with fine shot (No. 9), covered the shot with some lint, and placed a small paper weight on the lint. On the same day, the ligature came away from the innominate on slight pulling. On June 17th, some of the shot was taken out; but, bleeding coming on soon afterwards, the shot was replaced. Slight hæmorrhage occurred at intervals of two and fifteen days; and, on the night of July 5th, a terrific bleeding took place. It ceased from syncope. Being satisfied that the hæmorrhage could be accounted for by a retrograde current through the vertebral, Dr. Smyth ligatured that vessel on July 9th. For several days, the safety of the arm was endangered. The shot, which had remained in the wound for thirty-eight days, was now removed. There was no further hæmorrhage; and, the wound being closed, the patient was considered cured on September 16th. In May 1869, when the patient was exhibited at the American Medical Association, no vestige of the aneurysm remained. "The conclusion to which the members came, that the opera-

tions never had been performed at all, was perhaps not to be wondered at." In June 1874, he wrote to Dr. Smyth that the tumour had returned; and when he reached New Orleans, the aneurysm was considerably larger than at first. It was tense, globular, and pulsating. On October 5th, believing that a single branch of the subclavian was carrying on the collateral circulation, Smyth tied the internal mammary in the third intercostal space. Some improvement was thought to have taken place. He returned to hospital on March 29th, 1875, complaining of an abscess, which had previously been punctured, and which was prominent under the clavicle. It was opened with a trocar. No change had taken place in the aneurysm. He did not go into hospital; but, the day but one after, the aneurysm ruptured into the cavity of the abscess. The sac was now laid open and the clots scooped out, in the hope of reaching the mouth of the vessel supplying the aneurysm; but the operator was obliged to give up the search, and stuff the sac with lint. He died on April 6th, 1875.

At the *post mortem* examination, the innominate artery was found to be injected to the point of ligation less than an inch from its origin, where it suddenly became reduced to a bundle of tough fibrous tissue, in which could be traced the origin of the common carotid and the subclavian arteries. The carotid was occluded up to the bifurcation. The subclavian was impervious from its origin to a fourth of an inch of the thyroid axis. The thyroid axis and its branches were all pervious, and seemed not above the ordinary size. The subclavian from the thyroid axis to the aneurysmal sac, into which it opened, was rather under the ordinary size. The vertebral artery was represented by a fibrous cord up to the fourth cervical vertebra, where it became pervious. (*Report of the Successful Ligation of the Innominate, the Common Carotid, the Vertebral, and the Internal Mammary Arteries*. New Orleans, 1876.)

Mr. George H. Porter's Case.—The patient was aged 43. The tumour involved the three stages of the subclavian. Acupressure was applied to the axillary artery for fifty-three hours, without good result. A month after, an attempt at cure was made by placing direct pressure on the innominate. The vessel was laid bare after a tedious dissection. An instrument something like a lithotrite was used, as invented by Lestrangé. The artery was included between the blades from the morning of July 31st, 1867, to the evening of August 2nd. When the pressure was removed the pulsation returned strongly. The patient died of hæmorrhage. (*Medical Press and Circular*, 1877.)

Dr. Antonio José Peixoto's Case.—The patient was Dr. J. A. De Moura, a Portuguese, aged 33, formerly attached to the military hospital of Gros-Caillon, as surgeon. From 1832 he had noticed that his right ear increased in volume, and was excessively cold. In 1845, he consulted Nélaton, who recognised an erectile tumour of the ear, and ligatured the posterior auricular artery. Secondary hæmorrhage occurred. The tumour continued to increase in size, and in 1851 the patient went to Rio Janeiro. There he developed symptoms of being a "bleeder", so much so, that the punctures caused by mosquitoes required compression to stay the hæmorrhage. On the 14th of November, it was decided to tie the external carotid, on account of the size of the tumour of the ear; but as the vessel was much enlarged, it was determined to tie the common carotid. This was accordingly done. On December 4th, the nineteenth day after the operation, there was hæmorrhage from the carotid, and this occurred several times until the 7th, when the patient, not wishing to suffer more, tore the dressings from the wound. He was, however, quieted. On the 8th, it was decided to pass an "expectant" ligature (*ligature d'attente*) under the innominate. The ligature came from the carotid at the time, and as there was no hæmorrhage, the *ligature d'attente* was not tied. He was closely watched, lest it should be necessary to secure the vessel; but in spite of irritation of the larynx and trachea, no bleeding occurred. On the 13th, no complication having meanwhile occurred, the ligature was withdrawn from the innominate. The last date of the report is December, and the author promises to report the result; but although I have looked into all the succeeding volumes, no further mention is made of the case. It is to be observed, however, that this was not a real case of ligature, the operation consisting simply in passing a silk thread in anticipation of bleeding, actual tying not having been done. (*Mémoires de l'Académie Impériale de Médecine*, vol. xix, 1855, page 23.)

THE ADULTERATION OF BEER.—The Adulteration of Beer Act, which is to be introduced into Parliament next session by Colonel Barnes—the object of which is to compel brewers and retailers to declare on their barrels the names of the ingredients of which it is composed—was the subject of discussion at a recent meeting of the Cambridgeshire Tenant Farmers' Club. Messrs. Hicks and Bulwer, the county members, spoke in its favour; and a resolution was passed approving of the Bill.

LIGATURE OF THE LEFT SUBCLAVIAN ARTERY FOR TRAUMATIC ANEURYSM OF THE AXILLARY.

*Read in the Section of Surgery at the Annual Meeting of the
British Medical Association in Worcester, August 1882.*

By ARTHUR H. DOLMAN, M.R.C.S.,
Surgeon to the Derbyshire General Infirmary.

CATHARINE R., aged 45, had been drinking from March 14th, to the following Sunday morning. On that day she discovered that her left shoulder was swollen and painful. On the following morning she applied at the casual department for relief. Her left shoulder was then found to be greatly swollen and discoloured. There was also great effusion in the joint. No fracture or dislocation was made out. She accounted for the symptoms by stating that she had fallen down stairs on the previous Saturday with a bucket of water in her hand. She was ordered a cooling lotion, and the arm was bandaged to her side.

The synovitis subsided, but a general swelling and oedema remained, and soon after the oedema spread to the arm. She was treated by bandaging, lotions, and liniment for about a fortnight, but without much improvement, and she was then advised to remain in the infirmary. She did not, however, enter till April 17th.

On admission, there was observed to be swelling, with redness and tenderness on pressure of left arm and forearm. In the left axilla was a hard elastic swelling, which bulged anteriorly and posteriorly as well as below. There was oedema of the skin over the swelling and round the shoulder, which somewhat masked the outline of the tumour. On further examination the tumour was found to pulsate downwards and laterally. Posteriorly and below there was a systolic murmur, while at one point anteriorly the murmur was distinctly double. The arm was numb, cold, and almost useless. The pulse at the wrist was very feeble. Pressure upon the tumour during compression of the subclavian did not make any sensible difference in its bulk. The heart and other organs were normal. A saline mixture and lead lotion were prescribed, and in the evening a sedative draught to relieve pain, of which the patient complained greatly. On May 4th, iodide of potassium (7 grains), in compound infusion of gentian, was prescribed.

Up to May 12th, attempts were made to induce consolidation of the tumour by digital pressure on the subclavian, and by bandaging the arm to the side, but the restlessness of the patient prevented any sustained pressure. On this date the patient's sufferings induced her to consent to operation. The iodide was discontinued, and a generous diet with wine and stout ordered. On May 16th, the patient, having been anaesthetised, I proceeded, with the assistance of Messrs. Baker and Curgiven, to perform the operation of ligature of the subclavian in its third position, in the usual manner. Upon opening the deep fascia a difficulty was experienced in finding the vessel, which was apparently not in its normal position. After consultation with my colleagues, I divided the muscle which had been pushed up by the tumour. The artery was then readily found, and secured with a carbolic silk ligature; after which pulsation ceased in the tumour.

There was a slight return of pulsation, about the third day, from the establishment of the collateral circulation. There was no rise of temperature above 100.4° till May 22nd, when it was noted that the patient was well. Suppuration was now healthy; the edges of the wound were healing well. The patient had been greatly relieved from pain, and was very irritable but had become quite cheerful. May 23rd—Evening temperature 101.8°; pulse 124, small and soft; respiration 21. 10 P.M.—Pulse 30, small, soft, running, and irregular; respirations 32; temperature 102.8°; the skin over the tumour was boggy. May 24th—She was delirious in the night. The left hand was swollen; the axillary and scapular region was black and boggy; the skin in the axilla had given way, and blood-stained serum was exuding. The patient became rapidly worse, and sank at 4.20 A.M. on the 25th.

On dissection the artery was found still embracing the vessel. In the neighbourhood of the fascia, was found a large clot, partly formed before death; and in the upper portion of the axillary artery, on its inner side, was a round opening with smooth edges, about the size of a pin's head, which passed through the axillary sheath and communicated with the artery below the ligature.

At the autopsy, the body was found to be in a state of decomposition. The heart was found to be normal. The lungs were found to be normal. The liver was found to be normal. The kidneys were found to be normal. The stomach was found to be normal. The intestines were found to be normal. The bladder was found to be normal. The uterus was found to be normal. The ovaries were found to be normal. The prostate was found to be normal. The testicles were found to be normal. The penis was found to be normal. The rectum was found to be normal. The sigmoid colon was found to be normal. The descending colon was found to be normal. The ascending colon was found to be normal. The cecum was found to be normal. The appendix was found to be normal. The gall bladder was found to be normal. The pancreas was found to be normal. The spleen was found to be normal. The lungs were found to be normal. The heart was found to be normal. The liver was found to be normal. The kidneys were found to be normal. The stomach was found to be normal. The intestines were found to be normal. The bladder was found to be normal. The uterus was found to be normal. The ovaries were found to be normal. The prostate was found to be normal. The testicles were found to be normal. The penis was found to be normal. The rectum was found to be normal. The sigmoid colon was found to be normal. The descending colon was found to be normal. The ascending colon was found to be normal. The cecum was found to be normal. The appendix was found to be normal. The gall bladder was found to be normal. The pancreas was found to be normal. The spleen was found to be normal.

REMARKS.—You will probably ask why in this case, I did not operate sooner, as she got so much relief by the treatment. But,

although the operation was advised, she obstinately refused, and when we ultimately got her consent, she would not have it done till her husband returned from a hawking expedition. The reason I had to divide the clavicle was that, in consequence of the size of the tumour the limb could not be pulled down. I think that if I had a similar case, I should cut through the fascia above the clavicle sufficiently that the sub-claviary artery could be conveniently controlled; lay open the aneurysm, turn out the clot, and tie the artery above and below the wound. I consider that this woman died from blood-poisoning; about half the clot was demorganised, and the half soft and black. I should also advise that a double ligature should be passed round the artery if catgut be used, as they are so liable to break, and it requires to be pulled very tightly, thoroughly to obliterate the circulation. I used silk, in consequence of the catgut breaking.

ANEURYSM OF THE FEMORAL ARTERY: LIGATURE OF THE COMMON FEMORAL AND EXTERNAL ILIAC: RECOVERY.

*Read in the Section of Surgery at the Annual Meeting of the British
Medical Association in Worcester, August 1882.*

By THOMAS H. BARTLEET, M.B., F.R.C.S.,
Surgeon to the Birmingham General Hospital.

LIGATURE of the external iliac artery is an operation of rarity sufficient to make every example of it a matter of great surgical interest. The case I am about briefly to bring under your notice, presents many points of clinical interest and importance.

Alfred G., aged 38, a railway labourer, living at Derby, was admitted into the General Hospital, Birmingham, with a small pulsating tumour situated in the right thigh near the apex of Scarpa's triangle.

Previous History.—He enlisted in the army when he was seventeen, and after seeing ten years' service, he retired, and took to labouring at a railway station, which occupation he had followed up to his present illness, i.e., for the last eleven years. This had not entailed any very heavy work. Whilst in the army he contracted syphilis. As a rule he had enjoyed very good health. His illness began about four months before admission, when he first noticed a small lump in the right thigh, which came without any apparent cause, and as it caused him no inconvenience, he did not consult anyone till a few days before admission.

On admission he was a fairly built, healthy looking man. On examining the right thigh, a small, pulsating, distinctly expansile tumour about the size of a small walnut could be felt, situated over the femoral artery near the apex of Scarpa's triangle. The pulsation could be easily and completely stopped by compressing the femoral above; and in doing so, the tumour markedly diminished in size. Pulsation could be very faintly detected in the posterior tibial artery. There was no oedema of leg. No bruit could be heard over the tumour: he had no pain. The lungs, heart, and other organs were apparently healthy.

Operation.—After consultation, I decided to ligature the common femoral. The operation was performed on April 16th under carbolic spray. An incision was made extending from Poupart's ligament downwards for about two inches, a little diagonally to the axis of the artery, which was reached without any difficulty. A catgut ligature was then passed round the artery about three-quarters of an inch below Poupart's ligament, from within outwards, and tied tightly. The pulsation in the aneurysm at once ceased. Both ends were cut off short, and the wound closed. On April 21st (five days after the operation) the antiseptics were discontinued, as the wound was not "sweet." He progressed favourably till April 23rd (seventh day), when, after a fit of coughing, some bright blood was seen oozing from under the dressings. This was arrested by ice, and gentle pressure for a few minutes. A few hours afterwards the patient felt "something give way," which was at once followed by alarming arterial hemorrhage. Ether was administered, the wound opened out and enlarged, and a search made for the bleeding point. In doing so, the artery-forceps brought up, with the slightest pull possible, what proved to be the catgut ligature. On examining this, the catgut was found not at all softened, but firmly knotted, slightly surrounding a small piece of artery which had come away with it. It did not appear to have ulcerated through the artery at all. The artery had separated about one-tenth of an inch above, and the same distance below the ligature. After more than half an hour's trial, the proximal and distal ends were both secured with whipcord. There was slight recurrence of bleeding occasionally for the next few days.

April 30th (fourteenth day). Considerable hæmorrhage occurred, and was arrested by sponge-pressure.

May 4th (eighteenth day). There was copious hæmorrhage, only arrested by continuous pressure.

May 5th (nineteenth day). Severe arterial hæmorrhage occurred directly pressure was discontinued. After consultation, I ligatured the external iliac with whipcord, one end being left hanging out of the wound. Wire sutures were applied, and the wound was dressed with carbolic oil.

May 7th (twenty-first day). There was venous hæmorrhage from the lower wound. The upper wound was doing well.

May 10th (twenty-fourth day). An abscess (probably suppurating aneurysm) opened in the thigh just below the lower wound.

May 16th. The ligature came away from the external iliac (the twelfth day after application).

May 31st. The upper wound was quite healed; the lower wound was granulating.

August 4th. He was made an out-patient. His prolonged stay was caused by the abscess, which did not close till near the end of July. He could walk about with the aid of a stick; but the muscles of the leg remained weak.

REMARKS.—I desire, in connection with the case, to call special attention to the following points: 1. The aneurysm; 2. The treatment of the aneurysm by ligature of the common femoral artery; 3. The secondary hæmorrhage, and especially its frequent recurrence and its immediate cause, and the treatment of this condition; and 4. The ultimate successful issue of the case after ligature of the external iliac artery, notwithstanding the again recurring hæmorrhage and the supuration of the sac of the aneurysm.

1. Spontaneous aneurysm of the superficial femoral artery in the middle of its course is not very common. Gross says: "I have never seen an instance of spontaneous aneurysm in the lower third of the thigh." In our case, there are two factors which must be considered: (a) the syphilitic history of the patient; (b) the patient's occupation. I am not myself inclined to attribute the disease to syphilis. The primary sore appears to have been a chancre, since the patient described it as suppurating freely, as followed by suppurating bubo—both conditions very rare in infecting chancre; while the absence of all ordinary secondary symptoms, sore-throat, rashes, etc., is an additional proof that the syphilis was purely local, and not accompanied by, or rather not demonstrating that, systemic infection which might cause, among other degenerations, a degeneration of the arterial coats.

The patient's occupation, a pointsman on the Midland Railway at Derby, caused frequent pressure or concussion of the thigh by the handle of the lever used in moving the points. It would seem quite possible that the frequent repetition of this pressure or concussion might weaken the coat of the femoral artery subject to it. I remember, in my student-days at the General Hospital, a man who was treated by compression of the femoral for popliteal aneurysm. The popliteal aneurysm was cured; but subsequently a femoral aneurysm formed at the seat of pressure, which ultimately became an aneurysmal varix. This interesting case was under the care of, and has been reported by, my then teacher and now colleague, Mr. Oliver Pemberton. In connection with the causation of the aneurysm in the present case, we must remember that aneurysms do occur spontaneously, and that patients do account in this or a like way for many disorders in which we believe that cause and effect do not hold.

2. The treatment of the aneurysm. I need not enter into the various kinds of treatment of aneurysm. In the present case, only two suggested themselves—pressure and ligature. I was induced to prefer ligature, from the belief that antiseptic ligature of the femoral is a very safe operation; and that ligature after pressure, if still necessary, finds the parts in a less satisfactory condition than it would do if no pressure had been employed.

Having then decided upon ligature, I had to decide whether to ligature the superficial or the common femoral. The position of the aneurysm would have allowed but little room for the ligature of the superficial femoral, while the possibility or probability of the artery so near to the aneurysm being in a state of degeneration would have been very great. I, therefore, with the concurrence of my colleagues, decided on tying the common femoral artery. In looking back on the case, had I foreseen its course, I might have chosen to employ pressure. Had this failed, and been followed by subsequent ligature of the femoral, or had I ligatured the superficial femoral near to the disease in the first instance, I am inclined to think that the occurrence of secondary hæmorrhage would have been attributed by us to such plans of treatment.

Ligature of the common femoral has been violently opposed by many surgeons. Mr. Erichsen relates twelve cases, in which nine perished of secondary hæmorrhage; and he considers, or considered,

that the operation should be banished from surgery. The Dublin School, on the other hand, has been more fortunate, and gives eight cases of this operation, without a single death. The objections alleged to the operation are, the shortness of the trunk of the artery, and its numerous branches, which conditions, it is stated, prevent the formation of a solid coagulum, and thereby favour the occurrence of hæmorrhage on the separation of the ligature. My colleague, Mr. Oliver Pemberton, has had three cases of ligature of the common femoral, two successful, and one successful so far that the patient survived to the fiftieth day after the operation, and then died, not of hæmorrhage, but of inanition. In this case, although the ligature was tied just above the origin of the profunda, the artery was firmly plugged both above and below.

Mr. Pemberton believes that the use of the antiseptic catgut ligature, which usually does not divide the coats of the vessel ligatured, places the operation in a totally different position from that it previously held. Whether the unusual sequence of our use of the catgut ligature, instead of the customary absorption of the material, and the subsequent sloughing of the portion of the calibre of the vessel embraced by the ligature, whether, I say, these circumstances caused the untoward result of the first operation, and remove one case from the list of antiseptic operations, is, I think, a fair question; for, although thorough antiseptic precautions were employed, there is no doubt that, after a few days, the case was not aseptic, a result very rare in our hospital practice.

3. The occurrence of the secondary hæmorrhage was characteristic in its symptoms, though the eighth day was rather earlier than it might have been expected. Secondary hæmorrhage from a large vessel like the common femoral is as alarming at the time as it is portentous for the future. As Ferguson expressed it, the surgeon most assuredly finds himself in an eventful dilemma. The frequent recurrence of the hæmorrhage was due to the fact that it had actually been temporarily arrested by our house-surgeon before my arrival at the hospital; and, hoping against hope, I was unwilling to expose the patient to the great risk of another serious operation, while a possibility existed that the temporary arrest of the hæmorrhage might also be permanent. This failing, four lines of treatment present themselves: *a*. Ligature of the vessel at the bleeding points; *b*. Ligature of the vessel higher up; *c*. Amputation of the limb; *d*. Pressure. Authorities differ as to which line of treatment is best. Erichsen advises ligature at the bleeding points, and, this failing, amputation. Gross says pressure; this failing, ligature higher up or amputation. Holmes says that, while religature of such bleeding points is difficult and dangerous, from the state of the wound and the condition of the artery, yet it is safer than ligature higher up, which almost always fails. He recommends, therefore, amputation.

In one case, you will have noticed that pressure was employed most persistently and carefully. Pressure by the direct application of a sponge, so strongly and with so much discrimination and acumen recommended by Mr. Furneaux Jordan. The pressure was further assisted by the use of Martin's India-rubber bandage; and, employed thus carefully, pressure failed; then religation at the point of hæmorrhage was tried. This operation, difficult and trying as it always is, was satisfactorily accomplished, but the hæmorrhage recurred, either from the ligature not holding on the softened vessel, or from some branch broken off at the site of the original ligature, a subsequent separation which was not tied.

Two procedures only remained open to us—amputation, or ligature of the vessel higher up. The depressed state of this patient, physically from the loss of so much blood, and morally from the oft recurring alarms, would have rendered so severe an operation as amputation at or close to the hip-joint, inevitably fatal. Moreover, we should still have had to ligature the artery in the flap, at a part of its course where we knew it was softened and unfit to hold a ligature. Fortified by the advice, and aided by the assistance, of my colleagues, I ligatured the external iliac artery; and, though followed by a slight, apparently venous, hæmorrhage two days after, and the supuration of the sac of the aneurysm five days after, which considerably protracted the convalescence of our patient, he ultimately made a satisfactory and complete recovery.

M. LE DR. SOYE, Deputy for the Aisne, has recently met with his death by an accident. Being sent for from Vervins, his residence, for a consultation, he started with a servant in a one-horse chaise. Near a railway station, the horse took fright, rushed into a ditch, and not only M. Soye, but his man, were so severely injured that both died in a few minutes. M. Soye was one of the very few medical men in the Chamber of Deputies.

NOTE ON THE CHOICE OF MATERIAL FOR LIGATURE OF ARTERIES IN THEIR CONTINUITY:

WITH A CASE OF LIGATURE OF THE EXTERNAL ILIAC.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By BENNETT MAY, B.S., F.R.C.S.,
Surgeon to the Queen's Hospital, Birmingham.

We may assume, at the present day, that the choice is narrowed to some form of animal tissue as silk, catgut, or the strip of ox-aorta recently advocated by Mr. Barwell. Whichever is used, it is cut short, and the wound closed over the foreign body, in the hope of obtaining primary union. The best material is that by which this requirement is most surely fulfilled, and which, at the same time, effects a permanent barrier to the circulation. Silk, even the best, and with the most careful antiseptic precautions, cannot be relied on for the former purpose. Though the peritoneum has the power of encapsulating it, the connective tissue only does so as a lucky accident, and, more often than not, strangulation of the outer coat of the vessel proceeds to ulceration, by which the ligature is cast loose. By means of catgut, a true subcutaneous ligature can be insured; but the second point, that of permanent occlusion of the vessel, has not been so certain.

The first note of distrust was struck by the well known case of the late Professor Spence, in 1869, in which the catgut then in use softened and relaxed its hold on the common carotid, and with a fatal result. It is fair to say that this, and other cases occurring at the time, were not treated with antiseptic precautions. Since then, Professor Lister's incessant labours in this line have culminated in the chromicised catgut, which "will retain its hold on a vessel for three weeks, and yet become absorbed or encapsuled." This appears the perfection of a ligature; but, if it may be permitted, I hope to offer some practical observations upon its action.

During the past year, I have ligatured four large arterial trunks in their continuity, for aneurysm, and with only one slight departure from an uniformly good and perfect result. This break occurred in one case in which chromicised catgut was used in preference to the older form of common catgut which I employed in all the others.

The cases include one of ligature of the brachial artery, two of the superficial femoral, and one of the external iliac. Listerism was carefully carried out in all, the treatment of each wound as regards drainage, dressing, etc., being as nearly as possible identical.

In all but one (superficial femoral), the ligature used was a piece of common catgut (No. 3), which had been kept in stock in carbolic oil a long time. The wound in each of these cases healed at once and entirely, without any tendency to the formation of a sinus; and in all, the aneurysm rapidly consolidated, without any sign of returning pulsation. The ligature was tied as tightly as possible, and in a very secure reef-knot.

In the remaining case, I used chromicised catgut, and in this the wound did not heal throughout its entire length: for at one point a small sinus formed, which remained open six months. This sinus had every appearance of leading down to the point of ligature, but no loop has ever come away, though watched for. The remainder of the wound healed at once in its entirety; but at this one point, and it was not the line of the drainage-tube, it failed to heal over the ligature. It could not be induced to close, and remained open long after the patient was quite well and at work. The natural inference is, that there was some failure of antiseptic precautions, or that the drainage was imperfect; but neither of these appeared to be case at the time. It is a reasonable alternative to suppose that primary union failed owing to the nature of the material used; at least, it appears less easy to secure primary union over this material than over ordinary gut, but there is not the same fear of the destructive process of ulceration as with silk.

As the case of ligature of the external iliac artery has been one which leaves nothing to be desired in course and progress, I would add a few particulars. The patient, a man aged 40, was the subject of a large inguinal aneurysm extending above Poupart's ligament for some distance. He gave a history of direct violence to the vessel two years before, viz., the pressure of the hand-rail of a heavily laden hand-cart. He had had syphilis, and was a heavy spirit drinker. A high incision was made, so as to avoid straining the aneurysmal sac of the peritoneum, or the sac itself, and the vessel was exposed by perfect aseptic means, if necessary, the aneurysm being removed. The ligature was a piece of common catgut as described, tied as tightly as possible. The wound was treated antiseptically, and on the fourth day, when dressed, was found to have healed throughout its length: no disturbance of the union ever occurred. Pulsation in the aneurysm ceased entirely on the application of ligature, and never returned. The aneurysm rapidly hardened and con-

tracted, and is now imperceptible. The vitality of the limb was never for a moment in doubt. One advantage of the rapid union in this locality is a scar with scarcely any tendency to hernial protrusion.

The good result in these cases is to be ascribed to the perfect antiseptic precautions adopted, by which primary union and consequent subcutaneous ligature were brought about. The same object was also furthered by inflicting a minimum of disturbance on the tissues during the operations. Professor Lister points out that the advantages of the gut ligature are forfeited unless perfect antiseptic treatment be adopted with it, because, otherwise, the outer coat of the artery must die, and suppuration ensue.

In my case of ligature of superficial femoral, in which the use of chromic gut was followed by an intractable sinus, I believe there was no failure of antiseptic treatment; and I submit that the failure to obtain primary union was owing to the material employed, and that some samples of chromic gut are over-prepared, or over-hardened, so as to form a very hard wire-like substance.

In conclusion, I may say that I am well satisfied with stout common gut of good quality, improved by long keeping in carbolic oil, as a material for ligature which leaves little or nothing to be desired; and it is a matter of surprise to me that such fancy methods of treatment of aneurysm as Esmarch's bandage, from which I have seen fatal disaster in the most simple cases, should still find a place for discussion.

Mr. LUND (Manchester), speaking on Mr. Bryant's case, assumed that the action of the instrument (Speirs's compressor), was such as to leave the artery, at the point compressed, in a condition very similar to what attended upon successful torsion; the middle and internal coats torn through and incurved so as to arrest the passage of blood, and insure its coagulation on the cardiac side. In arteries in any way diseased with atheroma, in so early a stage as to give brittleness to the artery, there would be great risk of sudden division of the vessel, and unless the incurved coats prevented it, very serious hæmorrhage. The operation must be repeated with great caution until confirmed by further experience.

Mr. DIX (Hull), said that the operation, as described by Mr. Bryant, would be perfect if we could rely on producing division of the internal coats without damage to the external, and if it were certain to effect exactly the result it was wished to produce, without injury to the vessel. This remained to be proved by further cases, but of course was all-important. He wished to protest against the dictum of the reader of the address in surgery (Mr. Stokes) that surgeons who did not use Listerism were guilty of wilful blindness, and sinned by shutting their eyes to facts. Speaking for himself, he offered another explanation, viz., that he was satisfied with his success without it. If time would allow he could relate cases almost as wonderful as those related by Mr. Stokes, in which the only antiseptic used was cold water.

Mr. BARWELL (London) said that all must feel that Mr. Thomson was to be congratulated on his case, even although it had not turned out successful. It was evident, from the preparation exhibited, that the innominate, the carotid, and the subclavian, for its first half inch, were completely occluded, and Mr. Thomson could not force water either centrifugally through the innominate nor centripetally through either branch into the brachio-cephalic trunk. The blood in all probability was brought to the ulcer by the vertebral. Through the kindness of Mr. Thomson he had been, since the commencement of this case, made acquainted with its features and progress; and he sent to him a needle with the curve movable on a hinge, so that the ligature might be passed round a deep vessel without depressing the handle, a movement which was sometimes impossible. From what Mr. Thomson wrote to him, it seemed that he could not have got his ligature round the artery with the ordinary needle. Mr. Barwell also showed his ligature of ox-aorta. It was devised more especially for the operations such as that described by Mr. Thomson, in which (as also in dissection of the first part of the subclavian), secondary hæmorrhage from the seat of ligature had always occurred. As the flat ligature would not divide the middle and inner coats, the cavity of the vascular system remained intact, and no such cause of failure could occur. The ulcer, whence in Mr. Thomson's case hæmorrhage took place, was owing to an external cause, an accident which would hardly be likely to recur. It was not connected with the ligature, which had acted perfectly, and had entirely occluded the vessel, and cured the aneurysm. Referring to Mr. Bennett May's cases, and the use of chromic catgut, he had met with a very narrow sinus of a very chronic nature following its use.

Mr. WILLIAM STOKES (Dublin) said that he had shared great interest in Mr. Thomson's case, having been present at the operation. The cause of death was no doubt an accident, viz., local ulceration due to too long retention of the drainage-tube; and the lesson he learned from it was that, to avoid secondary hæmorrhage in a similar case, the best

plan would be to apply temporary pressure, as by wire-ligature, for from twenty-four to forty-eight hours, and then remove it. In this way no damage to the vessel, or ulceration, could result. Replying to Mr. Dix, who asked how such pressure was to be applied and how removed, Mr. Stokes said that there were several methods; one was by wire, and there were also special instruments.

EHRLICH'S METHOD FOR THE DETECTION OF TUBERCLE-BACILLUS IN SPUTUM.

Substance of Remarks made during a Demonstration in the Section of Pathology at the Annual Meeting of the British Medical Association, at Worcester, August 1882.

By G. A. HERON, M.D.,

Assistant Physician to the City of London Hospital for Diseases of the Chest, etc.

THE process known as Ehrlich's method for the detection of tubercle-bacillus in sputum may briefly be described in the following manner.

Sputum is spread in thin layers upon cover glasses and allowed to dry in the air. It is next exposed to a considerable degree of heat, either by being shut up in a properly constructed hot-box for twenty minutes or so, at the temperature of 212° Fahr., or—and this answers the purpose quite as well—the cover-glasses, with the dried sputum upon them, are passed three or four times quickly through the flame of a gas jet or of a spirit lamp. In this way the sputum is thoroughly set. The next step is to stain the sputum with any one of certain of the aniline series of dyes. Fuschine and gentian violet are two of those which Ehrlich has used. These colours are handled in this process in precisely similar ways, and, therefore, it is necessary to describe the use of only one of them. Fuschine was the colour which I used in my demonstration at Worcester, and I will speak of it now. A saturated alcoholic solution of that dye is made. This is added, in certain proportions, to a saturated watery solution of aniline prepared in this way:—Five cubic centimetres of aniline are added to one hundred cubic centimetres of distilled water. The mixture is allowed to stand for about twenty minutes, and, during that time, it should be frequently shaken. The aniline water is then passed through a moistened filter, and the filtrate should be as clear as good drinking water. It contains from three to four per cent. of aniline. To thirty cubic centimetres of this clear filtrate are added thirty drops of the saturated alcoholic solution of fuschine. A glistening metallic film will probably now appear upon the surface of the mixture, but should that not happen, then more of the solution of fuschine must be added until the film is clearly marked, for its presence is the sign that the staining mixture is of the proper strength. Beginners are likely to find some difficulty at this point, for the film is, in their early experiments, apt to be wanting. That being so, it may be as well to mention here, that if after sixty drops of the fuschine solution have been added to the aniline water without a distinct film having appeared, the desired result can be obtained with certainty by allowing the mixture to evaporate in the air for some hours.

And now, as to the use of this colouring fluid. The cover glasses, with the layers of sputum upon them prepared in the way already described, are allowed to float for thirty minutes, sputum downwards, upon the surface of a sufficient quantity of the staining fluid poured into a suitable vessel. When removed from the fluid at the end of that time, the sputum will be seen to be stained with a deep red colour. The next step in the process is to remove by far the greater part of this deep red colour. That is done by washing the cover-glasses, with the sputum upon them, in a mixture of one part of the acidum nitricum (not acidum nitricum dilutum) of the *British Pharmacopœia*, and two parts of distilled water. Here again the beginner may find some difficulty, for he is apt to leave too much of the red dye upon the sputum. The consequence of that is, that when he comes to examine his work under the microscope, he finds large red-pink smudges through which he can see little, if anything, distinctly. After the washing with nitric acid there should be, at most, a slight white-pink tinge visible to the naked eye in the sputum. The acid is washed out by dipping the cover-glass in distilled water. If the specimen were now examined microscopically, and if bacilli of tubercle were present in it, they would be seen, here and there, as red rods, and perhaps in clusters also, upon a colourless or whitish-pink ground. When the bacilli are numerous they could be well seen, even with so faulty a background of colour as this, but when they are few they might easily escape notice, unless their red colour were thrown into relief, as it were, by the use of some contrast colour. With this object, the process of staining is completed by allowing a drop or two of a saturated watery solution of methylene blue to fall upon the sputum after the nitric acid has been washed out with water. The blue colour is washed off to a certain

extent with water, just enough of it being left to give a distinct light blue tint to the sputum. The specimen should be examined, while still wet, with the microscope. If tubercle-bacilli are present, they will be seen as red rods upon a blue ground. All the constituent parts of the sputum and all other known bacteria take the blue coloration; the tubercle-bacillus alone retains the red colour due to the staining with the fuschine and aniline dye.

In the specimens which I prepared in this way before the Section of Pathology at Worcester, the bacilli were seen in large numbers. That is not usual. In examining a specimen of sputum for these organisms, one may reasonably expect to see one or two of them in a microscopic field, if they be present in ordinary numbers. When they are present in large numbers a cheesy-like portion of the sputum should be searched for and examined.

The tubercle-bacillus measures in length from $\frac{1}{1000}$ in. to $\frac{1}{2000}$ in. These measurements have been made on several occasions by Mr. E. M. Nelson, for whose kind help I am much indebted. Under a sufficiently high power, the blue-coloured ground of the specimen is resolved into swarming masses of blue-coloured bacteria if the sputum be not fresh. They average in length $\frac{1}{2000}$ in.

The tubercle-bacillus, so far as my experience goes, is not at all interfered with by the early effects of the putrefactive process. I have often found this bacillus present, in large numbers, in a specimen of sputum which, when fresh, seemed to swarm with these organisms. At intervals, during the last six weeks, I have examined this same specimen, which has been allowed to putrefy while freely exposed to the air. Certainly, in this particular specimen, the organism has not diminished in numbers during the first six weeks of putrefaction.

I have heard it stated in public, that very high powers are necessary for the microscopic examination of the tubercle-bacillus when Ehrlich's method has been followed. This is certainly a mistake, for I have often myself seen the organism, and shown it to other people, under so low a power as 150 diam. My friend Mr. Nelson tells me that he has seen the tubercle-bacillus under a power of 100 diam. I should not, however, advise a beginner to use such low powers as these. A power of 500 diam. is sufficient for the purpose of easily verifying the presence of this organism.

A condenser of some sort is a useful addition to the microscope in this line of observation, but it is not a necessity, except, of course, when a detailed examination is made. The tubercle-bacillus can be well seen by throwing a strong light directly into the line of vision. With good light, an ordinary mirror will of itself give ample illumination. The necessary colours have been supplied to me by Messrs. Morson and Son of Southampton Row, W.C.

In speaking of these dyes I ought to have said, that I find it unnecessary to go often through the process of preparing the colouring mixtures. The fuschine and aniline dye and the methylene blue colour were nearly two months' old when I used them at the Worcester meeting. As has been mentioned above, gentian violet may be used instead of fuschine. The contrast colour would, in that case, be given by Bismarck brown. Methylene blue would, of course, make a poor contrast to the violet-coloured bacilli.

These aniline dyes are apt to fade very quickly. They may illustrate markedly the presence of the tubercle-bacillus at the first examination of a prepared specimen, and within twelve hours there may not be one of the organisms visible. I have, however, several specimens which have preserved their colours fairly well for rather over two months.

Ehrlich's process, properly used, in the way now indicated, will demonstrate the presence of the bacillus of tubercle in sections of tissue just as clearly as in sputum.

A NEW METHOD FOR THE DETECTION OF THE TUBERCLE BACILLUS.

Read in the Section of Pathology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By HENEAGE GIBBES, M.D.,

Curator of the Anatomical Museum, King's College.

THE following will be found an easy and simple method of demonstrating the tubercle bacillus. It takes a short time to carry out, and the bacillus is stained so deeply, and is differentiated so fully from the surrounding substance, that it can be seen with the greatest ease with an ordinary quarter-inch object-glass and daylight.

The methods hitherto published have often failed, and, when successful, have only stained the bacillus so faintly that high power or artificial illumination is required to show it in anything like a satisfactory manner. Koch's original method has utterly failed in the many cases in which I have tried it. I think, then, that the ease and simplicity of

my method will make it acceptable to the large number of the profession who may wish to find the *Bacillus tuberculosus* for diagnostic purposes, whatever its value may ultimately prove to be for that purpose.

It is necessary to make two staining fluids—one, magenta, which stains the bacillus; the other, chrysoidine, which stains the surrounding substance, but not the bacillus. The magenta solution is made thus:

Magenta crystals	grammes	2
Pure aniline	c.c.	3
Alcohol, sp. gr. .830	c.c.	20
Aq. dest.	c.c.	20

Dissolve the aniline in the spirit; rub up the magenta in a glass mortar to a fine powder; add the spirit gradually while stirring until all the colour is dissolved; then add the water slowly, still stirring, and put in a stoppered bottle.

The chrysoidine solution is made by rubbing up the colour in a mortar with distilled water until it is saturated, and then adding a crystal of thymol dissolved in a little absolute alcohol, to make it keep. Neither of these solutions should be filtered when made. The chrysoidine should be kept in a dark place. A dilute solution of nitric acid is also required, which is made by diluting one part of commercial nitric acid with two parts of distilled water. The aniline colours are made by the Badesche Aniline Fabrik, 22, Bush Lane, Cannon Street.

The object of the process is to stain the sputum, or section, as the case may be, with a colour which the dilute nitric acid will remove from everything but the tubercle bacillus, and the subsequent staining with chrysoidine is only required to throw up the stained bacillus and make it more prominent. In Dr. Ehrlich's process, the stain for the bacillus is too faint, and the vesuvin, used to stain the ground substance, too opaque; consequently, the bacillus appears a faint pink colour on a dense yellowish brown ground, and is not easily made out without high power or special illumination. His method of dissolving the aniline in water, in which it is very sparingly soluble, is also open to objection, as it is very apt to vary in the amount taken up by the water.

The manner in which the stains are used is as follows. A little sputum is spread on a cover-glass and allowed to dry; it is then passed three or four times through the flame of a small Bunsen burner, and left to cool. A few drops of the magenta solution are filtered into a watch-glass, and the cover-glass, with the sputum downwards, placed on it, care being taken that no air-bubbles are under the cover-glass; it is allowed to remain from fifteen to twenty minutes. It is then put into the dilute nitric acid until all colour has been removed, which will take a few minutes; but it may be left for ten minutes without damage. It is then washed in distilled water until all the acid is removed, and placed in a few drops of chrysoidine solution which have been filtered into the bottom of a watch-glass; a few minutes will suffice to stain it deeply. It must then be again washed in distilled water, and the superfluous water drained off on filter-paper; it is then placed in absolute alcohol, to remove the remainder of the water, and dried thoroughly in the air. When dry, a drop of Canada balsam solution is placed on the cover-glass, and it is mounted in the usual manner.

Glass funnels should be used to protect the fingers in filtering the stains. Sections of hardened tissues are treated in the same manner, with the necessary modifications, and the bacillus is shown by this method equally well in specimens hardened in spirit or chromic acid.

OBSTETRIC MEMORANDA.

CASE OF INTERSTITIAL PREGNATION.

ON Sunday evening, the 1st instant, at 10.30, I was requested by the husband of one of my patients to come and see her, at once. He stated that they had gone to bed as usual, and had been to sleep, when his wife awoke him, and said that she had been woke by "pains in the abdomen," and that they had not got to sleep again. He had given her some brandy, but without any good effect.

I found her in bed, a tall stout woman, aged 32, complaining of pain in the abdomen, which was neither swollen nor tender on pressure. She was also suffering from sickness and slight diarrhoea, which she attributed to her having taken some strong pills. The vomit appeared to be semidigested food, and the motions were such as would be produced by a purgative. The patient's skin was cool and moist, her pulse good, and her respiration and temperature both normal. She was perfectly conscious, calm, and collected, and there was nothing whatever to indicate such a sudden and fatal termination as took place. She informed me, on inquiry, that she had missed two periods. Her general health had always been good. Her two only children had both been born at the full period, and are both living. The younger, fourteen months old, had been weaned about two months. She had never had a miscarriage; but, thinking it most probable that such was the nature of

this illness, I gave her opium, ammonia, and chloric ether, and ordered hot fomentations and linseed poultices to the abdomen, with a little brandy at intervals, leaving instructions that I was to be sent for, if necessary. I was not, however, called again until 8 A.M. the following morning, as she had suddenly become much worse. I then found her in a state of collapse, and evidently dying, but perfectly conscious, and complaining of a great desire to pass water. She had, however, done so during the night, and the bowels had been once relieved; the vomiting had not recurred. I passed a catheter, and found that the bladder was empty. She became rapidly worse, but remained perfectly conscious until 10.30, when she expired.

Necropsy.—There were no external marks of violence; the body was very fat, considering her age; the abdominal cavity was filled with very nearly six pounds of clot, and five pints of a bloody fluid. Floating in the fluid was a fetus, at about the second month of development, enveloped in its membranes, and with the placenta attached. At the upper part of the uterus there was a rupture, close by the right Fallopian tube, large enough to contain three fingers, and looking like a sac, the walls of which were extremely thin. The true cavity of the uterus, which was laid open and examined by Mr. Doran, contained a decidua, as is so often seen in cases of tubal gestation. There was no communication between it and the interior of the uterus, which weighed exactly eight ounces. The heart was fatty and somewhat flabby, and was perfectly empty, as were also all the large blood-vessels. The other organs of the body appeared perfectly healthy. The head was not examined. The entire internal organs have been sent to the Museum of the Royal College of Surgeons, where no specimen of interstitial gestation was hitherto to be found, though there is a fine series illustrating tubal pregnancy. I have no remarks to make on the case, except as to the absence of the graver symptoms until within so short a time of the death. The blood had evidently continued oozing out, until there was no more to come. The apparent desire to pass water was evidently caused by the pressure of the clots, etc.

CARR HOLSTOK ROBERTS, L.R.C.P.L., M.R.C.S.E.,
L.S.A., London.

PRESENTATION OF BROW, FEET, AND HANDS.

DR. W. SMYTH of Banbridge, whose report of a case of complicated labour will be found in the JOURNAL of September 30th, page 633, has forwarded to us the following communication, addressed to him by Dr. Smith of Pershore.

"Dear Sir,—As you invite discussion on your case of brow presentation with feet and hands, recently reported in the BRITISH MEDICAL JOURNAL (September 30th, page 633), I beg leave to report to you the following. Several years ago, I was summoned to the assistance of a senior Poor-law medical officer, to a distant village, eight miles from my home, with notice that the patient was exhausted, and the case almost hopeless. The inmates of the cottage seemed utterly destitute. A glance at the patient satisfied me I had a powerful woman, with probably much latent strength even yet to fall back upon. There was presentation of the head and all the limbs; the uterus was violently contracted. The woman said she was worn out, and desired me to let her alone to die without further interference. I told her it was my duty to help her by every effort in my power. We set to work, administering chloroform, and at the end of two hours were rewarded with complete success. My friend, standing with me at the foot of the bedstead, said: 'Well, you are deserving, if any man ever was, of a handsome fee from the guardians; I will see what I can do in the matter.' To our amazement, our exhausted patient raised herself slightly, and said: 'If anybody deserves the money, I am sure I do, after all I have gone through.' We had used forceps. The upshot was, I never even received thanks for my trouble and expense. I suppose my friend received the usual rebuff, as he never reverted to the subject. I have now and again met with head presentations, with one or more of the limbs; but this brow presentation, I am satisfied, is very dangerous, and no doubt has been the cause of some deaths I have known of. The last case I had was in every respect similar to yours, except that only one limb came down with the head. After my arrival at the house, at 9 P.M., I found the liquor amnii had not escaped. This was soon effected; and, feeling the head rather high up, I nevertheless expected soon to be released. In this I was disappointed. Hour after hour passed, and the pains were violent. I could feel the sutures and an angle of the skull. I tried to turn the head to the right; still there was no decided improvement to assist the woman, who now begged of me to use the instruments. I could find no long curved forceps. After dreadful shrieks, causing me to doubt, the woman called out: 'Why didn't you pull it away?' I said: 'Because you shrieked so dreadfully.' She said: 'Never mind; do it next time.' When the child was born, I found his right eyelids much swollen, the end of the lower blade having caused pressure thereon;

the left ear suffered in the same manner. The conclusion I came to was, that I had been somewhat successful in my efforts to turn the face into the left iliac fossa; that the length of the head, from the face to the occipital bone, was too long for the antero-posterior diameter of this woman's pelvis; but that, had I raised the forehead, at the same time bringing down the occipital bone, then the diameter of the head, from the crown to the base, would have been much less, and the nearest approach to natural presentation. This diameter is at right angles to the diameter in measurement for a hat—i.e., the circle from brow to occiput *via* the ears. The frontal bone has an acute angle with the face and summit of the head. It is this angle one feels, as it presents. Place your index-finger over the child's upper lip below the nose, and you will find a sharp depression, sufficient to hook firmly over the pubes. The stronger the woman's pains, the firmer this catches. Now, I believe that, by pressing the forehead upwards, the chin would approximate the child's sternum, bringing down the occipital bone. Then the frontal angle might be turned into its natural position, at the upper part of the left sacro-iliac symphysis. It is manifest that, simply flexing the head upon the sternum and revolving it, is the main point to be done without forceps. When the head presents naturally, it comes down low; and the inclined plane along the sagittal suture, from the occipital bone to the brow, can be felt from below upwards and backwards. When the face at the brim or inlet of the pelvis presents forwards, then the inclined plane is from behind, upwards and forwards towards the symphysis pubis. When the head is very high, and its sutures, and likewise an angle, easily felt, the presumption is that the frontal bone presents downwards, and requires manipulation or vectis. Encircle the head behind the neck, and you will see how freely the head could pass down, face uppermost. I had a curious case lately. The child was born and the placenta had come away, when I was summoned. I was told to look at a bladder-like and smooth swelling in the lips of the vagina. I removed several clots, satisfied myself that the uterus was all right, and, in spite of the assurances that urine had passed freely, I introduced the catheter, and thought the urine would never cease flowing. The diameter of my catheter is very small, as compared with others, though sufficient for a full stream to flow. The patient made a good recovery. If you examine the pelvic bones and foetal skull, with my descriptions, I hope you will see how interesting these cases have been to me.—Yours faithfully, SAMUEL W. SMITH, M.D. Pershore, October 2nd, 1882."

CLINICAL MEMORANDA.

ENDEMIC HÆMATURIA.

WITH reference to the endemic hæmaturia of Egypt, I think there is no reason to doubt that it is caused by Bilharzia in all cases. Since my communication of a case to the JOURNAL, December 14th, 1878, I have had five others under treatment; all had been to Egypt, most of them to Mecca as pilgrims; so that the disease appears to be growing more common in Bombay, owing to the passage to and fro of Mussulmen on pilgrimage from Mecca. One of my patients told me that the disease was considered to be venereal by the Egyptians, but there seems to be every probability that it is communicated by bad water. I have not, however, been successful as yet in producing it in puppies, to whom urine mixed with milk had been given, so that perhaps there may be an intermediate form in the development of the parasite, the embryo of which appears to die soon in water or urine, as far as my observations go. Of the different methods of treatment tried by me, namely, oil of turpentine, tincture of iron, quinine and sulphuric acid internally; of carboic acid internally and by the bladder, and of quinine by the bladder, none have proved successful. Iron has certainly improved the condition of the patient in one case, but that was probably due to its tonic effect on the blood generally. I should be glad of any suggestions in the way of treatment for future cases.

W. K. HATCH, M.B., Surgeon, I.M.D., Bombay.

SURGICAL MEMORANDA.

TREATMENT OF NEGLECTED SPRAINS.

THE following case is interesting as illustrating the usefulness of the plan of treatment of neglected sprains advocated by Dr. Wharton Hood in his book on *Bone-setting (so-called) in the Treatment of Joints crippled by Rheumatism, etc.*

J. C., a strong healthy-looking man, boatswain in the Merchant Service, consulted me on September 20th, 1880, on account of a lameness caused by a feeling of weakness in the left leg. He did not complain of feeling any particular pain anywhere; but I found, on inquiry, that, fourteen years ago, he had sustained a slight strain of the left ankle, and that it was followed by a little pain in that joint; this pain

was still felt when walking. As a consequence of this trouble, he had always since stood on the sound leg and used the affected one as little as possible. He had been treated in Buenos Ayres Hospital by the application of electricity to the foot and leg, but without any improvement resulting.

Four years ago, the carpenter on board his ship noticed that the leg of the affected side was smaller than its fellow. The measurements on September 20th were: *Right Leg*.—Thigh, at four inches below the great trochanter, 22½ in.; knee, 14 in.; calf, 15½ in.; instep, 11½ in. *Left Leg*.—thigh, at four inches below the great trochanter, 20 in.; knee, 14 in.; calf, 14 in.; instep, 11 in. On making a careful examination of the ankle, by pressing the thumb and finger over the joint whilst flexing and extending it, several painful points became apparent—notably, over the middle fasciculus of the external lateral ligament, and over the tibio-astragal ligament. I then made forcible extension and flexion movements of the articulation; in doing so, slight grating fremitus was perceptible. I then painted the part with iodine, and ordered him to rub in ammonia-liniment each day, to use the limb as much as possible, and to come twice a week to be electrified. Under this treatment, assisted by good rubbings in a salt-water bath, he soon improved; and on October 9th I sent him out walking briskly, when he reported that "he had not had any pain at all for the last three days". He soon went to sea again; and two letters have arrived from him from abroad, in which he particularly requested that I should be informed that he is as strong and well again in the limb as he ever was.

H. A. LATIMER, M.R.C.S. Eng., etc.

TWO CASES OF TRAUMATIC TETANUS.

TWO consecutive cases of traumatic tetanus, terminating in recovery, I deem worthy of being brought under the notice of the profession, pointing, as I think, to belladonna as our hope in the treatment of such cases.

The first is that of a boy, fourteen years old, who, whilst bathing (in August 1879), was thrown by his companions upon some broken crockery, which cut his knee severely, but not injuring the joint. He was a pale, ill-nourished lad, and the wound granulated slowly. Still he ate well, and appeared in his usual health until the fourth day after the injury, when he complained of stiffness in his jaws, and difficulty in masticating and speaking. When I saw him for the first time on the seventh day, his jaws were perfectly closed, and the muscles of the whole body so rigid, as to make it impossible for him to move in any direction; the contraction of the facial muscles gave him that expression of extreme anxiety so characteristic of the disease. He complained of tightness of the chest; his pulse was quick and weak, his temperature normal. He had taken nothing for two days, and had not slept. I ordered warm poultices, mixed with an opiate lotion for the knee, and milk, with brandy and eggs beaten, to be given as frequently as he could take them, partially by suction through a straw, and partially by spoon through a space between some uneven teeth; by these means he was able to take a fair amount of nourishment. I gave him chloral and bromide combined without effect, then changed to bromide and Indian hemp, but with the same result. I then decided to try belladonna, commencing with seven and half minim doses of the tincture (B. P.) every three hours. After taking eight doses, the pupils began to dilate, and I thought I saw an improvement in his general condition, particularly in the less anxious expression of the face. I therefore increased the dose to eleven minims every two hours, and subsequently to fifteen minims, when his pupils became widely dilated, and the other muscles gradually relaxed, so that, after four days of the belladonna treatment, he was able to separate his jaws to the extent of half an inch, and, in about ten days, to the full extent. His recovery, though complete, was very slow, as it was fully a month from the time of the injury before he was able to walk at all, and it was two months more before he resumed work. I should not omit to mention a severe attack of epistaxis, which considerably retarded his recovery.

My second case occurred in a collier, 18 years old, who on May 19th last had his right thumb severely crushed by a fall of coal. He had the wound dressed at my surgery for three weeks, it progressed satisfactorily, but at the last visit, he complained of stiffness between the shoulders, and two days afterwards the jaws and neck were similarly affected. I next saw him two days later at his own home, and found him confined to bed, unable to move his head or open his mouth, his legs and back becoming rigid, and his face wearing an extremely anxious expression. His breathing was laboured, his pulse quick and weak, he could neither eat nor sleep, and in short, had all the symptoms of that much dreaded disease. Acting upon my previous experiences, I at once ordered him fifteen minim doses of tincture of belladonna every four hours. When I saw him the next day, and

found his condition becoming more critical, and his pupils unaffected, I increased the dose to twenty-two and a half minims, and subsequently to thirty minims, and gave it him every two hours. From this time, he gradually improved, his pupils began to dilate, but were never very large, the general muscular rigidity diminished, he could open his jaws slightly, his face became less anxious, and he expressed himself much relieved, particularly in breathing; he could move his head from side to side, but his back and legs were still so rigid as to prevent him sitting up or bending his knees. After ten days of this treatment, he was able to walk out for a short distance with the aid of a crutch and stick, but was still unable to bend his knees, and could not raise himself from the recumbent posture without assistance. I made no change for eight days longer, and then ordered him to take his mixture every three hours. He continued to make a steady progress, and resumed work about the middle of July.

In concluding these brief notes, some points I observed during the treatment of these cases, are, I think worthy of mention, and foremost amongst these is the remarkable tolerance of the drug by the patients, and the absence of the usual therapeutic effects beyond the action on the pupils, even after large and long continued doses had been taken. In my first patient, through some inadvertence of the dispenser, the belladonna was discontinued for twenty-four hours, when the tetanic symptoms set in again with renewed vigour, but rapidly abated as soon as the error was rectified. In the second patient, the arms did not become affected, although the thumb was the seat of injury, and in the first case the arms were equally affected with the rest of the body, although the injury was at the knee. In the second patient, who was at once placed under the belladonna treatment, the symptoms gave way much more readily than in the first. That the recovery of these patients is due, not to any idiosyncrasy on their part, but to the action of the belladonna, is, I think, borne out by the fact, that the cases were consecutive, and the only ones in which I have tried that drug. I should be glad if I had been able to report others, but shall be pleased to hear that the experience of other medical men confirms my statement.

It has occurred to me that a close analogy as to cause and effect exists between tetanus and hydrophobia, both being dependent upon the action of a poison exerting itself on the spinal cord, and, that if belladonna be found capable of controlling the disordered condition in the former, it might also in the latter, by checking the spasm, be equally efficacious, and allow time for the system to eliminate the poison.

JOHN WHITELEY, M.R.C.S.E.

Wakefield, September 27th, 1882.

REPORTS

HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET.

MENINGITIS: LONG CONTINUED AND EXTREME RETRACTION OF THE
HEAD AND FLEXION OF THE LIMBS: DOUBLE OPTIC NEURITIS
AND LOSS OF VISION: BED-SORES: RECOVERY WITH GOOD VISION
AND POWERS OF MOVEMENT.

(Under the care of Dr. DICKINSON.)

[Condensed from the Notes of the late and present Registrars.]

EMMA C., aged 5 years and 5 months, was taken ill rather suddenly about the second week in February 1881. The prominent symptoms were headache, retraction of the head, and screaming. She was feverish, and vomited occasionally; but the bowels were regular. Her condition remained much the same until her admission, five weeks later, on March 17th. The chief point of interest in the family history was, that the patient was the ninth child; and that, of the elder children, five were still-born; two other surviving children were healthy. The patient was born at full time, and had never had thrush or snuffles. There was no history of consumption in the family.

On admission, she was much emaciated; the tongue was dry and thickly furred, with sores on the lips; the abdomen was flat; the chest was hard, and there were no signs of pulmonary disease. There was no strabismus or astasia; and the pupils were large and sluggish. The head was retracted to a very marked extent; the thighs were bent on the pelvis, and the knees on the thighs.

The "knee-phenomenon" was excessive, and the plantar reflex was well marked. There was no ankle-clonus.

March 21st. During the four days she had been in the hospital, there had been irregular fever, chiefly nocturnal, frequent screaming, and occasional vomiting. Ophthalmoscopic examination showed that the left disc was of the same colour as the surrounding retina, and that its margins were ill-defined. In the right eye, there was marked choroiditis; but the disc was not well seen.

March 22nd. In the evening, she became, rather suddenly, cold, clammy, and pulseless; and respiration was almost imperceptible. Under the use of brandy, hot-water bottles, and faradisation of the phrenic nerve, she rallied. On the following morning, she was almost totally unconscious; the pulse was 84 and very feeble. The temperature since the seizure had been subnormal. Both optic discs were much swollen, the margins obliterated, and the veins tortuous.

March 30th. Since the last note, she had remained in a semi-comatose state; for one day, she could not swallow. The pulse was very small, and for a few days irregular; the temperature had once risen to 101°, but, as a rule, was at or below the normal. On this morning, a convulsion, lasting about two minutes, and affecting chiefly the left side, occurred. She vomited twice. The retraction of the head and the flexion of the lower limbs remained marked.

On April 9th and 10th, there were convulsions, affecting chiefly the left side of the face. On April 11th, she was still unconscious, and the retraction of the head was more marked than ever. There was neuro-retinitis on both sides, most marked on the right. The temperature remained at or below the normal.

For the following fortnight she remained in much the same condition, except that sometimes she was slightly conscious. There was irregular but never very marked pyrexia, and occasionally vomiting and convulsions. At the beginning of the period, the left membrana tympani gave way, and a discharge of pus occurred. On May 2nd, she had an unusually severe convulsion. After any disturbance, especially after being washed, she would continue to tremble for an hour. The retraction of the head was more marked, consciousness was almost entirely lost, and sores had formed over the great trochanter on each side.

On May 16th, she seemed rather better; the retraction was less, she was more conscious, and there was no fever. The optic neuritis was still marked (in the left eye). A fortnight later, her general condition was little altered; there was slight ankle-clonus, and the general trembling on disturbance was extreme. The bed-sores were in a bad condition.

On June 11th, the temperature began to rise, and reached 104.8° on June 14th; it remained high for about a week in an irregular fashion, and then sank. The left optic disc began to show signs of atrophy; otherwise there was little alteration.

On July 1st, Dr. Dickinson recorded the "condition of perfect and most remarkable immobility" in which she lay. He says: "Whatever position she is put in—supposing it to be one of stable equilibrium—so she remains without change (for hours or days). Evacuations pass away without any movement or notice on her part. If watched, the regular movements of respiration and occasional winking of the eyelids are the only movements to be seen; according to the state of the bed-sores, she is put on to either side, abdomen, or back, and so stays."

The most remarkable thing in her attitude is the position of the head, which is drawn far back, with the occiput to the shoulder, and the face looking vertically upwards; any attempt to bend the head forwards is resisted by increased contraction of the muscles at the back of the neck; the expression of the face is not unnatural; the face is thin. The eyes are natural in expression, but apparently without speculation. The hands can be moved, but, generally, the arms are flexed at the elbows and wrists, and the fists clenched; the arm is fixed to the scapula by muscular rigidity, the scapula moving when the arm is moved. The thighs are bent on the pelvis, the legs on the thighs, the toes are pointed, and the feet hollowed. The muscles are rigid, becoming more so when an attempt is made to extend the limbs. Whenever she is moved, or any attempt made to extend the limbs, the muscles of the arm, leg, and body are thrown into tremulous movements. She owes her existence entirely to being fed." This described the condition in which she had then been for more than three months.

On August 3rd, the temperature again began to rise, and reached 103.2° on August 6th. The retraction of the head became greater, and she screamed frequently as if in pain. On the following day, however, the temperature was again abnormal; she was more conscious.

From this date, she slowly improved; the fever entirely ceased. In about a month, she was able to speak quite rationally. She made use of her hands, but the legs were still kept flexed. The pupils were widely dilated, and she could not see at all. The bedsores were doing well.

At the end of September, the condition of the eyes was the same; but she was gaining flesh fast, could talk, and had even developed a considerable power of singing. Both optic discs were pale, but not excessively; the margins were not very sharply cut, the veins were tortuous, and the arteries very small.

October 13th. The improvement had been continuing. Vision was returning; at first, there was evidence of mere perception of light; later, she evidently perceived objects. She could not sit up, but could move her head freely. Fever never recurred after August 6th.

On December 22nd, she was still improving; she could move the legs feebly at all the joints, and could stand. There was slight ankle-clonus on the right side, but not on the left. The pupils were less dilated, and contracted to light and to accommodation. Vision seemed fairly good as regards acuity, field, and colour perception. The optic discs were pale, and had sharply cut edges.

On January 26th, 1882, it was noticed that the hip-joints were stiffly flexed, owing to changes in the tissue outside the joint; by the advice of Mr. Thomas Smith, extension was put on the limbs by weights.

On March 10th, the position of the limbs was better, and the child was able to stand awkwardly with the aid of a helping hand. The left leg improved more rapidly than the right. On April 2nd, she could flex and extend it fairly well at all the joints, while the movements of the right limb were "still shaky". On April 10th, she got up, and was able to move about the ward in a supporting apparatus. On May 29th, she could stand alone, and walk with the support of one hand.

On June 22nd, 1882, Dr. Angel Money, the registrar, made a note to the following effect. The legs and body were fat, and the child's general health was good; she could walk, but badly; there was much lordosis, and the arms were thrown back in walking; the weakness seemed to be resident in the muscles of the back, and her gait more a feat of skill than of power. The knee phenomenon could not be obtained in any position on either side; there was no ankle-clonus (it had been "slight" on December 22nd and absent on December 31st). The plantar reflexes were good and equal, and the abdominal reflexes were to be obtained about equally on either side. The pupils were of medium size, but smaller than they used to be, and equal; the optic discs were still distinctly whiter than usual, and had well defined edges; the veins were not large, but were certainly more tortuous than usual; the proportion between the size of the arteries and veins was about natural. The sight, so far as could be tested, was quite good, in relation to acuity, field of vision, and perception of colours. There were four scars (of bedsores), one over each trochanter, one on the sacrum, and one about the centre of the right buttock.

TREATMENT.—Calomel, half a grain twice a day, for a week after admission. In April, she was ordered a draught, containing three grains of bromide and one grain of iodide of potassium, three times a day. On June 14th, she was ordered a grain of calomel every night; this she took, off and on, for three months.

REVIEWS AND NOTICES.

ON CONCUSSION OF THE SPINE, NERVOUS SHOCK, AND OTHER OBSCURE INJURIES OF THE NERVOUS SYSTEM, IN THEIR CLINICAL AND MEDICO-LEGAL ASPECTS. By JOHN ERIC ERICHSEN, F.R.S., Surgeon Extraordinary to the Queen; Ex-President of the Royal College of Surgeons of England, etc. New and revised edition. London: Longmans and Co. 1882.

THIS work is already well known to the medical profession. The eminent author states that the publication of the present edition has given him the opportunity of carefully revising the work, and of making a few additions to the text.

The object of these lectures is to direct attention to certain injuries of the spine that may arise from accidents that are often apparently slight, from shocks to the body generally, as well as from blows inflicted directly upon the back; and to describe the train of progressive symptoms that lead up to the obscure, protracted, and often dangerous diseases of the spinal cord and its membranes, that sooner or later are liable to supervene thereon.

The author has no desire to establish a specialty of "railway surgery", for exactly the same results may arise from injuries caused by blows and shocks in ordinary accidents as from injuries the result of railway collisions, but he refers especially to the latter because of the frequency of their occurrence, and because they are so frequently the cause of litigation. Moreover, the results of railway accidents are often very insidious in their development, and give rise to considerable difficulty of diagnosis.

The great importance of the study of slight injuries to the nervous centres is urged by the author, and he believes that as these cases come to be more carefully studied, and consequently better understood, much of the obscurity that has hitherto surrounded them will be removed, and that we shall less frequently see those deplorable contests of professional opinion which we have been so often obliged to witness in our courts of law. Although the results of railway shocks are, in a great measure, similar to the results of shocks from other accidents, yet no ordinary accidents, the author points out, can produce so great a shock, both physical and mental, as the violent concussion produced by the sudden arrest of a train which is travelling at a great speed.

The author deals, in the second chapter, with the effects of direct and severe blows upon the spine, which may cause immediate injury to the spinal cord, or subsequent injury to the cord from extension of disease, caused by injury to the bones and other structures surrounding the cord. The blow may be apparently trivial, but yet may give rise to serious consequences. "I have known", he writes, "the slapping of the back of a newly born infant to make it breathe, develop caries of the dorsal spine."

The various cases of which records are given show that fracture or dislocation of the vertebræ may occur without being detected before death.

A case is recorded of a patient who died suddenly upon the fourth day after a fall from a railway carriage between the carriage and the platform, in whom, after death, a dislocation was discovered between the second and third cervical vertebræ. No such injury had been suspected, because, upon admission to the hospital, there had been no sign of head injury nor of general paralysis; it was only in the left upper extremity that any paralysis existed, namely, loss of power in the deltoid and supinator muscles. Another case is given in which the spinous process of the fifth cervical vertebra was fractured. The injury was unsuspected before death, which occurred suddenly a few days after admission to the hospital. The spinous process was broken off at its root, and a sudden movement had forced it into the space between the arches of the fifth and sixth vertebræ.

The above two cases show that notwithstanding the occurrence of an injury of a fatal character, life may be prolonged for several days, until death is brought about by an accidental movement.

A further series of cases in this chapter illustrate many interesting points in connection with concussion of the spine; and it is noteworthy that many of these cases exemplify the fact that, although a patient may feel no immediate effects from an accident, serious symptoms may set in after an interval of several hours, days, or even months, such symptoms leading sometimes to recovery, and sometimes to permanent ill-health, or to death.

Lecture VI describes sprains, twists, and wrenches of the spine, and eleven cases are recorded in illustration which show forcibly the manifold ill effects that may result to the spine, the membranes, and the cord from such accidents.

In the next lecture the mode of occurrence of shock is discussed, and the author refers to the fact that it is "a very rare thing indeed" for the spinal cord or the brain to be injuriously influenced by the shock which is commonly produced by accidents, which occasion fracture or dislocation of a limb. "It would appear as if the violence of the shock expended itself in the production of the fracture or the dislocation, and that a jar of the more delicate nervous structures is thus avoided." The author compares this result with an injury caused to a watch by falling on the ground. "A watchmaker once told me that if the glass was broken, the works were rarely damaged; if the glass escapes unbroken, the jar of the fall will usually be found to have stopped the movement."

Whatever may be the nature of the primary effects of a concussion, the secondary processes are clearly inflammatory. Although a certain period usually elapses after the injury before markedly serious symptoms set in, yet the author insists that the individual always exhibits some symptoms of the shock during this interval. There may be a period of remission of severe symptoms lasting for a few weeks, or for two or three months, after which more serious symptoms set in.

With regard to the pathology of concussion of the spine, the author remarks that although inflammatory processes play an important part in these cases, yet changes may occur which are independent of inflammation. There may be molecular changes in the cord itself; spinal anæmia, induced by the shock of the accident, acting either directly on the cord itself, or indirectly and at a later date through the medium of the sympathetic, in consequence of which the blood distribution to the cord becomes disturbed and diminished. In fact, many similar symptoms may arise from either one of the two opposite conditions—spinal anæmia and spinal inflammation. But, whereas, anæmia of the cord is rather a functional than an organic disease, a distinction should,

avour. If we compare the remarks on this point in the two editions, we find that the author's further experience leads him in the direction of increasing caution. He emphasises that he advises this treatment "only in *very exceptional* cases and on *very small places*". As a *dernier ressort*, he recommends in the new edition that, in very obstinate cases, the oil is to be placed into the follicle with a gold needle.

A careful consideration of the valuable chapters on treatment confirms the results of our own experience, which have satisfied us that patience and care on the part of the practitioner and the nurse, and the thorough application of one of the remedies that have stood the test of experience, are the measures on which we must rely in ordinary practice. The oleate of mercury, which Mr. Smith highly recommends, is a valuable remedy for some cases; but in many instances it acts neither better nor more quickly than the old-fashioned preparations of mercury which are in common use; and, like them, it too often fails. The croton-oil treatment is undoubtedly potent, but should be used with the greatest caution. We are glad to observe that Mr. Smith's instructions are clear on that point. It should never be used in young children. Our own experience is, and will probably remain, limited to its use in strong healthy lads above eleven years of age; and even then only, as the author observes, "in very exceptional cases".

NOTES ON BOOKS.

University College Hospital: Reports for 1880.—In drawing up his report, Mr. STANLEY BOYD has followed out the recommendations of the Association of Registrars, of which body he is secretary. He deals only with the cases discharged from, or dying in the hospital in 1880. The report consists of nine tables; the first of these forms a classified list of the various diseases, the number of patients suffering from each, distinguishing male and female, and gives the number discharged and the number dying under each heading. This is all that the association insists upon, but Mr. Boyd has added to this table a voluminous appendix, which occupies sixty pages of closely printed matter, and is, in fact, the chief feature of the volume. In this appendix we find, in a highly compressed form, particulars of all the more interesting cases. In the fatal cases, the *post mortem* appearances, and the clinical records, have been placed side by side, in parallel columns, an arrangement which is, perhaps, more convenient than any other which has been devised. Table II comprises all the cases of new growth. It is the least satisfactory part of the report; for, owing to an evident desire to compress, the details given are disjointed and incomplete. Table III, which deals with the operations, also suffers from the same over-compression, the few words appended as "Remarks" being often misleading. For instance, under the heading "Stretching Ulna" is the remark "Tetanus," and it is only after a careful search that we discover, by referring to the appendix to Table I, that the tetanus was not due to the operation, and that, in fact, the operation was undertaken for the cure of the tetanus, a point very necessary to ascertain, inasmuch as we believe that tetanus has, several times, followed the operation of nerve-stretching. The sixth table deals with the compound fractures; and, as illustrating the advantage of publishing such tables, we may mention that, by consulting it, a few minutes' calculation will show that thirteen compound fractures of the leg were admitted, and treated antiseptically; that two of these cases died of septicæmia four and five days respectively after the operation, and that the average stay in hospital of the remaining eleven cases which recovered was 46.2 days. A very full table of all the cases of stricture of the urethra is given, and from it we learn that the operation of internal urethrotomy was performed ten times without one fatal case, and that the average stay in hospital of patients thus treated was 32.3 days. We have said enough to show that Mr. Boyd's report not only bears evidence of much care and labour expended on its preparation, but is also an exceedingly valuable collection of observations and statistics reported in a systematic manner. Were all the hospitals in this country to publish reports as full, it would not take many years to accumulate a mass of trustworthy statistics, which could not fail to throw much light on many vexed questions.

Statistical Tables of the Patients under Treatment in the Wards of St. Bartholomew's Hospital during 1880.—One of the recommendations of the Association of Registrars was, we believe, that in the statistical table which gave the numbers affected with each disease the ages of the patients should be indicated. The Registrars of St. Bartholomew's Hospital have adopted this plan; the ages of the patients are given in eight periods: under 5, from 5 to 10, in decennial periods from 10 to 60, and "over 60." The volume does not profess to be more than a statistical compilation, and, as such, it is no doubt a useful

contribution; for fuller details of cases of peculiar interest, we must look to the *Report* also published by this hospital. Two sub-tables are added by the Surgical Registrars; one showing the number of cases of erysipelas and pyæmia; and the other the number of amputations, with the percentage of deaths during ten years (1871-80 inclusive). The latter table is of considerable interest, and is very conveniently arranged; it is, however, hardly full enough; for instance, it is, we think, misleading to class all the amputations of the thigh together, inasmuch as the mortality varies very much according as the amputation is made through the upper, middle, or lower thirds.

Middlesex Hospital. Reports of the Registrars for the year 1879.—The care which has been expended on this volume no doubt accounts for its late appearance: it is divided into three parts; of these the last and most interesting is the Report of the Pathological Registrar; out of a total mortality of 298, *post-mortem* examinations were made in 253 cases; this fact evidences a commendable activity on the part of Dr. SIDNEY COUPLAND and his associates. Dr. Coupland prefaces his report with a short summary, dealing with each disease *seriatim*; it is interesting to read that, in five out of the seven fatal cases of enteric fever, death was due to perforative peritonitis; that two out of the six cases of pyæmia had their origin in periostitis; and that in four out of the eight cases of miliary tuberculosis, granulations were found in the choroid. A summary, such as Dr. Coupland has supplied, brings facts of this kind into a prominence which they would not attain if we had merely had presented to us the long, and somewhat dry, details of the general table, which deals with each case separately. Unfortunately, this Report is disfigured by many misprints; "Tharyngitis" is a sufficiently obvious mistake, but what kind of disease are we to recognise in "Aorta nephritis"? The Report of the Medical Registrar contains an interesting table summarising the points of interest in the 71 cases of enteric fever treated during the year; it is preceded by a few apt remarks on the ages, complications, and treatment in the various cases. The chief feature of the Surgical Report is the "Cancer Table;" it has to deal with 143 cases, of which number 100 were females; 45 of these were cases of cancer of the female reproductive organs; 22 died, and the average duration of the disease in these 22 cases was eighteen months. It is curious to read that a history of cancer heredity was obtained in only 12 per cent. of the total number of cancerous patients.

Charing Cross Hospital. Sixtieth Annual Report.—The major portion of this report is contributed by Mr. WHITEHEAD, the Surgical Registrar; it consists of three tables. The first, which classifies the cases under the heads of the various injuries and diseases, contains, under the column of "Remarks," fairly full details of all the more remarkable cases. These remarks are more pleasant reading than in some of the Reports we have perused, owing to the retention of the small words, the "of's" and the "the's," and the "and's." May we plead with the Registrars who are preparing this year's reports, to have a little more consideration for the English language, and a little less anxiety to save paper and printer's ink? Mr. Whitehead has set a good example, for by fine paper, by small but clear type, and by making the column for remarks very broad, much confusing letterpress is avoided, without material increase in the bulk of his report.

REPORTS AND ANALYSES AND DESCRIPTIONS OF NEW INVENTIONS IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

SYRINGE FOR INJECTING VASELINE.



THE above engraving represents a glass syringe, manufactured by Krohne and Sesemann, used by Mr. Bader of Guy's Hospital for the treatment of gonorrhœal, purulent, and other forms of ophthalmia. The object is to inject vaseline ointment beneath the upper eyelid, passing the nozzle beneath it close to the outer canthus. To charge the syringe, the piston is withdrawn, and the ointment put into the tube with the finger or spatula. The widened upper end of the tube facilitates the entry of the ointment, and the manipulation of the syringe, if rendered slippery by the ointment.

A NOVEL FORM OF VACCINATOR.

MESSRS. FERRIS and Co. of Bristol have forwarded an ingenious form of vaccinator, mounted in the shape of a pencil-case. At one end, there are five needle-points, covered by a silver perforated cap, which moves up and down on a stud, so as to expose the needle-points; or, when not in use, they can be wholly covered, by a slight bayonet-like arrangement of the cap. At the other end, there is a reversible silver spatula for collecting lymph, and rubbing it upon the superficially lacerated cuticle. The advantages of this instrument are its ready portability, its perfect cleanliness, and the absence of all sign of cutting arrangements, the presence of which tend so much to alarm timid mothers and children. After use, the needle-points can be readily cleaned by passing them through some soft wash-leather.

ADEPSINE.

ADEPSINE is a product obtained by a new process from the coal oxides of petroleum. There are two varieties: one pure white, the other orange yellow, the former being apparently of superior quality. In general appearance, they somewhat resemble vaseline. They are not acid, they are not affected by exposure to light, and it is said they cannot, under any circumstances, become rancid. They are undoubtedly of value as solvents, in the preparation of ointments, and perhaps for toilet-purposes. We find that they can be applied freely to the skin without the production of any irritation. Their freedom from smell and taste is a decided advantage. Adepsine-oil is a bland, colourless, tasteless, odourless fluid, and will probably be much used in dispensing. These preparations are manufactured by Messrs. Carl Hellfrisch and Co., of Offenbach-on-Main, under the direction of Dr. Fresenius.

MESSRS. MACKEY, MACKEY, AND CO.'S EMULSION OF COD-LIVER OIL AND OTHER PREPARATIONS.

WE have received from Messrs. Mackey, Mackey, and Co., specimens of several of their new preparations. Their "Mistura Olei Morrhue" is a good sample of cod-liver oil emulsion, and, although not very palatable, might be preferred by some patients to the simple oil. The "Mist. Senegæ Ammon. Conc." contains carbonate of ammonia, tincture of squills, spirits of chloroform, and decoction of senega. When freely diluted with water, its taste is by no means disagreeable. The "Mistura Bismuthi Comp." is said to be remarkably efficacious in cases of dyspepsia. Each dose contains two minims of dilute hydrocyanic acid, ten minims of tincture of nux vomica, and a thirty-second of a grain of morphia, "with bismuth, spirit chloroform, and aromatics", the bismuth being in its "most effective form". It smells of prussic acid, and has a colour that would shame the show-bottles in a chemist's window. The "Mistura Bismuthi Comp. c. Ferro" is equally attractive in appearance, and is not unpalatable. The "Mistura Cerii Composita" is a new soluble compound of cerium, and is recommended as a "specific for vomiting in pregnancy, and a reliable remedy for cure of indigestion, or sick stomach arising from debility or excess in diet." It contains, in addition to cerium, tincture of nux vomica, hydrocyanic acid, and spirits of chloroform, and has been used in the treatment of chorea and epilepsy. Although we can speak favourably of the general appearance of these preparations, we should hesitate to express an opinion as to the physiological action or therapeutic value of some of the combinations. Mackey's Epulixon is intended only for external use, and is probably of more value than most of the mixtures. It is a disinfectant and antiseptic; and, when mixed with water, forms a milky fluid, which is well adapted for pouring down foul drains and closets.

EXPERIMENTS have recently been made in Rome by Signors Capranica and Colasanti, which are referred to in *Nature*, regarding the action of oxygenated water on the system. Physiologically absorbed (according to Hueter's method), the substance acts as a poison, quickly killing animals, the fatal dose varying with the animal's size (about 25 cc. is enough for a dog weighing 3 kilogrammes, 75 cc. for one weighing 13 kilogrammes). The poisonous action appears in all the great organs of the body, especially that of the spinal cord: the excito-motor power of that organ is overexcited, as shown by convulsive phenomena (tetanus, and locomotor ataxy). The physico-chemical acts of nutrition are also profoundly disturbed, as is proved by the very pronounced glycosuria previous to death. All these disturbances are attributable to decomposition of the peroxide of hydrogen in contact with the tissues. The consecutive phenomena in poison with oxygenated water are identical (the authors say) with those M. Bert has observed as resulting from the action of the compressed oxygen.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 14th, 1882.

THE MEDICAL ACTS AND THE ROYAL COMMISSION.

THE pressure on our space, in consequence of the demands arising out of the proceedings at the great jubilee gathering of the Association at Worcester, has prevented our returning to the very important Report of the Royal Commission on the Medical Acts as soon as we should have desired. The publication of that Report necessarily constitutes a distinct epoch in the medical history of our country, and the results foreshadowed in it must exert a marked influence on the education and position of the medical profession of the United Kingdom, and an important bearing on the national health, and generally on the public weal.

In the Report of the Royal Medical Committee, presented at the annual meeting in August last, attention was directed to the remarkable manner in which the Royal Commission on the Medical Acts had endorsed the views of the profession in respect of the leading principles by which future medical legislation must be guided. After the lengthened sittings of the Special Committee of the late House of Commons, during two sessions, on the different Bills then before Parliament, and the publication of the voluminous evidence then taken, the appointment of a Royal Commission seemed, in the first instance, almost superfluous, and only likely to retard much wanted legislation.

The manner in which the Royal Commission embarked on the work, together with the extensive range of the inquiries submitted to them, embracing virtually all subjects connected with the profession, has fully proved the incorrectness of any such opinion, and the wisdom of the appointment. The Commission were nominated on April 30th, 1881, and issued their Report on June 26th, 1882.

The evidence taken before the Select Committees of the House of Commons was submitted to the Commission, and further elucidated, supplemented, and corrected by the re-examination of several of the witnesses who had appeared before the Committees. The importance of such renewed examination cannot well be overestimated: witnesses of the highest and most unimpeachable character in some respects materially modified their testimony. Take, for instance, answers of the following witnesses on the subject of Direct Representation. Sir James Paget, under examination by the Earl of Camperdown, the chairman, was asked: 255:—"Would you mind repeating, shortly, your opinion respecting the considerable demand for direct representation from a certain portion of the profession, or, at all events, from certain persons who profess to represent the working profession?" "It seems to me to be just one of those cases in which public feeling should be satisfied. It seems to be deemed desirable, by the public feeling, that the profession should be represented on the Medical Council. I think it will make no difference whatever in the manner or the quantity of work done by the Council; and, for the satisfaction of the feeling, I think it should be granted." Subsequently, Sir James was examined on the same point by Mr. Simon, whose questions inferred disapproval of the above answer. Sir James replied: "I feel that there is this demand; and that, on the whole, it would be prudent, in the interest of the profession, and for what is called the good of the public, to comply with it. I do not think it matters much whether there are six more

or six less. I think it would be well to satisfy the strong feeling which exists for what is called the representation of the general body of the profession. The work of the Council would be much the same afterwards as it is now."

Professor Paget, Regius Professor of Physic at Cambridge, in reply to the Earl of Camperdown, stated, 886:—"I think persons elected in that way (by direct representation) would, more directly than the present members, represent the interests of the mass of the medical profession;" and, further on, he refers to the mode of election of such representatives proposed in Mr. Hardcastle's Bill as feasible.

Professor Humphry of Cambridge, late President of the British Medical Association, handed in a Memorandum to the Commission, in which he suggested a Medical Council of 14, to be thus constituted:—Six to be appointed by the Crown as at present; two by Conjoint Board for England; one for Scotland; one for Ireland; two by whole profession in England: one Scotland; one Ireland; total 14. Mr. Simon, in examining Professor Humphry, which he did at very great length, submitting hypothetical questions as to the canvassing, the turmoil, and expense that would be involved in electing direct representatives, elicited, in reply to query 1330, as to what "one may call the roots of the desire for direct representation," the statement:—"I think the root of it is that in the first place the profession feel that they pay, sustain, and support the Medical Council. The funds of the Medical Council are entirely derived from the profession. That is the case undoubtedly, and therefore they feel that they have a sort of claim to an influence in it;.....that is a real and legitimate claim. I think it is a fair claim. Then, secondly, they have also the feeling that the real requirements of the practitioner, in the matter of education, would be better attended to if there were a representation from the practitioners generally on the Council." Professor Marshall, F.R.S., Representative of the Royal College of Surgeons on the General Medical Council, expressed himself in favour of direct representation, and it naturally followed that Mr. Simon, from persistent examination on the subject, an accomplished adept at cross-examination, had a great many questions to ask. Referring to the fact that Scotland sent general practitioners as representatives on the General Medical Council, Mr. Simon asked, 2545:—"If the General Council, having to form an opinion as to the best education for general practitioners, require general practitioners to inform them on that subject, a Scotch general practitioner would not answer the purpose?" Mr. Marshall replied: "No; that is just the point. I say, no; for inasmuch as they have not the system of apprenticeship, they could not give information concerning that one point—as to the advantages of being apprenticed, the desirability of resorting to it in some shape or other, and, if so, when the period of apprenticeship should take place, whether at the beginning, whether in the middle, or whether at the end of medical education. Or, again, whether there should be a probation of some kind after passing the examinations. These are points of detail on which the practitioners of England would like to be consulted evidently, for they make a great point of some sort of service of that kind." He also mentioned other details—"small but practical details"—on which he (the general practitioner) might fairly be consulted; then the number of lectures, whether "the course of lectures in midwifery should be three or six months. I think men in general practice, who know the difficulties of that branch, and who meet with them every day, and who require assistants to be well qualified, and in whom they may have confidence, to manage their patients, deserve to be consulted upon matters of that sort. These are only a few points".....

Mr. Simon, question 2546: "The point on which I was wishing to be sure of your opinion was as to the necessity of direct representation, to insure the Medical Council having that kind of knowledge before it, when it already has three or four general practitioners amongst its members?"

Professor Marshall: "The advantage of having such knowledge is not the only consideration which has turned my mind. I originally thought that it would be better not to have direct representatives; but

there are several considerations in favour of it; one is, that you may strengthen the general practitioner element. If there are three on it, there is no objection to having two or three more. It is already admitted, by the fact of general practitioners being on the Council, that you should have that element; and why should you not strengthen that element? Or we may put it in this way, if they are there, and they do good—as I suppose they do—it would do further good to have three more. Then, again, you would get the element of variety of opinion and of view; and that, I think, would be of very great importance in the Council. Besides, the general practitioners now on the Council represent institutions, and not the profession generally."

This evidence cannot but be satisfactory to the Association, as it discloses four professional magnates, who, from being opposed to the admission of direct representatives on the General Medical Council, have all given in their adhesion to it; and we cannot but regard this fact as a great strengthening of the position which the old and steadfast supporters of direct representation have so long occupied, and an encouragement to them to persist in their efforts to attain it.

Various other questions in the report must be relegated to future communications, but it is impossible to go through the report and the evidence on which it is based without being profoundly impressed by the difficulties involved in the completion of it, and the admirable tact evinced by the manner in which the Commission have taken the decision of the great majority of the members on the more important issues, in order to complete their report, while consigning the irreconcilable views of others to the subjoined memoranda.

It is one of the objections to the constitution of the present General Medical Council that, whatever the eloquence or force of argument expended on certain points involving corporation interests, the votes of members representing those interests could be declared beforehand with unerring certainty, and, as members of the Royal Commission, so with Mr. Simon, the uncompromising opponent of direct representation before and after the failure of the Bill of Lord Ripon in 1870—a Bill which was framed and attempted to be forced through Parliament when he was medical adviser to the Privy Council; and equally so with Professor Turner, the avowed and unflinching champion of Scottish interests, which hitherto have formed an insuperable barrier to the conjoint scheme—it might safely be predicted that the weight of the one would be aimed against direct representation, and that of the other against the extension of the compulsory conjoint scheme to Scotland. Notwithstanding all their efforts as members of the Commission, pledged to their own views, armed with the great power of cross-examining every witness—a power which the evidence shows was by no means lightly used—and also with the power of calling before them as witnesses the ablest supporters of their respective opinions, both failed to gain acceptance for their opinions from the Commission; they can scarcely hope to obstruct legislation.

At the time of the Worcester meeting, the evidence of the Commission had not been issued. The Blue Book containing it can now be easily obtained by all interested in the subject of medical legislation; it should, however, be read in conjunction with the published evidence given before the Select Committee of the late Parliament. The evidence on which the present report of the Royal Commission is based is of the utmost importance, and further abstracts from it will yet appear in our pages.

We cannot conclude without expressing our gratitude for the admirable manner in which the Committee and their able and untiring secretaries have discharged their duties.

THE EXAMINATIONS OF SOME OF THE ENGLISH LICENSING BODIES.—II.

IN continuation of our observations of last week, we may remark that the majority of witnesses examined by the Royal Commissioners express a decided opinion in favour of handing over the preliminary examinations of intending medical students to our educational authorities—in this respect corroborating the recommendations so strongly urged in the

report of the British Medical Association on Medical Education. The General Medical Council, however, will have to determine the tests to be enforced at these examinations; and it appears to us that the majority of witnesses above referred to were disposed to recommend too low a standard for the preliminary examinations. The prevailing idea seems to be, if anything approaching to stringent tests as to general education are imposed, that so few schoolboys will be able to pass the examinations, that the profession would be starved, and the public consequently suffer. Objections of this kind have frequently been advanced against raising the standard of these preliminary examinations in other professions; but experience has invariably proved that these ideas are fallacious, the laws of supply and demand as certainly ruling these matters as they do other ordinary concerns of life. There is no reasonable ground for supposing that even a temporary falling off of the supply of medical students would follow, if the standard of preliminary examinations were gradually raised, so that students might have plenty of time to prepare themselves for the more severe tests to be imposed on them.

The amount of knowledge gained by our sons at school bears no adequate proportion to the sums of money expended upon them; one of the reasons for this unsatisfactory state of things is, because both schoolmasters and scholars find that the smallest possible amount of knowledge suffices to enable a boy to pass the preliminary examinations. No more effective plan could be devised for improving the system of education in our schools than by raising the standard of these examinations. We may be quite certain of one thing, which is, that a lad cannot be safely allowed to commence the study of medicine unless he has proved himself—by proper tests after leaving school—to be capable of further education. It is as useless to attempt to teach a colour-blind man to paint, as it is to expect that a lad can with profit study medicine, unless his memory, reasoning faculties, and powers of observation have been carefully cultivated by years of efficient school teaching. We believe it is not too much to expect that all intending medical students should be compelled to pass an examination, equal in stringency to the matriculation, and preliminary science examinations of the London University. A lad who has passed this ordeal with success will work his way with comparative ease through the intricacies of anatomy and physiology, and subsequently may with confidence enter on the study of medicine and surgery.

In the report of the British Medical Association on Medical Education, it was urged that, at the commencement of their second year, students should be compelled to undergo an examination in their first year's studies: these examinations to be conducted by recognised school authorities under the supervision of the General Medical Council. "No student was to be permitted to enter on his second year's studies until he had passed such an examination." The greater number of witnesses examined on this subject by the Commissioners concur in the advisability of carrying out this plan, and the Royal College of Surgeons have now adopted a rule somewhat to this effect. By means of these examinations, it will be possible to weed out the idle men from our medical schools, and to dispel the common delusion which hangs over so many freshmen, that the examinations in anatomy and physiology are so distant they require no immediate attention—an error which is at the root of much subsequent trouble to many students. Sir J. Paget is probably correct (Q. 327) when he observes: "We are moving towards the time when anatomy and physiology will be taught in separate schools—I mean in London or several other large towns—instead of having them taught separately, as they are in every medical school. I think there are eighteen or nineteen in London, but I believe it possible we shall work round to the time when we shall have distinct professors or these subjects, who will teach them (or the chief part of them) in separate scientific institutions."

Sir J. Paget's influence with the profession is probably greater than that of any man who has lived during the present century. We sincerely wish he could see his way to employing his unrivalled opportunities towards instituting a movement in the direction above indicated.

An institution of this kind in connection with the Royal College of Surgeons would hardly be of less importance than the splendid library and museum which is contained within its walls. Until we have schools of the kind, it will be necessary for the General Medical Council to exercise the best possible control over the examinations of our first year's students, as well as over the schools in which they are taught.

The Report on the Examinations contains valuable information respecting the improvements we may hope to see effected in the professional examinations when under the control of the Medical Council and the Divisional Boards. With reference to anatomy, the visitors express their opinion "that primary examinations should include dissections by every candidate." They explain how they may be arranged: in fact, a test of the kind is now enforced at the examination of the Royal College of Surgeons, Ireland, where each candidate is required to perform dissection and answer questions in dissections—made, not only by himself, but by other candidates. This plan gives the examiners facilities for determining a candidate's anatomical knowledge with far greater certainty than *visu voce* or by written questions. In the final examination of the Royal College of Surgeons, Ireland, students are obliged to perform operations on the dead body—a practice which might, with great advantage, be generally adopted.

The Visitors of the examinations, in the report to which we have so frequently referred, appear to have taken too limited an idea of the value to be attached to what may be called clinical tests. We must constantly bear in mind that the education of our students will be controlled by the examinations: if the standard of clinical examinations are low, bedside teaching will be imperfect. This is one of the chief faults of our present system. It is because tests, as regards sound clinical instruction, are neglected that hospital practice is slurred over by so many of our students. If the visitors had taken this view of the matter, they would hardly have held up for approval a practical examination, which precludes the opportunity of testing a student's knowledge in cases of accident or acute disease, and practically almost excludes female patients and children from its sphere of action. There can be no question that, if students are to be examined at the bedside, the work cannot be done as rapidly as it now is, and more time means extra expense; and it is, therefore, certain that in future the fees paid by students must all go to the examiners. As has been pointed out in the evidence taken before the Commissioners (4,275), patients in the large Poor-law infirmaries may be utilised for the purpose of examining our London students at the bedside, should it be found inconvenient to take them into the wards of our hospitals. The examiners might economise their time if the system adopted at the Irish College of Surgeons were enforced—the examiners reading over and adjudicating upon the whole of the written papers, candidates rejected upon these papers being precluded from continuing their examinations.

If these written examinations were held at the several educational centres, the students would be saved some trouble and expense, and the examiners would thus have more leisure carefully to read over the papers, and, by sifting out the more inadequately prepared candidates, additional time could be given for testing the knowledge of the remaining students in the clinical portion of the examination.

"THOUGHT-READING."

"PHILOSOPHICAL amusements" are no new thing; but in this, as in other lines, we seem to have in these days a fertile trick of invention. Mesmerism and spiritualism being no longer novel, there has arisen the new notion of "thought-reading". Like the others, it appeals in the first place to our sense of wonder, and in the second place to our scientific instincts. Mr. Irving Bishop's procedure is well known. His patient, whether alone or in a room full of spectators, is invited to fix upon a place or object in the absence of the operator, who is brought in blindfold. He seizes the patient's hand, and, with many signs of nervous excitement, presses it against his own forehead. Almost at once, he begins to change about with the patient in various

directions. Sometimes they do proceed directly, and very swiftly, to the exact spot assigned. At other times, there are a series of wild wishes, which may or may not in the end come right. Another very similar plan is the spelling out of an unknown word upon an alphabet suspended on a string. The patient is led rapidly up and down by the blindfolded operator, who stops now and again opposite a letter he suspects, and reverses it, or passes to those on either side. During this performance, the patient is entreated "to keep before him a mental picture of the word desired", and Mr. Bishop asserts that he gains through the bodily contact some kind of knowledge of the mental picture.

The natural explanation of these phenomena, which have been exhibited in circumstances where collusion was impossible, is probably simple enough. Unconscious muscular indications are quite capable of guiding the operator, to assuming that he possesses by nature or practice a certain degree of hyperæsthesia. The alphabet trick is even more easily explained than the other; for, as the patient is led rapidly up and down, there will necessarily be a certain change of attitude as he passes the proper letter—a kind of change from negative to positive, and *vice versa*—which should not be hard to detect.

Marvels, however, have a way of growing rapidly; and accordingly, the idea of thought-reading, once floated, threatens to assume alarming proportions. A notable article in the *Nineteenth Century*, not to mention others, assures us that sundry children, not otherwise remarkable, have been able in a large majority of cases to guess correctly a word or object fixed on in their absence. The conditions of the experiments are not very accurately stated, but we are assured, of course, that collusion was out of the question. The ordinary man would probably conclude that, if all this was so, the explanation would again be found in some kind of acute sensitiveness to unconscious facial or other indications. But we are presented by these writers with a marvellous theory, which the editor hastens to corroborate by an extract from a former essay of his own. We are reminded of the ether, and its capacity for conducting certain kinds of vibration. We are then invited to assume that every mental operation is in some way correspondent to a molecular vibration somewhere in the brain-centres, called, for simplicity, a "brain-wave". The inference is obvious. If these children, or others, appear, without sensible signs, to know one's thoughts, it is simply because they are somehow sensitive to the brain-waves propagated through the intervening ether.

This theory is wild enough, and widely remote from scientific verification as yet; but, of course, no one can say it is impossible. It has been held by some of the more credulous students of hypnotic phenomena, that the patient could be affected by the unexpressed thoughts and volitions of the hypnotiser. Here, again, the natural explanation is, that such volitions are really expressed in some slight but sensible indications, by which, in the hyperæsthesia of the hypnotic state, the patient's senses are affected. The whole theory of hyperæsthesia, indeed, is in need of deepest study; and, until we know more about it, speculations on thought-reading will continue to be unprofitable. How minute the "minimum perceptible", as it used to be called, may be, no one pretends to know. If we carry the question further, no one can really dogmatise as to the relation of knowledge and other mental facts to sensation, properly so called, at all. Neither physiology nor psychology has solved, as yet, the riddle of how, out of a concussion at the tympanum, a thing so utterly different as knowledge and the thousand other things which "hearing" implies can be evolved. Whether we say it is done in the brain or by the interaction of a brain and a mind, it remains a mystery. Possibly some may prefer to insist upon the mind's action as distinct from the brain-changes, and may imagine that, in some way, knowledge may be transmitted from mind to mind without sensory intervention at all. Such a theory would really be no wilder than the theory of the brain-waves and the ether. But it will be more to the point, and more likely to conduce to real notions of the human organism, if students of such questions will address themselves to the study of hypnotism, as it has

lately been carried on, with much promise of results, in Paris and in Breslau. Professor Heidenhein is much more likely to arrive at tangible results than Mr. Irving Bishop or the writers in the *Nineteenth Century*.

SENSORIAL LOCALISATION.

ONE of the most actively discussed questions in the physiology and pathology of the nervous system is that of the existence of certain cerebral sensorial centres. Some of our English as well as some German authors have described, under the name of sensorial aphasia or of word-blindness or word-deafness, a form of aphasia to which particular lesions and symptoms are ascribed. The patient, while almost completely preserving intelligence, is unable to utter, read, or write, does not understand the words which he hears, nor those which he pronounces, and is therefore not disturbed or annoyed by the fact that what he says does not correspond with what he is thinking or intending to say. General sensation, sight, and hearing are normal in so far as relates to the common sensorial centre. In examining the anatomical lesions of the cases, the convolution of Broca is found uninjured; there is only destruction of a region of the posterior zone of the left brain. The path of exit, the third left frontal convolution, is free from lesion; that which is affected, is the storehouse of commemorative images of written and spoken words.

A case of great interest, shown by M.M. d'Heilly and Chantemesse, and related by them at the Medical Society of the Paris Hospitals on July 28th, is one of the neatest and most striking examples which have been published of this form of cerebral disease in its bearing upon sensorial localisation. A young tuberculous female became suddenly aphasic; she could hardly comprehend anything which was said to her; she could neither read nor write, and only pronounced some incoherent words. Sight, hearing, motor power and general sensibility were well preserved. Her intelligence was almost completely preserved; she understood signs made to her; conducted herself correctly in feeding herself with solids and fluids; recognised a friend who came to see her, shook hands with him, and took part by smiles and changes of expression in the games which went on in the ward; she played cards, and was never mistaken either as to their colour or value. At the *post mortem* examination, there was found a thrombic clot in the fourth branch of the left Sylvian fissure, with softening of the cortical matter of the tributary territory, affecting the superior labium of the first temporo-sphenoidal convolution in its posterior half, extending over the lower half of the inferior parietal lobule, and over the anterior half of the gyrus. The limitation of the lesion, the marked and well defined character of the symptoms, justify the record of this case as one highly illustrative of the series considered to indicate definite lesions as belonging to the condition of word-blindness or word-deafness, and in maintaining by pathological evidence the doctrine of sensorial localisation.

THE METROPOLITAN SMALL-POX HOSPITALS.

ALTHOUGH the report of the Royal Commission appointed last year to inquire into the question of hospital accommodation for infectious diseases has not yet been issued, we are enabled, through Sir Rutherford Alcock's pardonable indiscretion, to form some sort of idea of the general outcome of the Commission's labours. Sir Rutherford, as President of the Health Section of the Social Science Congress, took occasion to emphasise the possibility of preventing the spread of infectious disease by the evidence laid before the Commission, of which he was a member. And in speaking of the limitation of small-pox, he used words which, in the light of Mr. Power's recently published report on the experiences of the Fulham Small-pox Hospital, sound ominous as to the decision at which the Commission have arrived with regard to the question of extension of small-pox from a hospital, about which so much has lately been written. Sir Rutherford said that "a broad line has been drawn between the danger attending the aggregation of cases of small-pox and of fevers." "From the hospitals devoted to the treatment of the latter, under the regulation of the Metropolitan

Asylums Board, there does not appear to have been any instance of the spread of infection to the neighbourhood; but, as regards small-pox, the same immunity has not been secured, and may possibly be unattainable." He suggests that all the convalescent and slighter cases, which will admit of removal without danger to a considerable distance, could be transported by land or water outside the ring of inner London, "leaving only the more serious cases for treatment near to the places, if not in the parishes, where they actually occur, and in such diminished numbers as to lessen materially, if not entirely to obviate, any danger of infection extending to the surrounding neighbourhood." These words, if they mean anything, denote that the Commission has been swayed by the report of Mr. Power to the belief that the small-pox hospitals of the metropolis have, in some undefinable and as yet unexplained fashion, caused a dissemination of that disease in their immediate neighbourhood.

It is curious that, while these grave allegations are being made against the London hospitals, a prolonged and exhaustive inquiry by Dr. Thorne Thorne into the working of about seventy hospitals in the provinces, gave results almost entirely negative as to any injurious effect upon the health of the population arising from their use. In several cases, indeed, Dr. Thorne found infection communicated through some fault of administration—fault of a sort that should not have existed at a hospital, but which would have been simply inevitable if the sick had been under private management. As regards small-pox, he could learn of only two instances where infection had appeared to spread from a hospital in a row of houses, to other houses, in a way that suggested conveyance of the infective matter through the atmosphere rather than by means of persons or things; but in both these cases, the hospitals were buildings which ought never to have been used by a sanitary authority for the isolation of cases of infectious disease, forming part, as each one did, of a row of dwelling-houses, and being in each case so situated that the patients had to be removed from the ambulances in the public thoroughfare. In many other instances—the same disease, small-pox, being in question—Dr. Thorne heard of no extension of infection to neighbouring streets or houses, in spite of the best inquiries that he and officers of health before him could make.

Dr. Buchanan, the Medical Officer of the Local Government Board, in commenting upon these results, has observed that "the very experience that has led to the present practices of disease classification within fever hospitals, and that has required small-pox to be treated in distinct buildings, is consistent with an *a priori* expectation that, on careful inquiry, it might be possible to discover, around ill-placed hospitals, instances of the spread of disease, especially of small-pox; for it could not be affirmed that, on passing the doors or windows of the hospital, the air borne material of infection became inert. At a former time, indeed, it was thought that the infection must needs be destroyed by dilution; but with better knowledge of the pathology of infection, and with recognition of the material of infection in its near relations with particulate matter, this expectation had to be modified. It came to be seen that dispersion of infection was not necessarily synonymous with destruction of it, and with the new knowledge it was felt that fresh assurances respecting its destruction would have to be gained. Wherefore it is assuredly satisfactory to note how few instances of an infection, seeming to have been conveyed through the air, were discovered in Dr. Thorne's lengthened inquiry."

A remarkable case, strongly confirmatory of Dr. Thorne's experience, has recently been reported upon somewhat in detail by Dr. Seaton of Nottingham, whose zeal in the cause of public hygiene is equally great with that of his honoured father. Dr. Seaton is at all times in the van of sanitary reform, and he is always striving to teach the good people of Nottingham how to raise their standard of public health and to set a good example to other municipalities. He also has been assailed with this bugbear of the evil influence of the sanitary hospital. To counteract it, he has had all the cases of small-pox occurring in the borough since the beginning of the present outbreak in the town graphically represented upon a large map, with results completely dis-

posing of the theory of mischief arising from the hospital. The map makes it clear that the prevalence of the disease, so far as it can be said to be in the neighbourhood of the hospitals, is anything but uniform. Whereas the incidence of the attacks on the east and south sides has been very marked, the west side was exceptionally free. Moreover, whereas on the east side there was a considerable proportion of early cases, the cases on the south were almost entirely at the later period of the epidemic. During the first five months of the epidemic, during which there were 152 cases under isolation in the Garden Hospital, the district on the south side (between the gaol and the work-house), which is much more crowded and populous than that on the east, escaped almost entirely. What is still more remarkable and instructive, though this part of the town remained comparatively free from the disease during all these months, it subsequently did suffer severely, the date of its invasion occurring about the end of April. At that time, a case of small-pox was brought from Yorkshire to a house, where it was nursed from beginning to end, and that case and not the hospital was most clearly the starting-point of this local outbreak. The special prevalence of the disease was on the east, north-east, south, and south-east sides of the hospital. In the west, south-west, and north-west directions, the prevalence of the disease was comparatively very slight. Indeed, on the west side there were hardly so many cases as have occurred much further away. The south side, though it escaped almost entirely during the first five months of the epidemic, was subsequently severely attacked, and the date of its invasion coincides with a period during which there were obvious reasons to account for it. These facts are altogether opposed to the theory which Dr. Seaton's experience leads him to believe is quite untenable; viz., that small-pox hospitals must be a source of danger to the neighbourhoods in which they are placed, in some way through the air.

THE Treasurer of the British Medical Benevolent Fund desires to acknowledge, with most sincere thanks, the liberal donation of £100 from Dr. Beany of Melbourne.

PROFESSOR PAUL VOGT has been appointed Professor of Surgery and Director of the Surgical Clinical Wards at Greifswald, in place of the late Professor Hueter.

WE regret to learn that Dr. E. Dewes of Coventry, the President of the Birmingham and Midland Counties Branch of this Association, has been obliged to leave England, to winter in the Engadine.

NOTWITHSTANDING that the report of the outbreak of cholera at Modane was immediately denied, King Humbert's Government has telegraphed to the French Government, begging for official reports, which, when published, it is hoped, may tranquillise the public mind.

SEVEN deaths from scarlet fever are reported to have occurred at Accrington during the past week, as compared with six and nine in the two previous weeks. The number of new cases is said to be diminishing.

A LARGE lunatic asylum has been constructed at Bayreuth. Doubtless, it is a mere coincidence that the asylum should have so quickly followed upon the colossal theatre erected there for the performance of the "Music of the Future."

THE Harveian Lectures of the Harveian Society of London will be given this year on November 23rd and 30th, and December 7th, at 8.30 P.M., at the Stafford Rooms, Titchborne Street, Edgware Road—the subject being Ophthalmic Medicine and Surgery in relation to General Practice.

COLOUR-BLINDNESS does not appear to be confined entirely to railway signal-men. Newspaper correspondents would seem to be subject to the affection. The marines have hitherto been recognised by their red coats; but the war correspondent of a morning paper speaks of the "dreaded red coats" of the guards, and the still more "dreaded blue" of the marines.

A TELEGRAM from Lady Strangford at Cairo to Colonel Duncan states that the wounded Egyptians are coming in daily from the villages; that an excellent house had been lent to her by the Khedive; and that it would suit admirably for the purpose; but that much was required in the way of hospital fittings. She hoped in providing these to have the support of the English public.

DR. JOHN M. KEATING recently read a paper before the College of Physicians of Philadelphia, in which he stated that Dr. Formad and himself had found micrococci in the blood of children affected with measles of a malignant type. With the idea of counteracting the development of organisms, whiskey was freely administered to some of the patients; and it was only when the alcoholic treatment was adopted that recoveries took place.

THE Medical Society of London will hold its first meeting of this, the 110th Winter Session, on Monday next at 8.30 P.M., when, on the conclusion of the usual routine business, the President, Mr. Francis Mason, will make a few introductory remarks. Dr. Dolan of Halifax, will then read the *résumé* of his essay on whooping-cough, which obtained the Fothergillian prize of the Society last spring. Much work of a practical nature is already promised for the ensuing session, which promises to be a prosperous one.

It is not yet possible for us to give a complete list of the entries at the medical schools, as students are permitted to enter for the whole session up to the 15th instant. We are, however, able to say that, up to October 12th, there were at Guy's Hospital eighty full entries, and fourteen for special courses. At the London Hospital, eighty-four students entered for the full curriculum, and forty for special courses. At St. George's, the numbers were forty-three full entries, and six for special courses. At the Leeds School of Medicine, twenty students entered for the full curriculum, and three for special courses.

THE following have been chosen by the Council of the Statistical Society as subjects of the annual competition for the Howard Medal (1883):—"The best Exposition of the Experiences and Opinions of John Howard on the Preservation and Improvement of the Health of the Inmates of Schools, Prisons, Workhouses, Hospitals, and other Public Institutions, as far as Health is Affected by Structural Arrangements relating to supplies of Air and Water Drainage." All essays are to be sent in on or before June 30th, and no essay is to exceed 150 pages (8vo) in length. The successful competitor will as usual receive a grant of £20.

SURGEON-GENERAL W. A. MACKINNON, C.B., Head of the Medical Branch in the office of the Director-General of the Army Medical Department, passed two days at the commencement of the present week in examining the cases of the wounded men from Egypt, who are now in the Royal Victoria Hospital at Netley. The hospital was also visited on Monday, the 9th instant, by Lieutenant-General H. S. H. Prince Edward of Saxe-Weimer, commanding the Southern District, and a large staff. The Princess and several ladies accompanied the party, and went through the wards in which the sick and wounded from Egypt are under treatment.

A LATE GESTATION.

It is stated that Madame Ratazzi is about to present her third husband with a son and heir. The lady is over fifty years of age, and the pregnancy is naturally exciting some interest among her friends and acquaintances.

ANTIVACCINATIONISM.

THE release from prison of a Bedford antivaccinator named Mastins was on Monday made the occasion of a demonstration. Mastins was met at the prison-gates by a band and a large number of antivaccinators, who paraded the principal streets of the town.—An Anti-compulsory Vaccination League has been formed in Natal, under the presidency of Archdeacon Colley, who is reported to have expressed his determination to go to prison rather than act contrary to his principles.

THE SCARLET FEVER EPIDEMIC.

THE available accommodation in the Metropolitan Asylums Board Hospitals being exhausted, the Fulham Hospital was reopened, on the 6th instant, for the reception of cases of scarlet fever. Mr. R. D. R. Sweeting has been appointed Medical Superintendent.

DEATHS UNDER CHLOROFORM.

TWO cases of deaths under chloroform are reported in the *St. Petersburger Medicinische Wochenschrift* as having recently occurred in the Odessa Hospital. The first was in the practice of Dr. Senkewitsch, the 26th of August; the second in the practice of Dr. Douat. Further details have not been given.

INCREASE OF SMALL-POX AT WEDNESBURY.

AT a meeting of the Wednesbury Sanitary Authority on Tuesday, it was reported that, in consequence of small-pox patients appearing amongst the crowds at the recent wake, the epidemic had spread to an alarming extent, sixty-six fresh cases having broken out in a fortnight, several of which have proved fatal. It was resolved to erect an additional hospital.

METHYLATED PAREGORIC.

THIS nauseous compound is apparently not unknown in commerce, though illegal. At Hull recently, a chemist and druggist was fined £10, for unlawfully selling paregoric in the preparation of which methylated spirit had been used. Two samples were found to contain methylated spirit instead of ordinary alcohol, but in different quantities in each, which must have been taken from two different sources. The offence was admitted.

COFFEE TAVERNS IN GERMANY.

THE establishment of coffee taverns in the interests of temperance, for the benefit of the poorer classes, which has been prosecuted with so much zeal in this country, is to be attempted in Germany. A society has already been formed; and the plans are now under consideration at Frankfort-on-the-Maine, where the first meeting to concert measures has been held.

ANIMAL VACCINATION IN INDIA.

ANIMAL vaccination continues (we read in the Report of the Allahabad Medical Society) to be carried on in Bombay, Poona, and Kurrachee; a total of 470 heifers having been inoculated last year, with successful results in 456 instances. Thirty or forty animals were operated on month by month. The months of August and September show a larger proportion of failures than any other months, while from January to June only one failure is recorded out of 236 operations. In Bombay, animal lymph alone is kept up; in Poona and Kurrachee, both human and animal lymph is in use. The total cost of the animal vaccine arrangements was 2,700 rupees.

EXCISION OF MECKEL'S GANGLION AND THE SUPERIOR MAXILLARY NERVE.

LAST week at the General Hospital, Birmingham, Mr. T. F. Chavasse excised the superior maxillary nerve at its exit from the foramen rotundum to its facial termination, Meckel's ganglion being removed. The speno-palatine fossa was reached by trephining the anterior and posterior walls of the antrum, and tracing back the infraorbital nerve. The operation was performed for obstinate neuralgia of fourteen years'

standing, in a man aged fifty. The wound has virtually healed, and there has been no recurrence of the pain. This operation has been previously performed by James R. Wood and Carnoghan of New York, and, we believe, a very similar one was once performed in this country.

POISONING BY MALE FERN.

A SAD death is reported from Colombo, Ceylon, where a gentleman was prescribed three-quarters of an ounce of ethereal extract of male fern and a drachm and a half of Pulv. Kamalæ, for the cure of tape-worm, and the dose was repeated in four hours. The patient sank, with symptoms resembling those of choleraic diarrhoea. The necropsy revealed congestion of the stomach, with ecchymoses beneath the mucous membrane, and small clots of blood upon the mucous surface of that organ. There were similar patches in both the small and large intestines. Indeed, there was clear evidence of the administration of an irritant poison. The prescription is said to have been one copied by the medical attendant of the deceased gentleman from a work of repute, where the quantity of extract of male fern is apparently a misprint.

THE NEW MEDICAL SOCIETY.

THE latest addition to the medical societies of London held its inauguration meeting, in the Board Room of the West London Hospital, on Friday last, October 6th. Judging from this first meeting, the success of the West London Medico-Chirurgical Society seems assured. The room was scarcely large enough to accommodate an audience which crowded it in every part. The Council had invited Dr. Burney Yeo to give an address on "The Antiseptic Treatment of Lung Diseases," and the interest felt in this subject, no doubt contributed to the largeness of the assembly. The President, Dr. Hart Vinen, opened the proceedings by a short introductory address, in which he sketched out the objects and aims of the new society; and, after Dr. Burney Yeo's address, an animated discussion followed, in which Drs. Thudichum, Thorowgood, Rayner, Browne, Chippendale, Alderson, and others, took part.

FORMATION OF A NEW INDIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

WE referred some time since to a communication, which had reached us from India, on the subject of the formation of a new Indian Branch of the British Medical Association, to be entitled the "North-Western Provinces and Oude Branch of the British Medical Association." These communications were referred to the proper authorities at home; and have resulted in obtaining the signatures of upwards of fifty of the resident medical men in those provinces to an application for the formation of such a Branch. This has been despatched to the General Secretary of the Association, which will be laid before the Committee of Council. Unfortunately, it did not reach England in time to be laid before the Worcester anniversary meeting, as it was intended and desired.

AN inquest was held on the 6th instant, at Camberwell, by Mr. Carter, respecting the death of a man who died suddenly after taking a draught administered by the assistant of one Stokes, a herbalist, or the cure of "wind". The patient appears to have died a few minutes after taking the draught, which was prepared by the assistant in the presence of the herbalist. Stokes refused to be sworn, and made an affirmation. He stated in evidence that none of the ingredients were of a hurtful character. The assistant, who made up the draught, could not be found at the inquest, he having left town, and his master had not got his address. It might have been supposed that an adjournment was at least needed for the production of the dispenser, and perhaps for an analysis to be made. The jury, however, came to the conclusion that the medicine was perfectly harmless; that the death of the deceased was due to syncope and stoppage of the heart's action; and that there

was no occasion for a *post mortem* examination. A more monstrous verdict has seldom been recorded, even by a "crown's quest" jury. We commend the case to the notice of the Home Secretary.

THE PERSECUTION OF RESEARCH.

DR. THURSFIELD of Shrewsbury gave a very instructive commentary on the present system of restricting physiological experiments, at a recent local board meeting at Whitchurch, Salop. There have been some cases of apparent irritant poisoning, affecting a number of persons who had all partaken of brawn; and Dr. Thursfield stated that, after investigation, and microscopical and chemical examination, he had no doubt but that the symptoms produced depended upon certain extremely minute organisms existing in the brawn, which, however, could only be shown absolutely by experimentally administering a small quantity to some small animal. He was, however, unable to give the result of any such experiment, as, by so doing, he should render himself liable to severe penalties.

COFFEE ADULTERATION.

THE large profits made by coffee adulteration ought to induce magistrates to inflict heavier fines, so as to suppress it. A grocer in the East End of London, no small retail shopkeeper, but a large dealer, sells coffee containing 40 per cent. of chicory; and then, unblushingly, stated in court that the complainant must have known it was a mixture because of the price. Result: a fine of £5; or less than a tradesman in a large way of business would make, any Saturday afternoon, by following the same course. But, on the other hand, sanitary officers ought to be very careful to avoid prosecuting where the labelling clauses of the Adulteration Act have been carried out. The failure, which is almost sure to occur in such prosecutions, brings the administration of the Act into discredit. Several such cases have recently been brought under our notice.

A NEW ANIMAL FOOD.

Is the capybara really good to eat? Dr. Saec strongly recommends it for cultivation and domestication, alleging that it is an excellent acquisition for farms and country houses, where, without requiring more care than a rabbit, it will supply as much meat as a sheep, and he believes that it will take a place between the sheep and the pig in Europe, and that, in many ways, it can be substituted for the last-named domestic animal. This capybara, which is found in great abundance in South America, is of the average size of a pig; it can be obtained very easily; it quickly recognises its master, whom it follows everywhere, and eagerly seeks for caresses. It especially likes to be scratched, and, to attract attention, extends itself full length on one side. It is very clean in its habits. In shape the capybara realises the normal type of the meat-producing animal, as its body is an almost perfect cylinder; its limbs are short and slender; its tail and ears are very short; the head alone is large. Its apathetic character makes all nourishment available which it consumes, so that it is not necessary to fatten it; and it can be kept in a limited space. It will thrive in a dry stable, where it should be fed on all kinds of vegetables, herbs, and roots; it likes clean water and a soft litter, and it eats remarkably little for its size.

THE MEDICAL OFFICERSHIP OF HEALTH FOR PADDINGTON.

THE last two reports of Dr. James Stevenson give details of the health of Paddington; one is the annual report for the year 1881, the other deals with the sanitary condition of the parish during the second quarter of the present year. The former report discusses at length the increase of population in the parish as disclosed by the census of last year; and shows that the increase which had obtained from 1861 to 1871 did not remain at the same high rate from 1871 to 1881. The death-rate of Paddington in 1881 was 15.7 per 1000; and that of St. John's District was as low as 12.2. The death-rate of London generally for the year was 21.2. The annual death-rate from zymotic diseases was only 1.9

per 1000 inhabitants in Paddington, as against 3.64 per 1000 in the whole of London. The lowness of the death-rates, general and zymotic, of 1881, was maintained also in the first two quarters of the present year in Paddington. We understand that Dr. Stevenson, who has now held the post of Medical Officer of Health in this important district for eight years, without any increase of salary, has at length made application for an augmentation of his stipend. Considering, on the one hand, the large amount of time which his duties in this wide parish must occupy, and the valuable reports, especially those on public latrine accommodation, and on ambulances for the removal of infectious cases of illness, which have issued from his investigations in Paddington and throughout the metropolis, it is much to be hoped that the members of the vestry may feel that they can accede to Dr. Stevenson's request, prompted thereto by its reasonableness and by the desire to retain the willing services of a valuable officer.

TYPHOID FEVER AND INFECTED MILK.

AN outbreak of typhoid fever has occurred at Stone Chair, in the district of the Shelf Local Board, Halifax; and in his report on the subject, Dr. Britton, the health-officer, shows conclusively that infected milk has been the cause of the outbreak. Three cases commenced on August 24th, one on the 26th, three on the 31st, three on September 1st, and one on the 3rd. Of these, one has died, and the remainder are recovering: two of them, however, are seriously ill. From a careful house-to-house inspection, Dr. Britton ascertained that in each case the milk was obtained from one farmer. On inspecting the farmhouse, the health officer found that the back kitchen was used as a dairy, and in it was a sink full of dirty water. In a place adjoining was an open grate to a drain, which communicated with the manure-heap and pigsties outside. This untrapped drain was within two yards of the table on which the milk bowls were kept, and in the same place in which the milk-cans were kept, an open door dividing the places. In front of the farmhouse was an offensive accumulation of sewage from an overflowing cesspool. An analysis of the water obtained from a well in the kitchen, and also from one in the field, proved them both to be of an unsatisfactory character. The history of the outbreak is as follows. On July 11th, the father of the farmer's wife came on a visit, was taken ill about the 21st, apparently from cold, and was laid-up nearly three weeks, being confined to the house for a fortnight. He had no medical attendant, but Dr. Britton considers the symptoms were those of a mild attack of enteric fever. His wife came to nurse him on August 14th, was taken ill herself on the 21st with vomiting and purging, and died on September 6th. Her death was registered from apoplexy.

THE REGISTRATION OF MIDWIVES.

A CASE, which shows the urgent need for some such registration of midwives as has been proposed by the Parliamentary Bills Committee of our Association, acting in conjunction with the Obstetrical Society, has recently been disposed of by Mr. Partridge. Eliza Foorde, a midwife, living near the Harrow Road, was charged on suspicion with having caused the death of a soldier's wife, by administering to her a noxious drug, at Pimlico. It appeared from the evidence that, on searching the place where the accused lived, the body of a male child was found in a drawer, wrapped in brown paper. A woman, who had accompanied the deceased home from the prisoner's house, stated that a bottle of medicine, given her by the latter, had been dropped and broken, and therefore the deceased could not have taken its contents. In consequence of an anonymous communication, sent to the doctor who had attended deceased, an inquest was held; and the jury would not be satisfied until an analysis of the intestines had been made. No trace of poison, or of anything calculated to procure abortion, being found, the prisoner was discharged; but, on her counsel asking the magistrate to say she left the court without a stain on her character, Mr. Partridge said he could do nothing of the kind. The prosecution was a very proper one, and he thought the police would have been wanting in their

duty had they not brought the matter forward. In the proposed Bill on the subject, which has been under the consideration of the Medical Council, power was sought to suspend midwives for irregular conduct; and, in extreme cases, to cancel their certificate of registration. The numerous cases of malpraxis which occur, from time to time, show how much need there is for such a provision.

NO DEATH-CERTIFICATE.

THE question as to whether a medical man, after attending a person who dies, as he believes, from natural disease, is bound to supply a death-certificate gratuitously, is one which is at present attracting the attention both of the profession and the public. The following, as we hope, unique case, raises the further question as to whether a medical man, having seen a patient, is bound to supply him with medicine. We think that there are few medical men who would not, in such a case of necessity, admit at all events the moral obligation of supplying succour to the dying. An inquest is reported, in the *Carlisle Patriot* of the 29th ult., as having been held on the body of an illegitimate infant. The evidence of the relatives—if they are to be believed—was to the effect that the medical attendant refused to supply a bottle of medicine to the dying child unless a sum of three shillings was previously paid to him. Dr. Conway's evidence is reported to have been this. He found the child very feeble, weak, emaciated, and semi-comatose. The child was to all intents and purposes starved; and he considered that it was then about to die. There was no hope, he said; and he recommended that some comforts should be given to it, and said he would charge three shillings for his visit, and they must send him that sum. They had called him in too late; the child died from natural causes, from errors in diet. Dr. Conway, however, refused to give a certificate, because he did not attend the child sufficiently long. He did not prescribe; a fee of three shillings was indeed mentioned, but this was for the visit, and not for the bottle. He promised a bottle on conditions. The jury took a view adverse to those of the medical attendant, and returned a verdict that the child died from natural causes; and that they thought Dr. Conway ought to have supplied the medicine he prescribed for the deceased. We cannot help thinking that the medical attendant in this case would have acted more wisely and more humanely had he, seeing the urgent condition of the case, supplied the medicine without question of fee. It would be hard, we admit, to lose the fee; but it must be even still harder to hear such a rider appended by the jury to their verdict.

NAPHTOL IN SKIN DISEASES.

PROFESSOR KAPOSI (*Wk. Med. Wochenschr.*, Nos. 30 and 31, 1882) has published an account of his more extended experiences of naphthol in the treatment of skin diseases. He continues to use naphthol ointment in scabies, and with the best results. His formula is R Axungiae 100, sapon. mollis 50, naphthal 15, cret. alb. pulv. 10, ft. unguentum. The patients without any preliminary bathing or washing are firmly rubbed once with this ointment, and are then well powdered and covered with woollen clothing. One day suffices to effect a cure. For children the ointment is made with half the above strength of naphthol. In eczema the indications are the same as for tar. The naphthol must be employed much diluted, as it is apt to prove very irritating to an eczematous skin. In suitable cases, a half to one per cent. ointment is rubbed in gently once or twice daily, or a quarter to half per cent. alcoholic solution is painted on the part. In chronic circumscribed eczema with thickened epidermis, a 2 to 5 per cent. naphthol ointment is used. In eczema crustosum of the scalp, one part of naphthol to a hundred of olive, cod-liver, or almond oil, may be advantageously employed. In prurigo, the remedy is highly recommended. Every evening a 5 per cent. naphthol ointment is rubbed over the affected extensor surfaces, and the parts are then powdered. Professor Kaposi states that a cure follows in a surprisingly short time. The treatment is modified for children, and the strength of naphthol reduced. In ichthyosis, naphthol would appear to act as successfully as it does in

prurigo. Five patients were treated in the Vienna Hospital during the year. They were all rubbed once or twice daily with 5 per cent. naphthol ointment, with the result that the skin became smooth and pliable, whilst concomitant eczematous complications disappeared. To prevent relapse in prurigo and ichthyosis, a bath with naphthol soap is taken once or twice a week, and a 5 per cent. naphthol ointment is rubbed in every second or third day. When naphthol is used over a period of three to four months, it is considered advisable to substitute for it a simple ointment every fourth week, in order to avoid any possible risk of absorption. Professor Kaposi reports on its use in other skin diseases, but in none of them are the effects so striking as in cases of scabies, prurigo, and ichthyosis.

NEW MUSEUM CATALOGUES.

THE first volume of the *Descriptive Catalogue of the Pathological Specimens contained in the Museum of the Royal College of Surgeons of England* (second edition) is now in print, being published by Messrs. Churchill. We have frequently referred to the progress of this new catalogue. The first regular catalogue was published by the Council of the College in 1830; it was compiled from the scanty manuscript and label records of Hunter himself. The preparation of the first edition of the catalogue in its present form, a labour first intrusted to Mr. Stanley by the Council in 1842, was undertaken systematically by the united efforts of Mr. Stanley and Sir James (then Mr.) Paget, from 1846 to 1849. Professor Flower prepared a supplement in 1863. A second supplement was in course of preparation a few years since, when the inconvenience of increasing supplements was recognised; and, on July 11th, 1878, the Council sanctioned a proposal that a new edition of the catalogue should be prepared by Sir James Paget, with the co-operation of Dr. Goodhart and Mr. Alban Doran. The present volume is devoted to general pathology; its price is 5s. The pathological volume of the *Descriptive Catalogue of the Anatomical and Pathological Museum of St. Bartholomew's Hospital*, "published by order of the governors," is also ready, and, like the College catalogue, is published by Messrs. Churchill. A history of the museum and of the different editions of the catalogue will be found in the preface. Mr. Stanley presented to the Court of Governors of St. Bartholomew's Hospital the first printed catalogue in 1831. The second edition passed through a similar official ceremony in 1846; this issue was prepared by Sir James (then Mr.) Paget, a second volume appearing in 1851; a supplement was arranged by Mr. Savory, and published in 1862. The present new volume was prepared by Mr. F. S. Eve; it is handsomely bound, and printed in excellent large type. At present, our space does not allow us to enter into details of the contents of either catalogue. It is sufficient to say that they both supply a very great want.

WRITERS' CRAMP.

ALTHOUGH counting among the minor nervous disorders, the spasmodic disease termed writers' cramp, has probably given rise to quite as much discomfort, and even hardship, as some of those considered more important. For the literary man and the copying clerk writers' cramp may mean something not unlike starvation. Many expedients have been tried to relieve it, such as a thick penholder, metal plates attached to the penholder, besides severer measures, such as myotomy, tenotomy, and nerve-stretching. The treatment as at present recommended for it, consists firstly and fundamentally in the absolute cessation from all attempts at writing for a prolonged period; secondly, in the use of the constant current and a well directed exercise of the muscles with general tonic treatment. The energetic surgeon, Professor Nussbaum of Munich, comes forward with a method of treatment, which certainly deserves trial, if only on account of its simplicity. Considering that, whatever the site of the malady, there is always a spastic contraction of the flexors and adductors with a weak condition of the extensors and abductors, Professor Nussbaum set himself to contrive a penholder that should be directed by the extensors and abductors, instead of the flexors and adductors. This he believes he has

accomplished in what he terms a bracelet. This bracelet is a stiff band of gutta percha, oval in shape, about $\frac{1}{8}$ th inch thick and $1\frac{1}{4}$ inch broad, having a long diameter of about $3\frac{3}{4}$ inches, and a short of $1\frac{1}{4}$ inch. It is therefore wide enough for all five fingers to be slipped into it, but in using it, the thumb is only just entered, the fourth finger is entered almost as far as it will go, and the little finger is left outside. It is evident that the bracelet can be held firmly only by expanding the fingers strongly, that is, by the use of the extensors of the first four fingers, and the abductor of the thumb. To this bracelet the pen is screwed so as to be in contact with the paper when the hand lies on the table. The instrument is made in different sizes by Stiefenhofer of Munich. In order to collect a large experience, Professor Nussbaum advertised, in the newspaper, the gratis treatment of writers' cramp, and had accordingly a considerable number of well marked cases. He states most absolutely that every one of these cases at once wrote easily and distinctly with this instrument, not a trace of spasm appearing in any one of them. All expressed themselves as feeling specially comfortable in using it, and some of the patients, after a time, acquired the feeling that they could again write in the ordinary way without fear of spasm. Professor Nussbaum commends the treatment, therefore, in his preliminary notice of it for trial by those who have such cases under their care. As we have said, it is extremely simple, and has this very strong recommendation in its favour, that in place of the patient being forbidden to write, he is encouraged to write with the instrument as much as he possibly can, in order thereby to strengthen the antagonists of the muscles liable to the spasmodic contraction.

THE SMALL-POX EPIDEMIC AT THE CAPE.

ACCORDING to the latest news from Cape Town, the small-pox is spreading there. The following account of the epidemic is interesting. Last June, in some manner not positively known, but presumably through a third-class passenger on board one of the mail steamers for this port, small-pox made its appearance in Cape Town, the first people attacked being coolies employed at the docks in coaling steamers. The patients were at once removed to the hospital, and the house in which the disease first appeared was placed under strict quarantine, the inmates, of whom there were about thirty, being guarded by a cordon of police, who prevented all ingress and egress. The quarantined people were supplied with food by leaving their meals a short distance from the house, when some one would come out and take the food in. A few days after this, fresh cases were reported in all quarters of the city, and the disease made steady, though at first not alarming, progress. At first the pestilence was confined entirely to the coloured people. The municipal authorities were not idle. Additional street inspectors were appointed, and energetic steps were taken to cleanse the city. The Contagious Diseases Act was proclaimed to be in force, empowering duly authorised persons to enter and inspect every building within the area proclaimed to be under its operation. With the exception of the Malays, the population availed themselves of the facilities afforded them of vaccination. A farm was purchased by the municipality near the city, whereon several cottages of wood and corrugated iron were erected, and the place was used as a lazaretto. Not many days elapsed before about seventy afflicted individuals were removed thither. There is now hardly a street in the city free from the disease. Two ambulances are now kept constantly at work. The Malays absolutely refused to take the most ordinary precautions. In one instance, the police doctor found two children suffering from the disease concealed beneath a bed on which the mother, in a similar condition, was lying, and in another instance a small-pox patient was discovered hidden under a heap of cauliflowers in a greengrocer's shop. It is estimated that there must be four or five hundred cases in Cape Town and the suburbs. One medical man has predicted 20,000 cases of small-pox within a few weeks. A perfect panic exists, and business is practically at a standstill. The farmers, who are the great mainstay of the Cape Town trade, have almost to a man isolated themselves on their own land, and will hardly allow a stranger to approach their homesteads. Already

cases are reported as having occurred in several up country towns, and it is feared that the whole of South Africa will be overrun with the pestilence. So grave is the alarm felt that, at Kimberley, 800 miles distant, no fewer than two thousand persons were vaccinated in a single day. A Reuter's telegram, dated Cape Town, September 19th (*vid Plymouth*), announces that a large number of cases of small-pox are still being reported daily. During the last week, over 200 fresh cases were reported, and forty deaths occurred.

THE CHARGE AGAINST HOSPITAL AUTHORITIES.

At an inquest held in Camberwell last week by Mr. Carter, coroner for East Surrey, on the case of a cabman, who was said to have died from the effects of a fall on the pavement, in attempting to get out of his cab while in a state of insensibility from drink, it was elicited that the deceased was taken to Guy's Hospital, where he was retained for a couple of hours, and afterwards sent away with an admonition to his wife "to put him to bed, and to give him another two of whisky warm." It appeared that the man died half-an-hour after he was taken home, and the surgeon who was called to see him after death, stated that it was quite palpable that the cause of death was concussion of the brain with effusion; he also expressed an opinion that the deceased should have been admitted into the hospital, although even then he would have succumbed to the injuries. The coroner remarked that it was greatly to be lamented that the deceased was not admitted to the hospital; and the jury, in returning a verdict of "Accidental death," added their opinion that a want of common feeling had been shown on the part of some person at Guy's Hospital. With reference to the above case the house-surgeon, who saw and treated the deceased at the hospital, and who ought to have been summoned as a witness in the inquiry, offers the following explanations: "The patient was brought to the hospital last Thursday night, at 12.30, in a state of insensibility, evidently caused by drink. I examined him in the company of the house-physician and resident dressers, and found he had received a recent bruise of the eye and a graze on the nose, but could not detect any fracture or injury to the bones, nor was there any appearance of hæmorrhage, as some one is reported to have affirmed at the inquest. The alcoholism being the chief symptom, I gave the patient an emetic, with copious draughts of warm water, which, from his inability to swallow by the mouth, I introduced by a tube through the nostrils. Finding this did not take effect, I used the stomach-pump, and drew off a large quantity of alcoholic fluid from the stomach. After a time, the patient recovered consciousness so far as to be able to give his name and address, and as his injuries were not of a sufficiently severe character to retain him in the hospital, I advised his friends to take him home, and he walked out with them. I can positively assert, and this statement is corroborated by the rest of the gentlemen present, that no one suggested he should take more whisky, or that 'he was refused a drink of water by the nurse.' The number of drunk and incapable people brought to the hospital surgery at midnight has of late much increased, and the necessity of finding accommodation for more serious accidents, precludes the possibility of admitting alcoholic cases, unless they have sustained serious injuries. I believe that the man died from other causes, totally irrespective of the trivial bruise to his face, though no doubt engendered by habitual drunkenness; and I can only regret that the coroner did not see fit to summon me for my evidence, or order a *post mortem* to be made of the deceased."

AN AMERICAN INEBRIATE HOME.

The medical treatment of habitual drunkards has, in the United States, so risen in popular estimation as to have created a demand for a number of special institutions for the care and cure of inebriates. The fourteenth annual report of one of the most successful of these establishments is now before us. The home in question is situate at Fort Hamilton, in the vicinity of New York city, and stands in a park of twenty-six acres. The president, Dr. Mason, gives an interesting

analysis of 600 cases of alcoholic inebriety treated at this home. Of the whole 600, less than 20 per cent. were females, a remarkable contrast to the unfortunate state of things in this country, where the proportion is at least double that in America; 65 per cent. were natives of the United States, 60 per cent. were Protestants, and only 3 inebriates professed no religion. But 10 per cent. were uneducated, 25 per cent. had received a liberal education, and one in six had passed through a college curriculum. Ten per cent. were professional men, and a considerable number of the others were in affluent circumstances. The number of married females was five times as great as of spinsters. Of the total admissions, 67 per cent. were voluntary, while 33 per cent. were committed to the institution by a justice of the peace, or by process of county court, or (where property was involved) by order of the Supreme Court of the State. Insanity of parents was found to be one of the predisposing causes, but the principal predisposing cause was heredity. The proportion having intemperate progenitors was 44 per cent., the father having been a drunkard in 35 per cent. There were 358 cases of habitual, as against 242 of periodical, inebriety. Contrary to what was naturally to be expected, the periodical form was not more common among the females than among the males. Seven-twelfths of the whole number of both habitual and periodical drunkards had been addicted to their vicious habits for over ten years before seeking admission to the home. In 20 cases, opium was also indulged in; and, in one case, chloral, in addition to alcohol. In fully five-sixths of the cases, the inebriate tendency manifested itself between the ages of 15 and 35, and in the larger proportion between 15 and 25. Injuries to the head were in excess of the other exciting causes. Among the chief of these latter were social drinking habits, business and trade drinking customs, and nervous worry. Of the 600 cases under treatment, 100 remained in the home. Of the 500 discharged, the history of 283 was known. Of these, one-half were doing well, 26 per cent. relapsed or were unimproved, and 7 per cent. had died or had become inmates of the lunatic asylum, hospital, or almshouse. Of the 317 whose history was unknown, it is reasonable to presume that a fair proportion had either been cured or benefited. The medical officer states that the practice in the institution, for the last two years, has been to prescribe alcohol only as a drug in a medicinal mixture, with a more satisfactory result than followed the previous method of administration in the form of beer, wine, or spirits. As a guarantee of the accuracy of these figures, it is but fair to add that the president submits his annual report to the legislature of the State of New York, in compliance with the provisions of the charter of the home, which report is thereafter published.

FLEXIBLE ANATOMICAL PREPARATIONS.

DR. ROSWELL PARK observes, that all who are versed in the matter will agree with him that any dry anatomical preparation, as, for instance, a joint, which shall preserve its identity as a specimen, and at the same time remain permanently flexible, is a great desideratum. This he has succeeded in making, and he takes the opportunity offered to him of an invitation from one of the editors of the *Annals of Anatomy and Surgery* to publish his method. This method is based upon the peculiar properties of glycerine which are so well-known that little or no chance is afforded for any claim to originality. For several years he has used it more or less in combination with other preservatives, in various embalming fluids and the like. During his experiments, he found in some old receipt-book, a note to the effect that a solution of saltpetre and brown sugar in glycerine would preserve insects and small animals. Desiring about this time, to make dry preparations of the joints for office reference and for sake of convenience, he determined to try this combination. Omitting experimental details, the following are his procedures. The joints to be prepared—supposing these parts to be selected for preparation—should be carefully dissected, by aid of maceration, so as to remove thoroughly all the soft parts except the ligaments. If one desire to use special time and care, the preparation may be soaked a few days in benzine to dissolve out the fat. It may then be bleached

by hypochlorous acid in the following way. A small quantity—4 to 5 grammes—of powdered potassium chlorate is put in a stone jar, and 20 cc. of strong hydrochloric acid poured over it. The jar is then filled with water, and the specimens dropped into it. From six to thirty hours in this solution suffice. After still further scraping and cleaning they are finally placed in the following mixture: coffee sugar, 2 parts; saltpetre, 1 part; methylic alcohol, 1 part; glycerine, 16 parts. A little water may be used to assist in the solution of the solids; or a good article of syrup may be substituted for the sugar. A little thymol may also be added with advantage, although it is not necessary. It should be dissolved in the methylic alcohol. In this mixture the specimens are allowed to remain from one to two, or even three weeks, according to their size. After their removal from it, they are allowed to drain for a few days, and then need only a little trimming and scraping before being placed in the cabinet. In most cases it will be well to scrape off all the periosteum, except where it would interfere with the ligaments. Under this treatment, the ligamentous structures become as flexible as they were during life, while thick tendons become almost transparent, and they remain so. Joints thus prepared with their capsules properly dissected make, for the anatomist's eye, really beautiful preparations. Instead of losing mobility, they become even more limber with time. He has made in this way a full series of preparations of the joints of the body, over a year ago, and they are now better in every respect than when first made, save that they have darkened a little from their original bleached condition. He fully expects them to last as long as he does. There is not the slightest odour of decomposition about them. Subsequent trials and experiments have convinced him that this method may be successfully applied to all portions of the body, and specimens of any kind. Preparations of an entire limb may be made in this way, which shall be perfectly flexible, and serve the purposes of demonstration much better than the dried and varnished specimens found in our museums. In making them, the vessels should of course, be injected first, preferably with a mixture of gelatine and glycerine, used warm. By this method there will be very little shrinking and shrivelling up of the structure. Pathological specimens, of joints especially, can be in this way kept to show to best advantage. He believes that the more this method is tried, the better satisfaction it will give. And he asks those giving it a fair trial to kindly communicate their results to him.

LUNACY IN ENGLAND.

THE continued increase of lunacy in England among the pauper class is very strongly indicated by the 36th Report of the Commission on Lunacy just issued. There were, we learn, in England and Wales on the 1st of January in this year, no less than 74,842 persons registered as being persons of unsound mind, showing an increase on the previous year of 1,729. Of this increase we find 1,717 patients belonged to the pauper class, the number of females preponderating, and an increase of 12 patients (3 males and 9 females) to the class of private patients. Of the total number, viz., 74,842, 7,753 belonged to the private class (4,090 males and 3,663 females), and 67,089 (29,657 males and 37,432 females) to the pauper class. It will thus be seen that the number of private patients has remained almost stationary, while the number of pauper patients has increased to little short of the increase shown in this class last year, viz., 1,801. This total of 74,842 is exclusive of 230 persons who have, after judicial inquiry, been pronounced to be of unsound mind, and who are residing in private houses under the personal supervision of their committees; neither do these figures include 140 male prisoners who have become insane whilst undergoing penal servitude in prisons. The following are some of the more noticeable changes which have taken place, compared with the 1st of January 1881. In county and borough asylums there has been an increase of private patients of 45, and of pauper patients 1,291. In ordinary workhouses an increase of 140. In metropolitan licensed houses there has been an increase of 97, and in provincial licensed houses 165. In the metropolitan district asylums there has been an increase of 25; but a decrease of outdoor paupers of 14. The number of pauper patients in metropolitan

and provincial licensed houses on the 1st day of January 1882 was 1,468, showing an increase of 262 on the number registered in January 1881. It is pointed out that the provision, by county and borough authorities, of public asylum accommodation fails to keep pace with the requirements. This is said to be especially the case, at present, as regards Middlesex, Essex, and Surrey, as well as one or two other counties and boroughs; as the accommodation now vacant for paupers in licensed houses is but small, and is likely soon to be absorbed, much inconvenience may be long be anticipated to arise, especially in the metropolitan district, from the absence of adequate public asylum provision. "We are constantly urging the justices," say the Commissioners, "to take a comprehensive view of the prospective requirements of their districts; but in many instances our representations have only resulted in action by them after much delay, whilst, in the meantime, guardians are obliged to maintain many of their insane poor in licensed houses at nearly double the cost which would be incurred in a county asylum." There has been no increase in the year in the number of county and borough asylums, the number being still sixty-one. In these the numbers were, on the 1st of January last, 42,691; 584 in the private class (266 males and 318 females); and 42,107 of the pauper class (19,026 males and 23,081 females). The recidivies of the year, compared with the admissions (deducting transfers, but not excluding readmissions) were 35.24 per cent. for males and 44.85 for females—i.e., 40.13 per cent. for both sexes. These figures, as also the following mortality table, compare somewhat favourably with those of the previous year. The mortality, calculated on the average daily number resident, was 12.16 per cent. males and 7.57 females—i.e., 9.64 for both sexes. In county and borough asylums, there has been a reduction during the year in the average weekly cost per head for maintenance, medicine, clothing, etc., of the patients, of 2½d. in the county asylums, and 7½d. in the borough asylums. Of houses licensed to receive lunatics in England and Wales, there were, in January of this year, ninety-six, containing 4,883 patients; 1,730 males and 1,685 females of the private class; and 582 males and 886 females were of the pauper class. Pauper lunatics (as distinguished from idiots) are received at eight houses—five in the metropolitan district, and three in the country. Idiots exclusively are received in six licensed houses; three, however, of these—the Eastern Counties Idiot Asylum, at Essex Hall, Colchester; the Western Counties Idiot Asylum, at Starcross; and the Midland Counties Idiot Asylum, at Dorridge Grove, Knowle Common—are in reality charitable institutions managed by committees, and in the nature of lunatic hospitals. They are worked, however, under licences from quarter sessions, in order to avoid the expense of a resident medical superintendent, which would be required were they registered as hospitals. The number of lunatics and idiots, and persons of unsound mind, retained in workhouses and workhouse infirmaries, in 1882, was 10,970—showing an increase of 105 on the number registered in the previous year. Of these, 12,223 were inmates of ordinary workhouses belonging to unions or parishes, while 4,743 were in the Metropolitan District Asylums at Leavesden, Caterham, and Darenth, which, for the purposes of the Lunacy Acts, are classed as workhouses. There are now two distinct asylums at Darenth; that for adult imbeciles, and the school for idiot and imbecile children. The workhouses visited by members of the Board during 1881 were 286, and the insane and imbecile inmates seen were 13,431, or 5,974 males, and 7,457 females. It is well pointed out that the adequacy and efficiency of the staff of attendants, not only in asylums, but also in hospitals and licensed houses, remain, as they ever must, matters for careful inquiry. As a rule, it will be found that in county and borough asylums, the proportion of attendants to patients is sufficiently large, but that there is room, speaking generally, for much improvement in their training and qualifications. With regard to amusements, very much is done to relieve the monotony of asylum life. Outdoor sports and games, occasional excursions and picnics, are everywhere encouraged; while indoors, especially in the winter months, dances, theatrical performances, readings, magic lantern lectures, and the like, are commonly arranged with

more or less frequency and variety. In many asylums the number of patients who are usefully employed is comparatively large, though, as might be anticipated, all the asylums are not equally entitled to credit for promoting industrial occupations among the inmates, and in some there is still great scope for improvement in this direction. On the subject of Registered Hospitals the Commissioners remark:—"We cannot but notice how few patients are received into hospitals at low or moderate rates. Accommodation of a very good kind can be and is provided in many licensed houses (whose proprietors cannot be supposed to receive patients at a loss) for 30s. weekly, and we regret that more provision for the middle class is not made at that figure, or still lower, by institutions originally founded as charities for the insane. Some of these hospitals are very flourishing; others are, we believe, the reverse. Some are making large profits, but these profits appear too often to be expended, not in the extension of provision for cases only able to meet moderate payments, but in accommodation calculated to attract the wealthier class, who are not in the same strait for suitable asylum care and treatment. Doubtless, the unaccountable lack of public sympathy for the mentally afflicted of the middle class (who are indeed, perhaps more to be pitied than any who suffer from bodily disorders) is a great difficulty with hospitals for the insane, yet the mischief is, we think, aggravated in some instances by apparent competition on their part with licensed houses of high reputation. In one case only, that of the York Hospital, are paupers unhappily associated with poor patients of the private class, manifestly a suicidal policy in regard to the charity. The table above referred to gives the average weekly cost of a patient in each hospital, but the conclusion must not be drawn that such cost represents the outlay upon each individual patient, since there are many wealthy persons in some hospitals paying large sums, who have comforts and luxuries in which their fellow patients making lower payments do not participate, but the cost of which swells the average expenditure. It must be understood that from these remarks upon the charitable institutions we entirely except the Idiot Asylums (Royal Albert and Earlswood) also the Royal Hospital of Bethlem, which hospital receives all its patients gratuitously."

SCOTLAND.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

THE opening meeting of the winter session of the above Society was held on the 6th instant. The chief business was the election of office-bearers, and the following were unanimously chosen:—*President*—Dr. W. T. Gairdner; *Vice-Presidents*—Drs. Robert Grieve and Alexander Robertson; *Council*—Drs. George Mather, H. C. Cameron, Robert Forrest Lapraik, D. Maclean, J. C. Woodburn, W. Whitelaw, W. A. Wilson; *Secretaries*—Drs. W. L. Reid and J. W. Anderson; *Treasurer*—Dr. Hugh Thomson. The only public business before the meeting was a paper by Dr. H. C. Cameron, embodying Notes of some Cases of Unusual Surgical Disease and Accident.

THE CHAIR OF PHYSIOLOGY IN SYDNEY UNIVERSITY.

THE newly instituted Chair of Physiology in Sydney University, has been filled by the appointment to it of T. P. Anderson Stuart, M.D., Edinburgh. Dr. Stuart had, during his curriculum in Edinburgh University, a highly distinguished career, and on graduating M.B. in 1880, he was awarded the Ettles Scholarship. He then studied in some of the continental schools for some time, and since has acted as Demonstrator of Practical Physiology in the Edinburgh University. He graduated M.D. in August this year, and was awarded a gold medal for his thesis, which dealt with the Physiological Actions of Nickel and Cobalt. His candidature received the hearty support of the Edinburgh School, and it is satisfactory to know that the growing usefulness and importance of the colonial university will be augmented by the

addition to it of one who, by natural ability and thorough training, is so well qualified to teach the science of physiology.

HEALTH OF GLASGOW.

THE report of the medical officer of health for the fortnight ending September 30th states that there were 445 deaths registered, showing a death-rate of 22 per 1,000 living. During the fortnight, scarlet fever has been very prevalent, and apparently in all the districts of the city. The deaths from that disease have numbered 20—a fatality which has not been reached since February of last year, at the close of a severe epidemic, which began in the autumn of 1880. Whooping-cough has not been so fatal during the fortnight; but in his report Dr. Russell has very properly drawn attention to the dangers which accrue to the public health by carrying about in the tramway-cars children suffering from whooping-cough. In this way, the disease is spread in all directions and amongst all classes. When writing on this subject, Dr. Russell has also taken the opportunity of dwelling at some length on the ventilation of the tramway-cars, which is very defective; and he shows that, unless these cars are kept clean and efficiently ventilated, they would do more than any other agency to spread infectious diseases, especially those of children. We hope the authorities will take up the matter, and see that Dr. Russell's recommendations are carried out.

ABERDEEN UNIVERSITY COURT.

AT a meeting of this Court, held last week, the following minute was adopted in reference to Professor William Pirrie, on the occasion of his retiring from the Chair of Surgery: "The Court feels that it cannot quit the consideration of Dr. Pirrie's retirement without recording to his honour the character that he has borne throughout a very long career. Being identified with the very commencement of the Aberdeen Medical School, he has been largely instrumental in impressing upon it the stamp it now bears in the medical world. First as a Lecturer on Anatomy in Marischal College, and next, for the period of forty-three years, as Professor of Surgery, he has necessarily had a leading part in the education of nearly two generations of medical graduates. His teaching has been characterised by a remarkable power of lucid and impressive exposition; while he spared no pains in providing the aids requisite to make it demonstrative. His zeal and enthusiasm, combined with such teaching ability, effectually secured the attention of his students, by whom he will be respectfully remembered as one of their most valued instructors." At the same time, the following six Examiners in Medicine were appointed for the ensuing year: Mr. Frederick Treves, London; Dr. R. M. Wilson, Old Deer; Dr. John Barclay, Banff; Dr. James Anderson, London; Dr. George Edmond, Stonehaven; Dr. Jas. Greig Smith, Clifton. The following assistants to professors were appointed: Chemistry, Henry T. Jones; Anatomy, Dr. T. W. Griffith; Materia Medica, Dr. J. G. Hall; Medical Jurisprudence, Dr. Francis Ogston, jun. The medical session opens on November 1st, when the Erasmus Wilson Professor of Pathological Anatomy, Dr. Hamilton, will deliver his introductory address.

IRELAND.

DR. DENNEY has been appointed medical officer of Lismore Workhouse, at a salary of £100 per annum.

THE guardians of the Belfast Union granted a bonus of £10 to Dr. Watt, the Resident Physician of the Union Hospital, for the increased duties which he was called upon to perform during the recent small-pox epidemic in Belfast.

ST. VINCENT'S HOSPITAL.

MR. JOHN S. M'ARDLE has been appointed to the vacant surgeoncy

of this institution. Mr. M'Ardle was educated in St. Vincent's Hospital, and was resident surgeon to it, after obtaining his surgical qualification from the Irish College of Surgeons in 1879. He is a Demonstrator of Anatomy in the Catholic University Medical School.

VACCINATION.

ACCORDING to the returns of vaccination received for the second quarter of the year, it appears that there were 32,593 persons successfully vaccinated; in 2,398 cases the operation was postponed, and 80 children were reported insusceptible. The deaths of 1,707 unvaccinated children under three months old were registered, making a total of 36,778 children with regard to whom particulars as to vaccination were obtained.

THE LATE DR. THOMPSON.

AN effort is being made by some of the friends of the late Dr. Thompson of Lisburn to erect a memorial hospital to him in Belfast. Tables have been published showing that the hospital accommodation for general medicine, surgery, and fevers is very inadequate in comparison with the population, and very much below that of other towns; for instance, Cork, with a population of 100,518, has 350 beds; Greenock, with 57,146, has 220 beds; while Belfast, with a population of 208,000, has only 160 beds.

THE LATE DR. HUDSON.

DR. JAMES LITTLE has presented to the King and Queen's College of Physicians in Ireland a portrait of the above well known physician, who was an ex-president of the College. The portrait is painted by Sir Thomas A. Jones, President of the Royal Hibernian Academy, and is an excellent likeness. Dr. Little was an intimate and appreciative friend of Dr. Hudson; and his generous gift to his College of the portrait of one of its past ornaments is perhaps the most fitting tribute that could be paid to the memory of an eminent Irish physician, as well as one of the kindest and most unassuming of men. The College have passed a cordial vote of thanks to Dr. James Little for his valuable presentation.

NORTH INFIRMARY, CORK.

A SPECIAL meeting of the Committee of this institution was held last week for the purpose of electing a house-surgeon in the room of Dr. Cotter, resigned. Testimony was given as to the great efficiency and courtesy with which Dr. Cotter had discharged the duties of the post; and Dr. Golding, speaking on behalf of the medical staff, said that he had been an observer of Dr. Cotter during his very distinguished undergraduate course in the Queen's University—a course so distinguished, that it drew from the Lord-Lieutenant himself the highest approval. Dr. Pierce J. Daly, assistant-surgeon to the Mercy Hospital, was elected house-surgeon without opposition.

TESTIMONIAL TO WILLIAM BEAMISH, M.D., OF CORK.

AT the annual meeting of the Committee of the Fever Hospital, held on the 5th inst., presided over by the Mayor of Cork, Dr. Beamish, recently one of the physicians, was presented with an illuminated address. The Mayor read the address, and said that he thought it a great honour to preside at that meeting, in order to present Dr. Beamish with an address after his years of well-earned confidence, which he deserved from the people of Cork. It bore ample and unexaggerated testimony to the great skill as a physician to that institution, to which he had given his valuable services during half a century. Dr. Beamish having read a suitable reply, the proceedings terminated. We understand that the address, which is a beautiful work of art, will be on view for a time at the Exhibition now being held in Dublin.

THE KING AND QUEEN'S COLLEGE OF PHYSICIANS.

THE stated annual meeting of this College, for the election of its officers, will be held on Wednesday next, the 18th instant, being St.

Luke's Day. Dr. George Johnston, the retiring president, will be succeeded by Dr. William Moore, who lately resigned the King's Professorship of the Practice of Medicine, after a tenure of fourteen years. There will probably be five candidates for the four censorships annually appointed, and also a contest for some of the additional examinerships. Dr. J. Magee Finny, who has served the college so ably and so well for the last eleven years as its registrar, will not seek re-election, having been appointed King's Professor of Practice of Medicine, on Dr. William Moore's resignation. It is understood that Dr. John William Moore will be appointed to succeed Dr. Finny as Registrar.

THE SCHOOL OF PHYSIC IN IRELAND.

AT the last monthly business meeting of the King and Queen's College of Physicians, the College, by a large majority, adopted the following motion: "That the following resolution of the College, passed on the 21st February, 1868—namely, 'that in future no King's Professor in the School of Physic shall be allowed to hold an appointment as medical officer to any clinical hospital other than that of Sir Patrick Dun'—be repealed." This subject, as our readers are aware, has been before the College on several former occasions, and with different results. The question of the legality of the resolution has also recently been submitted to the opinion of eminent counsel, by both Trinity College and by the College of Physicians. The opinion expressed by the counsel consulted by the latter body was against the legality of the resolution. We fear, however, that its repeal now by the College of Physicians will go but a little way towards finally settling the question when it may arise afresh by any vacancy in the King's Professorships. Trinity College strongly objects to these professors, who at present lecture Trinity College students in the University School of Medicine, holding an appointment as medical officer to any clinical hospital other than that of Sir Patrick Dun, to which they are *ex officio* entitled to act as physicians, and which is the hospital chiefly attended by Trinity College students.

ULSTER EYE, EAR, AND THROAT HOSPITAL, BELFAST.

A SPECIAL meeting of the committee of this hospital was held on the 4th instant to consider matters of the greatest importance. Among these was the desirability of extending the accommodation afforded by the present building; and a resolution was adopted expressing the necessity for additional day-rooms and ward-accommodation, and empowering the trustees of the hospital to enter upon negotiations with the Belfast Charitable Society for obtaining thirty feet additional frontage to Clifton Street. The proposed extension will probably cost £2,000. The Committee had also under consideration a scheme for amalgamating the various hospitals in town for medical teaching. The special hospitals, containing an aggregate of 180 beds, have not been taken advantage of by the Belfast Medical School for this purpose, and the Royal Hospital has not special departments for diseases of women and children and of the eye and ear. It was resolved: 1. That it is desirable, in the interests of the Belfast Medical School and of the general community, that all the hospitals in Belfast should be amalgamated for teaching purposes, and thrown open to students. 2. That, whilst we do not feel called upon to take the initiative in any negotiation for amalgamation, we desire to record our readiness to join in any scheme which may seem reasonable to us and our acting surgeon for placing at the disposal of the medical school of Belfast the great field for clinical instruction presented by the Ulster Eye, Ear, and Throat Hospital.

A DIRECTORY for Nurses is about to be established in Cincinnati, the medical societies of that city having become interested in the matter.

COPPER IN BREAD.—M. J. van der Berghe communicates to the *Journal de Pharmacie* for July, an investigation which he has made. Being struck with the constant appearance of a minute quantity of copper in bread, he was led to make a very cautious examination of wheat. He found in a million parts of wheat 9.24 parts of metallic copper, and of oats 10.8 parts.

THE EGYPTIAN EXPEDITION.

WE are happy to learn that no deaths whatever have occurred among the sick and wounded received at Netley Hospital, with the exception of one man who reached England in a moribund condition, and that all the patients are doing well.

THE ALLEGED BREAKDOWN OF THE ARMY MEDICAL DEPARTMENT IN EGYPT.

WE must again refer to a subject which occupied our attention last week, and which is attracting a good deal of comment among certain of our lay contemporaries; it has been alleged that the Medical Department "broke down" in Egypt, and that our soldiers consequently had to endure great hardships. We endeavoured to show that the charges of inefficiency, in so far as concerned the medical arrangements at the base at Ismailia, were unfounded. We have since prosecuted our inquiries, with regard to the management of the Medical Department at the front. We are in a position to speak with confidence of the manner in which its duties were fulfilled both at Kassassin and at Tel-el-Kebir. The first action at the former place occurred on August 28th; Surgeons-Major Shaw and Hickson went forward on the previous evening in command of a half bearer company, and were present under fire, Surgeon-Major Shaw receiving, as is well known, a mortal wound; the bearer company was able to render immediate assistance to the wounded, and so far from there being any want of medical necessities, it was found, by the officer who took over charge on the next day, that not half of the dressings in the haversacks of the Army Hospital Corps had been used, and that chloroform and other drugs were in abundance. The second considerable action occurred on September 9th at the same place; on this occasion it may be remembered that the enemy made, what is, we believe, technically called a reconnaissance in force; in fact, the camp was attacked. This time it contained a full bearer company. This bearer company was, here again, under fire, and attended at once to the needs of the wounded. All the medical supplies had been fully made up, and were more than sufficient to meet all the calls made upon them on this occasion. As to the constitution of this bearer company, we may remark that it consisted, on the eve of the battle of Tel-el-Kebir, of two surgeon-majors, four surgeons, and one hundred and thirty men; having been reduced to this number by the casualties at Kassassin. At Tel-el-Kebir, Surgeon-Major Ray was in command of this bearer company. To accompany the advance, it was divided into two half companies, Surgeon-Major Townsend taking second command. Six litters, thirteen cacolets, stretchers, two field panniers holding medicines and dressings, and two "medical comfort boxes", accompanied each half bearer company. One "medical comfort box" contained twenty-four bottles of brandy, the other contained essence of beef, Ebswort soup, arrowroot, sugar, tea, etc.; in addition, the men carried twelve haversacks, each containing dressings, sponges, a dressing-case, pans, cholera mixture, and aromatic spirits of ammonia. The surgeons themselves carried morphia. Let it be remembered that we have here enumerated only the more important items in the equipment of one half bearer company, and that there were two full bearer companies in the field. The medical officer of each corps went with it into action. He was provided with a "field companion" (which contains tourniquets, first dressings, band-splints, opium, etc.) carried by an orderly, and was attended by orderlies carrying regimental stretchers. Immediately after the first line, and in front of the supports, came the bearer companies; they were within the first line of the enemy's entrenchments, long before the fighting was over, so that the wounded were quickly supplied with every necessary from the stores carried by the bearer company with them into action. Meanwhile the field hospital had been moved down the canal to the point where it met the line of entrenchments, and there the hospital was established. As fast as the medical officers of the corps and the bearer companies or the field could apply the first necessary dressings, the wounded were carried to the field hospital; where necessary, a dose of morphia was administered before removal, and we are in a position to say that there was an ample supply of this drug on the field. No operations at all, we believe, certainly none of any magnitude, were performed before the wounded reached the field hospital. The surgeons there performed any primary operations, and the wounded were at once transferred to boats on the canal, and taken by water to the base hospital. We have last week stated, on the best authority, that there was never any dearth of chloroform or other medical necessities at the base; if these operations were performed without chloroform, or if there was any failure of drugs, it must have been at the field hospital. Was there any such failure

there? We are happy to be in a position to speak most positively on this point; the engagement occurred on the morning of September 13th; by the evening of the following day all the English wounded left the field hospital *en route* for the base; their place was taken by wounded Egyptians, who to the number of between seven hundred and eight hundred were treated by our medical department; over twenty capital operations were performed on these men before they had been handed over to the Egyptian doctors on September 17th. All these, and many other operations, were performed under chloroform—so that, so far from our own men having suffered from a want of chloroform, or other medical necessities or comforts, the medical supplies were sufficiently complete to meet the demand made upon them by this large number of the wounded enemy. Having investigated the charges made by certain organs of the lay press as fully as is possible, we feel confident that the Department may be exonerated from all blame; the charges made against it, so far as they are specific enough to admit of examination, we have shown to be unfounded in all that regards the progress of affairs in Egypt.

Fresh charges have, however, been made against the medical officers by certain soldiers returning from the seat of war; it is said that the sick and wounded were starved and neglected. This charge is not made with regard to all the transports; of the *Lusitania*, for instance, which arrived on October 7th, it is said that "the majority of the patients being put on excellent food, soon picked up." The *France* arrived on October 10th, bringing 306 invalids; and the men of the Guards, particularly, complained of the food. It is, however, reassuring to find that, of the 306 who came on board in Egypt as invalids, it was found necessary to send only 33 to Netley, the remainder being despatched to their depôts. The medical officers in charge of transports are not responsible for the quality of the food supplied; they can only order what they consider most suitable, the responsibility for the quality rests on other shoulders. This remark applies to the case of the men sent home in the *Malabar*. A contemporary has published statements to the effect that, though "there was an abundance of provisions, yet the sick and wounded say they were half-starved;" and that they "were served out daily rations of weak tea, dry bread, tough meat, and porter, insufficient alike in quantity and quality." Concerning this and other points of general administration, Mr. Ernest Hart is conducting a special personal inquiry at Netley and elsewhere, of which we shall next week publish the details. We may say, however, that it is certain that the medical officers in charge ordered all the men "fresh rations", which ought to have provided a liberal supply of "good food"; and we may add, that some other men, who came home in the same ship, according to our contemporary's report, "say they got all they wanted."

Concerning the accusations, made by certain of the returned warriors, against the officers of the Army Medical Department of neglect of their duties towards the wounded, we may say that one of the grounds of complaint has been that the wounds have not been dressed with the frequency which certain of the wounded considered necessary. Antiseptic surgery is not yet fully understood by the vulgar. Our readers, however, know too well for us to enlarge upon the subject, that when a severe wound has been rendered antiseptic, and has once been properly dressed, one of the first objects we desire to attain is to leave such a wound undisturbed; and that the most recent advances of surgery, both in this country and in Germany, have tended to teach us that the less a wound, once rendered antiseptic, is interfered with the better for the patient. Antiseptics were extensively used at the base, and we recently heard of a case where a severe wound received by an officer in Egypt, having been dressed antiseptically in that country, was, on that officer's arrival in London, left, on the advice of the very greatest authority on antiseptic surgery, entirely undisturbed.

We may best conclude by quoting the words of Sir Garnet Wolseley's despatch with reference to Tel-el-Kebir: "The medical arrangements were all they should have been, and reflect the highest credit upon Surgeon-General Hanbury."

[FROM OUR OWN CORRESPONDENT.]

KAFR DOWAR ENTRENCHMENTS.

I HAVE heard it stated by local authorities, in more than one quarter, that in the Egyptian army much attention is paid to cleanliness, while, like all Eastern nations, great care is observed in the selection of water for drinking and cooking purposes. It may be interesting to know to what extent sanitary matters engaged the attention of that portion of Arabi Pasha's army which occupied the position at Kafr Dowar in front of Alexandria. No doubt you have been informed in what condition the camp grounds at Tel-el-Kebir were found by our army.

Together with Dr. Grant of Cairo, on the morning of September 16th, I visited the position just vacated by the Egyptian army near Alex-

andria. The train from the Maharamby Station took us within about two thousand yards of the earthworks; here the line was destroyed by the enemy. The water from the canal having been cut off, it receded from close by the railway-line, so that what used to be a lake was now quite dry. Here a quantity of decomposing fish caused a rather offensive smell; while, on the other side, we observed some dead bodies of natives, now almost reduced to skeletons; they were evidently killed at the time of the flight from Alexandria, as they were near the wreckage of carriages.

The enemy's entrenched camp extended from Khurshid through Kandje Osman to Kafr Dowar, a distance of about six miles. The first line of defence was constructed on rising ground on the site of the village of Khurshid. These formidable earthworks are sometimes called "aslan", which merely means "strong as a lion". An immense amount of labour must have been employed on these works, the most extensive in the position. Within them were guns, small arms, camp equipage, and war material of new pattern, and all in capital order. The tents were left standing, and horses picketed as abandoned by the enemy. Everywhere there were signs of order and regularity, but not the slightest indication of any sanitary arrangements. Here, within a comparatively limited space, the ground was saturated with the excreta of thousands, and the dead animals in camp were scarcely buried, while the fresh water canal close by was polluted with filth, as if by design. From here the camp extended along a narrow neck of land, with the canal, near Lake Madieh, on one side, and the salt lake of Mariotis bounding the other. Over this land, through the centre of the lines, the Cairo railway passes. At certain points, the position is strengthened by earthworks finished with great care. Along the entire way, the same want of any sanitary precautions was apparent—a strange thing to find with an army that had everything in connection with their armament, camp equipage, and appointments in such perfect order. The Bedouins did not abandon their arms; these irregulars seemed to have made a more hurried departure than the others, evidently having no desire for a kit-inspection that morning, but their camp grounds were, if anything, in a more foul condition than others.

At Kafr Dowar, cavalry and horse artillery were encamped, and many thousand stand of arms were surrendered. Kafr means Christian, and Dowar a turn; probably, this was at one time a Christian village. Having received permission from the General (Sir E. Wood) to go beyond the village, where the hospital was situated, and inquire as to the condition of the sick and the nature of their diseases, I heard from Mahamet Bey Salem, the medical officer in charge, that no epidemics or contagious fevers occurred in the Kafr Dowar army. The hospital here is a field hospital where mild cases alone came under treatment. Three general or base hospitals were established at Dammanhoar and Cairo, where patients were taken by rail. When the sick at Kafr Dowar hospital heard of the approach of the English, both they and their attendants left, so that none remained when I arrived; thirty-five patients in all went away that morning, chiefly cases of country fever and ulcers, but there were among them ten cases of ophthalmia. Eighty-five wounds were treated in this hospital; there were no amputations; five deaths occurred, three of these were officers. This hospital had fifteen tents for sick, six and eight beds in each tent; many of the beds were on roomy iron cots; where there were no cots, the bedding was placed on Indian matting, which covered the floor of the tent. This looked clean and comfortable. No expense had been spared on material; all things appeared new and good, and the hospital stores abundant, possibly some instruments and medical appliances were looted from the civil and military hospital at Alexandria. From what I saw during a brief inspection of this hospital, there need have been no anxiety concerning the care of the sick and wounded Egyptians of the Kafr Dowar army. The officers and men looked fat and sleek; evidently they did not over-exert themselves on the earthworks. The cattle left in camp were also in good condition and healthy.

It was pleasing to see, like an oasis in the desert, the cleanliness and good sanitary arrangements at the hospital. What a contrast with the state of filth and neglect that surrounded the engineer works and camp grounds! Our troops had to occupy the enemy's position for a few days. The first night many slept in the open; sleeping thus, should, if possible, be avoided in this country, on account of the heavy dew which falls. In the vicinity of the camp grounds, it was very difficult to select anything like eligible sites for tents; the most favourable were those on the parapets of the abandoned earthworks.

THE CARE OF THE WOUNDED EGYPTIANS.

AFTER the battle of Tel-el-Kebir, all the energies of the English medical officers were first devoted to the care of their wounded men, and in a few hours, and all the wounded Egyptians had been patched to the field hospital,

which had been established on the extreme left of the position. Attention was then given to the wounded Egyptians; the bearer companies encamped, we believe, and established small temporary depôts upon which the wounded could be concentrated. On the day after the battle, all the English wounded were moved down, by the canal, to the base hospital at Ismailia. The field hospital thus left empty was immediately filled up with Egyptians. The stores of all kinds in this hospital were ample, and there was never at any time any failure of drugs or necessaries. The battle occurred on September 13th, and up to September 16th about eight hundred Egyptians had been treated by our medical officers in this field hospital alone. On September 16th, the Egyptian medical officers arrived, and the care of their wounded was transferred to them; on the following day, the transfer to Cairo began, under the superintendence of the Egyptian surgeons. We hear that, after Tel-el-Kebir, the wounded exhibited none of that dread of falling into the hands of the enemy, which they showed, according to the correspondents, at an early part of the campaign; on the contrary, they welcomed the orderly parties with effusion. The Egyptians made very good patients; unlike many of their co-religionists, and unlike the Abyssinians or the Zulus, they had no superstitious fear of an operation involving the loss of a member, and submitted to amputation without a murmur. About twenty-five or twenty-six capital operations, chiefly amputations, were performed, chloroform being invariably administered; the number of cases in which bullets were extracted was very great, the men themselves taking an immense interest in the search; frequently when the surgeon came to examine the case, the patient himself was proud to be able to show the exact spot, where, after perhaps hours of searching, he had himself been able to locate the bullet; and in most cases the patient was found to have come, guided by his own sensations, to a wonderfully accurate idea of the position of the bullet. The Egyptians bore all operations well, much better than Europeans; not a single case of hæmorrhage occurred after operation, and when handed over on September 17th, all the wounded were doing well.

THE SICK AND WOUNDED AT THE HERBERT HOSPITAL.

THIS hospital, which stands on Shooter's Hill, and is considered to be a building extremely well adapted for the purpose for which it was designed, has recently received a large number of sick and wounded men returned from Egypt. Through the courtesy of Surgeon-Major Wyles, we have had an opportunity of visiting the hospital, and seeing and conversing with some of the patients. Most of these wounded had been present at Tel-el-Kebir, and their wounds were gunshot, and chiefly involved the extremities. One poor fellow, however, was pointed out to us whose condition was most precarious. The bullet had entered the chest on the right side in front, had traversed the thorax, and finally spent itself in the left shoulder-joint, which was in a condition of complete disorganisation. Some of the men had come down from Tel-el-Kebir to the base by boats on the canal, others had been taken to Kassassin and forwarded thence by rail. All had endured some exposure and privation while lying on the field of battle, and in transit to the base-hospital, but they spoke lightly and cheerfully of the hardships then suffered, and all spoke in terms of warm praise of the treatment they met with at the base-hospital at Ismailia. Food, they said, was abundant, milk and beef-ten for those who could not take solid food, and fresh meat daily for those who could. Most of the men now at the Herbert Hospital had come home in the *Courland*, and when we questioned them as to their passage on board that boat, their faces would fall, and they would say that they were anything but comfortable. It was said that this boat was never intended for the duty to which it was put, that, namely, of bringing home the wounded, but had been engaged to act rather as a tender to the *Carthage*. However this may be, there was, according to the statement of the men, a scarcity in the supply of fresh meat, which was only served out twice on the voyage. The supply of salt meat and preserved foods was ample, but they complain, and we cannot help thinking that the complaint is justified, that the food supplied to them on board the *Courland* was so much inferior to that to which they had become accustomed at the Ismailia Hospital. We are not in a position to state who is responsible for this absence of fresh provisions, but we believe that it was primarily due to the fact that the ship was not suitably fitted up for the purpose to which it was hastily converted; we believe also that the number of invalids was large considering the size of the ship, and that the difficulty of dealing with them was considerably enhanced by the fact that several were suffering from typhoid fever. On other boats, on the other hand, which were well adapted for carrying passengers, we hear only of the advantages which are accorded to the invalids from the voyage; and we think it, therefore, unreasonable to suppose that the Army Medical Department is responsible for all the

discomforts endured on board the *Courland* and some other boats; indeed, it has yet to be shown that it is responsible for any.

EGYPTIAN OPHTHALMIA.

IN Egyptian ophthalmia we have one of the many instances in which a disease, mild, or even insignificant in one place, becomes in a different climate, or with a people of dissimilar habits, a veritable scourge. It appears beyond doubt that the conjunctivitis with muco-purulent discharge which occurs sporadically in this and other temperate countries, is essentially the same disease as that which runs so severe and frequently so destructive a course in Egypt. It may be difficult to lay the finger upon the most potent cause of this great difference, but we are sure that the irritation of fine particles of sand, the rapid variations of temperature from night to day, and the moist heat which prevails in Egypt at certain seasons of the year have each of them their influence. When a disease of this kind is once started in a household, its spread becomes extremely rapid by means of the direct contagion, facilitated by the overcrowding which prevails among native Egyptians of the poorer class, and from the frequent occurrence among such granular affections of the eyelids. A foreign army, however carefully provided for, will be exposed, not only to contagion, whether by direct contact or by the transmission of atmospheric germs through short distances, but also to many of the direct causes named above. And these influences will be the more potent in proportion to the frequency of granular lids—a condition, even now, far too common in British barracks. The army medical staff have before them a laborious and comparatively uninteresting work. We venture to think, however, that their efforts in the isolation and treatment of this disease will be of even greater practical value than their recent brilliant services in the field. Let them do what they may, we are but too sure that the tendency to relapse, which is so marked a feature of this disease, especially when associated with granular lids, will keep it for many years under our observation. Fortunately, however, the conditions of our life and climate tend to diminish its intensity, and to check its spread, except, perhaps, among the poorer Irish of large towns, among whom the predisposing granular lid affections are, comparatively, so severe and so wide-spread. It would be a slight on so distinguished a body of men as the medical staff to suppose it necessary, as has been suggested in a lay contemporary, to call in the aid of ophthalmic specialists. Their extra labour will be to some extent relieved by the urgent necessity of drafting the sufferers home to more favourable hygienic influences.

THE HYGIENIC CONGRESS AT GENEVA.

THE official commencement of the deliberations took place on the afternoon of Monday, September 4th, when M. Schenk, on the part of the Federal Government, welcomed the assembled guests, and referred to the part Switzerland had taken in measures of a generally beneficial character. He admitted, however, that there was yet much to learn in sanitary matters, the annual death-rate of the entire country being 27 per 1,000, and infantine mortality being specially high.

After other congratulatory addresses, the president of the Congress, Dr. Lombard, gave his opening address, in the earlier portions of which he dwelt on the sanitary features of Geneva, which is healthier than most of the European cities. The air of the city is constantly renewed by the action of the north-east wind, which is prevalent. Although productive of certain inflammations and neuralgic affections, this wind exercises, upon the whole, an influence of a salutary nature. Thus, on one occasion, the slight appearance of cholera which manifested itself, was rapidly dispelled by the brisk north-east wind which blew at the time. A similar fact is recorded as to a more recent and very general epidemic of influenza. According to the public testimony of Professor Tyndall, the Geneva water is the purest of any in Europe. In Geneva, he further stated, food of good quality is consumed in abundance, and he attributed to the quantity of meat which is eaten by the population, their comparative freedom from rickets and scrofula. He also referred to the importance of the lighting and ventilation of schools, and the necessity of restoring to health any sickly children by giving them the advantages of mountain and sea air.

M. Fauvel reported that a competition had been established by the city of Turin for the best work on hygiene, the final decision of the judges being in course of discussion. Before the close of the Congress, it was announced that Dr. Layet of Bordeaux had gained the prize.

During the visit made to the Hygienic Exhibition at a later portion of the day, M. Cernesson explained the system adopted in Paris for the ventilation, heating, and lighting of scholastic buildings, his remarks being illustrated by the models exhibited.

On Tuesday, September 5th, the proceedings commenced with the

explanation by M. Darier of his invention of a respiratory appliance for warm air, by which the air is introduced into a small receptacle of India-rubber, and from thence conveyed by an India-rubber tube to the mouth, being thus sufficiently warmed to enable delicate persons to go out of doors in all weathers. The Congress then divided itself into its five sections: 1. General Hygiene; 2. Public Hygiene; 3. Application of Science to Hygienic Purposes; 4. Scholastic and Veterinary Hygiene; 5. Demography. The proceedings of the forenoon were of varied interest, and included a suggestive paper by Dr. Bourneville of Paris on the establishment of training-schools for infirmiry attendants.

Dr. L. de Csatory of Hungary advocated the necessity of an international sanitary convention, and the question was referred to a select committee for their careful consideration between now and the Congress of 1883.

Dr. FALIO (Geneva), opened a discussion on disinfection, with the relation of a series of experiments made by himself, with special reference to the use of sulphurous acid for disinfecting clothing and bedding.—M. VALLIN (Paris), differed in some points from the previous speaker, and described the comparative effects of other disinfecting substances in addition to those of sulphurous acid. He stated that a really practical disinfectant must not only destroy microscopic animal and vegetable germs, but must be devoid of properties which would injure the objects disinfected, and must be of sufficiently easy application and low price to be within the reach of the public at large. He considered that warm damp air was (in the absence of certain chemical vapours) the most efficacious and easily applied disinfectant. As preventive measures, he suggested that infirmiry attendants should wear a kind of overall while exposed to infectious contact, and should remove it afterwards. He also referred to the need of medical men changing their clothes after visiting cases of an infectious character.—Dr. SONDEREGGER (St. Gall) recommended the vapour of chlorine as a disinfectant. He suggested the use of a kind of sentry-box with an opening towards the top for the person in it to breathe through. The necessary appliances for the production of the vapour of chlorine are introduced at the lower part of the box, and the person in it is completely disinfected. He has also invented a furnace for disinfecting clothes.—The physician of the Children's Hospital at Zurich confirmed the experiences related by Dr. Sonderegger, whose suggestions had been acted upon in the hospital in question. The reappearance of contagion during their temporary disuse served to confirm the previously formed opinions as to their hygienic value. Amongst the remarks of other speakers, was a statement that corrosive sublimate is the most efficient agent for the destruction of the microscopic elements, and particularly of spores.—Special interest was attached to M. Pasteur's statement as to the attenuation of virus. He expressed his dissent from certain of the theories lately propounded by Dr. Koch, and the general tendency of his remarks went to prove that the virulence of the germs of virus increases when it is sheltered from the action of oxygen, but can be attenuated by exposure to oxygenic influence. With reference to the virus of typhoid fever he stated that by a series of trials it had been found possible to obtain a sufficient degree of attenuation for the virus to act as a preservative against the disease instead of producing it. He alluded to the commission which had been appointed by the Russian Government for the purpose of investigating the subject.—Dr. KOCH, who was present, signified his intention of replying in the technical press to the remarks made by the previous speaker with reference to his theories.

On Wednesday, September 6th, a paper was read by Colonel ZIEGLER, chief of the Army Medical Department of Switzerland. It dealt with the question of the foot-covering of soldiers, from a sanitary point of view. He advocated the giving of practical instruction to military bootmakers, and the granting of a certain amount of authority in the matter to the medical men attached to the army.

M. CORRADI (Pavia) dealt with the question of phthisis, the contagious nature of which had, he considered, been over-estimated in former times in Italy. Dr. LEUDET (Rouen) stated his opinion that the transmission of the malady from a consumptive husband to his wife was more frequently the case than was the communication of the malady from a consumptive woman to her husband. Professor M. VALLIN considered that it was not reasonable at present to demand the institution of special hospitals for consumptive patients. Mr. A. SMITH (London) called attention to the possible connection between the quantities of sewage-matter in towns and the relatively large proportion of consumptive persons in urban districts.

Dr. VARRETRAPP gave a most interesting description of the holiday colonies for school children, which have become general in Germany of late years. This system had been partially introduced into Switzerland and Italy.

On Thursday, September 7th, Dr. LOMBARD, the President of the Congress, gave an interesting address on the influence of altitude on health, and gave prominence to the advantages possessed by the Engadine as a dwelling-place for consumptive persons. M. PAUL BERT (Paris) and Dr. MARCET (London) also spoke on the same subject.

On Friday, September 8th, Dr. ALBRECHT (Neuchâtel) read a paper on the hygiene of infantine nutrition, and stated his opinion that cow's milk is the most efficient substitute for the breast.

Dr. DALLY gave an interesting exposition of his views on the subject of corporal deformity during school life, with special reference to the modern form of handwriting, and the position of the body it necessitates.

The closing banquet was attended by 140 members, and the usual complimentary speeches were made.

Next year's Congress will take place at the Hague.

ROYAL COLLEGE OF SURGEONS.

FROM the *Calendar* of the Royal College of Surgeons which has just been published, we glean some interesting statistics respecting that institution, some of which will perhaps surprise its members, when they learn that there are as many as 16,093 Members and 1,186 Fellows, making a total of 17,279, now on the roll.

The receipts and expenditure of the College from Midsummer-day 1881 to Midsummer-day last are given; the former represented by £18,578 2s. 11d., and the latter as £17,272 2s. 5d. Of course the largest income is derived in fees paid by the students at the different examinations, amounting to the large sum of £15,653 3s. Rents from chambers adjoining the College yielded £1,523 14s. 6d.; dividends on Stock (£32,515 18s. 10d.) produced £1,097 4s.; fees received from members of the Council and Court of Examiners on their election are represented by £63; and the income, formerly so large, from old Members of the College, on their election to the fellowship, amounts only to 50 guineas this year.

In the expenditure, the largest amount is, of course, in fees paid to members of the Court and Boards of Examiners, and Council, represented by £7,092 8s. 6d. This is followed by salaries and wages for the necessarily large staff of officers and servants, viz., £4,122 15s. Taxes, rates, and diploma stamps required the large sum of £1,525 10s. 8d. In the extraordinary expenditure, the sum of £278 10s. 8d. appears as representing the cost of the *conversazione* to the members of the International Medical Congress.

During the past collegiate year, the Board of Examiners in Anatomy and Physiology, consisting of nine members, including the chairman, Mr. Henry Power, who is the only member of the Council on the Board, has held six meetings for the fellowship and forty-five for the membership, with the following results. Of the 107 candidates at the primary fellowship, 46 passed, and 61 were referred for six months. For the primary membership, there were 1,091, of which number, 743 passed, 305 were referred for three months, and as many as 43 for an additional three months.

The Court of Examiners, consisting of ten members, all of whom are also members of the Council, has held two meetings for the examinations for the fellowship, and thirty-six for the pass examinations for the membership. For the former distinction, there were 42 candidates, half of whom passed, the other half being rejected for one year. At the pass examination on surgical anatomy and the principles and practice of surgery, medicine, and midwifery, there were 666 candidates, of which number 343 passed; 69 were approved in surgery, but to qualify in other subjects; 56 were approved in surgery, and afterwards qualified in other subjects; 254 were referred for six months; the total number of diplomas granted in the collegiate year being 399. The Board of Examiners in Dental Surgery has held three meetings, and examined 32 candidates, 28 of whom were approved.

The President's annual report has given way to that of the Secretary, who now, like the Conservator and Librarian, makes an independent report to the Council. It is rather lengthy, occupying nineteen pages; and, as most of it has already been published in the *BRITISH MEDICAL JOURNAL*, we proceed to that of the Conservator, Professor Flower, giving an interesting account of the Hunterian Collection from the time it came into the possession of the College down to the present day. Speaking of the Pathological Collection, Professor Flower paid a well deserved tribute to Mr. F. S. Eve, F.R.C.S., the Pathological Curator, and Sir Erasmus Wilson, Lecturer on Pathology; and adds, that the new catalogue, upon which Sir J. Paget, Dr. Goodhart, and Mr. Alban Doran, F.R.C.S., have been so long and so industriously engaged, is now completed; and that the first volume, containing a description of the preparations illustrating general pathology, is now ready for distribution. Like the report of the Secretary, most of Professor

Flower's information has already appeared in this *JOURNAL*. He states the following important fact, as showing the great interest taken in the Museum, not only by the members of the profession, but by the public at large, that, whereas in 1861 the number of visitors to the Museum was represented by 3,669, it had increased in 1881 to as many as 11,284. This large number did not include about 1,500 who attended the *conversazione* to the members of the International Medical Congress. In order to give the foreign visitors an idea of the history and scope of the Museum and its relations to other institutions, and, at the same time, to place on record, in a concise and accessible form, some facts connected with the origin and progress of the Museum, over which he so admirably presides, Professor Flower seized the opportunity of addressing the Section of Anatomy on this subject. The address was subsequently published in the first volume of the *Transactions of the Congress*. There are about ten pages devoted to the donors to the Museum during the past year, which Professor Flower would be glad to see doubled.

The Report of the Librarian, Mr. Chatto, is also very interesting, giving, as it does, a brief history of the collection of which he is the able custodian. He tells us that, during the past year, there have been added to the library 495 volumes, and that the entire collection now consists of 38,648 volumes, and 39,417 tracts, pamphlets, essays, reports, and theses. Mr. Chatto, now that Mr. Stone has resigned, after half a century's service in the College, appears as the senior officer, having been elected librarian in 1853, and a member of the College so long ago as 1832. Mr. Trimmer appears next as having been elected Assistant-Secretary in 1859. Mr. Flower follows as having been elected Conservator in 1861.

Of the six recipients of the honorary gold medal of the College since it was established, in 1800, only two are now living—viz., Professor George Bennett, F.R.S., of the University of Sydney, who was admitted a member of the College so long ago as 1828, and a Fellow in 1859; and the other, Dr. William Łodewyk Crowther, of Hobart Town, a member of 1841, and a Fellow of 1874.

In looking down the list of Councillors, we find that the following have filled the high office of President—viz., Sir James Paget, Bart., 1875; Mr. Prescott Hewett, 1876; Mr. John Birkett, 1877; Mr. Luther Holden, 1879; Mr. John E. Erichsen, 1880; Sir Erasmus Wilson, 1881; and now Mr. Spencer Wells.

The following members of the Council have carried off the Jacksonian Prize: Mr. Birkett, in 1848; Mr. John Whittaker Hulke, F.R.S., in 1859; Mr. John Wood, F.R.S., in 1861; and Mr. Christopher Heath, in 1867.

The compilation of this interesting work reflects great credit on all concerned—i.e., the printer excepted, who, by some extraordinary blunder, has omitted perhaps the most important part of it, viz., the By-laws, although referring to them in the Table of Contents as to be found at p. 55. We have since heard that, as far as practicable, the Secretary has called all the copies in, to have the blunder rectified.

All essays for the Collegial Triennial and Jacksonian Prizes of the Royal College of Surgeons must be sent in on or before December 30th next.

MR. LISTER'S ADDRESS AT UNIVERSITY COLLEGE.

THE annual opening address of the University College Medical Society was delivered by Professor J. Lister, F.R.S., on Wednesday evening last. The subject chosen was the Relation of Physics to Medicine. Mr. Lister commenced by referring to his early connection with University College; then, turning to the subject of his address, he spoke of the ignorance under which most students of medicine laboured with regard to physics. He described the Bramah press at length, and showed how the principle upon which it depends might throw light upon some surgical dressings for the treatment of hæmorrhage. He then referred to the influence of gravity upon the circulation, and pointed out how this influence was annulled, and frequently counteracted, through the medium of the vaso-motor system. He related an experiment which he had made by suspending a horse by the hoofs; he found that, in this position, the arteries in the extremities were contracted almost to obliteration of their calibre; this effect he also attributed to the action of the vaso-motor system. He pointed out how, when the arms were raised, a contraction of the vessels of the subclavian artery took place, and the circulation of the blood in the arm was consequently arrested. In the course of his address, he made of the experiments performed by Hales, whom he designated as "a vivisector and a divine." He related a third and another experiment, made by Hales, in which a tube of the blood-vessels was cut, and the blood, which fell on a moving strip of paper after escaping from a fine tube inserted

in the carotid artery of the dog. He commended the study of physics, especially of hydrostatics and pneumatics, to medical students; and thought that these subjects ought to be introduced into all primary examinations. When he was a member of the General Medical Council, he had striven to obtain the addition of these subjects to the curriculum, but without avail. Lately, however, he found that the Council had added them to their list, but only as optional subjects.

The address was illustrated by experiments, and was listened to with great attention by a large audience, which included most of the professors in the medical faculty of the college.

After the address, a *conversazione* was given by the Society in the Flaxman Gallery, and in the Museum of the College.

DR. KLEIN ON VACCIN CHARBONNEUX.

WITH reference to Dr. Klein's recent communication to the Veterinary Department of the Privy Council (see JOURNAL, October 7th, p. 692), which we have brought under the notice of M. Pasteur, that eminent French chemist writes to us as follows:

"I am much obliged to you for having informed me of the result of Dr. Klein's experiments on *vaccin charbonneux*. These experiments suggest to me the following reflections: The discovery of a means of producing modified virus, and the efficiency of the practical use of such virus in all matters relating to *vaccin charbonneux* have been so thoroughly proved, in various countries, for at least a year, that there is nothing more to be done, in the way of demonstration, to settle the question. It is an accomplished fact that now belongs to science.

"If any experimenter, however competent he may be, and I know that Dr. Klein is very able, fail when he attempts a fresh verification of the question, his duty, in the present condition of science, should be the investigation of the motives by which he is opposed. I have already pointed out that the question of species and race should be taken into consideration. A vaccine which vaccinates rabbits, vaccinates sheep very badly, or to a very small extent. Some breeds of sheep do not tolerate at all, or tolerate very badly, the vaccine which is efficient for another breed. It is advisable that preliminary trials should be made on a small number of individuals, especially if we pass from one country to another, so that we may be assured of the degree of strength of the vaccine; and if it be desired also to find out what is suitable to new species or varieties, mice and guinea-pigs cannot be used for the trial of sheep-vaccine. There are also, in the kind of experiment under consideration, other sources of possible failure. Thus, I have already pointed out, that in one of the experiments undertaken in Italy, the virulent virus employed was septicæmic as well as anthracic. The vaccinated animals died as well as the non-vaccinated subjects.

"Dr. Klein has, as it appears to me, equally failed in proving that *vaccin charbonneux* loses its virulence when cultivated at 42° to 43° Cent., in contact with the air; this is because he has not followed the method pointed out by me, and here also he can only blame himself for his failure. The conclusion of the communication to which I am now replying is prudent to the last degree, for it is certainly most unadvisable to introduce *vaccin charbonneux* into a country where anthrax does not exist."

THE NEW BUILDINGS OF THE MEDICAL SCHOOL IN EDINBURGH.

THE extensive improvement in progress has now so nearly approached completion, that all the classes, with the exception of those of materia medica, medical jurisprudence, and chemistry, will be held in the new buildings at the beginning of this winter session. The departments are grouped round a quadrangle; the south-east portion is occupied by the anatomical school. Of the dissecting-rooms, which have already been in use for some time, the largest measures 108 feet by 30 feet, and is 27 feet high. When to this is added the accommodation afforded by the smaller room, it appears that space can be provided for 500 students, whereas the old rooms only accommodated 300; the lecture-room can also accommodate 500 students, and, to facilitate study, special rooms have been set apart for microscopical work, and for "bones." Cloak-rooms, lavatories, and rooms for demonstration and for the demonstrators complete this division of the school. Close at hand, on the east side of the quadrangle, there has been assigned to the class of the "Practice of Medicine" a class-room, provided with a gallery, which last session's experience proved to be happily constructed so far as hearing and seeing the lecturer are concerned. The class museum is to the west of the lecture hall. Two compact rooms, which are entered from the north side of the lecture-room, will now be

used as retiring rooms for the professor, and to these private access is had by a spiral staircase. This staircase, and the professor's reading-rooms, open in turn upon the suite of five rooms, which the professor purposes to arrange for practical illustration and teaching in connection with his chair. One he has already set apart for practical teaching of the use of the ophthalmoscope, and another for that of the laryngoscope. The others he will utilise for purposes which may suggest themselves during the course. In the ophthalmoscope room, it is proposed, by means of a light placed centrally in the apartment, to enable about six students at a time to practise with this important instrument upon dummy specimens, so as to enable them to gain facility in its manipulation before using it on the living subject. A like plan will be followed in the laryngoscope room. The surgery department, to which Mr. Chiene, the new professor, will be inducted at the opening of the session, was in full working order last session, and its rooms are situated on the same floor with those just described, and consist of a lecture room, retiring rooms, and rooms for practical work. The midwifery department is situated at the west side of the south quadrangle. It is entered by a corridor, opening upon the south-west corner of the north quadrangle, and also upon the Middle Meadow Walk; and has, in the first place, a lecture-room, with a compact and ungaliered auditorium, seated for about 250 students. The lecture-room is in communication with the professor's rooms and with the museum. There is, further, a large practical room, intended for tutorial classes and original investigation, and supplied with models and other appliances for the thorough training of the students in their practical work.

The pathological department is the one which, perhaps, more than any other has benefited by the alterations. In the western part of the building it occupies a set of rooms which comprise a lecture-room, already rather too small for the large class it is designed to hold, and opening from it, two rooms for the use of the professor, one of which is a private laboratory; both these latter rooms have doors on to a corridor, from which there is an entrance to the pathological part of the great museum. Further south along this same corridor, is a large class room for practical work, which measures 39 feet by 40 feet, and is 27 feet high. It is lighted on its north, south, and west fronts by large windows measuring 16 feet in height and 6 feet in breadth, and is, besides, magnificently fitted with every requisite for carrying on the work of a large practical class. Slate tanks for storing material, troughs, etc., and wash-basins, are placed at intervals round the room, and there are five long tables in the centre, and also tables fixed by each window, at which students may carry on microscopic work. During the summer session, five classes, each consisting of about thirty-six students, met daily for practical work. Adjoining this is another fine room, measuring 30 feet by 30 feet, and 20 feet high, also most completely fitted up for pathological research, with various apparatus, chemical, etc., and intended for the use of more advanced students. On the floor below are three smaller rooms, intended for special work. These average a little over 40 feet in length by 14 feet in breadth, and each is lighted by three windows placed in the west wall. The north room is set apart and fitted for photographic work, etc., in this department, and possesses a dark chamber and other necessary apparatus for this work. The central room is for chemical and experimental pathological work, and the most southerly room of the three is at present used for storage and work in connection with preparations for the practical class. In all the rooms which are intended for practical work, the gas and water fittings are most complete; and a large ice-house, and cellars for storage, entered from the lower court, complete the accommodation for the pathological department.

In the physiological department, the lecture hall has been enlarged, and can now accommodate 500 students, while for the practical work, sixteen rooms have been provided. The class museum is placed opposite the lecture-room on the ground floor, and communicating with it are several smaller rooms for the curators and for demonstrations. On the first floor are the practical and experimental rooms. Of these, the largest has an area of 33 feet by 21 feet, and it is furnished with ebonised mahogany tables, sinks, water-taps, etc., after the style adopted in the pathology department. A smaller room, intended and arranged for the like work, is in communication with the larger apartment, whilst the student's lockers are placed in a third. The professor's retiring and work rooms are placed in the west side of the building, over the midwifery class museum, and are admirably furnished for private work. At the end of the lobby from which these enter, are the students' lavatories. Opening off a lobby, which runs at right angles to the one just mentioned, is a series of rooms fitted up for the experimental and practical study of physiology, as well as for physiological chemistry, and for the use of the professor's assistant and other purposes of the department.

Our contemporary, the *Scotsman*, from whose columns we have

largely quoted in giving the above description, concludes with a very natural outburst of national pride. "So far", it says, "as the schemes of the designers of the buildings has been carried out, no British, and few, if any, Continental, schools can be said to possess a more magnificent home. With its various departments completed, and the courses of instruction given in these supplemented by the clinical teaching of the Royal Infirmary, and the botanical course followed out at the Botanical Gardens, the equipment of the school may be viewed as in every respect satisfactory."

THE ANNUAL MUSEUM OF THE BRITISH
MEDICAL ASSOCIATION.

[Continued from page 699.]

Dr. Styrup (Shrewsbury) had on view an admirably-devised Urinary Cabinet (designed for his own use), which contains the following serviceable collection of fittings: Seven capped and stoppered bottles for reagents; drop bottle in case for acid; eight test tubes, inclusive of one with fine conical end; urinometer in case, and 2 oz. graduated trial glass; 6 oz. glass, with cup bottom to receive urine passed in the consulting-room for examination; thermometer; spirit-lamp; litmus and turmeric paper; microscopic and thin glass slides; watch-glasses; Stanhope lens; blow-pipe; pipette; stirring rod; tube-holder; brass forceps; platinum foil and wire; wood stand for urinometer, trial glass, and test-tubes; glass tray in wood frame.

Mr. James Startin exhibited a collection of Twenty Water-Colour Drawings of Skin Eruptions; also a specimen (in spirit) of a Mouse affected with Favus; and his Skin-Scraper, Lancet, and Ring, for the treatment of acne rosacea by division of the prominent cutaneous vessels.

Mr. Priestley Smith (Birmingham) exhibited his Registering Perimeter. This perimeter acts on a principle different from that commonly adopted. The test object sweeps the field of vision in circles concentric with the point of fixation, and not in meridians passing through that point. This permits automatic registration on the chart with a minimum of mechanism. The test object is carried by a quadrant fixed in a revolving axis, and attached to the other end of this axis is a wooden disc, or handwheel, by means of which it is rotated. On the posterior surface of the handwheel, in the meridian corresponding to that occupied by the quadrant, is a strip of brass, in which slides a steel pencil or pricker. Facing the point of the pricker, and readily brought into contact with it by the thumb of the operator, is a chart holder, carrying a circular paper chart. The test object and the pricker move in circles, the one around the visual field, the other over the surface of the chart. The first revolution sweeps the extreme periphery (90°); on the completion of this and each succeeding revolution, test-object and pricker are both moved by hand 5° or 10° (i.e. one or two notches) nearer to their respective centres. During each revolution two points are pricked upon the chart, namely, those at which the test-object appears and disappears.

Dr. Swayne (Clifton) exhibited some interesting Pathological Drawings.

Dr. F. Charlewood Turner displayed some interesting microscopical specimens of Arterioles of the Brain, from a case of cerebral hæmorrhage, showing miliary aneurysms and periarteritis. One was a portion of an arteriole with a small branch, affected with periarteritis; the latter presenting at its origin a well defined aneurysmal dilatation of recent formation. The outer coat of the vessels was swollen and infiltrated with nuclei; at the seat of the aneurysm, the tunic was also much swelled, and over its convexity the muscular fibres of the middle coat had disappeared. Another specimen was a portion of an arteriole affected with periarteritis, presenting at one place a dense aggregation of corpuscles, causing a projection with some in-lying of the arterial wall at that part; apparently the commencement of an aneurysmal formation. The third was a portion of an arteriole presenting a fusiform aneurysmal dilatation at one part, over which there is great fibrous thickening of the outer coats. The inner tunic was also much thickened at the part, and had become fused with a fibrinous coagulum which occupied the cavity of the aneurysm.

Messrs. Weiss and Son exhibited a varied collection of their surgical instruments and appliances.

Messrs. Wyleys and Co. (Coventry) exhibited their special preparations of Chlorel, Amelars and Chlorel Liqueur, representing a small percentage of the above preparations of Anacard, Balastrum, Cereus, Colonicum, and Liqueur, and their general pharmaceutical preparations and solutions.

Messrs. Young and Postans had a large display of their special medical granular effervescent preparations, their Phosphorised Cod-

Liver Oil, Ripe Indian Bael Fruit, and other specialities, which have on previous occasions been noticed with approval in our columns.

The Zander Medico-Gymnastic Company, Limited (7, Soho Square), exhibited three of their excellent machines (of which they have over fifty in use) for exercising and strengthening the muscular system, for correcting deformities, and for the application of passive movements in general medical practice, and for the promotion of healthy growth and development in young persons. These machines, which attracted great attention, are divided into two sets, termed active and passive. In the former, resistance, which can be regulated at pleasure by means of a weight on a graduated lever, has to be overcome by the patient ; in the latter, the patient is perfectly passive : but here, also, the various movements are capable of exact regulation.

Medical literature was well represented by the collections of Messrs. J. and A. Churchill; Smith, Elder, and Co.; Sampson Low and Co.; and Deighton and Co., of Worcester.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL:

NOTICE OF QUARTERLY MEETINGS FOR 1882: ELECTION OF MEMBERS.

A MEETING of the Committee of Council will be held on Wednesday, January 17th, 1883. Gentlemen desirous of becoming members of the Association must send in their forms of application for election to the General Secretary not later than 21 days before the meeting—viz., December 27th, 1882, in accordance with the regulation for the election of members passed at the meeting of the Committee of Council of October 12th, 1881.

FRANCIS FOWKE, *General Secretary.*

COMMITTEE OF COUNCIL.

NOTICE OF MEETING.

A MEETING of the Committee of Council will be held in the Council Room, Exeter Hall, Strand, London, on Wednesday, the 18th day of October next, at 2 o'clock in the afternoon.

MEETINGS OF SUBCOMMITTEES.

Tuesday, October 17th, 1882.—Scientific Grants Committee, 4 P.M.; Office and Printing Subcommittee, 5 P.M.; Medical Reform Committee, 8.15 P.M.

Wednesday, October 18th, 1882.—Arrangement Committee, 10.30 A.M.; Journal and Finance Subcommittee, 12 noon.

FRANCIS FOWKE, General Secretary.

161A, Strand, London, September 12th, 1882.

BRANCH MEETINGS TO BE HELD.

WEST SOMERSET BRANCH.—The autumnal meeting of this Branch will be held at the Railway Hotel, Taunton, on Thursday, October 26th, at five o'clock. Dinner (5s. a head, exclusive of wine) will be served at 5.30 punctually. The subject, as usual, will be "The Influence of the Soil on the Growth of the Vine." The names of those who should inform the Honorary Secretary before the day of meeting.—W. M. KILLIV, M.D., Honorary Secretary.—Taunton, September 26th, 1883.

at the time of the 1990 census, 10.5 percent of the population was aged 65 and over. The population is projected to increase to 1.2 million by the year 2000, with the percentage of the population aged 65 and over rising to 13.5 percent. The population is projected to increase to 1.2 million by the year 2000, with the percentage of the population aged 65 and over rising to 13.5 percent. The population is projected to increase to 1.2 million by the year 2000, with the percentage of the population aged 65 and over rising to 13.5 percent.

Honorary Secretary. — R. J. H. [Signature]

Secretary.—FREDERICK WALLACE, Honorary Secretary, 66, Carondelet Road.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.—The next meeting will be held at the Surrey County Hospital, Guildford, on Thursday, October 26th, 1882, at 5.30 p.m.: T. M. Butler, Esq., in the chair. The following cases have been promised. 1. Dr. W. H. Day: Chorea. 2. Mr. Lorimer: A Case of Congenital Stricture of the Rectum. 3. Dr. Morton: A Case of Psoriasis Abscess. 4. Mr. C. J. Sells: A Case of Tetanus. Several interesting cases in the Hospital will be shown. Dinner will be provided at 6.30 to the minute at the White Lion Hotel; charge, 5s. 6d., exclusive of wine. Members intending to dine are requested to kindly intimate their intention to the Honorary Secretary, before the 23rd instant. —A. ARTHUR NAPPER, Honorary Secretary, Broad Oak, Cranleigh.

BORDER COUNTIES BRANCH.—The autumnal meeting of this Branch will be held at the Infirmary, Whitehaven, on Friday, October 27th. Gentlemen who intend to read papers are requested to communicate with one of the Honorary Secretaries—F. KENDALL BURT, M.B., Kendal; JOHN SMITH, M.D., Dumfries.

BATH AND BRISTOL BRANCH.—The first ordinary meeting of the session will be held at the Museum and Library, Bristol, on Wednesday evening, October 25th, at half-past seven o'clock, J. K. Spender, M.D., President. A petition respecting the Regulations affecting militia surgeons will lie on the table for signature. The following communications are expected. Dr. H. Waldo: Consolidation of a Large Aneurysm without Surgical Interference (the patient will be exhibited). Mr. N. C. Dobson: Remarks on some of the more important Operations during Ten Years' Work at the Bristol General Hospital. Mr. W. H. Harsant: Two Successful Cases of Colotomy. Dr. A. E. Aust Lawrence: Notes on Cases of Placenta Prævia. —E. MARKHAM SKERRITT, R. J. H. SCOTT, Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.—The first meeting of the present session will be held at the Royal Naval School, Greenwich Hospital, on Friday, October 20th, at 8 p.m. Dr. Bridgewater, President of the Branch, will preside, and deliver an address. Clinical cases will be discussed, and the election of an honorary secretary will take place. —H. NELSON HARDY, Honorary Secretary, The Grove, Dulwich, S.E.—October 12th, 1882.

EAST ANGLIAN BRANCH: AUTUMNAL MEETING.

THE autumnal meeting of the East Anglian Branch of the British Medical Association was held at East Dereham, on Thursday, September 28th, when upwards of eighty medical men assembled from various parts of Norfolk, Suffolk, Cambridgeshire, and Essex. This is the first meeting ever held at Dereham, and the proceedings were most successful throughout. Upon arrival, they were escorted to the new Water Works, and from thence to the Sewage Farm, where the system of downward filtration at the outlet of the sewer attracted much attention. The sewage-water, after irrigation over the farm, escapes through small drain-pipes into the river alongside the farm, quite clear and apparently colourless. Returning to the town, the visitors were enabled to observe the excellent and simple method adopted for flushing the drains in the streets. Here and there are manholes, which are connected with the drains, and, by means of a trap-door, are converted into wells. These are easily filled by a hose, and, the trap being lifted, about eighty gallons of water rushes along the drain and thoroughly flushes it. Every drain is submitted to flushing of this kind once a week.

Previous to the meeting for the discussion of papers and other matters of scientific and professional interest, an organ recital was given in the handsome parish church by Mr. Martin, the organist.

At 1.45, the members met at the Assembly Rooms, the chair being taken by the President, WILLIAM MILLER CROWFOOT, Esq., M.B. There were also present: the President-elect, J. Lowe, M.D. (King's Lynn); the Honorary Secretaries, W. A. Elliston, M.D. (Ipswich), and M. Beverley, M.D. (Norwich); T. E. Amyot (Diss), R. Atthill (Great Bentley), F. Bateman, M.D., P. Eade, M.D., H. Robinson, R. J. Mills, S. T. Taylor, M.D., R. W. White, and H. Turner (Norwich), P. W. Latham (Cambridge), Caleb Rose, M.D., G. C. Edwards, H. J. Benham, M.D., and W. Locke, M.D. (Ipswich), R. V. Gorham (Yoxford), E. Crickmay (Laxfield), W. W. Vores, M.B., J. Smith, F. Palmer, and J. Browne, R.N., M.D. (Great Yarmouth), E. G. Barnes, M.D. (Eye), F. Haward (Halesworth), J. B. Pitt, M.D., H. C. Hastings, J. Vincent, M.D., H. B. Vincent, and S. M. Hopson (East Dereham), W. Ebdon (Haughley), H. Mallins, M. B. (Watton), A. R. Manby (East Rudham), J. Ryley, M.B. (Great Yarmouth), C. W. Doyle, M.B., F. C. Bailey, J. T. Compton, M.B., T. H. Morse, T. W. Richardson (Norwich), H. G. Foster (Attleborough), C. G. Ellis, J. R. Clouting, R. H. Foot, M.D. (Wells), F. W. Joy (Brandon), R. T. Hales, M.D. (Holt), R. B. Kidd (Blofield), D. W. Hughes (Wyndham), T. L. Lack (Hingham), A. C. Mayo (Great Yarmouth), T. K. Milne, M.D. (Shipham), H. Raven (Litcham), E. Reeve (Reedham), W. E. Sofie (East Harling), H. F. Steele (Brandon), J. T. Skrimshire (Holt), F. J. Thomas (Swaffham), G. Gillet (Brooke), C. P. S. Wayman (Foulsham), C. A. O. Owens, M.D. (Long Stratton), J. Bateley (Gorleston, Medical Officer of Health, Great Yarmouth), P. P. Ransom (North Elmham), etc.

Nineteen gentlemen residing in the district were admitted members of the Association.

The following papers were then read and discussed.

1. H. C. Hastings, Esq., M.R.C.S. (East Dereham): Notes of a case of Rheumatic Fever, with Observations on the Past and Present Treatment of the Disease.

2. James Vincent, Esq., M.D. (East Dereham): An Account of three cases of Total Suppression of Urine.

3. H. Mallins, Esq., M.B. (Watton): Notes of a case of Aphasia, with Right Hemiparesis, in a Girl aged 12.

4. F. Bateman, Esq., M.D. (Norwich): A paper on Hystero-Epilepsy.

5. Alan Reeve Manby, Esq., M.R.C.S. (East Rudham): The Curability of Fevers.

6. F. Haward, Esq., M.R.C.S. (Halesworth): Notes of a case of Ovariectomy.

7. W. A. Elliston, M.D. (Ipswich): Notes of a case of Excision of the Lower Four Inches of the Circumference of the Rectum.

8. Michael Beverley, M.D. (Norwich): Notes on the Efficacy of Quinine in Whooping-cough.

The members afterwards adjourned to an invitation *déjeuner*, given to the Branch by the medical men of East Dereham and the neighbourhood.

SOUTH EASTERN BRANCH.

A CONJOINT meeting of the East and West Kent Districts of the above branch was held in the Town Hall, Folkestone, under the presidency of Dr. Bowles, F.R.C.P., on Thursday, September 28th.

The Provisional Sub-Committees of the Collective Investigation Committee for the two districts, were confirmed by the meeting.

Dr. Bowles opened a discussion on "The Ventilation and Management of Sewers." After tracing the history of sewers as applied in recent times, pointing out the difficulties and dangers which dogged each step of advance, he drew the attention of members to the desirability of investigating and determining for certain the causes of the stenches from street gratings, which were injurious to property and health, and questioned whether the permitting warm summer air to enter the cool drains did not encourage putrefactive changes, and thus give rise to dangerous organisms. He believed the necessity for such extreme ventilation might not arise if flushing were properly carried out.

A very prolonged and interesting discussion ensued, in which Mr. Adams of Maidstone, made some very original and practical remarks, illustrated by diagrams, of the rate of influx and efflux of sewer gas at ventilators, and the causes which influence the moving of gas in the sewers.

The discussion was finally adjourned to a future conjoint meeting, to be held in the West Kent District this time next year.

Dr. Tyson showed a boy, aged 16, with leprosy of the face, which had been developing for two years. The patient, born in Ireland, left for India when two months old, and remained there six years; then returned to Ireland, and has not been abroad since. There was no history of leprosy in the family.

Dr. Tyson showed a man, aged 83, with a rodent ulcer situate on left side of nose over the canine fossa, which commenced five years ago, and gradually increased to the present size, about one square inch.

The President entertained members at luncheon before the meeting, and afterwards 20 sat down to dinner at the West Cliff Hotel.

A. H. B. HALLOWES, Hon. Sec., West Kent District.

T. WHITEHEAD REID, Hon. Sec., East Kent District.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT. A MEETING of the above district took place at East Grinstead, on September 27th; Mr. WALLIS of Hartfield in the chair.

The following papers were read:

1. Dr. Mackey related a case in which urgent Dyspnoea, with respirations of 100 to 120 per minute, accompanied by cardiac *bruit*, pain, etc., simulated serious disease for a time, but culminated in a hysterical paroxysm. The differences between hysterical and diabetic dyspnoea were illustrated by comparison of cases.

2. The Chairman showed specimens from a Tumour of the Kidney in a Child two years old. The growth seemed during life to involve the liver, and not the kidney.

3. Mr. Abbott described cases in which Conjunctivitis seemed to be due to the use of atropine and other solutions. He believed the cause to lie in the formation of septic growths in the solutions, and recommended the addition of camphor, which completely prevented such formation.

4. Dr. Ransing read a paper on the Relation of Lithæmia to Cardiac Prognosis and Treatment.

Dinner took place at the Railway Hotel.

CORRESPONDENCE.

PROFESSOR PACINI ON THE CLAIMS OF HARVEY AS THE DISCOVERER OF THE CIRCULATION.

SIR,—I have recently had the honour to receive from Professor Pacini of Florence, a letter, of which I enclose a copy, together with a literal translation which I have made, omitting only the complimentary Italian superlatives.

I do not doubt that you, Sir, and your readers, will feel an interest in the verdict of this eminent Italian professor, with regard to the relative claims of Harvey and of Cesalpino to be considered the discoverer of the circulation of the blood.—I am, etc.,

11, Saville Row, Oct. 7th, 1882.

GEORGE JOHNSON.

[COPY.]

"All Illustrissimo Signore Professor Johnson.

"Ho letto con grandissimo piacere la sua bella Dissertazione (*Harveian Oration*), che Ella si è compiaciuta mandarmi circa la grande scoperta della circolazione del sangue; e dietro questa lettura ho dovuto riconoscere che la gloria di avere dimostrata questa scoperta con ogni sorte di argomenti e di fatti, appartiene incontestabilmente ad Harvey. Ella però non deve meravigliare che attualmente i più rumorosi sapienti Italiani pretendono attribuirarla a Cesalpino. Che se Cesalpino ed Harvey fossero tuttavia viventi e certo che i nostri sapienti si farebbero un dovere di attribuirarla ad Harvey. Ma essendo ambedue morti, è naturale che i sapienti Italiani pretendono rivendicarla per Cesalpino; ed ecco perchè l'Italia è detta ancora *la Terra de' Morti*.

"In prova di ciò potrei citare più d'un esempio in cui non sempre si è lasciata parlare la verità dei fatti; come si è visto ancora ultimamente nella R. Accademia dei Lincei quando questa Accademia ebbe a giudicare il famoso concorso per le Scienze biologiche, nella seduta solenne del Dicembre, 1881.

"Pubblicherei pure questa lettera se vuole, purchè sia pubblicata tutta integra; e intanto profitto di questa occasione per mandarle, con i miei ringraziamenti, alcuni miei opuscoli mentre mi confermo con tutto il rispetto.—Suo affettuosissimo Collega,

FILIPPO PACINI.

"Firenze, Settembre 28th, 1882."

[TRANSLATION].

To Professor Johnson.

I have read with the greatest pleasure your beautiful dissertation (*Harveian Oration*), respecting the great discovery of the circulation of the blood, which you have been pleased to send me; and, having read it, I am bound to acknowledge that the glory of having demonstrated that discovery by every kind of argument and of fact, belongs unquestionably to Harvey. You ought not, however, to wonder that actually the most clamorous of the scientific Italians endeavour to attribute the discovery to Cesalpino. If Cesalpino and Harvey were now living, it is certain that our scientists would consider it a duty to attribute it to Harvey; but, both being dead, it is natural that Italian scientists should attempt to claim it for Cesalpino; and thus it is that Italy is still called "The Land of the Dead." In proof of this, I could cite more than one instance in which, to speak the truth with regard to facts has not always been permitted, as was seen recently in the Royal Academy of Sciences, when the Academy had to decide the famous competition in Biological Science at the ceremonial sitting of December 18th, 1881.

You may, if you please, publish this letter, provided that it be published entire; meanwhile, I avail myself of this opportunity to send you, with my thanks, some of my pamphlets; and remain, with all respect, your most affectionate colleague,

FILIPPO PACINI.

Florence, September 28th, 1882.

THE MILITIA MEDICAL SERVICE.

SIR,—With reference to your letter of May 26th last, containing further statements with regard to the claims of militia surgeons, I have the honour to inform you that the British Medical Association, at its annual meeting at Manchester, in 1881, and at its subsequent meetings, has had the opinion of "two eminent Queen's counsel as to

their being justly and legally entitled to this pension, and this view has been further confirmed by the legal investigation which we have caused to be made of the case." I am directed to acquaint you that Mr. Secretary Childers, after giving full consideration to those statements, and having taken the opinion of the law officers of the Crown upon the whole correspondence, sees no reason for altering the decision on the subject communicated to you by the letter from this office of April 17th last, A/ Militia /3,819.

1. You state that in none of the statutes relating to militia surgeons is there anything to imply that they belonged to the permanent staff; but I am to point out that the Acts before the 10 Geo. IV distinctly treat surgeons, as well as adjutants and quartermasters, as part of the permanent staff. Taking 9 Geo. IV, cap. 67, for example. By Section 1, the surgeon's pay is provided for among that of the rest of the permanent staff; and by Section 3, every adjutant, paymaster, surgeon, quartermaster, and every non-commissioned officer, drummer and fifer on permanent pay of the regular militia when disembodied, is to reside in the city—i.e., where the arms of the corps are—or within a reasonable distance thereof; and, when absent from such residence without leave, they forfeit their pay. By 10 Geo. IV, cap. 10, sec. 3, the permanent staff was reduced, in accordance with the circular dated War Office, December 24th, 1828; and by 10 Geo. IV., cap. 10, the surgeon's pay, and that of other reduced officers, is no longer provided for among the rest of the permanent staff; nor (see Section 2) are the surgeons, or the other reduced officers, any longer required to reside (as under former Acts) near the arms of the corps, though the rest of the permanent staff is required to do so.

2. You quote the 20th section of the Pay and Clothing Act, 31 and 32 Vict., cap. 76, which provides that, "whereas certain allowances have been granted in pursuance of former Acts to adjutants, surgeons, and quartermasters of regular militia, who have by age or infirmity been rendered unfit for further service, such allowances shall be issued and paid during the continuance of this Act", and infer from the wording of this section "that other surgeons than those employed before 1829 were receiving allowances and pensions, and that it was intended by these statutes that they should still be paid." This is not the case. The only allowance granted to militia surgeons retired on account of age or infirmity "in pursuance of former Acts" is the pension of six shillings a day granted from year to year to militia surgeons of twenty years' service (formerly three shillings a day after thirty years' service) by the annual Pay and Clothing Acts up to 1829, the year when the "permanent staff" was reduced. The Pay and Clothing Act of that year (10 Geo. IV, cap. 29) distinctly states (section 25) that the above pension is to be given to surgeons who shall have been rendered unfit by age or infirmity "previous to the 25th June, 1829"; and no subsequent Act gives this pension to any surgeon who had not retired previously to the above date, or any other retiring allowance to any militia surgeon appointed since 1829.

3. You urge that it is inequitable that militia surgeons "should be forced to retire without pension, by virtue of a rule issued years after their appointment," and that they "were told, on accepting service on the departmental medical list, that they would retain the rights they previously enjoyed by so doing, one of these rights being that they were not compelled to retire on account of age." No such right was ever possessed by the militia surgeons. The Crown has always had the power to decide at what age militia officers should cease to serve, and the decision that all militia surgeons must retire at sixty-five was a boon to them, considering the age at which other militia officers are compelled to retire.

4. You draw attention to what you describe as a slight inconsistency in the statement that a complaint was made in the year 1874 by you on the 15th February last, that the pay of the militia surgeons is very inadequate, as compared with that of the medical officers of the regular army. The words used in the petition were: "Your petitioners would point out that they have rendered services to the country for very inadequate pay, as compared with the medical officers of Her Majesty's forces," thereby challenging a comparison between the pay of the militia surgeons, and that of the surgeons of the regular army.

5. Finally, you refer to various Acts of Parliament, by which provision was made up to 1874, for the payment of pensions at six shillings a day to militia surgeons; but, as has been shown in paragraph 2 of this letter, the pension referred to was payable only to such militia

surgeons as had retired before 1829. I cannot admit your plea that the militia surgeons have a claim, either in equity or in law, to the pension provided for by the Acts of 1874. I have the honour to be, Sir, your obedient servant.

Pall Mall, S.W., October 7th, 1882.

ON THE FORCIBLE FLEXION OF JOINTS.

SIR,—The paper which was read by Mr. Howard Marsh, at the recent meeting of the Association, and which is reported in the JOURNAL of last week, is full of practical suggestion; though, for my own part, I regret that it is entitled "On Bone-setting." In the first place, it has little, if anything, to do with the setting of bones; and in the second place, it appears wholly desirable that orthodox practice be kept above suspicion of every form of charlatanism, even in such a small matter as the title of an excellent paper.

Some time since, there was a considerable and notable correspondence printed in this JOURNAL, on the matter of an understanding between orthodox and unorthodox practice, and I cannot now but think that surgeons have acted unwisely in countenancing "bone-setters", and even in advising certain of their patients to place themselves under their treatment. Of the conduct of the practitioner who will so far forget his duty to his profession as to administer an anæsthetic to enable the "bone-setter" to ply his reckless trade, I will say nothing.

The successes of the "bone-setter" soon make him notorious; the unfortunate cases are unnoticed in the brilliancy of the lucky ventures; those surgeons, however, who are engaged in hospital practice, are constantly meeting with joint-cases which have been converted into clinical wrecks, under his blind handling. I have three such cases under my care at the present time, all in children, and such, it appears, are the little patients who suffer most from "bone-setters."

The first is that of a small boy who was brought to me with early hip-joint disease, and whom the anxious mother was subsequently induced to take to a neighbouring "bone-setter." Of course, a bone was "out" and had to be "put in." The mother was then told to go home and apply ice, and, subsequently, iodine tincture, to the hip. After this manipulation the disease went on apace, and I have since had to excise the joint.

A little girl was slowly recovering from an attack of strumous inflammation of the knee-joint, the leg being encased in a plaster-of-Paris bandage; her Sunday School teacher considered the progress to be too slow, and took the child to a "bone-setter." Acute arthritis followed his manipulations, and the girl is now under my care at the Children's Hospital.

The third case is that of a boy who was brought to see me last Saturday from near Leamington. He had had the misfortune to have been under treatment by two rival "bone-setters", for fracture through the lower end of the humerus. The result of their treatment has been, to say the least, unsatisfactory.

"Bone-setters" obtain many of their greatest triumphs in the very instances where our treatment has been most thorough. I allude to those cases of joint-disease in which the limb has been long secured in "absolute, continuous, and uninterrupted rest." The confinement of the joint has, perhaps, from an anxiety to do the very best for the patient, been too prolonged. Then comes the ignorant tradesman who cracks through adhesions which the surgeon himself would have done well to have demolished by gradual manipulation.

It is certainly well that orthodox surgery is beginning to pay more attention to the forcible flexion of stiff joints, but I cannot avoid expressing two hopes in connection with this subject. The first is that the treatment of chronic joint-disease in childhood may not suffer thereby; the second is, that the mysterious words "bone-setting" may be allowed to die a certain, though lingering, death in their appropriate home of ignorance and quackery.

EDMUND OWEN, F.R.C.S.,

Surgeon to Out-patients at the Hospital for Sick Children.

October 10th, 1882.

MILITARY AND NAVAL MEDICAL SERVICES.

THE MILITIA MEDICAL SERVICE.

SIR,—In your issue of September 23rd, a correspondent, signing himself "Militia", has given you a very fair and impartial account of the present unsatisfactory position of acting surgeons to militia regiments, and the treatment to which they are subjected. Feeling, as I do, that your correspondent cannot be charged in the slightest degree with exaggeration in the remarks which he has made, I feel bound to corroborate his statements in every essential particular, and to add what seems to me necessary for the further elucidation of the subject.

To begin with, it is admitted on all hands that, by the warrant of 1876, new appointments of commissioned surgeons to militia regiments were forbidden; but it is equally clear that no militia regiment since that date has been able to dispense with the services of a medical officer.

Now, apart from the question of the wisdom of having done away with these appointments, I would like to know in what respect it can possibly be to the interests of the public service that the office of the most important officer of a regiment should be abolished, and the cheapest and nastiest method substituted, of carrying on the work by soliciting the services of medical men by a process of downward competition at the lowest possible rate—a practice which does not exist in any other department of Her Majesty's service—for the sole purpose of saving

a little money to the State in a very questionable manner. It is scarcely credible that any Director-General could lend himself to such an arrangement; but, as it is equally inconceivable that the Secretary of State should suggest such a drastic remedy without a consultation, we must in the meantime, and in the absence of further evidence, direct suspicion towards the head of the Medical Department. In ventilating this grievance in a public manner, I do not believe that any of the present acting surgeons are at all particularly anxious of having commissions restored, or that they are too ambitious of obtaining the privilege of wearing a cocked hat. What they do want is—and in all fairness it should be conceded them—an officiating appointment with honorary rank, and consolidative pay, but on a more liberal scale than the present "contract rates". Your correspondent says that he has examined 36 recruits for ros. 6d. in one day. I have had the honour of examining over 300 men on day of assembly for Her Majesty's Government for the same amount.

I venture to say that there is not even a board of guardians in the United Kingdom so penurious as to dare to offer such a sum for an equivalent amount of work. So long as matters are allowed to remain in this unsatisfactory state, there will be well grounded discontent, whoever may be officiating. To argue that cheapness is for the good of the service, will not for a moment stand the test of just criticism.

No doubt but that, in a country where professions are overstocked, men can be had to do the work cheap; but such men are not likely to uphold the dignity of the profession, or to be of much advantage to the service. If the surgeon is not fit to be an officer, he is equally unfit to associate with gentlemen. At present, he is put on a par with the butcher and grocer, whose wares are accepted at "contract rates" only. This is not as it should be, and, what is more, it gives satisfaction to no one. It is alike distasteful to the officers and men, as they have repeatedly told me; and certainly it is not a measure of reform that can be recommended from any point of view.—I am, sir, your obedient servant,

JUNIUS.

PRINCE Edward of Saxe-Weimar, the General commanding the Southern District, accompanied by his staff, visited Netley Hospital this week, for the purpose of inspecting the sick and wounded. As there are only one hundred beds now vacant at that establishment, the principal medical officer at Portsmouth has received instructions to use his discretion as to the ultimate destination of other invalided troops arriving at that port, and consequently is at liberty to send them to either Chatham or Aldershot.

STAFF-SURGEON W. L. Powell has been promoted to the rank of fleet-surgeon in Her Majesty's fleet, with seniority of September 24th, 1882.

In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Staff-Surgeon E. A. Hudson has been placed on the retired list of his rank from this date.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE following memorial has been presented to the Right Hon. J. G. Dodson, in his capacity as president of the Local Government Board, by the North-Western and Yorkshire Associations of Medical Officers of Health:—

"To the Right Honourable J. G. DODSON, M.P., etc., etc., President of the Local Government Board.

"The memorial of the North-Western and Yorkshire Associations of Medical Officers of Health respectfully sheweth, that your memorialists are a body of medical officers of health, practising in the counties of Lancaster, Chester, Derby and York. That your memorialists, having been from time to time instructed and informed by the annual reports of the medical officer of health of your Honourable Board, and forming a high estimate of the importance of the topics discussed in the said reports, and having experienced difficulty in obtaining copies of the same owing to the small number printed, humbly pray that your Honourable Board will order that a copy of the said report, with appendices, may henceforth annually, as issued, be presented to every medical officer of health whose appointment shall have the sanction of your Honourable Board. And your memorialists will ever pray, etc. Signed on behalf of the North-Western Association of Medical Officers of Health, WILLIAM HUGH HUGHES, President; FRANCIS VACHER, Hon. Sec. Signed on behalf of the Yorkshire Association of Medical Officers of Health, S. W. NORTH, President; J. MITCHELL WILSON, M.B., Hon Sec.

THE NORTHERN SANITARY ASSOCIATION.—This association, the inauguration of which we noticed a short time ago, has now practically commenced its career. At a recent meeting of the executive committee, Mr. Fleeming Jenkin, M.Inst.C.E., professor of civil engineering in the University of Edinburgh, and consulting engineer to the Sanitary Protection Associations of Edinburgh and London, was appointed consulting engineer. Mr. Coard S. Pain, engineering surveyor of Liverpool, acts as resident engineer; and the secretaryship and treasurership is placed in the hands of Mr. J. S. Harmood Banner.

MEDICAL NEWS.

Infirmary and Dispensary, 1887-88. Spence, promoted.

CONBOLD, C. S. W., M.D., appointed Medical Practitioner to the Earlswood Asylum for Idiots, *vice* G. W. Graham, M.D., resigned.

CRADDOCK, F. H., M.R.C.S., appointed Medical Superintendent to the Gloucester County Lunatic Asylum, *vice* E. Toller, M.R.C.S.

DOUTY, J. Harrington, M.R.C.S.Eng. and L.S.A., appointed Second Assistant Medical Officer in the Powick Asylum, near Worcester.

DUNLOP, J. B., L.R.C.S.I., appointed Assistant Resident Medical Superintendent to the Downpatrick District Lunatic Asylum.

DUSERAT, H. A., M.B., appointed House-Surgeon to the Weston-super-Mare Hospital, *vice* F. N. O'zanne, L.R.C.P., resigned.

FLINN, David Edgar, L.K.Q.C.P.I., L.K.C.S.I., L.M., appointed Surgeon to St. Michaels Hospital, Kingstown, Dublin.

GARDNER, P. H., M.R.C.S., appointed House-Surgeon to the Royal United Hospital, Bath, *vice* H. G. Terry, M.R.C.S., resigned.

GILBERT, H. J., M.B., appointed House-Surgeon to the Lancaster Infirmary and Dispensary, *vice* J. H. Fraser, M.B., resigned.

HITCHCOCK, Charles Knight, M.D., M.A.Cantab., appointed Deputy-Superintendent of the Warneford Asylum, Oxford, for six months from the 3rd instant.

HORMAZDJI, R. N., M.R.C.S.E., appointed Assistant-Surgeon to the Cape Copper Mining Company, South Africa.

HUNT, H. R., L.S.A., appointed Dispenser to the Public Dispensary, 59, Stanhope Street, Clare Market.

MORGAN, E. Rice, M.R.C.S.Eng., of Morriston, appointed Medical Officer to the Swansea Truants' Industrial School.

O'BRIEN, R., M.B., appointed House-Surgeon to the Western General Dispensary, *vice* W. Knight, M.R.C.S.

RAND, R. F., M.B., appointed House-Surgeon to the Oldham Infirmary, *vice* T. Harkness, M.B., resigned.

ROBERTSON, D. W., L.R.C.P., appointed Medical Officer to the Pickering Union, *vice* F. W. Smalles, L.R.C.P., resigned.

RODGERS, J. H., L.R.C.P., appointed Junior House-Surgeon to the Darlington Hospital, *vice* D. H. P. Johnston, B.A., resigned.

ROWLAND, C. D., M.B., appointed Junior Assistant Medical Officer to the County Asylum, Whittingham, Preston.

SPENCE, William James, L.R.C.S. and L.R.C.P.Ed., appointed Resident Physician to the Bradford Infirmary and Dispensary, *vice* Foster, resigned.

STREET, Alfred Francis, M.A., M.B.Cantab., M.R.C.S., appointed Senior Resident Medical Officer to the Radcliffe Infirmary, Oxford, *vice* J. E. Hine, M.B., resigned.

TREVES, Frederick, F.R.C.S., appointed an Examiner in Anatomy at the University of Aberdeen.

WALSH, J. H. T., M.R.C.S., appointed Resident House-Surgeon to the London and Brompton General Hospital.

WEBB, H. G., L.K.Q.C.P.I., appointed Medical Officer of Health to the Northleach Union.

WILLUGHBY, H. J., M.B., appointed House-Surgeon and Secretary to the Chichester Infirmary, *vice* A. E. Buckell, M.B., resigned.

WILSON, M.S., M.R.C.S., appointed House-Surgeon to the Salisbury Infirmary.

WINDLE, B. C. A., M.B., appointed Resident Registrar and Pathologist to the General Hospital, Birmingham, *vice* H. G. Barling, M.P.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

SPENCE.—At St. Ninians, Burntisland, Fife, on the 6th inst., the wife of Robert Spence, M.B., of a son.

MARRIAGES.

CHADWICK—WESTALL.—On September 28th, at the British Consulate, and afterwards at the Church of Holy Trinity, Geneva, Switzerland, by the Rev. John Wood, uncle of the bride, assisted by the Rev. Joseph Last, Chaplain, Alfred Chadwick, M.D., of Heywood, Lancashire, to Ellen, eldest daughter of William Westall, Esq., Clair, Voie, Geneva.

HEATH—BROWN.—On October 10th, at St. Paul's, Newcastle-on-Tyne, by the Rev. Robert Daurt, W. Lenton Heath, M.B., B.S., F.R.C.S., of Gloster Road, South Kensington, to Bertha, youngest daughter of Arthur Brown, Esq., of High Park Road, Newcastle-on-Tyne.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—The Entrance Scholarships in Natural Science have been awarded as follows: Scholarship of £100 to Mr. Horace Duncan; scholarship of £60 to Mr. E. D. Shirliff.

LONDON HOSPITAL MEDICAL COLLEGE.—Mr. Hugh Smith has obtained the Entrance Science Scholarship of £60; Mr. E. Barclay Smith, the Entrance Science Scholarship of £40; Mr. R. Raby, the Buxton Scholarship of £30; and Mr. F. R. Ozzard, the Buxton Scholarship of £20.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The first meeting of the twenty-seventh session, 1882-83 was held at the Royal Kent Dispensary, Greenwich Road, on Friday evening, October 6th, 1882, at eight o'clock precisely. The following gentlemen were duly elected as officers for the present session, 1882-83: *President*: G. H. Cable, M.R.C.S.E. *Vice-Presidents*: A. Forsyth, M.D.; John Marshall, M.R.C.S.E. *Council*: A. L. Bowen, M.R.C.S.E.; J. E. Burroughs, M.R.C.S.E.; F. Carson Fisher, B.A., M.D.; J. Hammersley,

M.R.C.S.E.; C. H. Hartt, L.R.C.S.I.; F. Moon, M.B.; J. P. Purvis, M.R.C.S.E. *Treasurer*: Prior Purvis, M.D. *Secretary*: H. W. Roberts, M.R.C.S.E. *Librarian*: J. B. Saundry, M.D.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.—The distribution of prizes to successful students, under the direction of this body, took place last week in the lecture theatre of the society's house, Bloomsbury Square, before a crowded audience. Mr. M. Carteighe, president, occupied the chair, and was accompanied by Mr. S. R. Atkins, vice-presidents Professors Redwood, Atfield, and Bentley, and several members of the council. Reporting on the results of the most recent examinations in chemistry and pharmacy, Professor Redwood remarked with satisfaction on the solidity of the studies, and on the fact that the students were of a good class, and had been regular and punctual in their attendance on lectures. Equally favourable reports were made by Professors Atfield and Bentley from their respective departments. The principal honours of the occasion were awarded to Mr. F. W. Short; good seconds to Mr. T. G. Nicholson, Mr. W. C. Drew, and other students. In the course of an address to the students, Mr. Joseph Ince, F.L.S., F.C.S., remarked that fifty years ago pharmacy was not represented by any corporate body, and had no recognised system of training or education. Now this deficiency had been met, and a school had arisen which could boast of the services of men like Pereira, Todd, Thomson, Fownes, and of the eminent professors who directed its curriculum at this moment. The text books at the command of the modern student were so various, and many of them written with so much ability, that it had ceased to be desirable to be a man of one book; on the contrary, it was a positive gain to consult two or more standard treatises, and to bring independent judgment to bear on any branch of science or technical research.

ST. BARTHOLOMEW'S HOSPITAL; ABERNETHIAN SOCIETY (Founded 1795).—Winter Session, 1882-83. Committee of Management: *Presidents*—Mr. Ernest Clarke, Mr. Jessop; *Vice-Presidents*—Mr. Harper, Mr. Howe; *Treasurer*—Mr. Savory; *Hon. Secretaries*—Mr. Berry, Mr. Womack; *Additional Committeemen*—Mr. Chapman, Mr. Heath. This society, composed of the teachers and students of the hospital, holds its meetings in the Abernethian room every Thursday evening, at 8 o'clock precisely, during the Winter Session, for the reading and discussion of papers on subjects of medical science or practice, and for the exhibition of pathological specimens. The society's reading room is for the exclusive use of members, and is open during the same hours as the library. The following papers are announced for the present session, 1882-83: October 19th, Mr. Davy, Sociology and Disease; October 26th, Mr. Habershon, Theories of Vision; November 2nd, Surgical Discussion, Intestinal Obstruction, introduced by Mr. Bruce-Clarke; November 9th, Mr. Oscar Clarke; November 16th, Mr. Montague Smith, Hydrophobia; November 23rd, Mr. Howe, Nerve Stretching; November 30th, Mr. Womack, Ferrier's Nerve Centres; December 7th, House Physicians' Evening; December 14th, Mr. Ernest Clarke, Congenital Abnormalities; January 11th, Mr. Collings, The Study of Nervous Diseases; January 18th, Mr. Harper, Retention of Urine; January 25th, Mr. Campbell, Reason and Instinct in Relation to Medicine; February 1st, Medical Discussion, Diphtheria (introduced by Dr. Steavenson); February 8th, Mr. Jessop, A Blow on the Eye and its Consequences; February 15th, Mr. Bowlby, Orthopedic Surgery; February 22nd, Mr. Shore, Bright's Disease; March 1st, House Surgeon's evening; March 8th, Mr. King; March 15th, annual general meeting; election of officers. Any member wishing to read a paper, or show cases, is requested to communicate at once with one of the secretaries. The above list is liable to alteration, but the subject of each meeting will always be posted on the society's notice boards, and published in the medical papers one week beforehand.

INCREASE OF LUNACY.—Attention is called by the daily papers to the fact that pauper lunacy is, according to official reports, greatly on the increase in London: and the asylums are so full of patients, that the greatest difficulty has been experienced in providing suitable accommodation for the cases as they arise. The board of guardians of St. Saviour's, Southwark, was lately compelled to send some cases into Lancashire, Devonshire, and Glamorganshire. The clerk to the guardians reported that he had, in answer to his application, received telegrams from six or eight asylums, all conveying the same answer, "No accommodation"; and, when waiting on the Lunacy Commissioners, he had been informed that room might possibly be found at Ipswich for one patient. In the end, the guardians resolved to write to the Surrey justices, asking them to use all possible expedition in opening the new county asylum they are building.

We understand that out of eight candidates who presented themselves for the recent primary professional examination of Apothecaries' Hall, Dublin, five failed to satisfy the examiners.

LETTERS, NOTES, AND ANSWERS TO
CORRESPONDENTS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopaedic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopaedic, 10 A.M.

THURSDAY...St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.

FRIDAY.....King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY...St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON
HOSPITALS.

CHAMBER CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu, F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

CUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th., 1; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, dai, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 0; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W. Th. S., 1; Throat, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, Tu. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 1; Throat, Th., 1; Throat, M., 2; Orthopaedic, W., 2; Dental, Tu. S., 9; Th.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., Tu. F., 2; Eye, Tu. F., 9.15; Ear, M. Th., 2; Skin, Tu. Th., 1.30; Throat, M. Th., 1.45; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. T., F., 1.30; Eye, M. Th., 1.30; Ear, Tu. F., 1.30; Skin, W., 1.45; S. 9.15; Throat, Tu. F., 1.30; W. S., 1.30; Skin, W., 1.45; S. 9.15.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 7; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE
NEXT WEEK.

MONDAY, February 7, 8.30 P.M. Introductory Remarks by the President, Mr. M. J. Fothergill; Dr. Dolan: *Résumé* of Fothergillian Principles.

TUESDAY, Feb. 8, 9.30 P.M. Specimens to be shown: Dr. James M. ... An Appearance of the Dia... Obturator Hernia. Dr. ...

THU ... P.M. Mr. Pepper: Trepanning ...
ical Rest in the Treatment of Medical

FRI

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with Duplicate Copies.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED

THE CO-OPERATIVE MEDICAL ASSOCIATION.

STR.—It is not difficult to see the cause of those various *frantic efforts* by necessitous medical men in London and other *large hospitals* when at these we have constant *influxes of patients* in a good social position being willingly admitted to the hospital. When the two classes act most discreditably the *poor patients* who are admitted, in their necessity, vulgarise medical practice, and the *rich patients* who, without some radical corrective, soon reduce it to beggary; *or is it* they who, having the advantage of hospital appointments, abuse that advantage to their own interest? I say to their own interest, because a surgical operation, or successful medical treatment of persons in middle social position, will in various ways, direct and indirect, best serve the private practice of him or they who attend such persons at a hospital.

[illegible]

* That hospitals are constantly and shamelessly abused by the admission of those who ought to pay for their treatment, we hold to be as well established as any truth can be that rests on the evidence of numerous and independent witnesses; but it does not seem to follow that the medical staff is necessarily responsible for arrangements with which they have, in many cases, nothing to do. In the instance adduced by our correspondent, the conduct of the hospital surgeon was, if we have heard the whole story, quite inexcusable; since, for those able to pay for hospital treatment, there are the Home Hospital and St. Thomas's Hospital, at either of which the patient could be treated. It is not surprising that he had there been doubt about his ability to do so, but it is not surprising that he had such an opportunity. We prefer to believe that neither class of practitioners is quite so unscrupulous as our correspondent appears to think.

SIR.—With reference to the above-named case, at the late year, 1874, when the

The first of these is the fact that the majority of the population of the United States is now living in urban areas. This is a fact which has not been fully recognized by the medical profession. The majority of the medical schools in the United States are still located in rural areas, and the majority of the medical students are still from rural areas. This is a fact which has not been fully recognized by the medical profession. The majority of the medical schools in the United States are still located in rural areas, and the majority of the medical students are still from rural areas. This is a fact which has not been fully recognized by the medical profession.

A. P. ...

MEDICAL REPRESENTATIVES IN PARLIAMENT.

SIR.—Surely Dr. Tyson is unreasonable in his desire that the chief medical colleges should be represented in Parliament, seeing that no other class of men send representatives of their class. Medical men, equally with other citizens, have the right of voting for the University and other representatives, as they are qualified to do, and they can come forward as candidates; but, from the nature of their calling, very few are able to give up their time to the duties of the House of Commons. We have, however, a grievance, in that members of our profession are never called to the Upper House, in which the duties are less exacting. A few representatives of medicine and science would be of great value in drawing attention to the need for sanitary legislation. Only last week, Professor Henry Robinson stated, at the Sanitary Congress, "that it was no exaggeration that not one quarter of the dwellings of all classes—high and low, rich and poor—were free from dangers to health, due to defects with respect to drainage, water, or ventilation, and which were capable of being easily avoided at the outset."

In the face of such a state of affairs, medical men, who have been the first and chief in pointing out sanitary defects, would be useful in directing the attention of our legislators to the necessary remedial measures. The other leading professions, the Church, the Army, and the Bar, have representatives among the Peers, whereas Medicine, which is not second to any of them in learning, or in the temporal benefits it has conferred on the nation—benefits which have been in a great measure unrecognised, owing to the unassuming way in which they have been performed—is invariably overlooked in the distribution of the higher honours. Some day, we may have life-peerages, and then a greater number of those who have benefited their country and mankind generally may be called upon to give advice in the Upper House.—I remain, sir, yours truly,
W. H. LAMB.
46, Kensington Park Gardens, W.

SIR.—I am attending a child with diphtheria. The medical officer of health, having been informed of the existence of the case, called at the house, visited and examined the patient, and expressed opinions as to its treatment. I should like your opinion of such conduct. On a previous occasion, the same individual was called in an emergency, when I was absent, to a patient of mine, and stuck to the case till death released the patient from his unwished for attentions. I sincerely hope all medical officers of health do not act elsewhere as they do in my neighbourhood.—Yours, etc.,
S. W.

THE LATE QUEEN'S UNIVERSITY.

SIR.—In the BRITISH MEDICAL JOURNAL for August 19th, Dr. J. Wilson Hamill urges all graduates of the Queen's University to send in a formal application for corresponding degrees to the Royal University. Will you kindly allow me to express my opinion on the matter?

The Act abolishing the Queen's and establishing the Royal University constitutes (?) every graduate of the former a graduate of the latter. Verily, this is conferring degrees in a wholesale fashion, and I question the actuality of the matter. But, fancy, what a curious position for a man to be in. A graduate of, say, thirty years' standing in the Queen's is, in a moment, transformed into a graduate of only a day of the Royal. And he is not that same, *de facto*.

Had the Queen's been remodelled on the plan of the present Royal University, and received a new charter, it would be perfectly proper, and, doubtless, agreeable to all concerned. But to sweep away an university which had done nothing to merit such treatment, at a time when it was more than thirty years old, and in a most flourishing condition, was unprecedented and incomprehensible. It was an act of which a certain statesman, in my opinion, alone could be guilty. Besides, it was a piece of injustice so gross, and a breach of faith so glaring, to hundreds of graduates of Queen's University, that I never believed for a moment my Alma Mater was in serious danger until, to my surprise, it was literally blotted out. It is another proof of the utter inability of British ministers to manage the internal affairs of Ireland. Mr. Gladstone would not dare to sweep away an English University. He is now a long time tinkering higher education in Ireland, and ought, I think, by this time to see that he is unequal to the task.

What guarantee is there that the Royal University, which is only of yesterday, shall not, next year, share the fate of the old and already renowned Queen's? Judging from certain precedents, the Premier is liable, at any moment, to sweep away the Royal University as easily and as readily, should the whim seize him, and with just as little compunction for the rights of its graduates, as for those of the late Queen's. My advice to my fellow-graduates is, to be content with the reality already possessed, and not to hunt after a fleeting shadow.—I am, sir, etc.,
P. O'CONNELL, M.D., Ch.M., Queen's University, Ireland.

Sioux City, Iowa, U. S. A., September 22nd, 1882.

A CORRESPONDENT forwards the subjoined cutting from the *Westminster and Chelsea News* of October 7th, 1882. It is to be regretted that a medical man should resort to such expedients to secure publicity. "John Pringle, M.D., L.R.C.S.E., L.M., No. 2, Markham Square, King's Road. Dr. Pringle begs to inform the public that he has commenced practice as a general practitioner in this neighbourhood, and may be consulted every day between 9 and 11 A.M. He intends to devote himself more especially to cases of childbirth, and the ordinary complaints of women and children, having been for some time resident assistant in one of the largest lying-in hospitals in the kingdom.—June 30th, 1882."

SWEETNESS AND LIGHT.

SIR.—Commenting in the JOURNAL of October 7th on the address delivered at Liverpool by Mr. Matthew Arnold, your reviewer speaks of him as "the author of the phrase 'sweetness and light'." So far as the collocation of two familiar words can constitute authorship, the claim belongs to Swift. In the *Battle of the Books*, the dispute between the spider and the bee is summed up in favour of the latter, on the ground that, as the maker of honey and wax, she bestows on the world "sweetness and light"—I am, etc.,
JAMES DIXON.
Harrow Lands, Dorking, October 7th, 1882.

SIR.—Replying to Mr. P. B. Spring, may I suggest the possibility that the symptoms of his patient depend on a weak heart and probably diseased blood-vessels, which we so often find in old patients who suffer from gout. I recently treated an old gentleman who suffered from a dilated heart, and in whom giddiness often occurred in the morning from the disturbance of circulation caused by leaving the recumbent posture; it was relieved in his case by a hot drink of tea, coffee, or milk, before getting up.—Yours truly,
RUSTICS.

A PECULIAR DIAGNOSIS.

A CASE of small-pox at Fort Worth, Texas, was diagnosed by the irregular practitioner in attendance as "erysipelas from the toes to the knees, measles from the knees to the waist, and seven-years' itch from the waist to the top of the head." In consequence of this diagnosis, several persons, who were allowed to visit the patient, contracted small-pox.—*Chicago Medical Review*.

THE NATURAL HISTORY OF DOCTORS.

M. COLIEN says *L'Union Médicale* (quoted by the *New York Medical Record*), compares the different classes of the medical world to those of the ornithological world, and thinks that Cuvier's classification adapts itself perfectly to the disciples of *Æsculapius*, e.g.:

First Class.—The *Rapaces*. The eagle holds the first rank. Such are our great physicians, our great surgeons and specialists.

Second Class.—The *Passercaux* (sparrows, etc.), which includes the medical journalists (*diarii*) and bookworms (*bibliophylacæ*).

Third Class.—The *Grimpæurs* (climbers), who can hardly fly at all alone, but are very skilful in making use of the help of others.

Fourth Class.—The *Gallinacæ*, of which the representatives are the army-surgeon (*iatros cristatus militaris*) and navy-surgeon (*iatros cristatus aquaticus*).

Sixth Class.—The *Palmpèdes*, aquatic birds who live in water, upon water, and by water. Of these there is a subclass, the *Saccharum lacti ferendes*, who live upon sugar of milk.

THE *Nashville Journal of Medicine and Surgery* gives the following plan for the removal of plaster-of-Paris bandages. Dr. F. H. Murdock, of Bradford, Pa., says: "A very convenient way to move a plaster-of-Paris bandage is as follows: Take a strong solution of nitric acid, and, by means of a camel's-hair pencil, paint a strip across the bandage at the most desirable point for division. The acid will so soften the plaster, that it may be readily divided by means of an ordinary jack-knife."

MSS. AND PRESCRIPTIONS: A PRINTER'S PROTEST.

Oh, why do people form such a's, and finish off such b's—
Why do they make such crooked c's and such confounded d's?
Why do they form such shocking e's, and f's with acute fits?
Their g's and h's are too much for any printer's wits.
What a human eye is without sight is an i without a dot,
J's are such curious, crooked things, we recognise them not.
K ought to stand for kindness; but comes in well for kick,
L's and m's are mischievous, while n's just raise Old Nick.
O's are rarely closed at all, and p's are shaggy things.
Q's might as well be spider-legs, and r's mosquito-wings.
Some people make a passing s who never cross a t;
Others use the self-same strokes to form a u or v.
W's get strangely mixed; x's seem on a spree.
Y is a skeleton on wires. Zounds! how we swear at z!
And yet, just think what typ'o's get from drivers of the quill!
They call us such a careless set, and scribble on at will.
Well, they will scribble, and we must swear, and vainly try to please,
Till they go back to school and learn to make their a, b, c's.

In the interests of accuracy, the above protest and plea is commended to the world of science by
DIABOLUS TYPOGRAPHICUS.
Manchester.

P. A. T.—There is no question as to the right of title to physician; the question is as to the right of title to Dr., which is quite a different one, since it is essentially and technically an university title.

HYSTERICAL APHONIA.

SIR.—In a recent number of the JOURNAL issued by the Salvation Army, there is an account of a case of hysterical aphonia, where the voice suddenly returned at the instigation of a supernatural voice to the person affected, bidding her sing one of the favourite songs. The case resembles closely that of a lady who has often consulted me for the same cause, and who has repeatedly lost her voice for periods of several months. On the last occasion, the voice returned under the excitement of a dramatic performance at Manchester of a highly sensational character. This journal contains many evidences of that mental disturbance which at various times has found expression in this and other countries, and which appears to be almost epidemic.

The question which naturally arises is this: Have certain conditions, social, physical, or otherwise, existed for some time, with the result of producing a widely spread disease of the brain and nervous system, which renders the sufferers liable to religious or other forms of delusion? Has injustice, or poverty, or such like cause been at work, with this result? One cannot but feel pity, if it be so; and how to deal with it becomes more clear.—Yours, etc.,
AN INQUIRER.

PROTESTANT SCHOOLS IN FRANCE.

SIR.—Some months since, a correspondent inquired if any of the members could recommend a good Protestant school in France; but I believe no reply was received. At that time, I heard of such a school in French Switzerland; however, as I could not speak from personal knowledge, I did not mention it. During a holiday in Switzerland last August, I visited Aigle, where the school is situated, and called upon the schoolmaster, M. Tause Dufour, spending three days more or less with him. I was so satisfied, that I have placed one of my boys under his care.

At Aigle, I met three friends from England who knew M. Tause intimately, and all bore testimony to his character as an accomplished man and able teacher. He is not only a Protestant, but well known as a decided Christian. He keeps a good table, and his pupils are as well, if not better fed than they would be at home. The school is, of course, a private one, and the only English boys there at present are three sons of a friend of mine and my own son. The eldest brother of these lads is now studying for the medical profession in Edinburgh, having passed all preliminaries direct from M. Tause.

Aigle is, as many of your readers will know, a pretty village in the Rhone Valley, about ten miles from Lake Leman. In the same village, there is a good school for girls also. A relation of M. Tause, Madame Dempoilf, the widow of the German Professor of Hanover, who taught Prince Alfred German, makes arrangements for English girls.—Yours faithfully,
D. M. WILLIAMS.
63, Shaw Street, Liverpool, October 9th, 1882.

"F. A." as an M.B. of Cambridge, is, we believe, entitled by courtesy to style himself Dr. Such being the case, he should send out his accounts as Dr. F. A., and not put any letters after his name.

ERRATA.—In the paper on Notification of Infectious Disease, at page 710 of our last number, for "7,000 to 10,000 alone appear on the register in any one year" (in reference to deaths from direct personal intemperance), read "700 to 1,000 alone appear", etc. In the list of prizes awarded at the Middlesex Hospital School of Medicine, as printed in the last issue of the JOURNAL, the name "W. H. Cragg" should have been "W. H. Crago."

BRITISH MEDICAL ASSOCIATION.

FIFTIETH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

TREATMENT OF CARDIAC, HEPATIC, AND RENAL DROPSY.

Being an Introduction to a Discussion in the Section of Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By D. J. LEECH, M.D., F.R.C.P.,
Physician to the Royal Infirmary, Manchester.

THE subject I have the honour to bring before this section is manifestly too extensive to be discussed to-day in all its bearings, for, in its broadest sense, it would include the treatment of the various cardiac, hepatic, and renal ailments which give rise to dropsy, and this would be too wide a field for the time at our disposal. It seems to me, however, that we may with advantage discuss the treatment of dropsy in a narrower sense.

In dealing with cases of oedema and ascites dependent on heart, kidney, or liver troubles, one or two points stand out prominently for consideration. The first is the advisability of attempting to remove the fluid by mechanical agencies or by medicines; a second is the means of removing it, should we so desire. A decision on these points involves, to a certain extent, in every case, a consideration of concomitant or alternative treatment; but, in order to bring the subject within due limits, I propose to confine my remarks to that portion of it which relates to the removal of fluid.

And first I would raise the question: Is it desirable, in all cases of dropsy, to attempt the removal of fluid by mechanical means, or by eliminants of water, such as diaphoretics, diuretics, and purgatives? I hold not. I believe that the routine use of agencies to get rid of fluid by these means is, in a certain proportion of cases, to be avoided.

The immediate causes of effusion in the dropsies under consideration, on which most stress is usually laid, are, 1, obstruction of the venous circulation; and 2, insufficient removal of water by the kidneys with sequential hydræmia, and the treatment is usually in accordance with this view of causation. If there be evidence of obstruction, attempts are made to remove it, sometimes directly, sometimes by medicines acting on the lungs or heart. If these fail, or if no obstruction be present, then the abstraction of water by tapping, or by medicines which increase excretion from skin, bowels, or kidneys, is, for the most part, entirely relied on. But it is doubtful whether the conditions above named are by themselves efficient causes of dropsy; certainly they do not always suffice to explain the anasarca and ascites in heart, kidney, and liver disease.

Great obstruction to the return of blood through the right heart not unfrequently exists without dropsy appearing; and, when dropsy does occur, its extent is often no measure of the obstruction. Experiments, too, on animals, seem to throw some doubt on the production of dropsy by venous obstruction alone.

Defective secretion of urine is frequently spoken of as the most important factor in the production of dropsy. Bartels, for example, seems to view it as the essential cause, both of cardiac and renal watery effusions. But there are reasons for doubting whether, by itself, it does lead to dropsy. In obstructive suppression of urine lasting many days, dropsy does not usually occur. Dr. W. Roberts notes that, out of ten cases in which suppression, more or less complete, lasted nine to eleven days, dropsy was only met with once. Nor does the history of calculous anuria warrant the supposition that the want of urine excretion is made up by increase in the fluid discharged from stomach, skin, or bowels. In scarlatinal nephritis, too, suppression for a long time may occur without a trace of swelling.

The conjoint effect of impeded venous circulation and defective kidney excretion is, doubtless, more potent than either factor singly; yet considerable venous obstruction, with defective water excretion, may fail to produce dropsy. On the other hand, the occasional co-existence of profuse watery flow from the kidneys, with extensive ascites and anasarca, evidence of any considerable venous obstruction being absent, shows that the causes already alluded to, will not suffice to explain the occurrence of dropsies. I have known a flow of urine, averaging above eighty ounces daily, continue for weeks with increasing oedema and

effusion into the peritoneal cavity, and this, too, without any indication of venous block, and without thirst calling for increased consumption of fluid.

The dropsy again, in acute Bright's disease, cannot be explained by the defective excretion of water, for it occurs generally within a day or two of the first indication of kidney mischief, and often when the urine, though small in amount, is by no means suppressed. It has been known to come on in scarlatinal nephritis, whilst the urine flow continued unduly copious.

The other causes of dropsy which aid those already mentioned, and which sometimes appear to produce their effects independently, may be enumerated as follows: 1. Alteration in the blood or blood-pressure; 2. Defective nerve-supply to vessels or tissues; 3. Structural alterations in vessels and other tissues, with modifications of the nutritional processes.

Some of these causes are connected with those before mentioned; alterations, for example, in the tissue or nerve-supply of the heart or arteries, may lead to venous obstruction. But, for the most part, they produce their effects in a different way, and, on this account, the ensuing dropsy is less amenable to treatment by agents which eliminate water, and sometimes wholly uninfluenced by them. Deficiency of albumen in the blood, and consequent undue serosity of this fluid, may cause more ready transudation through the walls of the vessels, and increased blood-pressure; may, as Dr. Mahomed suggests, force fluid through the walls of the arterioles. It is possible, also, that alterations in the composition of the blood, by preventing it flowing readily through the minute vessels, may lead to effusion into the tissues from the blood thus detained. Diminution of blood-corpuscles, so constantly present in cardiac and hepatic disease, plays an important part in the production of dropsy, chiefly, perhaps, by lowering tissue-nutrition. Impairment of the nervous influence may produce its effects in a similar manner, and, also, by leading to the dilatation of the minute vessels.

Changes in the tissues themselves, and in the nutritive processes going on in them, seem to me to bear not unfrequently a leading part in the production of dropsy. Apart from the dilatation of vessels arising from impaired nerve-influence, the vessel-walls may be so altered as to allow more easy efflux of fluid.

The lymphatic system may be influenced, and the due balance between exudation and absorption destroyed. Leichstein has recently suggested that, in scarlatinal dropsy, the accumulation of fluid in the tissues follows on an engorgement and subsequent inflammatory irritation of the lymph-vessels, due to the action of the poison on the lymphatics of the skin. In other cases, depressed vitality may lead to impairment of the normal absorbing power.

Loss of the elasticity or tone of the tissues may give facilities for the accumulation of water in them. In lax structures, watery collections appear earliest, and last the longest.

It appears to me that the frequent dependence of dropsy on blood, nerve, and tissue changes, has much to do with the difficulty often experienced in removing effused fluid. When the effusion arises chiefly from obstructed venous circulation, or from defective water-excretion, the tissues being but little weakened, we may usually relieve or cure by the elimination of water; but we fail to do good by direct water-removing agencies, in proportion as deterioration of tissues, altered blood, or weakened nerve-supply, jointly or separately, take the lead in the causes giving rise to dropsy.

In the earlier stages of heart-disease with anasarca, for example, diuretics may succeed admirably; later on, as the general health fails, they lose their power, even though there be no evidence of increasing obstruction of the circulation; and at last it sometimes happens that we cannot drain the water from the oedematous tissues, even when they are pricked or tapped; much less can we remove it, by inciting the kidney, skin, or bowel action. We can, indeed, no more remove fluid from the tissues by these means than we can drain a soaked sponge by a trocar.

It is true that the kidney and heart structures are involved in the general tissue-degeneration of advancing disease; and hence, as time goes on, they answer to the whip less readily than in the earlier stages, and that this, in part, accounts for the frequent failure of digitalis and diuretics in long-standing dropsies; but another, and probably more common, cause of this failure, is consequent on the important part which tissue and blood-changes, and weakened nerve-supply, then play in the production of dropsy, and cannot, in many cases, succeed.

Now, the routine and continuous employment of eliminants of water where no good result can follow from the very nature of things, is an evil. It cannot be that the useless administration for long periods of squills, juniper, and potash-salts, of jaborandi, jalap, and elaterium, is devoid of injury; and the injury is the greater since, during the em-

ployment of such agents, tonic and nutrient treatment is commonly neglected. We cannot, of course, always decide as to the possibility of success from the use of water-eliminants. In the aged—in those whose nutrition has been rendered defective by prolonged disease—they are usually of no service, and in more promising cases we at times find them fail. In doubtful cases, they must be tried, but a short trial of the leading remedies soon allows an opinion to be formed of the value of eliminators of water. These failing, it is, I believe, better to fall back on tonics and nutrients, than to try the hundred remedies which have the reputation of carrying off water through the various emunctories.

After tonic and nutrient treatment, combined with rest, we sometimes find that remedies, previously powerless, become efficacious, and, removing the water, cure the dropsy. Diuresis, under improved nutrition, may even set in, apart from the use of special remedies.

In cardiac dropsy, if the patient be placed under favourable circumstances, spontaneous diuresis is not uncommon. In cirrhosis, it occurs more seldom; yet I have seen several remarkable instances of it. It is frequent in some forms of Bright's disease. In acute Bright's, indeed, it seems to be a natural termination of the disease; and in the subacute attacks, especially when supervening in chronic cases, it is far from rare. In a case of albuminuria under my care recently, with great and general oedema, lasting many months, where purgatives, diaphoretics, and diuretics had been tried fully, but in vain, I saw prolonged rest in bed, with tonic treatment, followed in a few weeks by profuse spontaneous diuresis, which, in a fortnight, removed every trace of dropsy.

The mode in which removal of fluid may best be accomplished has next to be considered. I propose briefly to call attention to the points which seem to be worthy of discussion, in the various means used to eliminate water effused in the abdominal cavity or into the tissues. And, first, I must allude to tapping in ascites. Dr. Frederick Roberts, many years ago, drew attention to the fact that tapping might not only relieve, but cure, ascites in cirrhosis of the liver; and many cases have been recorded where, after tapping once to one hundred and thirty-two times, the fluid has ceased to form.

It seems to me there are two factors in the production of ascites in cases of cirrhosis: obstruction to the passage of blood through the portal vein, and an altered condition of the walls of the peritoneal cavity; and, in hepatic dropsy, sometimes one, sometimes the other, predominates as a cause of effusion.

When the dropsy is due mainly to a block in the portal vein, tapping is almost necessarily followed by fresh effusion;* when chiefly to the condition of the serous membrane, then the mechanical removal of fluid may not be followed by a recurrence, a healthier condition of the membrane having supervened. We have here an apparent exception to what I have stated concerning the comparative inutility of water-removal when tissue-alteration, rather than mechanical obstruction, causes dropsy. It is only apparent, however; for, if the walls of the serous sac remain in the same unhealthy condition as when the fluid was poured out, the good effect of tapping is very temporary, and the abdomen refills with great rapidity. In acute cirrhosis rapidly tending to a lethal termination, where, though the fluid is abundant, the dilated intestines occupy the major portion of the abdominal cavity, the difficulty in breathing and the discomforts of the patient are strong incentives to remove the fluid; yet, in my experience, not even temporary relief follows this procedure. Nor have I seen the slightest good from tapping in advanced cases of ascites dependent on cirrhosis, where symptoms of coma have developed. In ascites connected with heart-disease, as well as in ascites dependent on cirrhosis, tapping may lead to the cure of the dropsy. A patient with advanced heart-disease came under my care last year, who about three years before had been tapped three times; six, four, and five pints of fluid having been removed at short intervals. After the third tapping, the fluid did not return for three years. Of such temporary cure I have seen several examples; but they are more rare than in cirrhotic ascites. I cannot call to mind a single case of ascites dependent on Bright's disease in which more than temporary relief followed paracentesis.

I know of no way by which it is possible in cirrhosis to distinguish with certainty the cases in which cure can be effected, from those in which we can only look for relief. The greater reasons we have to expect serious obstruction in the portal circulation, the more must we fear that the fluid will re-form after removal; and enlarged abdominal veins point to such serious obstruction. Yet I have discharged, cured of his ascites, after two tapplings and diuretic treatment, a man whose abdominal veins were distinctly prominent. Tapping soon, and, if necessary,

often, then, it seems to me, should be the rule in most cases of cirrhotic ascites, and I think, too, in ascites dependent on heart-disease. Apart from the relief it gives, the removal of the pressure from the renal veins is justly supposed to favour subsequent diuresis. In kidney-disease, also, no harm can come of early tapping; unless, indeed, the nutrition of the patient is much depressed. When this is the case, and the fluid is not abundant, tapping seems to give no relief, and only hastens the fatal result.

I should not have brought the question of paracentesis so prominently forward, were it not that, as Dr. Duncan of Croydon has recently pointed out, tapping for all forms of ascites is still, in many works on medicine, alluded to as only a remedy to be used as a last resource.

What are the dangers of tapping? Peritonitis, syncope, and exhaustion from the loss of albuminous material are spoken of, but, so far as I know, very few cases in which serious evil has arisen from paracentesis have been recorded.

In 400 cases of paracentesis of which I have notes, I only find one instance of a bad result following the operation. In this case, rapid peritonitis, ending fatally, followed a complete emptying of the abdominal cavity for the second time. Not unfrequently, however, I have observed pains pointing to peritonitis after the operation. A bad result due to syncope I have feared, but never seen, nor have I noted any considerable effect from the loss of the albuminous fluid; even repeated tapplings cause much less exhaustion than we should expect, from the amount of albumen lost on each occasion.

Should the peritoneal sac be completely, or even almost, emptied, or should we be content with taking away a small quantity of fluid? To the former plan I am averse, since, as I have said, I have seen fatal peritonitis follow on one occasion; yet I have known experienced men prefer it, as giving the best results.

Undoubtedly, the removal of a small quantity of fluid, in peritoneal as well as pleuritic effusion, sometimes gives relief, and seems to act as an incentive to the absorption of the rest; and, where the circulation is extremely weak, as in ascites, with irregular feeble heart, I have, at times, tried with success the removal of a small portion of the fluid. One drawback there is to this: unless an excessively fine trocar be used, the puncture left by the instrument continued to weep, and no ordinary means will check the flow of fluid. I have twice seen this occur after the use of a cannula only one-eleventh of an inch in diameter; once, the compression of the weeping orifice by needles alone sufficed to check the flow. Now, this prolonged flow is not without danger; I have known fatal peritonitis follow it.

About the comparative advantages of the various modes of tapping, I would just say a few words. I take it that it is never wise to use a cannula with a greater bore than one-eleventh of an inch, unless, indeed, for the sake of relieving urgent dyspnoea, the effect of pressure.

When but little fluid is to be removed, the very fine tubes of Dr. Southey are, I believe, decidedly the best; but, where the quantity to be got rid of is large, and the circulation fairly vigorous, I prefer the small to the very fine cannula, as being less fatiguing for the patient, and quite as safe.

The use of fine cannulae, advocated by Dr. Southey, is, beyond all doubt, the best means for the mechanical treatment of oedema, and should supersede all other plans. I am satisfied they should be used earlier and oftener than they are. Let me strongly indorse the advice of Dr. Goodhart with regard to their employment. He recommends that they be put in some boiling germicide before being employed. In one case under my care recently, the neglect of this precaution led to serious results. Phlegmonous erysipelas of the leg, followed by widespread pus-formation and considerable danger to life, followed the use of a fine cannula which had been simply washed before use. Heating the cannula in the flame of a spirit-lamp will serve the same purpose as boiling, but it injures the metal, and renders it liable to break.

Diuretics rank next as the most active agents for the relief of dropsy, but about their value there is a great divergence of opinion, to which, it seems to me, two causes mainly contribute. In the first place, they are often used in cases where they cannot possibly be of service, and an impression of their inutility is often founded on such use. Diuretics cannot eliminate water if, from structural changes in the glomerular tubes, the water-passages are wholly or partially sealed up, nor when tissue-degeneration is far advanced; nor can they act when the kidney is functionally competent, if the tissues generally are in such a condition that they will not yield up their water. The uselessness of some of our reputed diuretics, and the slight value of others, is a second reason for the scepticism with which some regard the whole class.

A careful series of water measurements carried on for some years, has satisfied me that diuresis occurring spontaneously must often have been erroneously attributed to the action of the drug given to produce it.

Of the potency and utility of some diuretics there can be no doubt,

* Dr. Goodhart has called attention to the possibility that, in some cases, it may, at times, be preceded by the formation of new channels for the blood in the liver.

but the power of this class of medicines is exercised within narrow limits. It is too much influenced by the cause of the watery effusion. In hepatic dropsy, copaiba or its resin seems to give the best result. Caffein sometimes, but less often, promotes diuresis. Digitalis I have rarely found of use; whilst from juniper, squills and salines I have not been able to assure myself that any increased urine flow has followed.

Dr. Wilks Taylor has showed that the resin possesses the diuretic properties of the balsam copaiba. I am not aware that any proof has yet been given that the oil acts also as a diuretic, but the following case points to this conclusion:—J. B. W., aged 49, a whiskey imbibing omnibus driver, came under my care on March 3rd, with ascites of ten weeks' and anasarca of six weeks' duration. His history and symptoms pointed to cirrhosis as the cause of dropsy. Until March 9th he took no medicine. On that day he was ordered five minims of oil of copaiba three times daily, and he took it till he was discharged on the 28th. The following table shows the daily quantity of urine excreted:

March 5th ... 54 ozs.	March 18th ... 95 ozs.
" 6th ... 44 "	" 19th ... 96 "
" 7th ... 20 "	" 20th ... 98 "
" 8th ... 46 "	" 21st ... 80 "
" 9th ... 66 "	" 22nd ... 62 "
" 10th ... 50 "	" 23rd ... 66 "
" 11th ... 34 "	" 24th ... 54 "
" 12th ... 64 "	" 25th ... 68 "
" 13th ... 84 "	" 26th ... 52 "
" 14th ... 98 "	" 27th ... 72 "
" 15th ... 90 "	" 28th ... 40 "
" 16th ... 100 "	
" 17th ... 100 "	

The commencement of diuresis followed so closely on the administration of the drug that one can hardly help doubting a causal connection. Yet the oil has never since in my hands produced a similar effect, though I have often tried it, as it is possible that the diuresis was, after all, spontaneous.

In cardiac dropsy, digitalis and caffein seems to me by far the most powerful excitors to increased urine flow. Saline diuretics rank next in efficiency. Copaiba in my hands has rarely proved of use. Squill and juniper have disappointed me always, and I have tried them largely. About broom I cannot speak with certainty, since I have not used the fresh preparation by itself.

Two years ago, in the *Practitioner*, I recorded a series of cases illustrating the marked benefit derived from caffein in many cases of cardiac dropsy, and my subsequent experience has confirmed the views I then enunciated. Dr. Breckenridge has recently borne further testimony to the value of the drug as a diuretic. He thinks it should be given by itself when the blood pressure is fairly normal, but combined with digitalis when the pressure is low. In these points I fully agree with him, for digitalis is of the two by far the most powerful vascular diuretic. The arguments he has brought forward, however, in support of his view that caffein acts alone on the renal epithelium, seem to me insufficient, nor do I think we can with certainty augur the success or failure of caffein from the condition of the circulation or that of the renal epithelium, as far as it is possible to determine this.

I am satisfied I have seen, both in health and disease, a distinct effect produced by caffein on the circulatory organs, nor will the law of action laid down by Dr. Breckenridge explain several instances both of failure and success in the administration of the drug which I have met with. In renal disease the estimation of the effect of a diuretic is much more difficult than in hepatic or cardiac affections, for diuresis is more often spontaneous. Saline diuretics, especially the tartrate and bitartrate, citrate and acetate of potash have given me the best results. From iodide of potassium, which some have thought so beneficial, I have obtained no definite effects. Digitalis and caffein have seemed occasionally useful, but much less so than in cardiac disease. Where copaiba, squill, and juniper have appeared to succeed, I have usually had reason to doubt their real efficacy. The inhalation of the oil of juniper has appeared to give me rather better results than its administration by the mouth.

The difference between the time at which the various diuretics commence to act, and the varying periods during which they act, deserve a short notice.

In average doses, digitalis rarely acts within thirty-six hours, often not for forty-eight hours, sometimes not for three to five days. If caffein acts at all, its diuretic effect is almost always noticed within twenty-four hours. Copaiba, like caffein, acts quickly, but not with such uniform rapidity. Sometimes a day or two elapse before it affects the urine.

The duration of the action of digitalis is usually longer than that of

other diuretics. The diuretic influence of caffein and copaiba are much more transient than that of digitalis, and caffein loses its power very quickly. It cannot be relied on for sustained diuresis. Copaiba may be given with advantage a long time, but its effects usually cease at once when the drug is withdrawn. Does the establishment of free diuresis ever do harm? Not in cardiac and kidney disease as far as I can tell, but in ascites dependent on hepatic troubles, the experience of Dr. Taylor seems to point to the possibility that the removal of fluid by means of increased kidney action, does not always prolong life, and may even shorten it. Out of eight cases in which the administration of copaiba resin was followed by an increased flow of urine and the decrease of ascites, in four, coma, followed by death, quickly set in.

Personally I have never seen any evil appear to follow the removal of dropsy by the aid of diuretics. The relative value of diuretics and purgatives in the treatment of dropsy must now shortly be considered. Many writers, disheartened by the frequent failure of diuretics, have ascribed to purgation a higher value in the removal of dropsy than they accord to diuresis, but with this I cannot agree.

That the administration of a hydrogogue purgative is at times followed by diuresis and subsidence of swelling is probable, but yet I must say that I have not been able to demonstrate this by actual urine measurements in a large number of cases which have passed through my hands of late years. I think the result more rare than is usually supposed. I never purge actively till I have given a fair trial to diuretics in various forms and conditions, and under these conditions I have not met with encouraging results.

It is true that a considerable amount of fluid is at first carried off by hydragogue purgatives, but the process soon reaches its limit, and the dropsy ceases to subside even if the bowels be continuously harried. In two cases of dropsy, when purgation had been long carried out but unsuccessfully, I noticed at the *post mortem* a markedly catarrhal condition of the mucous membrane of the small intestine, and I cannot help thinking that often more harm than good is done in dropsy by long continued purgation. For the catarrhal condition of the mucous membrane must interfere seriously with absorption and nutrition. Then, too, in pronounced dropsy, we at times find that severe diarrhoea in no way diminishes the oedema.

In hepatic dropsy, I am satisfied that very active purgation is rarely beneficial; and, in cardiac dropsy, I have much more faith in diuretics. In renal dropsy, however, purgation is often our only resource, and its depurative effect is certainly most advantageous; but, even in renal dropsy, it has not unfrequently appeared to me that excessive purgation had been productive of more harm than good.

Diaphoretics, in hepatic and cardiac dropsy, I have found of but little service. In renal dropsy they are of great value, but less it seems to me, by removing fluid, than by eliminating from the blood a portion of the material which the kidneys have failed to excrete. I have not witnessed extensive subsidence of dropsy from diaphoresis alone.

Two other methods of treatment I must just allude to—the withholding and free administration of liquids.

The withholding of liquids in cases of dropsy was advocated by the earlier physicians; in later times, much less importance has been attached to this plan. But Dr. Cheedle has brought forward a few striking cases illustrative of its utility. He finds that the amount of water excreted, is greater as compared with the quantity ingested when a small, than when a large quantity of fluid is taken. He does not recommend rigid abstinence from fluid, but only such avoidance as can be borne without discomfort. Personally, I have so far made no experiments on this point.

The free administration of liquids, especially distilled water or milk, has been tried with the idea that a flush of water through the kidneys might clear the renal tubules.

It has also been thought that increased ingestion of water might, by increasing vascular pressure, originate a diuresis. Dr. Dickinson, in 1864, advocated this plan in the treatment of the nephritis of children; and Bonchoadour, and Dujardin-Beaumetz value highly the use of water and milk in cardiac dropsy. I think I have seen increased ingestion of fluid of service in ascites dependent on cirrhosis, as well as in cardiac and renal dropsy; but more accurate observations are required before the comparative advantages of an increase or decrease in the supply of liquid to dropsical patients can be even approximately determined.

In conclusion, I must express my regret that I have been compelled to avoid the consideration of many important questions connected with the treatment of dropsy. The mode of action of diuretics, the cause of spontaneous diuresis, and the effects of diuretics in increasing the excretion of solids, are subjects of great interest. My object, however, has been to bring up for discussion the more practical points connected with the treatment of dropsy.

diuretics acted. How the cathartic assisted, he did not know, except that perhaps they temporarily relieved the kidney, which then acted better. As to hydragogue cathartics, he had found them very useful, in hepatic and cardiac diseases. In hepatic disease, they not only relieved the dropsy, but also tended to cure the hepatic mischief upon which it depended. As to remedies which act on the skin, he had not found that his patients had derived much benefit from them.

Dr. WILLIAM CARTER (Liverpool) said that his general impression had been that, in acute renal disease with dropsy, the safest and best method of treatment had been to promote free diaphoresis by means of the hot-air bath mainly, to give a simple non-nitrogenous diet, and to let the kidneys alone. Generally diuresis soon occurred, and the dropsy disappeared. As to tapping, he believed that, generally, early tapping with a small trocar in ascites was useful; and that, in anasarca, the employment of Southey's trocars was also useful, and unattended with any serious risk. As to the use of hydragogue cathartics, it had seemed to him necessary either to combine the hydragogue with a general purgative, so as to evacuate the entire canal, or to use such a purgative in the intervals of employing the more active remedy. If this latter were not done, though temporary relief might follow, remote distress was caused by a gradual accumulation of feces, becoming more and more impacted, which, with failing strength on the part of the patient, could not at length be voided at all.

Dr. S. RODEN (Droitwich), referring to Dr. Leech's assertion that he had never seen benefit follow the use of iodide of potassium as a diuretic, said that, many years ago, he found marked benefit ensue from the combination of iodide of potassium, with dilute nitric acid, in a case of cirrhosis in a broken-down constitution, associated with ascites and general dropsy. The attention of the profession was called to the great value of this combination in broken-down constitutions, many years ago, by, he thought, Dr. Richard Quain. As to the intestinal catarrh that followed the use of salines in dropsy not unfrequently, he had frequently seen this condition occur, but had usually found that the use of one of the salts of iron, notably the potassio-tartrate or saccharated carbonate, had been attended with the best results. He thought that the extravasation that followed tapping might well be accounted for by the great quantity of albumen that was often found in the fluid with disease. On submitting it to heat in a test-tube, the result was sometimes that the test-tube was half full of deposit.

Dr. PHILLIPSON (Newcastle-on-Tyne) said that, in considering the question of the treatment of dropsy, it was of the utmost importance to have in mind the causation of the condition, but more especially the stage of the organic disease productive of the state. For, in the early conditions of dropsy, medicinal remedies were effective, and afterwards, perhaps, wholly inoperative. In valuing mechanical treatment, notably that by Southey's tubes, the mode of procedure ought to be compared with the method of practice in vogue previously, that of incision, and that of puncture. Unquestionably, the use of Southey's tubes was followed by less chance of erysipelas and exhaustion. But, in the employment of the mechanical method of treatment, medicinal remedies must not be omitted. For, after the withdrawal of the fluid, the effect of medicinal remedies would be enhanced. In cardiac dropsy, remedies which had a tonic influence on the heart should be used; and in ascites consequent upon cirrhosis, judicious influence upon the liver; and in anasarca, associated with kidney-degeneration, diuretics, and subsequently tonics, such as quinine and iron. He extolled the hypodermic injection of pilocarpine in producing diaphoresis in cases of renal dropsy.

Dr. BROADBENT (London) proceeded to point out in what, in his opinion, consisted the very great value of Dr. Leech's communication—it was that it compelled a revision of the ideas of the causation of dropsy. He attached as much importance to any evidence of the relation of causation of competent observers, but any real advance in therapeutics could only result from a more thorough comprehension of the mode of action of remedies. For this purpose the nature of the morbid process which it was sought to relieve must be known, and Dr. Leech had justly pointed out that dropsy was not to be explained merely by hydræmia or known obstruction; but that it was necessary to consider the conditions of blood, nutrition of tissue, nerve-supply, and variations of arterial tension; and he hoped that Dr. Leech would show the bearing of the different remedies on the morbid factors of which he had spoken. He had pointed out that dropsy was not due to the gross mechanical conditions to which it was usually attributed; but, after all, dropsy was a mechanical condition, and must be explained of explanation by reference to mechanical principles, or principles known to physical science; and its treatment would only really be understood when its causation was understood by reference to these principles. He was convinced that arterial tension was an important

factor in the production of dropsy. Dr. Broadbent would not relate his experience further than to mention two cases which he had had within a very short period of each other. In both, bleeding was practised for the relief of uræmic convulsions, and not only were the convulsions at once arrested, but the dropsy rapidly disappeared, and the kidney disease was relieved. Here the primary effect of the remedy was mechanical—the removal of arterial tension. He had employed Southey's tubes extensively, and always with advantage, and he had obtained some interesting information by examining the fluid he was enabled to collect by this means. He had sometimes found more urea in this fluid than in the urine. Time would not permit him to do more than again express his sense of the value of Dr. Leech's paper.

Dr. LEECH said diuretics were often disappointing, because we expect from them results which they cannot possibly produce, and because mistaken observation has led us to attribute powers to drugs which they do not possess. The amendment following the administration of such a drug as sulphate of iron might be due to improved nutrition. Following on this, diuresis might occur apart from special drug-treatment. The combination of iodide of potassium, nitric acid, and taraxacum, mentioned as useful by Dr. Roden, might be advantageous from the effect on nutrition of the free iodine thus administered. But the utility of such combinations is often apparent rather than real. Purgatives are of very great value in the treatment of dropsy, and probably they are at times of service in initiating diuresis; but careful water-measurements had not proved this in any case where a full trial of diuretics under favourable circumstances had previously been made. The removal of fluid by tapping often causes less exhaustion than could be expected when we consider the amount of albumen removed. In cirrhosis, loss of flesh and strength is often marked; but here the ailment which causes the dropsy often tends to rapid emaciation. In ascites from cardiac disease and from obscure peritoneal affections, the slight effect of repeated tapping on the general health was often surprising. The use of Dr. Southey's tubes in anasarca prevents the excoriation and superficial inflammation often seen after scarifying the legs or puncturing them with a lancet. The danger alluded to in the paper arises from the infection of the deeper tissues. Heating a tube, supposed to be clean, in spirit-lamp often causes the escape of a puff of smoke, evidently from the combustion of animal matter. It is from the introduction of this animal matter into badly nourished tissues that danger may occur. The profuse urine-flow sometimes continuing after the removal of the fluid in ascites and anasarca is very curious. In cardiac dropsy, the diuresis excited by digitalis often continues several days after all trace of dropsy has gone, apart from any undue consumption of fluid. The body seems capable of retaining a very large excess of water, without effusion into the tissues or cavities giving any evidence of this. Dr. Carter's suggestion, that purgatives adapted to empty the bowels should be given from time to time during the administration of hydragogue cathartics, is well worthy of notice, for lumpy accumulations may remain in the bowels after repeated evacuations. Dr. Leech stated that he had not found jaborandi of the value which would be expected from its physiological properties. His present experience of it had led him to abandon its use.

ON AUSCULTATION OF THE TRACHEA AND MOUTH IN THORACIC DISEASE.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By DAVID DRUMMOND, M.A., M.D., T.C.D. & Durh.,

Physician to the Newcastle-on-Tyne Infirmary; Senior Physician to the Newcastle-on-Tyne Hospital for Children, etc.

IN this paper it is my desire to invite the attention of the members of the British Medical Association to a physical method of examination, which I have found of great service in the detection of some thoracic diseases. My method, shortly, is auscultation of the trachea and mouth. It is now nearly three years since my attention was first directed to the column of air in the large bronchi, trachea, and mouth. In the first instance it was the discovery of the fact, first observed in my own person, that violent exercise, that is to say, increased action of the heart, causes a whiff synchronous with the cardiac systole, and audible to the individual himself during expiration when the mouth is wide open, that called my attention to the subject. I was struck by this phenomenon, which I attempted to explain by supposing that the arch of the aorta, on becoming over-distended, as a result of the cardiac excitement, actually compressed the trachea at each systolic expansion, and expelled air from it, thus occasioning the whiff. I subsequently discovered that even a very slight increase in the heart's action was sufficient to produce the whiff; for example, it was developed

on suddenly rising to the standing from the recumbent position; but then it was only to be heard with the bell-piece of the binaural stethoscope in the mouth during gentle expiration, and it disappeared on resuming the horizontal posture. At times there was a double whiff audible, systolic and diastolic in rhythm. I further observed that when the whiff was at all loud in the mouth, it could also be heard distinctly in the trachea.

It then occurred to me that, should my explanation of the phenomenon be correct, it ought to be present in many cases of aneurysm of the arch; for the sac, in a large proportion of such cases, impinges either against the trachea or large bronchi. This I found to be the case, a fact which I communicated to the Northumberland and Durham Medical Society in October 1880, demonstrating, at the same time, the physical sign on a patient the subject of an aneurysm of the transverse and descending portions of the arch.

Briefly, the oral whiff, which I may call the sign I am now referring to, can be detected in the following manner in cases of aortic aneurysm. The patient is directed, whilst lying on his back, to breathe as quietly as possible through the widely open mouth; the oval piece* of the binaural stethoscope is then introduced into the mouth to receive the expired air. Should, then, the sign be present, the expiration will appear to be interrupted at each beat of the heart by a whiff, which, in some cases, is very loud, whilst, in others, it is only detected at the end of expiration, an indication that it is but feebly marked. In certain cases, especially if the aneurysm be large, a diastolic whiff can be heard as well as a systolic. In cases in which the sign is well marked, it can be plainly heard in the trachea during quiet expirations, or when the patient is holding his breath, with the mouth open and the tongue depressed, so as to allow the gaping glottis to communicate freely with the buccal cavity. In very well marked cases, the whiff is audible in the trachea with the mouth closed, but it at once disappears when the nostrils are compressed by the fingers. In seeking for the sign, it is most important to avoid cardiac excitement; hence it should only be sought for after the patient has lain in the recumbent position for a short while, and after the reasons for inserting such a formidable looking instrument as the binaural stethoscope into the mouth have been fully explained. It is well, indeed, to school the patient accurately before commencing the examination, for nervous, interrupted respiration on the one hand, and forcible or nasal breathing on the other, will defeat the object of the examination.

During the past two years and a half, I have had the opportunity of examining 24 cases of thoracic aneurysm, 23 of the aorta, and 1 of the innominate artery, 18 of which were under my own care, and 5 were under the care of my colleagues or other medical friends. Of the 23 aortic aneurysms, the whiff was present in 17; in some of which it was well marked, and in others but feebly so; it was entirely absent in 3; in 1 it was not sought for; and in 2 stridor and *râles* were so loud as to interfere with its development. The sign was altogether absent in the case of innominate aneurysm. In 3 cases, the whiff only developed after the patients had been observed in hospital from six to eight weeks.

Before passing away from the subject of auscultation of the trachea and mouth in aortic aneurysm, let me very briefly, though with emphasis, refer to another way in which the tracheal column of air may be utilised and made to furnish valuable information by means of auscultation. In many cases, aneurysmal murmurs are only audible in the trachea. I have occasionally been able to diagnose an aneurysm by detecting a systolic vascular murmur in the trachea at the top of the sternum, auscultation of the base of the heart in the so-called aortic area furnishing at the same time absolutely nothing abnormal beyond a somewhat muffled first sound, followed by a loud high-pitched second sound, and sometimes not even that. These vascular murmurs confined to the trachea are tolerably frequent in cases of dilated aorta and small sacculated aneurysms; in one of the cases in which the tracheal whiff was absent, this tracheal murmur was the sign which led me to a diagnosis, in the absence of all basal *bruits*.

It is a fact worth recollecting, that nearly all systolic aortic murmurs are well heard in the trachea; but, when they are much louder here than at the base of the heart, they generally mean an aneurysm, either fusiform or sacculated. The two sounds in the trachea—the vascular *bruit* and the air-whiff—are easily distinguished, for the latter disappears when the patient's mouth and nasal passages are closed, whilst the former are best heard under these circumstances.

I now come to the second, and, I venture to think, the most important part of the subject. I have hitherto, in this paper, referred

* I have made for me, by Messrs. Brady and Martin, Newcastle-on-Tyne, a new bell-piece, for auscultating the mouth. It is made of celluloid, and is two inches and a quarter long, and about two inches and a quarter in circumference at the end. It screws on to the binaural stethoscope.

to simple auscultation of our air column; but now I wish to invite attention to the information gained by oral auscultation in conjunction with percussion of the chest.

The normal adult chest, when examined by the following method, furnishes certain features, which I must ask your attention to. The patient, sitting before the auscultator, is directed to hold the oral-piece of the stethoscope in his mouth, and to breathe very quietly into the tube, taking care not to allow the latter to touch any part of the mouth; the observer, then, with the ear-pieces adjusted, percusses the front of the chest. All over the anterior portions of the lungs, the percussion note is heard in the mouth as a clear, resonant, booming sound—a sound which can readily be imitated by holding the chest-piece of the binaural stethoscope, when it is applied to the ears, between the finger and thumb of the left hand, whilst the tube, or fingers which support it, are percussed by a finger of the right hand. Percussion over the second interspace, close to the sternum, on both sides, often produces a sharper sound with a higher pitch, which in some cases partakes of the characters of a metallic ring. Percussion at the bases posteriorly gives the same clear, resonant tone—only somewhat muffled and more distant. When the chest-walls are thin, as in a case of diabetes, the note obtained by percussing the areas beside the sternum is sharp, high-pitched, and slightly hissing, accompanied by a ring more or less amphoric in resonance—resembling, if I may so speak, the cracked-pot sound in germ.

In children, with thin chest-walls, this peculiar cracked-pot-like sound can always be obtained in the second and third interspaces beside the sternum, and often indeed all over the chest. But when the child is well nourished, and the walls tolerably thick, the note is very similar to that which I have described as being characteristic of a healthy adult chest—only slightly higher pitched, more resonant, and with a tendency to a cracked, metallic ring in the infra-clavicular areas. Such, then, are the phenomena elicited by an examination conducted in the way I have indicated, so far as the normal chest is concerned. The great value of the method lies in the fact that, by it, early phthisical consolidation can often be detected; and that at a stage when the ordinary percussion note, so far as the ear can appreciate it, is unaltered, and the ordinary auscultatory phenomena are very slightly, if at all, changed. In some cases in which the physical sign I am about to describe pointed to early phthisis, the inspiratory murmur was just a little harsh, and the expiration was somewhat prolonged and sub tubular. The suspicious sign to which I wish to draw attention, and which I venture to think will be found to be one of the most valuable and distinctive signs of incipient phthisis, is the sound heard in the mouth during quiet expiration when the chest is percussed over a nodule of consolidation, and that is a sound like the *bruit de pot fêlé* of Laennec, or the percuto-auscultatory blowing-sound of Baas. It is a sharp, high pitched, amphoric sound, exactly like the noise produced when a cracked teacup, held by the handle, is tapped sharply with the pulp of the finger, whilst the bell-piece of the binaural stethoscope is allowed to transmit the sound from the ears, with the addition of a hissing termination. This sound is only audible to the auscultator with the tube in the patient's mouth; it cannot be made out—I speak now of the sign as it is discovered in an early case of phthisis—by the method usually employed in order to demonstrate the cracked-pot sound. It is most frequently observed in the intercostal spaces at each side of the sternum, between the cartilages of the second, third, and fourth ribs; but I have also detected it in other portions of the front of the chest. It is true that this sign is closely allied to, if not almost identical with, the cracked-pot sound; indeed, they are probably dependent on the same cause, only, if I may be allowed the phrase, it is a much earlier manifestation of it, and, I think, possesses a significance as a diagnostic sign of early phthisis hitherto unattached to the cracked-pot sound.

The following brief details of a case in which a diagnosis was arrived at by this method, will serve to exemplify its value.

J. B., aged 25, a coalminer, was admitted into the Newcastle Infirmary in the beginning of May of the present year (1882), complaining of cough and nocturnal perspirations of six weeks' duration. He stated that he had lost weight. On examination, it was found that there was no flattening, and that the lungs were equally. The ordinary percussion-notes on both sides were normal and alike. The inspiratory murmur on the left side in the infra-clavicular region was slightly harsh and interrupted; the breath-sounds were normal. On the right side, the note was barrel-like and normal. The patient was lost sight of for a time, but, twelve weeks subsequently, the following points were noted. He had lost a few pounds in weight;

the cough and night-sweats still continued, and he had a white frothy expectoration.

Physical Examination.—There was distinct flattening beneath the clavicle on the left side; the percussion-note here was dull and high in pitch as compared with the corresponding area on the right side. The inspiratory murmur in the infraclavicular space was harsher than before, and almost puerile. The expiratory sound was prolonged. Auscultation and percussion of the right side were still normal. The sounds in the mouth remained unchanged.

Time will not permit me to enter at all fully into the advantages of this method of examination in the diagnosis of other thoracic diseases; but I must claim the indulgence of the members whilst I refer very briefly to the results of my experience of the method in a few other conditions.

Oral auscultation, in conjunction with thoracic percussion, will be found to be very useful in the diagnosis of pleural effusion. When the fluid-containing portions of the chest are percussed, there is an exceedingly short, high-pitched and distant sound heard in the mouth, resembling closely the muffled sound that is heard when the ear is pressed against a stone wall, whilst some one is tapping with the knuckle at the other side. In pneumonia, on the other hand, the sound is somewhat lower pitched, much louder, and more resonant. I have found the method very useful in distinguishing between fluid and caseous pneumonia, two conditions very often confounded by the similarity of their physical signs.

In cases of thickened pleura the note is muffled and high-pitched; whilst in pneumothorax it is very loud and resonant, like tapping an empty barrel. Of course percussion of the posterior regions of the chest must be practised by an assistant.

In conclusion, allow me to commend to the attention of clinical workers the column of air in the trachea and mouth, for my experience has taught me that we have therein a mine of wealth hitherto almost unexplored.

THE PHYSICAL DIFFERENCES BETWEEN BINAURAL AND UNIAURAL STETHOSCOPES.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By HENRY MALET, M.D.,

Physician to Out-Patients, Wolverhampton General Hospital.

THAT so unquestionably superior an instrument as the binaural stethoscope should not be more universally adopted, is a matter that calls for explanation; and this is, I think, to be found in ignorance of the minute manipulative details necessary in using it. In these, it essentially differs from the uniaural; and as each one has to find out the peculiarities for himself, he is apt to conclude that the deficiency which he naturally experiences is in the instrument, rather than in his method of using it—an error which it will be seen is all the more likely to occur if he be already skilled in the use of its rival. I have thought it worth while, therefore, to give a short account of the precautions necessary in using the binaural stethoscope; and in furtherance of this object, to make a few remarks on the physical difference in the conduction of sound by it and the uniaural.

The form of binaural stethoscope to which I refer is that usually known as Andrew Clark's, consisting of a rigid tube, from the ends of which pass two flexible tubes, each terminating in a right-angle bend and curving accurately adjusted to each auditory meatus.

In the ordinary uniaural stethoscope, the sound is almost altogether conducted by the substance of the instrument, as is shown by the use of solid stethoscopes, and the little difference produced by plugging a perforated one; and, in fact, the vibrations of a comparatively small portion of the chest-wall must travel through the body of the instrument to the ear, and it follows that we hear with it the sounds from a considerable portion of the chest at one time; in other words, the sound is somewhat interrupted by this, and is not so perfect as the solid continuity more perfect. With the binaural stethoscope, exactly the reverse is the case, the intervention of the flexible tubes being so arranged that the sound is conducted to the ear by the solid continuity of the tubes, and the chest-wall is not so much in contact with the instrument as in the uniaural. It follows that almost the only vibrations conducted to the ear

are those from the drum of skin immediately beneath the chest-piece, the rim of which tends to cut off the vibrations of the surrounding chest-wall from this skin-drum, and so from the air within the stethoscope. This method of conduction by the binaural necessitates the following precautions in its use.

1. Perfectly accurate adjustment of the chest-piece to the skin is absolutely necessary; the slightest communication between the external air and that within the stethoscope not only admits a confusion of foreign sounds, but prevents the conduction of the vibrations of the skin drum to the ears. This adjustment is sometimes difficult in the examination of thin chests, with narrow intercostal spaces, it will be much facilitated by covering the end of the chest-piece with tolerably thick india-rubber. Of course, it is almost equally necessary that the ear-pieces should perfectly fit the auditory meatus; but in this there is not likely to be any errors. With the uniaural, all that is necessary is, that the stethoscope should rest firmly between the ear and the part examined.

2. It is necessary to be cautious in the pressure exercised on the skin. If there is much subcutaneous fat, any excessive pressure fixes the drum of skin under the chest-piece against the tissues beneath it, and checks its vibrations. In some cases this effect is very marked, and may materially interfere with the delicacy of an examination. As a rule, the best pressure is that only just sufficient to keep the rim of the chest-piece in complete contact with the skin. In thin patients, when listening to the neck or abdomen, pressure may intensify sound by rendering the skin-drum more tense. With the uniaural stethoscope, on the contrary, fairly firm pressure always renders the conduction more perfect.

3. On account of the light pressure necessary in using the binaural, there is a liability to friction occurring between the chest-piece and a dry or a hairy skin; and this is exaggerated in common with other sounds by the use of both ears; the firm pressure of the uniaural obviates this annoyance. It may be effectually avoided in the binaural by using the India-rubber covering for the chest-piece alluded to above, against which the hair and skin will not slip.

4. On account of the very limited area from which sounds are conveyed by the binaural, it is necessary to examine a patient very universally, or some abnormal sound may be missed through its not being under, or very near, the chest-piece. As regards localisation and intensity, the two stethoscopes may be happily compared to the low and high powers of a microscope, the binaural having a smaller field, but higher power. The ease with which the binaural can be used, renders such complete examination less irksome, to both patient and auscultator, than a more curtailed one with the uniaural would be.

5. The muscular *bruit* is heard with such distinctness through the binaural stethoscope, that it will be found always very advantageous; and when making a very minute examination, quite necessary to have the patient in a position of complete rest. If, for instance, when examining a recumbent patient, the head is not properly supported, the hum of the cervical muscles may render minute interthoracic sounds quite obscure.

With the exception of the last, these binaural precautions are seen to be more or less directly the reverse of what are advantageous in using the uniaural; and it readily appears how a skilled uniaural auscultator, adopting his usual method when first trying a binaural stethoscope, would undervalue the instrument. The binaural stethoscope is not without real disadvantages; and of these, I believe the following to be the only worth mentioning. In some few cases, where it is necessary to make considerable pressure to get near the object we wish to listen to, the binaural is defective, on account of the light touch necessary in using it: for instance, when listening in fat subjects to intra-abdominal sounds, the pressure necessary to approach the deeper parts of the abdomen interferes, as explained above, with the vibrations of the skin-drum under the chest-piece, and enfeebles the sounds; this is very marked in auscultation of the uterus.

A slight disadvantage also arises from the necessity of applying the binaural directly to the skin, the intervention of even the least clothing both checks the vibrations of the skin-drum, and admits extraneous sounds into the chest-piece, and it is, in consequence, necessary to strip a patient for the most superficial examination; with the uniaural stethoscope and sufficient pressure, any intervening clothes are so compressed as to be practically a continuous solid with the stethoscope, and hence a rough examination may be made through some clothing—a very questionable advantage. I have also noticed that in some cases of consolidation of lung, especially in children, bronchial breathing was more marked with the uniaural than with the binaural stethoscope, due, doubtless, to the solid lung forming, with the uniaural, a less interrupted conductor than with the air in the binaural, and to the sound being heard from a larger portion of chest at once with the former. It should

also be borne in mind that if there is any defect in the membrana tympani or auditory canals of the auscultator, the uniaural stethoscope will, for all purposes, be the better instrument, as its vibrations are communicated to the bones of the head, whereas the binaural relies altogether on perfect conduction by the air in the stethoscope to the membrana tympani.

But these disadvantages are so slight as not to weigh in my mind for a moment against the superiority for general purposes of a properly used binaural stethoscope; in the first place, we have the infinitely greater comfort to both patient and examiner, the light touch of the chest-piece, the readiness with which (when the flexible tubes are of a proper length) a recumbent patient is auscultated without being much disturbed, while the examiner is saved from strained and uncomfortable attitudes, and is so much the more capable of arriving at a deliberate and correct conclusion. Again, there is the rapidity with which a very complete auscultation can be made, and, in particular, the great ease with which children can be thoroughly examined. The greater distinctness with which sounds are heard through the use of both ears, and also the concentration of attention obtained by the exclusion of all external noises, are marked advantages over the uniaural stethoscope. The very great accuracy with which the binaural localises sounds, is frequently of much service. The light touch with which the binaural is best used, renders it the only instrument suitable for the auscultation of venous and similar bruits, in which case also the advantage of seeing exactly what we are doing, at all times very important, is most marked. I would venture, in conclusion, to point out that it is necessary, when first acquiring the use of the binaural stethoscope, to supplement it with the accustomed uniaural, as all sounds are sufficiently different with the former to render their recognition uncertain at first.

THE STUDY OF THE FACE AS AN INDEX OF THE BRAIN.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By FRANCIS WARNER, M.D.Lond., M.R.C.P.,

Assistant-Physician and Lecturer on Botany at the London Hospital; Assistant-Physician to the East London Hospital for Children.

II.—ILLUSTRATIONS.*

THE engravings have been executed from photographs taken from life.

FIG. 1.—Thomas P.; age 52. Right hemiplegia, with cerebral facial palsy, right side. The face is asymmetrical, and the muscles in the right lower zone about the mouth act very indifferently. The nasolabial groove on this side is almost lost; this is well seen on comparing the two sides. No asymmetry is seen in the upper and middle facial zones.



Fig. 1.

FIG. 11.—John H.; age 52. Left hemiplegia, with cerebral facial palsy, left side. The facial asymmetry is less marked than in Fig. 1. From the median line to the angle of the mouth is a longer distance on the right than on the left side. The hemiplegia was of long stand-

* The text of this paper appeared in the JOURNAL of August 19th, 1882, p. 314.

ing; there was much rigidity of the paralysed arm. There was well-marked valvular disease of the heart.

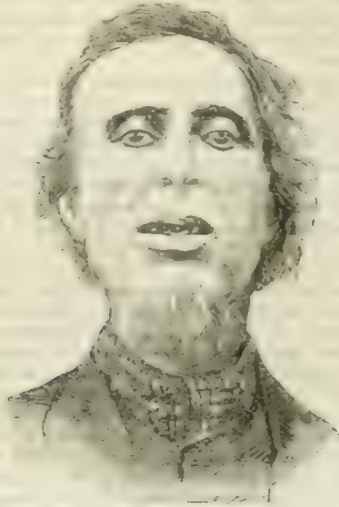


Fig. 2.

FIG. III.—Bell's paralysis of the face, right side. Thomas C.; age 50. Seen November 1880. Four days previously, he had suddenly

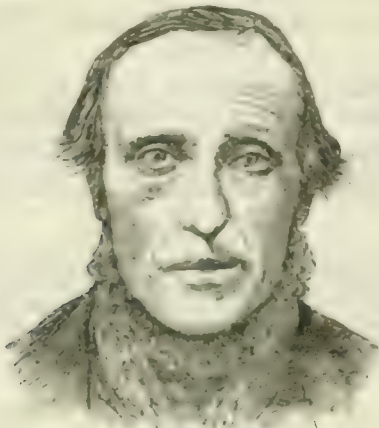


Fig. 3.

found his face drawn to the left side; no other paralysis. The paralysis appeared due to the effect of cold; recovery was complete in three



Fig. 4.

weeks. The symmetry in expression is striking. The only

cular muscle of the right eye is much weakened, as seen in the lower eyelid; the right eyebrow has fallen a little lower than on the left; the line of the eyebrow is nearer to the level of the pupil on the right than on the left, owing to the paralysis of the occipito-frontalis. The right cheek is flattened, the mouth and nose are drawn to the left.



Fig. 5.

FIG. IV.—John Walker; age 67. Seen April 1882. Paralysis agitans, in advanced stage. Face almost expressionless, with loss of all the fine adjustments of expression. He presents one dull monotony of facial expression. At the same time, he can occasionally be made to grin, can show his teeth, elevate the eyebrows, or close the eyes, etc. The face is symmetrical in its passive condition and in its movements, and the condition is similar in all its zones. His voice is as monotonous as his face—one uniform low monotone. The right hand was the earliest limb affected; there is little tremor now, but, when held out, it presents the posture of the "writing hand" described by Charcot.

FIG. V.—John B.; age 7 years. A high-class imbecile. Head well shaped and of fair size; no paralysis. He has illusions, and has had maniacal attacks. His hands present much finger twitching, and they often assume the "nervous posture". Any excitation causes smiling; pain, pleasure, strong light, all cause the same expression.

FIG. VI.—John B., smiling. The greatest change is in the lowest zone—i.e., the zone that is most paralysed by brain-disease. This is the only active expression possible in the boy; it is symmetrical, and affects the upper zone the least, the lower zone the most. Exaggerated muscular action is common with brain defects.



Fig. 6.

DR. H. S. GUTHRIE and Thompson reports, in the *British Medical Journal*, a case of lead poisoning in a young lady, aged nineteen years, by the daily ingestion of a carbamate or lead as a remedy to the skin and face. The patient was cured by a course of the treatment used, three times a day, was the preparation of the remedy used.

RODENT ULCER.

Read in the Section of Pathology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By ALFRED SANGSTER, M.D.,

Physician to the Skin Department at Charing Cross Hospital.

SINCE prominent attention was first drawn to the disease known in this country as rodent ulcer, there have been many attempts to establish for it a special pathology in accordance with its somewhat well defined clinical characters. Although these latter were highly suggestive of the alliance of the disease with cancer, yet the early observers failed to discover any microscopical appearances to support this theory; and, indeed, were so impressed by the negative results in this direction, as to express a confident opinion that the disease rodent ulcer was distinct from cancer.

In 1865, Thiersch of Erlangen pointed out the existence of an epithelial new growth in rodent ulcer, classing the disease as flat epithelial cancer, in contradistinction to the penetrating or infiltrating variety, of which epithelioma of the lower lip is the type. This observer found rodent ulcer to consist of groups of cell-masses, alveolar in their arrangement—the cells rounded or polygonal, not flattened, those bounding the wall of the alveolus columnar in shape, and perpendicular to the wall. These cell-masses were said to be connected with the rete Malpighii, and, from their shape and position, Thiersch considered them to be degenerated sebaceous glands. In one case, the growth was identified with degenerated sweat-glands. Since Thiersch published his views, there have been contributions towards the pathology of rodent ulcer, amongst others, by Moore, Hulke, Collins, Warren, Thin, and T. and C. Fox. Hulke demonstrated the epithelial nature of the disease.

In 1872, Dr. Collins Warren of Boston published his monograph on Rodent Ulcer. His conclusions are briefly as follows.

1. Rodent ulcer is a form of epithelial cancer.
2. It differs from ordinary epithelioma in the small size of the cells.
3. There are two types of arrangement of the cancer-cells—tubular and alveolar.

The cancer-cells Collins Warren thought to be derived from white blood-corpuscles exuded through the walls of vessels, the epithelium of the part affected not appearing to take an active part in the process. Dr. Warren found epithelial nests in rodent ulcers.

In 1879, Dr. Thin, in this country, in a paper published in the *Transactions of the Pathological Society*, first drew prominent attention to the fact that histological peculiarities were to be found in rodent ulcer apart from those of ordinary epithelioma, e.g., the non-implication of the Malpighian layer, absence of nests, etc. The author examined and reported on four cases, the conclusion arrived at being, that "rodent ulcer is an adenoma of the sweat-glands, in which a transition from the originally altered glands has been destroyed by ulceration before an opportunity has been given to make a microscopic examination."

In Dr. Thin's paper will be found a most able criticism of Thiersch's views, much aid from which I take this opportunity of acknowledging.

Lastly, in the same volume of the *Pathological Society's Transactions* will be found a paper by Drs. Tilbury and Colcott Fox. Their conclusions were similar to those of Dr. Collins Warren. The rete did not take an active part in the disease. Epithelial nests were to be found. The authors thought the growth originated in the external root-sheath of the hair-follicles.

Although I fear I run some risk of being tedious, yet I feel it is only possible to make a paper upon such a subject as I have chosen of any practical good, by the relation of some amount of detail.

In the first place, I am not concerned to furnish a history of each case from which my material was taken, my object being simply to demonstrate the fact that certain peculiarities are demonstrable in the microscopical appearances of the disease recognised by clinical workers as rodent ulcer, apart from those of ordinary epithelioma, just as certain clinical differences are observable between the two. Suffice it then to say that, in each instance, the material was furnished to me as that from rodent ulcer, by gentlemen whose clinical experience of the disease may certainly be trusted.

I will first read a short account of the microscopical appearances in each of the five cases collected, together with a few remarks upon special points of interest.

My first case was under the care of Dr. E. Buchanan Baxter; it was diagnosed by that gentleman as rodent ulcer, and subsequently handed over to Mr. Hutchinson, who concurred in the diagnosis, and excised the growth; the material was given to me by Dr. Baxter.

Vertical sections through the ulcerating margin showed the new

growth invading the corium, but quite superficially, in the form of glandiform masses; that is to say, the margins of the growth presented that circinate outline which suggests a lobular formation. As the character of the growth in this case may be said to be typical of rodent ulcer, a short description of it will not be out of place. It consists of nuclei, oval, elongated, or somewhat pear-shaped, and darkly stained; in size between that of a lymphoid cell and the nucleus of a well formed



CASE I.—Vertical Section through the advancing margin of a Rodent Ulcer, showing the glandiform masses of new growth. (a) Epidermis quite inactive. (b) Sebaceous gland. (c) Sweat-gland.

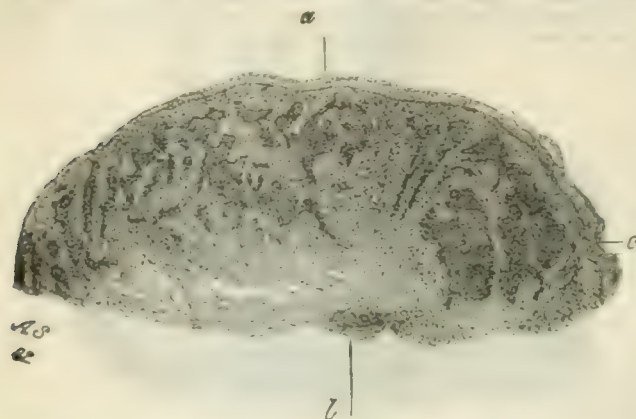
Malpighian cell. These nuclei lie closely packed, for the most part, without any defined arrangement, excepting where, in places, they assume a whorled arrangement, in fact, such a tendency to lamination as may be observed in any instance of rapid cell-development, pathological or physiological; in other places, the long ones follow one particular direction, as though acted on by currents; the peripheral nuclei are elongated, columnar, and arranged vertically to the periphery; the so-called palisade arrangement, the matrix in which these nuclei are packed, is homogeneous-looking, and faintly granular, only here and there are there to be seen indications of its subdivision into separate portions, in association with the nuclei. The Malpighian layer showed no signs of activity; it formed a thin, even layer, tapering off to a point, where the ulceration was reached. The new growth could be recognised, in places, in actual contact with the Malpighian layer, the difference in the character of the cells plainly recognisable. The sweat-tubes showed degenerative changes; that is, the regular arrangement of the lining epithelium was lost, the lumen obscured by proliferating cells, and the structures bounding the tube became less easily recognisable, until the whole was merged into one fibro-nuclear mass; but there was no attempt at the definite boundary line with the palisade arrangement of cells before alluded to as peculiar to the new growth. Such hair-structures as were visible showed degenerative changes, and especially it may be noted that there were outgrowths, from the external root-sheaths of the hair-follicles, indistinguishable in structure and arrangement of cells from the new growth. In one place, the outgrowth extended from one follicle to another. In another part, a cell-mass was seen (in the neighbourhood of a hair-follicle) indistinguishable from the new growth, but under a higher magnifying power, showing unmistakable signs of hair-formation.

There was considerable over-nucleation of the fibrous tissue forming the corium; lymphoid cells were conspicuously grouped in masses amongst the coils of sweat-tubes. Associated with the new growth were to be seen a few round spaces lined with flattened cells, which might be taken for "globes epidemics" of ordinary epithelioma; their centres, however, were not found to be occupied by the characteristic large cells—they have been pointed out by Dr. Thin as due to abortive hair-formation; I would add sebaceous gland formation as well. In a paper published in the *Pathological Society's Transactions*, 1879, I discussed the nature of these pseudo-nests and their relation to degenerated sebaceous glands.

I have little hesitation in assigning a like interpretation to the rounded spaces seen in these specimens. If this view of their nature be correct, it would go far to identify the new growth with hair-follicle change, a point I shall return to later on.

CASE II. was under the care of Mr. Balmanno Squire. The material consisted of a pin-head nodule from the immediate neighbourhood of a rodent ulcer. It is valuable as demonstrating the appearances of the pre-ulcerating stage. In vertical sections, the epidermis was seen over the greater extent of the nodule, in an attenuated atrophic condition.

The papillæ were obliterated, and consequently the Malpighian layer did not exhibit the usual interpapillary prolongations. In the substance of the corium, the new growth was conspicuous. It was distributed for the most part in rounded or glandiform masses, or the latter were angular, tailing off into processes, and joining with similar processes

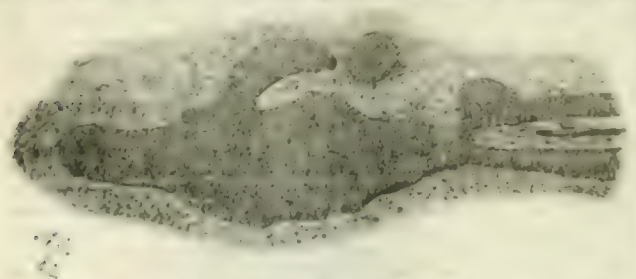


Case II. Vertical section through a rodent ulcer, showing the new growth beneath the atrophic epidermis. (a) Epidermis. (c) New growth.

from neighbouring masses, uniting the cell-masses as it were by narrow bridges. In many places, the new growth was of a marbled pattern, as if forming a network. The general character of the new growth was quite similar to that of the last case, excepting that the peripheral columnar arrangement of cells was not so well marked, and where the reticular type was approached, the nuclei became much elongated, even staff-shaped. A conspicuous feature in these specimens was the pigmentation of groups of cells in the midst of many of the cell-masses. The Malpighian layer also showed much pigmentation.

There were many scattered groups of small cells, some isolated, others associated with degenerating hair-follicles or sweat-glands. The character of these cells was peculiar; they were not so round or uniform as the lymphoid cells; they were rather angular, and indeed were of an "indifferent" type. Such hair-follicles and sweat-glands as were seen showed degenerative changes such as before described in Case I. It was impossible to identify the new growth with any special structure; but it cannot be denied that in some places, despite the marked inactivity of the Malpighian layer, the new growth was continuous with it. There were only two or three doubtful "nests" in twenty-four sections examined.

The material of Case III was kindly given to me by Dr. Thin, who received it from Mr. Hutchinson as a specimen of rodent ulcer. The material was from the eyelid, and the sections involved the whole thickness of the organ, displaying the mucous membrane with the closely associated Meibomian glands on one side, and the epidermis with the hair-follicles on the other. The new growth was seen in characteristic

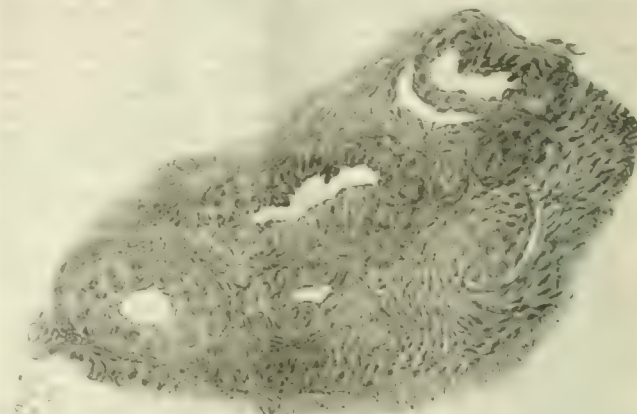


Case III.—From a case of Rodent Ulcer: showing irregular hair-follicle formation with outgrowth. The character of cells and their arrangement is similar to that of neighbouring masses of new growth.

masses close beneath the Malpighian layer, which in places was attenuated and stretched over it. There was little tendency to the reticular type of arrangement of the new growth. Pigment was very generally associated with it. Such hair-follicles as were to be seen were most erratic in their development, presenting outgrowths with circular contours and palisade cells, indistinguishable from masses of new growth. Here and there, circumscribed collections of pigment-cells obviously

represented abortive hair-formation. There was a tendency to inward growth of the Malpighian layer in masses like the new growth; but this was partial, and different to the regular finger-like prolongations of ordinary epithelioma. The Meibomian glands were in a state of inflammatory proliferation. There was no appearance of "nests".

CASE IV.—The material was given to me by Mr. Waren Tay, as that from a case of rodent ulcer. In these specimens, there was considerable activity of the Malpighian layer; but here, again, it was partial, and by no means exceeded what is possible as a result of continued inflammatory irritation of the corium—such, for instance, as may be seen in lupus. The corium, especially in its upper layers, was the seat of dense small cell-infiltration. Although there were whole tracts and masses of new growth similar to that seen in Cases I, II, III, it was for the most part broken up, and of the reticular type; nor was the palisade arrangement of peripheral cells even suggested. The most striking change in these specimens was observable in the sweat-glands. The latter exhibited gradational changes from unaltered sweat-tubes to such as showed degenerate changes of the lining cells, with invasion of the intertubular connective tissue by nuclei; the whole presenting that atypical appearance characteristic of true cancer. With regard to the affected sweat-glands, their appearance is better conveyed in a drawing than by description. I have, therefore, figured it. The rela-



Case IV.—From a Case of Rodent Ulcer. A degenerating sweat-gland.

tion of the affected glands to the neighbouring masses of new growth was highly suggestive of the sweat-gland origin of the latter. I am disposed to look upon this case as one in which the sweat-glands played a very conspicuous part. In the absence of evidence to the contrary, one might almost conjecture that it was a case of primary cancerous degeneration of the sweat-glands. There was no appearance of nests in these specimens.

The material of the fifth and last case was kindly given to me by Mr. Hutchinson. It was taken from a rodent ulcer of the orbit, which



Case V.—Section through exuberant growth from a case of recurrent Rodent Ulcer, showing the characteristic cell-masses, with peripheral columnar cells in the

had recurred on the site of a previous removal. The eye had been removed; and I remember that the orbit was occupied by a fungating and ulcerating mass, looking not unlike exuberant granulation-tissue.

Material was taken from the advancing margin, as well as from the fungating mass. The microscopical appearances were a repetition of what has been before described. In the material from the advancing margin, the extreme vascularity of the corium formed a special feature. Below and remote from the Malpighian layer, the characteristic new growth was seen, in some sections circumscribed, in others following the reticular type. There were no special appearances suggesting the origin of the growth. The material from the fungating mass showed an unique specimen of a luxuriant development of the characteristic cell-growth of rodent ulcer. Gigantic sharply circumscribed cell-masses occupied the meshes of a scanty fibro-cellular stroma. This appearance has been figured. There were no "nests".

In examining the facts in the five cases just recorded, one cannot help being struck by the conspicuous absence of the two phenomena which are amongst those admitted as most distinctive of the ordinary type of epithelioma—namely, the characteristic activity of the Malpighian layer, with its interpapillary prolongations gradually increasing in length, and the well known cell-nests, or "globes epidermiques". Although anyone, in looking through these specimens, might challenge the thickness of the Malpighian layer in places, I would maintain that such conditions of the Malpighian layer, as are to be seen in some of these five specimens, are not in the least typical of ordinary epithelioma, and may be shown to exist in almost any chronic inflammatory process affecting the skin, while, in numerous instances, the Malpighian layer was unusually thin and attenuated, and this in the immediate neighbourhood of recent ulceration. In three out of the five cases, cell-nests were entirely absent. In the other two cases, there were a few atypical, nest-like bodies, the nature of which I have before alluded to. In attempting to associate the new growth with any special structure of the skin, I am tempted to think, from the appearances where the growth was very superficial, that there was evidence forthcoming to identify it with the external root-sheath of the hair-follicles. In support of this must be mentioned, first, of all the outgrowths from the external root-sheath exactly corresponding in shape, and arrangement of cells, to the glandiform masses of the new growth. The vertical arrangement of the peripheral cells is highly suggestive of their descent from the palisade layer of the external root-sheath, and, in this connection, it is interesting to remark that, in molluscum contagiosum, a disease which Virchow first pointed out, was connected with the external root-sheath of the hair-follicles. We have cell-masses, with peripheral columnar and vertically placed cells, very similar to what is seen in typical rodent ulcer. Virchow at first called molluscum contagiosum, epithelioma molluscum. If, as said before, the nest-like bodies be accepted as due to abortive hair formation, this fact would at once identify the new growth with hair-structure. Again, the groups of pigmented cells lying in the midst of the cell-masses, seem to point to abortive hair formation. In the case in which pigmentation was most marked, there was also much pigmentation of the Malpighian layer. It is certain that in degenerative changes of the hair-follicles, such as occur in lupus, one may often recognise a group of pigmented cells in the position of the aborted hair. There was no evidence to show that the pigmentation was in any way connected with hæmorrhage.

Lastly, the extremely superficial distribution of the new growth, at least in its early stages, seems to identify it with some superficial skin structure, and, as may be seen, above the level of the sweat-glands.

The wandering, superficial character of the ulceration, so characteristic of the early stages of rodent ulcer, is probably due to the resistance offered by the tough, fibrous character of the skin at this level, and especially by that condensation of it which forms the fibrous coating of the hair-follicles. It is when this barrier is passed, and the growth invades the looser connective tissues, that it spreads rapidly.

Remak, in 1854, was, I believe, the first to put forward the hair-follicle theory of origin of rodent ulcer.

Drs. Tilbury and Calcott Fox supported it in a paper, published in the *Transactions of the Pathological Society* in 1879. While I was employed in writing this paper, Mr. C. Crooke, of the Leeds Fever Hospital, forwarded to me, through Dr. T. C. Fox, an interesting paper, accompanied by microscopical sections, read before the West Riding Medico-Chirurgical Society, in which he supported Drs. Tilbury and T. C. Fox. It may be noted also that even Dr. Collins Warren found the new growth to be continuous with the exterior root-sheath. In one case there is thus a considerable array of facts forthcoming to support the hair-follicle theory, and my impression is, that the evidence would be much stronger, if typical rodent ulcer were examined in their earlier stages, before they had eroded through the tough fibrous layers of the corium, and, so to speak, changed their type. Who, for instance, in examining material of such as that from Case v, would be able to form a conjecture as to its origin?

I cannot close this paper without attempting to combat the theory which has recently been advanced by Dr. Thin, namely, that rodent ulcer is essentially an adenoma of the sweat-glands. Dr. Thin instances a case recorded by Thiersch where the evidence that the morbid growth begins in the sweat-glands is unmistakable. He also instances the well known case described by Verneuil, where the sweat-glands were believed by that observer to be the starting point of an ulceration. I cannot do otherwise than accept Thiersch's case as one where the evidence is, as said, unmistakable. I would accept it as an exceptional instance. Verneuil's case I quite recognise with Dr. Thin, to be one of rodent ulcer, but with the greatest deference I submit that Verneuil has possibly misinterpreted the facts, and the forms he gives (in diagram) as those of dilated and exuberant sweat-tubes are really the forms of rodent ulcer growth, such as figured in Case i. It must be remembered that this case of Verneuil's was recorded nearly thirty years ago, a time when microscopical observation was more likely to be misled by appearances than it is even now. I regret that time does not allow of such careful examination of Dr. Thin's arguments as they deserve. I may state, however, that Dr. Thin reports on four cases of rodent ulcer; in two of which sweat-glands were found to be the seat of morbid changes, the chief of which consisted in dilatation and new cell-growth, although this new cell growth was not traced in direct continuity with the specific cell-growth of the disease. Dr. Thin goes on to say, great weight is to be attached to evidence that the sweat-glands in rodent ulcer are prone to take on morbid action, even when they are not in actual contact with the cell masses which constitute the essential elements of the disease.

To this line of argument it may perhaps fairly be objected that it hardly excludes the fallacy that the affection of the sweat-glands may be secondary to the first abnormal departure from a healthy condition which has disappeared by ulceration. Again, Dr. Thin brings forward the palisade arrangement of cells, and the boundary of the cell masses by a membrana propria as identifying them with sweat-gland structure; but I would ask, are the cells lining the sweat-tubes always columnar; are they, at any rate, of a more columnar type than the first layer of the Malpighian cells, or the peripheral layer of the external root sheath? And as to the membrana propria, could it be possible to distinguish between this and its homologue, the vitreous membrane of the hair-follicle, in the absence of other means of identification? It seems to me that these arguments fit the hair-follicle theory at least as well as the sweat-gland theory.

My statement then, with regard to the implication of the sweat-glands in rodent ulcer would be, that they become affected secondarily, that is to say, their cells take on a proliferous action in consequence of the general cell infiltration of the surrounding tissues which accompanies the new growth; that these degenerate sweat-glands ultimately assume a cancerous character is most probable. The appearances are never that repetition of typical gland structure to which the name adenoma might be applied. From appearances such as those figured by Thiersch, it appears that primary degeneration of the sweat-gland does occasionally occur.

In conclusion, I must admit the difficulty of pronouncing definitely as to the starting-point of rodent ulcer, and this, I think, is due to the fact that material from rodent ulcer is examined generally years after the commencement of the disease, at a time when almost every structure of the skin has put on some change, as a consequence of the irritation of the presence of a morbid growth, or the cell infiltration of the connective tissue accompanying it.

In saying that the external root-sheath is the part specially affected, one naturally asks, are there any facts concerning the structure or function of the cells of the external root-sheath apart from those of the Malpighian layer, which would account for special peculiarities of changes taking place in it?

Lastly, one may ask if, after all, the characteristic appearances of rodent ulcer may not rather be due to the process—whether, in fact, they do not depend on a type of cancerous degeneration, differing from that of ordinary epithelioma.

Dr. THIN (London) remarked that while not disposed to overlook the value of Dr. Sangster's opinions, founded as they were on a careful examination of a large number of cases, carried on over a considerable period, he was still not satisfied that the sweat-gland theory had been overthrown. In this investigation the diagnosis must at present rest, not on the clinical evidence, but on the results of histological examination. Clinically, there were cases in which it was clear enough that we were dealing with rodent cancer, just as there were others in which it was evident that we were dealing with epithelioma; but there were also cases in which the diagnosis between the two forms of cancer was

uncertain until it was decided by microscopic examination. He quoted one in point, in which a case diagnosed as ordinary epithelioma was found to be rodent cancer. In the large majority of cases of rodent ulcer, the elements in which the disease originated were destroyed before an examination was made, but there were a few cases on record in which the connection with the sweat-glands was satisfactorily shown. This being so, the presumption that, in other cases, the sweat-glands formed the starting-point was very strong, as it was not likely that nature would produce a special kind of pathological product out of two distinct kinds of elements. His objection to the observations of the authors referred to by Dr. Sangster, which went to show that the growth originated in the outer root-sheath of the hairs, was that they resembled ordinary epithelioma with rodent cancer. Nor did the evidence offered on this point appear to him satisfactory. On the boundary zone of a rodent cancer, although the hair-shafts fell out, there was a continued abortive attempt to form new hairs, leading to irregular epithelial knobs, which projected from the remains of the hair-follicle. Although the external cells of these knobs had a more or less palisade-like appearance, this was only what would, under the conditions, be expected, and was not sufficient to identify the outgrowths with the cancerous masses which were found near them. He did not attach any value to particles of pigment found in the midst of the regenerating cancerous cell-groups.

Dr. SANGSTER, in reply, said that his cases were diagnosed as rodent ulcer by certainly competent clinical authority. While endeavouring to settle the question as to the difference between rodent ulcer and ordinary epithelioma, we must be content at first to accept from clinical examples of what they call rodent ulcer. In the cases selected, no doubt was expressed. He admitted that what Dr. Thini said was correct, namely, that the outgrowths from the hair-follicles and the pigmentation, such as he had described, were not special to rodent ulcer; but if these were closely associated with the new growths, they being so, in some way, it seemed to him that the balance of evidence was not in favour of the primary affection of the sweat-glands.

FIVE CASES OF SARCOMA OF THE BLADDER.

Read in the Section of Pathology at the Annual Meeting of the British Medical Association, in Worcester, August 1882.

By W. ROGER WILLIAMS, F.R.C.S.,
Surgical Registrar to the Middlesex Hospital.

But little attention has been paid to the subject we are about to consider since Civiale wrote of it, a quarter of a century ago, "Rien n'est plus obscur que l'histoire des tumeurs fongueuses de la vessie" (*Traité Pratique sur les Maladies des Organes Génito-urinaires*, tome iii, p. 96).

In the *Transactions of the Pathological Society of London*, Dr. Sydney Coupland has recently recorded two interesting cases of this kind.

Notwithstanding all that Walshe and others have advanced to the contrary, I regard Civiale's classification of vesical growths, though based solely on the vague notions of a practical surgeon, as decidedly superior to any of his predecessors; since he recognised, in many of the so-called cancers, growths of a comparatively innocent nature, and amenable to surgical treatment. These he termed "fungus". "J'appelle fungus ou polypes les tumeurs qui naissent de la face interne de la vessie, et dont la nature varie trop pour qu'on puisse rien établir de général à cet égard." (*Op. cit.*, p. 97.) The vagueness of this definition no doubt rendered his classification liable to abuse; but I think Walshe very unjust in describing it as an attempt to pass off cancers as fungi. (*The Nature and Treatment of Cancer*, 1846, pp. 306-307.)

Last February, I exhibited a specimen of this kind at the Pathological Society of London, which was of a sarcomatous nature, a disease of which little mention has been made in this situation. As far as I was able to ascertain, no other example of the kind had hitherto been brought before that Society. I believe, however, the disease is not so rare as this fact seems to imply; and have since collected four other examples of it. Such cases are almost invariably regarded as cancerous, malignant, and incurable. It is my object to show they are neither cancerous, nor malignant, and, consequently, not wholly beyond the reach of surgical treatment.

In such cases, it may be as well to state that, by a cancerous growth, I mean a malignant one, composed of a fibrous network containing cells; and by the term malignant I mean infective.

It is not always so easy as is generally imagined, to distinguish between carcinoma and sarcoma, merely by the examination of small sections of the tumour under the microscope. The tendency of some pathologists to rely exclusively on the histological analysis, in

determining the nature of morbid growths, is, I believe, a delusion, and the source of many errors. I would insist strongly on the importance of taking into consideration all the circumstances in every case.

It has been stated that the essential distinction between carcinoma and sarcoma is a difference in the origin of their component cells—the one from epithelial, the other from connective tissue elements. Unfortunately, this is a merely verbal distinction of no practical value whatever, since, with the microscope, we cannot determine the origin of this, that, or the other cell. Indeed, the only certain knowledge we have on this subject is, that all cells originate from the ovum; the rest is pure hypothesis, and ought to be regarded as such.

The histological characters of the five specimens I am about to describe have so much in common, that separate descriptions of them would be unnecessary. Their structure consists almost exclusively of cells; this fact stands out above all others. These cells are for the most part rounded, granular, and twice or thrice as large as leucocytes. The logwood-solution stains them rapidly and deeply. Each one generally contains two or more indistinctly seen nuclei. Even the thinnest sections present little besides these cells. There is complete absence of anything like a fibrous network, and of the empty alveoli, so characteristic of cancer under such circumstances.

The cells are not easily removed; but, when this has been effected by pencilling, a finely granular or reticulated stroma is all that is left. In many specimens, a band of fibrous tissue may be seen here and there, but never presenting an alveolar structure. These are connected with the thin fibrous capsule, which may be found, on careful examination, lining the less exposed parts of the tumours. The blood-vessels are numerous and large, ramifying in the fibrous bands, and unsupported amongst the cells.

So much for the microscopic appearances. The naked-eye appearances are, I think, hardly less conclusive.

I will now proceed to give a brief description of each case.

CASE I. A married woman, aged 50, anæmic, but otherwise healthy looking, was admitted into the Wigan Infirmary on July 21st, 1881, under the care of Mr. Barnish, with history of bladder-disease of two years' duration. She died on July 30th, with symptoms of collapse and exhaustion. At the necropsy, the bladder was found to contain a fleshy, reddish-brown, fungoid growth, about the size of a hen's egg, attached by a short, thick pedicle to its base, in the vicinity of the orifice of the left ureter, the area of insertion being of rather larger size than half-a-crown.

The surface of this growth presented an irregularly lobulated appearance, sinuous fissures penetrating its substance to various depths in different directions. Its most exposed parts were superficially eroded. On its left side, the wall of the bladder was ulcerated, soft and pulpy, as if from incipient extravasation.

Several small growths of similar description were found near the main arc, and quite separate from it. The attachment of the latter was immediately over the vagina and cervix uteri, but the disease had not invaded either of these organs; indeed, it had not even penetrated the entire thickness of the vesical wall. The peritoneum was normal, including Douglas's pouch. In short, there was no cancerous infiltration. A few of the presacral lymphatic glands were slightly enlarged. Microscopical examination revealed only hyperplasia.

As far as could be ascertained by laying open the abdomen, no other parts were invaded by the disease. A complete necropsy was not allowed. No symptoms of internal recurrence were noticed during life.

CASE II. A bootmaker, aged 66, pale, but not cachectic, was admitted into the Middlesex Hospital on March 2nd, 1882, under the care of Mr. Lawson, with symptoms of bladder-disease of one year and a half's standing. He had a firm, raised, non-ulcerated growth, about the size of half a walnut, over the right external inguinal ring. There were no enlarged glands in its vicinity. It was not examined microscopically. The patient rapidly lost strength, and was in danger of dying of exhaustion, when, as a last resort, median cystotomy was performed on May 3rd. The next day he died, from the shock of the operation.

His bladder was of medium capacity, but hypertrophied. With the exception of the prostatic region, and a small space near the summit, the whole of its mucous membrane was invaded by a flat, soft, purplish-brown growth, projecting about half an inch above the normal level of the mucous membrane. Its raised, knotty, and rugose aspect looked, at first sight, not unlike that of an epitheliomatous ulcer. Closer examination revealed the fallacy of this appearance, which was caused by the presence of a number of fungoid, pyriform, and rugose outgrowths, not larger than grapes, closely packed together, and in places partially adherent. In their midst, many small islands of perfectly normal mucous membrane could be detected. Some of the more exposed parts of

these outgrowths were superficially eroded: otherwise, there was no ulceration. Their attachment to the wall of the bladder was quite superficial. Neither the rectum, peritoneum, nor other adjacent structures were invaded. The prostate was slightly hypertrophied, its middle lobe forming an obvious projection; otherwise, it was normal. A few of the presacral lymphatic glands were a little enlarged; their condition was that of simple hyperplasia. The internal organs were carefully examined by Dr. Fowler, but no recurrence of the disease was discovered.

CASE III. This patient was a man, aged 52, admitted into the Middlesex Hospital on December 8th, 1862, under the care of Dr. Stewart, with acute double pneumonia, of which he died on December 16th. His bladder was large and dilated; filled by an irregularly lobulated, soft growth, about the size of a man's fist. This was attached by a very short and broad pedicle to the posterior wall of the organ, behind the orifice of the left ureter. It presented a rugged and ulcerated surface. Several smaller growths, of a similar nature, were seen near it.

Although the disease had attained such a large size, it had not invaded any of the adjacent parts.

A complete *post mortem* examination was made, but no recurrence was discovered. The specimen is preserved in the Middlesex Hospital Museum, No. 43 of the bladder series.

CASE IV.—There is no history of this case. The specimen is No. 42 of the bladder series in the Middlesex Hospital Museum. It is a small male bladder, containing a compact fleshy growth, about the size of a bantam's egg, attached by a short thick pedicle, occupying an area the size of half-a-crown, to the outer side of the orifice of the right ureter. From the summit of the growth hangs a narrow process, about five inches long, coated with phosphates, of the same structure as the main tumour. There are no other growths. The rest of the bladder is healthy. None of the adjacent structures are invaded by the disease. In the catalogue no mention is made of recurrence in the internal organs.

CASE V.—The only history I have of this case is, that the patient was an old man, who died of exhaustion. The specimen is No. 41 of the bladder series in the Middlesex Hospital Museum. The vesical mucous membrane is studded with soft, ulcerated, shaggy growths. The largest, about the size of a hen's egg, projects from the middle of its posterior wall. The prostatic region is the only part not invaded. The disease has not involved any of the adjacent organs. There is no history of recurrence in other parts.

It is remarkable in these cases, although we have to do with advanced types of disease, that, in not a single instance, has the growth spread beyond that part of the vesical wall in which it originated. In every case, this was in close proximity either to the rectum, uterus, vagina, or peritoneum; yet, without exception, these parts escaped. In short, there was no malignant or cancerous infiltration.

Slight enlargement of a few presacral lymphatic glands was noticed in two cases; in both, the microscope revealed only hyperplasia.

But the most important fact in the history of these growths, in which they differ so remarkably from encephaloid cancers, is the complete absence of recurrence in the internal organs and in other parts of the body.

For these various reasons, therefore, I regard them as neither cancerous nor otherwise malignant; and, as such, in their earlier stages, amenable to surgical treatment. Every endeavour should be made to detect such growths at an early period, when I believe them to be perfectly curable. The prognosis seems to me to depend on the duration of the disease.

THE USE OF DILUTE MINERAL ACIDS IN THE TREATMENT OF CARIES, NECROSIS, AND EXOSTOSES OF THE EAR.

Read in the Section of Otology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By URBAN PRITCHARD, M.D., F.R.C.S.,

Aural Surgeon to King's College Hospital, etc.

THE subject which I desire to bring before your consideration is the use of dilute mineral acids, especially nitric acid, as a solvent in cases of caries, necrosis, and exostosis of the ear.

That there is nothing absolutely novel in the use of mineral acids in somewhat similar conditions, I am quite aware; for in cases of necrosis in other parts of the body, they are often extensively used as solvents; and, even in the ear itself, acids, more or less strong, have been used, both as an application to carious surfaces, and also as a solvent of metallic foreign bodies. It is not, therefore, to the fact of the use of

acids for these purposes that I wish to direct your attention; but rather, knowing from experience their extreme value in treatment, to set before you the distinct aim I have in using them, and also to describe my *modus operandi*. In both of these I may, perhaps, lay claim to a certain amount of novelty, for in them I differ somewhat from former workers.

I propose to speak of this mode of treatment: 1, in cases of caries and necrosis; and 2, in cases of exostosis. In order to show my meaning more clearly, let us consider briefly the course of these diseases, and classify roughly their different stages.

Periostitis and otitis, so common in the course of suppurative disease of the tympanum, frequently result in caries or necrosis, and then the surgeon's most strenuous attempts to arrest the otorrhœa are often unavailing. And even though he succeed in stopping this discharge, there is still danger of the mischief breaking out again, or, what is worse, of its affecting the deeper parts. Thus it occasionally happens that a case of otorrhœa is arrested, the meatus and tympanum becoming apparently healthy, when suddenly severe pain in the mastoid region supervenes, followed by all the signs and symptoms of necrosis of that portion of the bone. Or, again, other serious complications, such as pyæmia, meningitis, or cerebral abscess may arise, any of which must cause extreme anxiety to the surgeon. Indeed, I know of no form of ear disease which is so tedious and so disheartening as these cases of caries and necrosis of the temporal bone, especially when occurring in a very strumous patient, as is frequently the case. Under these circumstances, the surgeon is too often led to depreciate the value of treatment, and to form a far more unfavourable prognosis than is justifiable. Now, as a matter of fact, a very large number of these cases do recover, as far as the disease itself is concerned; persistent treatment usually yields very satisfactory results, and nature comes to the surgeon's assistance by forming barriers of inflammatory thickening all round the diseased spot, which serve to ward off dangerous extension of the mischief. My advice is, therefore, to persevere in treatment, and, while warning the patient that the case must necessarily be tedious, and attendant with some danger, yet that the result may be viewed hopefully, for the chances are greatly in favour of recovery.

For the purposes of treatment, it will be well to divide the disease into the following classes:

1. Acute otitis or periostitis, accompanied by much pain, and other inflammatory symptoms.
2. Subacute or chronic inflammation of the bone, with exuberant granulations or polypi, but no actual proof of caries or necrosis.
3. The same as No. 2, plus evidence of a carious surface, or necrosis of the walls of meatus, tympanum, or internal ear.
4. The disease when implicating the mastoid process.

In the first class of cases, where there are acute inflammatory symptoms, the treatment should be much the same as that of acute otitis; but the depletion should not be carried too far. If the pain be very acute, two or three leeches in front of the tragus, hot fomentations (especially poppy-head fomentations), warm injections of soothing, hot poultices, and a smart purgative will be required, with an opiate or chloral to induce sleep if necessary. Should the symptoms be less acute, a blister behind the ear, kept open by means of savin ointment, is very valuable, together with a zinc and carbolic acid injection. Frequently, these are enough to remove all the acute inflammatory symptoms; and then a generous diet, with cod-liver oil, quinine, and phosphates, etc., are of much value.

In the second class of cases, where there are no acute symptoms, or when these have passed off, leaving granulations and polypi, with a copious purulent, more or less offensive, discharge. Then, blistering behind the ears (kept open if necessary), nitrate of silver applied to the granulations or to the remnants of polypi after removal, together with zinc and carbolic (or boracic) acid injections, form the best local treatment. But careful search should be made for actual necrosis or caries, especially at the site of the granulations which often surround a carious spot. Then the case would come under the third heading.

In the third class, when we have distinct evidence of necrosis or caries, or even when we have good reason to suppose that such does exist, the use of dilute mineral acids, preferably nitric, I find to be of great service. If there be merely a carious surface, as is frequently the case, then acid seems to dissolve the dead particles, and induce a healthy action.

This treatment may be advantageously combined with applications of nitrate of silver, or other caustics, to the granulations, etc. In this form of granulation, though not in others, I prefer nitrate of silver, either in a strong solution or solid.

When using the solid silver, I prefer it fused on the point of a probe; a very convenient way of doing this is as follows. Heat the end of a probe to redness in a spirit lamp, then plunge it into powdered nitrate

of silver; on withdrawal, a fused bead will be found at the end. This is more convenient than the usual plan of fusing the silver in a crucible, and then plunging the probe into the molten mass.

Should there be a piece of necrosed bone, more or less loose, but not free enough to be removed at once, then again the acid injections will be found very valuable. The necrosed bone is in a condition to be readily decalcified by the acid; and, when the piece is thus softened, it may easily be removed by forceps, or, as frequently happens, it is unconsciously syringed out by the patient.

This last spring, I had a case in which I was just able to touch a small sequestrum in the meatus, but could not grasp it firmly enough to extract. After several unsuccessful attempts, I desisted, and ordered the patient to use acid injections. At the end of a fortnight, I found, on again examining the ear, that the whole of the necrosis had disappeared, leaving a healthy-looking cavity, which finally healed up satisfactorily.

As already stated, I prefer using nitric acid as my solvent, having found that acid most useful in decalcifying the petrous bone, when making sections of the cochlea. The strength should be from $\frac{1}{4}$ to $\frac{1}{2}$ per cent. of the pure nitric acid, and to this I usually add a little carbolic acid to render the solution more thoroughly antiseptic.

I order the patient to have the ear syringed out with this solution, warm, two or three times a day, cautioning him to stop or reduce the strength if any inflammatory irritation be produced.

In the fourth group of cases, where the mastoid portion of the bone is the seat of the disease; if there be not already an open sinus at the back of the auricle, an incision should be made right down to the bone, and the wound kept open by means of carbolised lint or drainage-tube. Where there is only slight periostitis, this may suffice to arrest the disease; but, if caries or necrosis be present, then the case is likely to be a tedious one.

The wound or sinus, whichever it may be, should be syringed out two or three times a day with the acid solution, and, if there is any communication through the bone between the sinus and the tympanic cavity or meatus, as often happens, then the acid solution should, if possible, be syringed right through, both from meatus to wound, and from wound to meatus.

In such cases, I have found this mode of treatment most satisfactory, as might be anticipated from the nature of these sinuses and bony cavities, which are otherwise so difficult to get at.

I might have described other stages and complications of this disease, but have limited myself to those directly bearing upon my subject. I wish it also to be distinctly understood that I rarely, if ever, treat a case of bone-disease with local treatment alone, because I am convinced of the importance of constitutional remedies, without which local treatment is, to my mind, almost useless.

I now come to the use of acid solvents in cases of exostoses; and, at starting, I am anxious that I should not be understood to advocate its use except in a very small minority of these cases, for, as a rule, I deprecate any interference with exostoses of the meatus; but there are certain cases in which it is advantageous or even necessary to remove these bony growths, and then it is that I advocate the assistance of acid solvents. Thus, if a single exostosis blocks the meatus entirely, making the patient practically stone-deaf, then I think its removal should be attempted, provided that there is no reason for supposing any other cause of deafness exists.

Again, occasionally one or more exostoses, either completely or almost completely, block the meatus, complicated behind with suppurative disease, caries, or necrosis.

Here the removal, or partial removal, of the bony obstruction is imperative, and in these cases the acid solution may be of great value.

A sketch of two such cases, which have been under my care within the last twelve months, will illustrate what I wish to convey far better than any general remarks.

The first case was one of single exostosis, completely blocking the meatus, rendering the patient quite deaf on that side, without any other cause of deafness.

A. B., aged 18, a healthy-looking student at Cambridge, had complained of occasional deafness of the left ear four years ago; but during the last four months, the deafness had been constant and complete. He never had any pain or discharge in that ear. The speculum immediately revealed a single exostosis completely blocking the meatus not far from the opening. On examining it with a sharp probe, the surface was found to be about the hardness of cartilage, but the deeper portion was quite bony. As the patient was very anxious to have it removed, and there was no reason for supposing that any other cause of deafness existed, I agreed to operate upon it.

First Operation.—When he was under the influence of ether, I introduced, through a speculum, a long stemmed burr which was attached to a dental engine. By means of about an hour's drilling, I

removed a portion of the exostosis, sufficient to admit a flat probe by the side of it. When the patient had recovered from the ether, I found the hearing distinctly improved, but not to any great extent. I then ordered the acid injections, watching the effect carefully. At the end of a month, although the wound in the exostosis had completely healed, I was delighted to find the tumour loosening, and therefore, at once, proceeded to operate again.

Second Operation.—When the patient was fully under the influence of ether, I introduced a dentist's elevator between the exostosis and the wall of the meatus, succeeded in breaking it off, and afterwards extracted it whole. After its removal, I syringed away a quantity of epithelium and cerumen, and the patient immediately recovered his full hearing power. No trouble was experienced afterwards; and in six months all trace of the spot where the tumour had been had disappeared.

The removal of this exostosis was rendered more easy than usual on account of its being pedunculated, but I was not able to take advantage of this until the tumour was somewhat softened by the acid.

The second case was that of an exostosis which had gradually blocked the meatus entirely, there being an old standing otorrhœa and a suspicion of caries deeper down, the exostosis itself being no doubt due to the irritation produced by the suppurative disease.

Miss N., a young lady whom I saw in consultation with Dr. Nicholson (Brighton) last autumn, complained of long standing otorrhœa on the right side, of which she had taken little notice until the last month or two, since when she had suffered intensely from several attacks of severe otitis, preceded by arrest of the discharge. On examining the ear, a large exostosis was found, almost completely blocking the right meatus, and rendering the exit of the pus almost impossible. The exostosis was hard, and very tender to the touch; moreover, there was evidence of acute inflammation of the parts behind it. In this case, an attempt at removal was the only chance of saving life, and therefore I strongly urged operative interference.

Operation.—When the patient was under the influence of ether, I proceeded to drill two holes in the exostosis by means of the dentist's drill, hoping to be able to break it off afterwards by means of the elevator, or by the gauge and mallet; but my efforts were unsuccessful. I then tried sequestrum forceps, which I was now able to introduce, but entirely failed to break off any considerable portion. I was therefore obliged to be satisfied with having made a freer opening for the exit of the discharge. I then ordered the acid injections to be used; and on my next visit was pleased to find that the vitality of the exostosis was being destroyed. After a time, nearly the whole of the tumour came away, partly in small pieces, and I was then able to proceed with the treatment of the otorrhœa and granulations which I found in the tympanic cavity. These have now almost entirely disappeared; and when I see my patient again, I expect to find the surfaces completely healed.

In this case, the acid injections probably saved the life of the patient, and undoubtedly saved a series of operations which would, at any rate, have been necessary.

In conclusion, I trust that I have sufficiently established the claims of this mode of treatment to make it worthy of a more extensive trial in the hands of my esteemed confrères.

Dr. KIRK DUNCANSON (Edinburgh), after expressing the interest with which he had listened to Dr. Pritchard's paper, related two cases, in one of which he had found marked benefit from the use of dilute nitric acid in cases of simple exostosis, applied to the tumour in the meatus; and in the other from a dilute solution of chloride of zinc, applied to the inflamed cutaneous covering of a triple exostosis.

Dr. PIERCE (Manchester) said that his experience was in accord with that of Dr. Pritchard in the use of the mineral acid for the treatment of exostosis, caries, etc. Dr. Pierce reminded the Section that he had found the use of strong nitric acid applied (after the preliminary use of iodine) to exostosis very efficient, and had mentioned this in his paper on exostosis of the auditory meatus, read at the meeting of the Association in Cork.

DEATH FROM CHLOROFORM.—A case of death from the administration of two drachms of chloroform by a dentist for the extraction of teeth is reported in *Omaha Herald* of April 28th, 1882. The patient was a woman, aged 35, and had a diseased heart and kidneys: three weeks before she had taken chloroform, which was administered by the same dentist, without any bad effect.

THE Town Council of Brighton have increased the salary of Mr. Butler, medical officer to the Sanatorium, from £100 to £150 *per annum*.

A CASE OF EXTENSIVE DISEASE OF THE LEFT TEMPORAL BONE, WITH HERNIA CEREBRI.

Presented to the Section of Otolary at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By F. M. PIERCE, M.D., L.R.C.P.Lond.,

Senior Surgeon to the Institution for Diseases of the Ear, Manchester.

THE subject of this history was L. W., aged 34, mother of seven healthy children. Her father, aged 64, was alive and well; her mother died at 54, "with abscesses behind the ear and on various parts of the body". She had otorrhoea from childhood in the left ear. Two years ago, she had severe earache. In June 1881, she observed a hard livid swelling, of the size of a florin, situated over the left temporo-maxillary articulation, extending from the tragus, over the middle of the zygoma. Motion of the jaw was painful. A profuse, grey-yellow, bloody purulent discharge escaped from the left auditory meatus. The hearing distance was $\frac{1}{2}$; but the tuning-fork was heard on the vertex in the left ear only. The entire meatus, except the posterior wall up to the membrana tympani, was the seat of caries. The meatus was full of large granulations. She had pain over the left side of the chest and parietal bone, extending to the vertex. There was intermittent rushing tinnitus aurium. The membrana tympani was perforated, and covered with granulations, all of which were removed and cauterised repeatedly. At the end of two months, she had left facial paralysis. The movement of the jaw was painful, and much restricted. There was no vertigo nor vomiting. She had pain at the back of the neck. Iodide of potassium, Donovan's solutions, and all kinds of tonics, together with various local applications, failed in any degree to check the destructive process. There was no swelling of the cervical or other glands.

At the end of August, the area of disease was of the size of a crown-piece, circular, and falling in from rapid disintegration of the anterior wall of the meatus, involving the cartilaginous and bony portions. There was no loss of taste or smell. The left Eustachian tube was pervious. There was no hæmorrhage from the temporal artery or the meatus. The patient went home for a month, and neglected treatment. On her return, the entire meatus up to the membrana tympani had fallen in, disclosing the capsular ligament, condyle, and posterior edge of the ramus of the jaw. The temporal artery was evidently occluded. The disease rapidly extended backwards, amputating the auricle, and including the entire mastoid in the necrotic process. The posterior auricular artery was also obliterated. Up to the time of death, no coma, convulsions, or pyæmia occurred. The destructive process involved parts of the sphenoid, pterygoid, temporal, parietal, superior maxillary and inferior maxillary bones, the greater part of the parotid gland, the ossicula, and membrana tympani. Eventually, the dura mater and left temporo-sphenoidal lobe of the brain protruded through the parietal bone. Prosis of the left eyelid occurred, and right hemiplegia, and she died on January 25th, 1882.

A NEW MATERIAL FOR CASTS AND MODELS.

By ANTHONY BOWLBY,

East Dereham, Norfolk.

I RECENTLY exhibited at the Museum of the British Medical Association at Worcester some casts, made of a new material, and, as numerous inquiries have been made as to their composition, I trust that the following brief account of the method of manufacture, and of the materials used, may be of use. The latter are as follows: Swinburne's prepared gelatine, 8 oz.; French chalk, 14 oz.; honey, 26 fl. oz.; glycerine, 6 fl. oz.: that is, the proportion of 1 part gelatine, $1\frac{1}{2}$ French chalk, $3\frac{1}{4}$ honey, $\frac{3}{4}$ glycerine. Prepare a colouring solution: rub down half a drachm of carmine in half-an-ounce of water; to this add two and a half ounces of glycerine, and keep in a stoppered bottle; shake the mixture before use.

The French chalk should be perfectly white, and the honey of as light a colour as possible ("Furber's Strained Californian Honey" and "Narbonne Honey" are the best). The cost of these materials will be about 7s.

The implements required are two large china pudding dishes, and two saucepans large enough to contain the same. Put all the gelatine into one of the dishes, and add plenty of cold water. Leave it to soak exactly half an hour. While the gelatine is soaking, weigh out the French chalk into the other dish, and add the glycerine. Stand the pots containing the honey in some hot water till it is fluid enough to pour; then add it to the mixture of chalk and glycerine. Mix all well

together, and place the dish containing the mixture in a saucepan of boiling water; let it get nearly to boiling heat, and keep on stirring it gently.

To this mixture must now be added the colouring solution, sixty minims of which will make a good flesh colour. When the gelatine has finished soaking, turn it out into a clean cloth, and wring out every drop of superfluous water; put it back in the dish, and place the latter in a saucepan of boiling water, over a fire or gas jet.

As soon as the gelatine begins to dissolve round the edges of the dish, pour over it all the hot mixture of French chalk, etc., and keep on stirring for fifteen or twenty minutes over the fire till the whole is thoroughly homogeneous; then remove the dish, allow the liquid to cool to about the consistency of treacle, and pour it into the mould. It is better not to use the freshly prepared material for casts, but to pour it out into flat dishes, and, after it has set, keep it for a week or two before using, when it may be readily melted by putting the dish containing it into a pan of boiling water. Should the material have been kept very long, it may be necessary to add a very little water to facilitate the melting. Considering that it takes some time to set at the temperature of the body, it is not advisable to use the material for taking the mould, for plaster-of-Paris is in every way better. Moulds made of the latter material should be well dried and oiled, after which they should be painted with spirit varnish, and again oiled before use. The cost of the material is slight, and the time occupied in making a considerable quantity is about one hour, or rather more.

Casts thus prepared present a very great resemblance to human flesh, both in colour, texture, and translucency. They are very easily painted, and form an admirable groundwork for the depiction of skin diseases. As to their durability, I cannot speak with certainty, having none which have been made more than ten months. It is very necessary to keep them in a dry place. I shall be glad to show specimens to anyone who will call on me at St. Bartholomew's Hospital, and to supply any additional information.

ALOPECIA AREATA: A CLINICAL STUDY.*

By GEORGE THIN, M.D.

HAVING observed that in the roots of hairs extracted from the margins of patches of alopecia areata, and between the root-sheaths and the hair-shaft, objects coinciding in appearance with bacteria are to be found, if carefully looked for, I was led to try a local treatment designed with the purpose of destroying minute organisms, and of preventing their propagation from one hair-follicle to another. The result of this trial, apart from the confirmation it affords of the bacteria-theory, has been so satisfactory, that I am encouraged to bring it to the notice of the profession. The remedy employed is sulphur-ointment, freely used; the sulphur being intended to act destructively on bacteria, and the fat of the ointment to mechanically prevent their growth on the surface of the scalp. The effect of the remedy is illustrated by the following cases.

CASE I.—A. L., girl, aged 3 years. Seen February 26th, 1880. The disease had lasted a year, having begun by the loss of a few hairs at a spot on one side of the head. Shortly afterwards, a spot appeared on the vertex. The loss of hair continued to spread, somewhat slowly for the first six months, and afterwards more rapidly, until, when I saw her, the scalp was almost entirely denuded, the skin being smooth and shining like a billiard-ball. A fringe of hairs still existed around the nape and at several parts of the margin of the scalp. At several points on the bald scalp, there were small islands of a few hairs marking the angles formed by the coalescence of the advancing circles of hair-destruction. The disease was still progressing. The free application of sulphur-ointment over the whole scalp was directed, and the disease ceased to extend. This was definitely ascertained, as the islands of hair on the bald scalp were so small that the number of hairs in some of them could be counted. On April 5th, a few downy hairs were visible at some points; a still more decided growth was noted on April 19th; and on May 3rd the downy hairs were found growing strongly. On June 7th, when she was seen again, the scalp was covered with a young crop of healthy hairs.

REMARKS.—The patient was a fine healthy child. No medicines were given, and the arrest of the disease was simultaneous with the first application of the sulphur-ointment.

CASE II.—K. O., a married woman, aged 30. Seen April 19th, 1880. Her hair was black, and unusually coarse and strong. There was one patch of alopecia areata, about the size of a shilling; it had

* Read in the Section of Medicine at the annual meeting of the British Medical Association in Ryde, August 1881.

been only recently noticed, and was increasing in size. The treatment consisted in applications of carbolic oil, 1 in 10, for which was shortly substituted the free use of sulphur-ointment. On May 1st, it was definitely ascertained that the disease had ceased to spread, and downy hairs were observed on the patch. On May 12th, the patch was covered with fine hairs.

REMARKS.—This woman stated that she was subject to headaches. She had suffered from the disease two years previously; and her brother, living in the same house, had had it eight years previously. Cessation of the disease was simultaneous with the beginning of local treatment. No medicines were given, nor change of diet prescribed.

CASE III.—E. Q., girl, five years of age. A patch, the size of a shilling, was noticed a month before I saw her on April 20th, 1880, when it had increased to two inches in diameter. Sulphur ointment was applied, and the patch at once ceased to extend. On May 4th, no downy hairs were observed. The patient was not seen afterwards.

REMARKS.—The case was not sufficiently long under observation, but it was ascertained that, with the application of sulphur-ointment, the spread of the disease was arrested. No medicine was given.

CASE IV.—S. B., girl, aged 12. Seen June 1st, 1880. There were several patches on the vertex and occiput, which were extending rapidly. Sulphur-ointment was applied; and on June 7th, it was found that the patches had not enlarged. On June 26th, it was again noted that there was no extension, and downy hairs were growing on several patches. On July 10th, there was still no extension; and as there was erythema and slight papulation on one of the patches, which I attributed to the use of the sulphur-ointment, I directed it to be discontinued. On July 26th, she came again with two new patches, which were spreading rapidly. The sulphur-ointment was again ordered, and they at once ceased to extend. The application of the ointment was limited to the patches and their borders; and when she was seen on August 4th, a new patch, near the two which had been arrested since July 26th, was shown to me. She was seen again on August 16th, 26th, and September 10th. The patches had all ceased to extend, but the growth of new hair was not satisfactorily established, and I am apprehensive to which I shall afterwards allude—a condition resembling a shaven beard of some hours' growth—persisted on some of the bare spots. At this point, unfortunately, I lost sight of her, and the treatment was after a time discontinued.

I saw her again on April 14th, 1881. The patches on the top of the head had, I was told, all got well shortly after I last saw her, but one situated

plete. I found two new patches on the vertex; one with a shaven-chin appearance. The sulphur-ointment treatment was again applied; this time more directly under my own immediate supervision. I continued to see her frequently. On July 10th, I was writing (July 10th, 1881), that the disease was arrested. On all the patches, there was a growth of hair, and the growth was established sooner, and had been more complete, on the patches than on others. [The cure was complete.]

REMARKS.—The points of interest in this case. On some of the patches, the hairs had left behind them very short black points, which I took off that it was with much difficulty that I could get them off with forceps. On other patches, the skin was smooth, and the hairs were growing freely. Examination of the margins were frequently examined, and the growth was established sooner, and had been more complete, on the patches than on others. [The cure was complete.]

The patient was free from headaches. When I last saw her, she was in rather feeble health, and was suffering from headaches. These yielded at once to full doses of quinine.

The treatment consisted in the application of sulphur-ointment. The patches alone were treated with the ointment, and they may be described as having been treated with the ointment. The treatment was continued until the patches were completely cured. The patient was free from headaches. When I last saw her, she was in rather feeble health, and was suffering from headaches. These yielded at once to full doses of quinine.

The result was that, from a point at which the vitality of the disease had not been destroyed, the loss of hair began again to spread. This time, the application of the ointment was continued sufficiently long to produce a permanent cure.

CASE V.—J. F., a young man aged 18; seen August 2nd, 1880. Two round patches on the vertex, one an inch and a half, and the other three-quarters of an inch, in diameter. Another curve extended upwards from the nape over the back of the head. They were getting steadily larger. The ointment was applied, and the patches ceased at once to extend; and, on October 3rd, it is noted that they were covered with fine downy hairs.

CASE VI.—A. S., girl, aged 6 years. Seen August 3rd, 1880. The first area was observed two months previously on the vertex, and was then the size of a fourpenny-piece. This spot had grown to be a circular patch, two inches in diameter. A few downy hairs were observed on some parts of the patch, which, however, still continued to extend. There were three other smaller and more recent spots, well separated from each other, and one had just been observed for the first time. Sulphur-ointment was applied, and all the spots at once ceased to spread. On August 28th, fine downy hairs were observed on all of them.

On October 2nd, whilst the hairs continued to grow on all the old patches, she was brought to me with two new ones. The sulphur-ointment was applied to them, with immediate arrest of the extension; and it is noted, on December 4th, that the hair is growing freely on all the patches.

REMARKS.—A faint light rose-tint of the skin was observed on the new patches in this case, bounded by a thread-like border of a brighter tint.

CASE VII.—R. W., lieutenant in the navy, aged 31, a healthy strong man, was seen December 29th, 1880. Seven weeks previously, a barber, whilst cutting his hair, discovered five patches of alopecia in the head, and two in the beard. (The patient used the same brush for his head and beard.) The spots were treated by the surgeon of his ship with a solution of corrosive sublimate for a fortnight. He then went to the Royal Naval Hospital at Plymouth, where his head was shaved, and the spots treated with iodine and blisters, new ones in the meanwhile continuing to appear. After ten days of this treatment, he was recommended to me by my friend Dr. Messer, R.N., who also sent me an account of the case.

I counted twenty-two patches, varying from the size of a split pea to that of a florin. I found also a curve of hair-loss descending into the right moustache from its upper border. I sent him back to his ship, with instructions to rub sulphur ointment freely into all the patches on the head, to brush a 1 in 30 solution of carbolic acid into the patch of the moustache, and to treat it also by sulphur ointment—the treatment to be continued for six weeks. At the end of this period, he informed me, by letter, that the hair was growing freely on all the patches, and he was directed to discontinue the treatment.

General Remarks on all the preceding Cases.—I have not thought it necessary to lengthen this paper by giving a description of the disease in sufficient detail to enable the reader to form an independent diagnosis. I am content to state that the clinical evidence was complete, and the diagnosis unquestionable. Further, I may add that, in every case except the last one, my researches relative to the bacterium which I believe is to be found in the hairs, led to unusually extensive microscopic examination, with conclusive results as regards the absence of ringworm fungus.

The short stumpy hair-roots, found in some of the patches in the case of S. B., might have raised the question of diagnosis between ringworm and alopecia areata; but, even if it could have been raised, the microscopic examination settled the point.

Slight erythema, as observed in the case of N. S., I had previously noticed in another case; and the fact is worthy of special attention. It can be variously interpreted, but to me it is evidence of a cause of irritation on the surface of the skin or in the follicles.

The object of the present paper is, however, confined to one point—namely, to submit evidence which shows that a local application, of such a nature as to prevent the movement of germs, and to destroy their vitality, was sufficient to cure alopecia areata. In this case, there are many ways of attaining these results. In a severe case, in a middle-aged adult man, for example, treated by me, I succeeded in obtaining a satisfactory cure by the application of carbolic acid. The use of sulphur ointment is, however, simpler, and therefore I have used it in all the cases. I have not thought it necessary in the foregoing to give the exact nature of the application of the ointment.

It may be useful to state in a few words what I believe to be the bearing of these cases, and of their successful treatment on the germ-theory of the disease, as opposed to the nerve-hypothesis.

With one exception, that of K. O., the patients were all in fairly good health. This woman was subject to headaches; but this had long been the case, and the alopecia stood in no relation to them.

In the case of S. B., there was neuralgic headache when she came back a second time for treatment, which at once yielded to quinine. Of seven patients, one only (K. O.) was subject to headaches, a proportion by no means startling, if it were found in the first seven persons we may meet any day in the streets of London.

In one and the same patient (S. B.), whilst patches were being at once arrested by the application of sulphur-ointment, on another patch, so long as it was untreated, the disease continued to spread. What nerve-theory can explain a fact like this? What mysterious affection of the so-called "trophic nerves" of the hair-bulbs can be supposed to exist which should at once yield to the simple application on the skin of sulphur-ointment?

No actual disease of nerve-fibres has ever been shown in this disease, and its extension does not take place in accordance with nerve-distribution. The nerve-theory is simply a haphazard name given to what would more appropriately be termed the agnostic theory.

To understand how purely hypothetical this nerve-theory is, we have only to consider that the acceptance of a fungus or an organism as a cause of the disease would not leave a single fact in connection with the nervous system unexplained, which clearly shows that the theory has not got a single fact to support it.

To return to the practical aspects of the question. In prescribing the sulphur-ointment, I have always recommended its free use, and that it should be well rubbed into the skin, both on the patch and for at least half an inch round its margin, where the hair is to be cut and kept short.*

ACUTE STRANGULATION OF THE ILEUM BY A DIVERTICULUM.

By J. COCKLE, M.D., F.R.C.P.,

Senior Physician, Royal Free Hospital.

WITHIN a period of about fifteen years, several contributions have been added to the subject of "Intestinal Obstruction" by our very ablest men. But, valuable as these contributions unquestionably are, the writers would probably be among the first to admit that there are points in the clinical history of obstruction by bands and diverticula, that require to be elucidated by the record of successive cases. The final aim of this larger experience will be to ascertain the correlation that may exist between a particular group of symptoms and such obstruction, and to enable us to formulate a method of treatment to be adopted sufficiently early to warrant the anticipation of a successful result.

In furtherance of this end, the following case (from notes by Mr. F. H. Norvill, M.R.C.S., House-Physician) is submitted, in the hope that it may be found to embody some points of interest in the clinical history of this form of obstruction.

John H., aged 17, a coach-painter's apprentice, was admitted on Friday, June 23rd, 1882, about 11.30 A.M. On the evening of Tuesday, June 20th, the patient drank freely, and brought himself fully under the influence of alcohol, most probably for the first time. Previously to this date the patient had been in good health, and had not recently been guilty of any irregularity in diet.

On Wednesday morning, 21st, he awoke about 5 A.M., suffering from great pain, which was referred to the hypogastrium and right iliac region. The pain was sufficiently severe to compel the patient to remain in bed. Vomiting of a greenish fluid occurred before mid-day. In the course of the day the patient took a seidlitz powder and an ounce of castor-oil; but little, if any, of either of these remedies was retained. The pain lasted with undiminished severity the whole of Wednesday. There is said to have been an action of the bowels in the early part of the day.

On Thursday, the pain and vomiting continued. A medical man was called in, and in the evening the abdominal pain was less. On Friday, soon after admission, the following points were noted. The patient complained of pain over the abdomen, most severe in the hypogastric and right iliac regions. There was slight dullness over this

part of the abdomen, and on palpation there was a sense of resistance. The abdomen was tympanitic in other parts, and was uniformly, though not excessively, distended; decubitus was dorsal, with the knees flexed; the body was in a cold sweat; the hands felt very cold; the radial pulse was very feeble; the tongue was furred; there was no blue line on the gums; the heart sounds were normal; the lungs were resonant on percussion; pulse 152, temperature 101° Fahr.; breathing quick. The sites of hernia, common and uncommon, were examined with negative results. The patient said he had had no sleep since the onset of pain, which was not so severe as yesterday. He had not suffered from lead colic. At 4 P.M. the patient was conscious, in but slight pain; he had cold sweat on his face and trunk, and cold extremities. There was a radial pulse; temperature 101°, pulse 154; respiration 48 per minute. Since admission, the patient had been sick on an average every twenty minutes. The vomited matter was fluid and dark, non-feculent; the dark colour was due to blood; the patient died soon after 6 P.M. No urine was passed while in the hospital, and it was stated that little or none had been passed since Wednesday. There was absence of melæna, of dysenteric symptoms, and of visible peristalsis. As regards treatment, it is only needful to mention that a simple enema was given by the long tube, and without any result.

Necropsy forty-five Hours after Death.—The body was well nourished; the pericardium contained an ounce and a half of clear fluid; the heart and valves were healthy, weight eight ounces; the lungs showed some œdema; they weighed twenty-five ounces; the stomach and small intestine were distended with air; the large intestine was in the normal situation, and, with the exception of the cæcum, was empty and contracted. There was recent peritonitis, more or less general, most marked in the hypogastric and right iliac regions, where several coils of ileum were matted together by recent lymph, and so made adherent to the upper part of the rectum. On separating these coils of small intestine, the obstruction was readily seen to have been caused by a band. Examination of the seat of obstruction, after removal from the



Strangulation of Small Intestine by a Diverticulum. (The sites of strangulation are marked by two arrows.)

body, showed that a portion of the ileum, fourteen inches long, was effectually shut off from the remainder of the intestine, above and below. The obstructing band proved, on careful examination, to be a diverticulum of the ileum, communicating with the lumen of the gut in two distinct places, within an inch of each other. The diverticulum was provided with three pouches, and was proved to be continuous throughout and with the gut, by means of a blunt probe. In dimension, the diverticulum varied from the size of the vas deferens upwards. The lower constriction of the ileum was distant twenty-five inches from the ileo-cæcal valve. The obstructed part of the bowel was intensely congested, inflamed, covered, in great part, with thick lymph, and distended with effused blood. There was also some blood effused into the ileum beyond each constriction. The liver was normal; it weighed forty-eight ounces; the gall-bladder was full; the spleen was firm, it

* As I have stated elsewhere, my explanation of the alleged existence of a fungus (in the ordinary acceptance) in alopecia areata is, that the cases have been either erroneously diagnosed, or the microscopic examination has not been conducted with sufficient care. The examination of a large number of hairs from a considerable number of patients has satisfied me that the fungus described by Gruby does not exist.

The *Further Contribution on Alopecia Areata*, read in the Section of Medicine at the recent Annual Meeting at Worcester, contains additional evidence in support of the efficacy of the treatment described in this paper.

weighed three ounces and a half; the kidneys were normal, weight of right four ounces, left four ounces and a half. The bladder contained no urine. The brain was not examined. The specimen of the obstruction has been preserved.

Whatever the amount of suspicion that might have arisen in the earliest stage of this case as to the possible operation of lead-poison, I can entertain no reasonable doubt that the lad, on admission into the hospital, was fast sinking from the effects of sudden and acute obstruction of the intestine. And even now, the all-important questions were still pressing: What was the nature, and where the precise seat of the obstruction? Much caution was needed in giving a reply. All other probable causes having been negatived as far as possible, the diagnosis was supposed to lie between acute strangulating intussusception, and acute strangulation of the intestine by a band or diverticulum. The seat of pain in the right hypogastric and iliac regions; the dulness on percussion, and the sense of resistance on palpation detected over this area, on admission, and caused, as was subsequently found, by a coil of intestine, fourteen inches long, distended with blood—a most important point—seemed to be suggestive of an intussusception; but there was no discharge from the bowels. It was the absence of any discharge; the sudden accession of pain of almost unremitting severity; the early and nearly constant vomiting, the speedy change in the character of the ejected matters consisting now, in greater part, of blood; and, furthermore, the suppression of urine, that led me to believe the strangulation might be caused by a band. But I might, unconsciously, have been influenced by the fact of having seen more cases of obstruction from this cause than from intussusception. It will have been noted that no meteorism limited to either upper or lower abdominal zone existed, the abdomen being equably and not greatly distended.

The history of the case furnishes no ground, whatever, to suppose that any change in the physical condition of the bowel, whether from displacement or otherwise, had existed prior to the attack. Excluding any action of lead-poisoning, of which there was really no evidence beyond the one indirect fact of "occupation", the only direct exciting cause seems to have been the over-free use of alcoholic stimulus shortly before the outbreak of the symptoms. Whether, under its influence, any violent muscular efforts were made; or whether irregular peristalsis and tonic spasm of the bowel were provoked, in one way or the other, it may be assumed that a coil of intestine was suddenly forced beneath and entangled in the grip of the diverticulum.

The symptoms mentioned appear to me to indicate with tolerable clearness the nature of the obstruction. But I would not be understood to affirm, at least too strongly, that they are absolutely distinctive, or even that they possess all the certitude attainable. If it were so, a complex would become a simple problem. But, occurring suddenly in a lad in the midst of perfect health, and, according to the statement of the father, without any former illness in any way connected with the attack, they did unequivocally point to some internal accident, and yield a high probability in favour of such accident resulting from the mechanical causation in question. The point to determine is whether the probability may be considered sufficiently high to warrant, in a similar case, a resort to surgical aid at a time when the chances for which an operation is undertaken are incalculably increased—that is, prior to the advent of secondary phenomena. It is these phenomena, together with the increasing collapse they bring in their train, that form in many—perhaps in the majority of cases—those main obstacles which go far towards marrying the success of any operation.

Three stages must, in these cases, be pre-supposed: a stage of simple constriction; one of superadded inflammatory accidents; and one of collapse. Practically, however, it is next to impossible to discriminate between the first two stages so as to be able to fix on the precise time at which inflammatory phenomena supervene. Doubtless they commence early, as instanced in the case described; while collapse, as is well known, threatens almost from the beginning in cases attended with acute abdominal suffering. Had surgical aid been resorted to in the evening or following morning of the attack, a different result might, probably, have been obtained. The attempt, at least, would have been not only justifiable, but more imperatively demanded.

The history of modern abdominal surgery shows how little danger usually attends the opening of the peritoneal cavity. The old fear on this head has long since passed away. Nevertheless, the old distrust in other than purely medical measures in such cases is, perhaps, as a rule, still in force, and is still based upon the uncertainty supposed to beset any attempt to determine either the precise seat and nature of the obstruction, or the extent of aflammatory action kindled around it. But heed must be taken to guard against the too rigid application of the rule, or it may be said, the maxim, that a band or diverticulum is the important exceptions.

But, should the symptoms enumerated have the significance ascribed to them, the seat of obstruction by a diverticulum might be divined with tolerable ease, not to mention the visible congestion of the stricture coil, and the distension of the intestine beyond. Even supposing the difficulties attending any attempt at relief proved insurmountable, the mere exploratory incision adds but little to the gravity of such a case.

It has long been known that untoward results occasionally follow the division of a diverticulum; hence the rule to divide it, when practicable, at a point remote from its attachment to the intestine. We may then, if it be of cord-like diameter, as in this specimen, fairly trust to its gradual contraction; or, should it prove pouched, and lead to the suspicion that its canal may have been used, it should, as has already been suggested, be ligatured, and, with the improved ligatures of the day, success might attend the procedure. It is almost superfluous to add, that all manipulation for the liberation of the intestines should be of the very gentlest kind; from other than gentle handling of a stricture coil already bordering on inflammation, there is much more fear of mischief than from any mere abdominal incision.

Failures may—indeed must—occasionally occur in the diagnosis of this particular form of obstruction where complications co-exist; just as they have done, and may do, in other cases requiring abdominal surgery. No general rules can cover all the possibilities. But by careful attention to every collateral circumstance, and to every present sign and symptom in the individual case, checked in fatal cases by *post mortem* examination, difficulties may be expected gradually to disappear. And, as a consequence, in experienced hands, success will so far outweigh failure as to leave little doubt that, timely resorted to, surgical means will be the means, *par excellence*, of a future not remote, in a class of cases which, as all past experience teaches, brook no delay; and in which all ordinary measures are not only utterly inefficacious, but—what is worse—involves a loss of precious time.

There is one other point of much interest in this case, viz., the almost complete suppression of urine. It is one, moreover, respecting which some diversity of opinion may still prevail. The late Dr. Barlow thought that this scanty secretion pointed to an obstruction high up in the small intestine, greatly diminishing the absorption-area for fluid. Another and a later view has been advanced by Mr. Sedgwick, based on the occurrence of the phenomenon in various morbid states—to the effect that the diminished secretion of urine resulted from some inhibiting influence exerted through the sympathetic system of nerves. And this is highly probable. The effect of peritonitis in depressing reflexly the heart's action is well known. Indeed; the influence of the nervous system in all such cases is, to a large extent, quite beyond dispute.

If I might venture an opinion, it would be that the intense irritability of the stomach rejecting nearly all fluid; the almost constant vomiting of more or less discoloured and often bloody matters; the agonising pain in the abdomen, so constantly and rapidly depressing the heart's action, and greatly lessening the stream of blood propelled into the aorta, and tending to collapse both of vascular and of nervous energy, would quite account for the more or less complete arrest of the secretion of urine.

In the case detailed, some urine is said to have been passed on the day following the attack; but with the deepening shock, all further secretion was completely arrested.

It must be admitted, however, that cases of obstruction of the small intestine have been recorded in which no suppression of urine occurred.

A short time ago, I saw, with Mr. W. C. Jefferies, a case of this kind, in which, after death, a band of recent lymph was found to have caused strangulation of a coil of the lower portion of the ileum. Here there was no suppression of urine, but the cause of constriction was secondary to peritonitis. A distinction ought, perhaps, to be made between such cases and those in which the constriction is primary. Arrest of secretion, therefore, when present, may assist the diagnosis, but it must not be relied upon as an uniform sequence.

FURTHER REMARKS ON STAINING BACILLUS TUBERCULOSUS.

By HENEAGE GIBBES, M.D.,

Curator of the Anatomical Museum, King's College.

SINCE my demonstration of a new method of staining the tubercle bacillus at the annual meeting of the British Medical Association at Worcester, I have made some more observations, and the result of these may be interesting. From the number of letters I have received on this subject, it is evidently attracting much attention at the present

time, and a few more hints may be useful. I have only received two or three letters recording failures, and these can, I think, be traced to the use of stains made up by chemists who did not know the particular anilin colour required. Messrs. Becker and Co., 34, Maiden Lane, Covent Garden, make up both magenta and chrysoidin solutions from anilin colours manufactured by the Badische Anilin Fabrik, and their solutions may be thoroughly depended on.

Another cause of failure is the use of ordinary, instead of distilled, water, by which chlorine is evolved and all colour removed from the bacilli.

In some cases, where a patient is seen, and it is desirable to test the sputum at once, a small quantity only can be obtained, and this with evident effort; in these cases, no bacilli will often be found. The secretion coughed up comes from the back of the throat. A case of this kind puzzled me for some time. I had previously found a large number of bacilli, but on two occasions could find none. I gave the patient a wide-mouthed bottle, and told her to use it the first thing in the morning. She brought it to me next day filled with thick sputum, which was literally crammed with bacilli.

There are one or two points about this method which I should like to mention. In the first place, the magenta solution used is a definite chemical compound, having a distinct formula; it is, in fact, diphenolrosanilin resulting from the addition of a fixed proportion of pure anilin to a certain form of rosanilin, or, as it is commonly called, magenta. In Ehrlich's method, a definite compound is not formed, hence the fading of the colour from the bacilli, which does not take place when a stable compound is used. In his process, also, the protoplasm alone is stained, and with high powers rows of bead-like bodies only are seen. With the method I have given, the whole organism is stained, and appears as it really is, a rod-shaped bacillus containing deeply stained spherical bodies (spores). In staining the ground substance, and thus throwing up the bacilli, either canelle or chrysoidin may be used in watery solution, and these are preferable for sputum, especially when it is to be examined with the highest powers. These colours are, however, not so well adapted for sections of tissue, where the cells colour so deeply with the brown stain as to make the bacilli difficult to discern with a dry $\frac{1}{4}$ of an inch. This ought to be easily done by ordinary daylight to make the process available for every-day clinical work.

I have made a number of experiments with the view of finding a good contrast to the magenta, and one which would not, at the same time, stain the surrounding tissues too deeply. I find a solution of methylene blue the best for this purpose. Make a saturated solution of the blue in spirit, then add this to distilled water until a tolerably deep blue colour is obtained. The sections are soaked in this until they have taken up a distinctly blue colour to the naked eye. They are then carefully washed in distilled water, and afterwards in methylated spirit. Care must be exercised in putting them into the spirit to keep them flat. After they have remained in the spirit for some little time, they are removed to absolute alcohol, and then oil of cloves, and mounted in Canada balsam; they are, of course, first stained in magenta, and passed through dilute nitric acid.

I have obtained some splendid results with this method, and the bacilli can be easily made out by their colour, if in any number, with a one-inch object glass. If, however, there are only a few scattered singly through a caseous mass, they will require a one-sixth to make them out perfectly. Before using this blue stain, all acid must be washed out of the tissue.

Sputum may also be stained with this colour, and it gives a very pretty appearance to the pus cells, if properly done. Sputum, when dried on a cover-glass and passed through a Bunsen flame, may be kept for a long time if protected from dust and moisture. It is very interesting to see the enormous number of bacteria present in sputum, and they are easily shown by staining with gentian violet. The sputum is dried on the cover-glass, and heated in the usual way; it is then inverted on some gentian violet solution, half per cent. in water, filtered into a watch-glass. A few minutes will stain it deeply. The superfluous colour is washed off in distilled water, and the cover-glass is then placed in methylated spirit until no more colour comes away; it is then immersed in absolute alcohol and allowed to dry. A drop of Canada balsam solution is placed on it; it is then inverted and placed on the slide and pressed gently down. It is a good plan to run a ring of shellac dissolved in spirit round the edges of the cover-glass, as it can then be examined with an oil immersion lens in a very short time. Bacteria of many kinds will be found, together with micrococci in masses and chains, and sarcinæ; if the sputum has been kept some time before mounting, penicillium will also probably be found. A slide of this kind will afford subjects for many hours' study.

CLINICAL MEMORANDA.

SCARLET FEVER.

THE following notes of an outbreak of scarlet fever which occurred here this summer, includes certain facts that may be interesting to many who study the important question of the notification of infectious diseases, which is at present exciting so much discussion.

On August 2nd, Mr. S., Justice of the Peace, attended the petty sessions at Knaresborough. He remained on the bench two hours. He took Miss B. with him on the box seat of the carriage; she returned, and her sister, Miss A. B., went for him, occupying the same seat; the distance they had to drive was three miles. On the 14th, Mrs. S. went to the moors. On the 16th Miss A. B. felt ill, and doubtless, had she been seen, would have exhibited signs in skin and throat, which on the 17th were fully visible as scarlet fever. There were fifteen people in the house who had never had the disease, and Harrogate was full of visitors; isolation of the case was therefore urgently called for. An empty house being secured, Miss A. B., with a trained nurse from Leeds, were lodged in it.

On the 19th, Mr. S. returned from shooting, feeling poorly; he thought he had got a chill by drinking cold water on the moors when hot and tired, and that this had brought out an eruption on his skin. The rash was scarlet fever, already desquamating at the neck. His throat was also much affected. He was at once removed to the house with the other patient.

On Monday, the 28th, Mr. S.'s valet showed well marked symptoms of the disease, and was speedily lodged with his master. Each case was treated with an unction of carbolic oil from head to foot as soon as desquamation began; in a fortnight all were well washed with carbolic soap and water; in a month, having had their final bath, they were clad in fresh things, and although still peeling about the feet, were allowed to return to society and mingle with their families. The interesting facts about this outbreak are: That the disease can be clearly traced; that the period of incubation can be calculated to a few hours; that during incubation, and even for some time after, the rash with all its characteristic accompaniments had been thoroughly developed; the disease was not communicated to others. The only way in which Mr. S. could have caught the disease was by his sitting in the court-house where a number of people who carried with them the contagion of scarlet fever were packed, it being epidemic in the town. Having received enough to secure his infection, he carried with him a sufficiency to infect his young friends beside him, the coachman sitting immediately behind escaping. The two then mingled during the entire period of incubation, fourteen days in both, with not only their own household, but a large circle of friends—Miss A. B. sleeping with her sister up to the 17th; and yet not one individual, although there were children and young people, becoming affected. The valet took the disease from brushing and putting by his master's clothes, which he brought down from the moors. It has been stated that desquamation had commenced on Mr. S.'s neck before his arrival. The period of incubation in the valet's case was eleven days, three days less than in either of the others, he was in a feeble state when exposed to the contagion, the others were in rude health, and this may account for the difference noted.

From the above history it is evident that the disease may be thoroughly limited in its area, provided the necessary steps are taken at the proper time.

J. A. MYRTLE, M.B., C.M.

Harrogate.

P.S.—Another interesting point in these cases is that, when they were admitted back into society, all were still desquamating about the feet, but no fresh cases appeared, due, I believe, to the free use of carbolic oil. Is it not possible that this powerful antiseptic may kill the germs in the desquamating epithelium? If so, may we not be able to allow our scarlet fever patients to return to their business and society sooner by a week or more than has been the custom hitherto.

THERAPEUTIC MEMORANDA.

SOME OBSERVATIONS ON THE NEWER DRUGS.

It would no doubt be useful if some attempt were now made to classify the drugs which have lately come into use with the profession; and it may not be amiss, in the absence of such classification, to give the results of one's own observations on the properties of the later compounds.

The large use of iodoform leads one to speak with diffidence concerning any new use to which its great healing properties can be put, for

Both hands were dropped at the wrists. The choreic movements, which appeared to affect the right side more than the left, were incessant, and as strong during sleep as at other times. The heart's sounds were normal. Pulse 80, but of varying rapidity throughout the minute; the temperature was 100.6°. Faeces and urine were passed involuntarily; and a strong and very unpleasant odour was given off from the skin.

He was ordered one-thirtieth of a grain of strychnia three times a day, the dose to be increased every second day until improvement showed itself, or the physiological effects of the drug were manifested; and in order temporarily to quiet the movements, enemata containing 60 grains of bromide of potassium and 20 minims of tincture of cannabis Indica were introduced night and morning for the first few days. In consequence of his emaciation, and the great difficulty in swallowing, nutritive enemata were also administered twice daily. Side-boards were fitted to the bedstead; he was kept scrupulously clean and dry, and otherwise protected from the abrasions which the chafings against the bed-clothes caused by his incessant movements, threatened. The first urine that could be collected was of specific gravity 1046, while that of a sample obtained a few days later was found to be 1055; but in neither case was there albumen or sugar.

When asked on March 31st to hold out his hand, he made what seemed to be an attempt to do so, showing that at that time he apparently understood what was said to him, though unable himself to speak. He gave no indication of recognising any difference in the taste of the various fluids given to him.

April 1st. The movements were very violent. The bowels acted three times involuntarily. Ether spray was applied for a moment or two to the spine, but was desisted from in consequence of opisthotonus coming on.

On April 2nd, he spoke for the first time, saying "Yes" in a slow and drawling manner, some seconds after the question had been asked to which it was a reply. Meanwhile, the amount of strychnia was being increased.

On April 4th, when the dose was one-twentieth of a grain, he seemed for the first time to recognise its bitterness, and made wry faces after taking it. On the same day, he said, in a very drawling, hesitating way, "I like milk". This was the first time he had spoken more than a single word at a time. The movements were much diminishing. The pulse had fallen to 84, and the temperature to 99.4°; but faeces and urine were still voided involuntarily, and the teeth always became again rapidly coated with sordes after having been cleansed. Occasional deep but transient flushings of the face were noticed; and, concurrently with them, extreme dilatation of the pupils, the left, however, being always slightly larger than the right.

April 12th. Except when he attempted to make some voluntary effort, when he tried unsuccessfully to reply to a question, there was no flushing of the face. He was taking one-thirteenth of a grain of strychnia for a dose.

April 24th. He was much more intelligent, and more ready in his replies. The movements were very slight, and the sordes had almost disappeared from the teeth. He made an unsuccessful attempt to get out of bed; he managed to get both legs out before he was observed (the side-boards having been removed for some days), but was unable to raise his body, though he tried to do so by means of the cross-rail hanging above him. In making a similar attempt two days later, he fell out of bed. On this day, a marked fall in the pulse, temperature, and respiration was noticed, which lasted for several weeks. The first ranged from 56 to 42; the respirations from 16 to 15; and the temperature from 95.4° to 97.8°.

By April 28th, the dose of strychnia had been increased to rather over one-seventh of a grain, and five grains of citrate of iron were now added. Day by day, strength and intelligence improved. The urine and faeces were now retained, but the pulse and temperature continued low. For several days, these were most carefully taken every second hour by day and night, and they were found to range between the points stated above. On May 15th, the pulse was only 36, and the temperature 95.4°; and as he continued very thin, and was unable to take cod-liver oil, either alone or phosphorised, he was wrapped in a flannel jacket, and daily anointed with the oil.

By June 7th, he could walk a little when supported, but could not yet stand alone. A week later, he could stand without support; and on June 16th, he walked a few paces alone. The patellar tendon reflex was quite absent from each side. The dose of strychnia was increased to rather less than one-fifth of a grain, three times daily; and on the 27th, it was further raised to one-fifth of a grain. On the latter day, he could stand or walk, even when the eyes were closed. The patella tendon-reflex was present slightly in the right, though absent from the left, leg. The power of grasp in the right hand, measured by the

dynamometer, was 35; left, 32; the pulse was 88, the temperature 97.8°. On June 30th, he was sent to the Wootton Convalescent Institution; and when he returned, at the end of a fortnight, the patellar tendon-reflexes were natural, and he seemed to be in every respect well.

For some few days after he was admitted, it was very doubtful if this youth would live, the case being one of the most severe that could be imagined. Among other features, it was interesting from the prolonged absence of the power of speech; the yet more prolonged depression of pulse and temperature, and loss of muscular power; the extreme vasomotor instability, as shown by the deep flushings, alternating with pallor, that frequently passed across the face; and, lastly, from the very large doses of strychnia (one-fifth of a grain three times daily) that were reached, without the manifestation of any of the physiological effects of the drug, or any other result than that of improvement.

CUMBERLAND INFIRMARY.

TREATMENT OF EPILEPSY BY BORAX.

(Under the care of STEWART LOCKIE, M.D.)

As the treatment of epilepsy by borax does not seem to be known to the profession generally, the following case may be of interest.

S. B., a lad aged 17, was admitted as an out-patient at the Cumberland Infirmary, on April 24th, 1881. He had then been subject to epilepsy for four years. At first, the seizures occurred about once a month; but at the time of his admission, they took place, on an average, once a week; sometimes, however, three or four attacks would occur in quick succession. The character and severity of the fits were sufficiently attested by the fact that, two years and a half before admission, the patient fell into the fire in one of the seizures, and was so severely burnt that it was found necessary to amputate the right lower limb through the thigh, and also two fingers of the left hand. No aura ushered in the attacks.

Bromide of potassium was ordered, at first in fifteen-grain doses, and soon afterwards in twenty-grain doses, three times daily. The intervals between the attacks were slightly prolonged at first, and during September, October, and the earlier part of November, lasted from ten days to a fortnight. Between November 7th and 28th, however, eight seizures occurred, five of them in one day. On this latter date, borax, in fifteen-grain doses three times daily, was substituted for the bromide, and has been continued—with an intermission of nine days, during which the bromide was renewed—to this date.

From the time of the commencement of the administration of the borax, no major fit has occurred. From December 16th to 19th, frequent attacks, in which the teeth chattered and the head was thrown back, were reported; and from December 28th to January 4th, attacks of a still slighter degree occurred. Since then—a period of six months—no attack whatever has taken place; and the poor lad, who had been thrown out of employment in consequence of his malady, has lately been employed in a telegraph office.

No skin-eruption occurred during the administration of the borax. Vomiting occasionally took place if the medicine was taken before meals, and at one period he complained of sleeplessness.

POPLAR AND STEPNEY SICK ASYLUM.

CASE OF TAPE WORM PASSED BY THE MOUTH.

[Reported by Mr. F. HITCH, L.R.C.P.]

L. S., a woman, 79 years of age, was admitted on April 3rd, 1879, with partial right hemiplegia. There were no symptoms of intestinal irritation, except an attack of diarrhoea in March 1881, which was treated, and ceased in a week or so. During the night of April 15th, 1882, the nurse's attention was attracted to the patient, and on going to see what was required, she found what she at first, in the dim light, took to be a piece of tape about one inch long projecting from the patient's mouth; on extracting this, it was followed by more, and after withdrawing some few feet of the material, she became alarmed, and hurried off to the night superintendent with the startling news (given in her own words), that she was afraid she had been pulling a woman's gut out. The superintendent, on going to the ward and bringing more light to bear on the patient, discovered that the object was part of a tapeworm, and commenced the further withdrawal of the parasite in a hand over hand manner, until at length the entire worm appeared, tail first, and apparently dead. On examination the following day it was found to be a perfect *tenia mediocanellata*, measuring twenty-eight feet, and bearing its head. Strange to say, the patient from this time gradually sank, from her infirmity, and died on the Monday following.

DONATIONS AND REQUESTS.—The Derby Infirmary has received £1,000 anonymously.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCTOBER 13TH, 1882.

JOSEPH LISTER, D.C.L., F.R.S., F.R.C.S., President, in the Chair.

Phthisis, Treated by Residence at High Altitudes.—Dr. THEODORE WILLIAMS described the case of a patient, who had been exhibited at a former meeting of the Society. A medical man, aged 30, had cough and expectoration of three years' standing, followed by hæmoptysis, wasting, elevation of temperature, and great prostration; and, when seen by Dr. Williams, in consultation with Dr. Vereker Bindon, on August 30th, 1881, presented the physical signs of consolidation of the upper lobe of the left lung. After five months' residence at Davos, including a walking tour of seventeen days in the Engadine, during the whole of which period he took exercise largely, he gained one stone in weight, and found his strength and power of climbing greatly improved. On first arrival at Davos, he had dyspnoea from the rarefaction of the air, but, this passing off, his respiratory powers became greater than previously. On his return, Dr. Williams found an increase in the cyrtometric and other chest measurements, especially in the upper regions of the thorax, and the physical signs denoted the development of emphysema and the old consolidation, and hypertrophy of the healthy lung. Dr. Williams stated that, while he ascribed the general improvement of the patient to the dry, pure, antiseptic atmosphere, and the sun's powerful influence, he assigned the arrest of the tubercular changes to the local effects, on the lungs, of breathing rarefied air, which, by inducing emphysema, caused an expansion of the thorax, at the same time affording a barrier to the encroachment of further infective processes in the organs. With regard to the durability of the good results of mountain climates, Dr. Williams's experience was that, in well selected cases, one or two winters sufficed to produce permanent arrest of consumptive disease, though in many instances a prolonged stay of at least two years was desirable. Dr. Williams exhibited cyrtometric tracings of similar cases, who had resided at Davos and Colorado for several months, to illustrate the widening of the chest through breathing mountain air.—Dr. ALTHAUS could speak most favourably of the climate of Colorado for such patients. He had sent a case of advanced phthisis there; and the improvement after three months' residence had been extraordinary. Two English physicians were practising there, one Dr. Solly, at an altitude of 6,000 feet, and Dr. Norman, at 8,000 feet above the sea level. His patient, a young lady, had been scarcely able to travel thither; she had hectic fever, emaciation, excavation of the lung, and constant cough, and other climates had done her no good. Her temperature, moreover, was 103° Fahr. After being in Colorado a week, she could remain out in the open air nearly all day, and Dr. Solly thought that after two years' residence she might be cured. One advantage of Colorado was that patients could remain there all the year round, without removal to lower levels; the weather was always sunny, and the atmosphere very dry, so much so, that dew never fell there.—Dr. BROADBENT inquired what was the point of the paper. That Dr. Williams' case had undergone improvement at Davos there could be no doubt, but there was generally the same improvement from change to any of the usual winter resorts. Was the benefit from wintering at Davos greater than that produced by residence in the South of France, Algeria, or Egypt? The patient, having a sedentary life here, went where he had plenty of exercise: and the consequent improvement did not seem to be very remarkable. Would not Dr. Williams have expected the same improvement from wintering elsewhere, or from a long sea voyage?—Dr. MACLAGAN asked how far the arrest of the disease-process was due to residence in a germless atmosphere? how far to the high altitude? how far did the general hygienic condition account for the improvement? Would not any patient have found his chest expand in the same way; or would not the expansion have occurred in any person with or without chest disease?—The PRESIDENT remarked that it was admitted that elevated situations were germless, yet it must be at the same time remembered that a germless atmosphere was not antiseptic, but aseptic. If the lung already had germs in it, it was difficult to see how the presence of a germless atmosphere could prevent their continuance in the lung. Perhaps the dustless condition of the atmosphere might have led to absence of irritation of the mucous membrane, and so lessened the inflammatory process. As for the *bessonde respirer* experienced in high altitudes, and referred to in the paper, he thought the larger respirations there taken were necessary, in order that a larger amount of the rarefied air, and consequently of oxygen, might be taken in; but, was this larger thoracic capacity kept up when the patient went again to the lower altitudes? If it was, one could understand how the benefit might re-

main. He had recently met in Switzerland, a gentleman, living there constantly, aged 60, who had become wonderfully robust since residence on the mountains, and could now undergo most severe exercise. He thought it still a question in what particular manner elevated altitudes led to improvement in the health.—Dr. WILBERFORCE SMITH said that, as to the girth of the chest, a gain of two to three pounds in the general body-weight so increased the girth of the chest, that fallacies, therefrom likely to occur, must be eliminated in taking the measurement of the chest. Dr. Williams had doubtless provided for this. He inquired if the aseptic atmosphere would not tend to diminish the liability to attacks of inflammation.—Dr. WILLIAMS had, in his paper, purposely kept himself to this case only, because he had previously written a lengthy paper on the subject. As to Colorado, he thought the difficulty was to induce people to go there, it was so far off; the atmosphere was splendid for phthisical patients. The point of the paper was, that in mountainous climates an expansion of the girth of the chest, and consequently of the lung underneath, took place. He had never before, too, seen such improvement as occurred in the lung of this patient. There had been marked dulness at one apex, and instead thereof, in a few months was hyper-resonance. He had not seen that point noted in any other paper. He had measured the chests of patients ordered to Australia and several other places, both before and after going, and he had never seen the same improvement occur in any other chest. He was not sure as to the exact influence which a germless atmosphere exercised on cases of phthisis. He did not know that the air at Davos or St. Moritz had ever been examined microscopically. The lungs in most people were not properly developed, and their development was brought about by going to these high altitudes. He did not pretend to understand the way in which mountain air improved the lungs of consumptives. The natives of all mountainous regions had large lungs and large chests. The one fault of high altitudes was that there seemed to be as much risk there of intercurrent inflammation of the lungs as at these lower levels. Southern stations diminished the tendency to catarrh; high altitudes improved the constitution.

Epitheliomatous Tonsil: Excision.—Mr. GOLDING-BIRD detailed a case in which he had removed an epitheliomatous tonsil in the manner adopted by Cheever (1871), and referred to three other cases of the same disease in which he had determined not to operate. The operation consisted in an external incision from the ear to the hyoid bone, through which the wall of the pharynx was reached with the greatest ease, and the tonsil, with the adjacent pharyngeal tissue, removed with the galvanic cautery. The later steps of the operation were aided by an additional incision through the cheek from the angle of the mouth. The disease having also affected the tongue, part of that organ was removed, as well as an enlarged gland at the angle of the jaw. Until the wound closed, an œsophagus-tube was used for feeding. Although great relief was given to the patient, yet he soon succumbed to recurrence, not in the site of the excised organ, but in the tongue and the lymphatics of the neck. The conclusions arrived at by the author were, that where only a limited infection of the lymphatic glands existed, and where the faucial growth was circumscribed, or nearly so, operation was called for; but that in other cases, feeding with tubes, with subsequent gastrotomy, was the treatment. The operation was itself far easier than many of daily occurrence, and seemed to offer no special risk to the patient. Of the four cases mentioned, it was considered by Mr. Golding-Bird that in three the disease was primarily in the tonsil; in all four, it was the left side that suffered.

Excision of the Base of the Tongue, Right Tonsil, and Part of the Left Palate for Epithelioma: Aneurysm of both Popliteal Arteries.—Mr. CLEMENT LUCAS related this case, of which the following are the particulars: D. K., aged 64, a coal porter, who had drunk freely, first came under Mr. Lucas's care in Guy's Hospital on February 13th, 1880. He was at that time suffering from a large aneurysm of the right popliteal artery, causing pain and œdema of the leg and foot, and from a small aneurysm of the left popliteal. Digital compression of the right femoral artery was continued for sixteen hours, when the aneurysm appeared to have consolidated, and pulsation could no longer be detected. On the following day, some pulsation was re-established, and digital compression was again commenced, and continued for eleven and a half hours, when pulsation ceased and did not recur, the tumour afterwards gradually shrinking. An attempt was made about a fortnight later to cure the small aneurysm in the left leg, space by digital compression, but this failed, and as the tumour caused little inconvenience, no further treatment was suggested, and he left the hospital. He was readmitted on August 2nd, 1881, suffering from epithelioma of the base of the tongue and right tonsil. On the right side of the tongue, opposite the last molar tooth, was a small ulcer, grey in colour and irregular on the surface. The ulceration extended along the anterior pillar of the fauces, and involved the right tonsil.

as well as the tissue between the tongue and the jaw. The surface of the tongue near the base was raised and indurated for about half an inch from the margin of the ulcer. The movements of the tongue were interfered with, so that mastication and deglutition were painful, and there was an increase of salivary secretion. No enlarged glands were felt beneath or behind the jaw. The operation was performed on August 9th. The patient being placed under the influence of chloroform, the cheek was first divided by an incision from the angle of the mouth to the masseter muscle, and the facial artery was twisted. A gag was then inserted on the left side of the mouth, whilst the tongue was drawn forward with forceps, and the flaps of the cheek were held back by retractors. The back of the tongue and tonsil were, in this way, easily reached. The soft palate was next divided near the middle line by means of Paquelin's cautery, and dissected down with the anterior pillar and the tonsil. The tongue was divided in the median line with a scalpel, and carefully dissected outwards till the lingual artery was reached, divided, and twisted, without loss of blood. The tissue between the tongue and the jaw was next dissected up, the cautery being used to stop any bleeding points, and finally the growth, with the base of the tongue, right tonsil, and half the soft palate, was removed in one mass. The cheek was brought together with three hare-lip pins, and it united primarily. The patient recovered rapidly after the operation, and, sixteen days later, was again subjected to digital compression for the cure of the left popliteal aneurysm, which was about the size of a pigeon's egg. Pressure was kept up with the aid of opium for forty-eight hours; but soon after this, though much consolidated, the tumour still pulsated. He left the hospital, with the tongue quite healed, on September 16th. He was readmitted into the hospital on February 13th, 1882. There was no return of the disease in the tongue or palate, which were united by a firm and sound cicatrix. There was a large mass on the right side of the neck below and behind the jaw, which had commenced six weeks before, and grew rapidly, extending outwards beneath the sterno-mastoid. An operation for the removal of this growth was undertaken on the following day. A vertical incision, about four inches in length, was made, commencing behind the jaw, and the growth dissected round. It was found necessary afterwards to enlarge the wound transversely. In the course of the operation, the lower part of the parotid gland, a portion of the sterno-mastoid, the posterior belly of the digastric and stylohyoid, and a portion of the submaxillary gland were removed, all of which were infiltrated. The facial artery was twisted, and the facial and lingual veins ligatured with catgut. At the bottom of the wound, the internal jugular vein and the two carotids, with the hypoglossal nerve, were exposed. Two enlarged glands were also removed from beneath the sterno-mastoid. The patient recovered without a bad symptom, and left the hospital on March 24th. He was again seen in July last, with a recurrence of the growth on both sides of the neck, but there was still no sign of disease in the original site. It was not then thought advisable to interfere further. Mr. Lucas said, that by the operation described, it was evident a cancerous tonsil, with the adjacent structures, could be completely removed from within the mouth, and when this was practicable, it had the advantage over the external operation of avoiding the fistulous track, through which saliva was apt to ooze. For the rest, the treatment of cancer here did not differ from the treatment of it elsewhere. The treatment, and the only treatment, was to operate early, and to operate late; to operate, indeed, so long as it was possible to remove a loathsome outgrowth without great immediate danger; to operate to keep it local; to operate on the earliest return; and though we might often be disappointed in our attempts to eradicate the disease, we might still prolong life; or, as in the case before us, succeed in driving the disease from its original site to one where it is less offensive, and more easy for the patient to bear. —Mr. C. HEATH thought the readers of both cases were to be congratulated upon the result of their operations. Dr. Cheever, who first devised the operation, doubted, after all the success he had had, if he had benefited the patients. As regarded the rule laid down by Mr. Lucas, for the treatment of cancer, which might be pithily described as "operate first, operate late—in fact, operate as long as there is any of the patient left," he would say that, where it was possible to remove the disease, including glands secondarily affected, one ought to operate. In cases of cancer of the breast, the surgeon, in removing the breast, should clear out the enlarged glands from the axilla, when they were fairly movable, and could be easily removed. Life might thus be considerably prolonged. —Mr. MORRANT BAKER also thought Mr. Lucas was to be congratulated on the result of his operation. He asked if there was much difficulty in the removal of the disease in the last steps of the operation. Had Mr. Lucas used the *dérasseur* or the scissors? In operations on the tongue, he himself had usually preferred

the *dérasseur* to the knife or scissors. As to the removal of affected glands, he thought, with the previous speaker, that enlarged glands, when they preserved their form, should, in operations for cancer, be removed again and again. He did not understand the expression—"driving the disease to another part;" its beginnings were present in the second site when the original disease was removed, and often it could not be reached and removed from its secondary situation. —Mr. BUTLIN said that, if these operations were justifiable, they were yet scarcely worth the doing. In both cases, the disease had recurred soon after the operation, as it did in almost all cases of excision of cancer of the tonsil. In a case which occurred in Paris, there was no recurrence, but perhaps in that instance it was not a case of malignant disease; for there was no enlargement of the glands. The disease might possibly not have been one of lympho-sarcoma, but of ordinary enlargement of the tonsils. Possibly, there was some slight error of diagnosis. —The PRESIDENT remarked that there was no doubt of the boldness and skill of the two operators, in their two cases. He himself thought, however, that such operative interference was more likely to be prejudicial than beneficial. He thought that Mr. Lucas's case, inasmuch as the disease did not recur at the original site, was an exceptional one. He felt a satisfaction in knowing that surgeons now removed lymphatic glands as well as the original cancerous disease. In his student days, it had been taught that, if the axilla contained large lymphatic glands, in cases of cancer of the breast, the case should be let alone. He had constantly cleared out masses of enlarged glands from the axilla, in operating upon cancer of the mamma, and the patients had lived for years afterwards, dying eventually from recurrence of the disease in internal parts. Mr. Syme used to remove glands from beneath the jaw in epithelioma of the lip; the only case in which that surgeon was wont to remove secondarily diseased glands. —Mr. GOLDING-BIRD said that his opinion was not in favour of this operation; in treating future cases of the kind, he would first feed through an oesophageal tube as long as possible, and then perform gastrotomy. —Mr. LUCAS agreed with Mr. Heath and other speakers as to the advisability of operation in cases of cancer. He had divided the tongue entirely with the knife, and divided and twisted the lingual artery. The growth had been carefully dissected out, and the bleeding points touched with Paquelin's cautery.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, OCTOBER 17TH, 1882.

SAMUEL WILKS, F.R.S., President, in the Chair.

The late Dr. Peacock.—The PRESIDENT paid a tribute to the memory of Dr. Peacock; who was, he said, one of the small band who met in Trinity Square, to inaugurate this Society. As well as being an original member, he had throughout been one of its most assiduous contributors, and had attended and shown a specimen at its last meeting. He had been, at one time, President of the Society. His career was, Dr. Wilks thought, an enviable one; he did not seek to acquire a large fortune—that was not his ambition; he was a man, not only of practical ability, but of large scientific attainments, and of deep artistic perception; and he devoted his energies, to the end of his life, to the prosecution of scientific research and to hospital practice, reserving, however, ample leisure for the indulgence of his artistic tastes and his love of travel.

Two Cases of Simple Ulcer of the Duodenum.—Dr. NORMAN MOORE said that, in the first case, a circular ulcer, as large as a fourpenny-bit, was situated just outside the pylorus; its base was adherent to the pancreas, and at one point it had penetrated a considerable branch of the pancreatico-duodenal artery; the perforation was the cause of death. In the second case, a deep ulcer, partly healed, was situated close to the pylorus. Its floor was formed partly from the pancreas, partly by the peritoneum. The patient, a bricklayer, had suffered from slight dyspepsia, but died of severe pulmonary catarrh.

Indentation of the Liver by the Pressure of the Enlarged Ribs in Rickets.—Dr. NORMAN MOORE showed a cast of the under side of the diaphragm of a child, and a drawing showing the depressions on the surfaces of the liver.

Cases of Aneurysm in Children.—Dr. NORMAN MOORE showed a number of cases illustrating this condition. 1. An aneurysm of the external iliac artery at its origin from the common iliac, from a girl aged 7. The sac was filled with firm laminated fibrin, and there were some small growths on the mitral, and a large calcified growth on one of the aortic valves. The aneurysm owed its origin, he believed, to an embolus from the aortic valves, which was followed by deposition of fibrin, in the method suggested by Dr. J. W. Ogle. 2. An aneurysmal bulging of the aorta a quarter of an inch above the aortic valves; the aneurysm appeared to be due to ulceration of the vessel; there were minute growths on the mitral and tricuspid valves. The child died of

acute general tuberculosis. 3. An aneurysm of the innominate artery, which dissected between the layers of the pericardium, and pressed upon the pericardial veins; there was great serous distension of the pericardium, produced probably in this way. Just below the aortic valves was a thickened ring of fibrous tissue attached on one side to the septum ventriculorum. This ring he compared to an imperfectly developed second tier of aortic valves, such as was seen in the ganoid fishes. The patient in this case was a young man, and had an illness nine years before death, which may have been acute rheumatism.—Dr. PAYNE said that the last case reminded him of a specimen he had once brought to the Society; it was a heart which presented an appearance resembling a second series of aortic valves. A subcommittee of the Society had come to the conclusion that the appearance was caused by a thickening of the endocardium, due probably to inflammation.—Dr. PYE-SMITH thought that the appearance might be due to a persistence of the aperture between the *bulbus aortae* and the ventricle, and that this was a far more probable theory than Dr. Norman Moore's.—The PRESIDENT thought there was now good evidence to show that aneurysms in children did have their origin in embolism; the aneurysm occurred at the spot. It had been suggested that the lymph was itself irritant, and set up ulceration. He thought that here at least was some positive evidence as to the causation of aneurysm: a subject which was still in a state of great confusion.—Dr. NORMAN MOORE thought that the fibrous ring was not due to inflammation, because there was no affection of the aortic or other cardiac valves; he thought that the hypothesis of the deformity in the heart being due to a persistent communication between the *bulbus aortae* and the ventricle was a good one.—At the suggestion of the PRESIDENT, the specimen was referred to a subcommittee.

Double Obturator Hernia.—Mr. A. BOWLBY exhibited specimens taken from a woman, aged 69; there was no history of abdominal obstruction until June 4th, when great pain, prostration, and vomiting set in. Four days later, the signs of abdominal obstruction were well marked; there was no marked local tenderness; rectum and colon were empty. Pain in the back of the thigh was complained of two days earlier, but was attributed to rheumatoid arthritis, from which she was a sufferer. On the eleventh day, she died. At the *post mortem* examination, it was found that there was a strangulated obturator hernia on the right side, and an empty sac on the left; the artery and nerve crossed the sac on the right side, and the gut was adherent to the sac to a great extent; the sac on the left side was very small. Most of the patients in whom obturator hernia had been observed were women of about this age, and, like her, thin. In most of the cases Mr. Bowlby had been able to find reported, the strangulation was not acute, and in this case the gut, though congested, was in a state from which it would probably have recovered, had it been returned.

Tricuspid Stenosis.—Dr. BEDFORD FENWICK brought forward a specimen from a woman, who, when admitted, was semicomatose. Breathing was rapid, and the jugular veins were much dilated. There was evidence of great dilatation of the right side of the heart. There was a presystolic murmur and thrill at the apex, which was displaced outwards; at the right base was a harsh presystolic sound, and a soft systolic murmur. At the necropsy, the right auricle was greatly dilated and hypertrophied. The tricuspid orifice only admitted the forefinger, and the tricuspid valves were greatly thickened and agglutinated together. Since he brought the subject before the society two years ago, he had been able to collect twenty-four more cases, so that he thought the disease ought no longer to be considered rare; the patients were generally women, and had enjoyed good health up to the onset of the final disease.—Dr. NORMAN MOORE showed the heart of a man, which presented well marked stenosis of the tricuspid, mitral, and aortic orifices; the right auricle was greatly dilated. He had found that pericarditis frequently complicated these cases, and masked the dilatation of the ventricle, and this happened in the present case. The murmurs heard in this case were presystolic and systolic; there was no pulsation of the jugular veins.—The PRESIDENT observed that he believed that there was an opinion that the tricuspid disease occurred subsequently to the mitral.—Dr. BEDFORD FENWICK said that his observation had led him to that conclusion; he believed that the inflammation

Parovarian and Broad Ligament Cysts.—Mr. ALFRED DORAN gave a demonstration of seven preparations illustrating the normal and morbid anatomy of the parovarium and the broad ligament and tube, in relation to the formation of cysts in the vicinity of those structures. The vertical tubes of the parovarium are lined with epithelium sometimes ciliated, but often cubical, the original primitive form of the lining of the tubes of the woman's body. From these tubes, and from the hilum of the ovary, but not from the fallopian tubes, spring the multilocular papillary cysts which give so much trouble to the operator. At the

outer end of the horizontal tube of the parovarium is a cystic dilatation, which is lined with a structure resembling endothelium. Apart from the parovarium, between the folds of the broad ligament, minute cysts are very frequent. It is from these, or from the terminal cyst of the parovarium, that the simple unilocular so-called "parovarian cyst" arises. The terminal cyst of the Fallopian tube never attains a large size, and no true cysts of the broad ligament appear, when young and minute, to arise from that tube. The preparations consisted exclusively of cysts in their early stage, so that their relations might be the more readily distinguished. A dissection of the parovarium, exposed by the removal of the posterior layer of the broad ligament, was also shown; Gaertner's duct appeared as a thin nerve-like white cord.

Gangrene of Fingers and Toes.—Mr. JONATHAN HUTCHINSON exhibited a patient, a middle-aged man, where this disease had begun in the fingers after exposure to cold while at work as one of a gang of navvies; the ends of the fingers inflamed and became gangrenous. At the present time, any slight depression of the temperature was followed by pain and swelling. He thought the case came near the disease described under the name of "symmetrical gangrene of the extremities", and agreed with it in having a previous history of frequent attacks of numbness after exposure to cold. It was clearly not an ordinary case of frost-bite.—The PRESIDENT said that he had had a boy under his care who had gangrene of his fingers and toes and haematuria. After months in hospital, the sores began to heal.

Mediastinal Tumour in a Boy.—Dr. S. WEST exhibited a specimen from a boy aged 15, who had only had prominent symptoms of pain, dyspnoea, and swelling of the chest for three weeks before death. The boy grew rapidly worse, and died in a paroxysm of dyspnoea. The tumour was found to have grown from the mediastinal glands, and was so large as to have flattened the heart against the diaphragm. The growth had spread along the vein to the heart, but did not involve its muscular structure; it also involved the lung. Its microscopical structure was that of a round-celled sarcoma; the pneumogastric and other nerves were infiltrated by the growth, and much enlarged. The points of interest in the case were the youth of the patient, the rapidity of the growth of the tumour (less than two months), and the thickening of the nerves.

Ulceration of the Colon in Typhoid Fever.—Dr. S. WEST, who also showed two specimens of this condition, said that the perforation had occurred in the one case at the sigmoid flexure, and in the other just above the junction of the ascending and transverse colon. In both cases there were collections of pus in the peritoneum; in the one in the pelvis, and in the other below the liver.

Cirrhosis of the Liver in a Child.—Dr. H. GIBBS said that the child began to exhibit jaundice three days after birth; the jaundice persisted; the stools were very pale; ascites and wasting set in at about six months old. The liver weighed four ounces. There was no trace of the common duct, and the hepatic duct was occluded. There was a great increase of the intralobular cells, due apparently to enlargement and increase of the cells of the biliary ducts.

THE late Mr. Francis Mautland Batour, of Trinity College, Cambridge, whose will has recently been proved, has bequeathed £1,000 to Dr. Michael Foster, Professor in Physiology at Trinity College, Cambridge, to be employed by him in the promotion and encouragement of the study of physiology.

SUICIDE OR MURDER.—Dr. Wolff reported at the Atlanta Medical Society a case of considerable interest from a medico-legal standpoint. At a place in Texas, near the Mexican border, a boy sixteen years old was found hanging in a barn. A handkerchief encircled his neck, and was tied to a beam above. His face was downward, and was within a few inches of the ground. His arms were outstretched, and his thighs were bent at the knees. At the *post mortem* examination the stomach was found to contain only a small quantity of food, no ecchymosis on surface of the lungs, face calm, and no appearance of strangulation. A protuberance was noted on the back of his neck, but no extravasation or effusion of blood. The protuberance was caused by the subluxation of the second cervical vertebra backward. A man was suspected and tried for the murder, but there were no witnesses to the deed, but Dr. Wolff, from the *post mortem* examination, was of opinion that the injury was found. He illustrated his views by showing the necks of several dogs before and after death. These specimens were presented to the jury, and invariably sustained the position of the witness. The defendant finally pleaded guilty, and was hanged by a law of the State of Texas; he was the first person of the kind found, and the law was wrought upon the facts. The evidence of Dr. Wolff forced a confession, and secured the conviction of the prisoner. —Atlanta Medical Register.

REVIEWS AND NOTICES.

FIRST AID TO THE INJURED: FIVE AMBULANCE LECTURES. By DR. FRIEDRICH ESMARCH, Professor of Surgery at the University of Kiel. Translated from the German by H.R.H. Princess Christian. London: Smith, Elder, and Co. Pp. 100.

THE classes which have been formed so numerous throughout the United Kingdom, under the guidance of the St. John's Ambulance Association, for instructing persons of both sexes in the modes of affording aid in cases of injury or sudden illness, pending the arrival of professional help, have naturally led to a demand for handbooks on the subjects taught in them. Two of these manuals, one published in 1878 by the late Surgeon-Major Shepherd, of the Army Medical Department, and another, having a rather wider scope and more copiously illustrated by woodcuts, published by Dr. Lionel Weatherby two years subsequently, have had a very wide circulation in this country. The movement for the diffusion of information in the subjects above mentioned, which spread so rapidly in England, did not excite any particular attention on the Continent until last winter. In the autumn of 1881, Professor ESMARCH, on visiting England to attend the International Medical Congress at London, saw some of the persons who had been instructed in affording first aid in cases of injury at work; and on his return to Kiel, this eminent surgeon set to work to establish similar classes, which he succeeded in doing, under the name of "Samaritan Schools." In the course of the winter, Dr. Esmarch, assisted by a band of colleagues whose sympathies he enlisted in the subject, gave a course of lectures, as well as practical demonstrations, on the application of such bandages and apparatus as would be serviceable for the ends in view, to a large concourse of persons. The lectures he delivered on this occasion were subsequently published by Dr. Esmarch, and they have been since largely circulated in Germany. These are the lectures which H.R.H. the Princess Christian, has now translated into English from the German language in which they originally appeared, and which are thus rendered available for general perusal and study in this country.

The instruction given by Professor Esmarch in Germany, like that usually given at the ambulance classes in England, has been divided into five sections. To each of these sections a separate lecture is devoted. In the first lecture a short account of the structure and organisation of the human body is given, illustrated by suitable diagrams. The first treatment proper for ordinary contusions and wounds, for poisonous bites, and for the arrest of bleeding, form the chief subjects of the second lecture. An explanation of the primary help necessary for such injuries as fractures of bone, dislocations of joints, sprains, and burns, follows in the third lecture; while the steps to be taken in cases of frostbite, drowning, suffocation, and poisoning are taught in the fourth. In the fifth and last lecture, the means of removing patients suffering from the effects of injury, from the places where their hurts have occurred to their own homes, or to hospitals, are explained. After each lecture, Professor Esmarch and his coadjutors taught practically the application of the dressings, splints, tourniquets, and other appliances, the use of which had been described in the discourse.

As the subjects of Professor Esmarch's course of lectures are almost identical with those of the lectures arranged to be given to the English ambulance classes, the explanations in his little work necessarily resemble very closely those in the handbooks previously published in England. He keeps in view, however, in his remarks, the aid to be administered on fields of battle more than has been done in the English lectures. The organisation of the Red Cross societies in Germany, and the extent to which they are recognised by the German Government, sufficiently account for this difference between them. Addressing his class in the course of his first lecture, the Professor remarks: "There are many among you who have already done service in time of war, and many who, in the event of another war, would be ready to do so again. In these lectures I shall constantly have to refer to the battle field. I hope and trust that, under the protection of the Red Cross, similar Samaritan schools may arise all over Germany, and prove of much service in times alike of peace and war."

The lessons of Dr. Esmarch are put in plain and concise language—sometimes, it appears to us, rather too terse to be altogether free from the risk of leading to danger in the application of his instructions. In the treatment of poisoning, for example, although the first direction given is to send at once for a doctor, still, among other steps recommended to be taken before skilled help comes, is the following: "Get, if you can, a piece of gutta-percha tubing an inch in circumference, and, if the patient is not unconscious, make him swallow twenty to twenty-five inches of it, enough to reach the stomach; raise the free end above his

head, and, by means of a funnel, pour as much water down as the stomach will receive; then lower the free end below the level of the stomach, and the stomach will empty itself. Repeat this process several times." This is certainly advice that we would hardly dare to give in a general way to ordinary unprofessional persons in this country. One important point to be observed, and one that must require to be constantly impressed on the minds of persons receiving the comparatively slight amount of knowledge that can be imparted in such a short course of instruction, is, that persons so instructed should never allow themselves to pass beyond the limits of the simplest kinds of preliminary help and protection, and, on no account, undertake the performance of things which may very easily, without additional knowledge, become sources of positive harm to patients. The lectures contain, however, beyond question, a great amount of information compressed into a small space, which may, in practice, be of real use in the treatment of various accidents and kinds of sudden illness, and which, in the hands of persons of ordinary intelligence and prudence, are calculated to render important services, as well by preventing injudicious interference as by doing positive good in such cases until professional assistance can be obtained. It is particularly this information which the illustrious lady who has placed this little book within the reach of the people of this country has had in view. "Should any of my fellow-countrywomen," the gifted translator writes, "who may read this little book be brought to see how each one of us, in her own immediate sphere, may render effectual aid to a suffering fellow-creature, then the object which I have had in view in translating these lectures will have been attained. The satisfaction of being able to render the needed aid to those in pain, and of possibly being the means of saving a valued life, should more than counterbalance the scruples that some might feel in entering on such a study."

It would be unjust to conclude this notice of Professor Esmarch's work without an acknowledgment of the admirable manner in which it has been translated into English. All the technicalities of the German language, which cause it to appear so stiff and formal to the English ear that is unfamiliar with it, have been got rid of; indeed, the conversion into English idiom has been effected so completely and perfectly throughout, that it is difficult, in following the pages, to retain the conviction that the work was not originally written in the language in which it now appears. Professor Esmarch's labours, in their present form, well deserve the attention of all persons who interest themselves in spreading a knowledge of the preliminary help to be given in cases of accident and sudden illness, and we anticipate a very extensive demand for the book.

MEDICAL DIAGNOSIS: A MANUAL OF CLINICAL METHODS. By J. GRAHAM BROWN, M.D., F.R.C.P.E., late Senior President of the Royal Medical Society of Edinburgh.

INTENDED chiefly for the use of students, this handy volume will be welcomed by the practitioner as well, giving, as it does, in a convenient form, a clear and trustworthy account of the methods employed at the bedside for recognising disease. It contains, in less than 300 pages of large clear type, a carefully classified account of the chief symptoms and signs which are encountered in diseased conditions, explaining their nature in a thoroughly scientific manner, and pointing the conclusions which may be drawn from their presence. The various means which are employed to assist the physician in investigating the nature of the disease which he is called upon to treat; the facts which may be learned from the application of the cardiograph, the sphygmograph, the microscope, the stethograph, and the cystometer, and other instruments of the kind, as well as the percussion-hammer and the stethoscope, are treated of with a clearness and completeness which is not to be found in any book of the kind with which we are acquainted. Indeed, the amount of information which the author has succeeded in compressing into so small a space, and that without any appearance of overcrowding, is astonishing.

In looking over a work of this kind, one naturally turns with some curiosity to learn the views which the author holds on various disputed points. On those points, concerning which a general consensus of opinion has been arrived at, Dr. BROWN, we find, invariably informs the reader what is the commonly entertained view on the subject; and, besides, in those instances where he has been led to differ from the generally received belief on any subject, he gives the reasons which have led him to hold a different opinion from that which is generally accepted.

One of the most striking characteristics of Dr. Brown's book is the originality of the views which are taken regarding the nature of various of the signs and symptoms of disease; and one of the most striking examples of this, and one which will probably raise some discussion amongst authorities on the subject, is the theory which the author gives regarding the nature of percussion and auscultation sounds. In the

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 21st, 1882.

THE REPORT OF THE ROYAL COMMISSION ON SMALL-POX.

THE Report of the Royal Commission upon Small-pox and Fever Hospitals was issued on Wednesday. The Commissioners held thirty-seven meetings; they examined forty-eight witnesses, comprising physicians of the highest eminence, medical inspectors of the Local Government Board, managers and officers of asylums, medical officers of health, district medical officers, and other persons able to give them information upon the subject upon which they were appointed to inquire. The report extends to thirty-one pages, and is accompanied by a transcript of the evidence upon which the report is based; it is illustrated by a series of maps and diagrams of a most instructive character, and altogether contains a mass of information most important to all who are engaged in the work of disease prevention, the whole extending to nearly 500 pages.

The report itself is divided into sixteen heads. The first gives the rise and progress of asylum hospitals. From this it appears that there are five hospitals in addition to the hospital ship *Atlas*, with accommodation for 850 small-pox or fever cases, provided by the Metropolitan Asylums Board. The second section sets forth the objects of inquiry. The third refers to what is called "The Behaviour of Small-pox in England." The particulars regarding this behaviour, as set forth in some comprehensive columns prepared by the Registrar-General, have already been published, more or less in detail, in our columns. The fourth section has reference to the notification and isolation of disease. The Commissioners are of opinion that legislative action should so arrange that the medical officer of health in every district should have early information of the outbreak of infectious disease, and that this communication should be made to him by the householder or occupier in every case, but that if he is a pauper, then the medical attendant should be called upon to notify, and that a small fee should be paid to every medical man who performs this duty. The Commission also recommend that the sanitary authority should have power to clear a house of its other inmates whenever it is necessary for the purpose of isolation, compensating those whom it is necessary to disturb.

The fifth section determines that the distinctions between paupers and non-paupers should be abolished; and the Commissioners recommend that the provision for hospital accommodation for persons suffering from infectious disease should be entirely disconnected from the administration of the poor-law, and treated as a part of the sanitary arrangements of the metropolis.

Section 6 has reference to the hospital authority. It is recommended that, as the Metropolitan Asylums Board have performed their work in a generally satisfactory manner, and as they have an experience which no other body can have, that they should be continued as the hospital authority, dividing London into groups of parishes for the purpose of election, and giving the pauper authorities a right to have their representatives also upon the Board. The Commissioners think that the superintendence of vaccination should be transferred from the poor-law to the new authority thus created.

The seventh section refers to the amount of hospital accommoda-

tion which is required; and it is recommended that there should be sites and buildings capable of receiving 3,000 fever patients, and 2,100 small-pox patients, which, by special exertion, could receive 2,700. The reasons for these recommendations are clearly set out.

As regards the location of these hospitals, it is recommended that the existing hospitals of the Metropolitan Asylums Board should not be used to anything like their present extent for cases of small-pox, but that they should, in the main, become fever hospitals; and that, with the aid of another which is indispensable for the East End of London, the present hospitals would fully accommodate all the fever cases which are generally likely to arise.

As far as small-pox cases are concerned, the Commissioners recommend that all convalescent and really mild cases should be at once sent right out of London. That, within the precincts of the present hospitals, arrangements should be made to provide for the reception of thirty or forty cases of severe disease in which the patient is too ill to be removed a long distance; and that the convalescent hospitals should be located either some miles down the river, or in some other isolated district. That, with the entire control of all ambulances, with a power to isolate on the spot when a case is too ill to be moved, and the early removal of all convalescent and mild cases into the country, there is no reason to suppose, if early notification be enforced, that the authority will have any difficulty in coping with the disease in the future.

It will be necessary for the authority to be much more strict in the future than it has been in the past, with regard to the regulations to be observed in transit to, and in the management of, the hospitals; for, according to section 9, it is evident that hospitals have been, and are to some extent, centres of infection. We will deal more directly with this point next week. The evidence upon this point is very contradictory; and the question as to whether hospitals are centres of infection *per se* or by their incidents, are seriously entered upon, and evidence taken which seems to show that mischief may result to a district altogether outside the question of administration; but upon this point the Commissioners give no opinion beyond the evidence which was put before them, and which is very well contrasted in the report.

Are small-pox hospitals centres of infection? If so, is the fact caused by personal communication, or to some atmospheric influence which is independent of that communication? Do both act together? Can either or both be averted or minimised? Asylum hospitals have spread the disease, upon this point the evidence before the Commissioners appears to be very conclusive. The carefully prepared tables which appear in the appendix, show very clearly that there has always been a comparative increase or decrease of the parochial mortality concurrently with the opening or closing of the Asylums Board's hospitals, and if Mr. Pearson Hill's evidence, as adduced from well prepared statistics, was not capable of other explanation, it would be conclusive as to the incidence of small-pox being intensely increased in the neighbourhood of the asylum hospitals by their use. The increased rate of mortality seemed clearly to have a distinct alliance with, and to be subsequent to the increased number of cases which were admitted into the Asylums Board's hospitals, and Mr. Power, one of the inspectors of the Local Government Board, who was specially appointed to examine the case of Fulham, seem to support Mr. Pearson Hill's conclusion, although his course of proceeding was somewhat different to the course pursued by Mr. Hill. He proceeded by forming special areas around Fulham Hospital in quarter-mile belts. He took no direct heed of the number of cases, but calculated the effect of the diffusion as it acted upon individual houses. He found that the disease was diffused around the hospital in circles of decreasing intensity, and he traced an alliance between the epidemic periods in the quarter-mile belts, and the presence of acute cases in Fulham Hospital as evidenced by the number of patients in the hospital on low diet. Dr. Tripe and Dr. Bristowe come to similar conclusions as regards Homerton and the Deptford Hospitals, viz., that the incidence of the disease upon a particular district is greater, the nearer that district is to a given hospital.

The Commission, having clear evidence upon this point, had, as a

part of their duty, to determine whether hospitals were centres of infection by reason of their incidents, or whether they were so *per se*. It was very clearly proved that the transit of sick persons; the conduct of the ambulance-drivers and persons in charge of patients; the carelessness of visitors and tradesmen; the communication of officers, nurses, and attendants with the neighbours; the exposure of infected bedding and clothing, with several other less active causes, did tend to propagate disease in the neighbourhood of a given hospital. The stream of patients in omnibuses, cabs, and on foot, to the hospital, was a continuing cause of danger to the neighbourhood. These causes of infection were much reduced, as they were one by one brought to the notice of the authorities; but some continued in action all through the epidemic periods, and doubtless had a large share in increasing disease round the hospital.

A number of eminent men gave evidence that small-pox could be more or less disseminated through the atmosphere, opinions varying as to the distance at which infection from another case could take effect, ranging from ten yards to one or two miles. Mr. Power tried to establish a law in his concentric circles of diseased areas round the hospital, diminishing gradually in intensity as they recede from the centre; but this is so important a matter, that we defer it for a future article.

THE INDIAN MEDICAL SERVICE.

In our issue of July 29th, we directed attention to the actuarial report of the Defence Fund Committee, the object of which was to demonstrate the amount of injustice which had been inflicted upon the senior members of the service by the late reorganisation of the Indian Medical Department. Before this re-arrangement, the average period of service for the grade of deputy surgeon-general was about twenty-six years; and this was fixed upon by Government as the limit qualifying a certain proportion of sanitary commissioners for the assumption of this rank and the extra pensionary and other privileges accruing therefrom. It has been computed, from data furnished by the *Indian List* for January 1882, that the consequent stagnation of promotion has already become so acutely developed, that 73 per cent. of the senior medical officers in Bengal, Madras, and Bombay, can never be eligible for promotion under the fifty-six years' rule; and that, under its modification by the report of a medical board into what may now be termed the fifty-eight years' rule, the percentage of these disappointments—occasioned, be it recollected, by changes enforced by Government to suit its own convenience, and in distinct violation of the parliamentary guarantee embodied in Henley's clause—will actually be sixty-six, sixty-eight, and sixty-five, in these presidencies respectively. The Committee, perceiving that the chances of advancement had been thus cut away from a large body of meritorious officers, temperately, respectfully, and earnestly solicited Her Majesty's Principal Secretary of State for India to take the matter into consideration, with a view to the concession of pecuniary compensation to each of the aggrieved officers. Under somewhat parallel circumstances, the Committee pointed out that awards had been granted to other branches of the military service for the withdrawal of colonels' allowances; and it was naturally concluded that "a scale of additional pensions, calculated on the same principle as in their case accorded to the injured medical officers, might best meet the equity of the case." They have never, so far as we are aware, impugned the right of Government to originate or carry into execution any changes in the department which might be deemed advisable in the public interests. What they claim to have firmly and in respectful language maintained is that, under the Henley guarantee clause, every member of the service injuriously affected by such alterations of the conditions of his covenant has, in equity, a very strong claim for compensation. We hoped, therefore, that the latest representations of the substantial grievances of the senior medical officers of the Indian army would naturally have met with the same equitable response as was conceded, under an analogous state of affairs, to the military officers, when they were liberally granted a bonus or additional pension to compensate them for the loss of colonels' allowance.

Our reasonable hopes, we regret to say, have not been realised. After acknowledging the letter of the Defence Fund Committee, the military secretary at the India Office is commanded to state as follows: "In reply, I am to inform you that, notwithstanding that Lord Hartington consented to receive a deputation of members of Parliament, retired officers and others, in 1880, and to refer the representations then made for the opinion of the Government of India, he does not consider it to the advantage of the public service, or conducive to the interests of discipline, that he should receive any further communication from a body such as that which you represent, in points regarding the status of effective officers in the Army." His lordship, doubtless, having discovered that the facts and figures cited are too strong to be rebutted, thus endeavours, with a high hand, to bar the way to the consideration of the important questions raised and discussed in the Committee's well argued and closely reasoned communication, and to block the channel through which redress must, if at all, be obtained. He retires into his shell, and declines to entertain the subject formally introduced to his notice on grounds which had no *locus standi* in the mind of the office he represents in 1880, when he did not regard it as injurious to the interests of the public service to receive and treat with the retired officers of the Defence Fund, members of Parliament, and others who joined in the deputation referred to. No attempt has been made to weaken or disprove the evidence on which the grievances have been established, for the best of all reasons, viz., that the India Office, if we are correctly instructed, has already admitted the fact that serious retardation of the promotion of the seniors has immediately succeeded the late reorganisation, without having as yet evinced any thing but opposition to the concession of an indemnity to the suffering officers, and that 60 to 70 per cent. of the late East India Company's medical officers still in the service, "are, owing to the limitation of age, absolutely debarred from the promotion to which, when they entered the service, they were induced to look forward with perfect confidence." Yet, in the face of such revelations as these and others, we are coolly told by a cabinet minister and Secretary of State of a Liberal Government in this, the ninth decade of the nineteenth century, that what was right and proper in 1880 is wrong in 1882; and that, by a sudden change of front, the reception of a temperately worded and powerfully supported appeal preferred by the retired officers constituting the Defence Fund Committee on behalf of their aggrieved brother officers, pointing out their sufferings, and suggesting the manner in which redress might be conferred on them, is not now advantageous to the "public service, or conducive to the interests of discipline." In this view, we are at issue with his lordship. The appeal was an unvarnished and a constitutional exposition of real grievances. As such, it merited the careful consideration of the advisers of the Crown. The reception of such a document, from whatever body emanating, provided it was temperately worded and supported by facts—as we have every reason to believe it was—could scarcely fail, in our estimation, to be "to the advantage of the public service, and conducive to the interests of discipline." In rejecting it, and declining even to consider it, on grounds which we have shown to be utterly untenable, Lord Hartington has signally failed in truly appreciating the duties and responsibilities of the high office he has otherwise filled with much honour and credit. If the sentiments which have guided his lordship in this matter "were entertained by all the members of our representative Government, there would indeed, practically, be an end to most measures of reform; for all sources of information as to the existence of injustice or abuse, other than those contaminated by officialism and red-tape, would thereby be effectually dammed."

We trust that the influence to which this change of front on the part of the Secretary of State for India is due may be as evanescent as it is unjustifiable. There cannot be a doubt that the seniors of the Indian Medical Service have of late been very badly treated, and that the grievances of which they complain are very real and important. We strongly recommend the Committee to continue to use its utmost exertions for the purpose of bringing them under the review of Parlia-

ment at the earliest opportunity. But, in order to do this with effect, and to emphasise their efforts in this direction, every individual sufferer should lose no time in submitting a petition to Parliament summarising his grievances, and praying for redress. "Should these be numerous, there is every reason to believe in the possibility of insuring an unprejudiced inquiry; and, in such a case, the equity of the claims advanced cannot fail to command ultimate redress."

LEAD-POISONING BY WATER-SUPPLY.

The interesting case of lead-poisoning by the water-supply at Huddersfield, to which we drew attention in a leading article on the 30th ultimo, has been followed by the publication, in the *Chemical News* of September 29th, and the *Analyst* for October, of experiments instituted by Mr. A. H. Allan of Sheffield, with the view of determining whether the presence of free sulphuric acid in the Sheffield water-supply would increase or diminish the action of the water upon clean metallic lead. The result was, that the addition of about one-eighth of a grain of sulphuric acid per gallon to the water—the quantity found by Mr. Fairley in the Blackmoorfoot reservoir—notably increased the quantity of lead taken up into solution by the water. Mr. Allan also very pertinently questions the presence of free sulphuric acid in the Huddersfield water, since the chlorides are more than sufficient to combine with the whole of the sulphuric acid present: and it is probable that hydrochloric, and not sulphuric, acid is the free acid present. The well known fact that the sulphate is a more soluble salt than the basic carbonate, and that, nevertheless, the latter is sufficiently soluble in water to be poisonous, lends additional strength to the view taken at the trial at Assizes, that the presence of sulphuric acid or sulphates in the Huddersfield water-supply affords no protection against the corrosive action of the water upon the leaden supply-pipes, but rather the reverse.

Following upon this case, an inquest has been held at Keighley, in Yorkshire, upon the body of a man alleged to have died from lead-poisoning. All the particulars of the case are, perhaps, not before us, but it appears that the man drank a soft lead-contaminated water; that he had a blue gum-line, obstinate constipation, and severe colic. He vomited frequently, and the vomit had no uræmic smell. He suffered severely from convulsions, and pains in the legs and arms; and, when he attempted to lift his arms, his hands dropped; and, about three days before death, partial paralysis of the arms had supervened. Convulsions had set in the day before, and continued till death—five days later. The patient also became comatose. Lead-poisoning was diagnosed; and the fatal was not the first attack.

The *post mortem* examination revealed a thickened and constricted state of the ascending colon, and contracted granular degeneration of the kidneys. Mr. Allan found traces of lead in the organs; but the quantity in the liver and spleen was small, and did not exceed one-fourth of a grain. It may be added that iodide of potassium had been freely given for several days before death. It is not, then, surprising, that the medical men in attendance, Drs. Tuck and Dobie, arrived at the conclusion that the man's death was due to lead-poisoning.

A new aspect was, however, given to the case by the evidence of Dr. Tidy, who appeared as an expert on behalf of the Keighley Local Board, which supplied the water. His evidence, as reported, is so extraordinary, that we feel constrained to give it pretty fully, and, as far as possible, as it is reported in the *Bradford Observer* of the 4th instant. It signalises a new departure in toxicology, and is the more important in consideration of the distinguished position and great ability of its author. We venture to dissent from very many of Dr. Tidy's conclusions, and to protest emphatically upon what we believe to be the rashness of his statements, which were not, as we conceive, given with the caution which should be shown in giving evidence in forensic cases.

Dr. Tidy is reported to have said that, in all the cases of alleged deaths from lead-poisoning that had come before him, he found that lead-poisoning was not the actual cause of death, although in some cases it had preceded death for some time. By this, we presume, he really meant to

say that the tissue-degenerations induced by lead were the actual and proximate causes of death. He had never seen a case of chronic lead-poisoning. He knew of no well-recorded case of chronic lead-poisoning. We trust that here Dr. Tidy is wrongly reported, but we take the report of the inquest from a high-class and widely-circulated newspaper. He was of opinion in the present case that death might have resulted perfectly independently of lead-poisoning. When the latter disease was much advanced, there was always paralysis of the extensor muscles. He knew of no case of chronic lead-poisoning in which there had not been paralysis in some form or other. In nine out of ten cases, the extensor muscles had been affected, producing "drop-wrist." He should expect to find that symptom in every case of advanced lead-poisoning. The muscles were in all cases affected before the nerve-centres. This was his experience, to which there had been no exception. He would expect to find a state of coma under these conditions. He would not expect to find any affection of the nerve-centres, such as delirium, preceding the paralysis of the muscles; but he made that statement with some reservation.

We may remark that this is opposed to the observations of other observers. Naunyer remarks that encephalopathia saturnina often appears surprisingly early—even within a period of eight days; and that it may come on without the precedence of other lead-affections. Dr. Tidy said that he had found as much as five grains of lead in the spleen, and four grains in the liver, of a patient; yet death was not caused primarily by lead-poisoning. The patient—a hospital patient—who had been under treatment, was sent out, and was brought in, having been run over by a cab. Lead was frequently found in the bodies of persons exposed to its influence, and yet no symptoms were developed. We think that this case of the man run over by a cab has no bearing upon the Keighley case, except to show that it is not all persons who are equally susceptible to the influence of lead, or, we may add, of any other poison. Here was a man exposed to the noxious influence of lead, and manifesting affections specially recognised as associated with saturnine poisoning—colic, constipation, restriction of the colon, a blue gum-line, paralysis of the arms, convulsions, coma, and granular degeneration of the kidneys. Lead was found in his body after death, yet Dr. Tidy was doubtful whether this was a case of death from lead-poisoning. It is fair, however, to state—seeing how widely we differ from his conclusions—that he assumed that no paralysis of the fore-arms was observed *ante mortem*.

The jury came to the conclusion that the deceased died from granular disease of the kidneys, but how caused they were unable positively to say; but they believed it was accelerated by lead-poisoning. In the circumstances, this was a sensible verdict; and it was impossible to reconcile the conflicting medical testimony. It will be difficult, we imagine, to persuade the profession and the public that chronic lead-poisoning is a phantom disease.

THE FORMATION OF FIBRIN.*

IN a recent paper, Dr. A. Schmidt sums up the more recent researches carried on in his laboratory, in prosecution of his well known views regarding the coagulation of fibrin. It is hardly necessary to remind our readers that, according to Schmidt, the coagulation of fibrin is due to the action of a ferment which is derived chiefly from leucocytes, but also, in part, from coloured cells. He first puts the question whether the decomposition of leucocytes which gives rise to the fibrin ferment be solely a *post mortem* phenomenon, or whether it also occurs in the living circulating fluid. To this question, he answers that such decomposition does take place, but to a far smaller degree than in the case of shed blood, and that the ferment, as it is formed, is destroyed in the organism. Finding that the ferment exists nominally in minute quantities, the further questions to be studied relate to its physiological variations in various animals, to the comparison of the quantity found in living blood with that found in dead blood, and to the pathological

* A. Schmidt, *Recherches sur le rôle Physiologique et Pathologique des Leucocytes du Sang*. *Arch. de Physiologie*, 1882, p. 513.

variations of these quantities in various abnormal conditions, spontaneous or provoked. Since to follow Professor Schmidt throughout the various items of his inquiry would be tedious and useless, the reader is referred to his paper in which the subject is lucidly exposed. We can only recapitulate its salient features, indeed, the paper itself is a *résumé* of results extending over several years, and is well worthy of the attention of physicians as well as of physiologists.

The fibrin ferment which is contained in the living blood of all animals, exists therein in very different quantities in different animals, under different conditions of time, season and health; these variations of quantity are naturally still greater for shed blood, but not always in the same sense—thus, whereas the living blood of herbivora contains less ferment than that of carnivora, the reverse is the case in the shed blood of these animals. In the blood, whether living or shed, of a fasting animal, the ferment is far less abundant than in that of an animal on full diet. As to season, a high temperature diminishes, a low temperature increases the quantity of ferment. The *post mortem* ferment is more abundant in arterial than in venous blood, the *ante mortem* ferment is more abundant in venous than in arterial blood.

In order to determine the possible action of an augmentation of the ferment in the blood, cats and dogs were submitted to injections of "blood-clot extract," in quantities such as would be sufficient to bring about clotting within fifteen minutes, of a volume of plasma equal to the estimated volume of the animal's blood. Such injections were innocuous, and prove that the organism is capable of destroying the ferment, or at any rate of neutralising its action. It is, however, possible by using a freshly prepared and concentrated extract to cause sudden death by general thrombosis. In other cases, when death did not ensue, there were grave constitutional disturbance, fever and alteration of the blood.

To examine the ferment in febrile blood, an experimental fever was provoked, viz., septicæmia by the injection of putrid liquids. In those cases in which the disease ended fatally, the *ante mortem* ferment was greatly increased (10 to 100 fold in calves and sheep; 12 fold in dogs), subsequently diminished, and even subnormal, the *post mortem* ferment was sometimes increased, sometimes diminished, being usually less as the *ante mortem* ferment was greatest in amount. The percentage of fibrin decreases in proportion with the severity of the disease, and is at its lowest at the moment of death, whereas it recovers and rises above the normal when the disease takes a favourable course. The physiological reading of these facts, according to Professor Schmidt, is as follows:—The decomposing leucocytes give rise to the fibrin ferment, and to a "substratum of coagulation;" this decomposition is in constant progress during life, since the ferment is always present in living blood; by the reaction of the organism, the products of this decomposition are constantly consumed, and the decomposition is compensated for by new leucocytes. An increased amount of ferment in the circulating blood is a sign that the decomposition has passed from a physiological to a pathological degree. The corresponding compensation by new leucocytes increases, but is limited and soon becomes inadequate, the corresponding consumption or disappearance of leucocyte products also increases, and to such a degree that the accumulation of ferment and substratum never reaches a value equivalent to that of leucocyte disintegration, and thus the percentage of fibrin falls as the disintegration increases. And, in effect, Dr. Hoffmann's observations show that the number of leucocytes contained in a given volume of blood drawn from an animal in various states, varied with the quantity of fibrin that can be derived therefrom.

Among many other points of interest, we may mention the effects of the injection of hæmoglobin and of pure water. Such injections—as we know from the observations of Naunyn and Franckel—are most deadly; hæmoglobin greatly favours coagulation, and kills by thrombosis of the great vessels, apparently by provoking the sudden development of fibrin ferment, which appears to be as suddenly effaced by the reaction of the organism. It is remarkable, however, that the injection

of intact globules, or of solutions of crystals, are innocuous. Thus the effects of a hæmoglobin solution in its active form produces much the same result as putrid liquids, but with far greater intensity of action; for, whereas, its rapidity in the latter case is measured by hours, in the former it is by minutes. Water acts by dissolving the hæmoglobin from the globules.

The pathological bearings of the above studies are thus summed up: "There are changes of the blood, actual diseases of the blood, when the physiological decomposition of leucocytes reaches an intensity beyond the normal. The products of this decomposition, among them the fibrin ferment, accumulates in the blood, the percentage of fibrin diminishes, the temperature rises, and, as an immediate consequence, the blood is exhausted of white corpuscles. These changes supervene when putrid liquids, or hæmoglobin in solution, are brought into direct contact with the blood; the effect of distilled water is the same, but less violent. Putrid liquids and hæmoglobin, absorbed by the subcutaneous tissue, have a similar tendency, but less marked."

THE latest return respecting the typhoid fever outbreak at Bangor, shows four new cases, this having been the daily average during the last fortnight.

THE Lady Mayoress, accompanied by the Lord Mayor and Sheriffs, will lay the foundation-stone of the new wing of the North-West London Hospital, 18 and 20, Kentish Town Road, N.W., on Wednesday, the 25th instant, at 3 o'clock.

OWING to the alarming spread of scarlet fever at Accrington, it has been decided to close the schools again. At a recent meeting, it was stated that, since the commencement of the epidemic, more than 500 cases had been reported, and that the deaths had been between ninety and one hundred.

WE are glad to be able to announce that our distinguished associate Dr. Grant Bey has returned to Cairo, and has found his house and valuable collections intact, and the sanitarium in good order. Dr. Grant Bey has been appointed a member of the Sanitary Board: a consultative body on all that concerns the medical department of the Egyptian Government.

WE understand, in reference to the appointment of Dr. Dutrieux already alluded to in our columns, that a duly and fully qualified medical man, Dr. Riski, has been appointed surgeon-in-chief of the Government Hospital, Alexandria, Dr. Dutrieux being relegated to the post of oculist to the same institution.

THE death of M. Davaine, well known from his discovery of the bacillus of "Charbon," is announced. Many of his most important works won for him prizes from the Académie des Sciences. Among the most important are his *Traité des Maladies vermineuses chez l'Homme et les Animaux*; a *Mémoire sur la Contagion du Charbon chez les Animaux*; and *Travaux sur la Septicémie*.

A GRAND county musical festival is announced to be held at the Market Hall, Truro, on Tuesday, the 24th instant, under the patronage of many of the leading noblemen and gentry of Cornwall, in aid of the hospitals of West Cornwall. The *artists* on the occasion will be Miss Annie Marriott, Mr. Edward Lloyd, and Signor Foli, who will be supported by a full band and chorus of about 500 performers, including members of the choral societies of Truro, Penzance, and Camborne, under the conduct of Mr. J. H. Nunn, M.R.A.M. The festival is to consist of morning and evening performances, that in the morning comprising Haydn's *Creation*, and that in the evening a miscellaneous selection.

THE bouquet given to Guiteau, by his sister, the day before his execution, has been examined by Professor W. C. Tilden of Washington, who has just issued his report. It appears that in one half-opened flower there were over five grains of white arsenic. This quantity, adds Mr. Tilden, would not only have been sufficient to cause death to a human being, but it was so largely in excess of a fatal dose, that the intent to kill might have been defeated by emetics. The original quantity of poison was larger than that found, as the petals of the flowers failed to retain in a dry state some which had adhered when moist.

SCARLET FEVER IN LEICESTER.

A SERIOUS epidemic of scarlet fever is prevalent at Leicester. Several cases have occurred in the Home for Penitent Females, where a large laundry is carried on. All the patients in the home have been removed to the Borough Fever Hospital, and all the linen in the laundry will be disinfected before it is returned to its owners.

MUNGOOSE AND COBRA.

MR. J. COCKBURN, at the July meeting of the Asiatic Society, Calcutta, read a paper on the habits and instincts of animals, in which he described the injuries inflicted on a cobra by a mongoose (*Herpestes auropunctatus*), which included the destruction of both the poison fangs in the snake's jaw. Mr. Cockburn brought forward arguments for considering the destruction of the fangs to be an act of reason, and not a mere accident.

THE HEALTH OF ST. PANCRAS.

AT a very numerously attended meeting of the members of the Sanitary Board for St. Pancras, recently held, Mr. Murphy, the Medical Officer of Health, brought up a report on the health of the district, showing that the death-rate of St. Pancras was higher than the average death-rate of London, but it had the most perfect immunity from small-pox, not a single death having been registered during the last five weeks. The disease, however, which particularly required the attention of the Sanitary Department at the present moment was scarlet fever, which had latterly increased very considerably throughout the metropolis, and was still increasing.

SMALL-POX AND FEVER IN HACKNEY.

AT the last meeting of the Hackney Board of Guardians, Mr. Andrew Wentzell, the Hackney member of the Metropolitan Asylums Board, reported that there were 91 cases of small-pox in the hospitals under the management of his board, against 92 reported a fortnight ago. He was sorry to have to report a considerable prevalence of fever, the cases having multiplied from 502, a fortnight ago, to 580 at the present time. This increase had necessitated the opening of the Fulham Hospital for fever cases, to which we referred in our last issue.

THE MALABAR.

THE Press Association states that inquiry has been made by Sir William Mends, head of the Admiralty Transport Department, into the allegations of ill-treatment made by soldiers who came home from Egypt in H.M. transport *Malabar*. After hearing evidence from all the officers on board, and two other unbiassed witnesses, Sir William Mends has come to the conclusion that there is not one word of truth in the soldiers' statements. The day-books of the ship show that the diet of the invalids on board was a generous one. The Medical Department of the army have not yet concluded their inquiry.

TYPHOID FEVER AT PORTSMOUTH DOCKYARD.

A SERIOUS outbreak of typhoid fever has occurred in the quarter occupied by the metropolitan police in Portsmouth Dockyard. Two deaths have already taken place, and two more cases are now lying in a critical condition at the Haslar Hospital, while others are just now

convalescent. The whole of the men attacked resided in a newly erected section house on some extension works. The outbreak is attributed to the defective ventilation of the sewers in the immediate vicinity; and a special inquiry into the circumstances attending the outbreak has been directed by the Admiralty.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held at the College on the afternoon of Thursday, the 19th instant. The minutes of the Ordinary Council of August 3rd were read and confirmed. The signatures to the by-laws of the college were received from the members elected to the fellowship at the last meeting of Council. Reports were received from the various annual committees. The Council proceeded to fill up the vacancies in the Court of Examiners and in the Board of Examiners in Dental Surgery, occasioned by the resignation of Mr. John Birkett from those offices. Mr. Thomas Bryant was appointed a member of the Court of Examiners, and Mr. J. Cooper Forster to the vacancy in the Dental Board.

PATHOLOGICAL SOCIETY.

AT the first meeting of the Pathological Society for this session, which was held on Tuesday last, the President, Dr. Wilks, made a feeling allusion to the loss which the Society had sustained by the death of Dr. Peacock, who was one of its earliest members, and had held the post of president, in addition to being a most constant attendant at its meetings.—We have been requested to state that the Society are anxious to receive the subsequent histories of patients whose cases have been brought before it, down to the latest possible date. A communication to this effect was issued some time ago, but it is particularly requested that any further observations made since the date of that notice, may be forwarded to the sub-committee intrusted with the matter, or to one of the secretaries, Dr. Payne or Mr. Henry Morris. These valuable histories will be published in the next volume of the Society's reports.

SMALL-POX IN AUSTRALIA.

IN the *Australian Medical Journal* for May and June, 1882, is an account and discussion on the "First Case of Small-pox in Melbourne in 1882." The case is related by Dr. Bates Headley, and from his description of it, there cannot be the shadow of a doubt that the case was an example of confluent small-pox. The point of interest in the case, however, is that small-pox is so rare in Melbourne that the doctors of the place rarely see it, and consequently know very little of it. Happy Melbourne! This may be due in some measure to the remarkable fear of it which exists in Melbourne, and to the consequent extreme precautions which are taken against it. The extent of these will be seen from the following extract from a report by Dr. Thomas S. Bulwer, health officer, in which he says: "April 20th—No one is allowed to approach the S.'s (the patients) or the nurse. I myself give instructions at a distance, and receive reports the same way from the nurse." Unhappy patients!

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

A QUARTERLY meeting of the directors of this society was held on Wednesday, October 11th, at 5 p.m., in the rooms of the Royal Medical and Chirurgical Society. The chair was taken by the President, Sir George Burrows, Bart. Two new members were elected. The death of one widow was reported, and two orphans had ceased to be eligible for further grants. Applications for grants were received from sixty-one widows, five orphans, and three orphans on the Cope-land Fund, and it was resolved that a sum of £1,259 10s. be recommended for distribution at the next quarterly meeting. The quarterly expenses amounted to £34 17s. The state of the funds permitting, it was resolved, on the motion of the acting treasurer, to make a

Christmas present to the widows and orphans in December next. The report of the committee on the revision of the by-laws was considered, and it was resolved that many important alterations should be submitted for approval to a general meeting of the society.

THE HAMPSTEAD HOSPITAL FOR FEVER.

THE Metropolitan Asylums Board have determined to open the Hampstead Hospital for cases of fever occurring in the district immediately adjacent to it, and have appointed as medical superintendent Dr. Collie, for many years medical superintendent of the Homerton Fever Hospital, and well known throughout the profession as one of our foremost authorities on the subject of the etiology and treatment of continued fevers. The appointment is one which will certainly meet general approval in the profession, and is especially valuable on account of the great administrative ability which Dr. Collie has shown himself to possess, and of his long experience in the management of fever and small-pox hospitals. Having regard to the importance of the class of cases treated in these hospitals, which include not merely fever cases properly so-called, but a large proportion of acute diseases, we trust that this appointment may be accepted as an indication on the part of the managers that they recognise the importance of providing for a post, of which the functions will require so much knowledge and tact, officers who possess adequate qualifications, such as age and experience are guarantees for, that kind of skill and efficiency which, in some parishes, is considered essential, and is supplied in the staff of visiting physicians, who are invariably seniors in the profession.

THE CHARGE AGAINST GUY'S HOSPITAL.

WE gave full details in our last number (p. 751) of an inquest held at Camberwell by Mr. Carter, coroner for East Surrey, on the case of a cabman who died after he had been sent to his home, from Guy's Hospital, at which institution he had been attended to by the house-surgeon, who had not admitted him as an in-patient, considering his injuries not to be of sufficiently severe a character to require admission. The coroner expressed his regret that the deceased had not been admitted, and the jury complained that there had been a want of common feeling on the part of some person at the Hospital. It will be remembered that the house-surgeon published a very satisfactory statement, which we inserted in the article above referred to, regretting, among other things, that he had not been summoned for evidence, and that no necropsy had been ordered. We now learn that the house-surgeon and other officials of Guy's Hospital have, quite rightly, petitioned the Home Secretary for a thorough and searching inquiry into the facts of the case.

TYPHOID FEVER IN PARIS.

TYPHOID fever, which has been epidemic in Paris during the last two months, has now assumed very serious proportions. According to the bulletin issued by the authorities on Saturday last, the number of deaths was 250, as against 57 and 134 respectively in the two weeks immediately preceding. The number of admissions to the hospitals increased in a similar ratio from 213 to 536 and then to 1,001. The total number of deaths in the whole city since the epidemic first set in is 862, whilst the cases now in the hands of the medical men in hospitals, private houses, and barracks are estimated at between 7,000 and 8,000. The death returns have been greatly swollen by the number of fatal cases amongst the soldiers at Vincennes, whither they are removed on being attacked by the disorder. Wooden huts are being erected in the courtyards of the Paris hospitals, special carriages are appropriated as ambulances, and the Société d'Hygiène is about to publish a code of instructions for the prophylaxis of the fever, as far as is possible under the existing most unsanitary arrangements of one of the most beautiful of European cities. It would occupy too much of our space to point out the sanitary defects of Paris. And it would, indeed, be extremely difficult to remedy them; but it may be hoped that the present melan-

choly experience will turn the attention of the Paris municipal authorities to a state of things which, even in ordinary times, raises the rate of mortality in Paris to 29 per 1,000, as against 18 per 1,000 in London, with its teeming East and West-end slums, its multitude of factories, and its foggy sunless winters, respecting which our French friends are never weary of employing all the shafts of their wit.

THE CASE OF POISONING BY MALE FERN.

THE case of poisoning by male fern, to which we had occasion to refer in our last issue, appears, as we have already stated, to have arisen from an unfortunate error in a well known work on treatment. The "work of repute" to which we referred is the sixth edition of *Naphey's Modern Medical Therapeutics*, published in Philadelphia in 1880, and the prescription that was copied was: "R Ext. ether. filicis maris f. 3 iss; Pulv. kamalæ 3ij.; Mucilag. acaciæ, syrupi simplicis, q. s.; Aqu. cinnamomi ad f. 3ij. M. Half to be taken at bedtime and half at 2 A.M." It is attributed to Dr. William Brinton of London, and it is this medicine that was administered to the gentleman who recently died, under such painful circumstances, at Colombo. No such formula occurs, as far as we have searched, in any of the published works of Dr. William Brinton. It seems probable, in fact it is almost certain, that the prescription was copied from a paper by Dr. John Brunton, which appeared in the *Glasgow Medical Journal* in April 1865, but the dose of the extract of male fern should have been given as one and a half drachms, and not ounces. It is a most unfortunate occurrence, and it is difficult to say on whose shoulders the blame should rest. The medical attendant was put on his trial for manslaughter, but was acquitted.

"MEDICAL COMFORTS."

No doubt the British soldier is apt to be something of a grumbler; and the British officer, especially in highly aristocratic regiments, whose officers are getting a new experience in campaigning, is apt to be exacting—to use the mildest phrase suited to the circumstances; and an officer of this stamp in hospital is apt to think that he is entitled to unlimited brandy and soda, or at least to a supply of things suited to his appetite or habits, rather than to his medical wants. Sometimes, too, he is disposed to think that precedence should be given to his servant at the cook's galley, in preparing special luxuries for his use, at a time when the galley fires are needed by the cook for preparing the regulation diets. It is easy to understand that, under these circumstances, complaints are readily engendered; and, if such complaints are accepted as valid ground for unfavourable accounts written home, rumours of ill treatment spring up, which have the most slender foundation. Nor is this the first campaign in which stories of this kind have reached us in profusion. Such incidents will always occur in campaigning; and the only misfortune is, that it should be thought necessary to attach importance to them, and to give them the publicity afforded by the winged messages of the press. Against some of these complaints may be set the remark of an illustrious personage at the seat of war, who, on seeing the requisitions forwarded by one of the medical officers for a hospital, and looking through the list of champagne, brandy, port wine, mineral water, and other luxuries, observed that only oysters were wanting in order to make up a fashionable supper.

HILUM OR "HILUS".

TWELVE months ago, a London physician, in an introductory address before a medical school, protested strenuously against technical terms in science. The medical public probably only agreed with the lecturer as far as the abuse of such terms is concerned. There can be no doubt about one point in the argument: if classical words be used, they must be used in their correct, uncorrupted form. No term in frequent use is so often corrupted as *hilum*. Professor Hyrtl, in his *Onomatologia Anatomica*, under the heading *Hilus Renis*, writes: "It is unimportant to us to decide who first adorned the language of anatomy with this error. It is only since the days of Haller that we hear

of the 'hilus renis', which is termed by Vesalius merely 'sinus', by Fallopius the 'porta renis', by Winslow the 'concavity', and by Leber the 'excisura'. The word 'hilus' is, I must say, a barbarism, for it was only known to the Romans as 'hilum'. They understood by 'hilum', according to Festus, '*id quod grano fabæ adheret*', that is, the 'macula nigricans' on the concave border of beans, the 'umbilicus' of modern botanists. From the nature of this little spot, the Romans would talk of any trifling matter as 'not worth a hilum', *ne hilum*, contracted to *nililum*, and, through the latter term, to *nilil*. To speak of the indentation on the concave border of the bean-shaped kidney as the 'hilum' is to make a good and tenable comparison, but never again should it be called 'hilus'." Dr. Klein and Mr. Noble Smith use the correct term *hilum* in speaking of the spleen and ovary in their *Atlas of Histology*; but "hilus" is constantly seen and heard in the writings and discussions of British medical and scientific authorities.

THE OWENS COLLEGE DINNER.

THE annual dinner in connection with the School of Medicine at Owens College, Manchester, was held at the Queen's Hotel, Piccadilly, on October 13th. About seventy gentlemen were present. The chair was occupied by Professor Thornburn, M.D. The chairman, in the course of his remarks, said they had now on their books 277 medical students, which meant an increase of at least 75 per cent. in the number of their members. These figures, he thought, showed how such institutions as Owens College, and the sister institution in Liverpool—the University College—were attracting in larger and larger numbers, the best of the medical students, at any rate in the North of England, for good. He wished specially to see the establishment among the students of a thorough and complete *esprit de corps*, which he hoped would some day do for a Manchester or Lancashire medical student, what was done now for an Edinburgh student, namely, that though he might go into the most distant parts of the world friendless and penniless, he should only have to announce his origin in order to meet with a warm heart and a friendly hand from some one there. Dr. Greenwood pointed out that the students of the Manchester Royal School of Medicine had taken most distinguished places in the honours list of the University of London. As regards the Victoria University, Dr. Greenwood thinks no long time will elapse before the practical injustice and incongruity which omitted from its charter the power of granting medical degrees would be remedied. Professor Gamgee, in proposing the toast of "The Royal Manchester Infirmary," said that the fact that they had connected with that infirmary such men as Roberts, and until his resignation, Lund, was sufficient to commend this toast. Dr. Banks of Liverpool, in returning thanks for the "Visitors," said that it rested with the authorities in Manchester whether they in Liverpool should come and knock at the gates of the Victoria University, and have them opened to them or not. He hoped that in the future, when men from Owens College and the University College dined together, they would do so, not as guests and strangers, but as fellow lecturers and fellow students of the Victoria University.

VACCINATION IN THE FRENCH AND GERMAN ARMIES.

In a letter published in a daily paper, Mr. Tebb has questioned the accuracy of Professor de Chaumont's remarks with reference to the relative prevalence of small-pox in the French and German armies, and asserts that the greater amount in the former is due solely to unsanitary arrangements, and that general revaccination appeared rather to extend the disease than to protect from it. We may leave Mr. Tebb to enjoy his theories, and merely apply ourselves to correct his facts, which are "seriously in error." He says that vaccination in the French army is now, and always has been, vigorously enforced, and he further states, on the authority of Dr. Oidtman, that shortly before the outbreak of the Franco-German war, the whole French army was revaccinated. But he fails to state that, when the greater part of the regular army were made prisoners, or shut up in beleaguered cities, the

army of the Loire was made up of new levies who had certainly not been revaccinated, and many of whom had probably not been even vaccinated in infancy. In the words of Morache (*Traité d'Hygiène Militaire*, p. 972) "Nul doute que la réunion de milliers de jeunes gens, sur lesquels la ré vaccination ne peut, faute de temps, être opérée, n'ait donné lieu à cette recondescence du fléau." All sanitarians are agreed that insanitary conditions greatly favour the spread of small-pox, but unless the specific poison exists or is introduced, no amount of mere dirt or crowding will start it *de novo*.

DEATH WHILST UNDER CHLOROFORM.

THE death of a man named Leaver whilst under chloroform occurred recently at the Royal Berks Hospital, Reading. The deceased was admitted to the hospital with an injury to one finger, caused by a scythe; and it being found necessary to amputate the finger, and the man having expressed his wish and consent, chloroform was administered by the assistant house-surgeon, and the operation commenced. The deceased had not been under the influence of the chloroform more than four minutes, when he suddenly ceased to breathe, and expired. Restoratives were administered, but without avail. At the coroner's inquest subsequently held, Mr. Sutton, the house-surgeon, stated that the action of the heart of the deceased, before chloroform was administered, was normal, and that but a small quantity was given. He did not think the chloroform was the cause of death, but he could not say without holding a *post mortem* examination. A necropsy was accordingly held; and at the adjourned inquest, Mr. Sutton said that he made a careful examination of the body on the preceding afternoon. He found the left side of the heart perfectly normal, and the right side dilated, and the muscular fibres of the walls were shown, by the microscope, to be in a state of fatty degeneration, to such an extent as to seriously impair the strength of the heart. The real cause of the degeneration was, doubtless, through pleurisy some time ago. Death was caused by the action of the heart being overcome, partly through the use of the chloroform, accelerated by the patient's struggles. The presence of chloroform could not be detected, such a small amount was administered. The jury returned a verdict of "Death from weakness of the heart, accelerated by chloroform", at the same time adding that they did not think anyone was to blame.

POST-OFFICE INDUSTRIAL INSURANCE.

IT must be admitted that Government insurance has, hitherto, been a failure. It had become imperative either to close this department of the Post-office, or by some changes in its regulations to increase its popularity and its adaptability to the wants of the working classes, for whose benefit it was initiated. It remains to be proved whether the changes about to take place in the regulations governing Post-office insurance will enable this department to compete successfully with the various successful industrial companies. The most important change made in the regulations is that which abolishes medical examination. We shall be anxious to see the departmental regulations drawn up in pursuance of section 6 of the recent Government Annuities and Insurance Act. Our insurance contemporaries have been profuse in their warnings, and it has been mysteriously hinted that "one of the most eminent of living actuaries" entertains the opinion that the Postmaster-General is "about to burn his fingers" by this change in the method of granting insurances. It is not difficult to understand that the insurance world views with disfavour Government competition in the field of industrial insurance, and the difficulties in the way of the experiment are sufficiently obvious, but hostile criticism is somewhat premature until the issue of the official regulations contemplated by the Act. At the same time, it is very satisfactory to note that the Act does not afford many facilities for child insurance, Government evidently not wishing to compete with some of the industrial companies in this objectionable, and we might almost say immoral branch of insurance. Section 4 of the Act, enacts that savings' bank insurances shall only be granted to persons, aged fourteen years,

and under sixty-five, with the exception that, if the amount insured does not exceed £5, the lower limit of age may be enlarged to eight years. No children under the age of eight years can be insured at all, and only for sums not exceeding £5 under the age of fourteen years. In order, as far as possible, to guard against the infringement of this enactment, Section 6 further enacts that the regulations "shall also make such provisions as seem, to the authority making the same, necessary or proper for making payment on the death of children under ten years of age, subject to the provisions contained in Section 28 of the Friendly Societies' Act, 1875." The Registrar of Friendly Societies has more than once expressed his doubt whether this section has operated effectually in the repression of over insurance of children by friendly societies and industrial companies. We may, however, confidently anticipate that these restrictive enactments will be more loyally respected by post office officials than they are by Friendly Societies and their agents, whose primary object, stimulated by a proportionally heavy commission, is to promote and encourage business.

METROPOLITAN BAKEHOUSES.

At the last meeting of the Clerkenwell Board of Guardians, a report was brought up from the Sanitary Committee stating that the medical officer had visited the sixty bakehouses of the parish, and found them mostly in good order, some in excellent order, and only a few were dirty, with sinks or traps defective. He ascertained that some of the bakehouses had been visited every three months by the factory inspector, some nine or ten months, a year, a year and a-half, and two years ago, while twenty-four of the sixty had never been inspected at all. The committee consequently state that, in their opinion, the inspection of the bakehouses by the factory inspector is most unsatisfactory, especially as compared with that of the local sanitary authorities previous to the transfer of the duties to the factory inspector in 1878. It would seem, however, that the condition of the bakehouses in East London is not so satisfactory even as in Clerkenwell, since we read that, at the Thames Police Court, Maria Clark, a baker, of Old Gravel Lane, St. George's, was summoned by Mr. Lakeman, the inspector of factories, for that she, being the occupier of a certain workshop where bread-baking was carried on, unlawfully neglected to keep the said shop in conformity with the 3rd section of the Act 41 Vict., cap. 16. It seemed that the defendant's premises had come under the observation of the authorities empowered to carry out the provisions of the Workshops and Factories Act, and on Sept. 26th, Mr. Lakeman visited Clark's premises, and found the bakehouse occupied by seventeen fowls, and exceedingly filthy. On entering the back kitchen, which was used as a storeroom for flour, he found it filled with all sorts of refuse material, and the floor in a dirty state. The bakehouse was 9ft. by 7ft., perfectly dark, and the window was obscured by dirt. In it were tools, baskets, bird-cages, pieces of timber, etc. On coming to the trough where the bread was made, he found the defendant kneading dough on sacks, and behind a dirty board were a row of tarts ready for the oven. There was only a paraffin lamp, and altogether the place was as much a fowlhouse as a bakehouse. Mr. Lushington said that the premises appeared to be in a most filthy state, and imposed a fine of £5.

FOREIGN SOCIAL CUSTOMS.

UNDER the heading of "What tourists note," the *Times* last week made mention of many matters connected with the affairs of daily social life, in which the practice of foreign countries seems to be superior to that of Great Britain. Some of these customs have to do with political life, elections, etc., but others are such, as would, if adopted here, promote the health and well-being of the community. The trouble which is taken to inscribe, at a registrar's office, every particular respecting a birth or death is most commendable, and results in the production of a document which is of real use. The endless electric clocks set up at the cross-roads in Paris; the benches placed everywhere to give rest to pedestrians; the omnibus stations where one may wait for an omnibus without being exposed to rain, wind, cold, etc.; the *crémeries*,

where are sold all eatables made with milk or eggs, chocolate, *café-au-lait*, omelettes, etc.; all these are amongst the institutions which we should like to see transplanted in London. Quick condign punishment is visited upon the heads of tradesmen who adulterate their wares; and a laboratory was last year opened at the *Préfecture de Police* in Paris, at which, for a small fee, analyses of food and drink are made and reported upon. Such reports being lodged by the victim of trade roguery at the police office of his district, the tradesman's shop is visited by inspectors, who overhaul the stock, and carry off all adulterated articles. Inspectors, too, are appointed to visit the kitchens of hotels and eating-houses, and see that the utensils used therein are clean, and the meat free from taint; and fines, we are assured, are as impartially inflicted upon transgressors of high as of low degree. It appears, further, from another tourist's note, that at Hanover a complete system of control exists for the prevention of sale to the public of any but the most healthy meat. No joint is allowed to be sold until it has passed the inspectors, who are experts, and subject different parts of the carcass of each slaughtered animal to microscopical examination. In July, sixteen carcasses more or less affected with tuberculosis, were discovered. It is allowable, perhaps, to doubt the wholesale inoculation of tuberculosis of the people of Hanover, which the condemnation of these carcasses is alleged to have prevented, but, at any rate, the custom of examining microscopically all carcasses before they pass out of the slaughter-houses, is much to be eulogised.

THE SURGICAL TREATMENT OF FACIAL NEURALGIA.

WE understand that Mr. Chavasse's case of excision of Meckel's ganglion and the superior maxillary nerve, is the first operation of the kind performed in the British Isles. In February 1880, Mr. Walsham stretched the infra-orbital nerve, the patient being a woman, aged 50, subject to intractable neuralgia—a case, in fact, precisely similar to Mr. Chavasse's; it is recorded in an original article, by the operator himself, in the *JOURNAL*, vol. ii, 1880, page 1,009. We are informed that this patient has never suffered from any recurrence of the neuralgic pain since the stretching of the infra-orbital nerve; and, also, that before the operation, removal of the spheno-palatine ganglion was proposed. The patient, however, expressly stipulated that she would not consent to any operation being performed, unless first assured that it did not entail the slightest risk to life. Mr. Walsham, moreover, was not strongly in favour of removal of the ganglion; and, it must be borne in mind, that he concludes the article above referred to, by observing that a morbid condition of the spheno-maxillary ganglion had, at that period, already been suggested as a cause of intractable facial neuralgia; and the ganglion had already been removed several times. It is, however, not improbable, the author added, that as the superior maxillary nerve must be stretched in the operation, the benefit obtained might be traced to the stretching of the nerve rather than to the removal of the ganglion. The fact that both stretching and excision of portions of the second division of the fifth pair of cerebral nerves have been performed more than once shows, at least, that facial neuralgia may resist all palliative treatment, that sufferers from this intractable disease may urgently desire operative interference, and that competent authorities and operators are not quite decided as to the superior merits of one out of two measures. No satisfactory decision will be obtained until many more such operations are performed, with the most scrupulous comparisons of results, as gleaned from histories of the course of the cases for years after the operations.

ALLEGED ABORTION FROM USE OF A DRUG.

AN inquiry has recently been held as to the cause of the death of a married woman, Eliza Pritchard, which occurred after her miscarriage under suspicious circumstances, and, as was alleged, by the administration of some drug by a midwife. According to the evidence of the sister of the deceased, the latter consulted a midwife, Eliza Foord, with the view of procuring medicine to secure a miscarriage, but this statement was afterwards withdrawn when the midwife was charged at the

police-court with having caused the death of Pritchard. Ultimately a bottle of medicine was procured from Mrs. Foord; and soon after, Mrs. Pritchard complained of illness. Dr. Neville, who was called in on the next day, was so impressed with the nature of her symptoms, that he asked pointedly whether some drug had not been taken; and on the next morning he repeated the question. Three days later, the woman died, having previously miscarried. A certificate was given assigning the cause of death to miscarriage; but the receipt of an anonymous letter by Dr. Neville led him to communicate with the police and the coroner; and the case was taken up by the Public Prosecutor. A necropsy revealed the presence of extensive peritonitis, not limited to the pelvic region. The gastro-intestinal mucous membrane was also extensively inflamed; and the kidneys were much congested. Dr. Thomas Stevenson analysed the viscera, and forty-four medicines taken by the police from the bed-room of the deceased woman, and from the house of the midwife. He found no poison in the viscera; and he thought that there was ample time between the Monday—the date of the commencement of the illness—and Saturday, the date of death—to admit of the removal of many abortifacients from the body. Only one of the forty-four medicines examined could be regarded as a substance likely to procure miscarriage. That was a packet of black hellebore powder. But this was a substance which had many legitimate uses. The gastro-intestinal inflammation which he observed in the viscera was more extensive and severe than was usual in cases of peritonitis after natural miscarriage; and this, coupled with the congestion of the kidneys, might well have been the result of the administration of a drug, of which, however, he detected no traces in the body of the deceased. The woman Foord was discharged by the magistrate; and the coroner's jury returned an open verdict.

HOUSE SURGEONS' FEES AND THE CERTIFICATE QUESTION.

DURING the hearing of a charge of attempted murder of a woman, at the Portsmouth Police-court on Saturday, a point arose of some interest to the medical profession. It transpired, in the course of the evidence, that the house surgeon at the Portsmouth, Portsea, and Gosport Hospital (Mr. Williams), had refused to the police a certificate of the condition of the injured woman, who had been detained in that institution in consequence of the severe nature of her injuries, unless he received payment for that certificate. The magistrates expressed their surprise that such a course should have to be pursued, but as the surgeon was not then in attendance, they agreed not to commit themselves to any condemnatory expression of opinion regarding the matter. The absence of the surgeon, after having been warned to attend the court, was also remarked upon with astonishment. The case had been disposed of some time, by the prisoner being remanded, when Mr. Williams came into court. The chairman of the bench then asked him if it was true that he had refused a certificate to the police because he was not paid for it. The surgeon replied, "Certainly." The magistrate's clerk remarked that, as the surgeon was not at the court in time, no entry could be made relative to his fee for attendance. Mr. Williams said he had to complain of the way in which he was informed of the case, and stated that he had only been warned to attend the court about forty minutes before. Ten minutes had been occupied in giving absolutely necessary instructions to be observed during his absence, and the remaining twenty minutes in his getting to the court. Inspector Bidgood said he warned the surgeon at ten o'clock that he would either have to give a certificate, or attend the court. Mr. Williams would not give a certificate without being paid for it, and as the Chief Constable told him there was no fund from which payment could be made, he had given Mr. Williams to understand that his attendance at court would be requisite. Mr. Williams distinctly denied the statement. The clerk then said: "You might have given a certificate and saved all this bother." Mr. Williams answered: "It is not usual to give a certificate without the fee." The chairman then remarked: "Well, the case has been adjourned for a week." Mr. Williams said that he had attended the court at great inconvenience,

and supposed that his fee would be duly paid. The clerk informed him that, as he had not arrived in time to give evidence, the fee could not be booked. Mr. Williams then observed: "I complain of the way I am informed of cases. It has been the same with the other house surgeons." The clerk answered: "We know all about the other house surgeons." The chairman, interrupting, said: "Excuse me, the case has been adjourned." The matter then dropped.

VACCINATION AND SMALL-POX STATISTICS.

DR. MACCOMBIE, in his last annual report on the small-pox statistics of the Deptford Hospital, points out some interesting deductions from the figures. Of the admissions, 2,303 were vaccinated, of whom 175 died, a mortality of 7.6 per cent.; 351 were said to be vaccinated, but had no marks, or bore no evidence whatever of vaccination, and of these 126 died, a mortality of 35.9 per cent.; 531 were unvaccinated, of whom 251 died, a mortality of 47.4 per cent.; that is to say, for every death among a given number of the vaccinated, 4 occurred among an equal number of the doubtfully vaccinated, and 6 among an equal number of the unvaccinated. These results are sufficiently conclusive of the advantages enjoyed by vaccinated patients compared with unvaccinated. But it is important, in considering the mortality among the vaccinated, to take into account the quality and size of the (superficial area) vaccination marks. With this view, the vaccinated cases are divided into two classes: (1) those with good vaccination, and (2) those with imperfect vaccination. By good vaccination is meant not less than one-third of a square inch of well pitted marks (two marks not quite so large as a threepenny-piece, or one mark as large as a sixpence, would be equal to this amount of surface). By imperfect vaccination is meant well pitted marks of less than one-third of a square inch of surface, or any extent of imperfectly pitted marks. Classifying the cases in this way, the mortality of those with good vaccination was 3.5 per cent., and of those with imperfect vaccination 9.5 per cent. Comparing the death-rate, in childhood and youth, of those with good and those with imperfect vaccination, he notes that, in the well vaccinated under 10, it is 1 per cent.; from 10 to 14, it is 1.8 per cent.; and from 15 to 19, it is 2.2 per cent.; while in the imperfectly vaccinated, under 10 it is 4.5 per cent.; from 10 to 14 it is 2.8 per cent.; and from 15 to 19 it is 5.3 per cent. This confirms what he had previously observed; that those with good vaccination, who contract small-pox under 10, or even under 15, years of age, run very little risk of dying from it, while the risk of death to the imperfectly vaccinated under 10 is considerable. The protection afforded by vaccination against fatal attacks of small-pox is exhausted at an earlier age in the imperfectly vaccinated than in the well vaccinated. As regards the vaccinated and the unvaccinated admissions in the first ten years of life, it is instructive to note that, while only 10 per cent. of the vaccinated are under 10, 58 per cent. of the unvaccinated are under that age, and the mortality is 3 and 54 per cent. respectively. It is commonly believed that the protection afforded by vaccination against small-pox is lost in many people at or about the age of puberty. Puberty is rather an indefinite age, but 15 is perhaps the best year to fix it at. Do these statistics support this belief? In Table II of the report, it appears that, of the total vaccinated admissions, 1 per cent. are under 5, 9 per cent. from 5 to 9; 19 per cent. from 10 to 14; 21 per cent. from 15 to 19; and 18 per cent. from 20 to 24; and so on in decreasing proportions in the subsequent five yearly periods. Moreover, it appears that a larger number of cases gives nearly the same proportions. Of 3,855 vaccinated cases admitted here during the past four years, the proportions are found to be: 1.4 per cent. under 5; 9.2 per cent. from 5 to 9; 19 per cent. from 10 to 14; 22 per cent. from 15 to 19; 17.6 per cent. from 20 to 24. This shows that, of vaccinated persons attacked with small-pox at all ages, the highest proportion of attacks occurs at the two periods from 10 to 14, and from 15 to 19, and the proportion in these two periods is nearly equal. As far, therefore, as the age at which vaccinated persons are attacked with small-pox may be taken as evidence that the protective influence of vaccination

against small-pox has become exhausted at, and not before, that particular year of life, it is clear that this influence is lost in about an equal proportion of vaccinated subjects in the five years immediately preceding puberty, and in the five years immediately following puberty. With the view of anticipating the exhaustion of the small-pox protection of vaccination, it is usual to recommend that a second vaccination should take place about puberty. Dr. MacCombie asks, Is this sufficiently early? and he concludes, from the facts just stated, that it is not. Speaking from an experience of nearly 4,000 vaccinated small-pox patients treated in this hospital, he is of opinion that it is impossible to lay down an absolute rule as to the precise age at which a second vaccination should be performed, but he recommends its performance five years before puberty (15), rather than wait till puberty; and were children exposed to small-pox infection at any age from 5 till 10, they should certainly have their vaccination tested, even if the primary vaccination might have been good. Persons revaccinated before or at puberty should be vaccinated again between 20 and 30. Some people, however, are so susceptible to small-pox, that even revaccination only makes them proof against it for a few years. But that these form a comparatively small proportion of the revaccinated population is apparent from the statement that, of 3,855 vaccinated admissions into this hospital during the past four years, only 22 had been successfully revaccinated, of whom, however, 3 died. The average interval between revaccination and the attack of small-pox in these 22 cases was 10 years. Dr. MacCombie concludes that small-pox after successful revaccination is rare; but that, when it does occur, it is likely to be as severe as when it attacks those who have only been vaccinated once, and for the reason that the protection afforded by the second vaccination has been as completely lost in the one class of cases as the protection of the primary vaccination has been in the other. Vaccination is so constantly assailed by a certain class of persons, that it is satisfactory to find that Dr. MacCombie emphasises his wish, before closing his report, to express his firm belief in its value as a means of diminishing the severity of small-pox in a large, a very large, proportion of those who have the misfortune to be attacked. "Were these persons", he says, "to see small-pox as we see it, and not merely to read about it, I cannot believe they would be so indifferent to human suffering as to continue to oppose a means which, if it does not always prevent, yet, in most cases, robs a horrible and loathsome disease of most of its terrors." The health of the staff engaged in the small-pox wards was very good, no case of small-pox or serious illness having occurred among them. During the past three years, there have been employed in small-pox wards 265 individuals of the staff. Of these, 65 had had small-pox before entering on their duties. None of these contracted small-pox. Of the remaining 200 who had not had small-pox, two contracted it. One was a nurse in a fever ward at the time, whose revaccination had been overlooked; the other was a ward-servant, who developed the disease four days after entering the service, and eight days after revaccination had been performed. She had evidently received the infection of small-pox before she was revaccinated. 193 staff who had not had small-pox, but who were revaccinated on or just before entering the service, did not contract it, although most of them passed twelve hours daily in small-pox wards. This is the concluding and interesting statement of a satisfactory and valuable report.

THE CLINICAL SOCIETY.

THE first meeting of the Clinical Society for the present session took place on the evening of Friday, the 13th instant, when there was a full attendance of members. At the beginning of the meeting, the President, Mr. Lister, showed a copy of the new diploma, with the seal of the Society attached, which had been presented to the recently elected Honorary Fellows of the Society. He also exhibited a specimen of the card which, when filled up, is to accompany the living specimens that may be exhibited to the Society. The following is the regulation with regard to such exhibition: "Notice of the exhibition of living speci-

mens should be given to the secretary, whenever possible, at least twenty-four hours before the meeting, and the patient should be in attendance at the rooms of the Society at eight o'clock on the evening of exhibition. Each case should be accompanied by a card containing a brief description of the points it illustrates; such card to be retained by the secretary for publication or not in the *Transactions*, at the discretion of the Council. Such exhibition 'by card' shall not preclude members from sending in papers on the cases as heretofore." A paper by Dr. Theodore Williams followed, which detailed the great benefit that had accrued to a phthisical patient from residence at Davos, and which opened up the whole question of treatment of such cases by residence in high altitudes. That such great benefit does result is, of course, now a well established clinical fact, but as to how the improvement is wrought, observers seem not to be equally agreed. Whether the germless or dustless condition of these elevated atmospheres is the cause of the invalids' improvement, or whether the expansion of the chest-wall, and consequent increase of the lungs themselves, is to be credited with all the good, seems to be at present undetermined. Some speakers thought that the out-door exercise which such patients could obtain was not without its benefit; whilst Mr. Lister explained that the mountain air was aseptic, not antiseptic, as was often thought. Dr. Williams seemed to consider that the large breathing capacity developed in high altitudes was the chief cause of his patient's improvement, as he had found from cyrtometric tracings of similar cases that the chest was always expanded after residence at Davos or Colorado. The climate of this latter place, with its sunshiny dry atmosphere, was considered by Dr. Althaus to have peculiar advantages as a residence for consumptives. Mr. Golding-Bird and Mr. Clement Lucas each detailed a case in which they had removed the tonsil by Cheever's method for cancer; but the result was not such as to induce Mr. Golding-Bird to perform a similar operation for the future. The advisability of removing neighbouring enlarged glands whilst excising cancerous growths was strongly insisted upon by various surgical speakers. Altogether, the meeting was one of interest both to physicians and surgeons.

HOSPITAL CHARGES FOR PAUPERS.

A DISCUSSION has recently taken place at the board meeting of the St. Pancras Board of Guardians respecting an application from the authorities of Guy's Hospital, for a form to be signed, requiring the guardians to pay one shilling per day for a pauper removed to the hospital to have an operation performed. Mr. Stafford, one of the guardians, stated that it was his impression that any person, rich or poor, admitted to the hospital, was supposed to be treated without expense; and another guardian said that if he sent his servant to the hospital he was not asked to pay any contribution to his maintenance, and he could not see why any remuneration was demanded in the case of a pauper. It was finally resolved not to pay the shilling per day demanded by the hospital. Dr. Steele, the superintendent of Guy's Hospital, comments on these proceedings in a letter to a contemporary. He writes: "From time immemorial, it has been the custom for guardians in London, as well as in the country, to send special cases to the hospital for the benefit of the superior medical skill and treatment it affords; and to protect the practice from being abused, the governors, more than a century ago, imposed a charge on the unions of one shilling a day during the pauper's residence in the hospital. This arrangement, which has always worked satisfactorily, has been the means of conferring innumerable benefits on disabled paupers, who have been brought to the hospital to undergo surgical operations and other treatment, which the Poor-law medical officers did not feel justified in attempting on their own responsibility. From its proximity to the hospital, St. Saviour's Union has largely availed itself of this privilege, while the lower class of the inhabitants make very free use of the hospital for in-door and out-door medical relief. The attempt on the part of the guardians to recede from the responsibility of indemnifying the hospital to a moderate extent for the medical maintenance of their paupers commenced about three weeks ago, when an old man from the workhouse, out on a day's

holiday, got drunk, fractured his leg, and instead of being taken to the workhouse infirmary, was brought direct to the hospital. The case, which has recently been the subject of discussion among the guardians, is even more illustrative of the necessity of preserving amicable relations betwixt the general hospital and the union infirmary. A woman in imminent danger of losing her life under a surgical operation which is had recourse to, is sent to the hospital in the parish ambulance by the medical officer of the union, as he feels himself unable or unwilling to cope with the serious character of the operation in the union infirmary. It is, of course, open to the hospital authorities to refuse admission to such cases, though common humanity suggests a more merciful alternative, yet if adjoining parishes and distant unions were to adopt similar tactics to those pursued by the St. Saviour's guardians, it is easy to foresee that the hospital, already overburdened with the claims of the industrious poor, must necessarily close its doors to those for whose benefit it was originally intended." Dr. Steele then goes on to point out that every day makes it more painfully apparent that the eleemosynary aid, in the shape of hospital accommodation for the sick and injured, is absurdly disproportionate to the requirements of the population in South London. The increase of population in the districts south of the river and within the metropolitan area during the last thirty years, has been at the rate of 88 per cent., the addition in the last decade not falling much short of 400,000, while the entire south side population is considerably over a million and a half. For this vast mass of humanity, the only two hospitals which have opened their doors for centuries, to receive all cases without recommendation of any kind, have been St. Thomas's and Guy's, neither of which hospitals is in any way indebted to the public for support. The accommodation in each of these establishments, fed mainly from the districts referred to, is not greater than it was at the beginning of the century, and the hospitals are unable to cope with the demands made on them, so that many serious accidents, which, twenty years ago, would have been readily admitted into their wards, are now sent away for want of room, or go to swell the already encumbered out-patient departments. In the midst of all this paucity of voluntary help, there have sprung up in the district, through the agency of the Local Government Board, numerous handsome infirmaries and hospitals, which are closed against every case of accident or urgency, unless fortified with a recommendation from the parish authority. Dr. Steele, therefore, urges that, in the interests of humanity, the time has now arrived when the hospitals may fairly claim the right, in the event of their own limited resources being exhausted, to send cases of urgency and injury, which cannot be well treated at home, to one or other of the establishments referred to, without what he denominates "the irrepressible parish formalities".

SCOTLAND.

STIRLING ROYAL INFIRMARY.

SO successful and prosperous has this institution been since its establishment, about eight years ago, that it has been decided to considerably enlarge the building by the erection of an additional wing at the back and east side of the present structure. The additional accommodation will give five new wards, a waiting-room for out-door patients, and nurses' rooms. The work is estimated to cost £1,500, of which £1,350 have been already subscribed.

GLASGOW HEALTH LECTURES.

ARRANGEMENTS have been completed for the delivery in Glasgow of another course of health lectures during the coming winter. Taken as a whole, the subjects selected can scarcely be regarded as of the same useful and practical nature as in previous courses, but the names of the lecturers are sufficient guarantees that they will be ably handled. The opening lecture is by Professor George Buchanan, on "The Structure of the Human Body."

WATER-SUPPLY OF LANARK.

THE new water-works, which have been constructed at a cost of £10,000, to supply the burgh of Lanark with water, were formally opened on the 13th instant. Hitherto, the supply of water to the town had been most unsatisfactory; but, by the new arrangements, there has been provided a copious supply of an excellent water, free from mineral and organic impurities, and allowing of a consumption of twenty-five gallons each per day to a population of 6,000.

SCARLET FEVER AT CUPAR.

THE outbreak of scarlet fever in Cupar, Fife (mentioned some time ago in the JOURNAL) continues to prevail and spread. At a meeting of the Sanitary Committee, held on October 12th, it was reported that, since the 3rd October, thirty-one cases had occurred, one death; and that many of the cases were severe. The medical officer of health recommended the closing of the public schools for the present, and stated that in three days as many as fourteen cases had been reported. After some discussion, the Committee, by a majority, recommended the closing of the public schools.

THE COMBE LECTURES.

THE Combe Lectures on Physiology and Health will this winter be delivered in Perth, Falkirk, and Leith; each course will consist of eight lectures. In addition to these, the trustees have arranged for two supplementary courses in Hawick and Galashiels; the success of the previous lectures in these places having encouraged the trustees to provide for each a course of six health lectures. Dr. Andrew Wilson is the Combe Lecturer for the above courses.

GLASGOW SOUTHERN MEDICAL SOCIETY.

AT a meeting of the Glasgow Southern Medical Society, held at Fleming's Temperance Hotel, 11, Bridge Street, on Thursday evening, the 12th instant, the following gentlemen were elected office-bearers for the ensuing session, 1882-83: James Barras, President; Dr. Robert Park, Vice-President; Dr. Edward Macmillan, Treasurer; Dr. A. T. Smith, Secretary; Dr. Robert Pollok, Editorial Secretary; Dr. R. W. Forrest, Seal-Keeper; Court Medical: Dr. Neil Carmichael (Convener), Dr. Macfarlan, Dr. John White, Dr. John Dougall, Dr. James Martin; Council: Dr. Carr, Dr. T. F. Gilmour, Dr. Alexander Napier.

ABERDEEN UNIVERSITY COUNCIL.

WE observe that the Aberdeen medical authorities are moving in the matter of trying to obtain additional bursaries for the Faculty of Medicine. At the half-yearly meeting of the University Council, held on the 11th instant, it was unanimously resolved to represent to the University Court the importance of making known the want of bursaries for students of medicine in the university. The subject was brought forward by Professor Struthers, who gave some interesting statistics, to show the plethora of bursaries attached to certain of the faculties, and the comparative poverty of the Medical Faculty in that respect.

THE PUBLIC HEALTH OF EDINBURGH.

AT the last meeting of the Public Health Committee of the Edinburgh Town Council, the convener of it gave a *résumé* of the work done in the interest of the public health of Edinburgh. As to insanitary houses, twenty had been pulled down and many others put right; 600 cases of minor nuisances, affecting the sanitary conditions of houses, had been dealt with, and the desires of the committee carried out. The death-rate of the city for last week he stated to be 14 per 1,000 per annum, and, for the past three months, 16, and this notwithstanding the prevalence of scarlet fever. During last week, there were 66 new cases of scarlet fever intimated to the medical officer of health, seven of diphtheria, seven of fever, and eight of measles, while there were eight deaths from zymotic diseases, six of these being due to scarlet fever, and of these, five occurred in the old town.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General, for the week ending October 7th, it appears that the death-rate in the eight principal towns was 22.3 per 1000 of estimated population. This rate is 3.5 above that for the corresponding week of last year, and 1.3 above that for the previous week of the present year. The lowest mortality was recorded in Aberdeen—viz., 16.9 per 1000; and the highest in Greenock—viz., 28.9 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 4.6 per 1000, or 0.4 below the rate for the previous week. Whooping-cough was the most fatal epidemic in Glasgow. Acute diseases of the chest caused 102 deaths, being the same number as that registered during the previous week. The mean temperature was 53.6°, being 1.6° above that of the week immediately preceding, and 4.4° above that of the corresponding week of last year.

GLASGOW ROYAL INFIRMARY MEDICAL SCHOOL.

TO mark the completion of the new buildings in connection with this school of medicine, it has been determined to hold shortly a *convocation*, so that all interested in the school may have an opportunity of inspecting the new class-rooms of the different departments, all of which, it is hoped, will be ready for occupation at the commencement of the coming winter session. The anatomical section has been in use for some time, and with its well-lighted and thoroughly ventilated dissecting-room, has given every satisfaction. The lighting and ventilation of the other parts of the building have also been well attended to, and the chemical and physiological theatres and the class-rooms for general instruction and experimentation have been well supplied and fitted up with every requisite for the convenience and comfort of the students.

FIFESHIRE MEDICAL ASSOCIATION.

THE first meeting of this association was held at the Royal Hotel, Cupar, Fife, on September 29th, Professor J. Bell Pettigrew, president, in the chair. The gentlemen present were: Drs. Constable, Leachars; Archibald, Moir, and Kyle, St. Andrews; Whitelaw, Macdonald, Douglas, and Turnbull, Cupar; Bell and Dow, Dunfermline; Porteous, Kirkcaldy; Spence, Burntisland; Aitkin, Buckhaven; Welsh, Kinghorn; Pithie, Ceres; Palm, Largo; Kennedy, Elie; Watson, East Wemyss; Lyall, Leven; Alexander, Leslie; and Blair, Tayport. Dr. Lee and Dr. Sinclair, Dundee, were present as guests. The proceedings commenced by an introductory address from the president, who observed that his first duty was to thank the members heartily for the honour done him in asking him to preside at this their first attempt at a reunion; his second and chief duty was to say a word or two in favour of that reunion, and concerning the object and scope of the association. The term reunion was used advisedly, for the members were united to each other by university and college ties before leaving the schools; and it is only when engaged in practice and dispersed over the country that they became disunited. As, however, union is strength, and the association was made up entirely of members of the same corporate body, it was their bounden duty to cleave one to another. As physicians and surgeons, not much would be said for the wisdom of the individual who regarded his own members as aliens; neither could much be said for the members themselves if they strove against each other and refused to act harmoniously for the well-being of the body. As with the body and its members, so it will be with ourselves professionally. Dr. Pettigrew strenuously urged union among all members of the profession, and the great question at present was whether medical men should be the slaves or the leaders and teachers of the public, which was safer in the hands of the profession than the professor would be in the power of the public. Union alone can secure the triumph of the right. Unprofessional competition and commercial rivalry were the great internal evils of the profession, and were manifested in underselling by low fees, in dread of calling in a rival to a consultation, and in dislike of taking a holiday, necessary for health, whilst practice is left to a colleague, who may dangerously increase his popularity,

Progress, promoted by hard labour in private, demands that all workers should occasionally meet and talk over their work, and such a union promotes professional and personal as well as scientific harmony. In conclusion, Dr. Pettigrew remarked: "Man has an appetite for work, and another for play; and the object and aim of the Fife-shire Medical Association is to provide for man's compound nature in both respects; and hence I humbly submit that at our annual meetings there should be a short address given by the president of the year on some medical or social topic, or a short paper or papers read and discussed by the members; and that the proceedings should terminate in a plain, substantial dinner, where the haggis will powerfully contend with John Barleycorn, to the utter discomfiture and annihilation of both. We shall in this way best secure 'the feast of reason and the flow of soul.'" The proposed rules were then considered, and, with a few unimportant exceptions, were adopted. Dr. Lumgair, Largo, was elected president; Dr. Archibald, St. Andrews, vice-president; Dr. Douglas, secretary; and Dr. Macdonald, treasurer. Dr. Constable, Dr. Porteous, and Dr. Gordon were elected members of council. Forty-seven of upwards of sixty medical gentlemen in the county have joined the association.

IRELAND.

Dr. LYONS, M.P. for Dublin, and Crown representative for Ireland on the General Medical Council, has been appointed a Deputy Lieutenant.

THE ROYAL UNIVERSITY.

It has been announced that the degrees and honours obtained at the recent examinations of this University, will be publicly conferred on November 3rd. His Grace the Duke of Abercorn, Chancellor of the University, will preside on the occasion.

ROYAL COLLEGE OF SURGEONS.

AN election of examiners, to examine candidates for the dental diploma of this College, was held on the 5th instant. The three outgoing examiners, being Fellows of the College—Messrs. Richardson, E. Stoker, and O'Grady—were re-elected. The dentists elected were Mr. R. Theodore Stack, Mr. Daniel Corbet, jun., and Mr. Henry G. Sherlock. The latter gentleman was re-elected a member of the Court of Examiners. Mr. Stack and Mr. Corbet are new members.

PRESENTATION TO DR. FOREMAN, BALLYNAHINCH, CO. DOWN.

A DEPUTATION waited upon Dr. Foreman of Ballynahinch on Thursday, October 12th, to present him with a beautifully illuminated address, on the occasion of his leaving for Denton, Manchester. Great regret was expressed at the loss which Ballynahinch and the neighbourhood would sustain by his removal. Mrs. Foreman was also presented at the same time with a silver tea and coffee service and salver. After the presentation, Dr. Foreman entertained the deputation and a number of his neighbouring medical friends to supper in Walker's Hotel.

MEDICAL MAGISTRATE.—His Grace the Duke of Devonshire, K.G., the Lord-Lieutenant of Derbyshire, has placed William Webb, Esq., M.D., F.R.C.S., of Wirksworth, the President-elect of the Midland Branch of the British Medical Association, in the Commission of the Peace for that county. Dr. Webb qualified as a magistrate at the Quarter Sessions held at Derby on the 17th instant.

THE mortuary question again has been before the Marylebone Vestry. In a communication from the Local Government Board, a complaint was made regarding the mortuary in Paddington Street. In addition to there not being sufficient accommodation for the reception of dead bodies, it was stated that there was no provision made for the *embauming* of *post mortem* examinations and coroner's inquiries. The matter was referred to the Sanitary Committee.

THE EGYPTIAN EXPEDITION.

INQUIRY CONCERNING THE TREATMENT OF THE WOUNDED IN EGYPT.

I HAD this week the opportunity, by permission of the Principal Medical Officer at Netley, Surgeon-General Holloway, of going through the wards at Netley Hospital, of carrying out an examination of invalids now in hospital from Egypt, and of obtaining from them their detailed personal statements as to the treatment which they received in the various field and base hospitals into which they were received in Egypt after wounds or in sickness; and of their impressions of the food, medical treatment, and general conditions of hospital administration, in the field, in the base hospitals, and on board the various transports on which they returned home. In this inquiry, which I carried out in considerable detail by the aid of shorthand notes of the statements made, I received every facility from the authorities. By authority of the Secretary of State for War, and the courtesy of officials in various departments, I have also had the opportunity of testing these statements by reference to some official documents; and I have been able to obtain personal information from returned medical officers and others on the questions at issue.

In carrying out this inquiry, I was guided in its direction by the allegations which have been made as to the defective administration of the hospitals and transports; the want of food, of medicines, of chloroform, the lack of cleanliness, the want of disinfectants and similar hospital necessities; and also the charges of want of comforts, cleanliness, and attendants on board the various medical transports which have brought home successive batches of invalids from Egypt. My inquiry had reference also to various details with which I have been furnished by several correspondents, medical and others, in Egypt, including medical officers at the seat of operations, and medical civilians who had means of observing and critically considering some of the hospital arrangements at Alexandria, Cairo, and elsewhere. Fully to state the results of my inquiry will occupy much space, more, perhaps, than can here be devoted to the subject; it is, however, one of so much importance in some of its developments, not only in relation to the present expedition, but also in reference to the present organisation of the Army Medical Department in its relation to other military departments, that I shall venture to discuss the more important points in some detail, and to give the principal heads of the statements made to me in examination and cross-examination of invalids, army hospital corps men, and members of nursing staff. I may at once, and before setting down the heads of the narratives which I obtained, say that, all accounts concur in relieving all the departments concerned of any such serious charge as would be involved in the absence of chloroform for the performance of surgical operations, in neglect of dressings of the wounded, or in any such general defective arrangements as could justify the allegation of "a break down in the hospital arrangements." It will be seen later on, that quite enough has become apparent in the medical history of this campaign to show that there is good ground for believing that some inquiry into the relations of the Army Medical Department with the transport, commissariat, and ordnance departments is likely to be attended with beneficial effects, and to produce an administration more conducive to the immediate and efficient supply of the field and base-hospitals with the transport and special supplies of food which are required, particularly during the rapid onward march of troops.

The whole tenour of the evidence which I have received in written communications from eye-witnesses, as well as of the verbal statements of sick officers and men, of nurses and orderlies, now in England, shows that, in the main, and in all that medical officers could possibly do, the sick and wounded were tended with the utmost devotion, kindness, and with indefatigable zeal, and that, with some exceptions, very soon after the beginning, the supplies were ample, and even luxuries were abundant in the field-hospitals. In this war, however, as in so many others, there seems to have been some ground for the complaint that there was inefficiency in some departments at the beginning; and as the war was in its first stages, it is not surprising, nor is it to be regretted, that these shortcomings have been very loudly commented on—although it is unfortunate that they should have been so much exaggerated—in the statements which have come home. Some of the leading facts which I believe these narratives will be found to establish are, that at the first the supplies forwarded to Kassassin Lock were limited. This seems to have been due to the fact that the ship *Carthage*, which was packed with five field-hospitals for the base, was delayed at Alexandria by going into harbour to land a field-hospital. By whose orders this occurred does not yet appear. It was also found very difficult to

obtain horses for the carts belonging to the movable field hospitals. As an example, a long correspondence with the brigade-major, the commissariat and transport authorities was necessary in order to get the horses for the carts, when it was required to move a movable field-hospital a distance of two miles. The difficulties of the commissariat and transport were no doubt considerable, and were increased by the flight of the natives, and the difficulty of obtaining native labour, so that in establishing the base-hospital at Ismailia, the Army Hospital Corps men were employed night and day in carrying up packages from the ship to the hospital, as well as in the duties in connection with the sick and wounded. Enormous strain was imposed upon a limited number of men of the Army Hospital Corps, in consequence of the severe and continuous fatigue duties thus imposed upon them. At the bottom of this question will be found to lie some larger questions of organisation and of expenditure.

In an article which will be found at page 173 of this JOURNAL for July 29th last, on the "Hospital Establishments for the Expeditionary Force to Egypt," it was shown that two field-hospitals and one bearer company were appropriated by the existing regulations for the Medical Department, to each division of an army entering upon active service; in all, four bearer companies and twelve field-hospitals for an Army Corps. The proportion of medical officers, officers of orderlies, transport officers, and their subordinates, were enumerated, together with the number of vehicles of all kinds and draught and riding horses, allotted to these establishments. It is presumed that the numbers thus laid down were determined only after full consideration as to the needs of the military service in these respects, and to the limitations required by due regard to cost and collateral military restrictions. But, as then pointed out, the expeditionary force was only taking with it a half-bearer company, instead of a full bearer company, for each division of the army, as well as a reduced number of field-hospitals. It would appear that the necessary means of completing the bearer companies and field-hospitals up to the full strength of trained subordinates, and of the different kinds of vehicles technically suited for their purposes, were not to be got—they were not in existence. As regards the trained men of the Army Hospital Corps, I am aware that the medical department made the greatest efforts to dispatch every man that could be obtained to the seat of war, taking every available man of the corps from service in the hospitals and other medical establishments in Great Britain, and replacing them by soldiers, or men from the reserves, as they best could. How far the horses, vehicles, and men for the half-bearer companies and field-hospitals, sent with the troops, were deficient in number as compared with the numbers authorised by the army regulations, remains to be seen. Complaints have been published on these matters, but how far they are justified can only be properly known when the official returns of these establishments as regards their composition at the time of taking the field have been published.

Some medical officers consider that the establishment detailed in the official regulations for a field-hospital, even if complete, is quite inadequate for the performance of the duties with which the hospital is charged. It is especially in the nursing staff that an increase is held to be necessary. The following is one of the statements which have been made on this point. A field-hospital, which is the unit of the English medical establishment, is intended for the care and accommodation of 200 sick men, and to each field-hospital there are 37 men of the Army Hospital Corps attached; but of these 15 are cooks, compounders of medicines, storekeepers, and clerks, leaving only 22 for the nursing of 200 sick, or one nurse to every nine patients; this is on a war footing. In the hospitals at home the proportion is one to 10; in the Royal Naval hospitals there is one attendant to every 7 men, and in India one is allowed to every five. The entire charge of nine sick persons is held to be excessively laborious for one person, and this is especially felt in a campaign subject to a sudden influx of severe cases. In India, a field-hospital would have 40 nursing orderlies, instead of the 22 who had to do the work in Egypt and on board ship. No men whatever are allowed for pioneers, for conservancy, or sanitary work, although in the field human agency is very much more needed for this purpose than in a well regulated, permanent hospital at home. The medical officers assert that at least four men ought to be provided for these essential duties for every hospital of 200 beds; and, further, that at least four more men should be employed as washermen to cleanse the patients' clothing (no provision for which at present exists), two or three to carry water, etc., two messengers, and four others (ten per cent.) to allow for casualties. It appears to have frequently happened in the late and preceding campaigns, that the doctors themselves, much as they were required for other urgent duties, had to wait upon the sick, and perform the most menial work, owing to the want of needful assistance. The question, of course, resolves itself mainly into one of expense; but in this, as in all matters bearing on

treatment of the sick and wounded, efficiency ought undoubtedly to be the first consideration, to which even cost should be subordinated.

There seems no doubt that the arrangements for the reception of invalids on board the transports gave rise to the greatest amount of dissatisfaction. In this respect Her Majesty's troopships are more complained of than those which were taken up from the commercial navy. The loudest complaints are against the *Malabar*, where the gist of the complaints is that the food supplied was unsuited for invalids, and intolerably monotonous; that there was no supply of linen; and that there was an insufficient supply of hospital attendants. To render medical officers responsible for accessory departments over which they have no control, would be in the highest degree unjust. There is, so far as I can find, a universal consensus of opinion that the army medical officers did their duty with singular devotion, courage, patience, kindness, zeal, and skill. With respect to the complaint made regarding the *Malabar*, I have ascertained the following facts. Orders for the *Malabar* to sail were given suddenly, in order to clear the base-hospital for the wounded from Tel-el-Kebir. At the suggestion of the medical officer in charge, and with the consent of Sir Beauchamp Seymour, the vessel was delayed two days in order that a further consignment of invalids, both from the hospital and from the *Carthage*, might be received on board. There were, when the *Malabar* started from Ismailia, fourteen officers, 201 non-commissioned officers and men on board, including a medical officer, an assistant-surgeon, and seven men of the Army Hospital Corps. The quarters placed at the disposal of the medical officer were unusually spacious, and well suited for his purpose. No. 9 cabin, on the lower deck, was selected for three dysentery cases, with sanitary arrangements and bath-room adjacent; and the women's quarters (there being no women on board) and the staff-sergeant's extensive quarters were made available for the purposes of the sick. The majority of the medical cases on board had been under the care of the medical officer of the *Malabar* at the Ismailia Hospital, and he was therefore well acquainted with their previous symptoms. The surgical cases were placed in the hospital with perfectly clean linen and beds. The other cases were carefully classified. There was a profuse and lavish use of disinfectants. After a temporary stoppage in the Canal, the *Malabar* sailed on the 9th. There were on board two serious cases of dysentery; and, in spite of unceasing care and watchfulness, both proved fatal within twenty-four hours after the departure from Ismailia. I am most distinctly informed that there was no lack of medical comforts on board H.M.S. *Malabar*, and that there were, in fact, champagne, port, arrowroot, beef-tea, lemonade, essence of beef, ice, etc., and that these were given on requisition. The captain commanding the *Malabar*, expressed, I learn, on every occasion of his official visits, a high opinion of the comfortable and cleanly appearance of the wards. The beds were either aired or made up, and the wards cleaned and dry rubbed. The bedding and clothing of the dysentery cases were condemned and thrown overboard, and no complaint was made on this point. Some vermin was brought on board by the men, but every effort was made to get rid of it.

I am authoritatively and positively informed that the medical visits were scrupulously timed and never broken, and no one could ever have truthfully reported that he "had not been seen by a doctor." The wounds were most carefully and regularly dressed, and there was a large supply of lint and bandages, with the addition of carbolic acid, oil, wool, tow, antiseptics, etc. With regard to the rations, it appears that fresh meat could not be obtained in the abundance the medical officers might consider necessary for the men like; for special directions were issued that in this expedition no live stock was to be carried on board transport vessels bringing home invalids. This step was taken by the Transport Department after full consideration of both sides of the question. The authorities came to the conclusion that the noise made by the cattle, and the inevitable fouling of the ship, especially dangerous in a hot climate, more than counterbalanced the advantages to be derived from the use of fresh meat. With regard to the *Malabar*, I am informed that fresh meat was only shipped on two occasions—namely, at Port Said and at Malta—and on neither occasion was the quantity large, not enough, I believe, to last more than one day. In the opinion, however, of the medical officer, the rations on board the *Malabar* were satisfactory and abundant, and carefully cooked and inspected, and suitable to the requirements of the men, who were actually convalescent and not suffering from any urgent symptoms; the rations being, in fact, the same as are served out to the invalids returning from India. These rations are (*vide* Appendix, No. xix of the official "regulations" for land transports) twelve ounces of preserved meat on three days in the week, on two days a similar weight

of salt beef, and on the remaining two days a similar weight of salt pork. Flour, suet, raisins, split peas, and compressed mixed vegetables are each to be obtained on two days of the week; preserved potatoes on four. Tea, sugar, and porter are issued daily. Fresh bread is issued on four days, biscuit on three. Every man would get this ration except where the medical officer ordered otherwise. The medical officer has power to order anything, fresh meat, fowls, vegetables, or any other luxury for his patients, and he can fall back upon the stores of medical comforts, which comprise ample quantities of prepared soup, essence of beef, preserved milk, preserved potatoes, and mixed vegetables, sago, arrowroot, rice, and barley; in addition, there is a very large supply of bottled ale, wine, and spirits. I am informed on the highest authority that there were on board the *Malabar*, as there was also on board all transports, whether belonging to the Government or hired, stores sufficient in quantity to supply double or treble the number of men with rations, according to the authorised scale, for thirty days. The wounded on board the *Malabar* did well: the wounds took on a healthy action, and most of them had healed before the ship reached home. Ere reaching Malta 56 men were found fit to land to return to their regiments at the front, and more would have left had not the news arrived that the war was over, and Sir Garnet Wolseley required no more troops. On H.S.H. the General's inspection at Portsmouth, only about twelve men were down below, all the other cases having recovered. With respect to the charge regarding the want of clean linen, it is true that the men were sent down from the front in the clothes in which they had fought. This was under military orders, and part of the necessities of the campaign, and the medical officer had no means of increasing the supply of clean clothing. A fatigue party was, however, by order of the medical officer, told off to wash the shirts of the men. It is stated on positive and reliable authority that no complaints were made by the men before leaving at Malta, nor to the orderlies or medical officers on board ship. The voyage seemed a pleasant one; the men played, read, and smoked on deck, and the wounded below were, by permission, allowed to smoke in their cots.

With regard to the complaints made with respect to the *Oronter*, it may be stated that Lord Napier of Magdala came on board at Gibraltar, and went round the decks, and saw and spoke to every invalid on board, and he expressed himself highly pleased with the condition of the sick and with all the arrangements made for them. Lord Napier was, moreover, to the War-office.

On the unwearied kindness, the constant attention of the medical officer and his assistant, and the only civilian, a member of the St. John's Ambulance Society, on board the *Malabar*, there is ample and reliable evidence. With the complaints of professional medical officers, whether civilian or military, are compared the constant complaint: the man who out of hospital lives willingly on a shilling a day, in hospital finds the cooking never good enough, the beef-tea never strong enough, the wine not in sufficient abundance, the beds hard, the nurses inefficient. The value of the complaints made by such grumblers, and the unreasonableness of giving public importance to them, may be partly judged by the following incident, which falls within my personal knowledge. One of the returned invalids, on being asked how he got on at Ismailia, and if he received any medical comforts, replied, "No, none whatever; only just our rations." Struck with the peculiarity of the circumstance, and thinking the man must have been mistaken, in the course of the day he was asked the questions, "Did you get no arrowroot or port wine?" "O," he replied, "I had plenty of arrowroot, and port wine, egg flip, and all those sort of things." "But," said his interrogator, "you told me this morning you had no medical comforts?" "O!" he replied, "I do not call those medical comforts." And in answer to the question, "What do you call medical comforts?" he replied, "O! grapes, jellies and such." Even field hospitals and medical officers cannot be expected to work miracles, or to provide grapes in the desert and jellies in the wilderness.

After allowing, however, for the exaggerations and the unmerited complaints of grumblers, for the rapidity of the movements of the troops, the strangeness of the country, the heat and stress of the climate, this campaign has only shown what even our oldest campaigners do not fail to show, although the deficiencies were there long noted, viz., that the complicated system by which the Army Medical Department is made dependent for its commissariat and for its transport upon other departments, which are too apt to look upon medical calls as but of comparatively slight importance, tends to make the arrangements for mounting the hospitals, and for carrying forward the necessary material for the service of the sick often very inadequate, and at the cost of excessive suffering. Instances may easily be found from the last Boer campaign, as well as from this Egyptian campaign, which indicate the advisability of mounting the

medical department much more completely in respect to its material and its transport. If the history of the field hospitals required for Sir George Colley's expedition were investigated, it would, I believe, be found that there also the arrangements of the ordnance department for supplying field hospital equipments broke down signally in some most important respects. Theoretically, the Army Hospital Corps is to be supplied with independent transport. Practically, is this done? Something also may have to be said as to the advisability of improving the arrangements for packing the stores, and as to the provision of a special independent hospital storekeeper, who shall have an individual and practical knowledge of the packing of the hospital equipment, so that they may be more readily found, and immediately available when received at their destination. With these preliminary observations I will now proceed to give some heads of the statements made to me by those patients and others of whom I made inquiries at Netley. One of the conclusions which any skilled observer can hardly fail to draw from the personal examination of the sick at Netley is satisfactory and important, viz., that the gravity of the cases received at Netley is but slight, not indeed comparable with those cases at present in the hospitals received from India as the result of ordinary military risks and hardships in a hot climate. Most of the men are suffering from debility brought on by deficient rations and very hard work in the earlier parts of the campaign, under the stress of the forced marches and rapid advances carried out by Sir Garnet Wolseley; such debility is always the most serious factor with which the medical officer can have to deal in the treatment of sick men. It says much, however, for the care and skill with which the sick, suffering from sunstroke, from dysentery, and from diarrhoea, were treated, as well as those suffering from wounds and injuries, that the mortality has been so small; the result from this point of view is highly satisfactory. At Netley, no deaths had occurred up to the date of my visit; and it is unnecessary to say that the men are cared for with a completeness of comfort, and a combination of skill and experienced knowledge which could only be attained in a great hospital establishment organised in the admirable manner for which Netley is famous, where is obtained the advantage of the life-long experience and ability of the ablest medical officers in the service: men whose attainments and scientific, as well as administrative, skill are widely known. Of Netley, and of the patients there gathered, it may be said that no body of invalids could possibly receive more skilled attention, or be progressing more satisfactorily than are the great body of invalids now there located.

I subjoin the following extracts from the statements made to me by invalids who had returned by the *Malabar*, *France*, *Orontes*, *Black Prince*, and *Nepaul*, and by some members of the Army Medical Service who had been on duty at the hospitals of Ismailia and Kassassin, with a further statement from one of the sisters who had done duty at the Ismailia hospital, and who returned home in the *Orontes*. They will be read in connexion with the foregoing explanations.

A. H. had suffered from dysentery and fever. He was received into the hospital at Telmahool (halfway between Kassassin and Ismailia). There were at that time about twenty other patients in the same ward. The attendants were army medical men; there were no sisters up at the front. He had plenty of food, including beef-tea. He had plenty of food before he fell sick; and in the hospital he had sufficiency of food, including beef-tea. He came home in the *Nepaul*, where he had good hospital attendance, and there was no scarcity of food. He heard no grumbling whatever.

M. F. was ill of dysentery, which lasted five weeks. He was then at Rumala, and was received into the hospital there; he was there two days, and heard no grumbling. He came home in the *France*, with about four hundred others, the greater number of whom were retained at Portsmouth, the worst cases only being sent on to Netley. He had on board the *France* arrowroot, broth, and soups, and rum, as he could not take milk.

R. B. had dysentery in Rumala, and suffered from rheumatism on the voyage home in the *France*. He was put under hospital treatment on board, and received arrowroot, milk, and soup, and then ship's rations.

A. C. had had sunstroke at Kassassin, and came home in the *Malabar*. He was insensible when taken into the hospital at Kassassin. He was there for two days (this was before the battle of Tel-el-Kebir); there was very little food of any sort, only biscuits and a little preserved meat. He had neither milk nor soup at the field hospital at Kassassin. He heard of no complaints. On board the *Malabar* he had ship's rations—no milk. There were one or two who had food from the saloon. He had neither soup nor arrowroot in the sick bay. There were only two hospital corps men in attendance, and the patients looked after the sick. The meat, tea, and other things which they got were poor in quality. Bread was the chief thing they got. He

did not get potatoes. He had tinned meat once a week. There were two doctors on the *Malabar*. He heard one of the marines complain of having to wait sometime before an operation could be performed. They had no change of clothing, and had to take off their shirts to wash them while they remained in their serge clothes.

D. T. returned home in the *Malabar*; the tea was bad and the meat hard; it was always boiled; he only had preserved meat and bread once, and preserved potatoes twice on the way home. He had no fresh potatoes; he saw none, more than what were in the soup; they had meat almost daily, but it was exceedingly tough.

F. P. went into the hospital at Kassassin with diarrhoea; he was there given some arrowroot, meat, and potatoes. He had all he wanted at Kassassin. He heard no grumbling. The hospital he considered was everything that it should be. Everything was ready. He had two pints of arrowroot a day and port wine. He had a bed of rushes. He came home in the *British Prince*. He was in hospital on board. He got rice-pudding, arrowroot, and sometimes eggs and brandy. He had nothing to complain of, neither did he hear any grumbling; there were about half a dozen hospital orderlies.

R. S. was in the Ismailia hospital for four days with epilepsy. They had fresh meat and bread, but the meat was so tough they could not get their teeth into it. They had preserved potatoes once a week, but they had no instructions how to cook them. He came back in the *Malabar*. They had preserved beef on board which was tough, and boiled beef once a week. The hospital orderlies complained of the amount of work they had to do, and he heard one of them say that for three days and nights he had not been able to have a smoke. He heard complaints made to Dr. Anderson by two or three men, at not having their wounds dressed. They were told that could not be helped, the men were doing as much as they could, and they must wait their turn. There was an insufficiency of clothing. He did not think there were more than half a dozen men who had any change of linen. Unless they wished to be alive with vermin, they had to take off their shirts and wash them themselves. None of the cavalry were allowed to take their full kit (this was the Colonel's orders); they were told that their change of linen would be sent on in their oil-ducks. He understood they were to be sent on as soon as communication was opened, but they did not receive them at all. In the ordinary way their kits should have followed them up. On their going on board, it was seen they had no change of linen.

B. J. returned home on board the *Orontes*. The attendance was short; there was not sufficient beds for them. The hospital orderlies did their best, but there were not enough of them. He was on deck, and ordered to go for a bed. On doing so, he was told there was no bed for him. He was to do the best he could. He had not sufficient strength to sling his hammock, and he laid down on the deck. There were any amount of men who, not having strength to sling their hammocks, had to do as he had done, and lie down on the deck or where they could. There were fifteen or sixteen such. They had to go to the surgery to see the doctor. There were more men than there were beds. The food was not very good; some who were sick could not take it at all; tea without milk (this is usual with ships' rations).

D. H. was taken into the Fever Hospital at the Palace, Ismailia, about two days after it was first opened, just after the battle of Kassassin. There were then about fifty or sixty wounded in the hospital. The men had everything they wanted. They had arrow-root and beef-tea and fresh meat. The medical stores were all there on his entering the hospital. He heard of no operations being performed without chloroform.

A. G. said he belonged to the bearer company at Ismailia. There were nearly two hundred of the Army Hospital Corps; certain of these men were employed in the hospital, and did nothing else; while outside were a large number who were employed in all kinds of fatigue duties, whether bringing up stores from the ship, or bringing sick and wounded from the railway to the hospital. The filling of the beds for the hospital was all done by the outside men, and they were carried by the Egyptian soldiers. There was a cook on duty the whole night for the purpose of making the beef-tea. The beef-tea was latterly made in large quantities in a boiler, and taken out as required. One whole side of the large entrance to the Ismailia hospital was crammed with stores. He heard no grumbling. The meat was fresh, and mostly killed the same day; but even then it looked flabby. It was good enough when it was cooked, and made good soup. The Egyptian wounded were as carefully attended to as the English. There was a special detached hospital for the Egyptian wounded.

O. M. went into the Ismailia base-hospital at the Khedive's Palace on August 30th, it did not seem then to have been opened long. They were then engaged in unpacking things. There was as much beef-tea and milk as one could desire, and the solid food was a ration. He was as comfortable as he could have wished.

S. R. went up to the front on the Sunday before Tel-el-Kebir, he was at the hospital at Ismailia on August 29th, they had just then got it into working order. There was plenty of everything. The Army Hospital Corps were at work night and day. There was plenty of beef-tea and brandy for those who wanted it. Dr. Tanner was the doctor in charge of the sick hospital ward. Doctors were there day and night seeing and dressing the wounded. There was an operation ward, there were thirty here, who had everything they wanted, there were plenty of medical comforts there. There were boxes of condensed milk and plenty of rice, beef-tea, water melons, brandy or port wine, lime juice, and arrowroot. When two went off duty at the hospital two others took their place. He heard of no scarcity of medicines. Doctors were walking through the wards almost every hour. There were barrels of disinfecting powder, though they were a few days without this. There were plenty of stores, and the sick were well looked after. Surgeon-Major Curran was the officer who looked after the Egyptian wounded. The Egyptian hospital was about one hundred yards away from the English hospital, in the garden grounds of the Khedive's palace. The bearers were mostly on duty at the hospital, and no man could leave the wards until properly relieved.

Sister B. went direct from England to the Ismailia Hospital. When she arrived there, the hospital had started about a week. It was not full. She had night duty. There were many very serious cases. She heard of no deficiency of chloroform, nor of any one undergoing amputation without chloroform. The food was very rough; but it was the best that could be got. By saying the food was rough, she meant it was not like the food here. There were plenty of medical comforts. There was always plenty of everything. She got there on September 8th, before the second fight at Kassassin. She returned home in the *Orontes*, and thought the food quite as good as could be expected on board ship. There were two sisters on the *Orontes*, one of whom fell sick. There were not many Army Hospital Corps; they had volunteers. When they left, they had eighty-one wounded and eighty sick on board. In addition to these, there were a number of naval sick and wounded. She wheeled large cans of milk and beef-tea between the rows of sick on board. No one on board the *Orontes*, she thought, was neglected. There were warrant officers told off, whose duty it was to go about night and day and see that the orderlies were doing their duty. The captain himself went round twice each day, to see that the warrant officers were doing their duty. They had fresh meat, fresh potatoes and carrots; they seemed to her reasonably good. There was no want of potatoes during the voyage. She did not think the men had a change of linen; there was a great deficiency of linen on board the *Orontes*.

The conclusions which appear to me deducible from the investigation which I have been enabled to make are—

I. That the Army Medical Department made provision of an extremely elaborate and extensive character for this campaign. That there was never at any time anything which could be reasonably described as a breakdown of the field hospitals.

II. That there was never any dearth of chloroform, and that the supplies of medicines were ample.

III. The contents of the field-havresacks might with advantage be adapted with careful foresight to the special necessities of each climate or campaign; e.g., in this campaign materials for eye-washes, and castor-oil would have been advantageous. These medicines were, however, abundantly supplied at the field hospitals.

IV. The rapidity of the advance and the brilliant success of the operations perforce converted what was really only a field hospital into what was wrongly called a "base" hospital at Ismailia. It was established in the empty building, "the palace."

V. Much of the grumbling was due to the fact that officers and men looked to find at this so-called "base" hospital full hospital diets, as if it were a "dieted hospital," whereas it was only a rationed field hospital. The base hospitals were, and were intended, under the circumstances, to be the *Carthage* hospital ship, and the transports detained for this and other purposes, and the hospitals at Gozo and Cyprus.

VI. For the first few days the want of horses threw an immense strain on the Army Hospital Corps and medical officers, and bearers worked night and day. There was, however, an abundant supply of beef-tea, and milk, arrowroot, lime juice, port wine, etc., at the Ismailia Hospital. The attendance on the sick was unflagging; medical comforts were kept supplied throughout the night as well as the day. Except the difficulty of procuring and the heavy work of the first few days, there was no ground for complaint at the hospital.

VII. The transports were crowded and after the engagement at Tel-el-Kebir were almost empty.

VIII. The men suffered greatly from fatigue and insufficient rations, and many of them bear permanent marks of this suffering.

IX. The transport department cordially worked with the medical officers, but their resources were unequal to the demands. The medical department requires, however, independent transport; and this is a subject which urgently demands the attention of the military authorities.

X. The efficiency of the hospital department would be promoted by the appointment of a storekeeper of the hospital equipment of such expeditions on each transport ship conveying medical stores. His special knowledge of the position and character of the packages would prevent delay or confusion.

XI. It is deserving of consideration whether the transports carrying home invalids, should not be specially furnished with a medical officer, trained to the utilisation of a ship's resources, permanently attached to the transport, and, therefore, well acquainted with the vessel, and familiar with all its arrangements.

XII. The allegations of hardship on board the *Malabar* and *Orontes* are greatly exaggerated. The allegations of neglect of the sick and wounded are the opposite of the fact. The men on the *Malabar*, however, were without linen when they sailed, having left their kits behind them; and the decision of the transport department not to carry living animals on board these ships deprived the men of fresh meat, and gave rise to not unnatural discontent.

XIII. The conduct of the surgeon of the *Malabar*, as well as of the surgeon in charge of the hospitals at Kassassin and Ismailia, is shown to have been deserving of the highest commendation, and marked by incidents of singular zeal and devotion.

XIV. The relations of the Army Medical Department to the Transport, Commissariat and Ordnance Departments are complicated, occasion difficulties in the field, and throw obstacles in the way of the rapid and immediate mounting of field hospitals, etc. Such arrangements as those for washing, etc., in connection with hospitals, are at present under the control of the Commissariat. Many of the complaints are on this head. So also with tents and "cover" for which the Ordnance Department is now separately responsible.

XV. A more generous and liberal equipment of the Army Hospital Corps would be a true economy, and the department should be more independent of the others in the arrangements for its work in the field.

In conclusion, I may express the opinion that a sufficiently strong case has been made out to call for a searching military inquiry into the whole bearings of the case, including not only an investigation of the charges made, but also a consideration of the requirements necessary in the general organisation of the Army Medical Department, with the view of making it more complete, more independent, more responsible, as well as of increasing the strength of the Army Hospital Corps, and of putting medical officers of the army in a position effectually and promptly to cope with the necessities arising out of the rapid movements of modern warfare.

ERNEST HART.

VISIT OF THE DUKE OF CAMBRIDGE TO THE HERBERT HOSPITAL.
ON Tuesday last, His Royal Highness the Duke of Cambridge paid a visit to the Herbert Hospital, in order to see for himself the condition of the sick and wounded men there. Under the guidance of the principal medical officer, Surgeon-General Young, and Brigade-Surgeon F. Wiles, who has special charge of the hospital, His Royal Highness went from ward to ward and from bed to bed, speaking to the invalids, inquiring the nature of the wound and the circumstances under which it was received, and endeavouring to elicit from the injured men the facts as to their treatment on the field, in the hospitals at Egypt, and on the voyage home. In nearly every case, the answers to the latter interrogations were as satisfactory as could be wished. One after another declared that the arrangements for their comfort and care had been most admirable from first to last; and even in some few instances, in which the reply came hesitatingly or in modified terms, further inquiry only resulted in the stereotyped declaration of "no complaints". To some of the officers, who lingered behind in familiar converse with the patients, they grew more communicative and frank; but, even under some temptation to find fault, the wounded men would not admit that they had suffered any hardships other than they might have expected in the nature of their business. The statement of one intelligent man, who seemed to speak with freedom and truth, may be taken as a sample. He was hit by a bullet in the leg during the assault at Tel-el-Kebir, and crept into a trench out of the way, not supposing that any one would look after him until the night was over, seeing that it would have been, in his opinion, fully and waste of time to have done so; but within an hour he was carried away upon a stretcher to the field hospital, and there had to wait half an hour before his turn came to be examined by the doctors. He was then carried to the canal and brought by boat to Ismailia. Some of his comrades had complained

of having nothing to eat all day, but he had plenty of water, and he did not think about eating. The hospitals out there were not such pleasant places as this one at Woolwich, and the diet was not so luxurious; but soldiers expected to rough it in war time, and even the extra roughness of their life on board ship they could readily forgive. The medical officers and hospital corps were also kind and attentive, but there were too few of them. One of the nursing sisters from Ismailia, with whom the Duke of Cambridge conversed for some time, bore similar testimony, and said that, as far as her experience went, the men fared well, both in the hospitals and on the ship *Lusitania*, which brought her to England. The want of orderlies to do the drudgery of the sick wards was, in her estimation, the only fault. Nearly all the wounds under treatment at this hospital are bullet wounds. There are only one or two caused by shells, and scarcely one caused by sabre or bayonet. Accommodation is provided altogether in the Herbert Hospital for 650 patients, and about 250 beds are now prepared, awaiting invalids on their passage home. The *Marathon*, expected at Portsmouth to-day, and the *Viking*, due at the same place to-morrow, are both bringing sick and wounded; and her Majesty's ship *Tyne* will arrive at Woolwich with others about Tuesday next. It is gratifying thus to find that the facts which we publish with reference to this question receive this independent confirmation.

EGYPTIAN OPHTHALMIA.*

SCARCELY had the French army taken possession of Egyptian territory, when a great number of the soldiers were attacked by an ophthalmia no less rapid in its progress than distressing in its results. In three or four days, it became irremediable. Excessive pain, delirium, erosion or destruction of the cornea, and loss of sight, were the common occurrences. These symptoms, it is true, generally appeared under, or were aggravated by, the treatment used for the disease. Some quacks pretended that, because they belonged to the country, they possessed an exclusive knowledge of an affection depending on their climate. They thus abused the credulity of many, and would, no doubt, have done so more generally, if the multitude of their mistakes, the abuse of their irritating eye-washes, and the disastrous result of their treatment, had not quickly compelled those who had not yet become victims to place a just confidence in the medical officers of the army.

From the moment in which this disease came under our observation, we have tried to collect everything which seemed to us to shed any light on its causes, its nature, its course, its prognosis, and its treatment. We have added to our own observations all those which our correspondence with our colleagues, surgeons of the first class, could furnish us. The result of all these we now give with all the method and precision of which we are capable.

If we do not present it to the public exactly as we communicated it to the Egyptian Institute, it is because new researches and fresh successes have obliged us to make several changes and several additions.

The great motive which has constantly directed all our views is the advancement of our art for the general good.

I divide ophthalmia into inflammatory or idiopathic, and serous or symptomatic ophthalmia.

The former consists in congestion of the eyelids, of the conjunctiva, and sometimes of the coats of the eye, followed by an extremely severe local pain, which the patients attribute to the presence of grains of sand (which are varicose vessels), dimness of vision, and impossibility of enduring bright light. To these first symptoms succeed headache, giddiness, sleeplessness, and diminished lacrymal secretion. The tears which are still secreted become acrid, irritate the eyelids and lacrymal puncta, and fall upon the cheeks. All these symptoms increase; fever often supervenes, and sometimes delirium. The disease comes to a head on the third or fourth day; in some sooner, and in others later. Like all inflammations, it passes through stages or periods.

Serous ophthalmia, or running of the eyes, develops more slowly, causes less pain; the redness is slight; the vessels of the conjunctiva are yellowish. There is usually oedema of the eyelids and a superabundance of tears. The complexion of the patient is swarthy; the tongue is foul. These are its symptomatic characters.

The termination of ophthalmia varies. When it is inflammatory, and is abandoned to nature alone, there usually form, on the sixth or seventh day, several points of suppuration on the edges of the eyelids, on their internal surface, and in their commissures. These ulcerations extend by degrees over the conjunctiva, attack the cornea, and often perforate it. This accident, not common in Europe, presents in this

climate a phenomenon worthy of remark. The opening which results from it is of a rounded form, and of a diameter almost exactly the same in all the cases. It allows a portion of the aqueous membrane or of the iris to pass, and forms a hernia known under the name of staphyloma. The tumour formed by the aqueous membrane is of a dull grey; that of the iris is of a deeper colour. This tumour is sensitive to the slightest contact with extraneous bodies or with the eyelids. The vision is more or less obscured during the first days, so that the pupil is partly or entirely effaced; but in general the staphyloma diminishes by degrees, re-enters the anterior chamber, and the membranes recover their former position.

Sometimes a portion remains without, which becomes strangulated by the contraction of the opening, loses its sensibility, and acquires a certain consistence, or else it becomes inflated, divides into several globules, and takes on a carcinomatous character, especially when there is a venereal complication.

When the staphyloma re-enters spontaneously, the opening of the cornea contracts by the sinking of its edges, and leaves a small opaque and depressed cicatrix, which at first interrupts the passage of luminous rays.

In some cases, the crystalline and vitreous humour follow the displacement of the iris. Their membranes become altered, and suppurate. The eye becomes disorganised, and its function destroyed. This is what we see among most of the inhabitants of the country, and especially in poor people, who lie almost naked on the ground and in the open air, have bad food, and are exposed during the day to dust and to the burning rays of the sun, without seeking to shelter themselves.

Hypopyon is rarely present, and offers nothing particular. Opacities have been frequent. They occupy one point or the whole extent of the transparent cornea; in the first case, the patient still perceives objects; in the second, the cornea, being entirely opaque, blindness is complete.

They only appear towards the end of the disease, and follow the ordinary course.

When the patient is irritable, and the ophthalmia is old, the congestion of the conjunctiva often becomes very considerable. This membrane forms a swelling around the cornea; it extends beyond the eyelids; these become turned down, swell up, and offer a great resistance to their reduction.

The tarsal cartilages seldom participate in this inflammation. When this occurs, the lacrymal canals which traverse them are destroyed by the suppuration which generally follows. The eyelids lose their form, and become retracted. This occurrence is almost always followed by loss of vision from consecutive inflammation of the eyeball. I have seen several examples of it.

It is rare that inflammatory ophthalmia, excepting when slight, terminates without treatment in resolution.

The case is different with serous ophthalmia. It may terminate by sweating, by copious lacrymation, and, above all, by diarrhoea.

In general, ophthalmia weakens the eye, and disposes to cataract, to gutta serena, to lacrymal fistula, and is frequently followed by mytaloopia. Several people cured of the former disease have been affected by one of these latter.

The broiling heat of the day, the refraction of the rays of the sun by the whiteness of the bodies spread over the Egyptian soil, which fatigue the eye, excess in spirituous liquors and sexual indulgence, the dust carried by the air, which gets caught behind the eyelids and causes more or less irritation to the eyeball, the suppression of the cutaneous transpiration by the sudden passage from heat to cold, the moisture and the coldness of the nights for the soldiers who bivouac, are the chief causes of ophthalmia.

The sudden suppression of diarrhoea produces similar results. We have had occasion to notice it in a great number of cases at the end of the campaign of Ssalcéhiéh, in the year 6 (1798).

I have noticed that fair people are more frequently affected by this disease than dark. I have noticed also that the right eye was more seriously affected than the left, for almost all those who have become blind of one eye have lost the right one. This is, perhaps, due to the almost universal custom of lying on the right side, so that this part of the body is the first to receive the impressions of the humidity of the ground.

This disease is more frequent during the overflow of the Nile than at any other season.

When ophthalmia is not neglected, and if it is treated with a knowledge of its causes, it has no bad results; but the blind confidence of the soldier in empirical remedies, his negligence in resorting to the hospitals for treatment, and the little care that he has taken at first to follow the régime prescribed to him, have caused a considerable number to lose their sight.

When persons attacked by ophthalmia are affected by any particular

* *Memoire sur l'Ophthalmie régnant en Egypte*, par le Ctn. Larrey, Chirurgien en Chef de l'Armée d'Orient, au Kaire. De l'Imprimerie Nationale, An. ix de la République Française. Translated by T. Lauder Brunton, M.D., F.R.S.

disorder, such as venereal, the results are more severe and more rapid.

Inflammatory ophthalmia is more severe and more difficult to cure than serous ophthalmia; besides, the prognosis varies according to the age, the state of the patient, and other circumstances easy to distinguish.

The indication presented by ophthalmia, consists in removing the fluids which congest and obstruct the capillary vessels of the eye, and in preventing their return.

The treatment is relative to such kind of ophthalmia, and to the principal effects which result from it. I will now relate the methods by the aid of which we have obtained most success in each case.

The inflammatory ophthalmia—a bleeding from the veins, the neck, the arm, or the foot—is useful at the commencement. It must be repeated, according to the condition of plethora of the patient, and the intensity of the inflammation. Then one may employ with advantage leeches to the temples, as near as possible to the eye; or, failing them, one may apply slight scarification to the same parts.

This first measure is to be followed by foot-baths, emollient and anodyne fumigations, lotions made with linseed-meal, poppyheads and saffron. Care should be taken to apply them as much as possible between the eyelids; applied to the exterior they increase the oedema. Poulitices, above all, are inconvenient in this respect, besides their inconvenience and their weight upon the eye.

A stupe of white of eggs beaten up with a few drops of rose-water, applied at night to the eyes, relieves the pain.

To second the effect of these topical remedies, one must make the patients take cooling and acid beverages.

If any symptoms of fur in the primæ viæ appear, some purgative substance may be added to the beverages. They may be sharpened with some grains of tartar emetic.

During the night, some glasses of an anodyne emulsion are to be given to the patient. He must be made to observe a suitable regime to keep up the action of the skin and to avoid daylight.

As the inflammation diminishes, and the congestion is lessened, a few drops of acetate of lead are to be added to the eye-washes, or a weak solution of chloride of mercury and of oxide of copper, the dose of which is to be gradually increased.

When resolution has begun, a decoction of pomegranate bark or a weak solution of sulphate of zinc is to be employed; for refrigerant beverages, a bitter and laxative tisane is to be substituted.

If, however, the congestion of the conjunctiva is obstinate, and it is puffy, some punctures should be made in it with a lancet; the most projecting points may even be excised. The use of sedative washes is to be continued.

If the eyelids are turned down, and form a swelling around the eye, which occurred in a considerable number of patients, several punctures are first to be made in the direction of the eyelid, taking care not to injure the tarsal cartilages. Astringent washes are then to be applied for several hours; and then we proceed to the reduction of the eyelids, with the precaution of anointing them with a little cerate so as not to wound the eyeball. They are then to be fixed in position by the aid of a bandage, and the patient must then be made to remain perfectly quiet.

This procedure, which has constantly succeeded with me, requires a little practice.

When these means are insufficient, the excess of the conjunctiva is to be removed, sparing as much as possible the tarsal cartilages. The eyelid then contracts, and resumes its primitive form.

Ulcers of the eyelids are to be treated with astringent and slightly caustic substances. We have used successfully for this purpose the following ointment.

White cerate, one ounce; red oxide of mercury purified and pulverised, six grains; prepared tully (oxide of zinc), one drachm; cochineal paste, ten grains. Mix and triturate in a marble mortar.

A very small quantity of this ointment is to be put on the eyelids at night before going to bed, and the eyes covered with a loose bandage.

The treatment of ulcers and opacities of the cornea is only to be undertaken after the inflammation of the conjunctiva has entirely disappeared. Fumigations with red oxide of mercury, or the direct application of some caustic, usually suffice to make them disappear. Sometimes, however, one is obliged to apply a seton to the back of the neck.

No attempt must be made to reduce the staphyloma while it is increasing. Nature must commence the reduction herself; it may be assisted by light compression, methodically made. If the tumour loses its sensitiveness and remains external, it must be extirpated with hollow curved scissors. I have only twice had occasion to perform this operation; in both cases the eye has partly regained its function.

In cases where the ophthalmia is kept up by venereal taint, it is necessary to destroy the cause and employ some mercurial in the eye-wash.

Serous ophthalmia requires a different treatment. General bleeding is not indicated in it. Leeches or scarification on the temple near to the angle of the eye are sometimes necessary; they are useful, also, upon the eyelids when these are oedematous.

Hot wine and sedative eye-washes should be immediately applied; but, as this disease is almost always associated with a gastric affection, the patient should take some emetics, followed by purgatives and bitter draughts. If the disease does not yield to these means, blisters are to be applied to the back of the neck or behind the ears. Fluxions of the eyes are often cured by the use of internal remedies alone.

Ophthalmia has spared few people during the last months of the year 6, and the first of the year 7. It has been almost always inflammatory, and had had, in some cases, disastrous consequences.

During the course of the year 8, few soldiers have been affected by it, and I have noticed that it was almost always symptomatic, and less obstinate. Thus its cure has been prompt and easy.

What are the causes of this difference? I believe we may find them in the severe marches which were made in the years 6 and 7 across sandy deserts, arid, destitute of water, and where the soldiers passed suddenly from the burning heat of the day to the moisture of the night, from which they could not protect themselves for want of cloaks and coverings. However, experience has taught them the only means of preserving themselves from this cruel malady; and so, from that time, they have been careful to carry with them all the necessary clothing.

The repose of the troops, the precautions they take during the marches, and their acclimatisation, have rendered the effects of this disease, during the last year, almost imperceptible.

I will now record an observation of a peculiar condition which has been produced by an inflammatory ophthalmia. Mary —, aged 16, daughter of a Greek living in Cairo, suffered, at the age of two years, from ophthalmia, in consequence of which the lids of the right eye remained for a long time closed. Gradually, however, they opened, but the upper one was attached to the cornea by a membranous growth, which formed adhesions with it.

This membrane, placed perpendicularly in front of the eye, of a triangular form, four or five lines long by three broad near its base, had its origin from the internal aspect of the eyelid, and had formed a strong adhesion to the upper three-quarters of the cornea, so that vision was entirely destroyed on this side. This membranous growth followed the movement of the eyelid and of the eye. The girl was thus much incommoded, and it caused a disagreeable deformity, which led me to try the operation I am about to describe.

After having suitably placed the patient, I passed between this membrane and the globe of the eye a small grooved director, armed with a very small bistoury, the cutting edge of which was concealed in the groove. After having disengaged the director, fixed the lid and the eye, I cut the membranous fold at its adhesion to the cornea. I then detached it from the eyelid by the aid of this instrument and of dissecting-forceps. The small portions which remained on the cornea were carefully removed, and the eye was dressed with some light dressing soaked in *aceto-minerale* water. There remained on the cornea a dull white opacity, studded with blood-vessels, which gradually became less, and has, to a great extent, disappeared, so that this girl now perceives objects, and, before long, will be completely cured.

This warns us that it is necessary, in cases of ophthalmia, especially in children, to remove the eyelids several times daily with some kind of mucilage, to prevent such an adhesion.

The above account of Egyptian ophthalmia has more than a historical interest. It furnishes an admirable illustration of the accuracy with which observations were made in what we may call the pre-scientific period of medical knowledge.

Larrey's classification into inflammatory and serous ophthalmia would appear rather to be one of convenience than founded upon a real distinction, as the former would seem to include the more severe and the latter the milder manifestations of one disease. It would be consistent with this that we should find the serous form proportionately more abundant towards the close of the war, when the less susceptible subjects, *i.e.* those with lids free from granulations, alone remained.

It is remarkable that he does not seem to have suspected the transmissibility of the disease by direct contagion. In this way, whether it be effected accidentally or by design, we must explain the more frequent destruction of the right eye. He graphically describes the prolapse of iris tissue with its covering lymph, the result of corneal necrosis.

With the advantage of the microscope we may at the present day refuse to admit that such a bulging ever took on a cancerous character. The greater liability of persons of fair complexion, and the influence of the suppression of a diarrhoea, still remain to be verified. It is, however, reasonable to expect that persons in a condition of malnutrition, from syphilis or from any other constitutional disease, are unduly liable to be destructively affected when once attacked. We do not appear to have advanced much in our methods of treatment. Depletion, anodynes, and astringents appear then, as now, to have had the largest measure of success. As to the operative procedures, perhaps the less said the better, as the observations were made on so few patients—two in the case of removal of the staphylococcal bulging, and one only in that of symblepharon.

THE ENTRIES AT THE MEDICAL SCHOOLS.

By the courtesy of the deans, wardens, and secretaries of the various medical schools, we are enabled to publish the following list of students who have entered at the beginning of the present winter session. In the table, Column A probably includes, in the case of some schools, students who have entered for preliminary courses in science only; but, wherever it has been possible, we have placed the numbers of students thus occupied in a separate column (D).

Schools.	A.	B.	C.	D.	Total.
St. Bartholomew's Hospital.....	110	15	0	36	161
Charing Cross Hospital.....	41	15	4	—	60
Guy's Hospital.....	81	15	—	—	96
King's College.....	35	—	—	—	—
London Hospital.....	87	40	—	—	127
Middlesex Hospital.....	31	5	0	—	45
St. George's Hospital.....	42	6	0	—	48
St. Mary's Hospital.....	25	7	0	—	32
St. Thomas's Hospital.....	62	31	0	—	93
University College.....	59	—	—	55	144
Westminster Hospital.....	19	4	1	—	24
Bristol.....	29	0	0	—	29
Owens College.....	58	6	—	12	76

A. Students who have entered for the full curriculum. B. Students who have entered for special courses. C. Dental students. D. Students who have joined classes for preliminary scientific instruction. * No return.

It thus appears that the total number of entries of first year's students this winter session in London is 622. St. Bartholomew's Hospital has again the largest entry; University College, the London Hospital, and Guy's Hospital come next in order, with numbers which do not differ very widely from the returns of last year, except in the case of the first-named school, which has not so large a majority as in 1881.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL:

NOTICE OF QUARTERLY MEETINGS FOR 1882: ELECTION OF MEMBERS.

A MEETING of the Committee of Council will be held on Wednesday, January 17th, 1883. Gentlemen desirous of becoming members of the Association must send in their forms of application for election to the General Secretary not later than 21 days before the meeting—viz., December 27th, 1882, in accordance with the regulation for the election of members passed at the meeting of the Committee of Council of October 12th, 1881.

FRANCIS FOWKE, *General Secretary*.

BRANCH MEETINGS TO BE HELD.

WEST SOMERSET BRANCH.—The autumnal meeting of this Branch will be held at the Railway Hotel, Taunton, on Thursday, October 26th, at five o'clock. Dinner (5s. a head, exclusive of wine) will be served at 5.30 punctually. The subject, as settled by the Council, for the meeting to discuss after dinner is, The Treatment of Acute Rheumatism. Gentlemen intending to read papers or be present at the dinner, should inform the Honorary Secretary before the day of meeting.—W. M. KELLY, M.D., Honorary Secretary.—Taunton, September 26th, 1882.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The autumn meeting will be held at Aberdare, on Thursday, October 26th. Members desirous of reading papers etc., are requested to forward titles to Dr. Sheen, Cardiff, before October 14th.—A. SHEEN, M.D.; D. A. DAVIES, M.B., Honorary Secretaries.

STAFFORDSHIRE BRANCH.—The ninth annual meeting of this Branch will be held at the Bell Medical Library, Cleveland Road, Wolverhampton, on Thursday, October 26th, at 4 P.M. An address will be delivered by the President-elect, Dr. Tocherick. Dinner at the Star and Garter Hotel, Victoria Street, at 6 P.M. Tickets (without wine), 7s. 6d. each.—VINCENT JACKSON, General Secretary.—Wolverhampton, September 25th, 1882.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.—The next meeting will be held at the Surrey County Hospital, Guildford, on Thursday, October 26th, 1882, at 3.30 P.M.; T. M. Butler, Esq., in the chair. The following cases have been promised. 1. Dr. W. H. Day: Chorea. 2. Mr. Lorimer: A Case of Congenital Stricture of the Rectum. 3. Dr. Morton: A Case of Psoas Abscess. 4. Mr. C. J. Sells: A Case of Tetanus. Several interesting cases in the Hospital will be shown. Dinner will be provided at 6.30 to the minute at the White Lion Hotel; charge, 5s. 6d., exclusive of wine. Members intending to dine are requested to kindly intimate their intention to the Honorary Secretary, before the 23rd instant.—A. ARTHUR NAPPER, Honorary Secretary, Broad Oak, Cranleigh.

BATH AND BRISTOL BRANCH.—The first ordinary meeting of the session will be held at the Museum and Library, Bristol, on Wednesday evening, October 25th, at half-past seven o'clock, J. K. Spender, M.D., President. A petition respecting the Regulations affecting militia surgeons will lie on the table for signature. The following communications are expected. Dr. H. Waldo: Consolidation of a Large Aneurysm without Surgical Interference (the patient will be exhibited). Mr. N. C. Dobson: Remarks on some of the more important Operations during Ten Years' Work at the Bristol General Hospital. Mr. W. H. Harsant: Two Successful Cases of Colotomy. Dr. A. E. Aust Lawrence: Notes on Cases of Placenta Prævia.—E. MARKHAM SKERRITT, R. J. H. SCOTT, Honorary Secretaries.

BORDER COUNTIES BRANCH.—The autumnal meeting of this Branch will be held at the Infirmary, Whitehaven, on Friday, October 27th, 1882, at 1 o'clock in the afternoon. The members will dine together at the Black Lion at 4 o'clock. Dinner, 5s. each.—J. KENDALL BURT, M.B., Kendal; JOHN SMITH, M.D., Dumfries, Honorary Secretaries.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of the above District will be held at Canterbury on November 9th. Members intending to bring forward any communications are requested to give notice to the Honorary Secretary at once.—T. WHITEHEAD REID, Honorary Secretary, 34, St. George's Place, Canterbury.—October 18th, 1882.

SOUTHERN BRANCH: DORSET DISTRICT.—The next meeting will be held at Blandford, on Wednesday, October 25th, 1882. The business meeting will be held at the Crown Hotel, at 3.15 P.M. Agenda.—Correspondence to be read respecting the proposed Dorset and West Hants Branch. Election of Officers for 1883. Discussion: Diabetes. Paper by Mr. F. D. Lys. Paper by Dr. J. Comyns Leach: "The recent Cremations in Dorset, the first in Modern England." Dinner at 5.30. Charge 6s. each, without wine.—WILLIAM VAWDREY LUSH, M.D., Weymouth; C. H. WATTS PARKINSON, Wimborne, Honorary Secretaries.

SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT.—The next ordinary meeting will be held at the Royal Isle of Wight Infirmary, Ryde, on Thursday, October 26th, 1882, at 4 P.M.; Alexander G. Davey, M.D., President, in the chair. There will be a discussion on the objects of the Collective Investigation Committee, and the formation of a Local Committee. The following communications are promised. Dr. Robertson: Pulse- tracings, and their Significance. Dr. C. Neill: Microscopical Specimens of Optic Neuritis, with Notes. Mr. W. E. Green: Two Cases of Obstruction of the Bowel treated with Belladonna. Dinner at Yelf's Hotel at 6 P.M.; charge 6s., exclusive of wine.—W. E. GREEN, Honorary Secretary.

SOUTH WESTERN BRANCH: QUARTERLY MEETING. A QUARTERLY meeting of the South-Western Branch was held at the South Devon and East Cornwall Hospital, Plymouth, on Thursday, October 12th, Dr. THOMPSON, of Launceston, vice-president, in the chair. Thirty-two members and several visitors were present.

Communications.—Mr. Square: 1. On rapidly advancing myopia. 2. Cases with specimens. 3. Microscopic studies. Mr. J. E. Adkins, unusual case in midwifery practice; Dr. Hudson, case of traumatic tetanus, recovery; Mr. E. S. Angove, case of traumatic tetanus, recovery; Mr. W. Heath showed a large number of interesting microscopic objects.

Before the meeting, the members were entertained at luncheon by Mr. Paul Swain.

Amputations at the Hip-joint in the West of England.—The fact that, during the last months, there have been three successful amputations at the hip-joint in the South Devon and East Cornwall Hospital, Plymouth, is deserving of more than a passing notice. It goes to confirm the growing opinion that this operation, hitherto so fatal as to preclude its performance save in the most desperate cases, may now be performed with far less risk to life. There still exists, of course, the shock which must of necessity follow the removal of so large a portion of the body as is included in a lower extremity. But, happily, that which added fatally to the shock, the severe hæmorrhage, can now be effectually arrested by the use of Davy's lever, the means adopted in the three cases under our notice. In the first case the amputation was performed by Mr. Paul Swain on a boy aged 10, for acute necrosis of the entire shaft of the femur. The patient was so reduced that no remedial measure for the removal of the dead bone could be attempted. The loss of blood certainly did not exceed two ounces, and the boy has made an excellent recovery. The second case was operated on by Mr. William Square, for malignant disease of the lower end of the femur in a boy aged 19. The loss of blood, for some reason, was more excessive, but not sufficient to prevent the perfect recovery of the patient. The third case, that of a girl of 16, with peculiar disease of the whole lower extremity, was operated on by Mr. Paul Swain, in the presence of a number of the members of the South-Western Branch of the Association. The hæmorrhage was controlled with Davy's lever by Mr. William Square, and did not exceed an ounce. The patient has

quite recovered from the immediate shock of the operation, and is progressing favourably. Evidently, for the future, amputation at the hip-joint is to take a new place in operative surgery, and will be adopted in many cases where measures short of it have long been felt to be ineffectual.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

The first ordinary meeting of the session 1882-83 was held at the Medical Institute, October 12th; Dr. BALTHAZAR FOSTER (President-Elect) in the chair. Forty members were present.

The Chairman explained the absence of the President, and moved the following resolution, which was seconded by Dr. Russell, and carried unanimously: "That the Secretary be requested to convey to Dr. Dewes, the President, the sincere sympathy of the members of the Branch with him in the illness which has necessitated his absence, and to express their hopes that he will soon return, restored to health, to preside over their meetings."

Mr. Lawson Tait showed an occluded and distended Fallopian tube which he had removed from a lady who had been under the joint care of Dr. Sanger and himself. After playing lawn-tennis on a wet afternoon, she had an attack of acute pelvic inflammation, and, when first seen, was unable to walk, and was suffering intense pain. A large doughy mass was felt behind the uterus, which Mr. Tait recognised as a distended Fallopian tube. Dr. Sanger concurred in its immediate removal, and, when this was done, the diagnosis was found to be correct. The patient made an uninterrupted recovery, and was at once relieved from her suffering. In this case neither of the ovaries were removed, but only one Fallopian tube.

Dr. Saundby showed a concentrated mixture for making lactic acid lemonade, prepared by Messrs. Woolley and Co. of Manchester. It was composed of equal parts of lactic acid and glycerine, flavoured with tincture of oranges, and was intended to be used, as suggested by the speaker, in the treatment of diabetes.

Dr. Russell read a paper on The Salicylates in Acute Rheumatism. In the discussion which followed, Dr. Malet, Dr. A. S. Underhill, Dr. Saundby, Dr. Crowe (Worcester), Dr. Thursfield (Leamington), Dr. Bassett, Dr. Wilson Moore, Mr. Yates, Dr. Edgar Underhill (Dudley), Dr. Carter, Dr. Rickards, and Dr. Foster, took part.

SHERIFFSHIRE AND MID-WALES BRANCH.

The annual meeting of the above branch was held at the Board Room, Salop Infirmary, on Tuesday, October 10th. There was a very fair attendance of members. Dr. TAYLEUR GWYNN was appointed chairman for the day, Dr. E. Burd, who was appointed vice-president at the last annual meeting, having declined to be elected president for the ensuing year, on account of his numerous engagements.

Retiring President.—A hearty vote of thanks was unanimously accorded to the retiring president, C. B. H. Soame, Esq.

Vice-President.—Dr. Edwyn Andrew, of Shrewsbury, was elected vice-president for the ensuing year.

Representatives at General Council.—J. R. Humphreys, A. Matthias, Esq., Dr. S. T. Gwynn, and the honorary secretaries were appointed.

Branch Council.—The following gentlemen were elected members of the Branch Council: Dr. E. Andrew, J. Bratton, Esq.; Wm. Eddowes, Esq.; H. J. Elliot, Esq.; Dr. T. T. Gwynn; J. D. Harries, Esq.; J. R. Humphreys, Esq.; J. Rider, Esq.; H. J. Rope, Esq.; R. W. O. Withers, Esq.; J. Gill, Esq.; Dr. Strange, and the honorary secretary. *Honorary Secretaries:* Dr. E. Cureton and Dr. Strange were appointed.

New Members.—The following gentlemen were elected members of the Association and Branch: Walter Thos. Steventon, Esq., Wellington; John Gill, Esq., Welshpool; Cecil A. Corke, Esq., Baschurch; Henry Owen Westwood, Esq., Prees; J. Peplow Cartwright, Esq., Oswestry; Wm. Calwell, Esq., Wellington; Dr. A. C. Mallev. Munslow; G. D. Collins, Esq., Shrewsbury; and W. B. Rigby, Esq., Shrewsbury.

It was proposed and carried that the annual meeting be held in future on the last Tuesday in June, unless otherwise ordered by the Branch Council.

Mr. Alfred Eddowes read some notes on a case of Compound Fracture of the Patella. Dr. Andrew read a paper on a case of Fracture of the Bowels, which ended fatally; also notes on a case of Fracture of the same. Wm. Eddowes, Esq., described a case of Hemorrhoids Tied; followed by Pyæmic Abscesses of the Neck and Thigh; recovery. He also showed temperature charts in cases of Pharyngotomy, Ovariectomy, etc.

A local committee was formed of the members present, with power to add to their number, as a branch of the Collective Investigation Committee of the Medical Association.

About twenty members afterwards dined at the Lion hotel. Oct. 19.

CORRESPONDENCE.

THE TREATMENT OF RHEUMATISM.

SIR,—With your permission, I am desirous of referring to the not unfriendly comments of Dr. Gowans upon my paper on Rheumatism and Gout, which appeared recently in the JOURNAL. The Doctor at first bears testimony to the efficacy of the treatment recommended, and then broadly avers that "at least sixteen years since he saw it tried in Glasgow Infirmary". The next sentence, however, solves the difficulty; for he explains that it was the method of Drs. Dechelly and Herbert Davies that was tested in that institution, and appends a statement of inferences drawn from that trial. With conclusions arrived at from such premises I have, technically, nothing to do. I do not, however, question the statement that the method referred to was not so successful in subacute as in acute cases. Very likely. Under my plan, the subacute yielded as readily as the acute forms. The second conclusion indicates most distinctly the fundamental difference that obtains between the two modes of procedure; for, while it states that it is immaterial whether the blister be applied over the heart or the articulations, my contention is that the blister should be applied to the cardiac region, and to that alone. Further, I am not unacquainted with the Dechelly-Davies, otherwise the blistering, plan of treatment. Had Dr. Gowans read my paper on the Pathology and Treatment of Acute Rheumatism (a copy of which I have forwarded to his address), as published in the *Dublin Journal of Medical Science*, he would have seen that I have given it sufficient prominence. As one reason why it has ceased to influence our practice, I may be permitted to quote a passage from Senator Ziemssen's *Cyclopædia*, vol. xxi, page 65; and his statement is but the reflex of medical opinion. He says: "I have myself repeatedly seen the blister treatment (of Legroux, Dechelly, and Davies) carried out in the wards of the Berlin Charité, without any result beyond a slight and often only temporary diminution of articular swelling, and a transient fall of temperature, resembling that produced both in sick and healthy persons by external irritation of the skin. I have never seen the blistering cause any change in the state of the urine; and the other effects were not more brilliant than those produced by other modes of treatment." He then refers to the risk of stranguy and urinary and fibrinous inflammation that may arise from the simultaneous application of a number of blisters; concluding, generally, that neither "this nor any other plan has been certainly proved even to exert an influence on the chief symptom of the disease—the joint-affection."

And now, notwithstanding Dr. Gowans's reclamations, I still think that one who holds that rheumatitis is a specific form of endocarditis of neurotic origin, and which depends for its cure on the agency of counterirritation over the heart alone, may not unfairly claim to have taken a "new departure", and to tread in a different pathway from those who accept the hypothesis of lactic acid or other *materies morbi* as its primal cause, and who, for its elimination, adopt the practice of promiscuous vesication.—I am, etc.,

ALEXANDER HARKIN, M.D., F.R.C.S.

5, College Square North, Belfast, October 1882.

SIR,—I have just read in the BRITISH MEDICAL JOURNAL a communication styled "Some observations on Rheumatism and Gout, with a New Departure." The new departure I find to be the treatment of acute rheumatism by blistering. The writer calls it "My Simple Plan for the Cure of Rheumatism." For very many years I have practised with great advantage this simple plan, but I by no means claim any credit to myself. I have extensively employed blistering in acute rheumatism, as a large class of students who have attended my hospitals are aware.

I first adopted it after reading a lecture by Dr. Herbert Davies, delivered in the London Hospital in 1864, "On the Treatment of Rheumatic Fever exclusively by Blistering." For the benefit of those who, like Dr. Hacker, have not had the advantage of reading Dr. Davies's lecture, I may quote his words, "The treatment has been a simple and entirely local; the result, in rapid relief of pain, quick subsidence of inflammation, and freedom from serious lesions, highly satisfactory."

As to the priority of the plan, I must refer the question to Dr. Davies, but certain it is that so long ago as 1864 he brought it prominently before the profession in his highly important and interesting lecture, going moreover the history of the treatment.

In speaking of the blister treatment of Dr. Davies, I have been told that before Dr. Davies's publication, the practice had been pursued by Dr. R. B. Todd, one of the most illustrious physicians of the nineteenth century. "Palmarum qui meruit ferat."—Yours, etc.,

A DUBLIN HOSPITAL PHYSICIAN.

MILITARY AND NAVAL MEDICAL SERVICES.

AFGHAN AND ZULU MEMORIAL FUND.

At a meeting of the committee of Medical Officers' "Afghan and Zulu Memorial Fund", held at 6, Whitehall Yard, on the 14th instant; present, Surgeons-General Thomas Longmore, C.B., J. Sinclair, and Deputy Surgeon-General J. O'Neil, C.B., it was decided to close the subscription list on December 31st, 1882. Officers who have not sent in their contributions are requested to do so before that date to the Honorary Secretary, Brigade-Surgeon Alfred Clarke, Royal Military College, Sandhurst. The amount subscribed up to date is £450.

THE death, is announced at Southampton, of Inspector-General James Windgate Johnston, M.D., Honorary Surgeon to the Queen. The deceased officer was the Senior Inspector-General of the Navy. He entered the service in 1825. He was in receipt of a good service pension of £100 a year, and also held the Blane medal. He was in his seventy-eighth year.

THE Queen has been graciously pleased to appoint Dr. Mackie, Physician to Her Majesty's Consulate at Alexandria, to be an Ordinary Member of the Third Class in Companions of the Order of St. Michael and St. George.

DEPUTY SURGEON-GENERAL A. G. YOUNG, recently promoted, has been appointed Principal Medical Officer of the Woolwich District. Mr. Young served with the 2nd Battalion of the Rifle Brigade in the Crimea, and was present at the siege of Sebastopol (medal with clasp and Turkish medal). He was also in medical charge of the 2nd Battalion 60th Rifles throughout the campaign of 1860 in China (medal with two clasps).

UNIFICATION AND FEIGNED DISEASE.

SIR,—In the JOURNAL of May 20th, is a letter from "A Voice from the Jungles of India", in which the theory that unification will conduce to feigned disease is put forth. I think it time this statement, so frequently made without foundation, was dropped, as it is not flattering to medical officers to suppose that they will be frequently taken in; moreover, feigned disease is not common amongst soldiers; and I believe that any intelligent medical officer, whether in charge of a regiment or station-hospital, will speedily detect men who feign disease, or who constantly report sick for trivial causes. One circumstance in dealing with soldiers should always be remembered, namely, that a trifling hurt or complaint, which in civil life would be thought little of, may incapacitate a soldier from performing the exact exercises required of him on parade; it would be harsh to regard such a man as a schemer, and send him back for punishment. I believe the statement made by regimentalists, that, under the new system, the men are not known, is greatly exaggerated, if not entirely unfounded; this is nearly the only argument now used by regimentalists. The infinite advantage of the station-hospital system cannot but be apparent to those who have seen both; the sick are probably better looked after by trained men. The medical officer is exempt from petty military interference, which was frequently a strong element under the regimental system, and is still in native regiments; a medical officer can now develop any talent he may have in the administration of his hospital, and feels that he is now to be trusted with other duties than the mere administration of medicine. Nothing could satisfy a department like ours but the freedom from improper interference in the management of our own affairs, which unification has given us. Who is so fitted to manage a hospital as the man specially educated for it? The present regimentalists are fast moving on, and let us hope we shall soon hear no more of them. After a good many years' experience under both systems, I have no hesitation in saying that the lessened familiarity between military and medical officers is most advantageous to the service. The separation conduces to increased respect, deference, and courtesy between us; we can express our opinions, when we differ, without acrimonious correspondence, as any difference of opinion passes through the brigade or adjutant-general's departments. Let us hope that those who have so successfully established the system for European troops, will speedily do so in the native army also.—Yours truly,

SURGEON-MAJOR A.M.D.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE FEVER EPIDEMIC AT BANGOR.

THE detailed report of Dr. Barry on the circumstances of the recent terrible epidemic of typhoid fever at Bangor and its neighbourhood, has now been published. Dr. Barry corroborates and emphasises the view which Dr. Rees, the health-officer of the district, took at the very beginning of the outbreak, namely, that the epidemic was spread by means of the water distributed from the reservoir supplying the town. It is melancholy to think that by far the largest amount of suffering, distress, and death that this epidemic has occasioned, has been immediately caused by the obstinate refusal of the local sanitary authority to accept the advice and opinion of their skilled officers of health. Dr. Barry, in reporting upon the epidemic, softens down, into official language, this lurid part of the picture; but it cannot be doubted that the sanitary authorities are indirectly responsible for the extension of the epidemic that took place after they were warned of its cause. So early as July

4th, when the cases occurring were comparatively few in number, Mr. Rees had arrived at the conclusion that the outbreak was due to pollution at the intake of the water-supply of the town. He accordingly at once had a special meeting of the authority convened, at which he stated the conclusions arrived at, and the means to be taken to prevent any further spread of the disease. But the sanitary authority, who had only recently purchased the waterworks, would not believe that the primary cause of the outbreak was in the water, and attempted to seek it in meteorological and other obscure directions. They ordered, however, the reservoirs to be cleansed, subjecting the filtering material to an inefficient washing, with the very water which at the time was under strong suspicion of being the cause of infection. Samples of water were also sent for analysis, and, on receiving a favourable report of it, they at once concluded that the danger could not lie in that direction, in spite of Mr. Rees's statement that the specific infection of enteric fever could not be detected by analysis.

Meanwhile, the epidemic was gathering force, and by the end of July had invaded 126 houses, and attacked 141 persons. Public attention had now been strongly attracted to the outbreak, and Dr. Barry was sent down to investigate. He came to the same conclusion as Mr. Rees, and left with the authority, at a meeting which he had with them, a number of recommendations for preventing the spread of the epidemic. The authority did not, however, proceed with sufficient alacrity with the more important of these, and, at the date of a second visit paid by Dr. Barry on September 12th, the terrible total of 548 cases of typhoid had occurred in Bangor and its vicinity, no less than 42 of which had already proved fatal. This proportion is much larger than we are accustomed to look for in epidemic spread by water; but there is no manner of doubt as to the causation of the epidemic in question. It appears that in May, a case of typhoid fever occurred at a house situated near the river Gasg, above the intake of the Bangor waterworks, and, subsequently, two other cases, no doubt caught by direct infection from the first, occurred at the same house. The excreta from these patients were, despite caution, thrown into a creek at the back of the house, whence they passed, by means of a rubble drain, into a small rapid stream which finds its way to the river, into which it discharges at a point about 350 yards above the intake of the Bangor water-supply, the whole distance from the house to the intake being about 700 yards.

Following upon this first case of those at this house, other cases occurred in various parts of Bangor. To the end of the first week of July, there was a continued series of dropping cases, which, during the latter part of the period, occurred daily in various parts of the town and district simultaneously; and, in the second and third weeks of July, there was a sudden outbreak, which affected both the town and neighbouring villages at one and the same time. The cases that occurred lived miles apart from one another, and, with the exception of the water-supply, had no circumstances in common, there being an entire absence of cases in houses not so supplied.

The sudden extension of the outbreak, in the middle of July, is accounted for by the bursting of a main, and consequent disturbance in the reservoir and filter-beds, on July 1st and 2nd. It was stated on all sides that, on those days, the water was much discoloured, and in some cases it was even said to have smelt badly. The filtering beds were very inefficient and dirty; and there is no doubt that the dirt, accumulated on the top, must have been carried into the reservoir, and thence into the main. From ten days to a fortnight after this took place, a simultaneous outbreak of fever occurred in various new localities. Subsequently, when the epidemic became generally diffused, it must of necessity have been assisted in its spread by the faulty ventilation of sewers and house-drains, and the foul accumulations of excrement refuse that prevailed in the town. But, looking to all the circumstances of the outbreak, we cannot doubt that it derived its primary and chief strength from the pollution of the reservoir; and it will have taught a fearful lesson to the local authorities of the dangers of inaction, and of the neglect of skilled advice.

THE DOVER BOARD OF GUARDIANS AND THE SUPPLY OF STIMULANTS.

AT a recent meeting of the Dover Board of Guardians, Mr. Fenn, the workhouse medical officer, applied for an interview with the guardians, for the purpose of bringing under their notice the supply of stimulants—notably, beer—which, as he alleged, was improperly given to certain of the inmates who were engaged in labour, but which he had ordered, in consequence of its having been the custom so to do, and not from any belief in its necessity. Consequent on this statement of the medical officer, a lengthened discussion took place; one of the guardians, the Rev. T. Briggs, observing "that, as a board of guardians

was precluded from giving any money consideration for useful work done, they had sanctioned the supply of a little beer, as an encouragement to the gardener, shoemakers, and carpenters who were engaged in labour in the house. If the doctor thought the inmates would be just as well without the beer, he was not obliged to sign the orders; but he did not think that Mr. Fenn would be censured by the Local Government Board if he did". Another of the guardians, Mr. Marshall, a surgeon in the town, "was of opinion that Mr. Fenn had acted wisely in bringing the subject before the board, as he considered that the responsibility for ordering beer, etc., for labour, should be thrown on the guardians, and not upon the medical officer". On which the Rev. T. Briggs remarked "that it was purely optional with the doctor whether he ordered these stimulants or not; and if he held they were not necessary, it would be impossible for the Board to say that they were". Whilst Mr. Pepper expressed "the hope that Mr. Fenn would hesitate before withdrawing the supply of beer; for although perhaps legally the inmates were not entitled to it, yet it was given as a reward for extra work that the board would have to employ workmen in the town to do"; which was followed by Mr. Fenn stating "that he could not conscientiously sign the order that the stimulants were necessary, but he would leave the subject in the hands of the board, and, if they wished the order given, for extra work, he would sanction it". The Chairman said "he was glad the doctor was willing to give the orders, as that would make it perfectly satisfactory". Ultimately, it was unanimously resolved that the doctor, having expressed his opinion on the subject of giving stimulants to the inmates, the board was of opinion that it should be carried on as hitherto.

In commenting on this procedure of Mr. Fenn, we would point out, for his benefit and that of other workhouse medical officers holding similar views, that the Local Government has distinctly laid down "that no stimulant of any kind should be supplied to a pauper inmate of a workhouse for any work done by him, unless the medical officer be of opinion that such stimulant be necessary for the preservation of the health of such inmate; and, therefore, if Mr. Fenn holds such strong views as to the injury done by ordering beer, etc., he should have the courage of his opinions, and refuse to sanction their supply.

THE OUTBREAK OF TYPHOID FEVER AT CLAPHAM.

INFORMATION having been given to the Local Government Board of an outbreak of typhoid fever at Clapham, attributed to the use of milk from a particular source, Dr. Parsons was instructed by the Board to inquire into the circumstances of the case. At the date of his visit on July 24th, the number of cases which were known to have occurred in Clapham and its immediate neighbourhood were twenty, and of households attacked fifteen; two other cases in one household were subsequently heard of. Previous to June, Clapham had for some time been free from typhoid fever, the only deaths registered from fever during 1882 having been three in the week ending February 25th, and one in that ending March 4th. The majority of the houses in which the fever had occurred were of a superior class, and in good situations, but their sanitary conditions varied in different cases, but in few was there any sanitary defect of a nature to make itself obvious to the inmates through the occurrence of bad smells or other nuisances; and in some cases, Dr. Parsons tells us, the drains had been laid and ventilated on the most approved modern principles. The points most open to objection were occasional absence of proper ventilation to drains and soil-pipes, continuity of sink-pipes and cistern overflow with the drains, and the use of the same cistern for flushing water-closets and supplying drinking-water. The sewers are stated by the surveyor of the district to be in good order, and freely ventilated by openings in the drains of the road. In one case only complaint was made of a bad smell issuing from a sewer grid opposite the house. On the outbreak of fever which was the subject of Dr. Parsons's inquiry attracting attention, it was soon observed that all the households in which cases had occurred obtained their milk from the same source; and as fresh cases came to knowledge the same condition was still found to hold good except in one instance. In this exceptional case, milk was obtained from a goat kept on the premises by the people themselves, supplemented by small quantities of milk purchased from a small local dealer. The house in which this fever patient lived was of an inferior class to most of the others invaded by typhoid. The kitchen, which was the living room, was ill ventilated, and contained a sink, the pipe of which went direct into the drain, guarded only by a broken and ineffective trap. In front of the house was a sewer grating, complained of as offensive, which appeared to serve for the ventilation of a considerable length of the main sewer. The house was situated on a hill, and the drainage was carried down a steep slope, and at many of these points was used in large quantities, in some cases for

twelve pints daily. In almost all cases the persons who suffered from fever were known to have been in the habit of drinking raw milk more or less freely, and in some the patient was the chief milk-drinker in the house. Thus at one house containing about fifteen inmates, the patient and an elder sister were the only ones who drank cold milk, and it was remembered that on one particular occasion shortly before the illness, the elder sister would not drink the milk, saying that it had an unpleasant taste and smell. On further inquiries, it transpired that the milk purveyed by the Clapham dealer up to the time of the outbreak was of two kinds obtained from different sources; that yielded by his own cows being sold as "nursery" milk and ordinary milk, which was sent to him from dairy-farms at Musbury near Axminster. The fever among the dairyman's customers has been made out by Dr. Parsons to be confined to the users of the ordinary milk; of the households which took this milk, about one in seven has been attacked. He points out that, on the supposition that the fever was conveyed by the milk, this seems a small proportion; but suggests that it is probable that escaped milk was used only in supports. Thus, at two households, in each of which there had been two cases of fever, at the one eight pints, at the other twelve pints, were taken. At each of two other houses, in which there had been one case of fever, four pints daily were taken. Inquiries made at Drake's farm, one of the farms whence the supply of "ordinary" milk was obtained, which is supposed to have caused the outbreak of typhoid under investigation, showed that there had been some cases of typhoid at Musbury last winter, the last of which recovered about the end of March. The excreta from this case were thrown into a vault of primitive construction, and then flushed out in a way which it is inferred may have polluted the water on Drake's farm. Dr. Dupré has made an analysis of a sample of this water, which shows it to be largely polluted by sewage, and entirely unfit for drinking or culinary purposes. Dr. Parsons, therefore, comes to the conclusion that the fact unquestionably shown by Dr. Dupré's analysis of the pollution of the well at Drake's farm; the existence, at a not very remote date, of typhoid fever, in the neighbourhood of the farm, and the evident possibility of the access of the specific poison to the well, by percolation from the sewage-polluted brook through the porous gravelly soil, indicate a channel by which infection may have gained access to the milk; whether in the rinsing of the churns or by the accidental splashing from the pump in the process of cooling. The cessation of the further spread of the fever within a few days after July 6th, the date when the Musbury supply of milk was discontinued, confirms Dr. Parsons in his view of the connection of the fever with that supply. This outbreak, which, fortunately, was not so serious in its results as some which it has been our duty to chronicle, still tends to accentuate the necessity for a thorough and skilled inspection of all farms whence milk for family consumption is obtained, with reference to their drainage, water-supply, and arrangements for storage and transmission.

UNIVERSITY INTELLIGENCE.

THE LATE PROFESSOR BALFOUR.—The following formal announcement of the meeting to be called to arrange for a memorial to the late Professor Balfour, has appeared in the *Cambridge University Reporter*: "The Vice-Chancellor begs leave to inform the members of the Senate that he has received the following communication: 'We, the undersigned, conceiving it desirable that some memorial of the late Professor Balfour should be established in the University, beg leave to ask you to be so good as to call a meeting of members of the Senate and others, at which it is hoped that you will consent to preside. G. E. Paget, G. M. Humphry, Thos. M'K. Hughes, H. N. Moseley, Alfred Newton, G. H. Darwin, E. W. Blore, Coutts Trotter, M. Foster, A. Sedgwick, J. W. Clark, Sydney H. Vines'; and, in accordance with the request contained therein, invites the attendance of members of the Senate and others at a meeting to be held on Saturday, October 21st, at half-past four o'clock in the afternoon, in the Lecture-room of Comparative Anatomy, in the New Museums, to take steps to establish in the University a memorial of the late Professor Balfour."

The Vice-Chancellor further announces that he has received a letter from Mr. J. W. Clark, M.A., superintendent of the Museum of Zoology and Comparative Anatomy, announcing that the library of the late Professor Balfour has presented his collection of books to the University, and that Mr. Clark has deposited the collection in the library. The collection consists of a large number of books, and is of great value to the University. The Vice-Chancellor further announces that he has received a letter from Mr. J. W. Clark, M.A., superintendent of the Museum of Zoology and Comparative Anatomy, announcing that the library of the late Professor Balfour has presented his collection of books to the University, and that Mr. Clark has deposited the collection in the library. The collection consists of a large number of books, and is of great value to the University.

and embryology : and so extensive a series, especially when arranged as this is, according to subject, places before students the most important information on any given group of animals, without the trouble of reference to journals and transactions. Besides these works on morphology, about 60 volumes on general science have been presented to the Philosophical Library.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 12th, 1882.

Iliewicz, Henry Frederick, Marquess Road, Canonbury.
Leftwich, Charles Harcourt, New Cross.
Manley, John Herbert Hawkins, West Bromwich.
Tripp, Charles Llwelllyn Howard, Royal Free Hospital.

UNIVERSITY OF DURHAM.—The following is a list of successful candidates at the examination held this week.

First examination for the degree of Bachelor of Medicine.

First-Class Honours.—No candidate was successful.

Second-Class Honours.—James R. Roberts, Middlesex Hospital.

Pass-List.—Edmund L. Archer, M.R.C.S., St. Bartholomew's; John F. Bate, University College; William L. Blight; Henry W. Dixon, Newcastle-upon-Tyne; John M. Harper, London Hospital; Isaac Hartley, Newcastle-upon-Tyne; William Jaques, Newcastle-upon-Tyne; James Lazenby, Newcastle-upon-Tyne; Herbert Mosse, Charing Cross Hospital; George P. Newbolt, St. Bartholomew's Hospital; Edward A. Opie; Louis Robinson, St. Bartholomew's Hospital; James M. Robson, B.A., Newcastle-upon-Tyne; Frederick T. Thistle, L.R.C.P., St. Bartholomew's Hospital; Shirley L. Woolmer, University College.

Ten candidates failed in the examination as a whole : two failed in Chemistry only, and one in Botany only.

MEDICAL VACANCIES.

The following vacancies are announced :—

ANDERSON'S COLLEGE DISPENSARY, Glasgow.—Surgeon on Dispensary Staff. Applications to D. Wilson.

AUCKLAND UNIVERSITY COLLEGE, New Zealand.—Two Professors, one for Chemistry, and the other for Natural Science. Applications by October 31st.

CARLOW UNION.—Medical Officer for Bagenalstown Dispensary District. Salary, £120 per annum, with £20 per annum as Medical Officer of Health, registration, and vaccination fees. Election on October 24th.

CHARING CROSS HOSPITAL.—Assistant-Physician. Applications by October 23rd.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park.—Resident Clinical Assistant. Salary, £20 per annum. Applications by November 9th.

CLAPHAM GENERAL DISPENSARY.—Medical Officer. Applications to the Honorary Secretary, 42, Manor Street, Clapham.

DENTAL HOSPITAL OF LONDON, Leicester Square.—Administrator of Anesthetics. Applications by November 13th.

DENTAL HOSPITAL OF LONDON, Leicester Square.—Dental House-Surgeon. Salary, £40 per annum. Applications by November 13th.

GLASGOW HOSPITAL FOR SICK CHILDREN.—Two Visiting Physicians, one Extra Physician, one Pathologist, one Aurist, two Visiting Surgeons, one Extra Surgeon, one Oculist and one Surgeon Dentist. Applications by October 23rd.

GLASGOW HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer. Applications by October 23rd.

GLENTIES UNION.—Medical Officer for Ardara Dispensary District. Salary, £100 per annum, with £15 per annum as Medical Officer of Health, registration, and vaccination fees. Election on October 24th.

GREAT NORTHERN HOSPITAL, Caledonian Road, N.—Ophthalmic Surgeon. Applications by October 31st.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Resident Clinical Assistant. Applications by November 4th.

KENDAL UNION.—Medical Officer and Public Vaccinator. Salaries £40 and £45 per annum respectively. Applications by October 26th.

LEADHILLS.—Medical Officer. Applications to T. Newbigging, Mines Office, LONDON FEVER HOSPITAL.—Resident Medical Officer. Salary, £200 per annum. Applications by October 31st.

LYMINGTON UNION RURAL SANITARY AUTHORITY.—Medical Officer and Public Vaccinator. Salary, £32 per annum. Applications by October 21st.

LYMINGTON UNION RURAL SANITARY AUTHORITY.—Medical Officer of Health. Salary, £50 per annum. Applications by October 21st.

MACCLESFIELD GENERAL INFIRMARY.—Senior House-Surgeon. Salary, £100 per annum. Application to the Chairman of House-Committee by October 28th.

MANCHESTER ROYAL INFIRMARY, DISPENSARY, AND LUNATIC HOSPITAL OR ASYLUM.—Honorary Assistant-Surgeon. Applications by October 28th.

MIDDLESEX HOSPITAL, W.—Assistant-Surgeon. Applications by October 24th.

NORTHAMPTON GENERAL INFIRMARY.—Physician.—Applications to be addressed to the Secretary not later than October 27th.

NORTH-WEST LONDON HOSPITAL, 18 and 20, Kentish Town Road.—Ophthalmic Surgeon. Applications by October 28th.

OLDCASTLE UNION, Crossakiel.—Dispensary Medical Officer. Salary, £80 per annum, and £15 as Medical Officer of Health. Application by October 21st.

PARISH OF BIRMINGHAM.—Physician. Salary, £150 per annum. Applications by October 23rd.

POPLAR AND STEPNEY SICK ASYLUM DISTRICT.—Assistant Medical Officer. Salary, £120 per annum. Applications by October 30th.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, 191, Marylebone Road.—Physician to the Out-patients. Applications by November 10th.

ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY, Wigan.—Junior House-Surgeon. Salary, £80 per annum. Applications by November 2nd.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Clinical Assistant. Applications by October 31st.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—House-Surgeon. Applications by October 30th.

SCARBOROUGH FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Resident Medical Officer. Salary, £200 per annum. Applications by October 23rd.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House-Surgeon. Salary, £25 per annum. Applications by October 23th.

WESTERN INFIRMARY OF GLASGOW.—Two extra Dispensary Surgeons. Applications by October 28th.

MEDICAL APPOINTMENTS.

BAMPTON, A. H., M.D., appointed Assistant-Physician to the Plymouth Public Dispensary.

BLAGG, A. F., M.R.C.S., appointed Resident Medical Officer to the Rochdale Infirmary, *vice* F. C. Stevenson, L.K.Q.C.P.I., resigned.

BUCHAN, W. A., M.D., appointed House-Surgeon to the Clinical Hospital and Dispensary for Women and Children, *vice* W. Donie, M.B., resigned.

BUCKLEY, C., L.R.C.P., appointed Medical Officer to the Mitchelstown Union. Kil dorey Dispensary District, *vice* Thomas Reardon, L.K.Q.C.P.I., resigned.

CLENDINNEN, J. George, L.R.C.S.I., L.S.A., appointed Medical Officer of Health to the Lower Sedgley Local Board, *vice* Joseph Eagleton, L.R.C.P. and S.E., resigned.

COLLIER, J., M.R.C.S., appointed Junior Demonstrator of Anatomy to the Owens College, Manchester, *vice* W. Evans-Hoyle, M.R.C.S., resigned.

CROSS, F. R., F.R.C.S., appointed Honorary Surgeon to the Bristol Eye Hospital, *vice* R. T. H. Bartley, M.D., deceased.

DENNEHY, P. R., L.K.Q.C.P., appointed Medical Officer to the Lismore Union Workhouse and Fever Hospital.

HALL, B., M.B.Lond., M.R.C.S., appointed Assistant Medical Officer at Earlswood Asylum, *vice* Dr. Jones, appointed an Assistant Medical Officer at Colney Hatch.

HENRY, Thomas, L.R.C.S., appointed Medical Officer for Pomeroy Dispensary District to the Cookstown Union.

LEWIS, L., M.R.C.S., appointed Assistant-Physician to the Plymouth Public Dispensary.

LOUGHEED, W. H., M.B., appointed House-Surgeon to the Kent County Ophthalmic Hospital, *vice* W. W. Smyth, L.R.C.P., resigned.

MACCARTHY, Flennell, M.B., B.Ch., Dub., appointed Surgeon to the Midland Railway, Worcester District, *vice* George F. A. Knapp, M.R.C.S., deceased.

PEARCE, W., L.R.C.P., appointed Resident House-Surgeon to the Seamen's Hospital, Greenwich.

PROFFITT, A. H., M.R.C.S., appointed Resident House-Surgeon to the Horton Infirmary, Banbury.

RAWSON, E. E., L.R.C.P., appointed Medical Officer of Health to the Thornton Local Board.

REARDON, Thomas, L.K.C.Q.P.I., appointed Medical Officer to the Donereel Dispensary.

SCOTT, C. C., M.B., C.M.Edin., appointed House-Surgeon to the Ayr New Hospital, and Surgeon to the Dispensary.

SCOTT, G., M.B., appointed Resident Medical Officer to the Portpatrick Parish *vice* G. T. Brown, M.B., resigned.

SHAW, H. B., B.A., appointed Demonstrator of Practical Physiology to the Charing Cross Hospital Medical School.

STEVENSON, W. E., M.B., Cantab., M.R.C.S., S.Sc. Cert. Camb., has been appointed Electrician to St. Bartholomew's Hospital London.

WEST, J. A., M.R.C.S., appointed Resident Clinical Assistant and Registrar to the North-Eastern Hospital for Children.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

EAL.—On October 6th, at 54, Wheeley's Road, Edgbaston, Birmingham, the wife of Henry Eales, M.R.C.S., of a son.

MARRIAGE.

ALLARD-PEACEV.—On October 12th, at Boddington Church, Gloucestershire, by the Rev. John Arkell, Vicar of St. Ebbs, Oxford, assisted by the Rev. Thomas Purnell, Vicar of Boddington, Joseph Higginson Allard, M.R.C.S.E., L.R.C.P.E.d. of Tewkesbury, second son of William Allard, J.P., F.R.C.S.Eng., to Harriet Mary, eldest daughter of the late W. H. Peacey, J.P., M.R.C.S.Eng. No Cards.

DEATH.

WATERHOUSE.—October 17th, at Peatling Magna, Leicestershire, of enteric fever, Joseph Bourne Waterhouse, M.R.C.S., in his thirtieth year.

But, as has often been pointed out, it is not enough to cause a sensible amount of trouble to the offender. It must be as teething, or errors of judgment, or as a means of bringing to the surface some new and better method.

"ON THE INFLUENCE OF FULHAM SMALL-POX HOSPITAL ON THE NEIGHBOURHOOD SURROUNDING IT. BY MR. W. H. POWER."

SIR,—As I was intimately connected with the above institution as its medical officer for nearly four years, and as I had made the spread of small-pox in its vicinity my special study, I may be permitted to make a few observations on the above report. The late Mr. Godrich, the parish medical officer for the Brompton district, contended against the existence of the hospital from its opening on the same grounds now proposed by Mr. Power in the Blue-book. His report and observations were investigated by Dr. Dudfield, and submitted to the tribunal of the BRITISH MEDICAL JOURNAL. But the facts and history collected from time to time showed that the spread of the disease can be explained with satisfaction in a commonplace manner. That Mr. Power should tread the same erroneous grounds is not to be wondered at, as he has fallen short in information during the conduction of the inquiry through his want of knowledge of the locality and its inhabitants, and ignoring the past experience.

Taken as a whole, Mr. Power's report is rendered least attractive by the non-observance of systematic narration, omission of heading of paragraphs, and cumbersomeness with unnecessary, and by no means accurate, maps, tables, plans, etc. I have noted several of his sentences as incomplete, and without sense. He grounds his nine conclusions on laws and theories which must be proved first before they are followed. That he should have committed many mistakes in the narration of the administration of the hospital is but natural, but it does not warrant him to draw hypothetical conclusions which, if left unnoticed, must inevitably cause a serious drawback in national sanitation.

"Particulars supplied by the Steward of the Hospital respecting the wards," given at the end of his report, are beyond the bare measurements, inaccurate, and the description not at all graphic. The calculations of dimensions are incorrect. He gives us to understand that the hospital can accommodate 300 patients in the ten pavilions. The cubic space in each pavilion on the male side is 49,744.125, giving 25 bed-provision in each ward; while, on the female side, the cubic space is 45,785.25, making a provision for 23 beds. A visit to the hospital will at once demonstrate that one window, 2,000 cubic space, and 144 square feet to each bed, as laid down in the standard, is in accordance with the design of the building. Consequently, it can take in 240 cases at most; and when one pavilion on each side is cut off to provide for cases admitted through misadventure, it can take in only 210.

We now turn to examine what Mr. Power has to say regarding the administrative circumstances of the hospital, and the sufficiency of these to account for the spread of the disease. He states that the managers of the Metropolitan Asylums Board were nowise unfamiliar with the accusations to which small-pox hospitals are liable; and they applied their experience with great intelligence and forethought. He has given us no facts to join him in these laudatory remarks. Soon after my appointment as its Medical Superintendent, I applied to the Managing Committee to assist me in investigating the history of the spread of the disease in its vicinity, and to profit by the experience of the case of Hampstead Hospital; but they refused my application, on grounds that their duties lay in the treatment of the cases entrusted to their charge, and no more. However, I have collected such a history for my own satisfaction, and on my own responsibility. Dr. Thorne Thorne remarks that, when a hospital is hurriedly built during a panic, it is always indifferent in accommodation, and imperfect as a part of the sanitary defences of a district. Such has, unfortunately, been the case with Fulham Hospital. It was opened in March 1877, during a panic, when only five wards were barely walled, the superior officers were quartered in the sculleries, and the subordinates in a ward. The washing of the staff was sent out, as the laundry was incomplete, and there never has been proper provision to wash the linen of the staff. Some of the staff slept outside. The administrative block was not ready for nearly two more months, and was meant to accommodate a staff to nurse eighty cases, with a non-resident steward. The various necessities, as dispensary, baths for superior officers, sculleries, pantries, and various other rooms, were wanting, and have been patched in here and there, to the great detriment of the administration. The attention of the Managing Committee was drawn to these imperfections, but it was put off from time to time to take action in the matter. Cases of small-pox have occurred owing to these wants of precaution in the families of the members of the staff, and their friends, year after year. For four years, no sort of repairs, limewashing, painting, etc., of the buildings took place, and the walls looked no better than those of a warehouse. Many faults of the servants were made excusable on account of these imperfections. The clothing of a patient has never been washed on his admission. The non-resident staff are obliged to work in the wards, and among patients in their shirt sleeves, which part of the dress is never changed. The chaplain of the hospital is almost a daily visitor, and the chairman of the Managing Committee visits twice a week. Cases of small-pox have occurred among the members of the Committee and their households. The communications with the steward of the Stockwell Small-pox Hospital were very frequent, and have seriously told on the administration of the institution.

As regards the hypothesis of aerial infection, I shall only briefly state my objections; and in a subsequent communication I shall show that calculations of averages of cases in specified portions of the districts are entirely misleading. Taken this vast metropolis as one community, we never have known that any zymotic disease has made itself manifest so generally everywhere as to lead us to believe that infection has been diffused through the air. In half a mile ring from the hospital are included mansions of Redcliffe Square and its vicinity, the Boltons, etc., as well as the Lands End, Fulham, where hovels of labourers are located. It is quite unfair for him to draw averages of cases in these two localities alike. In three-quarters of a mile ring, Queen's Gate, Onslow Gardens, etc., and poor parts of Fulham and Chelsea, are included. Certainly Mr. Power would not mean, when it is brought home to him, that such calculations as he makes would ever satisfy a scientific inquiry.—I remain, yours obediently, MONTAGUE D. MAKUNA,

late Medical Superintendent Fulham Small-pox Hospital.

Office East India Association, 26, Charing Cross, S.W., Oct. 17th, 1882.

A PROVINCIAL TEACHER.—The election of Mr. Bryant as a member of the Court of Examiners of the Royal College of Surgeons in the vacancy occasioned by the resignation of Mr. John Birkett, of Guy's Hospital, took place on October 20th. Mr. J. Cooper Forster, of the same hospital, Vice-President of the College, is Chairman of the Court.

NEW VACCINATORS.

SIR,—The "novel form of vaccinator" described in the BRITISH MEDICAL JOURNAL for October 14th, is exactly like one I have had in my possession for some time. It was purchased at Maw and Co.'s, and is figured in their new catalogue on page 31, and called the "Cooper Rose's."—Yours truly, ROBERT SLADE, Puddletown, Dorchester, October 16th, 1882.

IS IODINE AN ANTIDOTE FOR STRYCHNINE?

SIR,—Articles have appeared from time to time in the daily papers lauding iodine as a "sure antidote" for poisoning by strychnia. Knowing that we have frequently got hints from empirics on the action of medicines, I resolved to put it to the test. The dose of iodine recommended is one teaspoonful, or one dessert-spoonful, according to the caprice of the writer. (This seems to be the undiluted tincture.)

Having got several dogs, I proceeded as follows. 1. I administered strychnine-crystals (five or six grains), and waited for the initiative twitchings, which always precede a fit. I then administered tr. iodi. in varying quantities; but, in every case, it was a complete failure. 2. I mixed crystals of strychnine with crystals of iodine, by rubbing together in a mortar in very varying quantities, and that did not even shorten the time for the physiological effects of strychnine to take place. An antidote given with a poison should render a poison abortive.

A fox-terrier of mine got a bait about 9 P.M. Having lost faith in iodine, I gave him an emetic of sulphate of zinc and tincture of ipecacuanha. The dog escaped from the house, but I felt sure he would vomit. Fits came on, which proved he had not. I injected hypodermically one grain of morphia; and from time to time during the night, in divided quantities, I injected down his throat six or seven drachms of tincture of belladonna. At four next morning, the fits had left, and there were just perceptible twitchings. At 9 A.M., the fits returned with great severity; the eyes protruded from their sockets, and the tongue thrust out of his mouth, swollen, and of a dark purple colour. I then gave an emetic of cap. sulph. and decoct. tabassi; and threw some decoction into the anus. He vomited a fresh bait, after which he sank exhausted by fits at 10.30 A.M. The belladonna and morphia evidently retarded the immediate action of the strychnine, but appeared, also, to have stopped its elimination from the body. The dog was ill from 9 P.M. to 10.30 A.M., and should have died (without interference) in from five to fifteen minutes. Some practical physiologist might settle the question. The bait showed no signs of digestive action.—I am, etc.,

RICHARD McDUGALL, M.B. and C.M.

Murrumbidgee, New South Wales, August 17th, 1882.

. Iodine is not a promising antidote for strychnine. There is nothing antagonistic in the physiological action of the two substances; but iodine renders strychnine very sparingly soluble, and, indeed, precipitates the alkaloid, in great measure, from its not too acid solution. Iodine-crystals are too little soluble in water to admit of their affording much chance of rendering strychnine insoluble when both are administered simultaneously. The powerful irritant effects of large doses of free iodine render the remedy by no means a safe one. Bromide of potassium, chloral-hydrate, and the inhalation of chloroform, are far more likely to counteract the effects of strychnine than large doses of iodine.

MR. GLADSTONE AND THE IRISH UNIVERSITIES.

SIR,—Permit me to correct an error into which Dr. O'Connell has fallen in his letter printed in the JOURNAL of October 14th. He attributes the Act abolishing the Queen's, and establishing the Royal University in Ireland, to Mr. Gladstone; whereas the Queen's was abolished, and the Royal established, by the late Government, as all men know who take an interest in such matters. If those who established the Royal University are worthy of blame, then the late Earl of Beaconsfield and Lord Cairns are the persons who should suffer, not Mr. Gladstone. By inserting the above, you will much oblige, yours faithfully,

F. R. TENISON, M.D.

215, Uxbridge Road, London, W., October 14th, 1882.

HOUSE-SURGEONS' EVIDENCE.

SIR,—Are house-surgeons entitled to a fee for giving evidence in a police-court? And, if there be any doubt about obtaining the fee, is it not allowable to appeal to the magistrates for an order before giving evidence?—Yours truly, E. F. FLYNN, Sunderland Infirmary, October 9th, 1882.

. It is usual to allow house-surgeons a fee of half-a-guinea for giving evidence in a metropolitan police-court; and we believe that this sum, at least, would be given in the provincial police-courts. The amount is fixed according to the discretion of the magistrate. No surgeon can legally refuse to give evidence in a police-court before his fee for so doing is paid; but the magistrate invariably orders the proper allowance to be handed to him.

OVERTAKEN.—Carrying bottles in a doctor's carriage, or using it exclusively for visiting patients, will not exempt its owner from taxation. In the exemption clauses of the carriage-tax law, "bearing the owner's name printed thereon" is an absolutely necessary requirement for exemption, even in the case of wagons and tradesmen's carts.

ACCURACY.—We cannot recommend any particular instrument-maker. Some of the best clinical thermometers are mentioned in our advertisement columns.

DR. HARKIN'S PAPER ON RHEUMATISM.

SIR,—The startling "departure" advocated by Dr. Harkin could scarcely become commonly adopted from the two cases quoted by him. In case number one, neither the actual commencement of the fever, nor the treatment previous to October 29th, are mentioned. The pyrexia was evidently not great. Lastly, the recovery of this, as far as one can understand, mild case, was not rapid, requiring fourteen days before a half-mile walk could be attempted. In case number two, the first blister fails, and possibly its application has something to do with the weak cardiac impulse. It is hardly fair to attribute the improvement of the joints to the second blister, when alkaline lotions had been applied. Counting up, by dates, the duration of this case appears to have been seven or eight, rather than five, days.

Dr. Harkin properly attaches importance to rapidity of cure; but I cannot see any novel rapidity in either of the above quoted cases. My last case, a publican, with temperature rising to 104°, was only five days disabled, at the end of which I did not discover any lameness or weakness of gait. The treatment, began by purgative of calomel and jalap, consisted of citrate of potash, with colchicum, internally, with turpentine, and later, lin. iodi externally. The blankets were kept from contact with the affected joints by manipulated hat-boxes.

Mr. Brown (in the JOURNAL of October 14th) makes a reasonable comment upon the self-congratulation Dr. Harkin indulges in respecting the questionable "merit" of dispensing with medicine. Practice of medicine upon the lines of "one disease," "one treatment," is scarcely removed from quackery.

The pathology and etiology advanced by Dr. Harkin would, no doubt, be questioned, and could be refuted by many; but, as it would be presumptuous for me to ask any more space, I must leave it to some one more capable. Remaining, yours truly, B. H. DALE.

REMARKS ON THE FORM AND MECHANISM OF THE HEART.

Notes of a Lecture given in St. John's College, Cambridge.

By DONALD MACALISTER, M.A., M.B., M.R.C.P.,

Fellow and Medical Lecturer of the College, and Teacher of Medicine in the University.

WHEN Harvey (of Caius) first attempted to follow with his eye the movements of the heart, as he saw them taking place in newly opened animals, he tells us that their suddenness and complexity baffled him; *ita ut modo hinc systolen illinc diastolen, modo e contra, modo varios, modo confusos fieri motus me existimarem cernere (De Motu Cordis)*. This indeed is hardly to be wondered at. The entire cycle of the heart's movements may occupy one-half to two-thirds of a second. In this time all the phases of auricular and ventricular diastole and systole are passed through, the heart rotates and tilts, the great vessels in close relation with its cavities pulsate, coil, and uncoil. It is not wonderful if the details of so complex and so sudden a series of movements are scarcely to be made out by the eye alone. The paces of the horse have been watched more widely and more often than the motions of the heart. But simple eye-observation has always been as inadequate in one case as in the other. Veterinary authorities have differed as widely over the nature and sequence of the horse's paces, as physiologists over the visible motions of the heart. Two indirect methods of observation have lately been applied to determine the truth in the case of the horse. One is Marey's—the graphic method. In this, by special mechanism, the animal is made to leave on a recording surface permanent traces of his movements, or rather of the movements of some of his members. These traces are then deciphered and interpreted. From the tracing, the movements can be inferred and synthesised.

The other method, most recently and most completely carried out by Muybridge, might be called the static method. In it, a series of pictures of the animal in successive instantaneous positions are obtained. We get an idea of how he would look if he were suddenly fixed in any one of his positions. From this discontinuous series of phases, we can readily infer by what movements the one phase passed into the other.

These two methods are thus complementary. The graphic method gives us the positions of selected parts of the animal at each instant: the static method gives us the positions of each part at selected instants.

Analogous methods may be applied to analyse the movements of the heart. Marey's cardiograph (which we shall consider in our next lecture) gives us continuous tracings, from which the motions of selected points of the heart have been clearly and certainly inferred. Thus the motions of the apex, or rather the rhythm and character of its impulse, are completely determinable in any given case. But, applied to the heart as a whole, the cardiographic method is scarcely adequate. It can at best only give us a clue to the displacements of a limited number of its points. In a simple mechanism like that of a limb, which has only one or two degrees of freedom, such partial data would be enough to determine the motions of the whole. But the heart has many parts, it has no rigid attachments, its points are not simply connected, it has interior as well as exterior movements. To settle even a few of the questions that arise, we should need a multitude of cardiograms, and the greatest of skill to interpret them.

The static method seems more promising. If we could obtain fixed pictures of the instantaneous figure of the heart in various phases of its cycle, we should be able, if the phases were well chosen, to study and educe at leisure the movements by which the cyclical changes of form are effected. This method has been applied with exquisite skill, and, in view of the great difficulties in the way, with much success, by Ludwig and Hesse at Leipzig (*"Beiträge zur Mechanik der Herzbewegung"*, *Arch. für Anat. und Phys.*, 1880). The results have not yet found their way into your physiological text-books; but, as I have had the opportunity of making myself personally familiar with them, and as I think they will throw light on several of the questions of physical diagnosis which it is our business to study together, I do not hesitate to ask your attention to them to-day.

We have, then, to find a means of fixing the form of the heart in two or more typical configurations of its cycle. In a first attempt, at least, we should naturally choose for fixation the states of complete systole and complete diastole, under conditions agreeing with the normal. The form of the heart as you see it in the *post mortem* room, and as it is seen in this specimen, cannot be regarded as representing any one of the normal configurations. The muscle may be relaxed as here, but it is not distended as in natural diastole; or it may be rigid, and yet not emptied of its contents, as in systole. The internal resistances and supports afforded by the liquid blood are altogether diverse from those due to cavities that are empty, or contain only clots. The exact study of form in dead hearts is thus almost as hard as the exact study of motion in living ones. To be true to nature, we must find means to fix the form of natural diastole in a heart whose muscle still retains all its vital properties. We must also have the power of producing in this heart a contraction whose process shall imitate exactly the natural contraction of systole, and of fixing that.

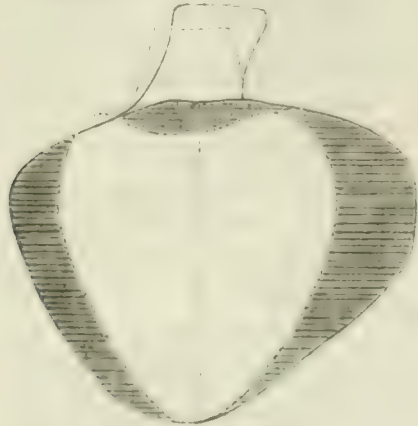
What are the factors which determine the dilatation-form of the heart in diastole? Its muscle is relaxed; there is, therefore, no contractile element. The chief factors must be of a passive kind; they are (1) the elasticity of the muscular walls; (2) the pressures to which these walls are subjected. Suppose, then, we have here suspended a heart still possessing all its vital properties unchanged: let us gradually fill it with blood until the pressure is equal to the mean blood-pressure during life. It will dilate, and assume a definite form. Consideration will show you that this form can only differ to a slight and negligible degree, if at all, from that of true diastole. When the heart is in its place in the thorax, its outer surface is exposed to slight and variable pressures depending on respiration, etc. These may affect somewhat its changes of position; they may guide its movement as a whole; but, in the case of a heart lying loose in the smooth pericardial sac, the factors which control and determine its typical diastolic form must, after all, be these main ones of intrinsic elasticity on the one hand, and internal blood-pressure on the other.

Here is a plaster-cast of a dog's heart, or rather of its ventricular part, in what I have called typical diastole. You will ask how the mechanical difficulties in the way of modelling a cast of the still-living heart have been overcome. The heart must be still living; the elastic properties of a muscle in which death or rigor has set in are altogether different from those of a live muscle. And the process we use must be such as not in any way to destroy the heart; for we want to obtain a cast of it in contraction. The difficulties, then, are not slight; but they have been overcome at Leipzig in the following way.

A dog is rapidly bled from the carotids; the chest is opened; the auricular vessels are ligatured; straight graduated glass tubes are tied into the pulmonary artery and the aorta; and the heart is then removed from the body, and suspended by the tubes, which are kept vertical. The blood of the animal has been meanwhile freed from fibrin, and it is now poured into the vertical tubes so as to dilate the ventricles, until the pressure is equal to the mean blood-pressure during life (150 millimètres). The auricles at once begin to pulsate rhythmically, and continue to do so for nearly an hour. The ventricles remain soft, pliable, and irritable all this time. The heart-muscle, in contact with nutrient blood and prevented from cooling or drying, is in fact alive. Certainly in the first few minutes of this hour no change in its vital properties can have occurred. Little pins are quickly inserted into the muscle at certain spots to serve as reference marks; and then a thin layer of very quickly setting plaster is lightly applied. A minute or two is enough to let this harden sufficiently, and then it is broken off by a skilled hand, who is able to set together the pieces again, and so to form a mould from which casts may be taken. The weight of the plaster does not alter the form of the ventricles, for the level of the blood in the vertical tubes remains unchanged during the manipulations. All this of course requires great skill and quickness; many unsuccessful experiments were made before these were attained; but I am describing the course of an experiment supposed in every way successful. It was in this way, then, that this cast of the diastolic heart was made. Here is another cast of the same heart in typical systole. To obtain this, the heart, still living and uninjured (for the auricles still pulsate), is emptied of blood, and then plunged quickly into a hot saturated solution of bichromate of potassium at 50° Cent. (122° Fahr.). One rapid and final contraction of the ventricular muscles takes place; this is permanent, for the muscle passes into *rigor caloris* (Foster, vol. i, p. 2; Hermann, vol. i, pp. 99, 147): and in this state it is fixed, and its textures hardened, without shrinkage or alteration by the bichromate. We can let it stay in the solution till the hardening is complete, and take a cast of its outward form at leisure.

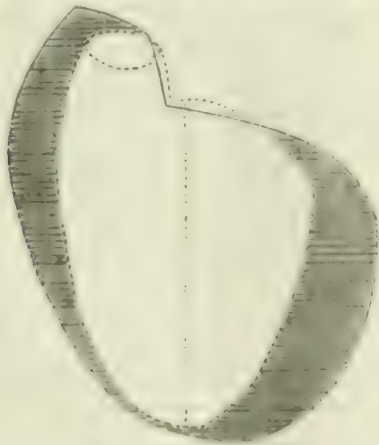
We have, then, before us the form of the heart in diastole, and the form of the same heart in systole; corresponding points being marked

by the little reference-pins. Let us first consider the external differences. You see that in diastole—(1) The shape is roughly hemispheroidal, the pointing of the apex being scarcely marked: in the plane of the auriculo-ventricular openings (the *ostia venosa*) the greatest dimension is from right to left; the antero-posterior is less; from this plane to the apex is the shortest of all. (2) The conus arteriosus arches over the plane of the ostia. (3) The posterior surface, bisected by the longitudinal interventricular furrow, is much flatter than the anterior. In systole, on the other hand—(1) The shape is conical, the apex distinct; the diameters drawn in the plane of the base are notably shortened, but in equal degree; the length of the cone from base to apex remains unaltered; it is now greater than either diameter of the base. (2) The conus has sunk down towards the plane of the base. (3) The difference in curvature between the anterior and posterior surfaces has disappeared. The three diagrams (Figs. 1, 2, 3) bring out these points; they represent vertical projections of a pair of casts superimposed for the sake of exact comparison. They are taken from Ludwig's *Arbeiten*, 1880.



1.—Posterior surface.

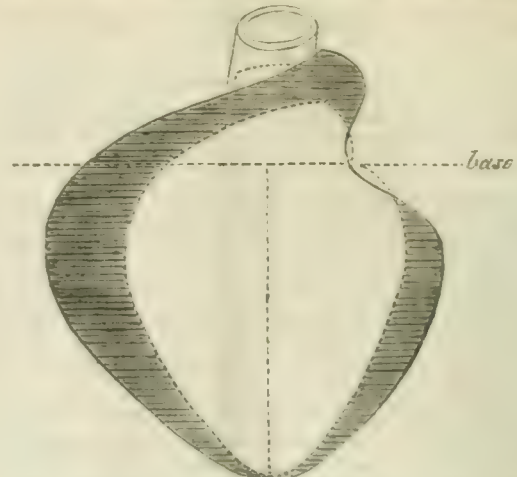
The fact that the length of the ventricle remains unchanged, is very striking. It is true, in strictness, of the left ventricle only, for the apex is part of this ventricle. We shall see later what slight modifications apply to the right ventricle. Again, the reference-pins inserted along a meridian of the left side in diastole, maintain their vertical distances



2.—Left lateral surface.

almost unaltered in systole. The length of the ventricle is, in fact, constant; not merely as a whole, but also in its parts. This settles, while it perhaps accounts for, a dispute that has lasted for centuries. Galen and Vesalius taught that the heart lengthened in systole; Harvey that it shortened. In the seventeenth century, the famous medical schools of Montpellier and Paris fought fiercely, but chiefly with dialectic weapons, on Galen's side and on Harvey's respectively. At length, Bassuel asked triumphantly, "How, if the ventricle lengthens, can the auricular valves, anchored to its walls by the tendinous cords, ever succeed in closing?" No answer was forthcoming from the south,

and so victory remained with Paris. Since then, the text-books tell you that the heart shortens when it contracts. It is not hard to see how Harvey, and other observers since, have got this impression from



3.—Anterior surface.

watching the still acting heart *in situ*. Kürschner's authority is often cited: let us see what he says (Wagner's *Handwörterbuch; Hersthätigkeit*). "By means of the ribs, the increase in the heart's length during diastole may readily be demonstrated. In rabbits, the apex is deeper by a whole interspace in diastole than in systole. The question may also be easily settled by inserting a pin opposite the point occupied by the apex in diastole: it will then be observed that at every contraction a free space is left between the apex and the pin." A moment's reflection will show you that this does not settle the question. To prove that the length alters, we must not merely prove that the apex moves: we must show that it approaches the base. I can move about freely the tip of this oblique India-rubber cone which rests on the table, but I do not change the length of the cone; the tip moves parallel to the base. So the apex of the heart may twist and tilt, while it maintains unchanged its distance from the base. There is another source of fallacy. The conus arteriosus lies anteriorly, and catches the eye first. We have seen (Fig. 3) that this sinks down towards the base with each contraction. The distance between the prominent parts of the conus and the apex does, therefore, diminish in systole: but this is not the length of the heart in any useful sense of the term. I have said enough, perhaps, to fix in your minds, as a fundamental proposition, that the length of the ventricle does not alter as the heart contracts. We shall see again and again what valuable corollaries follow from this.

The next point is the very considerable difference between the area of the base in diastole and that in systole. (Fig. 4.) This is so marked,

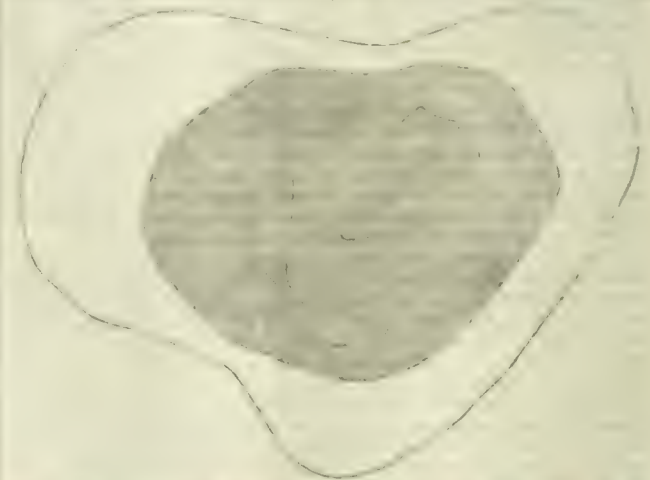
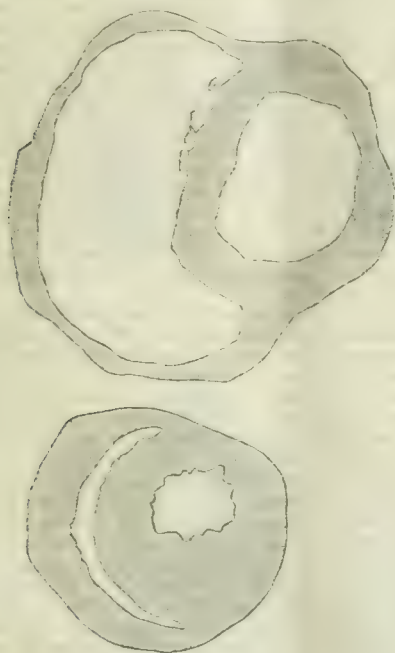


Fig. 4.—Projection of the base in systole and diastole of the same heart. The disposition of the ostia in systole is indicated.

and at first sight so astonishing, that careful measurements have been made so as to check and control the experiments in various ways. But from all of them it still comes out that, in systole, the area of the base (in the plane of the ostia) is little more than half what it is in diastole. Moreover, this marked diminution of area falls almost entirely on the ostia venosa; the arterial orifices are scarcely, if at all, affected. Let me fix this in your memory, as I tried to fix the former proposition regarding the length of the heart—by citing an apparent contradiction. In Foster (i, 4), you read: "According to Kürschner, the circumference of the base of the ventricle is absolutely increased during the systole; a tape placed round the base becomes tense at the commencement of systole, while the cavity is still full of blood." A few lines before, we are told that, during the systole, the right-to-left and antero-posterior diameters of the base both shorten. How can the circumference be increased, if the diameters both diminish? you may very naturally ask. If you turn to Kürschner, you will find that he almost reluctantly admits the tape experiment, first performed by some one else, I suppose, and proceeds to explain it away. He insists that the tightening is only momentary, and at the very beginning of systole—that is, before the contraction of the heart, as a whole, is completely set up. An instant afterwards the tape is loose. He gives an untenable explanation of this momentary effect, as I think; and you may easily find another more satisfying. Looking at these casts, you will see that it is impossible to put a string round the base of the ventricles, without including the *conus arteriosus*. Now, you know that, as systole begins, the *conus* descends: it may very well carry the encircling string with it on the anterior aspect, and the string which did go straight round in a circle is now pulled down into an oblique ellipse, as it were. It will thus be

Diastole.



Systole.

Fig. 5.—Sections through the upper third of the ventricles.

tightened for a moment, until the diminution of the girth from the advancing contraction more than balances the increase due to obliquity. There are other factors which come in; but all I wish to do here is to clear up what I know to have been a puzzle to some. The string experiment refers to the very beginning of systole, and does not strictly bear on the question of the area of the base (seeing the string includes the *conus* at least). The fact on which I am insisting is, that in complete systole the area of the base itself is diminished by nearly a half.

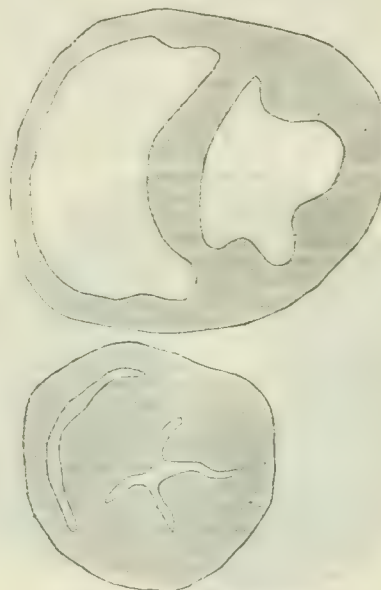
Putting now the two data together, we see that the inevitable inference is, that the systolic form is derived from the diastolic by diminution of the heart's transverse section everywhere, without change of its length.

Let us see how this is borne out by a study of the internal cavities of the ventricle. You will see at once that our method for getting a cast of the outward form will not do for the form of the cavities. We

might pour plaster into the dilated cavities, but we could not set free the mould without destroying the heart. Another method was chosen. Two young dogs were taken of the same litter, make, and size. They were similarly fed, and grew together. It might be presumed that their hearts would be as similar as they were themselves. Several such pairs of dogs were taken, and preliminary experiments showed that the presumption was justified. The pairs of hearts were alike in development, size, and weight. One heart of a pair was dilated as before with its own blood, and then lowered into cool bichromate solution; it was thus slowly hardened in its diastolic form. The other was similarly brought to contract by hot bichromate solution, and hardened in systole. When the hardening was complete, casts of the cavities could be made in plaster, or fusible metal; or corresponding transverse sections could be cut, to show the relations of the walls to the lumen.

Here (Fig. 5) are two pairs of such cross-sections, made in the middle and upper thirds of the length respectively. They will illustrate the points brought out by examination of the casts of the cavities. The cavity of the left ventricle in diastole is nearly cylindrical. It is rounded off below, and above divides into two necks set at an angle. These, of course, correspond with the auricular and aortic openings; they are separated by the great anterior flap of the mitral valve. The cast shows three shallow grooves, corresponding to the two great papillary muscles, springing from the outer wall of the ventricle, and to a fleshy prominence at the anterior angle between the wall and septum. The septum is singularly smooth, as it passes up to the root of the aorta. You will see in this hardened specimen, and in the diagrams, that the three longitudinal prominences do not extend higher than the middle third of the cavity. So the lumen, above their tips and just below the valves, is free from their encroachment. The cross section here is concave all round. In systole, the cavity has wonderfully altered. The cast shows the suprapapillary space as a rounded

Diastole.



Systole

Fig. 5.—Sections through the middle third of the ventricles.

solid mass. From this springs a short vertical axis, and round it twist four sharp flanges or wings, like the threads of a right-handed screw, ending in a ragged point. The deep hollows between the flanges correspond to the three longitudinal prominences and the septum. The septum has bulged into the cavities to make up for its anterior-posterior shrinkage. The cross-section of the lumen below appears then as a four-rayed star; near the base, it becomes smooth and rounded.

Of the right ventricle I will not say much at present. The casts and diagrams show that in diastole its cavity has the shape of the bowl of a short thick spoon, the long axis being oblique to that of the left ventricle. The right ventricle, in fact, twists round the left somewhat, so that the sections in the diagrams are rather oblique for the right ventricle, though they are transverse for the left. In systole, the lumen becomes narrowed to a fine slit; it forms a larger arc of a smaller

or the contraction become less energetic. Instead of diminishing the area of the base by a half, it languidly contracts it—say by a quarter. It will not be wonderful, then, if, from this cause alone, the valves find themselves inadequate. They are asked to close bigger orifices than usual; but not because the orifices have dilated. Those pliable fibrous rings, to which the valves are attached, are pretty tough structures; no ordinary force will stretch them perceptibly, unless their structure become disorganised. The valves are insufficient, not because the base is dilated in this sense, but because it is insufficiently contracted. Restore the power of the enfeebled muscles, and the incompetence disappears, and with it the regurgitation.

When an animal is rapidly bled till it is feeble, a murmur indicating regurgitation from the ventricle is heard with the heart-sounds. You may inject a proper saline solution to make up the normal quantity of circulating fluid; but still the regurgitation occurs. As the animal makes blood again, so that its muscles are again properly nourished, the murmur disappears. In later lectures, and at the bedside, we shall often have cause to remember this factor in the causation of transient regurgitant murmurs. It is because it is a factor not commonly recognised, but yet, as I believe, an essential one, that I have led you gradually, and perhaps lengthily, to see its exact meaning. The hypothesis of dilatation is, we shall see, somewhat strained to account for what we can easily and naturally explain, without assuming any such grave structural change. The picture of the base of the heart in systole, present to many minds, is too much like that given in Quain's *Anatomy* (vol. ii, p. 250), and in other text-books (Fig. 7). The true

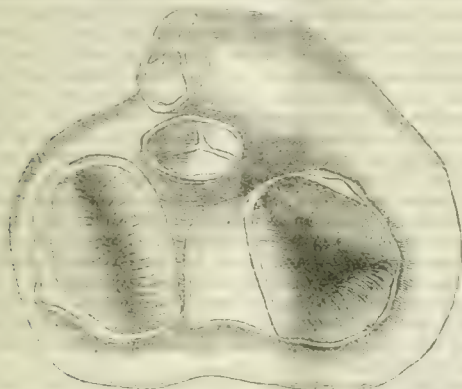


Fig. 7.—Base of the ventricles according to Quain: two-thirds natural size. This picture is this of Professor Ludwig's (Fig. 8). A glance at these will show the difference better than a long description.



Base of the ventricles in systole according to Ludwig: two-thirds natural size.

But, now you will, perhaps, say that I have been proving too much. If the ostia venosa are so gripped and contracted in systole, how do the ostia arteriosa remain patent and uncompressed? Nature has provided for this, and the device she uses is as simple as it is perfect. Consider the left ventricle. We saw that the papillary muscles do not

extend higher than the middle third of the cavity. Even in extreme systole, then, when the projecting muscular masses are all in contact below, there still remains a free space under the valves—the suprapapillary space. You will remember, also, what I show you in this calf's heart (hardened in diastole), that, between the orifice of the aorta and the orifice of the auricle, is placed, as a partition, the great anterior flap of the mitral valve. This flap is, however, not merely a partition, it is continued upwards beyond the fibrous valve-ring, to form the posterior membranous portion of the root of the aorta. The suprapapillary space is thus shut off towards the auricle, and left open towards the aorta by this pendent continuation of the aortic wall, the flap of the mitral. The issuing blood-stream strikes against the ventricular side of the partition, and, by one and the same action, shuts off the auricular opening and swells out the root of the aorta, making it continuous with the suprapapillary space, and leaving the outgoing path unobstructed.

There is a further arrangement for securing that this greater flap shall always be in the right position. The blood must always so strike it that it is thrust the right way, viz., towards the auricle. The two large papillary muscles to which its borders are attached are seated on the outer wall of the ventricle—that is, on the side opposite to the aorta (Fig. 8). During diastole, then, the retreating wall, with its muscles, carry the edges of the flap ever away from the aortic opening. In full diastole, the flap and its cords are stretched aslant across the cavity. Thus, when contraction begins, the flap already lies at such a slope athwart the ostium venosum, that the extruded blood must needs strike against its under or ventricular side.

I say the valve is on the stretch in diastole. This is not what the books usually say. But it is what is always seen when a heart is hardened in diastole; it is plain in this specimen I show you. The flap does not hang loosely down; it is stretched taut from basal ring to muscle tip. If the valve is to be bent upwards into its place, it is plain that, in contraction, these two points of attachment must approach each other. If we think of the papillaries as shortening and shrinking into the muscle-wall during systole, it is hard to see how the valve can act. M. Bassuel might propound his victorious question to us in another form. Now, careful measurements have been made to settle this point; and they show that, while the tips of the papillary muscles do not approach the plane of the ostia at all, they do approach, and that in a very marked degree, to the aortic orifice. What is true of the integral parts of the heart-wall, is also true of the semi-detached papillaries. Their various cross sections move during contraction in planes parallel to the base. The approach of the muscle-tip to the base of attachment of the valve, due to the approach of the muscle-wall alone, is so considerable that the valve might be forced too far through into the ventricle. This is compensated for by a shortening of the papillary muscle itself, which is just enough to bring back its various parts to the levels in which they lay in diastole.

The suprapapillary space may serve yet another purpose. Even at the end of systole, it still remains full of blood. In this residual blood, bathing the under sides of the sigmoid valves, their flaps can have free play. They can unfold themselves, and become sacculated without hindrance, at the instant when systole ceases, and the blood in the aorta seeks to rush back into the ventricle.

To those who read German, I cannot give better advice than that they should study carefully, with the help of these diagrams and models, the original from which this lecture is mainly taken—namely, the paper of Ludwig and Hesse, already cited above. The account they give of the heart's action rests on facts and measurements. It is not simply one more "view", which may be credited or discredited at pleasure.

A TRICYCLE RIDE.—At the Hammersmith Police-court, a Fellow of the Royal College of Surgeons appeared in answer to a summons for furiously riding a tricycle. The constable stated that he saw the defendant riding furiously. The defendant denied that he was riding fast, and said he was fatigued, as he had been a run of sixty miles. The magistrate, however, was of opinion that he was underrating his powers, and fined him 40s. and 2s. costs. The defendant complained of having been taken to the station, followed by a number of roughs. To be riding a tricycle so rapidly after a journey of sixty miles argues well both for the powers of endurance of the rider and the excellence of the machine ridden. On the same day, several other tricycle-riders were fined for furious riding. It is possible that, in the pleasurable muscular excitement and rapid movement, accurate sense of speed is lost. When, however, a mounted constable has to gallop his horse to overtake a tricycle, it is obvious that the tricycle in question is going at a rate exceeding six miles an hour. This is not safe in the streets of a large town.

SOME REMARKS ON EHRLICH AND GIBBES'S METHODS FOR THE DETECTION OF BACILLUS TUBERCULOSIS.

By WILLIAM VIGNAL,
Collège de France, Paris.

DR. G. A. HERON has minutely described (BRITISH MEDICAL JOURNAL, October 14th, 1882, page 735) Ehrlich's method for the detection of bacillus tuberculosis in sputum. The details furnished by him are very precise, but the following may be added to them with advantage.

1. It is desirable to keep the staining fluid with the cover glasses during a quarter of an hour, at a temperature of 40° centigrade (104 Fahr.). The colouring matter penetrates more thoroughly, and the bacilli are more deeply and equally coloured.

2. It is not advisable to mount the preparations in water, but in a solution of gum, mixed with glycerine, prepared in the following manner. Equal parts of neutral glycerine and filtered solution of gum are mixed together; the gum is of the same thickness as the glycerine, and should be, before mixing, heated in a water-bath with a small quantity of arsenious acid, in order to prevent the development of fungi.

3. Aniline dyes, as Dr. Heron observes, are apt to fade very quickly, but those obtained at Merck's Fabrik, Darmstadt, are free from this disadvantage. All chemicals furnished by this manufacturer invariably give the same results.

4. The tissues from which sections are made should be hardened in alcohol only. Chromic and picric acids, also salts of chromic acid, prevent the staining of the bacillus. This method of staining is based on the theory that the tubercle-bacillus is enclosed in a sheath, which, by alkalies, is softened and penetrated (aniline water, which serves as the vehicle for the colouring matter, is a liquid alkali), but is hardened by contact with acids. Nitric acid combines with the colouring matter of aniline, to form colourless and soluble salts; this acid is thus effectual in removing the colour from the other elements of the tissue not required to be stained.

It happens frequently that physicians desire to ascertain whether tubercles contain the tubercle-bacillus, but they have not the time at their command necessary for making sections. In such cases the following method may be adopted: divide the tubercle with a bistoury, then scrape one of the surfaces, spread the scrapings on the cover-glass, and treat them in the same way as the sputum. In preparation thus made, there are very few isolated bacilli. They are present in clusters, and examined by a low microscopic power represent red or blue spots; but when a high power is used, each separate bacillus is distinctly visible.

Dr. Gibbs's modification of Ehrlich's method for the detection of tubercle-bacillus in sputum, described in the two last numbers of the BRITISH MEDICAL JOURNAL (pages 735 and 786) has the advantage of requiring only one staining fluid, which can be prepared in advance. A preparation of sputum can thus be quickly and easily made, when the detection of tubercle-bacillus is sought in order to determine diagnosis.

Dr. Gibbs asserts that the coloration according to his modification has also the advantage of being permanent. We have already called attention to the fact that the chemicals used in preparing microscopic specimens, are not always good when this is the case, the colour fades with equal rapidity whether Gibbs's modification be adopted or not.

When the specimens are mounted in Canada balsam, they are cloudy: this is especially evident when a high power is used. This is due to the fact that the light passing through media of different refractive power, is remedied by substituting for Canada balsam the mixture of gum and glycerine which I have already mentioned.

ANTISEPTIC MIDWIFERY.

By P. M. BRAIDWOOD, M.D. Edin.; and FRANCIS VACIER, F.R.C.S. Edin.; Birkenhead.

DR. NEIL MACLEOD's paper in the JOURNAL of October 7th is doubtless one of the most important contributions to the literature of the subject of antiseptic midwifery, and it is a pleasure to find that the results of his researches are so fully confirmed by those of other observers.

The details of Dr. Macleod's experiments are, that normal human lochia of the fourth day is septic to rabbits, and that it invariably induces in them septicaemia, as proved by *post mortem* examination; and that the same result is obtained from our tables recording thirteen experiments made with lochia from five women. As, in four of

these thirteen experiments, the lochial discharge was kept from three to seven days, in two cases it was mixed with carbolic acid, and in one with a saturated solution of cuprum, the experiments with normal fourth day lochia were but six. The washings from woman No. 1 killed two rabbits, when injected into the peritoneal cavity: the washings from woman No. 2, injected into a rabbit, failed to kill; and the washings from woman No. 3, injected into the peritoneal cavity in three rabbits, in one instance killed, and in two instances failed to kill. Thus three out of six rabbits died, and in each case on the eighth or ninth day; and these three, on *post mortem* examination, were all found to have metastatic abscesses. We think this warranted the inference that normal lochial discharge is septic to rabbits; and that, when thus septic, the disease produced is invariably septicaemia. We are not surprised that Dr. Macleod, on injecting the fourth day washings from one woman into two rabbits, and from another woman into four rabbits, failed to kill. Our results did not show that injecting lochia would kill in every case; on the contrary, we failed to kill in three out of six cases. If Dr. Macleod had followed our method exactly, his failing to kill might be accounted for in many ways; e.g., the percentage of lochia in the washings he used may have been much less than in those we used. However, the method was not the same. After the completion of parturition, in the case of both Dr. Macleod's patients, the vagina was syringed daily, morning and evening, with a 2½ per cent. solution of carbolic acid. Thus the fluid was not collected till the vagina had been syringed out six or seven times at regular intervals with a fairly strong astringent lotion. How far the lochial discharge would be modified or repressed by this practice, we have no means of judging; but any discharge collected after such treatment would certainly not be normal lochia. Again, in both of Dr. Macleod's cases, the labour was complicated with perineal rupture and the use of forceps. In the case of Mrs. S., Dr. Macleod states, there was the worst laceration of the perineum he has ever seen; "the vaginal wall being split from within outwards about two inches, the rectal wall one inch." Again, in both Dr. Macleod's cases, silk stitches were inserted in the wounds. In the case of Mrs. S., "carbolic silk stitches were introduced immediately after the third stage terminated, two in the rectal, and two in the vaginal mucous membrane; also three deep perineal and five superficial skin stitches". Can the discharge from passages thus wounded and stitched be designated normal lochia? Then the fluid from one woman is described as odourless; that from the other, as smelling "slightly of faeces"; and one of the women supplying the fluid "had passed wind *per vaginam*". The fluid we made use of had the characteristic smell of lochia, and was normal fourth day lochia simply diluted with water.

It is open for any one interested in this matter to repeat our experiments. But for the restrictions of the Vivisection Act, we should have had pleasure in repeating them ourselves. If, however, the experiments are to be on all fours with ours, the fluid used must be taken from a vagina without wounds, and one that has not been washed out with astringent lotions; and if, out of six rabbits, or even a dozen, septicaemia be induced in one, that will be confirmatory evidence. A few animals surviving after being injected with this fluid does not call for any special explanation. With us, as many survived as died. Perhaps they take the disease in a modified form, and recover; perhaps they are proof against it; perhaps, in their case, the fluid never reached the peritoneum. A single animal dying a few days after being thus injected, and then showing most undoubted signs of having septicaemia, is, on the contrary, a noteworthy fact; and, as septicaemia is not a disease which rabbits take spontaneously, it is only reasonable to infer that the fluid injected must have been septic to rabbits.

OVARIAN CYST SUPPURATION AFTER PARTURITION: HYPERPYREXIA: OVARIOTOMY: RECOVERY.

By WILLIAM HENRY DAY, M.D.

Physician to the Samaritan Hospital for Women and Children.

MRS. B., aged 25, was sent to me by Dr. Godfrey of Compton Terrace, Highbury, December 12th, 1881, with a letter saying that "she had suddenly jumped up tumour, pushing the uterus before it." She had been married for nearly five months, and there were some sickness symptoms, but no pain. Dr. Godfrey believed that pregnancy was possible in this case, but not probable. On examination, I found, in favour of the existence of pregnancy, that the labia, and vaginal mucous membrane were of a dusky hue, that the areolae were of a deeper colour than might be expected in a fair woman, and that the glandular follicles were prominent. The abdomen was not perceptibly enlarged, nor could the uterus be felt above the pubes. I fancied I detected the uterine souffle in the left iliac region, but no foetal heart-

sound. The uterine cervix was bent on itself behind the pubes, and the os was firm and closed, as in a primipara. On the left of the uterus, in Douglas's space, was a very soft swelling; it seemed to give the sensation of a thin cyst, containing a thin fluid, and was of the size of an orange. This I was inclined to regard as ovarian. I came to the conclusion that the patient was probably in the fourth month of pregnancy, and that the vaginal swelling would most likely prove to be ovarian.

On January 8th, 1882, Dr. Godfrey wrote that he now heard the uterine *soffle*, and that the fetal movements were distinct. The globular body in the vagina was unaltered, and the os was still small, and tilted up behind the pubes. Later on, Dr. Godfrey again informed me by letter that she was delivered on May 9th of a healthy child, under chloroform, with forceps, and that a large fluctuating tumour could be felt on the left side of the abdomen.

On June 10th, I was requested to meet Dr. Godfrey in consultation. The patient was suckling her child at the time of my visit, but in a few days she was obliged to discontinue it. The abdomen was greatly enlarged and pendulous. The swelling previously mentioned in the vagina had disappeared, and nothing abnormal here could be detected. Over the abdomen, from the umbilicus to the pubes, the percussion-note was dull; above this the note was tympanitic; turning on the right side of the abdomen elicited resonance on the left, and *vice versa*. I considered that there was a large flaccid non-adherent ovarian cyst, containing a thin fluid. The patient was rapidly losing flesh and strength, and looked very ill. Pain and pyrexia were considerable; but, as she had been only confined a month, and there were no symptoms demanding immediate interference, I advised that the operation should be postponed, and the patient carefully watched.

On July 5th, Dr. Godfrey informed me by letter that, since my visit, the pain and pyrexia had increased, and that he regarded her state as critical. He inquired whether the cyst could be tapped or removed, with a chance of success, whilst the temperature was continually at 102°. On visiting the patient at 6 P.M., I found her in great pain and unable to move, as peritonitis had been present for some days. I advised that we should keep the patient as quiet as possible, and under the influence of enough opium to subdue pain. I pointed out the necessity of waiting a little to see whether the temperature would fall before having recourse to ovariotomy; tapping, in my opinion, being out of the question. If, however, the patient should become worse, I recommended that the operation should not be delayed, even though the temperature should continue high. For the next few days, the temperature fluctuated between 99° and 102°, and the patient was obviously going from bad to worse.

On July 11th, Mr. Spencer Wells, with the assistance of Dr. Emmett of New York, Dr. Godfrey, Mr. Meredith, and myself, removed a large multilocular ovarian cyst. The cyst was very thin. Extensive adhesions to the abdominal wall and to the omentum were separated, after the cyst had been emptied of a large quantity of turbid flaky fluid, not at all fetid. The pedicle was secured by ligature, which was returned. The left ovary and uterus were healthy. On the third day after operation, Dr. Godfrey reported that the patient was going on well. Temperature 99; pulse 94; pain diminishing.

Mr. Spencer Wells removed all the stitches on the ninth day. The wound had healed perfectly by first intention, and the patient went on recovering without interruption. The case is a very striking example of the subsidence of fever, as soon as the cause of the fever had been removed.

A CASE OF RHEUMATIC NODE.

By GEORGE MAHOMED, M.R.C.S., L.S.A.

House-Surgeon to the Bournemouth Dispensary and Cottage Hospital.

I AM led to record the following case, which I believe to be one of rheumatic node, because the existence of such a condition is still doubted by many.

In text-books of surgery, rheumatism is enumerated among the possible causes of nodes, and we are told, in the way of treatment, etc., that "If rheumatism or syphilis be suspected, the appropriate constitutional treatment must be adopted," but this is all the information on the subject that they usually afford.

Moreover, in an article in the *System of Surgery*, Mr. Holmes says: "It is extremely difficult to be certain of the existence of any specific affection of bone due to the rheumatic diathesis," and he records a statement to the same effect by Rokitsansky.

Doubtless, the paucity of our knowledge on this subject is due to the comparative unimportance of the local disturbances which would generally co-exist with more serious conditions. Its chronicity offers an additional explanation, as our attention is not drawn to it by the complaints of the patient.

This must be my excuse for not having noticed it earlier during a ten months' attendance on the present case, which is that of E. G., aged 54, unmarried.

When I was called to the case, she had been suffering from her first attack of subacute rheumatism for about four months. She was confined to her bed, the knees and wrists were crippled, and she was sweating continuously. She improved slowly under treatment, and after about three months was admitted into the hospital, that her knees, which had become contracted in the earlier part of her illness, might be straightened. This was effected by breaking down adhesions (outside the joint) under chloroform, and she went out with good movable joints, though the muscles had wasted from disuse, so that she was unable to stand upright without assistance.

Until her illness, she had led a very active life as sick nurse, though she had latterly begun to grow stout; but since she has been lying up she has developed fat very quickly, and, lately, my efforts have been mainly directed to counteract this, as I think her heart is becoming burdened. A short time since, while examining the fit of some knee-caps she had made for herself, I casually passed my hand down the tibia, and noticed that she shrank, and that the surface was uneven.

On closer examination, both tibiae appeared enlarged, and tender at the upper part; and, on moving the thumb and finger down the edges, she likened it to "scraping the bone with a knife." On the inner surface of the right tibia, about two inches above the ankle-joint, a vaguely defined, doughy swelling, tender to touch, especially at the lower part, and measuring about one inch by three quarters, was discovered. When I examined this she winced, and exclaimed, "Ah! that's where it always hurt." In answer to my questions, she said it was always more painful by night than by day; that she had no remembrance of any injury to the part, and that there certainly had been no pain there until after the first attack of rheumatism. I had no suspicion of syphilis, for, as I have said, she was unmarried, and, during ten months, I had observed no other symptom which would lead one to expect it. Notwithstanding, my next step was to put her on bichloride of mercury for ten days; but this did not diminish the pain, nor alter the character of the swelling in any way.

I am therefore led to look upon it as a true case of rheumatic node, and it appears to exhibit the characteristics which Mr. Holmes thinks would probably distinguish that variety; 1, the large extent of bone implicated; and, 2, the irregular outline (contrasting with the ovoid nodes of syphilis). Respecting the third feature, namely, the longer course they run before affecting the bone itself, this instance offers only negative evidence.

In the way of treatment—having tried with success the suggestion of Dr. Orton, in the *BRITISH MEDICAL JOURNAL* for January 7th, in reference to the use of salicylate of soda as an external application in rheumatism—I determined to employ it here, and ordered a lotion containing that salt in saturated solution, together with glycerine and a little oil of cajuput, the latter to ensure its being used, and to stimulate the cutaneous circulation so as to favour absorption. At the end of ten days I examined the swelling, and found it more fluid, and the patient thought it was less painful at night. She had experienced considerable burning pain in it after the last examination.

I have continued to watch the case for two or three weeks, but there has been no further change, and she now thinks it is as painful as ever at nights.

Whether its becoming fluid was due to the salt, or to the friction, or whether it only became apparent from the softening of the skin, I do not know, but I am not very sanguine of any considerable improvement.

I noticed another curious symptom in this case which, perhaps, it is worth while to mention. While examining the bones of the forearm, and thumbing down their edges, I experienced the sensation of deep crepitation, exactly similar to that presented by a fracture. I produced this several times, but was unable to explain it, as there was no history of injury at any time, and I thought I must have been deceived by the crepitus of extravasation into the synovial sheaths. But my patient gave me the clue, in exclaiming, "You are squeezing the bones together." I therefore concluded that this was due to the degeneration of the interosseous membrane from the effects of rheumatic inflammation, thus allowing the bones to fall together. I confirmed this observation at a subsequent visit, and found that, on holding the arm between the thumb and fingers, the bones could be considerably approximated, and the grating produced; the patient, during the proceeding, experiencing sensations the reverse of pleasant. She said that when she tried to turn her sewing machine, the bones rubbed over one another in a similar way. I may mention that the upper part of the shafts of these bones were over sensitive, as in the tibiae, and there was a painful spot near the styloid process of the right ulna.

M. R. and G. R., had led to the hair in the other members of the family being examined, the family consisting of the father and seven children.) A fortnight before I saw this girl, her father discovered, near the nape of the neck, a circular bald patch, which, when I saw her, was about the size of a threepenny-piece, and there was a smaller doubtful place near it. The patch was an unmistakable example of area. The usual sulphur ointment was prescribed. I saw the patient from time to time for a few months, during which period the area did not enlarge, and no new hairs were observed on it. I thought it useless to prolong the treatment.

These three cases occurring in one family, present points of interest which lie beyond the scope of this paper, and which formed the subject of a communication made to the Pathological Society during the last session. The patients were shown at the meeting, and the diagnosis was confirmed. (Hairs were also examined microscopically.) The father had suffered from alopecia areata for twenty years. Particulars of his case were given in the communication made to the Pathological Society.

CASE XIV.—(Although this case is only of doubtful value as regards the effect of sulphur ointment, the treatment under which the destruction of the hair ceased deserves consideration.) G. C., a healthy man aged 50, rather full-blooded in appearance, and subject to headaches, consulted me on February 2nd, 1882. He stated that in July, 1881, he noticed two patches of area, one on each temple, and each being about the size of a florin. In November, he noticed a narrow bald "streak" on the occiput, which rapidly increased in size. An ointment containing iodide of mercury was prescribed by a medical man whom he consulted, and after a time it was increased in strength. He was under the impression at the time I saw him that this application had arrested the disease. It had produced an unpleasant degree of erythema and swelling of the scalp. I found large patches of area on the back of the head and parietal regions. As it was uncertain whether the disease had ceased to spread, I advised that the head should be shaved, and sulphur ointment kept applied.

The subsequent history may be told in a few words. There was no more destruction of hair, and he wrote me in the end of July that the patches were still only covered by a fine colourless down. This patient is under the impression that he got the disease from the brushes used in shampooing his head by a barber, whilst he was travelling in France.

CASE XV has no reference to treatment, but is worth recording on other grounds. E. J., a healthy unmarried woman, aged 27, a teacher, was not under my care, but I had an opportunity of examining her through the kindness of Dr. W. Stewart, who knew that I would be interested in her case. This patient had been subject to alopecia more or less since she was twelve years old. When she was at that age an area was observed on the top of the head; and soon another formed above one ear. The last patch has been permanently bald. Every year, new areas have formed, on which, after a time, the hair grows again. The patches always appear, she stated, in winter and early spring. I carefully inquired on this point. She was certain that a patch had never formed, for example, in August. Three years ago a large patch came on the forehead, on which the hair is now in its normal condition. At the time I saw her (February 21st, 1882) there was an area about the size of half-a-crown on the right temple. It came four months previously, and the hair was again beginning to grow on it. There were two areas on the left temple which had begun a month previously. On them the hair was not growing. Near the nape there was a bald patch, but she did not know how long it had existed. There was a small place just beginning on the top of the head.

CASE XVI. (For the opportunity of observing this and the following case I am indebted to the kindness of Dr. Liveing, who sent them to me from his clinique at the Middlesex Hospital. The patients were sent to supply me with material for investigating the condition of the hairs in untreated cases, with special reference to the organism which I have termed *bacterium decalvans*: but Dr. Liveing was so good as to allow me to treat them with sulphur ointment, and to observe and publish the result.) G. C., a girl, aged 12, was seen June 16th 1882. She had an area slightly larger than a shilling on the top of the head. Her mother stated that it had existed for three months, having been of the size of a pea when first noticed. It had become gradually larger.

Sulphur ointment was ordered. The patient was brought back to me on July 25th to report recovery. I found hairs growing over the whole patch. There had been no increase in the size of the patch after the ointment had been used.

CASE XVII.—Mrs. B., a healthy married woman, aged 21, with one child 15 months old, was seen June 23rd 1882. The hair began to come out two months previously. There was now a patch on the top of the head about three inches in diameter, and very near it another area about the size of a shilling. At one part only a few hairs separated the

two areas. The patient stated that both patches were rapidly enlarging. The loose hairs on the margins of both areas were extracted by myself and an assistant, the surrounding hair was cut close for from half to three-quarters of an inch, and sulphur ointment was ordered to be assiduously applied.

The patient was seen twice a week for the first fortnight, and, as the case was well suited to test the efficacy of the treatment, the patches were carefully scrutinised. From the day on which she was first seen until the day on which I write (August 4th, 1882), there has been no extension of the areas. There is now a full crop of very fine downy hairs on the larger patch. I have not noted the date on which they were first observed; but I am certain that it is not less than a fortnight ago, and therefore within a month from the time on which the treatment was begun. To-day, for the first time, I have detected downy hairs on the smaller patch.

What is the value of the evidence contained in the histories of the seventeen cases recorded in the two papers presented to the Section? That an area should cease to spread, and that new hairs should cover the bald patch in any given case, does not argue for the efficacy of the treatment that happens to be employed. Such a result may follow any treatment. But that the result should uniformly follow, in an unbroken series of fifteen cases, is a fact that cannot fail to have much weight with practical men who are familiar with the disease. Two of the seventeen cases were not treated; one of them (Case VIII) not being considered any longer amenable to treatment, and the other (Case XV) not being under my care. In the fifteen treated cases, the application of sulphur ointment was followed by an arrest of the disease.

I have already remarked that the selection of sulphur ointment, as a remedy, was made because I had observed that a minute organism was present in the affected hairs. The effect of the treatment confirms the supposition that the destruction of the hair is caused by the bacterium. With an effective antiseptic treatment, the destruction ceases.

The treatment, to be effective, must, however, be thoroughly applied. The hair must be shaved or cut close for some distance round the area. The margin which is thus laid bare, and the bald surface, should be kept covered with sulphur ointment. I have, as a rule, deprecated washing the patches; and have taken care to impress the patients, and those who had charge of them, with the necessity of using the ointment in sufficient quantity, and of keeping the hairs of the margin very short.

Sulphur ointment is not an elegant preparation; and I have adhered to its use so far, in order that its efficacy might be tested, and not because I think it would be difficult to find a more agreeable antiseptic preparation which would be equally effectual. The theory of treatment simply demands that the skin be kept covered by an antiseptic; and an ointment is, there is little doubt, the best form in which the antiseptic can in this instance be applied.

A well-made boracic ointment, or cream, would probably act efficiently, and deserves a trial. Whatever antiseptic may be selected, and in whatever form it may be applied, it is indispensable that the practitioner should himself make sure that the remedy is properly used. It is to the pains I have taken to ensure that the sulphur ointment was kept freely and constantly applied, that I attribute the success of the treatment in the cases which I have described.

It is known that alopecia areata occasionally relapses. A well-marked example of relapse is found in one of my patients, who formed the subject of Case I in the first paper, and reappears as Case X in the second one.

E. J., Case xv, affords a remarkable example of the chronic tendency to relapse and deserves especial attention. The occurrence of relapse in alopecia areata does not, in my opinion, in any way invalidate my theory of the disease.

Although patches of alopecia areata are usually perfectly bald, yet in some cases parts of the area are found covered with short stumps. I should not have thought it necessary to call attention to this fact, which has been recognised, were it not that it would seem occasionally to lead to difficulty in diagnosis. A continental dermatologist of reputation and experience recently sent me hairs from a case of this kind, which had given rise to doubts as to whether the patient, an adult woman, was not suffering from ringworm. I was able to confirm his opinion that the hairs did not contain trichophyton. Otherwise they presented the ordinary appearances of hairs from the margin of an area. The naked eye appearances of the stumps in alopecia are sufficient for the diagnosis. They are shorter and more uniform than the stumps in tinea tonsurans. They are so short that it is with difficulty they can be seized with fine forceps. Any doubt on the point can be easily determined by the microscope. The stumps are caused by the disintegrated hair breaking at the level of the skin.

Alopecia areata does not always come in areas. There are cases in which the essential feature is a profuse falling out of the hair all over the head, rapidly leading to complete baldness. In the case of J. P. (Case 1x), the destruction of hair occurred in this way. A more striking example of this form in which total baldness, I understand, resulted, was recently observed in the case of an adult man who was under the care of Sir William Gull and Mr. Hutchinson, to whose kindness I am indebted for the opportunity of seeing the patient, and examining the affected hairs. The hairs of the scalp were in this man's case shed with great rapidity, but no area was at any time formed.

ONE HUNDRED CONSECUTIVE CASES OF OVARIOTOMY, PERFORMED WITHOUT ANY OF THE LISTERIAN DETAILS.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By LAWSON TAIT, F.R.C.S. Eng.,

Surgeon to the Birmingham and Midland Hospital for Women.

Of this series of a hundred cases, only three died; and of these, one case was fatal by accidental suffocation—so that it hardly ought to be reckoned in the mortality of the operation.

Of the patients, six were pregnant at the time of the operation; and, in one of these, there was the additional complication of acute peritonitis. All of these patients recovered, and have had their children since, with one exception; she miscarried on the second day after the operation, and then made an easy recovery.

Four of the patients suffered at the time of the operation from acute peritonitis, and all recovered. One of these, as I have said, was also pregnant. She carried her child to the full term, and is now in perfect health. In two cases, the disease was solid fibroma of the left ovary. Both specimens are in the museum of the College of Surgeons. In ninety-eight cases, the disease was cystoma. Of these, the tumours in eleven cases were parovarian, and the ovaries and tubes of the corresponding sides were left intact, so that the operation was not ovariectomy at all. But Mr. Spencer Wells has included these cases in his list; and, for purposes of contrast with him, everybody else must do the same. It is a grievous mistake, however, and will have to be rectified.

I have already estimated that parovarian cysts constitute about 10 per cent. of such operations, and the present series shows that I am pretty nearly right. If so, then Mr. Wells has not yet completed his "thousand cases of ovariectomy;" for over a hundred of them were probably parovarian cysts, in which healthy ovaries were unnecessarily removed.

In thirty-three of the patients, the left ovary was the seat of the disease; and in twenty-eight, the right gland was affected. Of these sixty-one cases of removal of one ovary, there were three deaths; whilst in twenty-seven cases, in which both ovaries were removed, there was nothing but uniform recovery. This demonstrates clearly that Mr. Spencer Wells's conclusion, that removal of both ovaries is more fatal than removal of one, is quite mistaken; and that the fatality can only be explained by the use of the clamp, which might reasonably be expected to have a heavier mortality when used for two pedicles than when used for one.

In more than half of the cases (fifty-three), there were serious adhesions; but it has not been found that adhesions of any kind add in any way to the mortality. In the three fatal cases, there were no adhesions at all in two, and only slight parietal union in the third.

In seventeen of the cases, the tumours were almost sessile; and in one, so completely was this the case, that I do not know yet whether the tumour was ovarian or not, but, from its texture, I concluded that it must be.

The increased success in this series is to be attributed chiefly to: 1. The total abandonment of the clamp (Mr. Spencer Wells's) treatment of the pedicle; 2. The adoption of Keith's method of cleansing the peritoneum; 3. The adoption of Kœberlé's and Keith's method of cleansing the peritoneum; 4. Increased personal experience; 5. Diminished proportion of cases which had been frequently tapped; 6. The complete abandonment of the use of carbolic acid, or any other (so-called) antiseptic system, in the performance of the operation, and in the subsequent treatment; and 7. The adoption of the best hygienic and hygienic, on the best known principles, for private as well as for public patients.

Dr. ATKINS (Toronto) said that he could quite corroborate what Mr. Lawson Tait said about the entire absence of carbolic acid, or any such substance, in the water used for his ligatures, sponges, etc. Mr. Tait had asked him to taste it, and it was only plain tap-water. Mr. Tait had only omitted all the Listerian details.

Dr. WARD COUSINS (Southsea) said that tapping was sometimes followed by rotation of the pedicle. He related a case in his own experience in which the tumour, an unadherent cyst, was distended with gas and its contents fetid at the time of operation. The circulation through the pedicle was partially retarded, but not sufficiently to do more than obstruct the circulation through cyst. If operated on without tapping, the case ought to have succeeded.

Mr. MARTIN COATES (Salisbury) said he felt the difference of opinion about Listerism of men of such eminence as Professor Stokes and Mr. Lawson Tait in their different lines very perplexing to men who, like himself, did not claim for themselves equal eminence. He thought it only right to give his experience of Listerism at the Salisbury Infirmary. It was this: that, before he adopted this plan of dressing wounds, he had rarely, if ever, obtained primary union; whereas, since he had done so, he rarely, if ever, failed. Mr. Coates also narrated a case in which, after having opened the abdomen at the patient's urgent solicitation, the tumour was found to be an enlarged spleen. The abdomen was closed, and the patient afterwards improved.

Mr. W. THOMSON (Dublin) commented on the reduced mortality in Mr. Tait's cases, and the cause of the reduction.

Dr. BANTOCK (London), while congratulating Mr. Tait on his great success in this series, was inclined to disagree with him on the importance of adhesions. Adhesions were of various degrees. Adhesions to intestine and the pelvic cavity were of more serious import than those to the parietes and omentum. In a bad case of adhesions, a very large extent of the peritoneal surface was often destroyed; and this raw surface, for a long time after the wound was closed, often continued to pour out blood and serum, which, if not removed by the drainage-tube constituted a source of the greatest danger in spite of all the reputed virtues of Listerism. He was glad to know that Mr. Tait had been converted to the use of the drainage-tube, an instrument which Dr. Keith and himself had long regarded as of the highest value. He contended that a case of death from shock had no bearing on the question of antiseptics, or if any, it was in an adverse way, nor could one from hæmorrhage be made use of. This Listerian system was to be tested by the relative absence of septicæmia as compared with the un-Listerian; for no one was bold enough to contend that Listerism had banished septicæmia. He could state that this condition was just as frequent on the so-called antiseptic side of the Samaritan Hospital as on his side. He had pointed out that in carbolic acid there was a positive element of danger, and within the last week he had witnessed a very marked and indisputable case of carbolic poisoning. The operation was a tedious one, on account of extensive omental adhesions. After operation there was great depression; pulse weak, and 140. Next day, the pulse was still so feeble that it was difficult to count the beats, but the frequency had diminished. The urine, which was normal before the operation, both in quantity and quality, became less and less abundant each time the catheter was used, and contained an increasing amount of albumen. The urine drawn first, after the operation, was a mixed urine and fairly healthy, yielding a fair precipitate of sulphates on the addition of chloride of barium; but the next, which was slightly muddy and of a reddish tinge as if containing blood, yielded not a trace of sulphates, and so with the next two or three quantities. Then the urine began to increase in quantity, and as it did, and the carbolic acid was being eliminated, so did the albumen disappear and the sulphates reappeared. The temperature also began to rise, but was checked by the ice-cap, and the condition of the patient improved. Fortunately the kidneys were in a healthy condition before the operation, as shown by the early appearance of urates, after the carbolic acid had been eliminated and the irritation of the kidney had subsided. Had this not been so, disaster must have been inevitable, and the operator might congratulate himself on his good fortune. For it was a well ascertained fact that chronic Bright's disease very often existed in a latent form in presence of large abdominal tumours. On these cases, the carbolic acid exerted a peculiarly pernicious effect. With regard to general surgery, he was at a loss to explain the results related by Mr. Thomson previously and subsequently to the adoption of Listerism. To take any notion of the least, he (Dr. Bantock) related his last four cases. One changed her apartments on the twelfth day, and she went home on the twenty on the fourth month, a third was out driving on the ninth day, and the last left the hospital on the ninth day. In all these cases, the wound had healed absolutely by first intention. He believed that, if care were taken to arrest bleeding to the fullest possible extent, and the drainage-tube were used, the carbolic acid might be omitted with advantage to the patients.

Dr. P. SPENCER WELLS (Pittsburgh), as a fellow of the American College of Surgeons, and a frequent visitor to the Continent. As a matter he passed through England to Vienna, and spent about eight months at

One Hundred Consecutive Cases of Ovariectomy performed without any Listerian Details.

No.	Residence.	Medical Attendant.	Age.	Sex.	Disease.	Operation.	Date.	Hosp.	Private.	Recovered.	Died.	REMARKS.
1	Malvern	Dr. Weir	64	W.	Cystoma	Left ovary	1880 Nov. 1	—	P.	R.	—	Gangrenous tumour; subsequently had tetanus, and recovered completely from it.
2	Feckenham, Worc.	Dr. Leacroft	50	M.	"	Right ovary	" 20	—	P.	R.	—	
3	Hednesford	Dr. Marsh Stiles	41	M.	Parovarian	Removed	Dec. 2	H.	—	R.	—	
4	Coventry	Dr. McVeagh	21	S.	Cystoma	Left ovary	" 7	H.	—	R.	—	
5	Stratford-on-Avon	Dr. Gill	42	S.	"	Right ovary	" 22	—	P.	R.	—	
6	Hembleton, Worc.	—	50	M.	"	Right ovary	1881 Jan. 4	H.	—	R.	—	
7	Baddesley, Warwick.	Mr. S. F. Palmer	40	M.	"	Right ovary	" 5	—	P.	R.	—	
8	Llanbedr, Merion.	Dr. Williams	40	M.	"	Right ovary	Feb. 2	—	P.	R.	—	
9	Birmingham	Mr. H. Bracey	15	S.	"	Right ovary	" 2	H.	—	R.	—	
10	Brierley Hill	Dr. D'Arcy Ellis	41	M.	"	Both ovaries	" 5	H.	—	R.	—	
11	Dyffryn, Merioneth.	Dr. C. Williams	40	S.	"	Left ovary	" 7	—	P.	—	D.	
12	Chesterfield	Dr. Booth	32	S.	"	Left ovary	" 14	—	P.	R.	—	
13	Birmingham	Mr. Raffles Harmar	40	M.	"	Left ovary	" 17	H.	—	R.	—	
14	Leominster	Dr. Barnett	23	S.	"	Left ovary	" 19	H.	—	R.	—	
15	Nuneaton	Mr. R. B. Nason	50	M.	"	Left ovary	" 27	—	P.	R.	—	
16	Wooton-under Edge	Dr. Forty	25	S.	"	Both ovaries	Mar. 2	—	P.	R.	—	
17	Leicester	Dr. Cox Hippisley	31	M.	"	Both ovaries	" 3	H.	—	R.	—	
18	Harbury, Warwick.	Dr. Lattey	63	M.	"	Both ovaries	" 9	H.	—	R.	—	
19	Lancaster	Dr. Cassidy	50	M.	"	Right ovary	" 9	—	P.	R.	—	
20	Solihull	Dr. Page	22	S.	"	Both ovaries	" 12	—	P.	R.	—	
21	Wolverhampton	Mr. Walton Hamp	21	S.	"	Left ovary	" 16	H.	—	—	D.	
22	Ashby-de-la-Zouch	Dr. Betts	43	W.	"	Right ovary	" 26	—	P.	R.	—	
23	Cannock	Dr. Moses Taylor	50	M.	"	Right ovary	April 2	H.	—	R.	—	
24	Birmingham	Dr. Bailey	30	M.	"	Left ovary	" 9	H.	—	R.	—	
25	Cannock	Dr. Standish	29	M.	"	Left ovary	" 29	—	P.	R.	—	
26	Northwich	Dr. Hathwaite	47	M.	"	Right ovary	May 7	—	P.	R.	—	
27	Lichfield	Dr. Eastable	56	M.	"	Right ovary	" 7	—	P.	R.	—	
28	Birmingham	Dr. Cox	57	M.	"	Right ovary	" 19	H.	—	R.	—	
29	Derby	Dr. Cameron	40	M.	"	Both ovaries	" 21	—	P.	R.	—	
30	Malvern	Dr. Weir	40	M.	"	Right ovary	June 15	—	P.	R.	—	
31	Aston	Mr. Lawson Tait	51	M.	"	Left ovary	July 4	H.	—	R.	—	
32	Wellington, Somerset.	Dr. Edwards	22	S.	"	Both ovaries	" 5	—	P.	R.	—	
33	Walsall	Dr. G. Sharp	39	M.	"	Left ovary	" 6	H.	—	R.	—	
34	Ashby-de-la-Zouch	Dr. Eetts	34	M.	"	Both ovaries	" 7	—	P.	R.	—	
35	Derby	Dr. G. Copestake	35	W.	"	Both ovaries	" 13	—	P.	R.	—	
36	Alfreton, Derby	Dr. J. J. Bingham	40	M.	"	Right ovary	" 28	—	P.	R.	—	
37	Birmingham	Dr. D. Nelson	30	M.	"	Right ovary	Aug. 2	—	P.	R.	—	
38	Chick	Dr. Aylmer Lewis	17	S.	"	Left ovary	" 2	—	P.	R.	—	
39	Birmingham	Mr. Lawson Tait	40	M.	Parovarian	Removed	" 8	H.	—	R.	—	
40	Derby	Dr. Rice	12	S.	Cystoma	Right ovary	" 22	—	P.	R.	—	
41	Sutton-in-Ashfield	Dr. J. J. Bingham	25	M.	"	Both ovaries	" 24	H.	—	R.	—	
42	Worcester	Dr. Coombes	52	M.	"	Left ovary	Sept. 3	—	P.	R.	—	
43	Adderbury, Oxon.	Dr. Colgrave	46	M.	"	Right ovary	" 5	H.	—	R.	—	
44	Horne Suckley, Worc.	Dr. Woodward	51	M.	Parovarian	Removed	" 12	H.	—	R.	—	
45	Bilston	Mr. Lawson Tait	55	M.	Cystoma	Left ovary	" 12	H.	—	R.	—	
46	Birmingham	Dr. Kenny	30	M.	"	Left ovary	" 20	H.	—	R.	—	
47	Llandulas	Dr. Turner	48	M.	Parovarian	Removed	" 24	H.	—	R.	—	
48	Birmingham	Dr. J. R. Harmar	63	W.	Cystoma	Right ovary	Oct. 15	—	P.	R.	—	
49	Wolverhampton	Mr. S. F. Palmer	27	S.	"	Both ovaries	" 21	—	P.	R.	—	
50	Ombersley	Dr. Koden	55	M.	"	Right ovary	" 26	—	P.	R.	—	
51	Wolverhampton	Dr. Scott	34	M.	"	Right ovary	" 29	—	P.	R.	—	
52	Rugby	Dr. McKenzie	44	S.	"	Both ovaries	Nov. 1	—	P.	R.	—	
53	Swansea	Dr. Rawlings	—	M.	"	Right ovary	" 1	H.	—	R.	—	
54	Machynlleth	Dr. Pratt	63	M.	"	Right ovary	" 11	—	P.	R.	—	
55	Birmingham	Dr. Nelson	59	M.	"	Both ovaries	" 15	H.	—	R.	—	
56	Birmingham	Mr. Hallwright	22	M.	"	Left ovary	" 22	H.	—	R.	—	
57	Derby	Mr. Curgenven	50	W.	"	Left ovary	" 30	—	P.	R.	—	
58	Denbigh	Dr. Turnour	53	M.	"	Right ovary	Dec. 7	H.	—	—	D.	Had been tapped sixteen times.
59	Warwick	Dr. Tibbits	55	W.	"	Left ovary	" 16	H.	—	R.	—	
60	Kingswinford	Dr. Thomson	57	M.	"	Right ovary	" 19	H.	—	R.	—	
61	Llandulas	Dr. Wolstenholme	25	M.	"	Left ovary	" 24	—	P.	R.	—	
62	Dedley	Mr. Lawson Tait	46	M.	"	Parov. cyst.	1882 Jan. 11	—	P.	R.	—	
63	Birmingham	Mr. J. R. Harmar	32	M.	"	Left ovary	" 17	H.	—	R.	—	
64	Birmingham	Mr. Leach	30	M.	"	Parov. cyst.	Feb. 17	H.	—	R.	—	
65	Birmingham	Dr. Drury	27	M.	"	Parov. cyst.	Mar. 3	—	P.	R.	—	
66	Derby	Dr. Carter Wigg	54	W.	"	Left ovary	" 8	—	P.	R.	—	
67	Bromsgrove	Dr. Wood	40	M.	"	Both ovaries	" 13	—	P.	R.	—	
68	Birmingham	Mr. Hollinshead	50	M.	"	Right ovary	" 15	—	P.	R.	—	
69	Tipton	Dr. Hickinbotham	39	M.	"	Both ovaries	" 17	H.	—	R.	—	
70	Whitchurch	Mr. Groom	64	W.	"	Both ovaries	" 19	—	P.	R.	—	
71	Nuneaton	Dr. Young	27	M.	"	Both ovaries	" 23	—	P.	R.	—	
72	Nuneaton	R. E. Nason, Esq.	20	M.	"	Both ovaries	" 23	—	P.	R.	—	
73	Birmingham	Dr. Carter Wigg	50	M.	"	Right ovary	" 24	H.	—	R.	—	
74	Birmingham	Mr. Lawson Tait	29	S.	"	Both ovaries	" 25	—	P.	R.	—	
75	Birmingham	Dr. Madden	33	M.	Fibroma	Right ovary	April 5	H.	—	R.	—	
76	Birmingham	Mr. Waterson	17	S.	Cystoma	Right ovary	" 6	—	P.	R.	—	
77	Birmingham	Mr. Hollinshead	40	M.	"	Left ovary	" 7	—	P.	R.	—	
78	Birmingham	Dr. Edginton	30	M.	"	Both ovaries	" 13	H.	—	R.	—	
79	Cheltenham	Dr. Simmons	50	W.	"	Both ovaries	May 3	—	P.	R.	—	
80	Walsall	Dr. Oliver	20	M.	"	Parov. cyst.	" 5	H.	—	R.	—	
81	Leicester	Dr. Marriot	20	M.	"	Sessile?	" 8	—	P.	R.	—	
82	Birmingham	Dr. J. W. Taylor	60	M.	"	Left ovary	" 11	—	P.	R.	—	
83	Birmingham	Mr. Leach	45	M.	"	Left ovary	" 12	—	P.	R.	—	Tumour rotated and gangrenous; acute peritonitis.
84	Bilston	Dr. Smith	40	M.	"	Left ovary	" 12	—	P.	R.	—	
85	Leicester	Dr. Cox Hippisley	43	S.	"	Both ovaries	" 15	—	P.	R.	—	

One Hundred Consecutive Cases of Ovariectomy performed without any Listerian Details—continued.

No.	Residence.	Medical Attendant.	Age.	Sex.	Disease.	Operation.	Date.	Hosp.	Private.	Recovered.	Died.	REMARKS.
86	Lichfield	Mr. Clay	28	S.	Cystoma	Both ovaries	1882 May 16	H.	—	R.	—	
87	—	Dr. Dawe	—	W.	—	—	—	—	P.	R.	—	
88	Wednesbury	Dr. Blackwood	49	M.	—	Left ovary	" 18	H.	—	R.	—	
89	Birmingham	Dr. Hickinbotham	43	M.	—	Both ovaries	" 23	H.	—	R.	—	
90	Sunderland	Dr. Dixon	28	S.	—	Both ovaries	" 27	—	P.	R.	—	
91	Dudley Port	Dr. Price	34	M.	—	Left ovary	" 30	—	—	R.	—	
92	Stonehouse	Dr. Walters	27	M.	—	Parov. cyst.	June 7	H.	—	R.	—	Pregnant four months; miscarried on second day.
93	Birmingham	Mr. Lawson Tait	27	S.	—	Parov. cyst.	" 24	—	P.	R.	—	
94	—	Dr. E. S. Bull	54	M.	—	—	" 29	H.	—	R.	—	
95	Birmingham	Dr. Hickinbotham	18	S.	—	Left ovary	July 7	H.	—	R.	—	
96	Bickershill	Dr. Quirke	50	S.	—	Parov. cyst.	" 10	H.	—	R.	—	
97	Birmingham	Dr. Drury	22	M.	—	Left ovary	" 21	H.	—	R.	—	
98	Willenhall	Dr. J. Harthill	33	M.	—	Left ovary	" 29	—	P.	R.	—	Tumour rotated and gangrenous.
99	Llanrwst	Dr. Jones	57	W.	Fibroma	Left ovary	Aug. 5	—	P.	R.	—	
100	Birmingham	Mr. Lawson Tait	22	S.	Cystoma	Left ovary	" 5	—	P.	R.	—	

the clinics of the Continent. At Vienna there was very little spray and much irrigation; at Munich, much spray and but little irrigation; at Halle, much irrigation but little spray; at Berlin, a great deal of spray and irrigation, and the same thing at Kiel. When he came to Edinburgh, at the end of April, he would not have dared to do any surgical operation without spray or irrigation; but he spent about three months in Edinburgh, seeing during that time (one week excepted) all the operations Dr. Keith did. During this time he did only two operations under spray. In one, the spray was boroglyceride; in the other a 2½ per cent. solution of carbolic acid. Both these patients died of septicæmia; all his cases done without spray recovered. He did, some time ago, 100 cases under spray, with six deaths. He then did 50 cases without spray, with only one death. During the three months afterwards, Dr. Sutton went to Birmingham, where he had now been for some weeks. He had seen many operations by Mr. Tait without any Listerian precautions. Thus far, he had seen only one suppurating wound. The impressions made upon him by these operations and their results had unsettled him very much in regard to the application of Listerism. It was certainly of questionable advantage in abdominal surgery with some operators. He could not, however, believe that such men as Billroth, Nussbaum, Volkmann, and Esmarch could be mistaken in regard to its usefulness in general surgery; but in what branch of surgery, or in what cases, it was yet to serve best, time would develop. In the United States, Listerism was not universally used.

Mr. BARWELL (London) said that in regard to the scepticism, very warrantable and well supported, regarding the uselessness of spray, and the poisonous qualities of carbolic acid where Listerism was eminently useful, the place was as was the case in many continental hospitals, under bad hygienic conditions. Nevertheless, though the method was probably doomed to perish, surgery yet owed to its inventor much in regard to calling greater attention to cleanliness in surgery, and to care in dressing.

Dr. TAYLOR (Edinburgh) was for fourteen years assistant to Professor Spence, and, during these years, had watched the antiseptic system from its beginning, side by side with the other practice, and had tried to compare the results, so as to be able to make up his mind on this important subject. The decision arrived at had been pretty much that it was a question of good surgery *versus* bad surgery, and that Listerism was at best but a good coverlet for bad surgery, whilst it was often a very mischievous one, as when the blood became poisoned by absorption of the antiseptic used. The good surgeon was able to eliminate one by one from his daily practice the methods on which, in his weakness and ignorance, he relied, until at length he came to understand and to trust in the healing powers of nature, and endeavoured to take away all the incumbrances which tend to oppose or embarrass it. This had been well illustrated in the experience of Mr. Lawson Tait. This was precisely what Sir James Simpson arrived at in his later days, when he excised breasts which healed at the end of a week. His idea, which was most prominent in his mind was, that such results showed the antiseptic was unnecessary, but, in his later treatment, he had seen the results of a dry lint, or cotton, or what was a very favourable dressing, a light flannel shawl thrown loosely over the wound. Mr. Spence found that the more he resorted to treatment, the better were his results, and these were such, that Mr. Tait had been fully justified in comparing his method with the very general surgery of Mr. Spence. He did not think that this subject had ever been fairly and honestly dealt with. When he was trying to make up his mind on the subject, he made use of different kinds of

ligature and suture in the same wound, using wire, prepared catgut, and silk alternately; and he found that the catgut was the first to suppurate, the wire next, while plain silk created almost no irritation. He was quite sure that the experience of those present resembled his own in obtaining healing by first intention, even after long continued exposure to the atmosphere, by placing the edges and sides of the wound in close apposition, and using care and cleanliness. He had seen many cases illustrative of this, but especially remembered a case of secondary hæmorrhage after the removal of a large tumour from a gentleman's back, in which it was necessary to lay the wound open, and expose it for an hour, or longer, until the bleeding ceased, and the raw surfaces were glazed over. During that time, he invited all the germinal hosts to come and take up their abode in it; but they did not accept the invitation, and that wound healed throughout by first intention. He was quite sure that the individual experience of many present resembled his own; but, in order to settle the question for the profession at large, he thought a series of experiments should be made on a larger scale.

Mr. LAWSON TAIT, in reply, said that the point raised by Dr. Ward Cousins was a very interesting one, but he did not think that the tapping had anything to do with the rotation. He had removed many such tumours, one only a few days ago, where the cyst was universally adherent and in a state of gangrene. Mr. Coates' experience in the spleen case was illustrated in three cases of his own, where he had opened the abdomen with the intention of removing the spleen, and had not succeeded in doing so. All three patients had recovered, were still alive, and had been very much benefited by the tentative operation. How this was, he did not know. Mr. Thomson's criticisms were answered by the summary given in the paper, of the points which Mr. Tait regarded as having chiefly contributed to the increase of his success. If Mr. Thomson had been present when the paper was read, probably he would not have advanced the criticisms. It was not to the interest of the public or of the profession that such operations should be done by twos and threes; nor was it to the interest of the surgeons themselves to do only an occasional case, and have bad results. Certain men were now giving up their lives to such work, and, however much a minority of the profession might object to specialism, it was by it only that real progress had been effected. No better proof of this could be afforded than ophthalmic surgery. In Mr. Tait's own student days, the knowledge of diseases of the eye was almost limited to a small chapter at the end of text-books on the practice of medicine. Now, it was the most advanced department of our art. In reply to Dr. Bantock, he had to say that he had been misunderstood about adhesions. These complications were certainly of some consequence to the operator, as they tried his courage and fertility of resource. But they had made no impression on Mr. Tait's mortality, as, in the three fatal cases, there were only slight parietal adhesions in one. He had freely and fully confessed his error about the drainage-tube on several occasions, and readily did so again. Mr. Tait was glad to hear from Mr. Barwell, that so distinguished a surgeon had seen a movable kidney in the cadaver; but in life it had not been removed, and he doubted if it could be. He had to thank Dr. Spence for his generous support of the accuracy of his statements. He had been referred to most unfair and unwarrantable statements made by his friends, who statements no one was bold enough to make in private. In the instance of one well-known surgeon, Mr. Tait had to resort to the extreme measure of a threat of legal proceedings; and he trusted there would be no necessity for carrying this threat into practice, as he certainly would do, if this kind of criticism were continued.

DEMONSTRATION OF ORTHOPÆDIC APPARATUS.

Given at the Royal Infirmary, Worcester, on August 10th, 1882.

By E. NOBLE SMITH, F.R.C.S. Edin.,

Surgeon to the Orthopædic Department of the Farringdon Dispensary, London.

GENTLEMEN,—The majority of the instruments and splints, which I show you to-day, were originally devised by Mr. E. J. Chance, and all of them have been used by me with considerable success for several years.

HIP-JOINT DISEASE.—A great many plans have been devised for giving rest to the diseased structures in the treatment of hip-joint disease, and various splints have been used for fixing the joint in one position. I will not take up your time by attempting to describe, or even to enumerate, all the apparatus and splints which have been used for this purpose; but I may remind you that gutta-percha, plaster-of-Paris, leather, and other materials, are often moulded to the patient's limb and body, with the object of fixing the joint, and so resting it. These splints, when carefully adapted, as you are well aware, may answer the purpose tolerably well; but, even under the most favourable circumstances, the joint is kept by them so long in one position, that ankylosis, more or less firm, very frequently results.

Mechanical apparatuses are usually made to take their bearing from the pelvis, leaving the spine free to move. The hip-joint is not thoroughly controlled by any one of these instruments: for the leverage power of the spine on the pelvis is much greater than the leverage of the pelvis on the thigh; and, consequently, movements of the body will move the pelvis, in spite of the apparatus. There are some instruments, however—such as Thomas's splint, and Willard's—which are constructed upon the principle of controlling the spine; and these are far superior to those which leave the body above the pelvis free. The long splint controls the joint thoroughly, but it necessitates the forced straightening of the limb, and also retains it in one fixed position. A favourite plan of local treatment is to extend the limb by a weight-and-pulley apparatus.

Some surgeons extend the limb with the object of separating the articular surfaces from one another for the purpose of reducing interarticular pressure, others doubt the possibility of making this separation, but extend for the purpose of overcoming the spasmodic action of the muscles about the joint.

When a limb is extended by the weight and pulley plan, counter extension is made either by a perineal band, or by securing the patient to the frame of the bedstead, or by the weight of the body when the lower end of the bedstead is raised. If the leg be flexed by the disease, endeavours to place it in a straight position for extension by means of a weight will produce; or increase interarticular pressure, and this increase of pressure will occur whether we regard the flexion as dependent entirely upon muscular contraction or (as some surgeons assert) upon effusion into the joint only. Probably in the majority, if not in all cases, muscular contraction is the cause of the flexion, etc., of the joint, the position being brought about to allow the greatest possible space in the cavity of the joint. To show how increase of pressure is produced by extension, I have drawn the following purely diagrammatic figure. The psoas muscle alone is shown, although, of course, the iliacus and other muscles are implicated. The attachment of the psoas is also placed lower upon the femur than natural, so as to show better the result.*

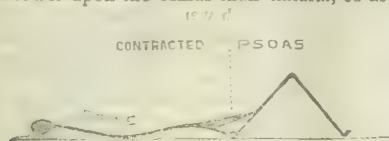


Fig. 1.

If the thigh be straightened upon the trunk, the femur will act as a powerful lever, the fulcrum of which will be the attachment of the psoas and other muscles, and the point raised or pressed upon will be the acetabulum. When the patient lies recumbent with the leg straight, the contraction of the psoas draws up the lumbar vertebrae, producing lordosis. The muscles will then be drawn into a condition of extreme tension.

The following diagram will show the manner in which extension by means of a weight over a pulley will increase interarticular pressure. And this pressure will be increased as the weight is increased, because the force will tend to straighten the whole body and produce a closer adaptation of the articular surfaces. Effusion into the joint produces flexion and adduction, because that position allows the greatest possible



Fig. 2.

space in the joint for the fluid. Attempts to straighten the limb will reduce this space, and thereby cause interarticular pressure. A more scientific mode of extension is traction in the line of the deformity; but the plan is objectionable, because it necessitates the fixing of the patient in one position to the bed-frame for many months. This fixed position of the patient cannot be so comfortable to him as when the joint is fixed without any constraint to the body; and under the latter circumstances the patient can be washed and moved with much less disturbance of the joint.

In order to thoroughly fix the hip-joint, the apparatus must control the movements of the pelvis, and this can only be effected completely by controlling the movements of the trunk. This fact will be apparent if we consider the great leverage power of the trunk upon the hip-joint in comparison with the power of the pelvis alone upon the same joint.

The apparatus which I now show you is constructed as follows.

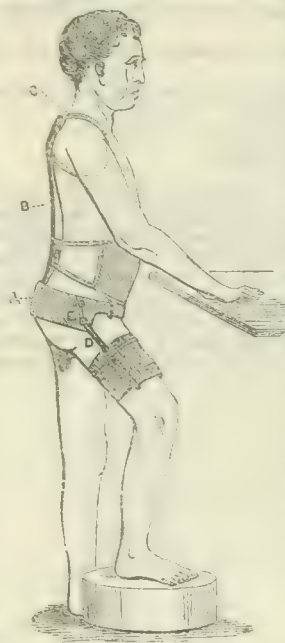


Fig. 3.

A pelvic belt, A, is adapted below the iliac crests. An upright bar, B, passes from this belt to the height of the shoulders, and terminates in a pad. Shoulder-straps fix this pad in its place. The lumbar vertebrae are controlled by the abdominal belt. The stem, D, joins the pelvic belt by a double rack joint, by which may be produced movements of flexion and extension, as well as abduction and adduction. When the instrument is applied, the inclination of the joints should be adapted to the position in which the limb is held by the patient. If this be done carefully, the joint is immediately rested, and pain ceases at once or very soon.

The next important step in the treatment is to effect a gradual *redressement*, by moving the joint day by day, and thus bringing the leg by degrees into a straight and extended position. This frequent gentle movement of the joint seems to prevent ankylosis. These movements require great care; they must always be made by the surgeon himself, and should always be stopped short of leaving the joint in a position which gives the patient pain.

When the joint is so far injured by the disease that its functions cannot be restored, then we should fix the joint (after gradually bringing it into a straight position) into one of very slight flexion, so that the joint may be ankylosed in the most favourable position. In the majority of cases, the prone position of recumbency is much more agreeable to the patient than any other; that is, if a properly constructed prone couch be provided.

When the patient is so far improved that the surgeon considers he may be allowed to walk about, the side bar of the instrument is to be extended to the ground and attached to the sole of the boot, having a rack-joint at the knee, and a front stop-joint at the ankle. By this means, the weight of the trunk is transmitted directly to the ground, and the hip-joint is relieved from pressure; thus dispensing with crutches, which are necessary in other plans of treatment, at this stage.

CASE.—G. W. F., aged 10, was sent to me by Mr. Curgenvin, of Craven Hill Gardens, on March 15th, 1882. The disease was first noticed when the boy was four years old. He was treated at first at a special, and afterwards at a general hospital. The disease was said to have been cured, or to have remained quiescent for several years. A few months ago pain recurred in the joint, and an abscess appeared and projected towards the outer side of the joint. When I first saw him, this abscess was about the size of an orange flattened out laterally; he suffered much pain. He was wearing an apparatus consisting of an iron stem upon the outside of the leg, reaching from a pelvic belt to the boot, with free joints at the pelvis and knee. This apparatus was ab-

* I am indebted to Mr. Howard Marsh for first pointing out this fact to me.

solutely useless, as it did not control in the least the movements of the joint. The abscess was increasing rapidly, and the case threatened to do very badly. I insisted upon strict repose, and adapted an instrument as described above. From the day upon which the joint was fixed by the apparatus pain ceased, and the abscess discontinued to enlarge. Hot-water fomentations and a stimulant liniment were used locally. The abscess soon began to decrease in size, and at the present time (August 1882), has almost entirely disappeared, and all the other symptoms have gradually ceased. The boy can now walk without pain, but is not yet allowed to get about much.

October 1882.—The abscess has entirely disappeared.

LATERAL CURVATURE OF THE SPINE.—Cases of slight lateral curvature of the spine, which are not dependent upon mechanical causes, may sometimes be treated successfully by carefully regulated general muscular exercises, and the avoidance of bad habits of position, but there are a large number of more severe cases which cannot be cured by such simple treatment. For these I have adopted a plan which consists in a combination of muscular exercises, and the use of a light mechanical support. However much we may dislike the idea of a spinal apparatus, it will be found that to treat bad cases satisfactorily some instrument must be used. I have discarded all the heavy and expensive machines made with crutches. The apparatus I am about to describe is constructed and applied upon the following principles.

1. To allow action of all the muscles of the back, and in fact of the whole trunk.

2. To afford support to the back, in a good position, directly the muscles become fatigued.

3. To be light.

4. To be adaptable by the surgeon himself.

5. To allow free thoracic respiration.

By means of this apparatus, a rest for the back is ready the moment the muscles become fatigued; and, moreover, the spine is thus rested in as upright a position as the curves will allow, and thus the patient has the advantages which would be obtained from resting in the most perfectly constructed chair, without the risk of ever allowing the spine to "subside" without using the support. In more severe cases, in addition to the above objects, we must use means to unfold the curves; or, when the case is so bad, and of such long standing, that no improvement can be expected, we must give support to the body, and prevent

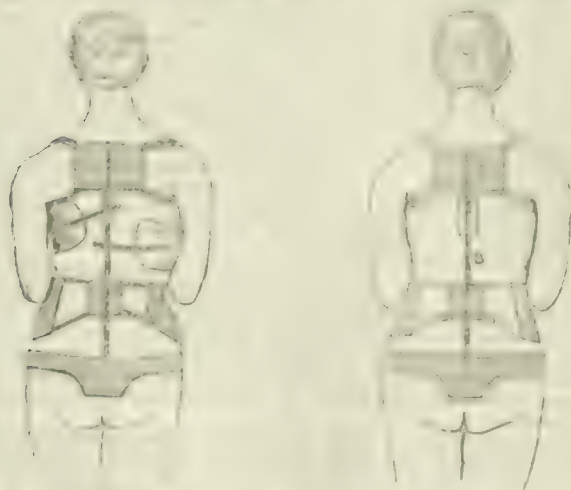


Fig. 4.—Front view of the apparatus. Fig. 5.

further increase of the deformity. But, even in these very bad cases, the instrument can be made to relieve the pressure which the deformity produces upon various organs and nerves, and so afford considerable comfort to the patients.

I would especially call your attention to a peculiarity of this instrument which is possessed by no other. It does not interfere with muscular action, so that, during its use, the dorsal and other muscles gain power, and the instrument may be discontinued at any time, the patient being only better from having worn it.

CASE.—Mr. C., aged 38, was brought to me by Mr. Azer Jones, at the recommendation of Sir William Gull. This case was especially remarkable in that the deformity was almost entirely dependent upon rotation of the vertebrae. Without troubling you now with a long history of this case, I may say that, although naturally a healthy strong

man, Mr. C. had been laid up for several months with indigestion, severe spasmodic pain in the back, pain in the liver, and severe sciatica, and was quite incapacitated from work. General treatment failed to relieve him. I had an instrument made which was a modification of that described above, and applied it on March 21st, 1882. Slight pressure was brought to bear upon the protrusion, the opposite and upper part of the spine being at the same time upheld. The pressure was gradually increased, and, upon April 25th, the patient described himself as deriving very much benefit from the treatment. His general health was improving rapidly, the sciatica and other pains had disappeared, and his digestion was very much better.

June 7th. He felt himself "another man", had no pain, had returned to his work, and could walk ten miles with comfort.

CARIES OF THE VERTEBRÆ.—As I lately discussed in the *BRITISH MEDICAL JOURNAL* (May 13th, 1882) the plan of treatment of caries of the vertebrae which I have found most successful, I will now only remark that the splint there recommended, and which I now show you, has proved in my hands a better means of fixing the spine than any other with which I am acquainted. With it I have been able to control the spine more thoroughly than can be done by plaster-of-Paris, while at the same time thoracic respiration is not interfered with. Moreover, this splint can be altered to suit the case during the progress of the disease. The practical results are very good.

CASES.—February 1882.—C. M., aged 12. Seven years ago, a small projection was discovered over the ninth dorsal vertebra. This gradually and slowly increased for two years, when the child was taken to a general hospital, where a plaster-of-Paris jacket was applied. This jacket was worn for four months; it soon became very uncomfortable, partly because of the accumulation of dirt beneath it. The child's sleep became much disturbed, and her general health deteriorated considerably. Pain was felt all the time the jacket was worn, and, when the jacket was removed, the angle was found to be much increased. The child had been gradually becoming worse, severe pain being always present in the left lumbar and the abdominal regions. I applied the splint referred to above, and the pain was relieved in a few hours, and has not recurred. On September 20th, I found that the angle had not increased. The child's general health had improved very much, and she is rapidly approaching perfect recovery.

January 1882.—A. W., aged 8, was sent to me by Mr. Curgenven. The child had a fall, and hurt his back, five years ago. Four months afterwards, his mother noticed a slight projection in the back, about the size of a walnut. The child was immediately taken to a general hospital, where a plaster-of-Paris jacket was applied. The jacket was never comfortable to the patient; after drying, it seemed to shift its position, and was removed, at the hospital at the end of a month. Jackets were renewed several times at intervals of about one month, and this treatment was continued for six months. The child was never free from pain, and the angle was increasing all the time. The boy was then kept at home for a few months, when he was taken to another hospital. There, a leather back-splint was moulded to the body. About this time, several abscesses appeared; two opened in the right

lumbar region, one in each groin, and one at the back of the right thigh. The leather splint was worn for twelve months; it always hurt the child, and the angle and the general health were getting worse all the time.

January 1882.—At this date, it was twelve months since the child had been able to walk or stand. For six months, he had rested upon his elbows and knees continuously, and he would not be persuaded to assume any other position. His breathing was rapid and very shallow, his pulse very feeble, and he could take but little nourishment. A large quantity of pus was being discharged from the abscesses. In short, the child seemed to be dying. On January 11th, I applied the splint above referred to, and here figured. The pelvic belt should be lower over the sacrum than shown in this figure.

January 13th. The patient felt more comfortable than he had felt for many months. He could turn in bed easily.

February 4th. A prone couch was supplied, of which he recognised the advantage immediately.

February 11th. He was feeling decidedly better.

March 13th. Severe pain was felt by the patient in the left side and

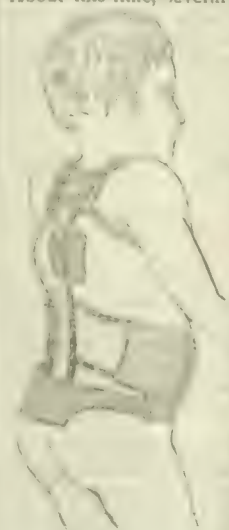


Fig. 6.

front of the thorax. I thought that, as the prone position had been assumed by the patient for so long without any local support to the spine, it was probable that the diseased parts might be rather over-extended. I therefore bent the splint so as to approximate the vertebrae very slightly.

March 10th. The alteration made at my last visit was very successful. There had been no pain since. The general condition had much improved. There was less discharge from the abscesses.

September 20th. There has been steady improvement since the last report. The child has recovered his appetite, and is much stronger. He has regained the use of his lower extremities, and can stand and walk a little, if permitted. The discharge from the abscesses has decreased very decidedly, and he is now recovering his health rapidly. When I first saw this patient, neither I nor Mr. Curgenvin thought that he could live many days.

GENU VALGUM.—The treatment of knock-knee in young people, while the bones remain soft, may be carried out by means of gradual reduction with splints and instruments. In cases that are not very severe in young children, simple splints, as shown in the figure, will suffice.



Fig. 7.

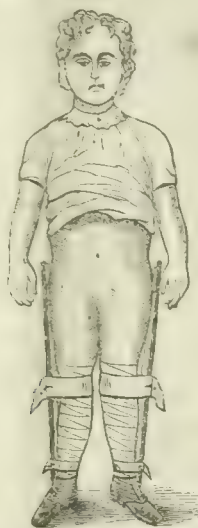


Fig. 3.

Figure 7 represents the splints, which are attached at the top by a band.

Fig. 8 represents the splints applied.

For the treatment of more severe cases, or for all cases in youths, the instrument (Fig. 9) should be used.

The reduction of the deformity is to be very gradually effected, the patient never being made to suffer pain by excess of alteration of the amount of pressure.

Many cases in which the feet have been separated by eight to nine inches, the legs have been brought into a straight position in a few months, the child being allowed to run about all the time.

BOWED LEGS.—By means of the simple splints here shown, severe forms of bowed legs can be straightened in a few months' time.

CASE.—S. G., aged $2\frac{1}{2}$, was brought to me on February 18th 1882. Both legs were bowed, so that the ankle-joints were thrown out

of their proper level, causing difficulty in walking. For more than six months this child had worn irons, recommended and made by an orthopædic mechanic, at a cost of seven guineas. They were made with the object of obliging the feet to move in a straight direction; but no improvement had taken place. I applied simple light wooden

splints, and in two months his legs were almost quite straight, and the difficulty in walking had disappeared.

INJURY TO THE KNEE-JOINT, causing displacement of one of the semilunar fibro-cartilages. This accident, which may be so easily mistaken for a simple sprain, but which generally requires the particular



Fig. 10.—Splint for Bowed Legs.



Fig. 11.—Splint for Bowed Legs: Side View.



Fig. 12.

manipulation devised by Mr. Hey of Leeds for its reduction, may occur to patients whose knee ligaments are weak or lax. The accident will not recur, if only the normal movements of the leg be permitted; and the instrument now shown is devised for that purpose. It is a modification of one used by Mr. Howard Marsh.

In the *Medical Press and Circular* of April 26th, 1882, I published a paper on this accident, with the account of four cases successfully treated. One was that of a gentleman, who had been suffering severely from this affection for more than five years. The use of this light apparatus (after the cartilage was replaced) has enabled the joint to get quite strong again; and since then—more than a year ago—the cartilage has remained in its place.

I should have been glad to show you some simple orthopædic boots, for the treatment of club-foot; but the short time at our disposal will not allow me to do so.

A SUCCESSFUL CASE OF NEPHROTOMY AND NEPHRECTOMY.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By GEORGE ELDER, M.D.,

Surgeon to the Hospital for Women, Nottingham.

MRS. W., aged 36, was admitted under my care on April 29th, 1882, suffering from an abdominal tumour. The history of the case went back two years and a half, when its first symptoms were pain down the left side and leg, aggravated by exertion and by painful micturition of scanty and thick urine. At no time was there hæmaturia. As time advanced, rigors, night-sweats, diarrhoea, nausea, anorexia, fever, and general declension in strength became superadded, until, on admission, she was literally "a bag of bones." The urine was loaded with pus, and, for the first few days, did not average more than sixteen ounces. Lithia water, *ad libitum*, soon increased the flow. There was distinct evidence of tubercle at apices of both lungs, but no family history of it.

Until May 10th, on account of the patient's weakly condition, I delayed making a full examination of the swelling, contenting myself with relief of the local suffering, and measures to improve her general condition. So tender was the superjacent skin, that no sort of satisfactory examination could be made without an anæsthetic. Ether was administered, and it was found that the tumour was a large left renal abscess, extending from the left anterior superior iliac spine up to, and continuous with, the cardiac dulness vertically, and, in the transverse direction, from an inch to the left of the umbilicus round to the spine. There was considerable bulging anteriorly, posteriorly, and laterally, and very distinct fluctuation was felt.

Evidently the kidney was converted into a large abscess-sac. After making the usual lumbar incision, and dissecting down to the organ, two large abscesses were emptied of offensive and curdy pus. The interior of the kidney was very friable, roughened, and gave rise to troublesome bleeding, which was checked by plugging with carbolised lint.

The kidney was very considerably enlarged, reaching inferiorly below the level of the crest of the ilium, and closely adherent to the surrounding tissues. The nephrotomy was performed under antiseptic conditions. There was little or no shock; and, on the evening of the operation, it was noted that the local pain was much lessened; and the temperature, which previously had fluctuated between 100° and 103° Fahr. fell one degree. For several days the urine contained a much smaller proportion of pus; and on the fifth day, for the first time since her admission, it gave an acid reaction.

For the three weeks subsequently, the patient's condition did not alter much. The wound discharged freely, and the urine was never free from purulent deposit.

The temperature remained high, and night-sweats continued, unless when controlled by pilocarpine in doses of one-sixtieth part of a grain. All through the illness this drug was effectual in checking the hyperidrosis. It is an interesting fact in this case, that the temperature in both axillæ was never the same, usually higher in the right; the difference occasionally being as much as two degrees. There was also, synchronously with this, right hemi-hyperidrosis. At this stage of the case, an attack of right pleuro-pneumonia, doubtless of septic origin, all but ended the record. When she got fairly over this attack I, on June 20th, extirpated the peccant organ, by extending the original incision upwards and downwards, and supplementing it by a transverse. By long and patient manipulation with the fingers, I peeled the kidney from its adherent capsule, and finally secured the pedicle with thick carbolised silk. After the removal of the kidney, the friable tissue, of which the pedicle was composed, broke down under the strain of the ligature, and, for a few seconds, the hæmorrhage was appalling. A second and then a third ligature were applied, with the result of effectually controlling the greater part of the bleeding, and ligature of several small arteries finally disposed of it. During the enucleation of the kidney, there was very considerable oozing, which the pressure of sponges kept under control. Altogether, there was a good deal of blood lost. Beyond washing the cavity with carbolised water, and plugging a few temporary metallic sutures completed the operation. Through an accident with the spray, the operation was not done strictly antiseptically.

For some hours after its performance the patient's life was despaired of from the intensity of the shock, which was combated by rectal injections of brandy and pancreatised beef-tea. During the first forty-eight hours the urine was very scanty, but since, its quantity and quality, have been normal. Up till date (July 22nd), the patient made an uninterrupted good recovery; and the wound, although not skinned over, was quickly filling in with healthy granulations. With the operation, the hemi-hyperidrosis and differences in temperature in the axillæ disappeared.

My only regret is, that I did not remove the kidney at the first operation.

Since the operation, the chest-symptoms have undergone considerable melioration.

October 24th. I last heard of patient two weeks ago, when her health was better than it had been for years.

A CASE OF GASTROSTOMY.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By R. H. BOURCHIER NICHOLSON, M.R.C.S. Eng.,
Assistant-Surgeon, the Hull Infirmary.

J. McD., aged 69, seaman, had good health up to three months ago, when he first experienced difficulty in swallowing; could not swallow quantities of fluid, and that with much pain and frequent hæmorrhage.

He could not pass the smallest sized bougie; recommended to me; and performed the first part of the operation on May 14th, under ether—strict antiseptic precautions being used. I made an incision between the third and fourth ribs, and on the inner side of the ninth and tenth left costal cartilages; passed two long silk ligatures through the peritoneal covering, three-fourths of an inch apart, and secured by Mr. Bryant; and stitched the stomach to the abdominal wall with twelve silver wires. The wound was dressed with iodoform and olive-oil (1 part to 3); then a pad of salicylic silk, covered with plaster, etc. A suppository of half a grain of morphia was given. Temperature 99°; pulse 96. He had no pain; and

passed urine. He was fed by enemata of four ounces of beef-tea, with ten minims of tincture of opium every three hours, and a beef suppository night and morning.

May 15th. Temperature 100.2°; in the evening normal. Pulse 100. He had no pain; retained the enemata; and slept well.

May 16th. Temperature 98°; pulse 100. Egg and milk were given alternately with the beef-tea. At 9.30 P.M., he had had hiccough since 3 P.M. No pain.

May 17th. The hiccough was better. The wound was dressed. It looked well; there was no pus. Temperature 99.2°; pulse 102.

May 19th. The bowels were moved. A drachm of brandy was added to each enema.

May 21st. Temperature 97.4°; pulse 84. He had kept up well, retaining the bulk of the injections. I finished the operation by passing a tenotomy-knife into the stomach, between the silk ligatures left in the first stage of the operation, making an opening one-eighth of an inch wide. I injected, through the œsophageal tube (the size of No. 6 catheter), four ounces of warm milk, and repeated it at 8.30 P.M. The injections by the rectum were continued. Two patches of ecchymosis appeared above the wound.

May 22nd. Temperature 98.2°; pulse 80. He had two hours' sleep. The ecchymosis was fainter. Beef-tea was given by the stomach; there was no difficulty in passing the tube. I removed three stitches; the wound granulating.

May 23rd. Temperature 98°; pulse 80. He was fed three times a day by the stomach.

May 24th. The remaining nine stitches were removed. The ecchymosis was disappearing. Maltine was added to the food given by the stomach. He had a loose motion.

May 28th. The wound was closing rapidly. Iced water and milk were allowed occasionally, but pain was caused by swallowing.

June 4th. He sat up to have the bed made. He had a troublesome cough. He was fed every three hours by the stomach.

June 7th. There was no oozing when he was fed; he had finely minced mutton with maltine.

June 10th. The wound was healed, all but a few granulations round the fistula.

June 17th. He had peptonised milk or beef-tea every three hours.

June 25th (sixth week). The fistula did not close entirely after the injection. There was slight oozing, occasionally tinged with blood. From this date the patient lost ground, the old pain in the chest continuing.

July 6th. He died, having lived seven weeks and four days after the operation.

At the necropsy, the stomach was found healthy. The stricture of the œsophagus was almost impervious, just above the entrance to the stomach.

REMARKS.—In this case I followed, as nearly as possible, the one reported in the *Lancet* (May 6th, 1882) by Mr. Bryant. I urged the man to have the operation done when he had some strength left, dividing it into two stages, as recommended by Mr. Howse. The two long silk threads I found a great help in the second stage. The beef-suppositories (made by Slinger of York) were of much benefit, the man saying he felt great comfort from their use. The man was saved the pangs of starvation, from which he was fast sinking when I first saw him. He certainly lived six weeks longer than if he had not had the operation performed, and was fairly comfortable during that time. There are cases on record who have lived much longer, and I had every reason to hope this might have been one more. I have retained the fistulous opening into the stomach, to show how strong the adhesions between the surfaces had become.

ATROPIA FOR EARACHE.—The most effectual treatment, and the one which has stood the test of years, says Dr. A. D. Williams, in the *American Chemist and Druggists' Bulletin*, is the local application of a solution of the sulphate of atropia. Not a single case but has yielded at once. The solution is to be simply dropped into the painful ear, and allowed to remain there from ten to fifteen minutes. Then it is made to run out by turning the head over, then being wiped with a dry rag. The solution may be warmed to prevent shock. From three to five drops should be used at a time. The strength of the solution must vary, according to the age of the child. Under three years, one grain to the ounce, and over ten years, four grains to the ounce of water. In grown persons, almost any strength may be used. All ages will bear a stronger solution in the ear than in the eye. The application should be repeated as often as may be necessary. Usually, a few applications will stop the pain. In acute suppurative inflammation of the middle ear, and acute inflammation of the external meatus, atropia will only slightly palliate the suffering, but in the recurring nocturnal earaches of children it is practically a specific.

ON A CASE OF ACUTE TRAUMATIC
MALIGNANCY.

Presented to the Section of Surgery at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By CHAUNCEY PUZEY, M.R.C.S.,
Surgeon to the Liverpool Northern Hospital.

THE subject of this paper is a case which came under my notice some months ago, and which I believe to be a typical instance of that class of cases to which Mr. Barwell has recently drawn attention under the term, "Acute Traumatic Malignancy."

The patient was an Irish labourer, 50 years of age, who said that he had been in excellent health until seven weeks before he came under my notice. On December 5th of last year, this man was admitted under my care at the Liverpool Northern Hospital. He was suffering from a tumour in the right mammary region, the history of which was as follows.

Seven weeks before his admission he had received a blow (from a man's elbow) in this part. Slight pain and tenderness followed, and in about a week's time, he noticed a small swelling above and somewhat to the inner side of the right nipple; the tenderness and swelling slowly increased, but did not much inconvenience him, but during the last week, the size of the tumour had increased rapidly, and he had found considerable loss of lifting and carrying power in the right arm.

The patient was a healthy looking muscular man, well-nourished and apparently in excellent condition. In the right pectoral region, there was a well-marked swelling about three and a half inches across in every way, and projecting forwards about one and a half or two inches from the chest level. It was evidently in the sheath of the pectoralis major; the integuments being freely movable over the swelling, the tumour itself admitting of a certain limited amount of movement (upwards and downwards only) over the ribs, and it being possible to pass the hand well behind the outer part of the tumour, from the axilla, when the muscle was relaxed. The skin was slightly reddened, apparently from pressure and friction of the clothes, and the temperature of the part slightly raised. There was no true fluctuation to be detected, but rather that elastic feeling which is noticeable in the softer forms of sarcoma, and in swellings containing clot or other semi-solid material, and tightly invested by fascia or muscle.

Two days previously to my seeing him, a trocar and cannula had been passed into the swelling by another surgeon, and some ounces of dark fluid blood removed (so said the patient). I introduced a medium sized aspirator needle; but though it evidently moved in a large cavity, only a few drachms of dark blood escaped.

The question arose (abscess being out of the question): Was this a case of some rapidly growing form of sarcoma, or was it one of hæmatoma resulting from laceration of muscle and slow bleeding from some small arterial branch? I inclined to the latter view for several reasons, one of which was that it appeared that the man was probably a "bleeder;" he said that he had been subject to bleeding at the nose for many years, but that he had not had an attack for two or three months past.

The patient was ordered to rest in bed, with an ice-bag constantly applied over the swelling.

December 8th.—Three days after his admission there was no apparent change in the size or appearance of the swelling, except a slight hardness extending outwards in the course of the pectoralis fibres. But, this day, the man being evidently alarmed by the amount of interest taken in his case and the various examinations to which he had been subjected by myself and my colleagues, suddenly announced his intention to depart, and this determination he carried out, promising to show himself in the course of a few days.

December 12th.—A week after my first examination, he returned to show himself. The swelling had evidently increased, and on the 14th he was readmitted. The swelling had now extended for some distance along the muscle, and there was a smaller swelling distinct, but apparently connected by a sort of isthmus, with that first noticed; this second swelling being in the anterior fold of the axilla. The integuments were redder and tenser, and the patient appeared for the first time to be alarmed at the appearance of affairs, and consented to operation.

Next day, December 15th, the patient having been etherised, an incision about six inches long was made across the middle of the swelling above the nipple, following the line of the pectoral muscle; the sheath of the muscle was exposed, and that and some thickness of the muscle itself bulged up into the wound. This was freely laid open, and a large quantity (probably a pint) of blood and loose clot was turned out. The wound was cleaned out, two or three small bleeding

vessels (looking like perforating branches of intercostal arteries) were tied, and the general oozing, which was very free, was checked by washing out the cavity with chloride of zinc solution (℥ij. to ℥i.). A large cavity was then seen to have been hollowed out in the muscle, the ribs and intercostal muscles forming the floor. Three or four ribs were thus exposed, and at the junction of one rib and its cartilage, there was some thickening which led to the consideration whether there might have been a fracture. There was nothing like cyst-wall or boundary of any kind whatever. The wound was then enlarged outwards to the swelling near the axilla, and another cavity communicating with the first and also filled with blood and loose clot was emptied and washed out with chloride of zinc. The wound was then stitched up, a drainage-tube being laid along the whole length of it. The operation and all subsequent proceedings were carried out strictly on the Listerian plan.

And here, I may say that there were two points observed during the operation, which made us doubtful about the nature of the case. One was that the blood and clots had a peculiar stickiness or mucosity about them; and one very solid and apparently organised mass of clot about the size of a walnut, which slipped out of the wound on to the floor, presented on section the appearance of a myxomatous sarcoma. For twelve days after this, all appeared well, the whole wound apparently united by first intention, and the chest surface was quite level. But, on December 27th, the patient complained of a feeling of tightness about the wound; and next day, when the dressings were removed, a little dark blood was found to have escaped from the sternal end of the wound, and there was a slight semi-elastic swelling at this part. On pressure, about an ounce of partly clotted dark blood was squeezed out, and this was followed by free oozing of bright arterial looking blood. Pressure was applied by means of a pad of gauze, and the Listerian dressing reapplied. Subcutaneous injection of ergotine was then commenced, and continued for two or three days. A week later (January 4th) the same thing occurred, and the same treatment was adopted. Now, a slight return of the swelling at the axillary end of the wound was noticed; and on January 18th, this latter swelling had so increased, that, the patient having been again etherised, this was laid freely open, the incision extending from the cicatrix of the former operation, nearly to the insertion of the pectoralis into the humerus. As before, a large quantity of soft clot and fluid blood was turned out, the cavity, which rapidly filled with arterial blood, was washed out with chloride of zinc solution, and one large muscular branch was tied. Nothing like cyst-wall or boundary appeared. Oozing still continuing profusely, the large cavity was filled with gauze soaked in oil and benzoïn (one part tr. benzoïn, seven parts linseed oil) and the Listerian dressings reapplied.

Then for a week or so all appeared to be going on well. The gauze-plugs were removed next day, and the antiseptic dressings continued. There was no suppuration, and for five or six days nothing could have been more satisfactory than the clean healthy granulating wound; a perfect type of a healthy sore. But once more we were disappointed, when one morning there was a little dark coloured sticky fluid on the dressings, and on their removal, a portion of the granulating wound was raised, dark and semi-transparent, like black currant jelly, and through it the finger passed into a cavity about the size of a large walnut, filled with the before mentioned carneoous clot.

And now there could be no doubt as to the malignant character of the disease, which was rendered still more hopeless by the appearance of gelatinous masses of granulations sprouting forth at the sternal end of the wound, and by a general boggy fulness extending between the two wounds.

For the last two or three weeks it had been noticed that the man was becoming thinner, and an unfavourable report had been made as to the histological appearances observed in the peculiar looking mass found at the first operation. In two or three weeks the masses of fungoid granulations had protruded and completely overlapped the edges of the wounds, showing a tendency to slough in some parts, and intense vascularity in all others.

Up to this time no sign of any secondary implication, either glandular or visceral, had been observed. The subsequent history of the case is unfortunately meagre; the patient decided to go home on February 14th, and after this I did not see him; but I heard that he lingered until the second week in June, and then died, from exhaustion apparently. No *post mortem* examination was obtained, but there does not appear to have been any evidence of visceral disease.

REMARKS.—I need hardly say that my feelings with regard to this case are anything but satisfactory. For, although I do not think the treatment in any way hastened the growth and necessarily fatal termination of the disease, and although I do not see how the disease could have been removed by any surgical procedures, yet, still the fact re-

mains that, even after the first operation, a correct diagnosis was not made, and various ineffective surgical manipulations were practised.

But I relate the case as one which I venture to think is an interesting example of acute traumatic malignancy (as Mr. Barwell terms it), *i.e.*, of an acutely malignant action set up by a recent injury. This is of course quite a different matter from the long recognised fact that malignant disease has a tendency to show itself in parts, the structure and nutrition of which has been damaged by old injury.

In the instance which I have related, it appears almost certain that as the result of a (not very severe) blow, more or less extravasation of blood occurred, and that active disease of a singular malignancy was immediately set up. In an editorial article in the *BRITISH MEDICAL JOURNAL* of February 11th, commenting on Mr. Barwell's paper on this subject, the writer says, "We know of a case where a large subcutaneous extravasation of blood followed a blow on the shoulder. The fluid part of the blood was removed by an aspirator. Within a few weeks a sarcoma developed in the shoulder, and rapidly recurred after removal." And in the cases related by Mr. Barwell, all the exciting injuries were such as would cause bruising and extravasation of blood. The exact nature of this malignant action is uncertain. But in the *BRITISH MEDICAL JOURNAL* of May 6th of this year, Mr. Harrison Cripps, of St. Bartholomew's Hospital, contributes an interesting paper on the subject of "Traumatic Malignancy," in which, after relating two cases in which malignant growth followed extravasation of blood from injury, he gives his theory as to the development of this peculiar mischief. Time will not allow my quoting more freely from his contribution to the subject; but after pointing out the resemblance between acute traumatic malignancy and acute pyæmic necrosis, he says, "One is driven to the conclusion that the poisonous organism must have been circulating in the blood, in which it was innocuous; but, when the extravasation caused by the blow allowed it to become stationary, it multiplied, producing all its poisonous local effects. I would venture to raise the question," he says, "as to whether the explanation of traumatic malignancy might not lie in some organism accidentally circulating in the blood, becoming the cause of active disease, by infecting the cells of a part when left stationary, by effusion into the tissue."

I think this case rather supports his views. Before seeing any of the papers to which I have referred, it became impressed upon me that the malignant action must be taking place in the blood itself; in fact the peculiar shape of the clots (?) as pressed out of the wound (almost like exaggerated "comedones") led me to wonder whether this action was going on in arterioles which became distended, gave way, and thus gave rise to continuous small hæmorrhages. Then there is supporting evidence of a more reliable and exact nature in the report of the histological appearances furnished to me by my friend Mr. Rushton Parker, who kindly examined for me the peculiar mass to which reference has already been made. After describing fully those appearances, he concludes by saying: "The growth is evidently a blood-stained myxo-sarcoma, or myxo-sarcomatous blood-clot." And this coincides with the histological appearances found in some other cases already referred to.

I have detailed the history of this case at perhaps too great length; but details were necessary to mark the peculiar features of a somewhat rare case; features which certainly seem to me to illustrate the reasonableness of the views expressed by Mr. Cripps. Unfortunately the main interest of such a case must be in its pathology; for remedial surgery appears to be of little avail, except where the affected part can be completely removed, that means, generally, when the disease occurs in one of the extremities, where amputation can be performed. Such a case is recorded in the last edition of *Erichsen's Surgery*, under the title of "Malignant or Sarcomatous Hæmatoma."

Report by Mr. Rushton Parker.—A fresh fragment examined on the day of operation was found to be bathed in mucus, which could be drawn out in long transparent strings. The texture of the growth was both sarcomatous and blood-stained, and at the same time suggestive of yellow blood-clot, passing, like the latter, into pink and red; but not purple. After mounting in spirit, sections stained with logwood or gentian violet, and viewed under the microscope a ground substance of wavy and granular, homogeneous and structureless, but for the greater part homogeneously granular, containing the ground substance were cells of irregular shape, some spindle-celled, others oval, and some stellate, with a central nucleus, and a fine network of fibres. True vascular channels permeated the tissue, recognised by their shape, and by their epithelial lining, but without contents to indicate what they might have contained. Between the fibro-cellular components of the tissue were spaces that may have been occupied by juice, of which indeed there appeared to be granular remains, probably precipitated mucus. In a corner of one specimen was a patch of blood-pigment in

irregular spheroidal crystals, but devoid of any prismatic shape. The growth is evidently a blood-stained myxo-sarcoma or a myxo-sarcomatous blood-clot.

CLINICAL MEMORANDA.

THE FACE IN DISEASE.

DR. WARNER is doing good service in directing attention to the diagnostic study of the face. In these instrumental days, we are sometimes apt to neglect, or pass lightly by, many pathognomonic signs, appreciable by the unaided senses, upon which our predecessors loved to dwell. For several years past, I have availed myself of every opportunity, in hospital and private practice, of tracing out the more reliable facial indications of disease. From my observations, I have learned that, while much that has been written upon clinical physiognomy is fanciful, far fetched, and fruitless, there remain many constant conditions of countenance which are sure signs of particular maladies, or of pain in particular parts, and I have been led to expect that further study of the subject will produce substantial practical results. Much of the rapid, and often correct though rapid, diagnosis which very experienced practitioners learn to make in medical cases, largely depends, doubtless, upon an unconscious translation into nosological language of the *tout ensemble* of unparticularised details in a patient's features, attitude, and manner. If we learned to trace out these details one by one, we should solve the secret of many a quick and apparently intuitive diagnosis. My immediate object is to draw attention to a pregnant sentence on the morbid appearances of the countenance, to be found in the late Dr. Marshall Hall's *Principles of Diagnosis*. Most readers will at once appreciate its truth; it has often helped me at the bedside: it is this: "In general, it may be observed that the brow is contracted by pain within the head; the nostrils are drawn acutely upwards by pain of the chest; and the upper lip is raised and stretched over the gums or teeth in painful affections of the abdomen."

JAMES SAWYER, M.D. Lond., M.R.C.P.,
Physician to the Queen's Hospital, Birmingham.

CASE OF CANCRUM ORIS IN THE ADULT.

R. C., aged 47, coachman, of intemperate habits, was admitted into the Hertford British Hospital, Paris, on June 28th, suffering from a sore heel, with pain and swelling in the left foot and leg. A week before admission, his heel was kicked by a horse. This injury caused a bruise, which caused no trouble for a day or two, till from the irritation of the boot the part ulcerated, the foot and back of the ankle and leg becoming swollen and inflamed.

On admission, there was, over the outer aspect of the heel, a small ulcer, a little larger in size than a shilling, irregular in form, and discharging a little watery pus. The surrounding tissues were swollen, the skin red and irritable, the erythema extending up as far as the calf, whilst the inguinal glands were slightly enlarged and tender. The foot was in a very dirty state, the patient suffering from excessive bromidrosis, causing a most offensive odour. The part was well washed with carbolic lotion, the wound dressed with carbolic oil and lint, and the leg dusted with starch-powder and enveloped in cotton-wool, full doses of the tincture of the perchloride of iron being given internally. This acted well, and in ten days the wound had healed, and the erythema entirely disappeared. On July 8th, the patient complained of feverishness and pain in the right hand and forearm, which soon became erysipelatous as far as the elbow; this was treated by the application, on lint, of a lotion of a sulphate of iron (one drachm and a half to a pint of water), the tincture of the perchloride being still continued (internally). It disappeared in a few days, when the disease reappeared in its original seat.

Again the patient improved; but, on July 17th, he complained of a sore-throat. Erysipelas manifested itself on the right side of the face and head. The mouth, tongue, and nares became dry; and, on the 20th, he had difficulty in swallowing. The breath had a most loathsome smell, although the mouth and throat were frequently washed with a weak solution of carbolic acid in spray.

On the morning of July 22nd, saliva began to flow again, but the difficulty in swallowing still continued, the back of the pharynx being in an ulcerated condition, and the voice was very husky. Black patches began to appear round the inside of the lips and on the tip of the tongue, and these very rapidly spread. The carbolic spray was continued at frequent intervals, alternated with a strong solution of chlorate of potash, which was also given in twenty-grain doses internally. By this time, he had become very weak, and stimulants required to be freely administered; notwithstanding which, and every possible atten-

tion, he rapidly sank, and died from exhaustion on the afternoon of the 23rd. The gangrene of the mouth had spread very considerably, the inside of the lips extending to their junction with the gums, and the tongue as far as the middle, where a line of demarcation seemed to run round the whole circumference, forming quite a slough, of a very dark grey colour, from which a thin sanious fluid, with a horrible odour, exuded.

There was no appearance of gangrene on any other part of the body; and the case is of interest, I think, as showing an example of cancrum oris in the adult.

WILLIAM BRYDON, M.B., C.M.,
House-Surgeon to the Hertford British Hospital.

SCARLET FEVER.

IN the notes of some cases of scarlet fever, published by Dr. Myrtle in this column last week, the conclusion is arrived at that, in two of them the period of incubation was fourteen days. Now, this is so contrary to the received opinions on the subject that it ought not to be allowed to pass unnoticed.

As far as I understand the history as given by Dr. Myrtle, his patient, Mr. S., resided in Harrogate, where an epidemic of scarlet fever was prevailing at the time. He drives out to Knaresborough to attend the petty sessions, and it is assumed that he then contracted the disease from persons in the crowded court. He, however, goes back to Harrogate, where the disease was rife, and remains there twelve days, when he starts for the moors. During the five days he is absent he develops scarlet fever, and returns desquamating.

Two days after his departure for the moors, Miss A. B. also falls ill with the complaint. Now, it seems to me that he assumes that these two persons could only have taken the infection at Knaresborough, and not afterwards somewhere in Harrogate, when to do so involves an entire re-consideration of what we know to be the rule as to the incubation stage of scarlet fever, is altogether unwarrantable.

This point may seem a slight one, but in reality it is of much importance, as serious conclusions sometimes have to be drawn as to the causation of infectious disease in a family or public institution, involving not unfrequently much responsibility on individuals. Thus, in a case which came under my observation some time ago, where scarlet fever broke out in a public school a fortnight after the reassembling of the pupils, the statement was made that the disease was probably contracted by one of the boys at his home, and introduced into the school when he fell ill fourteen days later. Now, seeing that the period of incubation varies, according to Wilks, from about three to six days, or less, according to Niemeyer from eight to nine days, it is highly improbable that this could have been the case; and it is for this reason that I think a statement as to its being prolonged to fourteen days should not be accepted without conclusive evidence as to its accuracy.

ERNEST FIELD, M.D., Bath.

THE CAUSATION OF DROPSY.

THE statement made by Dr. Leech, in his address at the annual meeting of the British Medical Association, a report of which appears in the last number of the JOURNAL, to the effect that dropsy frequently owes its cause to more recondite conditions than simple venous obstruction and diminished urination, brings forcibly to my mind the following case. A little boy, aged 6, was under my care, in the middle of July last, suffering from croupous pneumonia. He lapsed into a state of dangerous prostration, but survived a crisis which occurred on the sixth day. From this time, although he took food fairly well, together with a good allowance of stimulants and tonics, he failed to gain flesh and strength, and the lung-consolidation was only very slowly absorbed. Three weeks after the crisis, œdema of the face and lower extremities appeared, and, notwithstanding that the kidneys acted as usual (the urine being perfectly free from albumen), and there was no discernible obstacle to the circulation, gradually increased. It ultimately became general and intense (even the tongue being swollen to twice its natural size), and proved fatal on August 30th. At the time, I failed to solve to my own satisfaction the question of the origin of the dropsy. After reading Dr. Leech's suggestive remarks on the causation of dropsy, I should feel inclined to attribute it to a combination of defective innervation and impaired nutrition of the tissues generally. ALBERT MAY, L.R.C.P.Lond., M.R.C.S.Eng.,
Moreton Hampstead, South Devon.

OBSTETRIC MEMORANDA.

CHLOROFORM IN MIDWIFERY.

THE statement of Dr. Fancourt Barnes that the hypertrophy of the heart met with in pregnant women is one reason for the singular safety of chloroform administration to women in labour, is doubtless

correct, but it is questionable whether the idea is a new one. Most likely it will have already occurred to many who are conversant with the writings of the distinguished obstetrical teacher Dr. Robert Barnes.

Confirmation of the correctness of the view will be found in the study of the table of deaths from anæsthetics, compiled by Dr. Jacobs and myself, and published in the pages of the JOURNAL, pages 998 and 999, vol. ii. 1880.

In this table, it will be found that simple cardiac hypertrophy was nowhere met with, *post mortem*, amongst the whole of the one hundred and twenty deaths tabulated as occurring during, or immediately after, the administration of chloroform. In every case in which hypertrophy was met with, it was associated with fatty disease of the organ; and this condition would, of course, neutralise the effects of the hypertrophy.

But, another important factor comes into play in these cases—viz., the absence of the depressing, and even paralysing, influence of fear. In an ordinary operation, the patient approaches it with dread; and numerous instances are on record in which fear alone has brought about fatal syncope, even before the further depressing effects of chloroform have had time to take effect—even before its administration has been begun.

In confinements, the case is quite different. The patient is already in great pain; the heart is acting powerfully, in consequence of great muscular exertion; and, instead of looking forward to the chloroform with dread as the antecedent to a dangerous operation, she actually desires it as a relief to present suffering. She is thus in the most favourable condition possible for its administration; and, even if there were no cardiac hypertrophy, we might expect an almost total immunity from fatalities from the use of chloroform in these cases.

J. E. BURTON.

It is a matter of fact that the quantity of fibrin-forming elements in the blood is largely and relatively increased during pregnancy. Many physicians adopt the hypothesis that it is owing to this peculiarity that chloroform can be administered with such safety in obstetric practice. Since Dr. Fancourt Barnes believes that the hypertrophied heart of pregnancy can withstand the action of chloroform more easily than one not so hypertrophied, would he elect to administer this anæsthetic to a patient with a hypertrophied heart (the cardiac hypertrophy being due to causes other than valvular disease) in preference to an individual with no cardiac hypertrophy, and perfectly sound and free from every trace of organic disease?

CHARLES EGERTON JENNINGS.

London Hospital, E., October 23rd, 1882.

THERAPEUTIC MEMORANDA.

THE TREATMENT OF WRITER'S CRAMP.

THE account, in last week's JOURNAL, of the success which Professor Nussbaum has obtained in the treatment of this troublesome affection, with his newly-invented "bracelet", induces me to send you a short note of a case lately under my care, in which great improvement resulted from a method of treatment which, so far as I know, is novel.

In *Le Progrès Médical*, January 21st, 1882, Dr. Vigouroux reported the cure, by a M. Wolff, of two cases of writer's cramp, which Professor Charcot had transferred to Dr. Vigouroux's care for electrical treatment. M. Wolff's method consists partly in causing the patient to execute a series of movements with the arms, and partly in passive motion, massage, and friction. In each case, the cure was complete in fifteen days.

Among the ingenious machines of the Zander Institution, there are some which produce, as nearly as is possible by mechanical means, the effects of massage and friction as applied to the limbs. It occurred to me that, possibly, by the combined use of these and other machines, results equal to those of M. Wolff might be obtained.

The patient was a lady, who for some years had suffered from spasm of the flexors of the fingers and wrist whenever she attempted to write. A variety of remedies had been tried, without producing any decided improvement. By my advice, she began the use of various of the Zander machines, under the supervision of Dr. Oxley, the medical officer of the institution.

As the machines used have already been described in the JOURNAL, and as any one who is interested can see them for himself, at Soho Square, it is unnecessary for me to say more than that they are all intended to strengthen the weak extensors and abductors by rapid friction, vibration, or graduated exercise, both active and passive.

After ten visits, lasting about an hour each, the writing was tested; and sufficient improvement was found to have taken place to encourage us to persevere with the treatment. The spasm was postponed, and the movement of the hand along the paper was more even and con-

November 29th. The flatulence was not so bad, but she had hicough occasionally, and was sick twice.

November 30th. She was given chicken jelly. An enema of olive-oil was administered, without effect. Hiccough was frequent. The wound was dressed. Two stitches had been absorbed, and most of the rest were taken out.

December 1st. She was taking arrowroot, Brand's essence, chicken jelly and barley-water. The nutrient enemata were discontinued this evening. There was very little flatulence; the bowels were open twice slightly, after a simple enema.

December 3rd. She was rather troubled with flatulence; the bowels were opened once.

December 5th. The temperature was a little elevated; there was no pain or tenderness about the abdomen, and she slept well.

December 6th. The antiseptic dressings were renewed, but no spray was used.

December 11th. The patient had been sick twice after breakfast, had had shooting pains about the abdomen, and slight tenderness on the left side, and was suffering a good deal from flatulence. The temperature was subnormal (97.2° Fahr.); the bowels were not open; she had slight headache.

On the following day the patient was much better.

December 13th. The wound was dressed yesterday with strapping and salicylic wool; the few remaining catgut stitches were removed; the wound was healed up.

The patient continued to improve, being troubled only by a tendency to constipation. She left the hospital well on January 3rd, 1882.

Table of Temperature.

Date.	Hour.	Temp.	Date.	Hour.	Temp.	Date.	Hour.	Temp.
Nov. 25	8 P.M.	98.4	Nov. 29	8 A.M.	101.8	Dec. 2	8 P.M.	98.8
" 26	4 A.M.	99.6	" 29	1.45 P.M.	101.6	" 3	8 A.M.	98
" 26	10 "	99.8	" 29	8 P.M.	101.8	" 3	2 P.M.	99
" 26	2 P.M.	100.6	" 30	2 A.M.	101.2	" 3	8 P.M.	99.4
" 26	8 "	102.2	" 30	8 "	101.6	" 4	8 A.M.	98.2
" 27	2 A.M.	101.4	" 30	2 P.M.	101.6	" 4	2 P.M.	98.8
" 27	8 "	101.8	" 30	8 "	101.4	" 4	9 "	99
" 27	2 P.M.	101.2	Dec. 1	2 A.M.	100	" 5	8 A.M.	99.2
" 27	9 "	101.6	" 1	8 "	100	" 5	8 P.M.	99.4
" 28	2 A.M.	101.4	" 1	2 P.M.	100.2	" 6	8 A.M.	98.8
" 28	8 "	101.8	" 1	8 "	99.6	" 6	2 P.M.	99
" 28	2 P.M.	101.2	" 2	8 "	98.6	" 6	8 "	99.4
" 28	8 "	102.6	" 2	8 "	98	" 7	8 A.M.	98.6
" 29	2 A.M.	102.6	" 2	2 P.M.	99.6	" 7	8 P.M.	99

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, OCTOBER 4TH, 1882.

DR. MATTHEWS DUNCAN, President, in the Chair.

Spurious Hermaphrodite.—Dr. FANCOURT BARNES showed a child (living) which presented malformations such as those classified by Sir James Simpson under the title of "spurious hermaphroditism". He could find no trace either of testes or of uterus, but thought the child most likely a male.—Dr. CHAMPNEYS had, in a somewhat similar case, detected the uterus in examination by the rectum.—Dr. SWAYNE said that there was a specimen in the museum at Bristol, in which the external parts were like those in this case, but the internal organs those of a female.

Hypertrophy of Placenta.—Dr. HERMAN showed a specimen of hypertrophy of placenta. It had been removed piecemeal, and a large part left at the patient's house: the portion exhibited weighed more than four pounds. To the naked eye, its structure did not differ from that of normal placenta. The child was decomposing when born.—Dr. ROBERT BARNES had observed in some cases of hypertrophy of the placenta, dropsy of the placenta, and ascites and anasarca of mother and foetus. Possibly, the placental villi were overdeveloped, in order to find enough pabulum in the hydræmic blood.

Degeneration of Placenta.—Dr. CHAMPNEYS showed (for Dr. MURRAY) a placenta exhibiting fibrinous degeneration on the uterine, and calcareous degeneration on the foetal surface. The child was born alive.

On an Obliquely Contracted Pelvis of Unilateral Synostosis.—Dr. CHAMPNEYS read a paper on this subject. The pelvis was that of a child aged between 7 and 15, in which the changes at puberty had already slightly commenced. At this point, the left sacro-iliac joint became inflamed, leading to synostosis of part of the articular surface.

The left half of the sacrum was dwarfed, and the bone rotated so as to look somewhat to the left. The left half of the pelvis was narrowed, the pubic symphysis driven to the right, and its left half displaced behind the right; but, compared with most Naegelé pelves, the outline of the brim was less straight, there was less verticality of the ilium than usual, and there was no evidence of transverse rotation of the left os innominatum on its acetabular axis. The author considered the specimen one of a half-developed obliquely contracted pelvis of unilateral synostosis, most instructive in its bearing on the production of the typical pelvis of Naegelé.—Mr. GRIFFITH thought that the synostosis was congenital. If so, Dr. Champneys's theory would require modification.—Dr. CHAMPNEYS thought the joint showed clear evidence of disease.

Transverse Septum in the Vagina.—Dr. GERVIS described a case of the above malformation. The patient was aged 22, and menstruated regularly. She sought advice on account of pain in micturition, due to an urethral caruncle. About one and a half or two inches from its orifice, the vagina seemed to end in a *cul-de-sac*, having on each side a pouch, giving at first the impression that there was a double vagina. In the left cornu was a small opening admitting a probe into a space beyond. The hymen was present. The uterus could be felt from the rectum. The septum was divided with the thermo-cautery, giving exit to a quantity of brownish mucus. A granular erosion surrounded the os uteri. The caruncle was at the same time removed. The patient did well, and the endocervicitis began immediately to improve, when freed from the apposition of retained secretions. The author remarked on the value of the thermo-cautery in lessening the risk of septic infection in such cases.

Case of so-called Imperforate Hymen.—A paper on this subject, by Dr. MATTHEWS DUNCAN, was read. He was induced to relate the case by three circumstances. 1. There was a remarkable absence of any kind of suffering during nearly the whole time of the development of the disease. The patient had never menstruated, nor suffered from any uneasiness in connection with that function, until eight months before admission, when she was told by a medical man that she had a lump in the lower belly. Since then, she had suffered from irregular aching. The author thought the probable explanation of this was, that the uterine body was not distended; for facts showed that dilatation of the uterine body was more difficult and painful than dilatation of the vagina and uterine cervix. 2. The case illustrated the treatment without any injections, which had been the subject of remarks at a recent meeting of the society. An incision was made by Paquelin's cautery-knife. About 25 ounces of the usual treacly fluid escaped; about 20 ounces on the following day, and the last of it on the fifth day; in all about 50 ounces. At no time had it any fetor. No hypogastric pressure or interference with the flow was permitted. A piece of carbolised lint was put to the vulva. The patient made an uninterrupted recovery. He thought the risk of peritonitis was increased by the washing out sometimes practised. He thought the cautery-knife was preferable to any other mode of making the incision, because its wound was not an absorbing surface. 3. The condition of the pudendum rendered the term "imperforate hymen" erroneous and misleading. The vagina was closed by the membrane, upon which the hymen could be seen, entire and healthy; and after the operation, the hymen could be seen to have its normal position and relations. He had made the same observation in other cases; and he had seen the hymen present when vagina and uterus were both absent. On these grounds, he regarded the view of M. Budin (that the hymen was nothing but the anterior extremity of the vagina) as incorrect.—Dr. ROBERT BARNES said that, in these cases, toxæmia arose before the blood was evacuated, from decomposition of the hæmato-globulin in the retained fluid. He had not used injections; they were not called for in all cases.—Dr. GERVIS could hardly accept Dr. Duncan's view, that the membrane occupying the area within the hymen was the vaginal wall. He thought the variations in shape of the hymen, and the absence of muscular fibres in it, militated against M. Budin's view.—Dr. CARTER had had under his care a case similar to that described by Dr. Gervis. He had divided the septum, and the patient did well. He thought washing out was meddlesome, unless the discharge were offensive, or there were symptoms of septicæmia.—Dr. ROGERS mentioned a case under his own care. Some pyrexia followed the operation. The vagina was not washed out till a week after the operation, and, when this had been done, the pyrexia subsided.—Dr. GALABIN thought it an important question whether, in these cases, it was desirable to use injections immediately, after an interval, or not at all. The danger was greater the higher the atresia was situated. He had known of two cases of high obstruction, in which death had followed evacuation, although no syringing was used. Emmett had published a number of cases, many of them of atresia high up, in which recovery had followed treatment by injections. He (Dr. Galabin) generally

let the fluid flow for twenty-four hours, and then began antiseptic injections. All his cases so treated had been successful. Perhaps it would be best if a perfectly aseptic condition could be maintained by antiseptic dressings.—The PRESIDENT said that Dohrn had entered elaborately into the developmental histories of vaginal closures. What he (Dr. Duncan) wished to show was, that cases with blue thin-walled bulging between the labia were generally, often erroneously, called imperforate hymen; whereas in many, and also in cases where there was no vagina, a hymen could be distinctly seen.

New Intra-uterine Stem Pessary.—Dr. SWAYNE showed a new form of stem-pessary. It consisted of a perforated vulcanite stem, which rested on an India-rubber band, attached to a modification of Greenhalgh's pessary. These were introduced separately, but, when *in situ*, united by a silk thread. The advantages he claimed for it were, that it was easily introduced, kept in place, and allowed uterine mobility—so that it was free from some of the dangers that attended stem-pessaries. He should only use stem pessaries when simpler and safer means of treating uterine flexion had failed.—Dr. HEYWOOD SMITH asked what advantages Dr. Swayne's pessary had over that of Dr. Wynn Williams.—Dr. EDIS thought stem-pessaries very dangerous. The position of the uterus was too much regarded, whereas its condition was the chief thing. Numbers of cases of pelvic peritonitis occurred from the injudicious employment of stem-pessaries, producing much suffering and, not unfrequently, death.—Dr. ROGERS did not think Dr. Swayne's instrument more perfect than that of Dr. Wynn Williams.—The PRESIDENT did not use any kind of stem-pessary. He had known of many deaths from them, but he never knew of a case of version or flexion cured by them.—Dr. ROBERT BARNES thought stem-pessaries necessary in some cases. Accidents had occurred from them; but now more scientific instruments had been contrived. He preferred that of Dr. Greenhalgh. He had cured cases of anteversion with stem-pessaries.—Dr. HERMAN had known of a death following the use of one of Greenhalgh's stem-pessaries.—Dr. SWAYNE said that, in his pessary, the India-rubber supporting the stem was firmer than in that of Dr. Wynn Williams. He had used it many times, always with good results. He had always carefully watched the patient, and withdrawn the stem whenever it gave rise to pain or rise of temperature.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

THURSDAY, OCTOBER 12TH, 1882.

WILLIAM BOWMAN, F.R.S., President, in the Chair.

THE PRESIDENT said that he had great pleasure in announcing that the second volume of the society's *Transactions* was ready for delivery. Great praise was due to the secretaries for the punctuality with which the volume appeared. The volume was somewhat larger than the first, and would, he thought, be found to be of equal value.

Chronic Tubercle of Choroid and Brain.—Dr. STEPHEN MACKENZIE said that the patient, whose case he was about to describe, was a girl, aged 14. There was no tubercular history, but eighteen months before death she had suffered from whooping-cough, and had never been well afterwards. Headache, diarrhoea, vomiting, and loss of flesh, were followed by a white swelling of the right knee. Sight was subsequently rapidly lost. When first observed she was flushed and feverish, and quite blind. The ophthalmoscope revealed double papillitis. In the left eye, and to the outer side of the disc, was a large patch of choroidal disease, opaque and yellow in the centre, with a zone of black pigment; below the disc was a circular patch, over which curved retinal vessels; in the right eye one small patch existed. Acute cerebral symptoms, accompanied by a high temperature, supervened, and death occurred. The *post mortem* examination of the head showed a condition of acute tubercular meningitis, together with several caseous tumours, which were found, on microscopical examination, to consist of aggregated tubercle. The choroid was thickened by tubercles, the retina was swollen, and the optic nerve showed marked signs of inflammation. The case was a rare instance of the tubercular disease of the choroid was of service in confirming the nature of the encephalic lesion. Deutschman had found, by experiments on rabbits, that the induction of tuberculosis in the meninges and the brain was followed by double papillitis, and tubercle of the vitreous body and choroid, and he had traced the process to metastatic infection along the sheath of the optic nerve; he had also recorded a case of tubercular meningitis in a child, where tubercle of this sheath was present. Dr. Mackenzie, however, pointed out that the present case lent support to the theory of this direct connection between tuberculosis of the brain and eye, and drew attention to the similarity of changes in the eye and brain, as showing the pathological processes as well as aiding in diagnosis.

Tuberculous Mass growing from near the Optic Disc.—Dr. BRAILEY

said that, in this case, a tuberculous mass, apparently primary, springing from the optic disc and from the immediately surrounding choroid, simulated in some of its clinical features a glioma; the globe was enlarged, tension was increased, the anterior chamber was deepened, and the cornea was enlarged; the retina, except at the ora serrata, was detached, and with its vessels visible through the clear lens. There were many minute posterior synechiae. The mass presented, when examined after removal of the eye, all the histological evidences of tubercle; it replaced the tissue of the papillae, but did not extend backward beyond the *lamina cribrosa*, nor to any great extent into the choroid. As there was no evidence that it originated in the retina, Dr. Brailey was inclined to believe that it took origin in the choroid. The patient was a boy aged two years, who had been weak and thin, but was, when seen, stout and well; his mother had died of consumption. The after-history of the child could not be traced.

General Military Tuberculosis: Tubercle in the Choroid, but not in the Meninges.—Dr. FRANCIS WARNER related the case of a girl aged 9 years. She presented continued fever and emaciation; the respirations were increased in frequency out of proportion to the pulse and temperature; this averaged 102° to 103° Fahr. There were crepitations over the lungs, but no signs of pneumonia. The optic discs appeared healthy, but in each eye there were three or four light-coloured, raised, cloudy spots, at some points turning aside a retinal vessel. The child died eight days after these tubercles were first seen. At the *post mortem* examination, the lungs were found to be crowded with tubercles, which were found also in the liver, spleen, and kidneys. There was no meningitis, but tubercles were found in the choroid, on both sides.—Dr. E. B. BAXTER said that it was most desirable to make out what, precisely, was the common association of tubercle of the choroid. During the last twelve years, he had examined the eyes in tubercular meningitis, but he had never encountered tubercle in the choroid; papillitis he had generally seen. He had only seen choroid tubercle in two cases, and in both these cases there was no tubercle of the brain and meninges, but there was military tuberculosis of the lungs.—Dr. COUPLAND said that, in all the cases of tubercle of the choroid he had seen, which were not numerous, there had been tuberculosis also, not only in the meninges, but also of universal distribution. Cohnheim, he added, had found tubercular disease of the choroid to be a frequent accompaniment of chronic phthisis.—Dr. SHARKEY said that, during three and a half years during which he was resident at St. Thomas's Hospital, and examined eyes extensively, he only found tubercle of the choroid once *ante mortem* in meningeal cases.—Dr. BARLOW had seen about twenty cases of choroidal tubercle *post mortem*, and in a large proportion of these cases there was meningitis. He thought it most necessary always to have *post mortem* evidence of choroidal tubercle, and not to rely merely on the ophthalmoscopic appearances. In some cases of meningitis, in examining the choroid after death, he had noticed very fine tubercles, or what appeared to be such, "tubercular dust", as it had been called. He was glad to think that different stages in the development of tubercle of the choroid were being worked out. With military tubercle of the choroid we were already familiar. The case brought forward by Dr. Mackenzie was an instance of a chronic type. He referred to a case he had had under his care, where the eye was removed for a caseous mass in it, and where, after death, which occurred some time afterwards, caseous tubercle of the brain was found.—Dr. SANSOME thought the chief value in the diagnosis of tubercle of the choroid was the assistance it gave in the prognosis of doubtful cases; in one case of ordinary phthisis, he had found choroidal tubercle, and had been led to a correct diagnosis, though there was at the time no evidence of intracranial mischief. But he thought they were likely to be misled by seeing tubercle of the choroid; in one such case he had given a most unfavourable prognosis, which was entirely falsified; he had, therefore, ceased to believe that choroidal tubercle was a certain sign of meningitis, and to be depended on in prognosis.—Mr. HULKE thought that the anxiety expressed by the last speaker was unnecessary. In his experience, optic papillitis was generally seen in meningitis, while tubercle of the choroid was a part of a general tuberculosis, and seldom seen except in that connection.—Mr. BAUDENELL CARTER considered that, in advanced cases of meningitis, papillitis was generally present, and not choroidal tubercle, which, however, might be found in general tuberculosis. He thought that appearances were often encountered in the eyes of healthy people which might easily be mistaken for tubercle of the choroid; reliance ought chiefly to be placed on the general symptoms.—The PRESIDENT said that this discussion was an instance of the usefulness of the Society, which brought to a common focus the experience of physicians and ophthalmic surgeons.

Certain Cases of Destructive Ophthalmitis in Children.—Mr. NETTLESHIP said that his chief object was to draw attention to cases of deep-seated disease, which simulated glioma of the retina in their clinical

features. He believed that there were two principal types of morbid change in this class of cases, viz.: (1) irido-choroiditis, either acute and almost purulent, or chronic, the result of either form being opacity in the vitreous body, with subsequent detachment of the retina, and backward displacement of the ciliary processes, from shrinking of the inflammatory material; hæmorrhage between the choroid and retina might also occur; and (2) inflammation and condensation of the vitreous body, especially in its outer layers, and in some cases also in its antero-posterior axis, probably the result of a chronic severe retinitis, without detachment of the retina. Iritis occurred in nearly all cases of "pseudo-glioma," and there was often at an early period severe inflammation of the eye. Information was specially needed as to the causes of these eye-changes. It ought to be more widely known that these conditions of pseudo-glioma often came on during, or soon after, some severe illness, and that a considerable number of the children were syphilitic. Measles, whooping-cough, varicella, perhaps pyæmia, and sporadic meningitis, appeared, from the cases Mr. Nettleship had collected, to be the commonest antecedents; he desired, especially, evidence as to the nature of the connection between the ocular and constitutional conditions.—Dr. BARLOW had seen five cases of this disease, and in three of these he had had a suspicion of syphilis. He protested, however, against assuming syphilis to be the cause of every diseased condition in every person who had had, or whose parents had had, syphilis. In these cases, he did not imagine there was any causal relation to syphilis. On the whole, he thought the hypothesis of a pyæmic origin the most tenable, but he had never been able to obtain *post mortem* evidence. In the case of one man who died of ulcerative endocarditis, he had seen extensive hæmorrhages and opacities of the vitreous body, and he thought there were grounds for believing that some cases might so begin. He could confirm the statement that a history of an earlier acute illness was generally given, that this illness appeared to cease, and that afterwards, when the child was seen, a more or less damaged eye was seen.—Dr. BRAILEY thought that embolism was the active agent in only a few cases; for, in the few cases of embolism he had seen, the appearances were very different. He thought the cases were instances of suppuration of the vitreous body. Mr. Hulke had commented on the frequency with which suppuration of this part occurred in weakly children.—Mr. WARE TAY had seen a case of double panophthalmitis with cerebro-spinal meningitis, and he believed the combination was not rare, and that it had been observed in the epidemic at Dublin.—Dr. STEPHEN MACKENZIE said that, though he had seen a good many cases of sporadic cerebro-spinal meningitis (which was to be distinguished from epidemic cerebro-spinal meningitis), he had never seen one case of panophthalmitis.—Dr. FITZGERALD (Dublin) only remembered to have seen one case of panophthalmitis in the epidemic at Dublin. In endocarditis, in puerperal cases, and after amputation, he had seen some cases. Dr. Stokes, he believed, had described it under the name of "sudden dissolution of the eye", as occurring in cases of heart-disease.—Mr. ADAMS thought that the discussion had wandered from the subject raised by Mr. Nettleship, which dealt with cases where, with clear media, the yellow reflex supposed to be always due to glioma was observed. It was most important to know what the prognosis was in such a case. Was it necessary to excise? He thought probably not.

Living Specimens.—Dr. SAMUEL WEST showed a patient who exhibited the changes occurring in leucocythæmia to a marked degree.—Mr. JULER showed a case of what he and Mr. A. Critchett considered to be chronic membranous, or so-called diphtheritic conjunctivitis. Five months earlier, the patient had some double conjunctivitis. As this subsided, a white patch appeared in the left eye, and subsequently extended; and, when the patient was exhibited, occupied the whole palpebral aperture. Within the last ten days, a similar patch had appeared in the right eye.—Mr. HENRY POWER had seen one case which he considered to be similar to this; in it, the growth in time involved the whole cornea, and grew out into a horny process like a rupial scab.—Mr. NETTLESHIP had seen a few cases of this disease, which he regarded as a chronic kind of diphtheria; and a few more cases were on record. In some, the membranous patch grew outward, and became polypoid. In one case, under his own care, he had found lapis divinus of great use.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, OCTOBER 24TH, 1882.

JOHN MARSHALL, F.R.C.S., F.R.S., President, in the chair.

On Dislocation of the Foot, with Version and Torsion of the Astragalus. By RICHARD BARWELL, F.R.C.S.—The author remarked that dislocation of the astragalus was not uncommon. The bone displaced

from the socket formed by the leg-bones as well as from the rest of the tarsus, received, in nearly all instances, a twist, so that its surfaces looked in abnormal directions. Another very rare form of injury of the astragalus was that of which the following case was an example. G. F., aged 28, received the injury by the overturning of a gig that he was driving, he falling on the right foot. The foot was greatly inverted, the heel raised; the inner malleolus was much obscured, the outer very prominent. The round head of the astragalus was in front of and below the external malleolus. Running from the head to the upper part of that malleolus was a ridge of bone convex outward. A small wound a little way up the leg communicated with the seat of injury. Attempts at reduction, even though the Achilles tendon was divided, were ineffectual. Mr. Barwell excised the astragalus. It was in its normal place in the tibio-peroneal socket, but was twisted so that the trochlea looked outward, and rested against the articulating face of the outer malleolus. The man did extremely well; he was discharged in three months, walking with crutches. After a few remarks on the difficulty of nomenclature in dislocation about the tarsus, the author referred to Malgaigne's description of version and torsion "*sur place*," the former referring to a turn of the astragalus on its perpendicular axis. Of these, Malgaigne gave four examples, and the author had collected two others; they all, with one exception, were inward. Torsion, by which he meant a twist on the antero-posterior aspect, was in reality more rare, although it would appear on first sight more common, because Malgaigne quoted six cases; but on examination of the original records, these changes he found to be not *sur place* save in one case (Dupuytren's), and even here the bone was nearly extruded; and one preparation, the history of which was unknown, and in which the turn was very slight. The author's case was the only one in which a diagnosis had been arrived at during life, and, as far as could be ascertained, the only one in which the bone turned a quarter of the circle, and lay fairly in the tibio-peroneal socket. An appendix was added giving a short description of every case both of torsion and version in corroboration of these statements. The patient was shown to the members present. He walked fairly well with the help of a stick. There was shortening to the extent of about half an inch.—Mr. SPENCER WATSON said that few surgeons had seen cases similar to that described by Mr. Barwell; and, indeed, dislocation of the astragalus was a rare injury. He mentioned a case of compound dislocation of the astragalus in a girl, aged 17. It was the result of a gas explosion, and was probably produced by the fall of a sewing-machine on the foot, causing a wound over the ankle through which the head of the bone protruded. The astragalus was at once removed, no further incision being required. In a short time there was very free motion of the ankle-joint; shortening had taken place to the extent of three-fourths of an inch. Some years later, the foot differed little in appearance from the sound one. He believed that in Mr. Barwell's patient the movements of the part would in time become more free.—Mr. BARWELL explained, on a dry specimen, the mechanism of the injury. He did not think it so difficult of diagnosis as the observations of Malgaigne, and other French writers, seemed to indicate. Any increase of power of movement would, he thought, be due to increased flexibility of the tarso-metatarsal joints. Synostosis, at the part where the astragalus had been removed, was necessary, to make the foot a firm base of support. He did not attempt to turn the bone round and leave it in its place, because it was cut off from the sources of nutrition to such an extent, that necrosis would be very probable.—The PRESIDENT said that such cases were very rare. There was great difficulty in comprehending the descriptions of dislocation of the astragalus, even in the works of the best writers on the subject. The removal of the bone was a necessity. The astragalus had this peculiarity—that no tendon was attached to it, through which it might receive nutrition. Its chief source of supply was through the astragalo-calcaneal ligament, and when this was torn through in dislocation, only a few feeble ligamentous bands remained elsewhere. Hence, in dislocation, the vitality of the bone was so seriously compromised, that its early removal was advisable.

Ophthalmoplegia Externa, complicating a Case of Graves's Disease.

By FRANCIS WARNER, M.D.—The patient was a woman, aged 25, and was the subject of Graves's disease of four years' standing. There was marked mental excitability, and she was frequently attacked with gastric crises, vomiting, dyspnoea, and palpitation. Both eyes were nearly immobile, a condition not accounted for by proptosis; this had existed five months before admission to hospital. Limitation of movements was not equal in the two eyes, and was greater in the horizontal than in the vertical directions; double ptosis was marked. There was also bilateral paresis of the seventh and fifth pairs of nerves, and marked tremor of the legs. There appeared to be no evidence of syphilis. Under treatment, the goitre subsided, and the general con-

dition greatly improved, but the ophthalmoplegia remained. The unequal amount of paralysis of the two eyes was taken as some evidence of an independent nerve-centre for the movements of each eye, and this was supported by observations in infants in deep sleep and adults in coma, when either eye might be seen to move separately and independently. Again, the greater limitation of movement in the horizontal as compared with the vertical direction, was pointed out, as probable evidence, that separate centres governed these movements respectively.—Mr. HENRY POWER asked for information as to the connection of the sympathetic system with the phenomena of Graves's disease. Several symptoms pointed to such a connection; such as the force and frequency of the heart's action, and the various crises—bronchitis, tonsillitis, diarrhoea, gastric crises, etc. In the present case, the exophthalmos did not appear sufficient to account for the impaired movements of the eyelids. In some cases, probably from lymphatic effusion at the base of the orbit, the eye was so much thrust out as to impair movement. Symptoms were present in Dr. Warner's case which were rare in Graves's disease. For instance, there was ulceration of the cornea, which he had not seen in other cases. The ulceration was probably due to the loss of power in the superior and internal recti muscles to turn the eye outwards and inwards during sleep. He thought that there must in this case be some morbid condition affecting the fifth nerve; and that the ophthalmic symptoms were only secondary.—Dr. ALTHAUS said that the case was very rare and complex. He had seen many cases of Graves's disease without ophthalmoplegia, and *vice versa*. There was much obscurity as to the connection of Graves's disease with the sympathetic; in some cases, lesions of the cervical ganglia had been found, while they had been absent in others. He believed that syphilis was not a cause of ophthalmoplegia. Mr. Jonathan Hutchinson had seen ophthalmoplegia interna to lesion of the ventricular ganglion, and ophthalmoplegia externa to injury of the muscles of the third nerve. Dr. Althaus believed that the idea of the connection of the ventricular ganglion with internal ophthalmoplegia must be abandoned; and that both forms must be referred to lesion of the muscles of the third nerve at different parts. The case was one of much interest. The ophthalmoplegia remained; and there was a condition in which the prognosis was always unfavourable.—Dr. G. H. SAVAGE had seen several cases of Graves's disease among insane persons, with ophthalmoplegia. In several cases, the patients died of diarrhoea. He had examined the sympathetic in two cases, and found it healthy. In one of the cases, the suprarenal bodies were pulpy and broken down. There was no reason for suspecting the presence of syphilis. That Graves's disease was a very general nervous affection, which presented itself in three or four conditions, and had not yet been realised.—Dr. B. O'CONNOR thought that the disappearing swelling was rather unusual in Graves's disease.—Dr. WARNER believed that in his case there was affection, not only of the nerves of the eye but also of the fifth and seventh nerves. There were also indications that the spinal cord was not healthy. The patient had been watched carefully during several months, but no indications of syphilis could be found. The corneal ulcers were strictly local; and were probably much more connected with lesion of the fifth nerve than with syphilis. He regarded the ophthalmoplegia as a permanent lesion. The exophthalmos was at no time very marked.

A Dry Vapour Apparatus for Surgical Operations, devised by Mr. J. B. BROWN, of Manchester. It was capable of being charged with any antiseptic. (See BRITISH MEDICAL JOURNAL, October 15th, 1881.)

The apparatus, charged with glycerine and spirit, was also

MANCHESTER MEDICAL SOCIETY.

THURSDAY, OCTOBER 4TH, 1882.

F. BROWN, Esq., Vice-President, in the Chair.

The first subject for discussion was a case of *Hydatid Disease of the Liver*, presented by Mr. J. B. BROWN, of Manchester. The patient was a man, aged 40, who had been ill for some time, and was found to have a large tumour in the right side of the chest. The tumour was found to be a hydatid cyst, and was removed by Mr. BROWN.

The second subject was a case of *Hydatid Disease of the Lung*, presented by Mr. J. B. BROWN, of Manchester. The patient was a man, aged 30, who had been ill for some time, and was found to have a large tumour in the right side of the chest. The tumour was found to be a hydatid cyst, and was removed by Mr. BROWN.

The third subject was a case of *Hydatid Disease of the Kidney*, presented by Mr. J. B. BROWN, of Manchester. The patient was a man, aged 40, who had been ill for some time, and was found to have a large tumour in the right side of the chest. The tumour was found to be a hydatid cyst, and was removed by Mr. BROWN.

The fourth subject was a case of *Hydatid Disease of the Spleen*, presented by Mr. J. B. BROWN, of Manchester. The patient was a man, aged 30, who had been ill for some time, and was found to have a large tumour in the right side of the chest. The tumour was found to be a hydatid cyst, and was removed by Mr. BROWN.

The fifth subject was a case of *Hydatid Disease of the Ovary*, presented by Mr. J. B. BROWN, of Manchester. The patient was a woman, aged 30, who had been ill for some time, and was found to have a large tumour in the right side of the chest. The tumour was found to be a hydatid cyst, and was removed by Mr. BROWN.

The sixth subject was a case of *Hydatid Disease of the Uterus*, presented by Mr. J. B. BROWN, of Manchester. The patient was a woman, aged 30, who had been ill for some time, and was found to have a large tumour in the right side of the chest. The tumour was found to be a hydatid cyst, and was removed by Mr. BROWN.

of two. The woman had never suffered any pain, nor had there been any cerebral symptoms. The tumours were examined by Dr. Dreschfeld, who found them to be small round-celled sarcomata. The woman had always been fairly healthy; her family history was good. She had, however, for years been addicted to drinking.

Fracture of the Orbit.—Dr. A. EMRYS JONES showed a man who had been injured by the strap of a carding engine. On examination, both lids were found severely lacerated, and a piece of bone protruding through the upper lid; the right eyeball was completely destroyed. The patient was put under the influence of chloroform, the lids adjusted and stitched, the piece of bone dissected out, and also the remains of the eye. The bone was found to be a piece of the orbital plate of the frontal bone, about an inch and half long, and including the orbital notch. By digital examination, the fracture could be distinctly felt extending backwards to the apex of the orbit. There was very little hæmorrhage. The patient was kept quietly in bed. There were no alarming symptoms, and he made a complete recovery.

Some New Ways of Testing for Albumen in the Urine.—Dr. WILLIAM ROBERTS read a communication, in which he stated that the power of metaphosphoric acid to precipitate albumen was pointed out by Graham, in his classical researches on the modifications of phosphoric acid. The glacial phosphoric acid of the shops was merely pure metaphosphoric acid. A twenty per cent solution of the glacial acid made a most sensitive test for albumen in the urine. It was, if anything, more sensitive than nitric acid, and had the advantage of not being corrosive. Besides albumen, it also threw down peptones. It had, however, the serious disadvantage that it changed, on keeping, into the ordinary phosphoric acid, which did not precipitate albumen. In a few weeks, solution of the glacial acid became quite inert in albumen. This liability to change unfitted the metaphosphoric acid for ordinary clinical work as a test for albumen. Dr. Roberts proposed a second test, which, he thought, would prove more useful. It consisted of a saturated solution of common salt, acidulated with five per cent. of dilute hydrochloric acid (*B. P.*). It was applied exactly in the same way as nitric acid. A little of the suspected urine was poured into a test-tube, and then, the tube being held very obliquely, the brine was allowed to trickle to the bottom of the tube, so as to form a distinct layer below the urine. If albumen were present, a white cloudy zone formed at the junction of the two fluids. The precipitation of albumen by acidulated brine was not a true coagulation, and the precipitate was redissolved by adding an excess of the urine and shaking up, or by the addition of water. It was therefore necessary, for the efficient application of the test, that the brine should be in excess at the point of exposure to reaction. The brine-test was fully as delicate as nitric acid, and it had the advantage of not being corrosive. It did not throw down the urates as nitric acid sometimes did, nor did it deepen the tint of high coloured urine, nor cause the disengagement of gas. In all these respects the brine-test presented a distinct superiority over nitric acid. The acidulated brine precipitated peptones, so that occasionally it produced a cloudiness in urines which yielded no reaction with nitric acid. Dilute sulphuric, dilute nitric, or dilute phosphoric acid, could be used to acidulate the brine instead of hydrochloric acid, and the test so prepared was equal in sensitiveness with that prepared with hydrochloric acid.

Removal of Larynx.—Mr. WHITEHEAD showed a man whose larynx he had successfully extirpated five months previously, on account of an epitheliomatous growth involving the right vocal cord and the upper part of the trachea. The patient's voice was restored after some weeks after the operation, but gradually became hoarse, and was healed; it could still, however, be distinguished from the normal voice. The patient now was quite free, took his food without inconvenience, and enjoyed life. There was no evidence of recurrence.

Removal of Scrotum and Penis.—Mr. WHITEHEAD also showed a man whose scrotum and the skin of the penis he had removed, on account of an epitheliomatous growth involving the scrotum and the penis. The patient was cured, and was able to take his food without inconvenience, and enjoyed life. There was no evidence of recurrence.

The patient was cured, and was able to take his food without inconvenience, and enjoyed life. There was no evidence of recurrence.

were present. A basic systolic murmur was heard, of maximum intensity at the top of the sternum, well conducted down this bone, and for a short distance to the right and left of it. It was not heard at the apex, and was faintly heard in the carotids. There was a trace of albumen in the urine. She had had good health during childhood. The chief lesion was thought to be pulmonary stenosis associated with insufficient septa, and probably also with a patent ductus arteriosus. The conduction of the murmur to the right and into the arteries of the neck was not easy to explain.

Vesical Calculus.—Mr. STOCKS mentioned a case of multiple vesical calculi, in which thirty-seven stones had been removed by lateral lithotomy. These stones, altogether weighing upwards of four ounces, had not been discovered on repeated soundings, until the patient had been placed on his right side, and the finger inserted into the rectum. He had at various times passed fragments of stone, which led to the supposition that the prostate was the seat of the calculi. The patient was aged 67 years, and sank somewhat suddenly on the fifth day. Unfortunately, owing to the *post mortem* examination being conducted in a very imperfect manner, no explanation of the difficulty in detecting the stone could be given satisfactorily, although "sounding" had been repeatedly performed, not always by the same hand, and a silver catheter passed into the bladder forty or fifty times without any click being produced. The stones were composed of two classes. 1. Some had a minute "rape-seed" nucleus of oxalate of lime covered with a deposit of uric acid, forming stones three-eighths of an inch in diameter, having remarkable radiating lines in them. These again were incrustated with earthy phosphates, and might be called primary stones, of which there were eight. 2. Some of the uric acid stones having split spontaneously in the bladder, apparently through the radiating lines above alluded to, had become, in their turn, nuclei on which the phosphatic deposit had taken place, forming the larger number of calculi (secondary), differing in no respects from the others in external appearance, except in size.

Hæmatidrosis.—Mr. STOCKS also mentioned a case of hæmatidrosis occurring in a young lady, aged 21, tall, ladylike, intelligent—not hysterical—who had had fairly good health, and began to menstruate at 13 years. She had suffered frequently from dysmenorrhœa and menorrhagia, and had had three fits (epileptic) three years ago. She had since had headache and hyperæsthesia of the scalp for two days, and on awaking in the morning had found her body flannel and pillow-slip speckled with small reddish spots. Similar spots were discovered on her scalp and back part of her neck, most profusely, but also scattered about the trunk irregularly. The spots on the head were innumerable, and consisted of small cases of dried colouring matter, of a magenta hue, easily removed, having a perfectly whole skin underneath. This coloured sweat, whether hæmorrhagic or not, appeared three nights in succession. It appeared that on these nights she had, during her sleep, some slight convulsive attacks, of which she was unconscious, but thought in the morning that something strange had happened, though she was surprised when told that it had happened to her. The coloured pillow-slip was shown, exhibiting numerous small speckled stains of darker hue, although the whole of that part on which the head had rested had a decided tinge.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

ORDINARY MEETING, OCTOBER 13TH, 1882.

J. E. EDDISON, M.D., President, in the Chair.

THE PRESIDENT, in opening the session, after thanking the society for the honour it had conferred upon him, remarked upon the large number of interesting cases which come under the notice of men in country practice, cases which were lost sight of unless brought before some such society as this. He was of the opinion that the comparative importance of hospital work was sometimes over-rated, and he pointed out how much easier it was for members in the country to observe the course of epidemics, to note special modes of infection, etc. He laid stress upon the necessity, in order to maintain the vitality of a medical society, that every one should, as much as possible, take an active part in the business of the meetings, both by presenting communications, and also by criticising the facts and opinions laid before the society by others. He specially requested members to bear in mind that the object of such societies was to discover what was valuable in any communication, and to separate what was essential from what was useless. This could only be done by free and straightforward criticism, and the worst compliment that could be paid to the author of a paper, was to treat his observations with extreme tenderness, and as if they would not bear any investigation. He then spoke of the progress of public

opinion in favour of the notification of disease, and referred to the fact that this progress of opinion had been almost entirely due to the medical profession. At the same time, he said that he was very strongly opposed to any legislation that would compel the medical attendant to report cases in his own practice; referring, amongst other illustrations, to the fact that even now an enormous number of cases of scarlet fever, for example, were never seen by any medical man; and he felt assured that such legislation would tend still further to induce people to treat slight cases without consulting any one. If the responsibility were placed upon the householder, he would have every inducement to call in his medical man to decide as to slight cases, and thus such cases would be seen in their earliest stage, and epidemics would be more easily controlled. Dr. Eddison then referred to various subjects which he thought might with advantage be discussed during the session, amongst others, the period in which scarlet fever was infectious; whether, for example, it was (as it had sometimes appeared to be) infectious after desquamation had entirely ceased, and the question whether phthisis was infectious in any form. After some further remarks, he requested members to suggest other subjects for discussion, and concluded by again urging all of them to take an active share in the work of the Society.

Myxomatous Papilloma of Vagina.—Dr. JACOB showed microscopical sections from a pediculated myxomatous papilloma which had been removed by Mr. Jessop from the posterior wall of the vagina of a child, aged 4.—Mr. JESSOP said that the growth returned in six weeks, and was again removed, together with surrounding tissues, down to the mucous membrane of the rectum. After some weeks, the growth again returned.

Spray-Apparatus.—Mr. A. W. M. ROBSON showed an improved apparatus, made by Meyer and Meltzer, for using eucalyptus-spray.

Ulcers of Corneæ.—Mr. H. B. HEWETSON read the following case. A boy, H. J., had ulcers of the corneæ lasting three years, in spite of much treatment. The ulcers were at length touched with solid nitrate of silver, the patient being etherised. This proceeding was followed by acute pain, which entirely prevented sleep. Three days afterwards, Mr. Hewetson saw the patient, and found both corneæ on the verge of sloughing from purulent infiltration. He incised both corneæ, after the "central" method of Mr. Teale, evacuating purulent aqueous humour. The boy went to sleep at once, and was thenceforward entirely free from pain. In five weeks, the corneæ were clearing rapidly. Now, after two years, one cornea was almost perfectly clear; but the other had a central scar. Mr. Hewetson remarked upon the danger of applying nitrate of silver to corneal ulcers, saying that, unless they had in this case been incised, both corneæ would have sloughed, and vision would have been utterly lost.

Cyst of Liver.—Mr. F. H. DRAKE related this case. J. W., aged 15, while at play on August 2nd, was thrown down, another boy falling upon him. He was taken home, and lay in bed next day. On the following day, he went to work, complaining merely of soreness. In a week's time, it was noticed that his abdomen was large. On examination on August 16th, it was found to be distended with fluid, and tender. In a day or two, he became worse: the face anxious, legs drawn up, some colicky pain, frequent vomiting, and frequent painful micturition. Temperature 100°; pulse 99. On August 27th, he was suffering greatly from distension. Mr. Drake therefore tapped the abdomen with a Southey's trocar, drawing off two quarts of serum, tinged apparently with blood. On the next day, the pulse and temperature were normal, appetite was good, and the patient wished to get up; but, on the 29th, the symptoms returned; three quarts of bile-tinged fluid were withdrawn. Again he felt quite well; his spirits and his appetite were good; but again, on September 4th, he required operation, the fluid being now thicker, and at last, after flowing for three hours, blocking up the cannula. And now he was failing rapidly: cough, congestion of the right lung, emaciation, feeble and rapid pulse, and vomiting, remained. A fourth tapping on September 10th produced a paler but glutinous fluid, which, upon standing, looked like yolk of egg. He became still weaker, wasted almost to a skeleton, and died on September 14th, six weeks after the accident. During a part of his illness, a rash resembling urticaria appeared upon the chest and arms. **Necropsy.** The tissues were very pale; the abdomen was filled with brownish fluid. There was very little evidence of peritonitis; no adhesion of intestine; no flakes of lymph on the peritoneum, which was smooth, and but very slightly reddened. A large cyst was found to occupy nearly the whole of the right lobe of the liver. This cyst communicated with the peritoneum by a large ragged opening on the upper surface. The author remarked upon (1) the entire absence of symptoms previously to the accident; (2) the toleration by the peritoneum of the fluid from the ruptured cyst—a whole week having elapsed before anything at all was noticed in the abdomen, and a fortnight before serious symptoms occurred;

(3) the large quantities of fluid subsequently formed; (4) the immediate disappearance of symptoms after withdrawal of the fluid, pain returning only when the abdomen refilled.—Dr. BARRS, who had seen the case during life, and had assisted at the *post mortem* examination, said that urticaria had been noted by writers as occurring in cases similar to this; and that it was supposed to be due to the absorption of chitinous material furnished by the cyst-wall.

Ulcerative Endocarditis.—Dr. CHURTON read a case of acute ulcerative endocarditis, affecting the pulmonary valves, and showed the specimen, which was remarkable from the fact, that one curtain of the pulmonary valve was represented by a thin line of granulation; and another had a perforation large enough to admit the little finger.

Injury of Extensor Tendon of Middle Finger.—Mr. MAYO ROBSON read notes of the following case. A lady accidentally divided with a knife the extensor tendon of the middle finger, on the back of the hand. A fortnight afterwards, she consulted Mr. Robson, on account of the resulting deformity—the finger being constantly flexed at right angles to the hand. The ends of the divided tendon were more than an inch apart. The wound in the skin had healed. A longitudinal incision, three-fourths of an inch in length, was made over the tendon; the ends were refreshed, and then joined together by a single silkworm-gut suture. The wound healed rapidly; but, at the end of a fortnight, the ligature could still be felt beneath the skin, and caused slight irritation. On removal of the ligature, the irritation subsided. For a month the finger was kept upon a splint; the power of extension was then found to be perfectly restored, and was still (after six months) retained. It had been stated that silkworm-gut ligature would become absorbed if buried in the tissues, but would resist solvent action longer than catgut: hence the choice of this material. On removal, at the expiration of a fortnight, it was in this case only partially dissolved; but this might possibly have been due to its superficial position.

REVIEWS AND NOTICES.

LEGAL MEDICINE. PART I. By C. MEYMOTT TIDY, M.B. London: Smith, Elder and Co. 1882.

THE handsome and important octavo of 633 pages now before us, forms the first instalment of a great work on Forensic Medicine, projected by Dr. Letheby's able successor in the chair of forensic medicine at the London Hospital Medical College. The author in his preface gracefully acknowledges his indebtedness for much valuable matter, characterised by a depth and originality of thought, and a rare grasp of details, to the manuscript notes of his old master and colleague, who at his death entrusted his papers to Dr. TIDY'S care. The magnitude of the task undertaken in the writing of the work, of which this forms only a part, may be judged when we state that Part I treats only of evidence, the signs of death, identity, the causes of death, *post mortem* examinations, sex, monstrosities, hermaphroditism, expectation of life, presumption of death, survivorship, the effects of heat, cold, lightning and explosives, and starvation. These subjects, it appears, formed the basis of Dr. Tidy's course on forensic medicine in 1881. It is evident that the ground to be travelled over in future volumes is immense, and we cannot but admire the indefatigable industry which has enabled the author, in the intervals of a busy life, to amass such a vast collection of valuable cases, and to enrich them so copiously with his own observations upon their bearings. No fewer than 557 cases are given, many of them being fully detailed.

It is impossible in a short article to pass in review more than a few points of the many subjects treated of in the volume under review. It commences with a chapter on Evidence, which is, as we are informed, the actual lecture as given by the author as an introductory to his course; and, coming from one so versed and so skilled as Dr. Tidy is in the witness-box, it forms a most valuable essay, and is indeed the most readable chapter of the volume. A good deal is necessarily borrowed from the late Dr. A. S. Taylor's standard work, but Dr. Tidy deals with the matter in a way peculiarly his own. His advice is well worthy to be pondered by experts—medical and scientific. "Be jealous," he says, "for truth, careless when you please or displease. Let not your judgment be influenced one iota by the solicitor who is conducting the case. Be careless which way the verdict goes so long as your evidence is that of honest conviction, of intelligent judgment, and of accurate observation." Brave words these; albeit, the sentiment is not new; like words are too often preached from the lecture table, and forgotten in the witness-box by those experts who undertake to deal with every branch of medical evidence in the witness-box. Again, he writes: "Do not attempt a wild conjecture (I beseech you) in the

witness-box. To be accurate is ten thousand times better than to appear brilliant."

Dr. Tidy's volume would, we think, have been more attractive had the lecture style of the first chapter been adhered to throughout the book. At all events, the style becomes, after the first chapter, singularly altered; and in many chapters, whole pages appear as if they were simply very copious lecture-notes, notwithstanding that they are so long as to indicate that the whole of the author's lectures must be given almost *in extenso*; and this though not one-half of the field of forensic medicine is even touched upon. The defect to which we have just adverted, while not, perhaps, detracting from the value of the work as a book of reference, renders it less readable than it would otherwise be.

The special feature of the work is that, contrary to the usual custom adopted in British text-books of forensic medicine, the cases are recorded at the end of the individual chapters in which they are referred to. The text is thus not incumbered with details.

In a work of such general excellence, it would be invidious to carp at minute details; nevertheless, there are some blemishes which require notice. In the first place, nearly all the chapters relating to combustibles and explosives might have been omitted with advantage, as inappropriate to a book on forensic medicine; we except that portion which relates to the alleged spontaneous combustion of the human body.

In treating of sudden death, the old division of modes of dying proposed by Bichat—death beginning at the head, the heart, and the lungs, respectively—is strictly adhered to; and the old and disused term *apnoea* is employed as synonymous with asphyxia. No reference is made to the modern use by physiologists of the term *apnoea* in a sense precisely opposite to the term asphyxia, and recent observations of Dr. Hilton Fagge and others on modes of dying are altogether ignored. We cannot help thinking that the physiology of this chapter is defective.

Under the head of putrefaction, the following singular statement is made (p. 107): "Putrefaction in many cases helps, rather than interferes with the toxicologist in his search for poisons." It would have been well to define the conditions thus referred to; and the caution may be added that, as alkaloidal bodies are among the recognised products of putrefaction, the search for known poisons is, on this account, often impeded. In connection with this subject, we may mention that phosphoretted hydrogen is given as one of the gases evolved in putrefaction. We are ourselves inclined to think, however, that Hoppe-Seyler is right in denying that this was ever developed in the decomposing animal body. Again, the author states, that stagnant air promotes, whilst air in motion retards putrefaction (p. 90). This statement is in direct opposition to common observation; and those who are accustomed to perform the last offices for the dead, are aware of the importance of keeping the atmosphere of the dead-room still, so as to avoid a frequent renewal of the atmosphere, if the corpse be required to keep well. Dr. Ogston's advice on this point is sound and practical. He says, "A small apartment should be chosen, the doors, windows, and fire-place should be kept closely shut, and the body be enclosed in the coffin, with its lid down."

The remarks we have made as to explosives are equally applicable to that portion of the book which is devoted to inks and questions of forgery. These are matters with which the medical expert, as such, is not called upon to deal, and they are best left to the chemical expert.

In dealing with blood-stains, hairs, and fibres, Dr. Tidy is thoroughly at home, and practical. It is a pity, nevertheless, that the coloured chart of blood-spectra which forms the frontispiece of the volume was not omitted. It is a pretty specimen of amateur artistic work, to which the author has affixed the inscription "C. Meymott Tidy pinxit." The colours are, however, not true to nature; and obviously the spectra are not drawn to a scale of wave-lengths, and thus the value of the chart is greatly diminished.

In the chapter on life insurance, the instructions for examination of patients is sound and practical. Too often what is here urged to be done, is neglected. How common it is to omit to examine the urine in such cases!

On the whole, we can highly recommend Dr. Tidy's book to the profession as a solid contribution to the subject of Forensic Medicine, and one which cannot fail to increase the author's reputation as a medical jurist.

MANUAL OF THE PRINCIPLE AND PRACTICE OF OPERATIVE SURGERY. By STEPHEN SMITH, A.M., M.D., surgeon to Bellevue and St. Vincent's Hospital, New York. London: Sampson Low, Marston and Co. 1882.

THIS work, one of the most complete and reliable we have yet seen,

was originally designed as a handbook for military practice, and had great favour bestowed upon it, in consequence of which it was enlarged to meet the requirements of general and civil practice. No better explanation of the general idea of the work can be made than by the following quotations from the author's preface as regards its arrangement. "It is an effort to realise, within its assigned limits, all that is at present known of the operative part of surgery, the organs of special sense being excluded. The highest degree of authority has been given to the text, by embodying the teachings of leaders in the profession in every subject. New theories and methods are noticed in the leading text only so far as they are obviously correct, or are sanctioned by the weight of responsible names" (we may remark here, however, that a good many English names are omitted).

In the general treatment of subjects, something more has been attempted than to give the mere formal details of operation, following the dictum of Malgaigne, who said that a treatise on operative surgery, to satisfy all the requirements of the age, should, for each operation, discuss indications, exactly study the surgical anatomy, review all the proceedings; and, after mature examination, and judicious choice of the best, describe the manipulation, with all the necessary details, point out the different methods of dressing, give a statistical account of successes and failures; and, finally, in necropsy, seek the cause of death in fatal cases. In carrying out this, our author has been most fortunate.

A treatise in itself, it is more than a manual of operative surgery; and we have derived great benefit, when in difficulty and doubt, in consulting its pages, when the clearness of its diction, the correctness of its statements, the weight of its authorities, and the learning and practical skill of its author, have readily solved anxious doubts. We wish Dr. SMITH's work all success in England, where, for works like this, the cry is "still they come," and still more, we believe, are coming.

THE CHAMBERLENS AND THE MIDWIFERY FORCEPS. By J. H. AVELING, M.D. London: J. and A. Churchill. 1882.

IN this scholarly and laborious work, Dr. AVELING has traced, with clear and faithful lines, the biographical portraits of those Chamberlens whose names are for ever bound up with the history of one of the most benign of medical instruments, the midwifery forceps. In this way, facts, of more than individual interest, have thus been rescued from oblivion: for, in the lives even of many ordinary men, occurrences arise which are of historical significance. As matters, in themselves of trivial importance, acquire unwonted interest if they be associated with the thoughts or deeds of distinguished personages, so matters of wide moment not unfrequently drop into the abyss of time, simply because they were attached to the lives and names of obscure individuals. Hence the special importance and value of such works as the one before us, which unfolds to posterity a complete picture, and by surrounding facts, otherwise isolated, with associations of deep interest, preserves them for future contemplation and instruction.

The true history of the forceps, as now exposed, is remarkable. As is now well known to every obstetrician, the latest and most scientific improvement in the instrument has been made by a Frenchman, Professor Tarnier of Paris. Dr. Aveling, in unearthing the memoirs of the Chamberlens, has conclusively demonstrated that the first forceps was invented by a Frenchman—Peter Chamberlen, the elder: for it appears that William Chamberlen, his father, was a Huguenot, and fled to England from France, just before the massacre of St. Bartholomew's. Further, Dr. Aveling has made it plain that Dr. Peter Chamberlen, in whose house several forceps were discovered, and who had been regarded as the inventor, was not so. Dr. Aveling, we think, justly defends the Chamberlens from the reproach cast upon them, of having kept the forceps a family secret. He remarks: "When the forceps was invented, the age delighted in mystery. No physician was considered accomplished in his art who knew nothing of astrology. The public readily believed in medical marvels, and resorted much to pretentious quacks, many of whom had special protection and privileges granted them. All that can be fairly said against the Chamberlens is, that they were no better than their neighbours; and that they failed to recognise the obligation, imposed upon all members of our noble profession, of publishing freely and immediately any new method of alleviating human suffering, which, by their industry or genius, they may have been able to discover." Dr. Aveling has produced a work which must always remain the classical history of the forceps. He has evidently spared no pains to gather into one garner everything that relates to it. The task has been with him a labour of love; none the less has he earned the gratitude of the profession, for having thrown clear daylight upon a subject hitherto enveloped in darkness and doubt.

The work is one of great interest, and will commend itself to its readers by its own merits more than by any praise we can mete out to it.

UNQUALIFIED MEDICAL PRACTITIONERS. Second Edition. Read at Meeting of Midland Medical Society, Birmingham, February 2nd, 1881.

THE SYSTEM OF UNQUALIFIED MEDICAL ASSISTANTS IN ENGLAND, AND THE USE AND ABUSE OF THEIR SERVICES. Read at a Meeting of the Staffordshire Branch of the British Medical Association, May 1882. By DAVID EDGAR FLINN, L.K.Q.C.P.I., L.R.C.S.I., Medical Officer of Health, Brownhills Urban Sanitary Authority, etc. Dublin: Fannin and Co. 1882.

WE noticed the first of the two papers contained in this pamphlet shortly after it was read, and have, therefore, only to congratulate its author on the demand for another edition. He will doubtless be pleased to learn that the facts contained in it were brought under the notice of the Royal Commission on the Medical Acts by more than one witness. The second paper deals with what is practically the same question—the extensive employment of unqualified assistants in branch practices, etc., and attempts to define more exactly the limits within which they may be properly employed. "In the first place, he (the unqualified assistant) should act directly under the supervision of his patron or principal; he should on no account be allowed to undertake the management of branch practices; he should not be permitted to attend cases of serious moment, or undertake any operation (minor or otherwise) without the presence of his principal.....finally, his duties in a practice should be limited to dispensing, and visiting cases of illness of the mildest form." All this is very good, even though addressed to a Branch of the British Medical Association; it savours rather of what the French call "preaching the converted". The author is not so happy, it seems to us, when he comes to attack the abuses of the system of which he complains. "Now, what are the abuses that are made of the services of unqualified assistants? Their name is legion. The unqualified assistant is, in my opinion, unjustly thrust upon society at large, and undertakes the roll (*sic*) of doctor with as much self-assertion and confidence as if he were a Jenner, a Stokes, or a Nélaton. He appears before the world in a character that is not real, but hypocritical; he visits his master's patients, and assumes an air of knowledge that is absurdly ridiculous; he drives about town in his master's gig," and so on.

It would be very sanguine to anticipate that these, or even the more serious evils attendant on unqualified practice, are likely to be removed by any fresh legislation. The Royal Commissioners have reported that it is, in their opinion, undesirable to attempt to prevent unregistered persons from practising; and there are undoubtedly difficulties connected with such an attempt which all must recognise. One question which would immediately arise is, how are the poor, who now go to medical "assistants" and chemists' shops, to be attended to? We doubt if two out of every ten practitioners who hold a licence from the Hall would care to open an apothecary's shop, particularly in poor neighbourhoods; but, unless some such facilities were afforded, the public would be very likely to accuse us of acting the part of the dog in the manger. If the Medical Council or the Apothecaries' Company can devise a means of supplying this public want, they will confer a real benefit on the better class of poor; but, unless all sides of the question are considered and provided for, we fear we must expect to see a return to the state of things which existed before the Act of 1815.

NOTES ON BOOKS.

Some affections of the Organs of Respiration in which the Syrup of the Hypophosphites is Beneficial. London: James J. Fellows. 1882.

—This is a pamphlet of about fifty or sixty pages, containing reports of cases in which the syrup of the hypophosphites proved beneficial. It comprises an account of the medicinal treatment of asthma, emphysema, chronic consolidation of the lung, chronic bronchitis, and pleuritic effusion. It has been carefully compiled, and contains a great deal of useful information.

EARACHE.—In the American Medical Association, Dr. Jacobi remarked that closing the mouths of infants and children, and simply blowing into the nose, is often a very valuable method of relieving severe earache, and that, in a number of cases, he had obtained most excellent results from this procedure, the cause of the trouble probably being a catarrhal affection of the Eustachian tube.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st.

Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 28th, 1882.

MILITIA SURGEONS.

IN the JOURNAL for October 14th, we published a letter from Mr. Ralph Thompson, Under-Secretary of the War Office, on behalf of the Secretary of State at War, addressed to Mr. Ernest Hart, chairman of the Parliamentary Bills Committee, in reply to his letter of May 26th last, and also to our article relating to the legal rights of militia surgeons to retiring allowances and pensions, which was quoted in that letter. We cannot but express surprise and disappointment at the nature of his official reply, which, in our opinion, does not satisfactorily answer any one of the legal and equitable points contained in the letter of May 26th. We are, indeed, obliged to take exception to nearly every statement contained in Mr. Thompson's communication; and we assert, with some confidence, that none of the arguments contained in Mr. Hart's communication have been at all adequately answered by Mr. Thompson.

Taking paragraph 1, we still assert there is nothing in the Militia Acts, from George III to Victoria, which even implies that it was necessary that surgeons of militia should belong to the permanent staff. The wording of these several Acts state distinctly that "all surgeons of militia who shall have served twenty years and upwards, shall be entitled to, and receive, certain pensions on being retired from age or infirmity." That this is clearly the law of the case admits of no doubt. If this were not so, how can Mr. Thompson account for the fact that assistant-surgeons, subalterns, and paymasters who were never on the permanent staff, received half-pay or pensions from the very first existence of the militia, and for long after the disestablishment of the permanent staff? The Pay and Clothing Acts to which Mr. Thompson refers were merely supplementary Acts, providing for payment of pensions secured to all the several officers above mentioned, who were never members of the permanent staff. It is, therefore, evident that the Pay and Clothing Acts to which he alludes have no bearing whatever on the arguments on which we base the claims of militia surgeons to pensions.

Mr. Thompson is also entirely in error when he states that residence at headquarters was no longer compulsory. It can be proved from numerous cases that residence has been strictly enforced, and, in many instances, has been attended with considerable pecuniary loss to those thus compelled to reside, more especially during the last eight or nine years, when the establishment of brigade depôts at the headquarters of militia regiments deprived the militia surgeon of all his emoluments, save and except twenty-seven days' training, the pay for which barely suffices to meet the mess expenses, band and mess subscriptions, etc.

If surgeons of militia were not entitled to pensions, how was it that Lord Panmure issued a circular in 1854-55 granting half-pay or retiring allowances on certain conditions? Mr. R. Thompson is certainly wrong when he states, in paragraph 2, "that the pension of 6s. a day is to be given to surgeons who shall have been rendered unfit, by age or infirmity, previously to June 25th, 1820," and that no retiring allowance has been granted to any militia surgeon since 1820. We are, on the contrary, prepared to prove a case in which a militia surgeon retired in 1855, and was granted a pension of 6s. a day, no doubt in accordance with

Lord Panmure's circular. It will, we believe, be admitted that Mr. Thompson's contention is invalidated by such a case.

To paragraph 3 we entirely demur, especially where Mr. Thompson says that "no such right was ever possessed by militia surgeons." It is the very point contended for, that, by the general Militia Acts previously quoted, militia surgeons were, and are, possessed of these rights. It is not denied that the Crown has the power to decide at what age militia officers should cease to serve; but, as has already, in the previous letters, been pointed out, this may be fairly applicable to the combatant officers, who, as a rule, especially in the higher grades, are men of independent means, who joined the militia, not as a means of livelihood, whose only service comprises a period of twenty-seven days' training, and to whom the loss of pay for that period can be a matter of little moment; but it is far different for a professional man to be deprived at the very time he most needs it, and when he is unable to begin, as it were, life again—to have (as has been the case in a great number of instances) the larger portion, if not the whole, of his income swept away. He is thus, in many instances, turned adrift in his old age to seek the cold hand of charity, the aid of friends perhaps unable to aid him, or to seek a refuge within the doors of a workhouse, as, we are informed, has been the case in one instance. Her Majesty has the undoubted right, as Mr. Thompson says, to dispense with the services of any officer; but we doubt, if Her Majesty were made aware of the case of the militia surgeons, that she would ever consent that any officer who had rendered her good and faithful service, as militia surgeons have done, should be treated in this harsh, cruel, and arbitrary manner. It is, in our opinion, idle to talk of its being a boon to continue the services of the surgeon for five years longer than other officers; or to be told that at sixty years of age his retiring pension must cease. The Under-Secretary of War would certainly protest if he were told that his pension will be continued to sixty-five years of age, when it must cease, just when he might be expected to require it most, and, when unfitted by infirmities, to seek other employment. Such is the "boon" offered to militia surgeons.

In paragraph 4, Mr. Thompson alludes to what, he says, is a complaint the militia surgeons made in their petition: that their pay is very inadequate as compared with the medical officers of the regular army. We have already observed that this was not intended as a complaint, but simply a statement of actual facts, capable of proof; for instance, for a period of nine months in the year, the surgeon, if he be fortunate enough to be in charge of his staff, and employed in recruiting, performs all these duties—viz., attendance on the sick, supply of medicines, appliances, etc.—for a sum averaging from 2s. 6d. to 3s. 6d. a day; and, if he happen to be associated with an adjutant who remains his regiment during the non-training period, he may calculate on an additional 2s. 6d. a day. But many of the adjutants, though drawing full pay and allowances, are absent for months from headquarters, and defer taking recruits until the day of assembling for preliminary drill, when the unfortunate surgeon has to examine often as many as fifty recruits per day, and this for several weeks, for his daily pay of £1; whereas, if the recruits had been taken, as it is clearly intended they should be, during the non-training period, the surgeon would have received about £15 or £20 towards the inadequate pay of 2s. 6d. or 3s. 6d. a day. If, however, the surgeon happen to be at a brigade depôt, all these duties are taken from him, and are to be discharged by the army surgeon; and there only remains twenty-seven days' training pay for the militia surgeon. In this way, by Mr. Cardwell's scheme, two-thirds of the militia surgeons have been deprived of from £100 to £300 a year, and no compensation whatever has been granted them. The pay of a surgeon-major during the period of training, or even of embodiment, is fixed by the warrant of 1876 at the maximum of £1 a day, no matter how long his services have been; whereas a surgeon-major in the regular army commences on £1, and this increases, until, after (we believe) twenty-five or twenty-seven years' service, he receives £1 10s. a day. This limitation of the pay of a surgeon-major of militia is at variance with the Militia Acts, as it

was therein laid down that, when out for training or embodiment, surgeons should receive the same pay and allowances as officers of the regular army; and, although in the warrant of 1876 it is stated that militia medical officers on the departmental list shall receive the same allowances as medical officers of the Army Medical Department, we are in a position to prove that such allowances, though repeatedly applied for, have been always refused, on the plea that they belonged to the militia, who have a lower scale of allowances. We think, therefore, that the statements of inadequate pay, though not intended as a specific head of complaint, were fully justified.

Paragraph 5 requires no further comment than to say that we entirely dissent from Mr. Thompson's statement, that he has proved, in paragraph 2, that pensions were only payable to surgeons retired before June 25th, 1829.

In the concluding sentences of his letter, we remark that he says, in a somewhat offhanded manner, that, under the circumstances, Mr. Childers does not admit the militia surgeons' plea that they have any claim, either in equity or law, to pensions. We are at a loss to find on what grounds Mr. Childers denies the equity of the claim, as throughout the whole of Mr. Thompson's communication he scrupulously ignores the several strong cases quoted in our letter of May 26th, in which we gave the decisions of such eminent equity authorities as Lords Westbury and Bramwell; the latter judge stating, as a general rule, "The Legislature never takes away the slightest private right without compensation." Numerous instances were given by Mr. Hart, and have been published in these columns, which illustrate the rule that, when offices were abolished, or taken over by the Crown, adequate compensation has always been made. Mr. Thompson does not contradict these decisions, and they cannot wisely or justly be ignored. In reply, therefore, to this official assertion, that, in equity, the militia surgeons have no claim to pensions, we must still contend that they have; and, should an action be taken (as is most likely) in one of the superior courts, confidence is expressed by competent authorities that, on both points, they will succeed.

We would be loth, as we have before said, to believe that any Government or any minister will persist in a course that must leave them open to the charge of using "might to put down right"; that such an impression prevails, however, in respect to the case of the militia surgeons, not only among the militia surgeons, but also in the profession and the public generally, is evidenced by the numerous petitions that have been presented by several of the great medical corporations, and by Branches of the British Medical Association. None of them will feel satisfied at any other solution than the granting of one or other of the reasonable requests made by the Chairman of the Parliamentary Bills Committee of the British Medical Association on behalf of the militia surgeons, in the letter of May 26th; namely, either to refer their case to a small Committee of the House of Commons, composed of members from both sides (as this is not a party question), or a Commission before whom they may be heard by counsel, and evidence given of the several cases of injury and hardship inflicted on them; or to facilitate an amicable suit to be instituted in one of the superior courts, and decided by one of Her Majesty's judges. This is so reasonable and just a request, that a persistent refusal to adopt one or the other course can hardly be anticipated.

It is a proud boast of our institutions, and an axiom of law, that there is no wrong done for which there is not redress. What possible harm can accrue to the Government by granting the above request? For, if Mr. Childers has, as his advisers seem to have persuaded him, both law and equity on his side, he need not fear the result; but, on the other hand, the militia surgeons believe that they have the law and equity on their side. The issue can only be decided by a select Commission, or by high judicial authority, after hearing both sides. We, therefore, again urge earnestly on Mr. Childers the propriety and the justice of granting what the Chairman of the Parliamentary Bills Committee has asked for on behalf of the militia surgeons. He will thus not only be doing a graceful act, but will also convince those

gentlemen and the profession at large that justice has been done. Less than this will not satisfy us. If the decision be adverse to the militia surgeons, they will then at least be enabled to feel that they have not been harshly or unjustly treated, but will bow to what they will then know to be the declared law and equity of the case. At present, their personal convictions and the legal assurances which they have received are of an opposite kind.

SMALL-POX AND FEVER HOSPITALS COMMISSION.—II.

THE most difficult part of the subject which the Commission had to solve was the question as to whether hospitals were centres of infection, *per se ipsos*. That is, must hospitals be standing dangers to a given neighbourhood, in spite of quarantine and a cordon of neutral ground, which shall not be invaded, on the one side by inmates of the hospital, and on the other by persons not connected in any way with the institution? Small-pox is said by some of the witnesses to have a unique method of propagating itself by untraceable paths, availing itself of the varied means of communication, with a kind of penetrating subtlety which defies the locksmith, and renders quarantine an useless institution. The report deals with this difficulty in a half-hearted sort of way, and declines to commit itself to approval or disapproval of the proposition. It states that actual contact with a small-pox patient is not necessary for the propagation of the disease; and assents to the fact that infective matter can spread itself, at least, a few yards through the atmosphere; but how far this propagation is possible at the utmost for the infection to spread, and under what conditions it can spread beyond the generally admitted distance, the report states, that "the evidence put before the Commissioners did not enable them to answer either of these important questions." Mr. Power's table appears to have struck the Commission as a most important one: for it is printed twice over in the report. It shows that the unhealthiness of the special area around Fulham Hospital varied exactly with the presence of increased infectivity in the hospital itself; and another table, which is given in Mr. Power's evidence, seems to prove that the increased sickness in the special area followed the increase of cases on low diet in the hospital ("the report says, often very disproportionately, it is true"); but still presumably, the increase of acute cases in the hospital, from some unknown cause, produced an influence on the neighbourhood, which seemed to point to the hospital's extensive power of generating contagion more directly than to its external operations. Then the report says that, what is "at first sight" still more imposing, is the law which (using Mr. Power's words) "the injurious influence of the hospital appears to obey." In five successive epidemical periods, there is the same recurring phenomenon—viz., concentric circles of diseasedness around the hospital, diminishing gradually in intensity as they recede from the centre. Mr. Power found that, in a certain attack twenty-three, out of forty affected, could give no hint so as to account for their illnesses. He inquired very closely into every case, and came to the conclusion (on very insufficient grounds, we think) that the residuum left after the exclusion of every kind of mediate communication demonstrates the influence of the hospital on the district surrounding it, by atmospheric means. It is proved that the proportion of houses invaded by small-pox decreased, as they were more distant from the hospital, with a regularity, says Mr. Power, "strongly suggestive of a natural law." And it was said that the most minute inquiry failed to trace any mediate cause for the propagation of the disease. It was shown that the houses on the actual lines of human intercourse between the hospital and other parts of the metropolis did not suffer more than those cross lines along which the ambulances did not travel; and it was contended that, in atmospheric dissemination there is a vehicle of contagion of admitted potency within a certain range; and if we suppose that potency to have been under-rated, it is capable of producing exactly all these results. The report, however, then contends that the facts supporting this view are too

small in number; that they have been observed in the case of one hospital only, and are contradicted by evidence of a much more extended character from hospitals of larger dimensions than that of Fulham; that it is quite impossible to disprove personal communication; and it gives instances of immunity which, though not conclusive against atmospheric diffusion, are very strong. Mr. Power himself admits that unknown personal intercourse would equally account for the spread of the disease, and the report emphasises this by means of italics; thus: "With such an hypothesis" (meaning that of dissemination) "equally as with a hypothesis of conveyance by human movements, the gradation of hospital influence from centre to periphery would be in complete accordance." The report then replaces the image of a wave of atmospheric dissemination by another consisting of converging and diverging lines of infection, and points out that along these lines the effect must be that the incoming and outgoing of persons and things would offer occasions for disease, and in consequence affect the more immediate neighbourhood of the hospital to a greater extent than in the more distant circles. That if a diagram was made showing these converging and diverging lines, the ring close to the hospital would be much darker from those lines than in the circles farther away. It states "that the converging incomings and outgoings of the hospital would produce exactly graduated intensity of infection, from which we are tempted to infer an expanding wave. The argument is equally capable, with Mr. Power's table, of arithmetical statement, and is of equal value.

The report having made this statement, urges that it is essential that, in the construction and management of small-pox hospitals, both sources of danger should be guarded against with the utmost care. The views of the Commission are shown in the fact that they believe that a limited number of cases may be received within the boundaries of the present hospitals, without serious danger to the neighbourhoods; and they publish a plan by means of which ventilation may be made to diminish that danger to a very small amount indeed.

The question as to the distribution of the cases engaged the attention of the Commission. It was proved by evidence that in a serious epidemic there would be 400 or 500 persons who would not be fit to be moved for any great distance; that their collection in four or five large institutions would be to cause complaint, on good grounds, from the localities in which they were placed; whilst the sudden establishment of forty or fifty small institutions would be extremely difficult, as well as expensive and ineffective. And they recommend that the hospital authorities divide the metropolis into districts; that the administrative blocks, with a few small wards attached, be maintained within the precincts of the fever hospitals, which should be reserved for the more serious cases, limiting the number to thirty or forty; and that no hospital should receive patients except from the district to which it belongs. These arrangements, with others which are suggested, will always keep ready for use a skeleton capable of being clothed with more ample vestments whenever it may be required. At the same time, preparation should be made for at least 2,100 mild and convalescent cases in some isolated part of the county, which shall be easy of access; and the banks of the Thames (perhaps in the neighbourhood of Purfleet or Darent) are suggested as satisfactory sites.

The discussion of hospital accommodation or fever does not occupy a large part of the report. It recommends the discontinuance of the use of the present hospitals for small-pox patients (with the reserve already mentioned), and suggests that they will, with slight additions, be capable of accommodating all the fever cases which may arise. They recommend that there should be a capacity of extension to accommodate 3,000 patients. The Commissioners conclude their report with a recommendation, which we emphatically endorse, that the managers of these hospitals should have a compulsory power, so as to be enabled to obtain satisfactory sites for their hospitals; and that they should be able to award compensations to a greater extent than at present allowed under the Lands Clauses Consolidation Acts.

They think that the rule which confines the right of compensation to dispossessed proprietors should not be applied to hospitals, but that, wherever a substantial risk is held to exist, the depreciation of value which results from it should be a subject of compensation, and that the power of arresting the operations of hospital authorities by injunction should be taken away, as incompatible with the public safety.

We commend the report to the careful consideration of our readers. There is much in the evidence which will be worthy of close study; and all those who have the care and management of infectious hospitals, and also all medical officers of health, will do well to study the whole of the minutes of evidence, as well as the valuable tables in the appendix.

THE QUESTION OF QUARANTINE.

EVEN the president of the so-called International Council of Egypt can quote sanitary scripture of the most approved sort when it suits his purpose. Finding the navigation of the Suez Canal seriously impeded by the mandate that no pilot was to go on board a vessel from any suspected port, the directors wrote to the Council in December 1881, suggesting that a certain number of their pilots, labourers, and sailors, with all needful appliances, should be put into quarantine. A hulk was to be provided at Port Said and at Suez for their accommodation, and a special service for their transports. In case of sickness, they were to be removed and to be placed under the care of the quarantine medical officers, but while in health they were to be allowed on board the vessels passing through the canal in quarantine. This seems a reasonable enough submission to unreasonable scruples, but difficulties were found. The Council wanted the ordering of details to be in its own hands, and the bills were to be paid by the Company. The pilots, as quarantine officers, were to be under the entire control of the Council, while the Company paid their salary; and, finally, the Council reserved the right to modify or annul the whole arrangement at its convenience. The Company objected to these unfair claims, and with the sententious rejoinder from Dr. Mahmoud-Hassan that "the Company ought to take into consideration that all agglomeration is contrary to sanitary and hygienic principles," the matter dropped. The absurd order as to pilotage was continued until external pressure caused its withdrawal, and might, we presume, be renewed tomorrow at the fancy of the Council at Alexandria. The pilot in his steam-launch, no doubt, exemplified the president's maximum of isolation, but scarcely the twenty ships compelled to wait for him at Suez. Many of these had been exposed for three weeks to the breezes of the Indian Ocean, without a case of sickness. There is not a fact or argument in the history of cholera to show that they might not have been boarded by pilots in perfect safety. Even if cholera had been present, there is no such evidence of contagion as the Council has invariably assumed. Those who have the most practical acquaintance with cholera are they who least believe in its contagiousness. It is no doctrine of fatalism which the West would impose upon the East in its opposition to quarantine. Isolation of the sick, in place of aggregation of the healthy, cleanliness—pure air and pure water—have stayed cholera, where quarantine has failed; and if the Council be dissolved we trust that these measures, with which quarantine is incompatible, will receive their due weight.

Contagiousness is certainly not characteristic of cholera as it has appeared in England. Nurses, laundresses, and others brought by their occupation into proximity with the sick or their clothes, have not suffered more extensively than those who were not so exposed. In the cholera epidemic of 1849, according to the report of the College of Physicians, the women who washed the vast accumulation of foul linen at Drouet's School, those who washed the numerous bundles of foul bed-linen sent from the Oxford Cholera Hospital to the hospital workhouse, and those who washed the foul linen of the cholera patients at Leeds, all escaped without any serious attack of the epidemic. The same held good of the washerwomen at Oxford College, University College Hospital, Fever Hospital, Bedford, etc. In 1866,

at St. Bartholomew's Hospital, 136 cholera patients were treated, of whom 44 died. There were 105 nurses and other attendants, of whom three were attacked, and none died. At Middlesex Hospital, of 59 nurses none were attacked; and at Guy's Hospital, of 94 nurses, one was attacked and died. Such, indeed, was the general result, and it is needless to multiply instances. Perhaps some who are surprised at it may suggest that the cholera of other countries is contagious. They have only to turn to the Report of the Medico-Chirurgical Society of Paris on the cholera epidemic of 1865, to see that, at least, it is true also for France. Dr. de Pietra Santa, who drew up that report, has recently reaffirmed its chief conclusions, namely, that cholera is not contagious, and that a medical man or nurse may, with impunity, touch a cholera patient, sleep in his bed, and even inhabit his room, if only he be mindful of hygienic precautions. With such evidence as this, it is not to be wondered at that the French hygienists, with Baron Larrey at their head, who deny the contagiousness of cholera, are gradually gaining the confidence of the laity. The efficacy of quarantine as a preventive measure against cholera is now for the first time an open question in France. But it must be admitted that the older school still holds to its older faith; and the invariable reply of the contagionists, such as M. Fauvel, where disproof is offered, is: If contagion be inactive here, it is at least active elsewhere. We have, however, only to search the ample records of cholera to find how inconclusive is the evidence of contagion. At the commencement of an epidemic, belief in contagion is universal; but, by the time it has died out, so many facts inconsistent with that belief have occurred, that it is displaced by doubt. Thus, in the epidemic of 1853, in the Bahamas, which caused the death of eight per cent. of the inhabitants, the Resident Medical Superintendent of the Cholera Hospital at Bain's Town saw no clear evidence of it. The disease was supposed, upon the flimsiest grounds, to have been imported from North America in a schooner which came into the port of Nassau with the hatches nailed down. No one on board was known to have had cholera, "but the man who unnailed the hatches was one of the earliest, if not the earliest, victim of the disease, the first being a woman who is stated to have resided near the spot where the schooner anchored."

Such a phantom ship appears with every epidemic. Contagionists are easily satisfied, and health-officers are pleased to find that their whole duty is performed when they have enforced a more rigid quarantine service. After the epidemic of 1866 in Jamaica, Dr. Bowerbank said: "I have had no proof that any of the visitations of cholera were traceable to importation by a particular vessel; but I have known cholera introduced into a district and an island, and the disease not extend itself; thus, at any rate, proving that something more than mere introduction of the disease was necessary to its extension, and over which quarantine restrictions could exercise no influence." This is no mere dictum of an epidemiologist; it is the experience of a man who has taken an active part in the control of several epidemics of cholera. "From my own observations," he says, "I believe that cholera cannot be kept out of a district or a country by any so-called quarantine restrictions. I consider such restrictions useless, and worse than useless."

Again, in the previous epidemic of 1850 in the same island, in which there was a mortality of forty thousand individuals, importation of cholera was pretended to be proved by the contagionists. About a week before cholera appeared in Port Royal, two young men arrived from Chagres, in the isthmus of Panama. They reported that their father died of cholera at Chagres, shortly before they left. No other individuals were known to have landed from an infected port, and no ship arrived with cholera on board. The contagionists unanimously agreed that these two lads had introduced the disease into the island. Dr. Watson, surgeon of the Naval Hospital, Jamaica, who has narrated the circumstances, attended them on arrival for an intermittent fever. A few doses of quinine soon restored them to perfect health. No case of cholera occurred in their house, nor in the two adjoining

houses right and left of theirs. During the decline of the epidemic, Dr. Watson had much stronger proof of the non-contagiousness of cholera. The sloop *Persian* came into port with its officers and crew suffering from ague and debility, and fifty of them were sent into hospital. They were of necessity placed in the same wards in which cholera patients had recently died, and which still contained patients convalescent from cholera. They were attended by the same nurses and medical officers, and were surrounded by every circumstance conducive to the contagious extension to them of cholera. Not a man was attacked with it.

Indian records, as is well known, are full of reports, showing that the mode of extension of cholera is inconsistent with the theory of contagion. Sir J. R. Martin's observation, quoted by Macnamara, is a sufficient instance. "I served in the General Hospital, Calcutta, in March 1827, when the house was filled with cholera patients, and when all of us, Europeans and natives, were exhausted with the labours of attending on the sick, but none of us suffered from the disease."

If, then, there be contagion at all, it is of a sort so feeble in character and slow in action, that it certainly fails to explain the rapid extension of epidemic cholera. Dr. Farr described its rise during 1866 in East London "as an explosive eruption, such as would arise from the sudden distribution of an excessive quantity of strong cholera water for a short period." In eighteen days, the epidemic of 1832 in Paris had reached its climax, had already extended to all the quarters of Paris, and had been fatal to 7,000 people. During the latter half of last August, 16,000 deaths occurred, "as in a moment," in the Philippine Archipelago; and in Arabia, a like rapid extension of cholera has been observed among pilgrims who have already undergone the miseries of quarantine. The future Sanitary Board of Egypt, however it may be composed, has other and better work before it in the stern enforcement of measures of cleanliness and general hygiene than ever the International Council has effected with all its powers of quarantine.

THE MEDICAL DEPARTMENT OF THE ARMY AND ITS CRITICS.

IT is a fact of which the medical profession has good reason to be proud, that, whatever shortcomings the test of war found out in the organisation of the medical department, its officers have been ascertained to be not only blameless, but deserving of praise for the manner in which they struggled against difficulties not of their making. Our military contemporaries profess to be the exponent of the opinions of combatant officers. But to heap contempt and utterly unfounded obloquy on a body of gentlemen, to whose professional skill and devotion to duty they have to trust when prostrated by sickness or the unavoidable accidents of war, is neither a wise nor a just course. The general newspaper press were misled into publishing statements on the supposed breakdown of the department, which subsequent inquiries have proved to be groundless; and it is creditable to their fairness and candour that their columns were not only opened without reserve to the defence, but also that, as the facts were one by one made clear, they did justice to those who had suffered in public estimation in their pages.

A searching inquiry is announced by the War Office. A Commission has been appointed to investigate defects in organisation and transport, and to suggest the needful remedies. A voluminous "report", with the evidence on which it is based, will be published; the recommendations of the Commission will probably be embodied in a fresh edition of the *Medical Regulations*, and there, our fear is, the matter will end. The proposed remedies will certainly cost money, for which the Government of the day probably will be loth to ask. Soon, all too soon, the war in Egypt—its successes, its sufferings, and its lessons—will cease to interest the public mind; and our next war—be it a great or a "little war"—will then once more find the department unprovided, both in its *personnel* and its *material*, with what is needful for thorough efficiency, and the usual result will follow. The

newspaper correspondents of the day will hold up its officers to public execration "for sins, but not their own". Meanwhile, suggestions are plentiful enough. Surgeon-General Mouat has written to the *Times*. When this energetic officer addresses the public on the subject of his old service, two things are certain to be brought to the front; one is to express, directly or by implication, the unfavourable opinion which he holds on the subject of Sir William Muir's administration of the department; and the other is, to urge a return to the regimental system as the panacea for all departmental defects. The former point we may on this occasion pass over as beside the question. As regards the regimental system, it is dead and buried. When the British army was scattered about in single battalions all over the empire at home and abroad, the regimental hospital system was a necessity; but, under the new organisation, it would be a costly and absurd anachronism. To say that every battalion of infantry, every regiment of cavalry, every battery of artillery, quartered, say, at Aldershot, should have its separate little hospital, is to display the proposition in its native absurdity. When Dr. Mouat argues for a return to such an organisation as this, we think he is bound to go a step further, and teach the Secretary for War, to borrow a phrase of Lord Beaconsfield's, "how to arrange his face", when he goes down to the House to ask for money to carry out a system which has been abandoned as unworkable, not only in the British, but all continental armies organised according to the requirements of the day. Dr. Mouat was in the Crimea; how did it work there?

Then we have some would-be reformers calling for a system of "control" for the Medical Department; in other words, for the introduction into the British Army of the *Intendance* system of the French, just abandoned as the greatest curse with which any service was ever afflicted, and the fruitful source of untold misery to the sick and wounded of that army. It is useless to discuss such a project; let it suffice to say that British medical men are so thoroughly aware of the follies, miseries, and defects of such a system, that they would not serve under it.

Then we have the favourite remedy of the *Army and Navy Gazette*, viz., to deprive the medical officers of the control of the Army Hospital Corps, the body of men who are, as it were, the hands of those responsible for the care of the sick. It is said that medical officers are ignorant of discipline and military law, and know nothing of drill. The answer is plain: army-surgeons live their lives among soldiers, and know nearly, if not, indeed, quite as much about them and their ways, as combatants; they have much more difficult things to learn than the modicum of military law and the elements of "company drill" required for the purpose of maintaining discipline and military organisation among the attendants on the sick, and they have proved that they have learned both.

News has been received in London that the Emperor of Germany is suffering from a malady of a nephritic character.

The prize of £150, offered by the Empress of Germany for the best handbook on the duties of the Society of the Red Cross, has been awarded to Herr von Criegern.

Several hundred colliers have gone out on strike in the Ogmore Valley district, as a protest against the medical nomination of the management. The men are resolved not to go on with work unless the proprietors of the Llynvi Company appoint a medical man of their choice.

The London Memorial Brass Committee have decided that the surplus money subscribed to Mr. Landon's memorial shall be given to the fund now being raised for a memorial to the officers of the Army Medical Department who fell in the recent campaigns in Afghanistan and South Africa. The memorial will, of course, include the name of Mr. Landon.

SMALL-POX has broken out at Jarrow, where the compulsory notification of infectious diseases gives especial facilities for prompt knowledge of the facts. The Town Council, who had the question of hospital accommodation before them for a very long time, have now decided to erect a temporary wooden building, 50 feet by 20 feet, as a temporary hospital.

AN institution, the object of which was to supply nurses trained in English hospitals to our countrymen abroad, was established in Paris about four years ago. The scheme had the support of the English and the American Ambassadors; and this autumn a branch has been established at Nice, from whence it is intended to supply nurses, not only to the other health-resorts on the Riviera, but to Florence, Rome, and other parts of Italy. The direction of the new branch has been taken by an English lady, who has had a considerable and varied experience in London. Further information may be obtained by applying to Miss Sherrieff, Villa Clotilde, Nice.

THE translation, which we published last week, of Baron Larrey's pamphlet on *Egyptian Ophthalmia*, was very kindly furnished by Dr. T. Lauder Brunton, F.R.S., who had purchased, some years ago, a copy of this pamphlet with Baron Larrey's autograph, and one or two corrections in it, apparently made by his own hand. The contents of this volume being especially interesting at this moment, Dr. Brunton obligingly proffered a translation of it, which he was good enough to make with his own hand, for publication in the *JOURNAL*; this kindness was greater, inasmuch as the subject is not one, in itself, interesting to the translator. This explanatory note should have been published with the article last week.

A PLEASANTLY situated cottage hospital, in Hermitage Road, Central Hill, Norwood, has recently been opened by the Lord Mayor and Lady Mayoress. The hospital contains accommodation for fourteen patients, and the annual cost of each is estimated at £30. Up to the present, the promised subscriptions will provide for about eight beds, but an endowment fund of £2,000 has been established for payment of ground rent, and the maintenance of the remaining six beds. The donations to the building fund amounted to £2,337, which, it is estimated, will be sufficient to defray the expenses incident to the erection of the hospital, and £425 was separately subscribed to provide furniture, and surgical and other appliances.

ADVICES from Alexandria speak of the services rendered by Lady Strangford to the officers of the army in Egypt, by opening a convalescent home for invalid officers in the most cheerful part of the town. It appears that, in consequence of the great demands on the space in the hospitals, though mostly for maladies of a comparatively trifling character, the hotels have been mainly given up to the men and the officers. Most of those who have been ill (and there have been, especially among the officers of the Mounted Infantry, a few very serious cases of gastric or some kindred fever), have been living at their own expense in hotels in the town, to which they had been moved in the first emergency of illness. The officers who have been under the care of Lady Strangford speak in the highest terms of the kindness with which they have been treated, and of the rapidity with which they have progressed on their return to health, under her and her nurses. By Sir Garnet Wolseley's wish, a number of experienced nurses, whose services at Ismailia were of great value, are now undertaking the work of nursing at the Citadel Hospital at Cairo.

NEPHROLOGY.

ON the 21st instant, at the Queen's Hospital, Birmingham, Mr. Bennett May performed this operation on a man 34 years of age. The stone, weighing 473 grains, was extracted entire through an incision in the kidney, which was healthy. The case, which promises to be an

interesting contribution to the operative treatment of renal calculus, will be published when complete. At the present time the patient's condition is excellent in every respect.

INFANTILE DIARRHŒA.

At the beginning of the summer of the present year, special arrangements were made at the Birmingham Hospital for Sick Children for the reception of infant patients suffering from diarrhœa, with a view to a systematic and extended official investigation into the causes of that form of diarrhœa which especially affects young children during hot weather. This inquiry has been initiated and is being conducted by Dr. Ballard, on behalf of the Local Government Board.

THE BALFOUR MEMORIAL.

A LARGE and influential meeting of gentlemen connected with the two Universities has been held at Cambridge, in connection with the proposed memorial to the late Professor Balfour. The Vice-Chancellor presided. It was agreed, on the motion of Professor Huxley, that the memorial should take the form of a fund, to be called the Balfour Fund, for the promotion of research in biology, especially animal morphology. At the close of the meeting it was stated that the Balfour Family would give £3,000, and Dr. Michael Foster £1,000. Dr. John Willis Clark has been appointed treasurer to the fund.

PAUPER LUNATICS.

WE learn, from the just published report of the Local Government Board, that insane paupers are concluded to be a permanently increasing class. In ten years the number has risen from 48,506 to 63,524, of whom 39,128 are in county or borough lunatic asylums, 1,458 in registered hospitals or licensed houses, 16,811 are in workhouses, and 6,127 are residing with relatives, or are boarded out. The ten years show a gradual increase in the numbers in asylums and workhouses, and a diminution in the number otherwise provided for. These figures do not include 1,821 pauper lunatics chargeable to counties or to boroughs, and the addition of this number gives a total of 65,345 insane poor in all England.

SYPHILITIC INFECTION OF THE FINGER IN MEDICAL MEN.

PROFESSOR FESSENDEN N. OTIS, communicates to the *Independent Practitioner* particulars of eight cases of syphilis contracted by physicians in making digital examination of the vagina in syphilitic women. The initial lesion of this form of syphilis is described as being uniformly a papule, "coming soon to be of a deep red colour, and presenting a superficial abrasion, becoming circular and deeper by a slow molecular necrosis, not by ulceration with formation of pus; the secretion thin and serous, and drying into a scab, which is soon displaced by the fluid accumulating underneath." He also remarks "the entire absence of induration; in its place, a slight, flat, juicy-looking, boggy swelling, or elevation, about like a small peppermint in size and thickness."

THE HEALTH OF PARIS.

THE last returns of typhoid fever in Paris show a diminution in the number of cases attacked by this disease received into the hospitals. There were 741 from the 9th to the 15th of October, against 1,000 admissions in the preceding week. The number of deaths was 244, very nearly the same as in the previous week. Notwithstanding the decrease in the number of cases reported, Dr. Bertillon, the chief registrar of Paris, does not consider that the sanitary condition of Paris shows much improvement as yet. He points out, in his weekly report of the health of Paris, that the decrease in the number of cases of typhoid fever is not yet sufficiently marked, and the number of cases reported much too high to give hopes of a speedy lowering of the present mortality from the prevalent epidemic. The deaths of twelve soldiers from typhoid are reported, the same number as in the preceding week, being at the rate of 1.2 per 1,000 for the garrison of Paris.

MIDWIFERY AT THE PARIS HOSPITALS.

THE successful candidates at the recent *concours* for appointments as obstetric physicians to the Paris hospitals were, as already announced, MM. Budin, Porak, Pinard, and Ribemont. On October 16th, they commenced their duties at their respective hospitals as follows: M. Budin, at La Charité; M. Porak, at Saint Louis; M. Pinard, at Lariboisière; and M. Ribemont, at Tenon. In addition to the charge of the lying-in wards at the above-named hospitals, they will superintend the practice of the midwives, who deliver women at their own homes, in connection with these hospitals. Before long, there will be a fresh *concours* for similar appointments to the other general hospitals in Paris.

THE SALE OF PATENT MEDICINES.

THE question of the unrestricted sale of narcotics under the guise of patent medicines urgently calls for legislative treatment. An inquest was recently held at Notting Hill, on the body of a male child aged ten months, from the administration by the mother of twelve drops of a narcotic, "Wilson's Soothing Syrup", for the relief of a cough. Traces of morphia are stated to have been found in the stomach after death. Dr. Davis informed the coroner's court that the bottle sold to the mother of the deceased child contained enough narcotic to poison half-a-dozen children. A verdict of death by misadventure was returned, to which the following rider was appended: "That some restrictions should be made on the sale of patent medicines which could be used as poisons". It is earnestly to be hoped that before long the sale of patent medicines will be placed under some restrictions, and the unlimited sale of poisons be checked.

GUERMONPREZ ON DEPRESSION OF THE CRANIUM DURING CHILDHOOD.

THE conclusions of this paper, which is published in the *Archives Générales de Médecine*, August 1882, are that depression of the cranium, whether complicated or not, may, in a general way, be the cause of various psychological changes; these changes are more important when the depression occupies the frontal region, especially on the left side. When occurring in childhood from injury, depression of the cranium may constitute a positive obstacle to the development of the psychological faculties, opposing the growth of the encephalon and the full expansion of the cranial cavity. The relative microcephalism thus produced may be permanent.

SPILLMAN AND SCHMITT ON TUMOURS OF THE FOURTH VENTRICLE.

M. M. SPILLMAN AND SCHMITT, both professors of clinical medicine at the Faculty of Nancy, publish in the *Archives Générales de Médecine*, August 1882, a paper founded on one hitherto unreported case, and on thirty cases already published. Tumours of the fourth ventricle vary extremely in symptoms; diabetes, mellitus or insipidus, is the only symptom which appears to be directly in relation with the ventricular lesion. Diagnosis is impossible unless there be, besides diabetes, the usual manifestations of a cerebral tumour, combined with symptoms of disease of the medulla or pons Varoli such as internal strabismus, dysphagia, deafness and paroxysmal paralysis; and frequent vomiting, without cerebellar symptoms, must be present.

SMALL-POX AND VACCINATION.

IN a recent report on the Barnet Rural District, Dr. Saunders, in dealing with the prevalence of small-pox, refers specially to one outbreak, as interesting in showing the power of selection manifested by the disease. In one family three cases occurred, who probably became infected by attending a funeral, possibly by riding in mourning coaches. On May 2nd, twelve persons met together, and attended the funeral of a relative. Nine days afterwards, three persons were attacked with small-pox. Their records of vaccination were as follows: (A) with one vaccination mark, had the disease very badly; (B) had one good mark,

and had the disease distinctly modified; (C) had three good marks, and the small-pox pustules were so discrete as to be counted with ease. None of the other persons were attacked; their history touching the disease being as follows: (D) had six well-foveated vaccination marks; (E), wife of B, one of the persons attacked, had been vaccinated and twice revaccinated; (F) had four very good marks; (G) had three; (H) had had small-pox; (I) had been vaccinated and revaccinated. Of the other three persons, Dr. Saunders could not obtain information, but they escaped the disease.

PRECAUTIONS AGAINST CHOLERA.

THE Paris Académie de Médecine resolved, at a recent meeting, to submit to the Minister of Foreign Affairs a communication which they had received from M. Proust with regard to the measures which should be taken to guard against a possible outbreak of cholera. M. Proust states that, though there is now little fear of cholera being imported into Europe by the troops which have been sent to Egypt from India, there is more danger to be apprehended from the Mahometan pilgrimage to Mecca. He dwells upon the importance of maintaining the defensive system adopted in the Red Sea, by taking care that the pilgrims, on their return, are put into quarantine at El-Wesch, which is 650 miles from Suez, instead of at Djebel-Tor, which is much nearer. M. Proust says that it would not be safe to let them come so far until they had gone through a first purification at El-Wesch. These measures are intended to prevent the pilgrims from returning direct by sea to Suez; for there is little danger to be apprehended from the caravans, as experience has shown that, after they have come through the desert, they are always free from cholera. M. Proust insists upon the importance, generally recognised by other medical men, of keeping Egypt clear of cholera, for nothing can prevent it from extending thence into Europe; whereas, when there is no cholera in Egypt, there is never any in Europe.

THE SANITARY STATE OF CYPRUS.

ACCORDING to the annual Blue Book on Cyprus, just published, the general state of the island during 1881 was, on the whole, salubrious, notwithstanding a short outbreak of fever during the month of August, chiefly at Nicosia and Kythrea. Although there were many cases, chiefly among the natives, there were comparatively few deaths. In the High Commissioner's opinion, the outbreak was largely due to preventable causes, owing to the want of proper surface-drainage after the heavy winter and spring rains. This can only be remedied by more active and intelligent municipal efforts; and Major-General Biddulph trusts that the reform of the municipal council lately effected by legislative authority will incite them to more active steps. He adds that there was no zymotic (meaning epidemic?) disease, nor has there been any since the British occupation. The health of the troops left nothing to be desired. The admissions to hospital were 36 per cent. fewer than in 1880. The invaliding showed a decrease of 33 per cent.; and the constantly sick rate, which was 5.3 per cent. in 1880, fell to 3 per cent. in 1881. The camp on Mount Troados was for the third time occupied by the troops during the summer months, and its reputation as a sanatorium is beginning to become known in the Levant. The High Commissioner has little doubt that, a few years hence, Mount Troados will become a favourite summer resort for residents in Egypt and Syria. As a military sanatorium, it is probably unrivalled, and will afford a cool resort for English troops during the months of June, July, August, and September.

DISINFECTION OF HOSPITALS.

M. MIOUET has recently undertaken a series of experiments with reference to the destruction of the numerous micro-organisms held in suspension in hospital wards. It having been ascertained that many bacterial germs resist, for a period of two hours, dry air warmed up to 145° or 150° Centigrade (293° to 302° Fahr.), his investigations were made on chemical agents specially. After having satisfied himself that atmo-

spheres loaded to saturation with the vapours of chloroform, carbolic acid, ammonia, sulphurous acid, sulphide of carbon, hydrocyanic acid, and nitrous ether, are powerless to destroy all the germs contained in floating dust, even after twenty days' action, he directed his attention to a class of corrosive substances, which destroyed these so-called germs as certainly as a long-maintained temperature of 200° Cent. (392° Fahr.). Thus, an atmosphere saturated with iodine-vapour at the ordinary temperature destroyed every schizophytic germ at the end of ten days. Bromine, diffused in the air, produced the same results at the end of two days; hydrochloric acid gas, of an equal volume, acted at the end of the same time with similar efficacy; the vapours of nitrous acid and moist chlorine gas had the same effect; but the damage produced by these extremely corrosive agents on wood, linen, and metals rendered the destruction of bacteria by these processes a very costly proceeding. It must be remembered that bacteria, and not mould, is in question; for the spores of the commonest forms of mould resist the powers of these agents that can destroy bacteria.

NIGHT MEDICAL SERVICE OF NEW YORK.

DR. W. A. EWING, executive officer of the New York Night Medical Service, recently submitted to the Health Commissioners a report concerning the work performed by the members of the organisation founded by Dr. Henri Nachtel, of Paris, and established by an Act of the Legislature since September 1st, 1880, to December 31st, 1881. The report was as follows.

During the past sixteen months, 573 calls were made by 132 of the 450 physicians enrolled by the station-houses.

In my investigations as to the urgency of these calls and the worthiness of their recipients, I have become convinced of the great value of the service, not only to the sick and worthy poor, but to the well-to-do classes and to the physician, enabling the physician to decline with an easy conscience to go out at night, knowing that competent medical attendance may be quickly obtained by applying to the nearest station-house, and giving to the physician, who has signified his willingness to serve, an assurance that he will, at least in some measure, be rewarded for his services.

The visiting physicians of the dispensary are so miserably paid for their services (in some cases only 100 dollars per year) that necessity compels them to attend their private patients first; hence many hours often elapse before the arrival of much-needed medical or surgical aid. Prior to the establishment of the night medical service, it was often impossible for the very poor to obtain medical attendance in the night-time; for even physicians sometimes tire of doing gratuitous labour. The well-known urgency of night calls is further attested by the foregoing table, and by the fact that, of the 573 patients, ten died before the arrival of the physician.

The gratitude of the public, he adds, is due to Dr. Henri Nachtel for his indefatigable energy in the introduction to this country of this most valuable charity.

The question of organising such a service for this country is on the tapis. A similar service has been organised in Brooklyn and Washington, and is working efficiently in Paris.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE first meeting of this Society for the current session was held on Tuesday last; Mr. John Marshall, F.R.S., President, in the chair. The attendance of members was rather small. Before the commencement of the ordinary business, the President announced that the Council had decided on making some innovations in the conduct of the proceedings of the Society. In the first place, printed abstracts of the papers to be read are to be supplied before each meeting, in sufficient time to allow members two or three days for the consideration of the subject; and, on the evening of the meeting, a sufficient number are to be laid on the table for the use of members present. Hitherto, only a written abstract of each paper has been placed in the Society's room for inspection before the meeting. Another change is the relaxation of the rule by which all papers have been read by the Secretaries. In future, authors are to be allowed to read their own papers, if they prefer to do so. It has also been decided to obtain complete reports

of the discussions, and to publish them in the *Transactions* of the Society. The changes, the President thought, would lead members to take an increased interest in the Society's proceedings. The Council have also decided that, at each meeting of the Society, articles of scientific and practical value shall be exhibited. Two papers were read at the meeting. One was a description, by Mr. Barwell, of a rare form of injury of the astragalus, in which the bone was, without being dislocated from its socket, turned on its axis to the extent of one-fourth of a circle. The bone was removed; and the patient, who was exhibited at the meeting, made a good recovery. The other paper was one by Dr. Warner, on a case of ophthalmoplegia externa, which led to a discussion, in which Mr. Henry Power, Dr. Althaus, and other members, took part.

THE EPIDEMIOLOGICAL SOCIETY.

THE thirty-second session of the Epidemiological Society was opened on the 18th instant by a *conversazione*, given by the president, Dr. George Buchanan, F.R.S., to members and friends of the society, at University College, Gower Street. Among the company present were the directors of the army and navy medical departments and other eminent members of the profession. Several microscopical specimens, illustrating subjects with the study of which the society is specially concerned, were shown during the meeting. Among them, preparations of the ova and living embryos of *bilharzia hæmatobia*, exhibited by Dr. Cobbold, attracted special attention. The embryos were seen making vigorous movements within the firm outer shell of the ovum, which finally ruptured and allowed them to escape. The specimens were obtained from the urine of a patient who had contracted endemic hæmaturia while in Egypt. Dr. Klein also demonstrated specimens of bacillus tuberculosis in the sputum and lung from tuberculous patients; from the lung of a cow suffering from bovine tuberculosis (*perlsucht*); of the bacilli of anthrax and septicæmia; of the bacilli met with in the Welbeck and Nottingham cases of ham-poisoning; of the micrococci present in the lymphatics in ovine variola, and in the blood and liver of patients suffering from infantile diarrhœa. A section through the tongue, from a case of actinomyces bovis, also showed very beautifully the stellate masses of the fungus, surrounded by a deeply-stained zone of inflammatory exudation, containing numerous leucocytes. Specimens of the embryo *filaria sanguinis hominis*, from the blood of a patient suffering from chyluria, and from the Chinese mosquito, were exhibited by Dr. Stephen Mackenzie. Examples of trichina spiralis in the muscles of a wild boar; of embryos of *dracunculus* (guinea-worm); of the micrococci of diphtheria, pyæmia, septicæmia, and ulcerative endocarditis; of the ringworm fungus, artificially cultivated, etc., were also shown by Drs. Bastian, Gibbs, Henderson, Mackenzie, and Mr. Malcolm Morris. The first ordinary meeting of the society will be held at University College on November 1st, when a paper will be read by Dr. Norman Chevers, C.I.E., on "The Sanitary Defects of the Site of London and its Suburbs."

WASTE.

Dr. SIEMENS, President of the British Association, delivered a public address at Coventry, on the 21st inst., on Waste. He said there were different kinds of waste—waste of time, food, personal energy, mechanical energy, and material. These five kinds of waste, if they could not be avoided, might be reduced to such inconsiderable proportions as would constitute an enormous source of wealth. With regard to waste of food, many drank too much, which is hurtful, but most people eat too much, and excess of food is perhaps as hurtful as excessive drinking. The lecturer especially drew attention to the prevalent and great waste of food which takes place in the kitchen, and which a little method and science ought to enable us to avoid. In regard to the waste of personal energy, Dr. Siemens urged that, instead of reading trashy novels, books of history and elementary books of science would be found far more interesting, and would give pleasure for years to come, whereas the wasteful enjoyment of the hour was lost the moment the excitement was over. The success of successful men might invariably

be traced to the fact that they had lived more earnest lives than others who, with equal ability and desire to get on, frittered their time and energy away. Speaking of the waste of mechanical energy, the lecturer gave some striking instances of the saving of fuel in the production of steam-power, and went on to say that we had great stores of force in water-power, wind, and tidal action, which could, and doubtless would in time, be made useful for mechanical purposes. By the use of the heat of steam and the electric light, he had found that he could employ an artificial sun, and grow fruit, such as melons, peaches, and strawberries, in his greenhouses in the depth of winter. The burning of raw coal for domestic purposes is very wasteful. Coal should be reduced to gas and coke; gas can be burned more economically than coal, while the coke and other so-called waste products, resulting from the manufacture of gas, are of more money value by upwards of fifty per cent. than the coal originally used.

THE SANITARY CONDITION OF PARIS.

IN a notice of the sanitary exhibition connected with the recent International Sanitary Congress at Geneva, a writer in the *Builder* describes, as follows, a large double picture exhibited by the city of Paris, and intended to show the disadvantages of cesspools as compared with sewers. "The first half of the picture represents, in a very graphic and telling manner, the interior of a house while a cesspool is being emptied. From the garret to the people walking in the streets, every one is seeking to escape from the foul odour. Certainly, this rendering of a domestic inconvenience which all Parisians have experienced is familiar and effective. The second half represents the same persons, in the same house, quietly enjoying the evening without experiencing any inconvenience. It also shows that the cesspool has been abolished, and the closets, etc., placed in direct connection with the sewer. As a means of popularising a generally approved principle, this picture might have been of service; but, as it stands, it is, on the contrary, a triumphant demonstration of the superiority of cesspools over sewers in a country where such profound ignorance of house-drainage still prevails. According to the model in question, instead of improving matters, sewer-gas has been laid on throughout the house. It will scarcely be credited that there is not a single precaution taken to prevent the entrance into the house of gas from the public sewer. The drain-pipe ceases under the seat of the highest closet; it is not carried up to the roof for ventilation. It communicates by junctions with all the other closets on each floor, and none of these closets have any traps. It is only when the pipe, passing underneath the house, approaches the public sewer, that a bend will be found; but no means whatsoever are shown of ventilating the pipe, or of ventilating the public sewer into which the pipe falls. The house is thus utterly unprotected; and, under such circumstances, the old cesspool, with all its inconveniences, would be far preferable. It is astonishing that the municipality of Paris should have allowed this drawing, replete with every imperfection, to be presented as a model, and on such an occasion!" May not the present typhoid epidemic in Paris owe its virulence to some atmospheric peculiarity at the present time, in conjunction with these facilities for the distribution of typhoid throughout the city of Paris?

THE MURDER AT THE PRESTWICH ASYLUM.

SAMUEL SCHOLFIELD, an inmate of the Lancaster County Asylum, at Prestwich, near Manchester, was killed, on September 19th, by another inmate of the asylum named Luke Carter; and the unfortunate event having followed, at no great interval of time, upon another homicide in the same asylum, has been made the subject of unfavourable comment on the government of the institution in some local papers. The evidence, however, given at the inquest makes it abundantly clear, to any one conversant with the administration of lunatic hospitals, that the death of Scholfield was just one of those unavoidable accidents, which must occur, from time to time, in those large establishments, in which large numbers of the insane are congregated together, and which

no forethought nor ingenuity can prevent—unless, indeed, the public is prepared to sanction a return to the indiscriminate use of strait-waistcoats and seclusion in the management of the victims of mental disease. Scholfield, who had been an inmate of the asylum since 1875, was a demented and harmless lunatic; and his assailant, Carter, who had been for seven years under observation, was also regarded as weak-minded, but docile and inoffensive. Carter was employed, as numerous patients are in every asylum, in cleaning the ward which he inhabited; and, in order to carry on this work, he was entrusted with a broom. With this broom in his hand, he was sweeping the floor, on the morning of the 19th ultimo, when Scholfield inadvertently pushed against him, upon which he turned, and, in the presence of an attendant, who, however, had no time to interfere, he dealt Scholfield a blow with the handle of the broom, which fractured his skull, and resulted in his death in a few hours. Carter soon afterwards expressed his regret for what he had done, and explained that it happened in “a moment of irritation”. Sane people have their moments of irritation, in which they sometimes commit violent and culpable acts; and lunatics can scarcely be expected to be exempt from the ordinary foibles of humanity. The most general characteristic of lunacy is an enfeeblement of the power of the will, and consequent defective inhibition of primary reflexes and animal impulses; and it seems that the fatal blow which the lunatic Carter struck was just the unsuppressed reflex of the push which he received, unless, indeed, it was connected with the delusion which he was said to entertain, that he was being practised on by electricity, in which case he would regard it as merely a well merited shock for a shock. In any case, it is difficult to see how it could have been prevented by anything short of mechanical restraint. Both the lunatics had earned confidence by long continued good conduct, and both were under the immediate supervision of trained attendants at the time the homicide occurred. The officers of the Prestwich Asylum have nothing with which to reproach themselves in connection with this deplorable event.

THE MALABAR.

IN spite of the unmeasured attacks of correspondents in the daily papers, for the most part anonymous, additional and overwhelming evidence comes to our hand from day to day in corroboration of our testimony last week in support of the devoted manner the army medical officers had done their duty, both at Ismailia and on board the *Malabar*. Speaking of what was under his eyes at the moment, the special correspondent of the *Daily News* telegraphed on August 28th: “I went to-day over the Ismailia Palace, now used as a military hospital. The building is very humble for a palace, but the rooms are large and airy for a hospital. Surgeon-Major Anderson and his subordinates seem to have done all that is possible to make the poor fellows comfortable. About 200 patients have been received as yet, many of them from sunstroke, others for dysentery, and a few for gunshot wounds.” Many of the anonymous complainants in the daily papers are obviously persons whose experience of sea-voyages is very limited. Even in the finest ship, two or four persons, whatever may be their wealth, are obliged to occupy the same cabin. On board the much-abused *Malabar*, space was abundant, and 153 soldiers were accommodated in a ship fitted to carry 1,700 souls. When it was found that the soldiers (who were cavalry troopers) had been sent on board by their commanding officer without their kits, and were without a change of linen, a fatigue party was told off by Surgeon-Major Anderson to wash their soiled linen. More could not have been done under the circumstances. As to the scandalous statement that the men were “semi-starved,” we have before us, as we write, the daily dietary furnished by one of the patients, and it is not only sufficient, but abundant. As in respect to the medical attendance on board the *Malabar*, we can only reassert our statement of last week, that it was punctual and devoted. The orderlies did their work well, and there was not one case of neglect of duty reported to the Surgeon-Major, except that of an orderly who had neglected to perform a dressing before

9²⁰ A.M., and for this offence, the orderly was sentenced to seven days’ imprisonment; so strict was the medical discipline on board. That the patients endured the discomforts inseparably attendant on long sea journeys may be readily understood, and why they had not any change of linen with them is a matter for inquiry; but that they suffered from neglect on board the ship is an unfounded calumny.

CHICKEN-POX OR SMALL-POX?

IN his report on the Gloucestershire Combined Sanitary District, Dr. Bond discusses at some length the probable relationship between small-pox and chicken-pox. The first case of the outbreak on which Dr. Bond comments was that of a tramp who contracted small-pox. He was isolated in the infectious hospital. He stated that he had been vaccinated about twelve years ago, and he had one good mark on each arm. This was the first of six cases which happened in the Cirencester Urban District. Three other cases occurred in a cottage situated about a mile from the town. The first was that of a boy, who was at once removed to the hospital; and, when Dr. Bond saw him a few weeks afterwards, he had all the appearance of a patient recovering from a very mild attack of small-pox, or from what some people would call a very well marked attack of chicken-pox. Ten days afterwards, two adult labourers, who were lodging in the cottage at the time the boy was removed from it, were attacked with a general eruption, which exhibited still more distinctly the characteristics of mild small-pox. These were removed to the hospital; and shortly afterwards the father of the boy and another lodger were also attacked with a milder form of the same eruption, but it was not judged necessary to remove them to the hospital. The mother and another lodger were also attacked. There are several points of interest connected with this outbreak. In the first place, was it genuine small-pox? Dr. Bond is of opinion that it was; but he admits that the first of the cases—the boy—would have passed called chicken-pox. As to the two labourers, Dr. Bond has no hesitations in saying that, if they had not small-pox, he does not know what the disease was; but the type was unquestionably a mild one. All the six cases which occurred in connection with this cottage were reported to have been vaccinated in infancy; but none of them had been re-vaccinated except the mother, who had two good marks; and in all cases the severity of the attack was in an inverse ratio to the goodness of the vaccination marks visible. Presuming that this was an outbreak of small-pox, Dr. Bond discusses whence the infection came. There had been several scattered cases of disease, which had been treated by the practitioners who attended them as ordinary chicken-pox; but there was no evidence to connect his case even with one of these, any more than with the infection of distinct small-pox; and yet it seems clear that his case was the origin of all the others at the cottage. Eight days after the removal of this boy to the hospital, a case of severe small-pox occurred in the town. No source of infection could be discovered, except that the girl had been in the company of a young woman who some months previously had an attack of “chicken-pox”. Dr. Bond then discusses the probable relation of this with the earlier cases; but he arrives at no satisfactory conclusion. What appears most probable was, that the infection of what people call chicken-pox, but which Dr. Bond prefers to call mild small-pox, was prevalent in the neighbourhood at the time; and that, for some not very evident reason, it attacked these persons with unusual virulence, and with a virulence, indeed, which, in one case, could leave no mistake as to what was its true nature. But, if this assumption be correct, what becomes of the distinction between small-pox and chicken-pox? And how far are we justified in looking on this latter affection as an innocuous one? That it is innocuous in the large majority of cases, both to the individual and to those with whom he is in contact, seems unquestionable; but, if these cases bear the interpretation Dr. Bond has put on them, it becomes a grave question whether even the mildest cases of so-called “chicken-pox” should not be treated, if not with as much care in regard to isola-

tion as small-pox, at any rate with much more care than it generally is. A somewhat similar case occurred in the Westbury district. In this instance, the subject of the disease was the wife of the keeper of a small beerhouse in an unfrequented part of a forest. The patient asserted that she had been vaccinated, and also revaccinated when about twelve years of age; but Dr. Bond could only find two poor marks on the left arm. The most searching inquiry failed to elicit any evidence to show how the disease could have been imported into the house, which, though nominally a beerhouse, was so entirely out of any thoroughfare, that it could scarcely be used as a house of call by wayfarers. Both the keeper and his wife most strenuously denied either having been away from it, or having had anyone in it, for more than a fortnight previous to the outbreak, who could have brought the infection. What seems equally singular is that, although there were seven other persons living on the premises, and although, when Dr. Bond visited them three weeks after the patient was taken ill, which was immediately after he heard of the case, not one of them had been revaccinated, yet the disease did not spread. It is also deserving of notice that, in a cottage which adjoins the one in which this case was then convalescing, Dr. Bond found a child of about nine years of age with an eruption which would be ordinarily designated as chicken-pox. Dr. Bond could not discover that any other cases of chicken-pox had existed in the neighbourhood; and the coincidence of these cases is suggestive, when considered in connection with the Cirencester outbreak.

SCOTLAND.

REGISTRAR-GENERAL'S RETURNS.

THE returns of the Registrar-General for the week ending October 14th show that the death-rate in the eight principal towns during the week was 19.2 per 1000 of estimated population. This rate is 2.5 below that for the corresponding week of last year, and 3.1 below that for the previous week of the present year. The lowest mortality was recorded in Dundee—viz., 13.9 per 1000; and the highest in Glasgow—viz., 23.1 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 4.2 per 1000, or 0.4 below the rate for the previous week. Acute diseases of the chest caused 100 deaths, or 2 less than the number registered during the previous week. A male, aged 26, died in the Royal Infirmary, Glasgow, from hydrophobia. The mean temperature was 52.8°, being 0.8° below that of the week immediately preceding, but 6.9° above that of the corresponding week of last year.

THE WINTER SESSION, EDINBURGH.

THE winter session in the Edinburgh School, University and Extramural, began on Tuesday, October 24th, the classes being well attended, although a good number of students will not make their appearance till Monday next. The principal points to be noticed this session in the University are, the removal of the classes of Physiology and Pathology from the old to the new university buildings (a description of which recently appeared in the JOURNAL), and the installation of Mr. Chiene as Professor of Surgery. The new Professor delivered his inaugural address on Tuesday, in the chemistry class-room of the old University; it is at least inconvenient for such a purpose, and such meetings as that of Tuesday renders the necessity for a proper University Hall more obvious on each occasion. Professor Chiene's address was well received by an overcrowded assemblage of students and of the profession, and we hope in a future number to refer to it more fully.

THE NEW GLASGOW POLICE BILL.

THE terms of this measure, which it is proposed to get passed into law, have recently been made public; and we observe that in the sanitary clauses which deal with sanitary matters, nuisances, diseases, and food, some new powers are asked for, bringing the act more in

harmony with the English and Irish Acts on the subjects. Stated briefly, it may be said that the new sanitary clauses provide (1) for the compulsory notification by all medical practitioners of all persons suffering from infectious diseases; (2) for the removal of persons from an infected house to a reception house; (3) for the removal of dead bodies to mortuaries, to be provided by the authorities; (4) for the definition of infectious diseases; (5) for the regulation of children from infected houses attending school; and (6) for preventing the sale of milk in premises where persons are ill from infectious diseases. Speaking generally, it may be said that the new sanitary clauses are excellent and much to be desired, but they are undoubtedly of a stringent nature in many particulars.

HEALTH OF GLASGOW.

THE report of the medical officer of health for the fortnight ending October 14th, states that there were 463 deaths registered, representing a death-rate of 24 per 1,000 living. There were 120 deaths of persons below one year, and 47 of persons aged 60 and upwards. The number of deaths from pulmonary diseases was 154, being a death-rate of eight per 1,000 living, and constituting 33 per cent of the total deaths. The deaths from fever amounted to nine, and were all from enteric fever. The number of deaths from the infectious diseases of children was 52, viz., 30 from whooping-cough, 16 from scarlet fever, and six from measles. While whooping-cough has increased in fatality, scarlet fever has slightly diminished. There were 58 cases of fever registered, of which 51 were enteric, four typhus, and three undefined. There were also 148 cases of scarlet fever, 66 of whooping-cough, 46 of measles, and 25 of diphtheria registered, of which 52 were removed to hospital, and the remainder supervised at home. There are at present in hospital 138 cases of scarlet fever, 104 of enteric fever, and 26 of whooping-cough—in all 276; as compared with 255 this day fortnight, and 257 at the corresponding period of last year. In this report, Dr. Russell has drawn attention to the recent rapid increase in the population of Glasgow, an increase quite beyond the estimate allowed by the Registrar-General. As a consequence of this divergence, a higher death-rate is attributed to Glasgow in the Registrar-General's returns than is actually the case, and the tendency of this discrepancy will be to increase to a considerable extent, seeing that, while in 1890 the population would, according to the Registrar-General, be 530,451, it has already, in the present year, reached the total of 531,200.

HEALTH OF THE PRINCIPAL SCOTCH TOWNS.

DURING the month of September, the deaths of 2,030 individuals were registered in the eight largest Scotch towns. These consisted of 1,021 males, and 1,009 females. This number of deaths is under the average for the same months during the preceding ten years by 97, due allowance having been made for proportional increase of population. The individual mortality of each town was, per 1,000 of its population, in Aberdeen, 14; in Edinburgh, Greenock, and Leith, 17; in Dundee, 20; in Glasgow and Paisley, 23; and in Perth, 25. Nearly 44 per cent. of the entire mortality was of children under five years of age; and the percentage of each town was: 32 in Perth, 35 in Edinburgh, 39 in Paisley, 43 in Aberdeen, 45 in Dundee and Greenock, 48 in Glasgow, while it was actually 61 in Leith. Zymotic diseases contributed 431 deaths, or 21.2 per cent. of the entire mortality. In Leith and Perth, however, the percentage was considerably greater. Diarrhoea was most fatal, and, in Dundee, caused 14.7 per cent., in Leith 9.5, and in Perth 9.5 per cent. of all the deaths. The choleraic diseases were productive of 8 deaths, of which 3 were by choleraic diarrhoea, 1 by British cholera, 1 by cholera infantum, and 3 by diarrhoea and vomiting. Of 42 deaths due to fever, 9 were returned as typhus, 31 as enteric, and 2 as simple continued fever. As to the other zymotics, whooping-cough caused 84 deaths, scarlet fever 56, diphtheria 34, and measles 17 deaths; there was no death from small-pox. As to other diseases, apoplexy caused 56 deaths, paralysis 44, cardiac diseases 140, hydrocephalus 54, and premature birth debility 57 deaths.

Phthisis pulmonalis caused 214 deaths, or 10.5 per cent. of the whole; while inflammatory affections of the respiratory organs other than those already mentioned caused 297 deaths, or 14.6 per cent. of the total mortality. Of 70 deaths due to violent causes, 3 were of suicidal origin. Five individuals, each over ninety years of age, died in September, the oldest, a female, being ninety-seven years of age. During the month, the births of 3,318 children were registered, of whom 1,691 were males, and 1,627 females. As to the meteorological conditions, the report states that, "the month of September has been rather curiously characterised. The barometer has been at its ordinary mean height, but much disturbed, *i.e.*, afflicted with a great range; yet the wind has been of less than its usual strength, and the rain less, both in depth and days of falling, though great barometric range usually increases them both. But, on the other hand, the mean temperature was lower than due to the progress of the autumn season alone, and, as the daily range of the thermometer was greater than usual, the nights must have been more than ordinarily cold; and, together with the days, of a drying quality, favourable for harvesting operations." As to details, the mean barometric was less by 0.024 inch, and its monthly range greater by 0.177 inch; the mean temperature less by 1.3°, and its mean daily range greater by 1.5°; the mean humidity less by 2; the rain-depth, in inches, less by 0.61 inch, and its number of days less by 2; and the wind-pressure less by 0.48 lb., than the averages of the same month during the preceding 25 years. The highest mean temperature, 53.3°, was at Aberdeen; and the lowest, 51.4°, was at Perth.

IRELAND.

AN outbreak of scarlet fever has taken place at Ballyfin, Athy Union, and some deaths have already resulted. There is a probability of the disease spreading, as the poor refuse to go to hospital, and in one case at least a "wake" was held over the body of a man who had succumbed from the disease.

THE Abbeyleix Guardians have passed a resolution reducing the salaries of their medical officers of health, as they consider that the duties to be performed are too highly remunerated. The Local Government Board have refused to sanction the proposed reduction.

HEALTH OF CORK.

DURING the four weeks ending October 7th, the births registered amounted to 152, a number equal to 25.02 per 1,000, and the deaths to 116. The annual death-rate per 1,000 gives a total ratio of mortality of 19.02, but deducting those (25) who died in the workhouse, the urban death-rate will be 15.00. Some increase of fever has taken place since last month, a usual occurrence at this season, probably due to atmosphere influence.

THE PROPOSED ACADEMY OF MEDICINE IN DUBLIN.

A MEETING of those interested in the formation of this society, which is intended to be an amalgamation of several of the existing medical societies of the city, was held in the Royal College of Surgeons in Ireland on Saturday last. The President of the College, Mr. Barton, occupied the chair. A small representative committee was appointed to finally revise the proposed rules. A suggestion, which was generally agreed with, was also made, that surgery should receive as much prominence as medicine in the title of the new amalgamated society.

THE IRISH MEDICAL ASSOCIATION.

THIS Association having now become incorporated, a general meeting of its members has to be held, in compliance with the rules of the Board of Trade, to receive the report concerning the incorporation of the Association, and to hear the articles of association and memorandum of agreement read. A special general meeting of the Association

has therefore been summoned for the purpose on Tuesday next, the 31st instant, at the Royal College of Surgeons, at 4.15 P.M.

THE ROYAL MEDICAL BENEVOLENT FUND SOCIETY OF IRELAND.

WE regret to learn that, at a special meeting of the Committee of this Fund, held last Wednesday, a letter of resignation was received from the Acting Secretary. Dr. Marks has worked long and faithfully for the benefit of the Fund; and the loss of his services, necessitated as it is by the state of his sight, will be much regretted. Mr. Arthur H. Benson, of St. Mark's Ophthalmic Hospital, one of the Honorary Secretaries of the Fund, was appointed Acting Secretary. A small salary is attached to the office.

LUNATICS IN WORKHOUSES.

IN Ireland, where poorhouses and lunatic asylums are not only generally adjacent to each other, but also closely identified with the well-being of the humbler classes of society, a disposition prevails to draw them into a still closer connection, by rendering the former, on a principle of economy, subsidiary to the latter. The inspectors of lunatic asylums, in their recent report, state that, as far as their experience avails, and from day to day the conviction strengthens, they think it highly advisable that in each asylum district there should be selected a poorhouse, if available, in a central position, with land attached to it, to which tranquil and utterly hopeless cases could be removed. It would be the cheapest and best arrangement for the individuals themselves, as in many of the institutions the sites, from their very restricted area, present insurmountable difficulties, except in about five or six unions. At Belfast the guardians have shown an example worthy of imitation. By erecting a separate receptacle altogether for 300 of the classes in question, suitably constructed in an open space at an outlay of nearly £6,000, where paid attendants are employed, the cost of the establishment being derived from the usual poor-rates. The total number of the mentally affected in workhouses on the 31st of last December was 3,640, being 67 in excess of that in 1880. Those classified between both sexes as lunatics amounted to 1,771, and as idiots or epileptic imbeciles to 1,869. As regards the mortality, although the provision in unions for insane paupers is indifferent, yet it is so far superior to what, prior to admission, they had been accustomed to, that old age is largely noticeable among them.

KING AND QUEEN'S COLLEGE OF PHYSICIANS.

AT the annual stated meeting of the College, held on St. Luke's Day, October 18th, the following officers were elected for the ensuing year. *President*—William Moore, M.D. *Vice-President*—Francis Robert Cruise, M.D. *Censors*—Francis R. Cruise, M.D.; Arthur W. Foot, M.D.; Christopher J. Nixon, M.B.; Fleetwood Churchill. *Additional Examiners*—John Magee Finny, M.D.; G. F. Duffey, M.D.; Arthur V. Macan, M.B.; Christopher J. Nixon, M.B.; John M. Purser, M.D.; Walter G. Smith, M.D. *Registrar*—John W. Moore, M.D. *Treasurer*—Aquilla Smith, M.D. *Examiners in Midwifery*—John Kirkpatrick, M.B.; Stephen M. MacSwiney, M.D. *Professor of Medical Jurisprudence*—Robert Travers, M.A., M.D. *Representative on the General Medical Council*—Aquilla Smith, M.D. The following Member of the College was elected to the Fellowship—John Henry Chapman. This gentleman is well known as the able Honorary Secretary of the Irish Medical Association. He is also a dispensary medical officer (of the Donnybrook District of the South Dublin Union), and a medical officer of health—an important body of medical men, hitherto not directly represented in the College. At the same meeting of the College, the third reading of an amendment of by-law was adopted, by which it was resolved, "That, in accordance with the recommendation of the Inspection Committee, which was approved by the College on March 31st, 1882, histology be one of the subjects of examination for the first professional examination". Dr. Purser, King's Professor of the Institutes of Medicine, was appointed Examiner in histology.

BANQUET TO THE MEDICAL OFFICERS OF THE EGYPTIAN EXPEDITION.

We have the satisfaction to announce that a banquet of welcome will be given, at an early date, to the medical officers of the army and navy who served in the Egyptian expedition. The chair will be taken by Sir William Jenner, Bart., K.C.B., President of the Royal College of Physicians. Sir James Paget, Bart., Sir Joseph Fayrer, K.C.S.I., Medical Officer to the India Board, and Mr. T. Spencer Wells, President of the Royal College of Surgeons, have expressed their intention of attending the banquet; and Dr. Crawford, Director-General of the Army Medical Department; and Dr. Reid, Director-General of the Naval Medical Department, will also be present as guests. A committee is being formed to make the necessary arrangements; and, meantime, communications from gentlemen desiring to attend may be addressed to Mr. G. Eastes, M.B., 69, Connaught Street, Hyde Park, W.

THE PARLIAMENTARY VOTE OF THANKS TO THE ARMY OFFICERS.

We cannot but note with dissatisfaction, which we know to be shared by eminent and influential members of the profession both in the army and in civil life, that in the votes of thanks in the House of Lords by Lord Granville, and in the House of Commons by the Premier, no reference is made to the surgeon-general commanding the medical department of the expedition. The vote of thanks includes officers ranking as major-general, who are enumerated by name. The surgeon-general commanding the army medical service has the rank of major-general, and the omission of the name of Surgeon-General Hanbury from the vote of thanks is the more to be deplored, because he was the only major-general of that department, and among the combatant officers there were many who are enumerated. The services of the army medical officers have been universally recognised by the authorities as of a most gallant and devoted character. They have suffered from the bullet, as well as from disease; and their conduct throughout has been such as to evoke the thanks of the General commanding-in-chief, who has expressed in his despatches his entire satisfaction with the work of the medical officers and the services rendered by Surgeon-General Hanbury. This omission of the Army Medical Department from the vote of thanks has, no doubt, traditional precedent; but such precedents would now certainly be more honoured in the breach than in the observance. We earnestly trust that some means may be taken to supply this omission, or at least to indicate the sense of the Government that this service is not less deserving of public and parliamentary thanks than other departments of the army which have served their country so gallantly in the late war.

QUARANTINE AND COMMERCE.

We understand that Her Majesty's Government have made preliminary official communications to various European Governments on the subject of a proposed conference to discuss the present constitution of the International Sanitary Board of Egypt, with a view to endeavour to bring about a more satisfactory state of things than at present exists with respect to the quarantine regulations of that body. This conference is much needed; the constitution and the proceedings of the International Sanitary Board have been in the highest degree unsatisfactory, and, in many respects, opposed to the experience of English medical science. The constitution, powers, and regulations of this body alike require revision, and the action of the British Government will be viewed with no less satisfaction by the medical profession generally, than by the great commercial interests, which are at present seriously injured by the antiquated and unauthorised views which the Sanitary Board of Egypt attempts to enforce.

REBUTTER TO THE REJOINER OF THE SECRETARY OF STATE FOR WAR AGAINST THE LEGAL RIGHT OF MILITIA SURGEONS TO RETIRING ALLOWANCES AND PENSIONS.

In several articles and communications which have appeared in our JOURNAL during the last six months, and also in a detailed communication addressed to the Secretary of State for War by Mr. Ernest Hart, on behalf of the militia surgeons (see JOURNAL, May 20th, 1882, p. 745), both the legal and equitable right of these surgeons to pensions and allowances, on retirement from age and infirmity, have been maintained and fully argued. In a letter published in our JOURNAL of the 14th instant, against the aforesaid claims of the militia surgeons, addressed to Mr. Hart by Mr. Ralph Thompson, on behalf of Mr. Childers, on this subject, we are informed that this Minister, after giving full consideration to the statements therein made to him on the subject, and to an article in the BRITISH MEDICAL JOURNAL to which his attention was directed in the letter, and having taken the opinion of the law-officers of the Crown upon the entire correspondence, he cannot admit our statement "that the militia surgeons have a claim, either in equity or in law, to pensions on retirement". The reasons stated in substantiation of these objections we will mention and answer.

In reply to our argument that there is no statute law to imply that militia surgeons belonged to the permanent staff, it is stated that the Acts before the statute 10 Geo. IV distinctly treat them as a part of this body; firstly, because, by an Act of the previous year, 9 Geo. IV, c. 67, the surgeon's pay is provided for among that of others of the permanent staff; and that "every adjutant, paymaster, surgeon, quartermaster, and every non-commissioned officer, drummer, and fifer, on permanent pay of the regular militia, when disembodied, is to reside in the city—i.e., where the arms of the corps are—or within a reasonable distance thereof; and, when absent from such residence without leave, they forfeit their pay;" secondly, because, by the statute 10 Geo. IV, c. 10, the permanent staff was reduced according to a circular dated War Office, December 24th, 1828; and "the surgeon's pay and that of other reduced officers is no longer provided for among the rest of the permanent staff; nor (see Section 2) are the surgeons or the other reduced officers any longer required to reside, as under former Acts, near the arms of the corps, though the rest of the permanent staff is required to do so." In reply to these objections, we say, as to the former, that, while the words quoted from the statute 9 Geo. IV, c. 67, might reasonably be construed to imply that militia surgeons belonged to the permanent staff, they will also, with equal reason, admit of a contrary interpretation, if the well-settled principles of legal hermeneutics, as applicable to Acts of Parliament, are duly considered. With respect to the other ground of objection, we say that it will be found on a reference to Section 3 of the statute 10 Geo. IV, c. 10, which provides for the reduction of the permanent staff, that surgeons are not mentioned among officers and others therein stated; and this omission, we maintain, is very strong evidence to convince us that the militia surgeons did not form part of this division of the army.

It occurs to us that the main if not the sole ground of the legal title of the militia surgeons to pensions and retiring allowances is not whether, according to statute law, up to 1829, they did or did not belong to the permanent staff of the militia; but whether, by the statute 10 George IV, c. 29, and other Militia Pay and Clothing Acts up to 1873, they are so entitled. In our article of May 20th last, we quoted, in favour of the claim of these surgeons, the twentieth section of the Act 31 and 32 Vict., c. 76, alluded to in our previous communication, and which section provides that, "whereas certain allowances have been granted, in pursuance of former Acts, to adjutants, surgeons, and quartermasters of regular militia who have, by age or infirmity, been rendered unfit for further service, such allowances shall be issued and paid during the continuance of this Act." Now, from the wording of the section referred to, and others exactly the same which appear in numerous Militia Pay and Clothing Acts in force from 1830 to 1874, it seems clear that other militia surgeons besides those engaged in this section of the army up to June 25th, 1829, were either receiving pensions or allowances, or "that it was intended by these statutes that they should still be paid". This interpretation, however, is denied by Mr. Thompson, on behalf of the Secretary of State for War, in the last letter published on this question; for he states that "the only allowance granted to militia surgeons retired on account of age or infirmity, 'in pursuance of former Acts', is the pension of six shillings a day granted from year to year to militia surgeons of twenty years' service (formerly three shillings a day), after thirty years' service, by the Annual Pay and Clothing Acts up to 1829, the year when the permanent staff was reduced." In support of this allegation, we are informed that "the Pay and Clothing Act of that year (10 George IV, c. 29)

distinctly states (Section 23) that the above pension is to be given to surgeons who shall have been rendered unfit by age or infirmity, 'previous to the 25th of June, 1825', and no subsequent Act gives this pension to any surgeon who had not retired previously to the above date, or any other retiring allowance to any militia surgeon appointed since 1829.

After carefully considering Mr. Childers's adverse reply, and after again referring to the doctrines of leading European and American jurists, and the principal dicta of our judges, upon the construction of statutes, we cannot perceive sufficient reason for coming to any other conclusion than the one we have arrived at concerning this part of our argument, partly on account of the reasons mentioned in our article of May 20th last, and other communications; and partly for further reasons, which we will now mention.

In the first place, it appears to us that the determination of the legal right of militia surgeons to pensions or retiring allowances depends upon the legal meaning of the words "such allowances", in the latter part of the clause we have quoted from the twentieth section of the Pay and Clothing Act, 31 and 32 Vict., c. 76. Now, we submit that these words mean the pension of six shillings a day provided by the Annual Pay and Clothing Acts up to 1829; while it is contended, on the part of Mr. Secretary Childers, that this pension is only to be given to militia surgeons who shall be rendered unfit to act as such by age or infirmity, before June 25th in that year; and that no other retiring allowance was payable to any militia surgeon appointed since 1829. This being the issue between us, the next question is, upon what principles, for the construction of Acts of Parliament, is it to be logically adjudicated? In answer to this, we will, firstly, say that it is an incontrovertible doctrine, and one that has been adopted in this country for centuries, that the only rule for the construction of statutes is, that they should be interpreted according to the intentions of the Parliament which passed them. This principle was well stated by Chief Justice Tindal, in the celebrated "Sussex Peerage Case" (11 Cl. and Fin., 143), who also said that, "if the words of the statute are in themselves precise and unambiguous, then no more can be necessary than to expound those words in their natural and ordinary sense. These words themselves alone do in such case best declare the intention of the law given." What is called the "golden rule" for the construction of Acts of Parliament was pronounced by Mr. Baron Parke (Lord Wensleydale), in the case of "Becke v. Smith" (2 M. and W., p. 195), when he said that "it is a very useful rule in the construction of a statute to adhere to the ordinary meaning of the words used, and to the grammatical construction, unless that is at variance with the intention of the legislature, to be collected from the statute itself, or leads to any manifest absurdity or repugnance, in which case the language may be modified or varied so as to avoid such inconvenience, but no further." Several of our leading judges, including Lord Blackburn, have admitted the necessity of modifying language in statutes in order to avoid injustice or absurdity. From these and other statements we have made respecting the rules for the interpretation of statutes, it will at once be manifest that the reasonable mode of satisfactorily concluding whether the claims of militia surgeons to pensions and retiring allowances is by ascertaining the intention of Parliament concerning these payments.

For several years before 1829, a pension of six shillings a day was given by Annual Pay and Clothing Acts, to those surgeons retired on account of age or infirmity, after twenty years' service. This fact, in our opinion, clearly indicates that various Parliaments have recognised the justice of granting this payment to these deserving professional men. The Legislature which passed the 1829 Pay and Clothing Act also well knew that, as long as a militia existed in this country, surgeons must be employed for such; and that it would be unconstitutional and inequitable that any class of individuals, engaged by the State, should be deprived of their right to pensions or allowances on forced retirement from age or infirmity. When these payments have been granted to these disabled surgeons by statute laws, it appears highly unjust to conclude that the militia surgeons now living, who have retired from the causes just mentioned, are not legally entitled to pensions or retiring allowances. Another point of evidence in favour of their claims is the fact that, if it was intended, by the 1829 Pay and Clothing Act, to grant pensions to those militia surgeons only who should retire from age or infirmity, before June 25th, 1829, it is not likely, according to the doctrine of probabilities, that provision would be made for the payment of pensions to militia surgeons for fifty or more years afterwards, as none of the surgeons in receipt of this pension before June 25th, 1829, would probably be living for several years after 1879.

Again, the right of those of our present militia surgeons, who have been compelled to retire from age or infirmity, and who have served for twenty years and upwards, to receive pensions upon equitable grounds,

have been fully and forcibly pointed out by us, and noticed by Mr. Childers; but we regret to state that but very few of them are mentioned in the letter stating the decision of this Minister, and the contents of which appeared in our JOURNAL of the 14th instant, or in any other communications which we have received from the War Office.

Lastly, we trust that some means will soon be adopted to remedy this painful grievance suffered by a great number of the militia surgeons, and which the whole class feel to be as intolerable as it is unconstitutional.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL:

NOTICE OF QUARTERLY MEETINGS FOR 1882: ELECTION OF MEMBERS.

A MEETING of the Committee of Council will be held on Wednesday, January 17th, 1883. Gentlemen desirous of becoming members of the Association must send in their forms of application for election to the General Secretary not later than 21 days before the meeting—viz., December 27th, 1882, in accordance with the regulation for the election of members passed at the meeting of the Committee of Council of October 12th, 1881.

FRANCIS FOWKE, *General Secretary*.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of the above District will be held at the County Hospital, Canterbury, on Thursday, November 9th, at 3 P.M.; Mr. Parsons in the chair. Agenda—Collective Investigation Committee work. Mr. Thurston: Case of Atrisia Vaginalis. Mr. Brian Riden: Case of Spurious Hermaphroditism. Mr. Wachter: An Obstinate Case of Skin-Disease. Mr. Whitehead Reid: Endocervicitis. Dinner at the fleur de Lys Hotel at 5 P.M. —T. WHITEHEAD REID, Honorary Secretary, 34, St. George's Place, Canterbury.—October 24th 1882.

EAST YORK AND NORTH LINCOLN BRANCH.—A general meeting of this Branch will be held at the Infirmary, Hull, on Wednesday, November 8th, 1882, at 3 P.M. Gentlemen who desire to become members are requested to inform the Secretary, Mr. HARDEY, Honorary Secretary, 17, Victoria Road, Hull, before the meeting.

NORTH OF IRELAND BRANCH.—A general meeting of this Branch will be held in the Belfast Royal Hospital, on Thursday, November 8th, 1882, at 3 P.M. Gentlemen who desire to become members are requested to inform the Secretary, Mr. M.D., before the meeting.

CORRESPONDENCE.

NOTIFICATION OF INFECTIOUS DISEASES.

SIR,—Mr. Nourse forcibly and lucidly draws attention to some of the considerations which should be borne in mind when legislation in sanitary matters is under discussion by the profession. Permit me to show, by an example, that the results which he fears may follow from overlooking them—in one case at all events actually have followed.

There has lately been an epidemic of small-pox in Sydney, N. S. W., and for many months there was no law compelling the notification of fresh cases, so that, notwithstanding the published request of the Board of Health that all physicians should report cases coming to their knowledge, many were not reported, and many were concealed. At length, a patient died of small-pox under the care of a physician, and the nature of his illness first became known to the Board of Health through the certificate of death. The New South Wales branch of the Association, holding its usual monthly meeting thereafter, by resolution censured the physician referred to, for concealing the case; and, further, declared its opinion to be that all physicians are under a moral obligation to declare the nature of their patients' illness, if that illness happen to be small-pox. "One has an eye, and he'll take an ill," is no less true of the Government of New South Wales than of any other Government; and very shortly after the passing of their resolution which (I suppose) were accepted only as a moral expression of opinion, which had ever been held by the Government of New South Wales, a short Act was passed without opposition from medical or other members of the legislative assembly, by which the notification of cases of small-pox is made compulsory. The Act provides, not only that the physician shall inform the householder or person in charge of the sick,

but that he shall himself run with due speed, and personally deliver to the appointed authority, a certificate setting forth the nature of the case. The penalty is £50.

According to the manner in which Mr. Nourse accustoms himself to regard the doings of his fellow men, he may derive consolation or feel an added pang, from the reflection that depths exist, which have not only not been sounded by the profession in this country, but whose very existence has hitherto been un conjectured by it.—I am, etc.,

September 19th, 1882. J. ASHBURTON THOMPSON, M.D.

SANITATION IN SWITZERLAND.

SIR,—Upon my return to Lausanne, after an absence of some weeks, I looked over the latest numbers of the BRITISH MEDICAL JOURNAL, which I always read with deep interest.

The number dated September 16th contains an article, entitled "Sanitation in Switzerland", that I cannot allow to pass without protestation: and I count upon your benevolent impartiality for publishing a rectification, which I will do my best to abridge. The author very rightly calls the attention of the proprietors of hotels and boarding-houses to the actual importance of the sanitary condition of their several habitations, and more especially to the defects of the water-closets in some of the houses which are intended for the accommodation of foreigners. But, in this particular, is Switzerland so far behind? I have travelled over most of the countries usually visited by continental tourists, and I think I can affirm *de visu* that, taking one with another, our good Swiss hotels are, as regards their sanitary condition, at least equal, if not superior, to the average number of hotels in Paris, or the south of France, the whole of Italy, and on the banks of the Rhine and of the Danube.

The water-closets are almost everywhere furnished with earthen pans and an hermetic automatic apparatus, and, at the same time, they are abundantly supplied with water.

Nearly all the towns have made great sacrifices in order to improve the sewers, and obtain a perfect drainage.

Nowhere, I may add, can better water be drunk than in Switzerland. At Geneva, it is the blue and limpid water of the Lake Lemán; and Dr. Lombard, the witty President of the Geneva Sanitary Congress, related, in his opening speech, that Professor Tyndall once said to his pupils, "Those stupid Genevise are always complaining of the quality of the water they drink, and yet it is the very best in the world." Lausanne, Vevey, Montreux are, if possible, still more highly favoured, for there we drink the pure crystalline waters of the Alpine springs, and certainly they will not bring us the germs of zymotic diseases.

Milk is, nearly everywhere, of the first quality, and tuberculosis of cows is relatively rare. I have assured myself of this fact by consulting the registers of the inspector of butcheries.

The author of this article considers that certain infectious diseases—typhus, diphtheria, dysentery—may be introduced into England from Switzerland, and he particularly attributes the spread of typhoid fever to our Swiss hotels. No doubt the author means to be humorous, but allow me to reply to this paradoxical idea as if it were serious, although I have not the intention to undertake a scientific defeat, which would, I esteem, be altogether superfluous. I will only open, almost at haphazard, two of your classics.

If the author will read over again the fourth chapter of Sydenham, which treats of the continuous fevers of the years 1661, 1662, 1663, and 1664 in London, he will have no possible doubt that the epidemics in question were the same that, in the present day, we call typhoid fever. The symptoms are identically the same, and the great English practitioner traces, with a master's hand, the etiology of the fever, which he calls continuous, putrid, malignant, purpled, noting down the pernicious atmospheric and telluric influences, the alteration of the blood, and the malignity of the excrements. But as tourists never came to Switzerland in the sixteenth century, the English Hippocrates does not mention our Swiss hotels.

If I open the modern work, which I dare also call classic, of Dr. William Budd, I find that the Registrar-General's report for 1872 proves that, during that year, fevers (particularly that of the typhoid form) caused in England, independent of Scotland and Ireland, a mortality of 13,507. During the six preceding years, the annual mortality through fevers exceeded 18,000; in 1866 they were over 21,000, and in the preceding years, the average was about 20,000 *per annum*.

Dr. Budd agrees with the Registrar-General in attributing the diminution of 1872, first of all to the heavy rains of that year, which had purified the atmosphere, and cleansed the streets and sewers; then, above all, to the progress of public and private sanitation, which was, he says, most conspicuous these last few years.

Allow me to give you, as respects infectious diseases in Switzerland,

some figures that I extract from the official statistics, published monthly by Professor Dunant, General Secretary of the Geneva Sanitary Congress. For the year 1881, Geneva, with a population of about 70,000, presented 51 deaths from typhoid fever, 48 from diphtheria, none from dysentery. Lausanne, with a population of 31,000 souls, presented seven deaths from typhoid fever, 20 from diphtheria, one from dysentery. Vevey, with a population of 8,000 souls, had one death from typhoid fever, five from diphtheria, none from dysentery.

For the year 1882, first quarter (January, February, and March), Geneva had six deaths from typhoid fever, ten from diphtheria, none from dysentery; Lausanne, four from typhoid fever, six from diphtheria, none from dysentery; Vevey, none from typhoid fever, diphtheria, or dysentery. In the second quarter (April, May, and June), Geneva had five deaths from typhoid fever, four from diphtheria, none from dysentery; Lausanne, one from typhoid fever, three from diphtheria, none from dysentery; Vevey had one death from typhoid fever, two (in June) from diphtheria, none from dysentery. Montreux is not noticed in Professor Durant's tables, but it suffices to observe that the average of life is over sixty years, and that, probably, there is not a healthier locality in Europe.

These statistics are very reassuring, and yet it is necessary to add that the calculation is exaggerated, both for Lausanne and Geneva, by the fact that the hospitals of these towns receive invalids from all the cantons.

I conclude by stating a detail, which is not without interest for those parents who have children studying in our country. I have been commissioned this spring to visit the grammar schools (*écoles primaires*) of the town of Lausanne, with a view to their sanitary condition, and, somewhat later, received from the Government the same mission with respect to the Cantonal College and Industrial School. Well, during the past year, for about 2,200 children who frequent the Grammar Schools (*écoles primaires*), there have been only one case of typhoid fever and two cases of croup, all recoveries; and for 630 young students in the superior establishments of public instruction, there has not been one single case of infectious disease.—I am, sir, yours faithfully,

Lausanne, October 16th, 1882.

DR. JOËL,

Delegate of the Swiss Confederation to the Medical Congress of London.

ALCOHOL IN HOSPITALS.

SIR,—If you consider that the inclosed abstract is worthy of notice, it is at your service. I can answer for its being a correct statement, as it is taken from the audited accounts of the hospital. It will prove interesting, inasmuch as it shows that one at least of the general hospitals has for some years been cultivating temperance in the medical treatment; and it is curious to observe how the use of milk increased inversely with the diminution of stimulants: the former having increased nearly as much as the latter has diminished; the number of patients at the same time having increased by over one thousand.—Believe me, my dear sir, yours very sincerely,

WM. B. OWEN.

61, Cleveland Square, Hyde Park, October 7th, 1882.

St. Mary's Hospital.

	In-patients admitted.		Cost of Ale, Wine, and Spirits.		Cost of Milk.	
			£	s. d.	£	s. d.
1871	.....	1,949	.....	764 12 7	.....	455 15 5
1872	.....	1,777	.....	714 15 0	.....	470 3 11
1873	.....	1,753	.....	654 17 8	.....	495 5 5
Total for 3 years	5,479	.....	2,134	5 3	.....	1,421 4 9
1879	.....	2,164	.....	455 15 5	.....	665 2 1
1880	.....	2,126	.....	470 3 11	.....	713 18 0
1881	.....	2,253	.....	495 5 5	.....	576 9 9
Total for 3 years	6,543	.....	1,421	4 9	.....	1,895 9 10

The ale and milk include those supplied to resident officers, nursing staff, and servants.

QUARANTINE.

SIR,—“R.N.” is surely at one with me as to the inutility of quarantine measures against yellow fever. The facts of his story, as stated in your JOURNAL of the 7th instant are these.

Yellow fever breaks out in 1869 on H.M.S. *Barracouta*, off the West India Islands. The ship puts in at Bermuda. It is quarantined, and the sick are landed and treated at the quarantine hospital on Port's Island. The case is quite an ordinary one. Contagiousness is assumed, and the routine regulations are faithfully carried out. Next there comes the question, of what advantage were they? Of none to the ship, I think. “R.N.” says the disease, however, continued to spread

among the ship's company; and, finally, the sick had to be embarked, and the ship to leave for the colder climate of Halifax, where the epidemic at once ceased. Six weeks after the departure of the *Barracouta*, yellow fever broke out among the Marines of the dockyard of Port's Island; several of the men died, and this second outbreak was only stamped out by shipping off all the remaining sick and exposed to Halifax. "R.N." vouches for the substantial accuracy of these facts, and he does something more. He quotes, as the general result of medical investigation, that all naval experience proves that cold weather invariably stamps out the disease. He mentions the advice of the surgeon of the ship on the first outbreak of the fever, that it should immediately go north. And he gives us his own opinion as to the neglect of this advice. "Unfortunately, her captain persisted in putting into Bermuda, where the ship was quarantined", etc.

I have no knowledge of this outbreak, other than what "R.N.'s" letter supplies; and I confess I see in it neither proof of contagiousness, nor argument in favour of quarantine.—Yours faithfully,

Liverpool, October 11th, 1882. FRANCIS IMLACH.

THE TREATMENT OF RHEUMATISM BY BLISTERS.

SIR,—I have read with much satisfaction in the JOURNAL, the letter of "A Dublin Hospital Physician," on the blister treatment of rheumatic fever, in which he says that, "he has for many years practised with great advantage this simple plan;" adding, "I have extensively employed blistering in acute rheumatism, as a large class of students who have attended my hospitals are aware." And in conclusion, he says, "I have been told that, before Dr. Davies's publication, the practice had been pursued by the late Dr. R. B. Todd, one of the most illustrious physicians of the present century—*Palmas qui meruit ferat*."

I trust that I should be the last person to attempt to deprive so eminent an authority as the late Dr. Todd of any merit which he deserves; but a perusal of his *Clinical Lectures* will prove that, although he advocated the use of blisters in acute rheumatism, his method of employing them differed *toto celo* from the plan which I published in the *London Hospital Reports* of 1864, and I will claim your indulgence to show how such is the case. In a few words, my plan may be thus stated. Every joint, large and small, attacked by pain, heat and swelling, is surrounded simultaneously by circular and broad strips of emplastrum lyttæ or zones of blistering fluid, which are to remain above or below the inflamed joints, until a full discharge of serum is obtained, such a discharge being favoured by the application of large linseed-meal poultices. By this means, the temperature of the body soon falls, the pain is rapidly and permanently removed, the urine loses its abnormal acidity, and even in some cases presents an alkaline reaction; and the heart is, in the vast majority of cases, shielded from mischief. To be successful, the treatment must be adopted early, when the fever is highest and pain the most extensive, and be boldly carried out. One of my cases in the London Hospital had seven blisters put on at the same time (296 square inches), and no stranguity resulted. They were applied on June 3rd, the beneficial effect was rapid and complete; the pulse fell from 120 to 86, the urine became alkaline; the pain had almost left him in thirty hours, and on the 10th, the report says: "The skin having healed up, he could walk as well as ever."

I would now contrast the above with the plan laid down by the late Dr. Todd, quoting from the *Clinical Lectures*, 1860, pages 59 and 60: "Again, it may happen—and this is by no means of unfrequent occurrence—that the swollen and painful state of the joints does not yield to cotton-wool or oiled silk only, or that the heat which this application generates cannot be tolerated by the patient. What further treatment of the joints will you pursue? I have no hesitation in advising you to apply blisters, and I would recommend you to use every means in your power to get them to rise well. I do not think it advisable to use large blisters, and their use is to be deprecated. The plan I generally follow is this: I order a small mustard cataplasm to be applied to the affected joint, and to be kept on for half an hour, to redden the skin; after its removal, the skin is to be carefully washed and dried, and the blister may then be applied. You must not let this exceed the size of a crown-piece. It is better to apply two or three small blisters in rapid succession, and to different parts of the joint, than one large blister." Again: "A very large blister is apt to do mischief, but a small one, varying in size from a crown to a half-crown-piece, is almost universally beneficial."

Without trespassing needlessly, I trust, upon your valuable space, I may, in a few words, sum up the difference of the two plans.

1. I do not lose time in applying cotton-wool or oiled silk, but apply blisters at once where the joints are fully affected and the temperature of the body high.

2. I do not blister the inflamed parts themselves, but apply the emplastrum or acetum lyttæ as closely as possible to the affected joints, encircling them completely with the application.

3. I employ large blisters, not those of a crown or half-crown piece.

4. I order no specific medicine, such as alkalies and salicylates, giving only a moderate dose of morphia on the night when the blisters are applied.

The treatment, though apparently local, is really constitutional, is specific, and differs entirely from Dr. Todd's method of treating acute rheumatism, in the fact that blisters, large and many, are essential, and not simply accessory to the plan which acts, as I have said elsewhere, *cito, tuto, if not jucunde*. As regards the pain caused by the blisters, I would give the answer of one of my hospital patients, who said that he was grateful for their application, and would prefer to have forty blisters applied rather than undergo the agony caused by rheumatic fever.

I am obliged to the "Dublin Hospital Physician" for his favourable opinion of the plan, and am glad that he has given me the opportunity of showing that it is diametrically opposite to the method advocated by the late Dr. R. B. Todd.—I have the honour to remain, yours faithfully,

HERBERT DAVIES, M.D. Cantab., F.R.C.P.,
Consulting Physician to the London Hospital.

Finsbury Square, October 21st, 1882.

SIR,—It was with regret and surprise that I read a letter, in your last issue, on the above subject, by a gentleman who was formerly associated with me in practice, viz., Dr. Ashburton Thompson.

I merely wish to point out, in fairness to the medical profession and myself, that his claim of originality and priority in the treatment of rheumatism by the internal use of cantharides, is altogether an error. I never "suggested" it to him; but he found me, when he joined me in practice, treating all my cases of rheumatism, acute and moderate, with this drug; and learning from me that, "if the treatment be begun early enough, the patient will not suffer from carditis," he followed my practice, continued it, and afterwards presented me with the "long clinical details" for future use by me.

It was I who originated the treatment, and practised it for some years before I became acquainted with Dr. Thompson. I have not made it a secret: for several of my medical brethren have, at my "suggestion" to them, administered the drug with success, and have carefully refrained from publishing results, in accordance with my expressed wish.

I have been patiently waiting and recording until such time as I considered a sufficient number of cases had been obtained, by myself and from others, to warrant a logical deduction. As yet, I have not been able to persuade myself that Dr. Thompson's cases, *plus* six times as many of my own, are sufficient for that purpose. When the proper time has arrived, I shall lay before the profession both my theory of, and practice with, cantharides internally used against rheumatism, its allies, and that which is the serious part of rheumatism—cardiac complication.—I am, sir, yours obediently,

JOHN BRUNTON.

21, Euston Road, October 9th, 1882.

DURATION OF INEFFECTIVENESS IN SCARLET FEVER.

SIR,—Mr. Armistead's observation as to the incubative period and duration of ineffectiveness in scarlet fever, to which you refer in the JOURNAL of September 30th (p. 642), affords very definite evidence as to the former. With regard to the latter point, however, which is not only much more difficult to establish, but also by far more important for practical application in the routine of our work, his observation is not so conclusive. Was the child itself giving off contagion at the end of six weeks, or was it only the wearer of infected clothes? One would desire to know at what period of its convalescence it began to wear these clothes. This is a source of fallacy which renders very difficult all endeavours to arrive at accurate conclusions on this vexed question; and it is a matter of great importance that, whenever opportunity offers, facts should be collected to aid in its solution; for the suitable cases are few. The existing diversity of opinion must be very perplexing to the lay mind, some authorities recommending eight weeks, which according to our present knowledge does not seem too much, while others are content with half the time. It is very evident that if a period of eight weeks is necessary, and infected houses and clothes are put through the final disinfecting process at the end of four or five weeks, these will remain to be centres of infection for an indefinitely prolonged period; and it is no wonder that scarlet fever continues to be so prevalent in our towns, every now and again becoming epidemic, and carrying off its numerous victims.

J. W. MILLER, M.D.

23, South Tay Street, Dundee.

DR. WARLONT'S VACCINATOR.

SIR,—A letter signed "Amo," published in the JOURNAL of September 16th, 1882, p. 549, inquires if any one can inform the writer of the direct value of my vaccinateur-trepheine. As the inventor, I may be naturally suspected of partiality, nevertheless, I answer it. "Warlont's Vaccinateur-trepheine" is composed of a circular blade two millimetres in diameter, contained in a sheath of cylindrical shape, which receives a rotary movement by the action of an internal spiral spring. Closely applied to the skin, it should be drawn tight, it is sufficient to press heavily on the button with the end of the first finger to put the blade in action, which traces with lightning rapidity an annular furrow of a depth in proportion to the impetus given to the blade, an impetus which may be increased or diminished by turning back the protecting sheath. In the case of very young children, with very delicate skin, the blade should scarcely extend beyond the level of the sheath. When the incision is made, the vaccine is applied in the ordinary manner. This instrument has been objected to, as causing alarm to children, and as being difficult of application; but those who make such objections have probably never employed the instrument. To make a correct incision with the trephine is not more difficult than the dotting of a letter *i*, and children do not feel it.

The instrument resembles an aluminium pencil-case. Neither parents nor children can have any objection to it. It possesses still another advantage in the comparative experiments on the value of the different kinds of vaccine. It traces perfectly uniform incisions, which gives them absolutely correct appreciation of the results. This quality has recently proved of great service to me. The matter in question was the appreciation of the relative value of dry animal vaccine, as compared with wet ivory points in glass tubes, and of any new preparations known as vaccinal emulsion and ointment. The victory remained with the latter, without it being possible to ascribe anything to the operative method; it was the same in all cases. The superiority of these preparations, already well established in Belgium and in other countries, is still more forcibly confirmed by the following communication. "DEAR DOCTOR,—I congratulate you upon having made the most important discovery that has yet been made in animal vaccination—how to make the vaccine sent out uniformly successful. It is so with the vaccine in these tubes; it has never failed me once, nor any of my friends. Please continue the same care, and oblige me by telling me how it is done.—JOHN GREENE, Friday Bridge, Birmingham.—September 19th, 1882." My new preparations will lead to the complete disuse of points and fluid vaccine. Not only do they give more constantly successful results, but they retain the whole of their activity for a month and more. The emulsion is sent out in cylindrical tubes of yellow tint, the ointment in ground glass bottles, which may be carried in the pocket-cases of vaccinators for use as required. Their activity diminishes in a very slow degree, and only after the thirty-fifth day.—I am, etc.,

WARLONT,

Director of the Vaccinal Institute of Belgium, etc.

Brussels, September 21st, 1882.

ACTING MEDICAL OFFICERS TO CONVICT PRISONS.

SIR,—Having been shown the circular prohibiting medical officers of convict prisons making *post mortem* examinations, I thought it a matter of the utmost importance to acting medical officers engaged in private practice; for no respectable man, with decent qualifications or professional standing in his neighbourhood, would allow his treatment of convict patients to be commented upon before a coroner's jury by a rival practitioner trying to obtain distinction, the results of such an inquiry might prove disastrous to his future career.

I was determined to ask the Home Secretary the question whether acting medical officers engaged in private practice were to suffer the same indignity as the medical officers themselves, and wrote the following:

"Borstal Prison, August 4th, 1882.

"SIR,—With regard to the circular issued to-day to the prison authorities will you inform me if the order prohibiting medical officers making *post mortem* examinations is to apply to the acting medical officers who are engaged in private practice; if so, it will be difficult to obtain the services of a practitioner of the meanest qualifications and experience, who would allow his treatment of cases to be paraded before the public, and to be the subject of universal scandal.—I have the honour to be your obedient servant,

WALTER BUCHANAN."

After waiting sixteen days, instead of a written reply, I received a verbal message from a prison director, who after much conversation promised me that if I would withdraw the letter written to the Home Secretary (which evidently to the director was a grave offence, and

ought to have met with severe punishment), and write a letter of the same nature couched in milder terms, he could, he thought, promise me all I wished in the matter; in fact, he made himself so pleasant that for the moment I hardly thought that he could be a "mysterious" director of the prison service. This, in a weak moment, I did without having the promise in writing first, but on the next day, to my astonishment, I found faith was broken, and instead of the promise being fulfilled a short extract from a minute was forwarded to me, making no concessions whatever. I thereupon wrote the following letter (an offence which, judging from his conversation, I am of opinion he could not tolerate, not even from the governor himself).

"Paddock House, Chatham, August 22nd, 1882.

"SIR,—I have the honour of calling your attention to my letter of the 4th instant of a private nature, not having had a reply to the same, I fear it has never reached the proper destination, after waiting sixteen days, I found the Director of Prisons (Mr. Wakeford) was in possession of it, and he seemed much annoyed that I had not written to him instead. Acting upon his advice, he giving a promise that no medical practitioner should make a *post mortem* while I was acting medical officer, I withdrew my letter to you of the 4th, and wrote a similar one to him on conditions that I should receive the reply to it I wished, but in this he broke faith, for the reply I received was the opposite to the one promised, and one of a very unsatisfactory nature. This being so, I feel bound to ask your permission to withdraw my letter of the 21st, and to beg, sir, that you will favour me with a satisfactory reply to that of the 4th, which is of vital importance to me and other acting medical officers who are also private practitioners.—I have the honour to be, your obedient servant,

WALTER BUCHANAN.

"To the Right Honourable Sir Vernon Harcourt, Home Secretary."

This letter did reach the right source; and the Home Secretary, with his well-known courtesy, caused the following to be written.

"Whitehall, September 3rd, 1882.

"Sir,—I am directed by the Secretary of State to acknowledge the receipt of your letter of the 22nd instant. With regard to your letter of the 4th, I am to acquaint you that the coroner is the person who summonses medical witnesses; and that a *post mortem* examination should not be made by the acting medical officer until after the coroner has had notice of the death, and had time to name a medical man to make the *post mortem* examination, if he desires him to do so.—I am, sir, your obedient servant,

A. J. O. LIDDELL.

"To Walter Buchanan, Esq., Paddock House, Chatham."

I have nothing to complain of in this letter, as a coroner has always had a perfect right, in cases occurring outside prisons, to order whom he may please to make a *post mortem* examination; but I certainly think that, if medical officers are treated in the same way as I have been by Mr. Wakefield, they must be extremely fond of the service if they remain in it.—I am, sir, your obedient servant,

WALTER BUCHANAN.

THE TREATMENT OF SUBCLAVIAN ANEURYSM.

SIR,—I notice, in your issue of Saturday last, that Mr. Stokes, in the discussion on Mr. Thompson's case of ligature of the innominate artery, refers to temporary compression of large arteries, in their continuity, as likely to be a safe method of treatment in similar cases. He is apparently not aware that this treatment has been already adopted. In Vol. 58 of the *Medico-Chirurgical Transactions*, I recorded a case of aneurysm, in which I had applied temporary compression to the first part of the left subclavian artery, by means of torsion forceps, for ten and a half hours. The patient lived for five days, and then died from the result of a wound of the pleura, inflicted during the operation. At the *post mortem* examination, the aneurysm, now preserved in the museum of the Leeds School of Medicine, was found to be completely consolidated. I concluded my paper with the following remarks. "Notwithstanding the unsuccessful result, I still believe this operation to be right in principle, and likely to be successful in practice. By applying temporary compression in the place of ligature, it is, at any rate, possible that these operations for subclavian aneurysm may become more successful in the future than they have been in the past."—Your obedient servant,

A. F. MCGILL.

Leeds, October 16th, 1882.

POISONING BY OIL OF MALE FERN.

SIR,—I would beg to call attention to the paragraph headed "The Case of Poisoning by Male Fern," in your issue of the 21st instant. It is there stated that the prescription, from the effects of which a gentleman in Colombo died, was "copied from a paper by Dr. John Brunton, which appeared in the *Glasgow Medical Journal*, in April

1865, but the dose of the extract of male fern should have been given as one and a half drachms, and not ounces."

As this probably may lead your readers, and the readers of papers into which the paragraph may be copied, to infer that the dose of male fern, as given by me in the paper above alluded to, was given in ounces, and not, as is the fact, in drachms, I trust you will give this letter due publicity, so as to prevent any possible misconception on the subject. At the same time, I judge it right to submit to you the prescription used in Colombo (taken from the *Ceylon Observer* of September 1st 1882), and my own formula, which differ very largely as to quantity and materials.

The Colombo prescription is as follows: Ext. eth. filicis maris ʒjss; pulv. kamala ʒij; granati radices ʒij; mucil. ac aq. cinnam. ad ʒiv. My prescription is: Ext. eth. filic. mar. ʒjss; pulv. kamala ʒij; mucilag. et aquæ cinnam. ad ʒij.

I have used my prescription for twenty years, have proved it most effectual, and never found it produce disagreeable or evil results.—I am, yours faithfully,

JOHN BRUNTON, M.A., M.D.

21, Euston Road, October 23rd, 1882.

SPECIAL CORRESPONDENCE.

ABERDEEN.

Professorship of Pathology.—Laboratories in Marischal College.

WHEN Sir Erasmus Wilson founded the Chair of Pathological Anatomy, he wisely suggested that, in order to obtain the full benefits of such a chair, it would be necessary to have access to the materials which are obtainable only in a hospital. Professor Hamilton, in furtherance of this object, applied to the managers of the Royal Infirmary for liberty to conduct demonstrations at the hospital, and for the supply of materials for his class. The committee of management decided that the pathologist to the infirmary, Dr. Rodger, and the professor of pathology, Dr. Hamilton, should conduct the *post mortem* examinations alternately. This decision has still to be ratified by the managers, who meet in December. There can be no doubt that it is most desirable that the professor should have the opportunity of showing his students how to conduct *post mortem* examinations. At the same meeting, Professor Smith-Shand stated his opinion that the time had now come for the erection of a new general hospital.

Various laboratories in Marischal College resound with the din of the workman's hammer. To provide a laboratory for Dr. Hamilton, the medical jurisprudence class-room has been dismantled, and the professor of midwifery has obtained a new class-room by altering the old medical jurisprudence laboratories, and by some other changes it has been found possible to make ample provision for the increased teaching requirements.

HOSPITAL AND DISPENSARY MANAGEMENT.

CHELSEA HOSPITAL FOR WOMEN.

THE Eleventh Annual Meeting of the Governors was held on Saturday, July 29th, at the temporary hospital in the King's Road, Mr. Anthony J. Wright Biddulph, J.P., Chairman of the Board, presiding.

From the Report and Balance Sheets, which were approved and adopted, it appears that the number of patients treated during the year have been: In-Patients, 84; Out-Patients, 2,667; and attendances, 13,247. The self-help principle has been introduced into the In- and Out-Patients' Departments ever since the foundation of the hospital eleven years ago, during which time £3,400 has been contributed by the small payments of those patients who have been unprovided with a Subscriber's Free Letter. This averages 2s. 6d. from every In- and Out-Patient treated. The sum paid by patients during the past year was £349. This amount appears to have been carried to the General Fund, and used for the general purposes of the Institution. But as I trust that in time it may be possible for the Committee to set aside a part of these payments as an honorarium for the medical staff. The Treasurer said that although the financial results of the year have been very satisfactory, there was urgent need of contributions to pay off a mortgage of £2,000, and that £7,739 invested in the Funds had to be sold out to pay the instalments due upon the Contracts for the New Hospital, which it is expected will be ready for the opening ceremony early next year.

CORK STREET FEVER HOSPITAL, DUBLIN.

THE annual report of the above hospital shows a striking diminution in the number of cases admitted during the past year (ending March 31st, 1882) as compared with the last two or three years. There were only 471 admissions in 1881-82, against 1,250 in 1880-81. The admissions were, therefore, little more than a third of those of the previous year. The total mortality was so low as 10 per cent.

Small-pox is stated to have disappeared from Dublin; there was only one case under treatment during the twelve months, but the disappearance of infectious disease seems to have been general. The city was troubled by an epidemic of measles; but of this, only 57 cases were treated in the hospital. The most serious matter of the report, in our opinion is, that no less than 198 of the 471 admissions were cases of typhus. We know that typhus has been prevalent in Liverpool, and there are still cases of the disease in London, as may be seen on reference to the weekly returns of the Registrar-General. The conclusion we come to is, that typhus will crop up again in London next autumn: but, if practitioners will order or sanction the removal of the cases, even of doubtful cases, the outbreak will, in great measure, be stayed. The figures and tables given in the report will be of great value to those interested in the study of fevers. They are both statistical and meteorological, and well written descriptions are appended. We have, however, to record with regret the fact, that the work of the hospital was not carried on with immunity to life. Dr. Harvey ought to have written this report, but, unfortunately contracted typhus, and died.

WEST BROMWICH DISTRICT HOSPITAL.

THE annual report of this hospital shows that during last year 318 in-patients were treated, as compared with 361 in the previous year. There had been 4,241 out-patients dealt with, in addition to 1,592 accident cases, compared with 3,773 last year, and 1,360 cases of accident, showing an increase of 468 and 232 respectively. The daily average of beds occupied for the whole year was 26. During the year there had been 296 subscribers, and the amount of the annual subscriptions was £594 17s. 6d. The annual collections in places of worship on Hospital Sunday realised £265 18s. 4d., and the collections on Hospital Saturday £1,043 13s. 4d. The total expenditure for the year amounted to £1,667 11s. 9d., being a decrease of £65 13s. 2d. upon the previous year, and leaving a balance in hand of £485 19s. 9d. The new wing committee regretted that they were unable to announce in their report that the new buildings were ready for patients, but they expected that everything would be finished in three months.

WOLVERHAMPTON EYE INFIRMARY.

THE first annual medical report, lately published, of this new hospital shows that the total number of patients treated during the latter half of 1881 was 2,264. Of these, 2,134 were out-patients. Of a total of 539 operations, 451 were conducted upon out-patients, and 88 upon in-patients. Operations for cataract numbered 45, and of these 42 had been successful: 420 patients were supplied with spectacles. The average daily attendance of patients for the year had been 34. The general committee reported that the accommodation for in-patients was limited to seven beds, and a larger number of annual subscribers were wanted to provide more. The total sum received in donations for the year was £726, and the annual subscriptions reached £215. The first cost of establishment, including instruments, had been £215, and the current expenses were £381. The hospital lately received a bequest of £1,000 under the will of Mr. Pugh.

HOSPITAL AND DISPENSARY ABUSES.

SIR,—Your correspondent, "Probe," has done well in bringing forward a subject which certainly deserves more attention, if some remedy may be devised for the evils mentioned. The hospital (and I would add the dispensary) are certainly and abundantly abused by the admission of those who ought to pay for their treatment, as, as you correctly remark, a well-established truth; and alike true of other classes as it is of London.

A convenient mode is asked to maintain, by subscriptions, hospitals not confined to treating the poor as they are intended; but many others, whose names ought rather to be found among the list of subscribers, may obtain gratis the advice and treatment which they require. And I beg to corroborate, from personal observation, what your correspondent says, that "many who, having the advantage of hospital appointments, abuse that advantage to their own interest."

For is it not too often the fact of its being "an interesting case," rather than the necessitous circumstances of the applicant, which obtains for the latter the desired attention at either hospital or dispensary? Medical men not only have (and, moreover, are expected) to do much for nothing, but they in addition are called upon to subscribe (and also expected to do so liberally) towards the maintenance of these institutions. Now I, as a junior practitioner, politely decline to do so, for the very reason that I can see daily patients attended to whose names I, and many of my neighbours, would only be too glad to enter on our visiting lists, assured, from their position in life, that they are well able, if only willing, to pay for their private attendance. I know for a fact that many of the public are beginning, for the same reason, to withhold their subscriptions, so that it will be a pity if the poor should lose the benefits of these institutions, simply because the managers do not adopt some strict measures to prevent the abuse complained of. Now that the subject has been again ventilated, let us hope that it will not be allowed to rest until some radical change has been accomplished, and the consequent improvement in the circumstances of many "necessitous medical men," who, like myself, live almost under the shadow of a large hospital, and where from the proximity the very air might be charged with the carbolic spray, or the sound be almost audible of the percussion hammer, used in the treatment of numerous patients, who ought, properly speaking, to be attended by private practitioners.—
Your obedient servant,
October 16th, 1882.

DIRECTOR.

MILITARY AND NAVAL MEDICAL SERVICES.

REPORT OF THE HEALTH OF OUR ARMY IN EGYPT.

We are happy to be able to state that the most recent reports received from the army medical staff in Egypt show the state of the health of our soldiers to be fairly good, their most formidable enemy being enteric fever. This malady was somewhat prevalent in a serious form, chiefly owing, it is believed, to the polluted canal water and untrustworthy surface-wells, which had to be relied upon as the sources of water-supply during the operations of the war, and which were known to be open to grave objection, as being more than likely to convey germs of disease. These polluted sources of supply are now, however, replaced by pure drinking-water, and there is reason to hope that enteric fever will no longer prevail. The cases of ophthalmia, we are glad to hear, are not very numerous, and are of a mild character; they are treated by isolation, with good results, few cases advancing beyond the stage of mild granulation.

The strength of the army corps for Egypt has been fixed at present at 10,000 men. The medical staff will, we understand, probably include two deputy surgeons-general, four brigade-surgeons, and sixty executive medical officers, surgeons-major, and surgeons. The hospitals, organised on the home system, will be situated at Cairo and Alexandria.

The *Carthage* hospital ship will probably be retained on the station, and a general hospital at Gozo will also for the present be maintained.

THE WAR OFFICE COMMITTEE ON ARMY HOSPITAL ORGANISATION.

THE Departmental Committee of the Army Medical Department, just appointed by the War Office, will, we are informed, carry out a comprehensive inquiry into the constitution, organisation, and training of the Army Hospital Corps and bearer companies, and the determination of their requisite numbers in peace and war. It may be mentioned that Sir William Muir, the last Director-General of the Army Medical Department, had, before leaving office, laid before the Secretary of State a memorandum, in which he urgently recommended the addition of 300 men to the strength of the Army Hospital Corps in its peace establishment. The second head of inquiry will include the mounting and working of the field hospitals in time of war. A third head of inquiry will be the system of nursing in the army hospitals, whether by males or by females. A fourth head of inquiry will be the arrangement for transport of invalids, in peace and war, on board Her Majesty's ships and hired transports. It is intended that the inquiry shall be comprehensive and impartial, although it is in no sense hostile, since the inquiries made thus far, and the reports received by the authorities in all departments, are such as to indicate that the duties of the Army Medical Service have been carried on by all the officers of the medical department in a manner deserving of the highest commendation. The

committee has been so constituted as to include persons specially experienced in the different departments of inquiry. Thus, in addition to Lord Morley, the Parliamentary Under-Secretary at War, the committee will include the Director-General of Transport at the Admiralty, Sir William Mends, K.C.B.; the Deputy Adjutant-General of the Army, Major-General Hawley, C.B.; Major-General Sir Evelyn Wood, K.C.B., who commanded a brigade in Egypt, and who is now on his way home (this distinguished officer, it may be mentioned, was President of the Departmental Committee at the War-office, which inquired into the conduct of the Army Hospital Corps in the Cape war); the Director-General of the Army Medical Department, Dr. Crawford, who has seen active war service in India and the Crimea, and who before his present appointment has filled the highest administrative offices both in India and at home; Sir William MacCormac, a surgeon of St. Thomas's Hospital, who is not only well acquainted with hospital administration at home, but has seen much ambulance service in the Franco-German war; and the Assistant-Director of Supplies and Transport at the War-office, Mr. Lawson. We understand that this Committee will not only receive the reports and take the evidence of officers and soldiers, but that the correspondents of the newspapers who furnished public reports which come within the scope of the inquiry of this Committee, will have the opportunity afforded them of giving such details as may enable the authenticity and foundation of such reports to be investigated.

THE TREATMENT OF THE SICK AND WOUNDED.

SIR,—I read the report on the state of the sick and wounded on the occasion of your visit to Netley Hospital with much interest. I hope you will be able to get something done on the strength of it for the benefit of the soldier fallen in action in future. I have been here lately to see the disembarkations of the effectives and invalids from Egypt. Their appearance confirms the impression that they have been suffering from starvation quite as much as from climate. They look thin and wan, and weary. The ordinary soldier's ration must have been quite insufficient in Egypt to meet the demands on the constitution occasioned by arduous marching, sleeplessness, constant worry, and the excitement of action. They really ought to have had two or more pounds apiece of meat all round, instead of one. The want of this replenishment of exhausted nature after action will occasion collapse, and with it, fever and dysentery on exposure to their moribund causes. The preserved meats were only issued as a pound ration, but they say it did not fill them, and they wanted fresh meat instead to give them more strength. There seems to have been a want of attendance in the hospitals and on board ship, the detail of the Army Hospital Corps having been insufficient. There was nobody to clean up or remove refuse, or go for anything except the convalescents themselves, and they could not leave the wards or go anywhere else. The serious cases soon, besides, absorbed all the attendants and the doctors. In the Crimean war, where I have served, the old regimental system prevailed, and each regiment in the field had its own hospital. There where then three surgeons attached to it, ready for emergencies, and extra orderlies for increase of sick could always be got from the regiment close by. Now that cannot be done, under the departmental system, and extra attendants should now be previously engaged and kept waiting till wanted. The hospital extra dieting in the field would require to be much more generous than that in common use in station hospitals at home. Slops, like beef-tea and arrowroot, are complained of as being but poor nutriment to famished soldiers, who wanted something more hearty and filling, even though they were ill. From this cause of famine beforehand, several cases of amputation in the hospital have turned out badly, and some died. The stumps and incisions of operations have healed well and satisfactorily, but subsequently bones have become diseased and abscesses have formed and the case has become complicated, and troublesome. Ordinary bullet-wounds seemed to have healed well, and the tracks filled up easily and but little loss of tissue effected. The men say they preferred the air of the desert to that of Cairo.—With compliments, I remain, yours sincerely,

J. W. BLACK, Surgeon-Major, (Half-Pay.)

Portsmouth, October, 1882.

SIR,—Will you kindly inform me in your next issue, whether the Home Army Medical Service has a higher status than the Indian Medical Service; and, also, if the Indian examination is not more difficult than the Home Service?—And oblige, yours truly,

The Hon. Mr. Stansfeld, M.P.

* * * The Home, or *British* Army Medical Service, has no higher status than the Indian Army Medical Service. They are simply different branches of Her Majesty's service. The entrance examination, which is competitive and carried out by an examining board in London, is conducted at the same time and is alike for both services.

BY the death of Dr. James W. Johnston, Honorary Surgeon to the Queen, and Inspector-General of Hospitals and Fleets (retired), reported in the *BRITISH MEDICAL JOURNAL* of last week, a good service pension of £100 a year is placed at the disposal of the First Lord of the Admiralty.

THE premises of the Royal Ear Hospital, Frith Street, have been entered by thieves, who have stolen, among other things, all the silver aural instruments belonging to the hospital. These instruments were of peculiar construction and costly character. The authorities are making the most searching investigation into the affair, but, up to the present moment, have not obtained the slightest clue to the mystery.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

AN ACTION FOR FEES.

AT the Cambridge County Court on Wednesday last, before Mr. Bagshawe, Q.C., the case of *Grubb versus the Chesterton Board of Guardians* created considerable interest. The plaintiff, Mr. J. S. Grubb, of Waterbeach, claimed of the Chesterton Guardians, £3 3s. 6d., namely, for truss supplied to William Brewer, 3s. 6d., and £3 for attendance on Mary Pearson, a pauper living at Landbeach, for fractured leg. The first part of the claim was, after argument, admitted, and disposed of. In regard to the second claim, it appeared that Mary Pearson in June last met with an accident on her way to Cotterham, breaking her leg. She was carried to the house of Mr. Graves, at Cotterham, and there attended by Mr. Bridges, the medical officer for the parish. Mr. Bridges set the leg temporarily, and directed that the woman should be taken to the hospital at Cambridge. On the road, Mr. Grubb was met with, when the woman told him that her leg was broken. The leg had been attended to by Mr. Bridges by putting a splint on one side and pad on the other. Mr. Grubb, at the request of the woman, set the leg, and attended her, for which he charged £3. The guardians refused to pay, as they considered that it was the duty of Mr. Grubb to attend such a case, and that it came within the contract. Dr. Cooper, for the guardians, contended that it was not an urgent case, and did not come within the orders of the Poor-law allowances; and further, that the claim was barred by the statute, as the plaintiff did not send his claim at the half-year ending Michaelmas 1881. Mr. Ellison, for Mr. Grubb, said that the case was one of urgency; that Mr. Bridges only set the leg temporarily; and that it was a case which came under the term "surgical appliances". He also submitted that Mr. Grubb would have been liable to a penalty of £5 for disobeying the orders of the guardians. Mr. Grubb attended within an hour or two of his meeting the woman, and properly set the leg. In the opinion of Dr. Joseph Rogers, the treatment of Mr. Grubb was certainly the right one. Mr. Bridges said that it was not urgent, after being attended to. His Honour did not consider that Mr. Grubb intercepted the treatment by Mr. Bridges, and promised to consider the point as to whether, under Article 177, Sub-section 5, Mr. Grubb was justified in charging £3. Mr. Grubb desired, in our opinion, great credit for the courageous and public spirited course which he has taken.

MEDICAL AMENITIES IN THE UNION OF PENZANCE.

WE learn, from the *Western Morning News* of the 20th inst. that, at a meeting of the Penzance Board of Guardians, held the preceding day, a complaint was made, by Mr. R. B. Searle, L.R.C.P. etc., residing at St. Just, that his neighbour, Mr. Harvey, District Medical Officer of St. Just, had employed an unqualified assistant to attend a pauper patient, which assistant, Mr. Searle alleged, was not only unqualified, but incompetent; and that Mr. Harvey had not, in accordance with the regulations, marked the attendances of his deputy in red ink. "That as to the reduction of the fracture, which had been charged for," in that particular case it was not practicable. "That, in regard to the boy Nicholas, for whom there had been a similar charge, he did not think the boy did anything more than twist his ankle, for he had been unable to discover evidence of a fracture. In both these cases the doctor had received £3, and he believed it was frequently the case that doctors got £3 for such alleged fractures." A guardian: "Talking from experience, perhaps?" Mr. Searle: "Yes." Ultimately Mr. Searle threatened to report the matter to the Local Government Board, when it was eventually agreed to ask Mr. Harvey to meet the House Committee, Mr. Searle to be also present.

We should allow this most discreditable procedure to speak for itself, were it not that Mr. Searle has unwittingly raised a question which, in the interests of the ill-paid members of the Poor-law medical service, it is as well to make known. And, first, as to the employment of unqualified assistants (we quote from *Lunley's Manual for Poor-law Medical Officers*). It is therein stated that, by the 7th Official Circular, p. 225, "the Board are not prepared to say that in ordinary cases the medical officer may not employ, under his own superintendence, his assistant or apprentice to visit the sick paupers under his care, but they must distinctly point out that his doing so would not in any degree relieve him from any portion of the responsibility attaching to the discharge of the duties of his office." Now, in the answer put in by Mr. Harvey, it would appear that his assistant only acted under his immediate

supervision, and therefore he had carried out his duties strictly in accordance with the regulations of the department.

Into the specific allegations made by Mr. Searle against his professional neighbour, of making claims for fictitious fractures for the sake of fees, we forbear to enter, believing that Mr. Harvey is quite able to vindicate his character; but as regards the charge Mr. Searle advances against the Poor-law Medical Service generally, we can have no hesitation in repudiating the offensive allegations he has made.

There is only one weak point in Mr. Harvey's answer, and that is, his excuse for not entering the attendances given by his deputy in red ink. This should always be done; indeed, it behoves all Poor-law medical officers to act, as strictly as possible, up to the regulations of the department. In that way only can they successfully encounter charges that may be made by reckless persons, whether in or out of the profession.

COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES.

IN the account given in the *JOURNAL* of September 23rd of the proceedings that were being taken in Liverpool with reference to the compulsory notification of infectious diseases, the progress of events was traced up to the appointment, by the Health Committee, of deputations to visit certain of the towns which had had longest experience of the system, for the purpose of collecting evidence as to its practical working; after which it was agreed that a conference should take place on the subject between the committee and deputation from the medical profession of the city.

Two deputations, each consisting of three members of the Health Committee, left Liverpool on the same day, the one visiting Bolton, Blackburn, Edinburgh, and Greenock, and the other Warrington, Huddersfield, Leicester, and Nottingham, and collected evidence, which was published, immediately on their return, in an octavo volume of 250 pages. On the 5th instant a deputation from the profession, introduced by Dr. Gee, had a prolonged interview with the committee, when the chief objections to indiscriminate compulsory notification by medical men having been set forth by Drs. Carter, Costine, Barr, and Wiglesworth, a long conversation ensued, during which many questions were asked, and some doubtful points elucidated.

The committee met on the 9th, and again on the 11th, when a series of resolutions, formulated by the chairman, was submitted, and intended, if passed, to be presented to a council meeting to be specially summoned for their consideration. These, after enumerating the diseases, made provision for compulsory notification both by the householder and the medical attendant; for the payment of a half-crown fee to the medical man on his diagnosis being verified, if thought desirable; for notice being given by the private medical attendant before the removal of his patient to hospital, and for that removal being effected under his supervision, if considered desirable; for the removal, under certain circumstances, of the inmates of a house other than the sick person to, and their gratuitous maintenance in, a place of quarantine; for preventing persons entering the house where infectious disease existed; for the provision of hospital accommodation other than that of the workhouse, free of charge, for non-pauper patients; for the free nursing of poor patients retained at home; for preventing parents sending children to school from infected houses; for providing compensation for direct loss sustained through removal; for prohibiting the sale of milk under certain circumstances; and for putting into easier operation the epidemic powers contained in the 134th section of the Public Health Act. As a preamble, it was proposed that "it be recommended to the Council to apply to Parliament for an Act to require compulsory notification of infectious disease."

This was passed at once, as the latter recommendations would have been, seeing that the most of these were adopted from among those suggested by the medical profession to the committee. The entire discussion turned on the proposal that notification should be made compulsory on the medical attendant, without the exercise of any discretion on his part: and this, when ultimately put to the vote, was only carried by the casting vote of the chairman, six being in favour of and six opposed to it.

It was then agreed to refer the whole scheme to a special council meeting, to be summoned on the 18th. Soon after the decision of the Health Committee became known, the following memorial was drawn up, and in the course of five days received the signatures of 28 medical men of the city and neighbourhood, more than one fourth of them in general practice. It was sent to the President of the Medical Institution, the President-elect of the British Medical Association, almost every hospital physician and surgeon, and an overwhelming majority of the general practitioners.

"To the City Council of Liverpool.—The Memorial of the undersigned Medical Practitioners of Liverpool and its neighbourhood prayeth: That the recommendation from the Health Committee, carried only by the casting vote of its chairman, to compel all medical men, without the exercise of any discretion, to report cases of infectious disease to the sanitary authority, be not confirmed by the Council, on the ground of the many difficulties that attend the practical application of such a system; the concealment of disease from medical men which it has been shown to promote; and the absence of evidence that it has anywhere been attended by practical benefit to the community."

The preamble affirming the advisability of notification was readily passed; but, so soon as details were entered upon, it became obvious that the strongest diversity of opinion prevailed. The first serious difference arose out of an exemption clause, which it was agreed to take before considering the others. It was as follows:

"That the provisions of the said Act shall not apply to, nor shall any steps or proceedings be taken by the medical officer of health, under the Public Health Act, in any case in which two duly registered medical practitioners shall have signed, and one of them shall have transmitted to the medical officer of health a certificate that they have seen the patient, and that proper means are being adopted for the isolation and treatment of the patient; and provided that a further certificate, signed by one of such two practitioners, be also transmitted once during every fourteen days, until a certificate, signed by one such practitioner, shall be transmitted to the effect that the patient has recovered or has been removed, and that the house has been properly disinfected."

This clause, proposed by the Chairman of the Committee, was met by an amendment by the Vice-Chairman to the following effect: "That the provisions of the Act shall not apply in any case in which a duly qualified medical practitioner shall have been employed, and in which the directions of such practitioner as to isolation and treatment have been complied with;" which, with the additional provision that he should certify that his directions had been complied with, was carried by a large majority. To this, on the motion of the chairman, it was eventually agreed to add the words: "And that a copy of such certificate be forthwith sent to the medical officer of health by the medical attendant." But, on a further amendment to the effect "that no clause be inserted in the proposed Act making it compulsory on the medical profession to notify cases of infectious disease until uniform legislation be proposed for the whole country", being lost only by the casting vote of the mayor, it was proposed, and agreed by a very large majority, to postpone the consideration of the subject for a year, as it was felt to be impossible, in the face of such a medical memorial as had been presented, to go to Parliament on a mere equality of votes.

MEDICAL RELIEF IN THE BIRMINGHAM WORKHOUSE.—From a leading article in the *Birmingham Daily Mail* of the 7th instant, we learn that the house subcommittee of the workhouse have formulated a scheme for a modification of the system of medical relief within their establishment at Winson Green. To make the subject clear to our readers, we will state that this house is licensed for the admission of 1,973 inmates, the great majority of whom are either sick, aged, or infirm. To treat this number of invalids there are three resident medical officers, Dr. Simpson (the superintendent) and two assistants—to wit, Mr. Mitchell and Mr. Chaundy, their united stipends amounting to £700, plus furnished apartments, coals, gas, washing, and attendance; being, on an average, 714 inmates to each medical officer. Now, whether, to use the words of the editor, "714 inmates, or, to put it more correctly, one doctor to every 400 patients, is a sufficient proportion, is a matter which scarcely admits of but one reply." After having paid due regard to the fact that the majority of the cases are those of persons with chronic ailments, we are met by the remark of the chief medical officer, "that, even if he could have the help of an expert in special cases, he should not consider the present staff able to meet satisfactorily all the requirements of the sick"—a statement which we anticipated some months ago. We learn, from the same issue, that the committee have recommended that the house shall be divided into a medical and a surgical portion, to the latter of which the existing chief, Mr. Simpson, will be appointed, who will be assisted by a resident assistant-surgeon; and that a new appointment will be made of a non-resident visiting medical gentleman, who will superintend the medical section, aided by an assistant resident medical officer. The scheme, as propounded, meets with our approval; but we enter our protest against the salary which has been offered for the services of the visiting physician, namely, £150 a-year, as we question whether that first-class talent which the editor desiderates, and which

he asserts "is not to be found in the ordinary workhouse medical officer, can be got for this amount. It is true he is to be allowed the privilege of private practice, and unlimited opportunities for pathological research—a condition of things not very likely to be obtained, seeing that the Local Government Board has always thrown every difficulty in the way of the workhouse medical officer making pathological researches at all. We read that "the subcommittee naturally feel that the time is not yet ripe for honorary workhouse appointments," and, therefore, suggest a scheme which, while copying some of the features of the hospital system, combines them with the payment of a moderate emolument. Further on, the editor states that there will be, by this new arrangement, a saving of about £140 a year in salaries. We have omitted, however, to state that one part of the scheme is, that the visiting medical officer will be permitted to call in the advice of a consultant. It is nowhere said how, and in what fashion, the consultants are to be paid; but that, doubtless, will be arranged.

PRACTITIONERS AND MEDICAL OFFICERS OF HEALTH.

SIR,—In your notices to correspondents, in your issue of October 14th, "S. W." touches the real point in this vexed question of compulsory notification of disease by the medical attendant. It was bitterly opposed by the profession before its introduction here. It is now accepted and observed by everyone.

I found it easy to have an understanding with the authorities that a consultee should incur no responsibility; so that I have signed very few certificates myself, except in the cases of puerperal peritonitis, where I find the surgeons glad to be relieved of this duty, as well as of the risk of attendance, by my taking sole charge. Were it for no other disease than this, compulsory notification is of the most vital importance; the authorities taking up the odious duty of hunting out and suspending the dirty midwives by whom the disease is usually propagated.

But the safeguard that would meet such cases as that of "S. W.", is that the officer of health be strictly restrained from private practice in any form, and be paid accordingly. Any one who has worked among the poorer classes must know that the proposal for parents, or relatives, or lodging-house keepers, to notify disease is utterly Utopian.—Your obedient servant,

Leicester, October 14th, 1882.

JOHN BARCLAY, M.D., F.R.C.P.

MORTUARY ACCOMMODATION AT FULHAM.—At the last meeting of the Fulham Board of Guardians, it was unanimously resolved that the attention of the Fulham Board of Works be called to the correspondence which took place between them and the Board in November 1881 and June of the present year, on the subject of providing a public mortuary for their district; and that they be informed that it is with surprise the guardians learn that, although nearly twelve months have elapsed since the District Board came to the conclusion that some suitable provision should be made for the reception of dead bodies, and resolved to take action in the matter, yet, up to the present, the much needed accommodation had not been provided. In order to assist the District Board in completing their arrangements, the guardians have consented to continue to receive dead bodies into the workhouse premises for another period of three months from this date, but on the distinct understanding that this further extension is final; and, after its expiration, the guardians will not be responsible for any scandal which may arise from a want of a proper place in which to deposit the dead bodies found in the union. The Chairman doubted whether any steps would be taken, but a member promised to bring the motion before the next meeting of the District Board.

THERE have been a number of letters in the papers of late from medical officers of health, claiming for their district abnormally low death-rates. Mr. Partridge, health-officer for the Stroud and Bisley Urban Sanitary Districts, sends us a report showing that the death-rate of these places last quarter were 13.2 and 12.8 per 1,000 respectively—the lowest recorded in either district.

MUCH excitement exists in Melbourne with reference to an outbreak of diphtheria that has been occurring in the suburbs of that city. The *Melbourne Herald* is very scathing in its denunciations of the slothfulness of the Board of Health, and insists upon the importance of compulsory notification of infectious cases, isolation of the sufferers, and the destruction of infected clothes and bedding.

THE SANITARY STATE OF REDDITCH.—Redditch has had an unenviable reputation in times past for sanitary neglect and consequent zymotic disease. We observe, in a recent report of the health-officer, casual mention made of three cases of typhoid fever, which are dismissed as worthy of no further mention, because they occurred "in different parts of the town". Later on, we read a complaint by a ratepayer that he cannot get a pure supply of water, that provided for his house having been proved by analysis, as well as by a more certain test, sickness in his family, to be "utterly unfit for drinking purposes". The lessons of the past seem to be utterly lost upon the local board, who resolved to take no action in the matter, and may thus be laying up in store for their unfortunate constituents another epidemic of typhoid fever.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

HELMESLEY RURAL DISTRICT.—Dr. Bruce Low forwards, as usual, a complete and interesting report. In alluding to the prevalence of scarlatina, he remarks that many cases might have been prevented, if there had existed a compulsory notification of such diseases to the sanitary authority and its officers. Altogether, about seventy-eight cases, with four deaths, came under notice, but there were probably many more concealed. Indeed, Dr. Low, in common with many health-officers of rural districts, found several instances where the inhabitants had wilfully hidden their children—remarking to their neighbours, that "the medical officer of health is too particular, and will put you and your children in a band-box for six weeks." Referring to this display of ignorance, Dr. Low observes that most of the seventy-eight cases of scarlatina might have been prevented if, at most, two children had been, figuratively speaking, "kept in a band-box" till their danger to others was past. An outbreak of enteric fever afforded Dr. Low an opportunity of preparing a special report on the subject, which he appends to his annual statement. Of twenty-three cases that came to notice, seven proved fatal, the mortality being attributed to defective sanitary conditions. Fortunately, small-pox, diphtheria, and measles were absent from the district—not a single case having been reported. The total births registered during the year amounted to one hundred and thirteen, and the deaths to sixty-three—representing rates of 28.5 and 15.9 per 1000 respectively. This last rate is reduced to 15.4, on deducting the deaths that did not properly belong to the district. There was a considerable reduction in the infantile mortality, which is attributed to the improved knowledge of feeding infants shown in the district of late. Sanitary work was actively carried on during the year, and a good deal has been done under Dr. Low's energetic supervision; but the authority have much to accomplish before their district can be considered in a thoroughly sound condition.

EAST DEREHAM.—The high rate of infantile mortality in this district has received considerable attention at the hands of Mr. Vincent. He shows that, of the total deaths which happened during the past year (85), no less than 28 were those of infants under two years of age; and 21 of these he regards as due to injudicious feeding. This seems manifest from an analysis of the causes of infantile deaths, for ten were attributed to debility from birth, seven to convulsions, and two to diarrhoea, which the health-officer thinks may be taken as evidence on the one hand of a wholesale disregard of human life, or else of lamentable ignorance on the part of mothers of their primary duties towards their offspring. Mr. Vincent has done well in following the example of the Belgian Government by circulating a pamphlet containing simple rules for the general management of infants, for distribution to all persons who may register a birth in the district, under the various headings of "feeding," "cleanliness," "clothing," "fresh air," and "sleep." Small-pox was present in the district during the year, and, although of a mild type, attacked a large number of persons. Fortunately only two deaths from the disease came under notice. How the infection was imported into the district Mr. Vincent was unable to trace, but the first outbreak occurred at the Post Office, and from thence spread to the surrounding villages. Several other outbreaks in different parts of the town were reported, but active measures prevented any extensive spread of the disease. Scarlet fever caused four deaths, diarrhoea two, and whooping-cough and croup two. During the year an important advance was made in the sanitary improvement of the town by the completion of the system of sewerage and of the public water-works.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF OXFORD.

EXAMINATION IN PREVENTIVE MEDICINE.—The following certificate of proficiency in subjects bearing on the subjects of preventive medicine and public health, are requested to send their names to the Regius Professor of Medicine in the University of Oxford, November 1st, 1882. The examination will be held on the 1st of November, 1882, at the University of Oxford.

MEDICAL NEWS.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—The following resolutions were passed at the annual meeting of the Association of Medical Officers of Health, held at the University of Oxford, on Thursday, October 19th, 1882.

Schoon, Charles Henry, Bridge, Canterbury

The following gentleman also on the same day passed the Primary Professional Examination.

Morgan, George, Charing Cross Hospital.

MEDICAL VACANCIES.

The following vacancies are announced:—

- AUCKLAND UNIVERSITY COLLEGE, New Zealand.**—Two Professors, one for Chemistry, and the other for Natural Science. Applications by October 31st.
- CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park.**—Resident Clinical Assistant. Salary, £20 per annum. Applications by November 9th.
- DENTAL HOSPITAL OF LONDON, Leicester Square.**—Administrator of Anesthetics. Applications by November 13th.
- DENTAL HOSPITAL OF LONDON, Leicester Square.**—Dental House-Surgeon. Salary, £40 per annum. Applications by November 13th.
- DUNDALK UNION.**—Medical Officer for Carlingford Dispensary District. Salary, £100 per annum, with £25 as Medical Officer of Health, registration, and vaccination fees. Election on November 4th.
- GREAT NORTHERN HOSPITAL, Caledonian Road, N.**—Ophthalmic Surgeon. Applications by October 31st.
- HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.**—Resident Clinical Assistant. Applications by November 4th.
- HOLLOWAY AND NORTH ISLINGTON DISPENSARY, (Upper Holloway Branch).**—Two vacancies in the Honorary Medical Staff of this Branch Dispensary. Applications by October 30th.
- LONDON FEVER HOSPITAL.**—Resident Medical Officer. Salary, £200 per annum. Applications by October 31st.
- MACCLESFIELD GENERAL INFIRMARY.**—Senior House-Surgeon. Salary, £100 per annum. Applications to the Chairman of House-Committee by October 28th.
- MAHERAFELT UNION.**—Medical Officer for Bellaghy Dispensary District. Salary, £20 per annum, with £15 as Medical Officer of Health, registration and vaccination fees. Election on November 4th.
- MANCHESTER ROYAL INFIRMARY, DEPTFORD, AND LUNATIC HOSPITAL OR ASYLUM.**—House-Surgeon. Applications by October 28th.
- METROPOLITAN FREE HOSPITAL, 11 Commercial Street, Spitalfields.**—House-Surgeon. Applications by October 28th.
- NORTH WEST LONDON HOSPITAL, 20, Kentish Town Road.**—Ophthalmic Surgeon. Applications by October 28th.
- POPLAR AND STEPNEY SICK AND INFIRMARY.**—Assistant Medical Officer. Salary, £120 per annum. Applications by October 28th.
- QUEEN CHARLOTTE'S LIVING-IN HOSPITAL, 11, Mile End Road.**—Physician to the Out-patients. Applications by November 4th.
- ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY, Wigan.**—Junior House-Surgeon. Salary, £200 per annum. Applications by November 2nd.
- ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.**—Clinical Assistant. Applications by October 28th.
- ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.**—House-Surgeon. Applications by October 28th.
- SELF-AIDING DISPENSARY, Grantham.**—Dispenser. Salary, £60 per annum. Applications to be sent to W. V. Hardwick, Grantham, by October 28th.
- SEAMEN'S HOSPITAL, Greenwich, S.E.**—Dispenser. Salary, £40 per annum. Applications by October 31st.
- VICTORIA HOSPITAL FOR CHILDREN, Queen's Road, Chelsea, S.W.**—House-Surgeon. Salary, £50 per annum. Applications by November 7th.
- WESTERN INFIRMARY OF GLASGOW.**—Two extra Dispensary Surgeons. Applications by October 28th.
- YORK DISPENSARY.**—Resident Medical Officer. Salary, £130 per annum. Applications by November 7th.

MEDICAL APPOINTMENTS.

- BARLOW, Thomas, M.D., L.R.C.P.Ed.**, appointed Medical Officer to the District, Hastings.
- BORRILL, W. P. M.D.**, appointed House-Physician to the North Staffordshire Infirmary, Stoke-on-Trent, M.B.
- CHAMBERLAIN, M. J. P.D., L.R.C.S.Ed.**, appointed Medical Officer to the Hospital for the Insane, and the Order of Druids, Lytham, Lancashire.
- CHAMBERLAIN, M. J. P.D.**, and **CHAMBERLAIN, M. J. P.D.**, appointed to the North Staffordshire Infirmary, Stoke-on-Trent.
- CHAMBERLAIN, M. J. P.D.**, and **CHAMBERLAIN, M. J. P.D.**, appointed Assistant-Surgeon to the Hospital for the Insane, Lytham, Lancashire.
- PRAET, J. J. P.D.**, appointed Assistant-Surgeon to the St. George's Hospital, London.
- REVOLDS, J. J. P.D.**, appointed Assistant-Surgeon to the Portland Convict Prison.

BIRTHS, MARRIAGES, AND DEATHS.

- The following notices should be forwarded in stamps with the announcements.
- BIRTH.**
- On October 28th, 1882, the wife of Charles H. Thatcher, P.R.C.S.E., of a daughter.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

At a meeting of the fellows of the College, on Thursday evening, Sir W. Jenner, Bart., president, in the chair, a communication was received from Mr. R. H. Whistler, asking permission to copy a portrait of one of his ancestors, Dr. Whistler, who had been a president of the College. Permission was granted.

On the recommendation of the Council, Dr. R. E. Carrington and Dr. James Anderson were appointed additional examiners in anatomy, and Dr. Ferrier, F.R.S., and Dr. Watney were appointed additional examiners in physiology.

Mr. R. E. Webster, Q.C., was appointed standing counsel to the College.

The Harvey Joint Committee reported the recommendation of a form of sarcophagus to be erected to, contain the leaden shell in which the remains of Harvey are inclosed in the Church of Hempstead in Essex. The recommendation was adopted, and the Committee was directed to carry it out at an expense not exceeding £250.

Dr. QUAIN moved a resolution to the effect that, at the election of new Fellows, the Council inform the Fellows of the grounds on which they recommend the proposed fellows for election. The subject of the resolution was referred to the Council for consideration and report.

Dr. ACLAND moved a highly important series of resolutions, as follows:

"1. That, whereas, the Royal Commission on granting medical degrees has now affirmed the principle of diminishing the number of Examining Boards for Medical Licences, the Royal College of Physicians takes the opportunity of re-affirming that principle, already adopted and acted on by it."

"2. That the President be requested to name a Committee to consider and report to the College at its next meeting, what combination the College can best enter into for examination purposes, so as to secure for England, without further delay, one complete Pass Examination Board, which shall be satisfactory to the profession, the Medical Council, and the Government."

"3. That the President be also requested to take such steps as he may see fit, in order to obtain for the Committee the fullest information on the matter referred to it, before the next meeting of the College."

These resolutions were adopted by the College, and the President nominated a Committee to report on them.

The audited accounts were submitted to the College, and the Comitia were adjourned.

HEALTH OF FOREIGN CITIES.—It appears from statistics, published in the Registrar-General's last weekly return, that the death-rate in Madras was equal to 40.4 and in Bombay to 27.8 per 1000; small-pox caused 4 deaths in Madras, and fevers more than the usually high death-rate in each of these Indian cities. According to the most recent weekly returns, the average annual death-rate per 1000 persons, estimated to be living in twenty of the largest European cities, was equal to 25.3; this rate exceeded by 4.9 the average rate last week in the twenty-eight large English towns. The death-rate in St. Petersburg was equal to 41.1; the 527 deaths in this city included 45 from diphtheria, and 24 from scarlet fever. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged only 20.5; and while it was but 15.3 in Christiania, it ranged to 22.8 in Copenhagen; 5 deaths in the latter city were referred to scarlet fever. The Paris death-rate was equal to 25.8; no fewer than 244 deaths resulted from typhoid fever (showing a decline of but 6 from the number in the previous week), 27 from diphtheria and croup, and 8 from small-pox. The 156 deaths in Brussels, including 3 fatal cases of small-pox, were equal to a rate of 20.0. The death-rate in Geneva again fell exceptionally low, and did not exceed 14.3. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 22.5, the highest being 24.0 in the Hague; small-pox caused 5 deaths in Rotterdam, and scarlet fever 3 in the Hague. The Registrar-General's table includes eight German and Austrian cities, in which the death-rate averaged 24.3, and ranged from 18.3 in Dresden to 28.4 in Breslau. Small-pox caused 4 deaths in Vienna, and typhus 3 in Prague. The death-rate was equal to 21.9 in Rome and 20.8 in Venice; 8 deaths were referred to malarial fever in Rome and 5 to typhoid fever in Venice. In four of the largest American cities, the average death-rate was 24.3; the rate ranged from 20.1 in Philadelphia to 29.3 in New York. Small-pox caused 10 deaths in Baltimore; and the 348 deaths in Philadelphia included 30 from diphtheria and 14 from typhoid fever.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopaedic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopaedic, 10 A.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.

FRIDAY.....King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu, F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu, 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu, F., 12.30; Ear, Tu, F., 12.30; Skin, Tu, 12.30; Dental, Tu, Th, F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu, Th, S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th., 3; Throat, Th., 3; Dental, Tu, F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu, F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear, and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu, Th, S., 2; o.p., W. S., 9; Eye, Tu, W. Th, S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopaedic, F., 12.30; Dental, Tu, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu, F, S., 1; Obstetric, Tu, S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu, 2; Skin, Th., 1; Throat, M., 2; Orthopaedic, W., 2; Dental, Tu, S., 9; Th, 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu, F., 9.30; o.p., Tu, F., 2; Eye, Tu, F., 9.15; Ear, M. Th., 2; Skin, Tu, Th, 1.30; Throat, M. Th., 1.45; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu, 12.30; Skin, Th, 12.30; Throat, Tu, 12.30; Children, S., 12.30; Dental, Tu, F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu, T., F., 1.30; Eye, M. Tu, Th, F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu, F., 3; Eye, M. Th., 2.30; Ear, Tu, F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Dr. C. Theodore Williams: A Case of Paracentesis Pulmonis. Dr. Leonard W. Sedgwick (for Dr. Richard Schmitz of Neuenahr): On Six Hundred Cases of Diabetes Mellitus.

WEDNESDAY.—Obstetrical Society of London, 8 P.M. Specimens will be shown by Mr. Alban Doran and others. Dr. Champneys: Description of a Kyphotic Pelvis, with Remarks on Breisky's Description. Dr. Matthews Duncan: On Puerperal Diabetes. Dr. Chahbazian: On the Treatment of Post Partum Hemorrhage by Subcutaneous Injection of Ergotinine.—Epidemiological Society of London, 8 P.M. Dr. Norman Chevers: On the Sanitary Defects of the Site of London and its Suburbs.

THURSDAY.—Harveian Society of London, 8 P.M. Mr. Malcolm Morris: On Chronic Ringworm. Dr. Broadbent: On some points relating to the Sounds of the Heart.

MEDICAL PRACTICE IN PENDOCK, WORCESTERSHIRE.

SIR,—I have lately advertised in your columns a small villa residence, which is situated at Pendock, Worcestershire, as to be let, and in the advertisement I have stated my belief of the suitability of the place for a medical man desiring to establish a country practice, and referring especially to the fact that there existed little or no opposition, and that two or three parish appointments, of which the last tenant held one, were from time to time available. The advertisement is repeated in your issue of this week, in substantially the same terms, I believe, as those previously employed; and I have, therefore, only to refer your readers to it for fuller particulars. I find, however, that there is opposition of a kind that I did not anticipate. A few days since, a physician, practising in Clifton, drew my attention to the following paragraph, which appeared in your advertising columns under date October 14th, on the same page as my advertisement, and which ran as follows.

"Special Notice.—Pendock, Worcestershire.—In answer to inquiries, there is no parish appointment vacant. A medical man in residence and practice within two miles, agricultural population is poor and scattered, and there is no opening to establish a successful country practice.—For further particulars, if required, address BRITISH MEDICAL JOURNAL OFFICE, 161A, Strand, W.C."

The "medical man" referred to is a Mr. Boughton, who is in practice at Staunton, a village or hamlet two or three miles from Pendock. I find, on making application through my solicitor, that he is the gentleman who has compiled and inserted this notice.

I have, since seeing this advertisement, been at the trouble of making special inquiries of my local agent, and have ascertained from him the following facts. He is the borough surveyor of Tewkesbury, and his testimony is, therefore, perhaps of more value than that contained in the special notice.

He tells me that, within five miles on all sides of the residence to be let, are the following villages, with their respective populations, according to the census returns of 1871, the latest available to me. Pendock, 329; Red Marley (the adjoining parish), 1,265; Eldersfield (also adjoining), 782; Castle Morton, 818; Longdon, 629; Staunton (also adjoining), 507; Corse Lawn (adjoining), 519; Berrow (adjoining), 455; Forthampton, 430; Chaceley, 307; Birtsmorton, 289; total, 6,328. My agent believes that, in the whole of these villages, the only resident medical man is Mr. Boughton. There are at least two parish appointments, either exclusively attached to or connected with these villages, one of which is held by Mr. Boughton, and the other by Dr. Allard of Tewkesbury. One, I hear, is worth from £70 to £80 a year; and this was held by my late tenant, a medical man. Pendock lies between Staunton and the larger parishes of Red Marley and Eldersfield; and I think that these facts afford a sufficient answer to the statement in Mr. Boughton's notice that "there is no opening to establish a successful country practice". Assuming there were two or three doctors already in residence, instead of one only, I still think that, amongst 6,000 people, work could be found for another.

As the special notice is calculated, not only to depreciate my own property, and prejudicially to affect my reputation, but also to deter men who otherwise would be glad to avail themselves of the opening that undoubtedly exists, I shall be glad if you will insert this letter in your next issue.—I am, sir, yours obediently,
Clifton, October 25th, 1882.

C. TRAPNELL.

CHEMIST should apply to Mr. Brenridge, at the office of the Pharmaceutical Society, Bloomsbury Square.

CLUB MEMBERS AND THEIR MEDICAL OFFICERS.

SIR,—Will you oblige me by stating, in the BRITISH MEDICAL JOURNAL, if you are acquainted with any county court decision on a case where the member of a club sued his club surgeon for the attendance of another practitioner who had been called to attend without the knowledge of the medical officer of the club, and without any complaint being lodged against the medical officer till some months afterwards? I seem to have some recollection of a decision being given in favour of the surgeon of a club, on the ground that the contract is between the surgeon and the body of members, not with the individual members of the society. The case in which I am interested has been already decided by the society in favour of its surgeon (myself), and the member is now threatening an action to recover a bill said to amount to £37 10s. If there has been no decision, your opinion on such a case would be valuable.—I am, sir, faithfully yours,

WILLIAM THOMSON, L.R.C.P.E., L.R.C.S.E.

Wrenbury, Nantwich, Cheshire, October 17th, 1882.

. But very few county court cases, or a digest of their decisions, are reported in any legal newspapers or other law publications. On referring to those which appear in the *Law Times* and *County Courts Chronicle* for several years, which give the best account of these cases, we did not notice any such decision as that referred to. We are clearly of opinion, however, that the judgment in favour of our correspondent is quite right, provided he did not directly or impliedly give the member of the club who sued him permission to employ another practitioner in his stead; or that the latter did not voluntarily do or omit any act, or in other respects render himself incapable of performing his agreement with the club, whereby he could not lawfully discharge his duties as medical attendant to the member who sued him. It appears, from a reference to the law relating to the specific performance of contracts that a party is equally guilty of a breach of his agreement whether he directly refuses to perform it or willingly does an act that prevents his performing such, or whereby the other party thereto cannot have the benefit of it.

MR. J. W. W. STEPHENS should apply by letter to the Secretary, Army Medical Department, Whitehall Yard.

WILTS.—The prizes offered for competition by the Royal College of Surgeons of England this year are as follows. *The Collegial Triennial Prize*, consisting of the John Hunter Medal, executed in gold, to the value of fifty guineas, or, at the option of the successful author of the dissertation, of the said medal executed in bronze, with an honorarium of £50. The subject of this prize is "The Relations between the Radicles of the Lymphatic System and Capillary Vessels." *The Jacksonian Prize*, the subject of which for the present year is "Wounds and other Injuries of Nerves; their Symptoms, Pathology, and Treatment." Dissertations for both of the above prizes for the present year must be delivered at the College not later than 4 P.M. on Saturday, the 30th December next. The subject of the Jacksonian Prize for 1882 is "The Pathology, Diagnosis, and Treatment of Obstruction of the Intestines in its various forms in the Abdominal Cavity."

CALF-LYMPH.

SIR,—Now that animal vaccination is fairly established and used in England, I think a letter, which I received the other day from a gentleman to whom I sent two tubes of calf-lymph in November 1880, may be interesting to you and your readers, since it not only shows how a vaccinator can renew and keep up his stock of vaccine so that every child through whom it has passed is known to him, but also proves that, with care, calf-lymph can be preserved for some time in capillary tubes, as Dr. Murray kept his second tube for nearly two years.

"8, Church Street, Galashiels, October 5th, 1882.

"Dear Sir,—As promised, I now give you the results of the vaccinations I did with your calf-lymph from Calf No. 7 of date November 20th, 1880. With the first tube I vaccinated seven children, of whom three were successfully done, the others being failures; the three that took were small single vesicles, but characteristic. From these three, I vaccinated about a dozen children, and from these again others until this time, when I have vaccinated five hundred with scarcely a failure, every vesicle being satisfactory. The second tube I used three weeks ago (now nearly two years in my possession), vaccinating seven children, who all took most beautifully, the vesicles on the eighth day being clean, clear, and well raised, with slight areolæ, which increased until about the twelfth or fourteenth day, when they gradually went back, leaving an excellent mark, and at no time in their course giving rise to any marked constitutional symptoms. Since I have used your calf-lymph, I have never had a case that required any treatment afterwards. The vesicles were rarely broken on the eighth day.—With thanks, I remain, yours sincerely, WM. HY. MURRAY, M.D.—To J. W. Cook, M.D., Manningtree."

Now, sir, I think the above speaks volumes in favour of the use of calf-lymph, and I can say with confidence that Dr. Murray's statement entirely bears out my own experience. For nearly two years I have tested it severely, both on the animal and on the human subject; and I am so satisfied with it in every way that I hope to see the day when our Government will not only have one animal vaccine station, but many, and that every child born in the United Kingdom will have to be vaccinated direct from the animal. Since leaving Manningtree, I have suspended my vaccination of calves; but I have, on several occasions, availed myself of the use of animal vaccine procured from the station of the Local Government Board in Lamb's Conduit Street, London, and I speak of its effects in the highest praise. If properly used on good healthy children, every insertion will take and produce a true characteristic vesicle. Another strong point is—and I have made inquiries, not only in England, but in Holland and Belgium, where animal vaccination has been practised for over twelve years—as far as I can learn, there never has been a case of small-pox, even in the most modified form, in a person who has been properly vaccinated with calf-lymph. Hoping one day to see it exclusively used, I am, yours faithfully,

J. W. COOK, M.D.

7, North Hill, Colchester, October 17th, 1882.

INQUIRER (Leeds) asks where he would be likely to find any account of the history and progress of lectures, especially as applied to medical education.

NEW VACCINATORS.

SIR,—The novel form of vaccinator described in the BRITISH MEDICAL JOURNAL of October 14th is undoubtedly one of Dr. Cooper Rose's pattern, which has been supplied by instrument makers to the profession for some years past. The great inconvenience in this instrument rests with the needle points, which easily become rusty; and it being impossible for a medical man to take the needles out and clean them, or put a new needle in providing one should break, it must be sent to an instrument maker to be repaired, which renders the instrument for the time being useless, besides the expense of repairing it.

Messrs. Hooper and Company, of 7, Pall Mall East, surgical instrument makers, have for some time been supplying the profession with a very simple vaccinator, made as follows. A simple metal tube, about four inches long, with a socket at the end; the needles are placed in this, and the top screwed on, leaving the needles projecting according to the adjustment. By this arrangement, the old needles can be removed and cleaned, or new needles substituted by a few turns of a screw. The remainder of the tube is used for holding vaccine tubes. The price of the instrument being 6s. 6d.; altogether, this instrument is the most compact vaccinator ever introduced to the profession.—I remain, sir, yours truly,

FRED. J. HEDGCOCK.

34, Great Ormond Street, Queen Square, London, Oct. 23rd, 1882.

S. H. J.—Playfair's *Midwifery*; Barnes's *Diseases of Women*; Garrod's *Materia Medica*.

THE QUEEN'S UNIVERSITY.

SIR,—Dr. Jacob of Dublin is reported to have said, before the Royal Commission: "That he found that a large percentage of the successful men who obtained the L.R.C.P. and L.R.C.S.E.d. were Queen's College men, whose curriculum had lasted only two years." Now, the obvious bearing of this statement seems to be just this: that it takes a Queen's College man only two years to pass an examination which few men from other educational centres get through under four or five years. It follows, therefore, that the Queen's College candidate's mental powers must be above the average, and that his teaching and opportunities for acquiring knowledge must be exceptionally good. Dr. Jacob did not point this out to the Commissioners; though no doubt this was the moral he wished to be drawn. Elsewhere he has stated that he has known men pass the four "Queen's University medical examinations—admittedly the stiffest in Ireland—to have taken out all his lectures on thirteen subjects, attended eighteen months' hospital practice, and three months' midwifery, besides obtaining the L.R.C.P. and L.R.C.S., all in two years. One can only remark that, if such a graduate exists, he is a very marvel, and would do honour to any university.

Dr. Jacob, we take it, is not a hospital authority, or he would scarce have cast doubt on the verity of their certificates as to hospital attendance; and Dr. Jacob must know that a crafty, but lazy, student will find ways of evading the regulations of any institution; for instance, those of Trinity, by making flying visits to Dublin, putting in a minimum of residence and attendance on lectures, taking up and passing the examination subjects in penny numbers. Rivalry is only good when it is generous, and testimony when unbiassed and complete.—I am, sir, yours faithfully,

AUGUSTUS H. BAMPTON, M.D., Ch.M.

Plymouth, October 24th, 1882.

THE FLAVOUR OF BROMIDE OF POTASSIUM.

SIR,—I should be much obliged if any of your readers could suggest a pleasant medium for masking the taste of large doses of bromide of potassium and chloral. I have tried preparations of orange, lavender, etc., but my patient still complains of the nauseating saline taste of her draught.—I remain, yours truly,

BROMIDE.

CLINICAL LECTURE

ON
THE TREATMENT OF CLEFT PALATE,*Delivered in University College Hospital.*

BY CHRISTOPHER HEATH, F.R.C.S.,

Holme Professor of Clinical Surgery in University College, London.

GENTLEMEN,—Having performed the operation of staphyloraphy for the closure of a fissure in the soft palate of a girl of 14 before you last week, I take this opportunity of giving you some details of the subject which will, I think, be of service to you as practitioners.

Cleft palate occurs in infants otherwise well formed, or in combination with hare-lip; and in either case it may affect the soft palate only, or both the hard and the soft palates. When hare-lip is present, the fissure usually extends from the lip through the alveolus and the entire palate; but there are many exceptions, a fissure of the soft palate alone frequently accompanying a single hare-lip. That both affections are the result of arrest of development in the early weeks of foetal life cannot be doubted, and that they are hereditary cannot be denied; still, cases of cleft palate occur in families not known to inherit the malformation; and, in the great majority of cases, it will be found that the mother has been much out of health in the early weeks of pregnancy, or that the pregnancy has followed very closely upon a previous one, or has occurred during lactation.

The experience of Professor Haughton of Dublin first showed, in the case of the larger carnivora, the effect of diet upon the production of cleft palate; and it is very desirable, in the case of a parent the subject of the deformity herself, or having already given birth to a child with cleft palate, that, in subsequent pregnancies, every care should be taken to improve her health, and to administer food and medicines calculated to promote the formation of bone.

When a hare-lip and cleft palate are continuous, the latter deformity is sufficiently obvious; but, when a cleft palate occurs alone, it may be easily overlooked for the first few hours of life, and the earliest intimation of the malformation may be given by the inability of the infant to suck, and by the fact that milk introduced into its mouth with a spoon returns through the nostrils. Under these circumstances, infants are often allowed to pine away through insufficient feeding; but, with proper care, this may generally be obviated.

A large-sized India-rubber teat, or an ordinary covered spoon, such as is used for the administration of nauseous medicines, may be used to convey the milk to the gullet; but a much less troublesome and more effectual method is that adopted by Mr. Oakley Coles, who attaches a flap of elastic India-rubber (Fig. 1) to the nipple of an ordinary feeding-bottle. This overlies the nipple (Fig. 2), and is introduced into the mouth with it; and, when the infant is suckled, rises up against the cleft, and enables the child to swallow. The India-rubber is undoubtedly the cleanest and most effectual flap which can be employed; but I have often directed the use of a leaf-shaped piece of kid-leather with advantage, when the India-rubber could not be readily procured. Mr. Francis Mason has employed a very thin plate of soft metal, moulded to the patient's mouth, but allows that the instrument is not available in all cases. If no other plan be adopted, the mere closing of the nostrils by the nurse's finger and thumb at each effort of deglutition, will give material assistance to successful swallowing.

The question of surgical interference, in cases of cleft palate, is one which must be considered as still *sub judice*. That it is possible to close the entire length of a cleft, extending through both hard and soft palates, at an early age, is undoubted; but it may be questioned whether, in many of these cases, a better result, as regards articulation, would not have been obtained by the use of some form of apparatus. It is most satisfactory to the parents of a child, suffering from any congenital malformation, that the deformity should be repaired by operation as soon as possible; but grave disappointment is apt to follow when, as years go on, the power of articulation fails to improve in the ratio anticipated. The sufferer is inclined to complain that the operation has not improved his voice so much as his power of eating comfortably, and is sometimes annoyed to find that no mechanical contrivance can be subsequently worn, without undoing what was effected with much trouble and suffering some years before.

In deciding, therefore, as to the propriety of an operation for cleft-palate, it is necessary to take into account, not merely the mechanical difficulty of bringing the soft tissues on each side of the median line

into sufficiently close proximity to unite, but also the length of the palate, and the probability that it will sufficiently shut off the mouth from the nose, to prevent the nasal intonation commonly met with both before and after operations for cleft palate. In no case of successful operation for cleft palate, I believe, is the palate sufficiently in contact with the back of the pharynx to allow water to be injected from one nostril into the other, without entering the pharynx when the mouth is open, as is the case in well-formed throats. And yet, many of these patients have very little nasal intonation; which is to be explained, I believe, by the hypertrophied condition of the muscles forming the pillars of the fauces, which may be seen when the patient attempts to swallow with the mouth open, acting powerfully to narrow the fauces, and thus make up for the deficient length of the palate.

Before deciding, therefore, as to the advisability of an operation upon the soft palate, it is well to grasp the chin of the patient, and hold the mouth open, so as to aid his efforts at swallowing, when, if the two halves of the soft palate come into contact in nearly their whole length, while the superior constrictor and palato-pharyngeal muscles closely approximate the palate and pharynx, the case is one in which union may almost certainly be obtained, and probably a fair result as regards phonation.

In the case of the hard palate, there is an undoubted disposition for the two sides of the cleft to approach one another for some years after birth; and this is particularly seen in cases complicated with hare-lip, in which the successful closing of the lip tends powerfully to approxi-



mate the divided alveolus and palate. But success in closing the fissure in a hard palate depends in no small degree upon the mode in which the palate is arched. As was pointed out by Sir W. Fergusson, in cases of highly arched palates, which in section would resemble a Gothic arch, it is comparatively easy to dissect down the muco-periosteum sufficiently to make the flaps approximate; while, in palates but slightly arched, and the section of which would resemble a Norman arch, it is difficult to get the flaps together, and the tension must necessarily be severe.

It is quite true that these cases of slightly arched palate give the best results as regards the voice when the operation is successful, and that the high palates when most successfully closed are apt to lead to disappointment; but this might well be anticipated, since it is by no means uncommon for a person with a healthy high palate to speak with a nasal intonation, closely resembling that of one suffering from a congenital cleft or perforation by disease.

The effort involuntarily made by all patients, the subjects of cleft palate, to shut the nose off from the mouth in speaking, is aided as they grow up by a voluntary closure of the nostrils, which is very remark-

able. Ordinarily, in man, the nostrils are perfectly quiet in tranquil respiration, and it requires considerable effort to close them, as when plunging the face into water. A patient with cleft palate, on the contrary, may be noticed to put his compressores narium into strong action every time he speaks or swallows; and it is very difficult to overcome the habit when the necessity for it has passed away, either from a successful operation, or the adaptation of a well fitting apparatus.

The operation of staphyloraphy for closure of a cleft palate was, up to the last fifteen years, almost invariably postponed until the period of puberty or later, so that the surgeon might have the patient's self-control to aid him in his troublesome and tedious operation. A few cases had, no doubt, been operated upon in childhood, with indifferent success, by Mason Warren, and others; but to Mr. Thomas Smith, of St. Bartholomew's and the Children's Hospitals, is mainly due the credit of showing that it is possible to operate in infancy under chloroform, not only without risk, but with very great success. In his paper in the *Medico-Chirurgical Transactions* (1868), Mr. Smith described a gag by which the mouth of a patient can be kept open efficiently, and which, in some form or other, is essential for the due performance of the operation, now performed by him as follows. The patient is placed on a table of convenient height, facing the window and, if possible, a northern light. The head is supported by an air-cushion, and is firmly held by an assistant standing behind, while the arms and legs are strapped down to prevent struggling. The operator stands on the right of the patient, and the chloroformist on his left. The patient being thoroughly narcotised, the gag is introduced and the mouth screwed open, the rings of the gag being held by the thumbs of the assistant supporting the patient's head. The edges of the cleft are then pared with a slender double-edged knife, which is thrust through the margin of one side of the soft palate held tense with forceps, and made to cut up and then down to the end of the uvula. The margin thus separated is caught with the forceps, and the section completed up to the angle of the cleft, if possible, at one sweep, or if not, by a re-application of the knife. The same process is repeated on the other side; and, in favourable cases, it is both possible and satisfactory to remove the parings of both sides of the palate in one piece.

The closure of the soft palate is then proceeded with, fine silver-wire being used, with horsehair or silk for the uvula. Mr. Smith employs a sharply curved tubular needle for the wire, which is carried on a wheel in the handle of the instrument, and can be projected when the point has traversed both sides of the palate. A twister is employed to twist the wire up, but the last two turns are more conveniently given at the conclusion of the operation with a pair of torsion-forceps. The horsehair is softened in warm water, and is introduced with a small curved or rectangular needle set in a handle, being passed through both sides of the palate, and caught with a "catcher" or forceps. The horsehair is simply tied with three knots, so as not to slip.

Should there be a fissure of the hard palate, the operator proceeds to detach the muco-periosteum by a modification of Langenbeck's uranoplastic method. Making a puncture near the alveolus, he introduces a palate-raspatory of small size, and brings the point out in the fissure. Then, meeting this with a strong aneurysm-needle, he replaces the raspatory with the needle, withdrawing the former altogether, and working with the needle from the fissure towards the alveolus. In this way, aided, if necessary, by the leverage of strong curved scissors, the muco-periosteum of the hard palate is sufficiently detached; the hæmorrhage, if troublesome, being controlled from time to time by a small sponge pressed against the palate. With the curved scissors, the soft palate is then detached from the bone of the hard, one blade being passed beneath the muco-periosteum, and the other above the soft palate, so as to divide the tissues transversely close to the horizontal plate of the palate-bone.

The muco-periosteal flaps of the hard palate are now closed by a sufficient number of fine wire sutures; and, lastly, an incision, as recommended by Dieffenbach, is made on each side of the soft palate, so as to thoroughly loosen it, and take all tension off the stitches, which are then finally adjusted with torsion-forceps.

In this operation, no formal division of the levator palati muscles, as recommended by Sir W. Fergusson, is undertaken; but it is probable that the lateral incisions in the soft palate divide, to a great extent, the insertions of the levators; while the detachment of the soft from the osseous hard palate must necessarily divide the insertion of the tensors of the palate.

Many operators, myself among them, have found that they have obtained good union of the soft palate without even lateral incisions; but, when the tension is great, these should not be omitted; and, in cases of great muscular irritability of the palate, the systematic division of the levators may be undertaken with advantage. Whether the division is performed, as recommended by Sir W. Fergusson, with a lancet-

shaped blade set at right angles to the shaft of the knife, and introduced above the soft palate, or with a straight knife thrust through the palate, as proposed by Mr. Pollock, the division should be performed after the introduction of the stitches, which both serve to render the muscles tense, and also are more readily introduced before the hæmorrhage, sometimes severe, caused by the myotomy, obscures the view.

The material for, and the method of introducing, the stitches, vary in the hands of different surgeons. Sir W. Fergusson preferred purse-silk, and employed the method devised by Mr. Avery for introducing it, as follows. An ordinary palate-needle carrying the silk was passed from before backwards through the margin of the soft palate, and the loop caught with forceps and drawn out of the fissure. This being repeated on the opposite side, one silk was looped through the other and drawn by this means across the fissure and through both sides of the palate. In tying the silk, it is convenient to use a sliding knot—i.e., one end is simply knotted firmly upon the other, when, by pulling the silk, the knot is slid up to the palate, and will keep its place while a second knot is made over it.

In the after-treatment of a case of operation for cleft palate, it is essential that plenty of liquid nourishment should be given in the first day or two, and be followed up by semi-solid food, so that the patient's strength may be well supported, and the process of healing accelerated. The idea that any effort at swallowing, even of the saliva, must necessarily tear open the wound, was shown, by Sir William Fergusson, to be fallacious; and the practice of starving the patient, first decreed by Sir Philip Crampton, is now universally abandoned. Talking should be forbidden for the first few days; and it is undesirable that the patient should be exposed to any chance of taking cold by exposure to draught or east wind.

The time for removing the stitches after an operation for cleft palate has been greatly modified of late years, and it has come to be thought by the most experienced operators that the longer they are left the better. In most cases, silk or horsehair sutures should be removed in from ten days to a fortnight; but fine wire sutures may be left for weeks, or even months, so long as they do not scratch the tongue.

In order to improve the voice in cases of successful staphyloraphy in which the nasal tone persists, Mr. Francis Mason has proposed to divide the united soft palate on each side by a vertical incision, so that the soft palate may be loosened and made more flexible. The results are, however, disappointing, as the cicatrisation which necessarily ensues leaves the parts much *in statu quo antea*.

M. Passavant, with the same object in view, has proposed to make a transverse incision in the soft palate, which can then be drawn forward and reversed. A portion of the mucous membrane of the upper surface is then dissected off, and a corresponding portion of the mucous membrane of the pharynx, and the two raw surfaces are brought together with a few sutures. As M. Sédillot remarks, however, it is difficult to understand how the two surfaces can be brought into contact; and the experience of all surgeons goes to show that permanent separation of the posterior nares and pharynx by cicatricial tissue is certain to produce nasal intonation.

In describing the operation usually performed by Mr. T. Smith, it will be noticed that the entire fissure in both hard and soft palates is closed by the same operation. This practice is not followed by some surgeons, who content themselves with closing the soft palate first, hoping thus to influence the approximation of the two halves of the hard palate, or, in cases too wide for closure, to employ an artificial palate. It seems to me, however, that it is very undesirable to close the soft palate when the hard palate cannot be closed, for in these severe cases the soft palate is both small and short, and the results, therefore, as regards the voice are most unsatisfactory, even after the gap in the hard palate has been filled artificially. Again, if the patient is to be subjected to the inconvenience of wearing an artificial palate at all, he may as well be fitted with one to fill up the whole cleft, and thus improve the voice, which will be impossible if the scanty soft palate has been united.

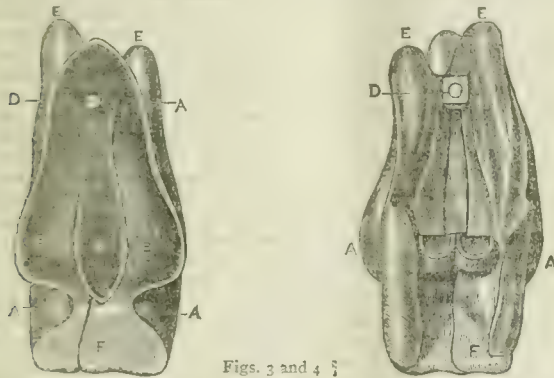
The late Dr. Mason Warren, of Boston, was one of the pioneers in closing fissures of the hard palate by dissecting down a flap of mucous membrane, and his success was such as to encourage other surgeons to imitate his practice. He worked from the margin of the cleft, using sharp knives set at a right angle to detach the periosteum, which was then united with sutures. Mr. Avery was the first to follow his example in England.

In 1862, Langenbeck published his experience of operating from the alveolus towards the margin of the cleft, and laid especial stress upon detaching the periosteum by means of blunt raspatories to form part of the thickness of the flap. Having performed this operation on several occasions with good success, I can speak well of it, notwithstanding the incision near the alveolus, which may, if carried too far back, give rise

to troublesome hæmorrhage. Two instances, in which nearly fatal hæmorrhage occurred from the posterior palatine artery, have been recorded by Mr. Howard Marsh, in both of which the hæmorrhage was successfully arrested by plugging the palatine canal with a wooden plug pushed through the palate.

In 1874, Sir William Fergusson brought forward what was then believed to be a new proposal, but was afterwards shown to be a revival of a suggestion of Dieffenbach's, viz., to detach the bony edge of the hard palate with a chisel, and to push the two portions of the hard palate towards the median line. In his early cases, Fergusson used silk sutures, but in his later ones he found he gained sufficient approximation by stuffing the gap made on each side with lint. In this proceeding the damage done to the parts is considerable, and necrosis, with some exfoliation, is apt to follow. Mr. Mason has proposed to limit the action of the chisel by boring holes in the line of incision with a brad-awl before the chisel is applied; but even with this modification the operation is one of limited application, which has not found favour with many surgeons.

Although the surgeon will not undertake to supply artificial aid himself in cases of deformity of the mouth, it is essential that he should be able to advise his patient in the matter, and possibly direct the dentist or mechanician as to the method to be adopted. In Mr. James Salter's and Mr. Oakley Coles' works, there will be found complete historical accounts of the methods adopted by successive practitioners to obviate mechanically the deformities of the palate; but for surgical purposes it will be sufficient to say that, as regards congenital cleft-palate, it is only during the last sixty years that anything like success has been attained. In 1820, M. De la Barre seems first to have employed "elastic gum" in making artificial palates, and in 1828 Mr. Snell made a palate of gold with a movable velum, which was subsequently improved by Stearn (1845), Sercombe (1857), and Parkinson (1867). All these palates acted simply as obturators, i.e., were placed below the palate, and overlapped the margins of the cleft, thus more or less completely shutting off the nose from the mouth. In 1861, Dr. Norman Kingsley, of New York, brought before the Odontological Society of Great Britain an artificial palate made entirely of vulcanised rubber, cast in moulds of metal taken from impressions in plaster-of-Paris. The velum of soft rubber (Figs. 3 and 4) had the great peculiarity that it fitted between the



Figs. 3 and 4.

halves of the split palate and moved with them, at the same time filling up the gap between the palate and back of the pharynx. With this palate, adapted by Mr. Coles, I have seen very remarkable results; but the method has the drawback that, if applied to patients whose growth is not complete, frequent alterations are required, in addition to the fact that the soft rubber wears out and requires renewal.

A palate on a totally different principle, contrived originally by Dr. Wilhelm Suersen of Berlin, and lately brought to my notice by Mr. Oakley Coles, appears in many cases to afford the most satisfactory means of treating cases of wide congenital cleft of the palate. It consists entirely of hard rubber (Fig. 5), the posterior part being much thicker than the hard palate, to which it is attached by a narrow stem. The posterior part, which is triangular shape, is set at an angle so as to pass above the soft palate, and fill up the cavity of the pharynx, the edges of the soft palate coming in contact with it in deglutition and phonation. Mr. Coles has found that the tone of the voice is improved by substituting gold in the hard palate, and having induced a highly intelligent medical student to try one of these palates after having worn one of Kingsley's, he informs me that he has no hesitation in giving the preference to the former, whilst I am able personally to testify to the improvement of his voice.

Whatever method of treating a congenital cleft palate may be adopted, the improvement in the voice must be gained to a great degree by education. A patient has in the first few years of life acquired vicious habits of speaking, and particularly a guttural and nasal tone,

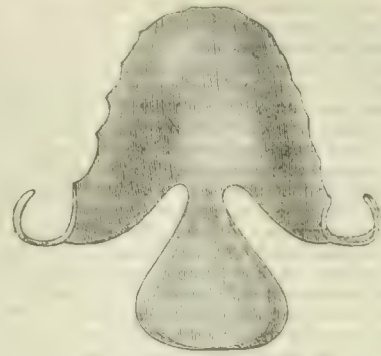


Fig. 5.

which requires great care to overcome. It is essential that he should be taught to speak with his lips, and to throw the voice forward; and, with proper teaching and diligent practice, he will in time speak as distinctly as the majority of healthy persons.

ANTISEPTIC INHALATIONS.

By WILLIAM HARTIGAN, M.K.Q.C.P.I., Hong Kong.

THE antiseptic treatment of lung-disease being still to a certain extent on its trial, I have thought that the report of a few cases occurring in the tropics, where infectious germs seem to be more numerous and active in direct proportion to the heat and moisture prevailing, might be of interest.

These cases, purposely selected as representing different types of lung-disease, seem to confirm the opinions of Drs. W. Williams and Coghill, that, by killing infectious bacteria, the purulent secretion of cavities is rendered innocuous, and that thereby the spreading of destructive action is prevented, or the setting up, by means of emboli, of foci of infection elsewhere; and that this leads first to arrest of disease (at least, of non-tubercular disease), and finally to repair.

CASE I.—In September 1880, I first saw a man aged 29, who had resided in China for five years, having left England to get rid of the sequelæ of catarrhal pneumonia. Though feeling better than when at home, he was still troubled with cough, and had been sent down to Hong Kong on account of serious pulmonary symptoms. He had lost forty-two pounds in eight months, and perspired profusely at night. The left chest was much flattened, scarcely expanding on inspiration; it was dull on percussion. Vocal resonance and fremitus were somewhat diminished; and coarse muco-crepitating râles were heard over its whole surface, both anterior and posterior. The right chest was fuller, and expanded more; but, on percussion, the cracked-pot sound could be heard immediately below the clavicle and nearly to the nipple-line; and over this space the respiratory sound was loud and blowing. The rest of the lung was resonant, but crepitating. The expectoration was profuse, muco-purulent, nummular, and offensive; it amounted to about thirty ounces in twenty-four hours. There was great dyspnoea; and the face had that unhealthy, livid grey colour so often accompanying septic absorption. Temperature 102° Fahr.; pulse 130; respirations 40. In addition to general treatment, antiseptic inhalations were ordered. At the expiration of four months, both lungs were resonant, and expanded fairly well. There was slight dry crepitation at the right apex; bronchial respiration over the left. He coughed only on waking, and about a drachm of frothy mucus was expectorated. He had no night-sweats. He had gained twenty-eight pounds. He could run up stairs without distress. Temperature 98°; pulse 78; respirations 16. The respirator used was at first a double fold of wadding, as suggested by Mr. Wilson Hope; subsequently, an imitation of Dr. Coghill's instrument, made by the patient with pasteboard and wire, but deeper than the original form, which was, I think, an advantage; at least, the patient, after procuring a respirator from England, continued to use his own in preference. The antiseptic was carbolic acid in solutions varying from 1 in 20 to 1 in 5. No difficulty whatever was expe-

October 10th. There had been more vomiting of blood, but the patient was still sick three or four times daily; he brought up the milk mixed with much gastric mucus, but now retained much more than for the three previous days. He complained of a burning pain in the stomach, and had had very troublesome hiccough for the last three days. There appeared to be complete loss of power in the legs. The pupils were dilated; his sight was very bad; he could not distinguish faces, but could make out the nurse by her dress. He could not hear well. There was no delirium. He knew his friends perfectly, but his mental faculties were decidedly weaker.

October 16th. He still vomited once or twice a day. He could not feed himself. His sight was completely gone. He was able to move his legs, but in a very jerky manner. He could only occasionally touch his nose accurately with his finger.

October 22nd. The patient wished to go home, and was removed by his friends.

He was readmitted on September 10th, 1881, and gave the following account of himself. Four years and a half ago, he noticed numbness across the chest, and pain across the back, a lump in, and tightness around, the belly, something drawing the belly and back together; then pains in the legs and weakness in walking came on, and he had not been able to walk for three years. He could stand with something to catch hold of three years ago, not since. Before losing his power to stand, he was not able for eight months to stand if the eyes were closed. He had not been able to see anything for twelve months; but sight failed from the first, and the left eyelid dropped; he also used to squint. After leaving the Infirmary last year, the pains were very severe for two or three weeks. The legs had not wasted much. He never had a large leg. The arm used to be larger than the calf of the leg before he was ill. The feet used to feel as if unnaturally heavy, and as if there were something soft underneath; the feet did not seem to go to the bottom of the boots. The urine had dribbled at times, but he had generally been able to hold it. Since last year, he had had no use of the penis; this had been failing for a year or two before.

Present Condition.—He was lying on the bed, not able to turn himself, quite dependent and helpless, unable to hold anything, to feed himself, or even to cover himself. He could raise the legs off the bed, and throw them over the side, but could not get them in again; he threw the legs about in a jerky manner, and with no definite aim. He also threw the arms about at random. He could not put a finger to his nose; in trying to do so, he struck the left eye with the left fist, and the right fist struck the pillow. The hands and arms were still strong; he could grasp firmly; the muscles were a little flabby, and the fingers were constantly semiflexed. All the joints were loose; there were no rigid contractions, and there was no evidence of any joint-disease. He could feel slightly everywhere, but feeling was much numbed; he could identify the prick of a pin, or a pinch; a hot spoon felt "sharp," but not hot; on the shoulder it felt "hot," but not on the legs, arms, or body. He could hold his urine, but had an accident occasionally. The urine was normal, of specific gravity 1018, without albumen. He had had no attacks of vomiting since last year; this had been the only attack. Digestion was good; the tongue clean; the bowels regular. He had no headache, nor vomiting. The heart-sounds were weak, but there was no murmur. He had a slight cough. He conversed well; his memory did not appear to be defective. There was no defect of hearing; he opened his eyes well. There was no ptosis. He had internal strabismus of both eyes, nystagmus, and myosis; no movement of the pupils. There was no bed-sore, or even redness. Cutaneous and deep reflexes were absent. The toes were "sometimes on the work." He felt as if hands were clutching his feet, and rubbing or tickling them. He had for months past been under the delusion that a number of people came to torment him; that the captain and crew of a man-of-war, and numbers of men and women, dressed in all colours, came to worry him all day and all night, and prevent sleep. He was ordered to have four grains of iodide of potassium three times a day, and a draught of chloral-hydrate every night.

November 17th. He complained much of tight pain round the body and limbs, and of being pinched and squeezed. He threw his arms about as if fighting with his ghostly visitors, and shouted aloud to drive them away. He accounted for all his pains by their intervention, though he was always rational when questioned, and knew that no one was on the bed molesting him. He was now always more or less wet. The movements of his legs upset the bottle, but without his notice. There was no tendency to bed-sore.

December 13th. He had had little sleep the last three days. He was noisy, always talking, shouting, and fighting with both hands. He threw off the clothing, and would fall out of bed if not protected

at each side. There was some rigidity and tremor of both hands, a little tremor of the tongue. Pulse 100, small. The urine was free from albumen and sugar.

January 24th, 1882. For the last week, he had been very noisy, but rational on being questioned. He had been almost unconscious for three days. He had previously had injections of morphia, and had had good nights, sleeping well afterwards. At 9 A.M. on the 23rd, he became pale, did not speak at all, gurgled in the throat, could not swallow, and brandy seemed to choke him. He was sick on the 22nd, and brought up clear water; none on the 23rd. He had been cold for some weeks, and complained of cold in spite of blankets and hot bottles. On the 23rd, the thermometer in the axilla, twice for five minutes, did not rise above 95°. He did not move his hands at all on the 23rd. He did not recover consciousness, was convulsed in the face and hands on the morning of the 24th, and died at 6 A.M.

Post Mortem Examination.—The body was fairly well nourished. Rigor mortis was well marked. There was congestion of the back and neck. The dura mater was not abnormally adherent. The subarachnoid fluid was in excess. The pia mater was rather adherent to the sulci. The brain was small, apparently shrunken; it weighed 47 ounces. On section, the brain-substance was tough, but otherwise looked normal. Nothing unusual was found in the ventricles. The optic nerves and commissure were manifestly much shrivelled, and of a translucent grey colour. The pons Varolii and crura cerebri were normal. The posterior pyramids in the fourth ventricle looked grey, and appeared to be soft. At the upper part of the medulla oblongata, this appearance was very superficial, affecting only the superficial neuroglia on each side of the middle line; but towards the lower part of the medulla it extended more deeply into the texture. The floor of the fourth ventricle looked granular, and the ependyma was thickened. The membranes of the spinal cord appeared to be everywhere normal. There was no undue congestion; no lymph nor opacities. The subarachnoid fluid was abundant, and the whole cord seemed small in all its dimensions. The roots of the nerves did not show any striking atrophy or abnormality. The posterior aspect of the cord was remarkably flattened, more especially in the cervical region; and the posterior columns presented a greyish shrivelled appearance down their whole length. On section, it was clear that the posterior columns were much atrophied. The posterior horns were parallel; and the tissue between them was greyish, translucent, and soft. The anterior and lateral columns appeared normal.

The spinal cord was put aside in Müller's fluid; and, after hardening, the following appearances were observed. It was small in all its diameters. It was flattened on the posterior aspect, but not uniformly so; in the cervical region, the antero-posterior flattening was most marked, the lateral diameter being here twice that of the antero-posterior; in the dorsal and lumbar regions, the lateral expansion was less marked, and the outline was almost circular. There was no visible atrophy of the nerve-roots. In cross-sections mounted for microscopic examination, it could be seen that the posterior columns were sclerosed along the whole length of the cord; but this condition did not show to the naked eye in sections of the cord unmounted. The posterior columns were manifestly much shrunken; but otherwise no abnormal appearance was visible without microscopic aid. It did appear that there was a difference in texture between the posterior and lateral columns, as the posterior had been acted on more powerfully by the hardening fluid, and had left a sulcus between the posterior horns of the grey matter; but otherwise the appearance and colour of the posterior columns did not differ materially from the antero-lateral columns. There was a decidedly pale spot in the left lateral column, extending continuously down the lower dorsal and the upper lumbar region, along three or four inches of the cord. This spot was situated immediately in front of the posterior nerve-roots, just within the circumference; internally, it shaded off gradually into the grey matter. There were faint indications of a symmetrical spot on the other side, but it was nowhere decided. The lateral columns looked normal in the cervical, upper dorsal, and lower lumbar regions. The sections, under the microscope, showed the usual appearances of sclerosis. The posterior columns were mere masses of neuroglia-tissue; the posterior fissure was obliterated; vessels were abundant and thick-walled; and corpora amyacea were numerous. A few atrophied axis-cylinders could be identified in the mass of connective tissue forming the posterior columns, but they were not easily identified. The antero-lateral columns were universally in an early stage of sclerosis; the circumferential layer of neuroglia was abnormally thick; and the trabeculae passing into the central parts were very numerous and coarse. The grey matter did not appear to be affected.

The optic nerves were both much atrophied. The left was flatter and broader than the right, which was round, but only about one-half

the normal diameter. The optic commissure, the optic nerves, and optic tracts looked flattened, as if compressed from above; they were firm in texture, but of an abnormally grey translucent colour. Sections under the microscope showed that the nerve-fibres had entirely disappeared; the tissue remaining much resembled that of the posterior columns of the cord.

The medulla showed indications of general, but not advanced sclerosis; the nerve-cells were quite normal, and the fibres with their axicylinders were easily seen, but the fibrous trabeculae were coarse and numerous, even in the deeper parts of the medulla. Around the central canal, just below its opening in the ventricle, the neuroglia element was in excess; and here it contained numerous amyloid bodies, demonstrated by logwood staining, but not visible in aniline stained sections.

REMARKS.—This case derives some interest from the fact that the patient was under observation for more than four years, and the history is, therefore, fairly complete. He did not, however, present himself for treatment in the early stage, and, at the time of his first admission to the Infirmary, he had been unable to walk for eight months. The disease appears to have had an unusually rapid course, and then to have remained stationary for some years. The history is entirely that of the parietic stage. The points worthy of comment are these:

1. The early appearance of parietic symptoms. In eight months from the onset, the patient was obliged to remain in bed, and at no time afterwards did he regain the power to walk.

2. The prolonged duration of a mere vegetative existence. Four years before death, the patient was unable to stand, and had become almost blind; but, during this lengthened period, there was very little change to record. Once only was there a gastric crisis, but this was of a very severe and lengthened character; so much so, that the patient looked moribund day after day; the vomiting was violent and sanguineous, and it continued with diminishing intensity for more than ten days. During this period, he took very little nourishment, and not much of this was retained; he became very emaciated, was cold, blue, and almost pulseless; but, notwithstanding all this, he rallied again, and continued his vegetative life for a period of nearly two years afterwards. There was no recurrence of the gastric crisis, and the patient manifested no indications of joint-disease.

3. The occurrence of delirium with delusions forms another feature of this case; and the character of the delusions, as being based upon the actual existence of lightning pains, is worthy of comment. The patient, on being questioned, used to admit the existence of shooting pains, but latterly these were all attributed to the wilful acts of a crowd of tormentors, the captain and crew of a man-of-war, whose mission it was to torment him unceasingly. These visitors were so real, as to give rise to movements of the arms, as if fighting and pushing them away, and the patient was constantly shouting to drive them away. On being questioned, the patient did not admit that they were creatures of fancy, but he attributed all his pains to their "pinching and pulling".

4. The history of syphilis was in this case clear, but, when the patient came under observation, the change was too far advanced to be modified by any specific treatment. Medicinal treatment of the later stages of posterior sclerosis can only be of a palliative kind. No drug appeared to have the least beneficial influence except morphia.

5. The early occurrence of amaurosis. The eye-symptoms were the first observed, and the patient had become completely blind a year and a half before his death. The advanced atrophy in the optic nerves and tracts found after death is quite in accord with the symptoms manifested. Why the optic nerve should be so frequently affected, and should be almost the first, and in one of my cases the only, cranial nerve affected, is a question worthy of investigation.

CASE II. Robert C., aged 42, a potter, was admitted to the Infirmary, March 22nd, 1881. He was quite well till four months ago, when he began to notice that there was pricking and tingling in the toes of both feet, which he attributed to chilblains. With the time, he noticed some loss of sensation, as he could kick his toes against anything without hurting them. He could walk both by night and by day perfectly till a month ago, and had no feeling of weakness in the legs after walking. On being closely questioned, he remembered that, for many years, in fact nearly all his life, he had had shooting pains in both legs, very occasionally, but very acute, which he could not resist. He had never noticed any other symptoms, but he had noticed that, when he was walking, his legs went numb, and he had to stop and rest. This, he said, was the first time. "He did not feel any weakness in his legs, but, in walking, his legs went numb." Still he continued to walk, and he did not notice any other symptoms, but he could not resist the pains. The weakness gradually increased, and he was obliged to stop and rest.

a run, across a board six feet in width (because the men were chaffing him about his weakness). On May 10th, as he found himself steadily becoming worse, he gave up work. At that time, the numbness had extended to the top of the thighs, but there seems to have been little loss of sensation; he could still walk a little till a week ago, when he found that he could no longer stand without holding on by his hands. He thought the weakness had increased during the last week, and, during the last three days, the numbness had extended up to the waist. For the last month, he had not passed urine oftener than usual, but had taken a longer time in doing it. There was no incontinence, but sometimes he did not know whether he had passed urine or not until he had shaken the bottle. His bowels had not been moved so often as usual. He used, years ago, to have numbness along the ulnar border of the right hand; at times, he still had this, but thought it had become no worse. Since the numbness reached the waist, there had been a feeling of tightness there. He had slept well. He had had no attacks of sickness. His eyesight was good. The hands were as powerful as ever. He had been married twenty years, and had had seven children, of whom three were living, and four died in infancy. There was a history of gonorrhoea and a sore, but no distinct history of secondaries. There was no family history of nerve-disease. He was not intemperate. Ten years ago, he had an attack of pleurisy; no other illness.

On admission, he was fairly intelligent. There was no paralysis of the face, eyes, tongue, or hands. The pupils were as small as pin-points, absolutely insensitive to light, equal; both acted with accommodation. There was no headache. The legs lay straight down the bed, and were not swollen nor cold. He could move his ankles and toes readily, and could raise his knees by flexing them about three inches off the bed, the left with rather more difficulty than the right; but he could not raise either leg entirely off the bed, nor hold it up when raised. He said he felt a touch less distinctly from the level of the umbilicus downwards, but he could feel and localise the slightest touch everywhere except about the toes, especially the left great toe, where there really seemed to be some loss of sensation. Sensation of heat and cold seemed everywhere to be normal, and the sensation of distance between two points also normal. Sensation to pain (pricking and pinching) was abolished all over the lower limbs and trunk, as high as the second intercostal space in front, and the second dorsal spine behind. The line of demarcation was sharp, and was a little higher on the right side. A pin could be thrust through a fold of skin, and he felt a touch of something "going to be cold or warm", but no pain. Sensation to pressure was also destroyed over nearly the same area; heavy pressure on the legs or chest-wall, he said, was light. There was no tenderness on percussion over the vertebral spines, and no hyperæsthesia to heat; the plantar reflex was readily got, as also the abdominal, but no epigastric or cremasteric on either side. There was no patellar tendon-reflex, and no ankle-clonus. Sensation to pricking was diminished, also, in the forearms; this he put down to working in cold clay and water. He felt a prick as such, but not so acutely as he ought. Sensations of pressure and weight were here normal. When he tried to touch the tip of his nose with his eyes shut, he missed with both hands, by about an inch, if doing it slowly. There was no tremor in the hands. He was not able to stand without holding on by his hands; he could only walk with support on each side. In walking, he straddled, and occasionally stumbled on a leg in an exaggerated way, but he kept the feet on the ground. His perception of the position of his legs was gone, but the movements were uncertain. There was no tendency to bed-sore; no incontinence of urine. The bowels were regular. His appetite was good. The sounds of the heart and lung were normal. The urine was of specific gravity 1020, acid, without albumen or sugar. The legs and chest reacted readily to the faradic current, and there was no reaction in their galvanic reaction. The muscles were firm. Each calf measured eleven inches and a quarter in circumference.

He was ordered four grains of iodide of potassium, with infusion of cascarrilla, three times a day; and, four days later, the iodide was increased to eight grains. Constipation was counteracted by confection of sulphur, and the patient was discharged.

On April 1st, he could still bear a pin thrust through a fold of skin in the lower chest, abdomen, and legs, but the upper limit of abolished sensation of pain was less definite. He could hold the left leg up for a short time; he could just raise the right from the bed; he could stand alone without the help of hands. The knee-reflex was still completely absent, and the pupils were pin-points.

April 8th, the iodide was increased to twelve grains three times a day, and on the 16th to eighteen grains. On the 9th, he could raise both legs together from the bed. On the 16th, he sat up alone without the help of his hands; and on the 24th, he walked with the help of two sticks, and could stand alone without holding anything. There was less abdominal tightness, and no pain. When a pin was thrust through a fold of skin anywhere below the upper chest he felt the prick, but some seconds late.

May 23rd. He continued to use one stick in walking, but could walk without it. He walked six times round the garden without resting, and found that his power to walk was steadily improving; but he still looked to the ground and watched his feet, which were thrown about a little. He was able to stand steadily, with feet together, if the eyes remained open; no tendon reflex.

On May 30th, he was ordered the following draught, to be taken three times a day. R. *Liquoris hydrargyri bichloridi* 5j; *potassii iodidi* gr. xvij; *extracti glycyrrhizæ liquidum* 5xv; *aquam ad* 5j.

On June 3rd, he was discharged, being made an out-patient.

June 13th. He reported steady improvement, and had been able to walk five miles in a day. He had resumed his usual occupation; could stand all day and work as usual.

June 27th. The mixture was discontinued, and nitrate of silver pill was ordered.

August 22nd. He complained much of pain in the back, for which he had been wearing a belladonna plaister. He was doing easy work, twelve hours daily, and walked to his work one mile twice a day. He could walk steadily, and could stand with his eyes closed; there was no patellar reflex. The muscles of the leg were unduly irritable to tapping, but cutaneous reflexes were defective as before. There was no change in the Argyll Robertson pupils, but his sight was more dim. He complained of shooting pains down the right ulnar nerve, and of numbness along the ulnar side of the forearm, and in the two fingers supplied by the ulnar nerve. This was the case on both sides of the body, but the right was the worst. He looked anæmic, and seemed weak. He was ordered to have twenty minims of liquor ferri perchloridi, and ten minims of tincture of nux vomica, in an ounce of water, three times a day.

December 10th. He reported that he could walk best in the dark, and could go out at any time, night or day. He was able to get through his work without difficulty. Sometimes he had severe pains in different parts.

January 21st, 1882. The pains had been growing worse, but he could walk as well as before. He was never free from pain for many hours. He was ordered five grains of iodide of potassium, and ten minims of tincture of nux vomica, in an ounce of water, three times a day.

March 18th. The pains had continued, but not worse than before. He was not any weaker, and was going on with his work.

April 29th. The pains were still becoming worse. He was ordered to take a mixture containing red iodide of mercury three times a day.

May 29th. He complained of pain in the back, and was sick once yesterday. The pains in the limbs had been less, but the back was always bad, in spite of belladonna and opium plaisters. He was ordered to have twenty minims of liquor ferri perchloridi three times daily.

January 10th. The patient walked well without a stick. He could stand steadily with his eyes closed. He walked in a fairly straight line with his eyes open, but appeared to fix his gaze on something in front, and did not look at his feet. He could turn round without staggering. With his eyes closed, walking was very tottering, and he described the sensation of walking so as being very peculiar. The pupils were contracted to the size of pin points. There were no reflexes. His general health was good. The pains had been less severe of late.

REMARKS.—This case appeared to superficial examination to be one of myelitis, and it was only on close examination that the characteristics of posterior sclerosis were seen. The acuteness of onset of paralysis of motor power fully developed in four weeks, and then the slow but steady recovery of muscular power, culminating in complete restoration to the previous state of health, render the case almost unique in the history of locomotor ataxy. The diagnosis of ataxy rested on the following points: 1. pin-point pupils, insensitive to light, but still varying with accommodation; 2. abolition of all reflexes, except the plantar and abdominal; 3. marked modification of cutaneous sensibility, no absolute anæsthesia, but analgesia, and slowness in transmission of sensory impressions; 4. absence of muscular wasting; 5. loss of power not complete, no paralysis of bladder or rectum, and no tendency to bed-sore; 6. the history of previous lightning-pains elicited on close questioning, and of numbness in the parts supplied by the right ulnar nerve.

The question naturally arises whether this patient did not have an

attack of myelitis, from which he recovered, his ataxic condition continuing unchanged. There can be little doubt that sclerosis is really a very chronic form of myelitis, and that acute inflammatory attacks do occur from time to time in the history of tabes. Whatever be the explanation of the patient's history, this complete recovery of the power of walking and of standing to work as well as usual, is a striking indication that a hopeful prognosis may be justifiable in some cases, when symptoms of ataxy seem to be well developed (if not far advanced).

The question of the syphilitic origin of tabes has been much discussed by Erb, Gowers, Buzzard, Dowse, and others; and my own experience tends to show that another argument may be added to those founded on statistics in favour of the syphilitic origin of the disease. Iodide of potassium has been found to relieve the pains, and to improve the motor power, in many of the cases under my observation, more particularly in the early stage; and I feel convinced of the early detection of tabes by close inspection of the eyes, and by Westphal's test in cases where patients have chronic muscular or cutaneous pains; and then the early treatment of the disease by specific remedies, more particularly the iodide of potassium, is a most important advance in the treatment of diseases of the spinal cord. In this case, the improvement commenced very soon after iodide of potassium was given, and steadily continued under its influence; it has been omitted from time to time, but is generally resumed with benefit after a period of some weeks, when some other drugs are given. One case will not establish a therapeutic law; time forbids that I should give the details of others. This case is one out of many in which good results have been seen; and I submit that we have, in the utility of iodide of potassium, another and a powerful argument for the syphilitic origin of tabes.

The latter of these two cases points so strongly to the syphilitic origin of tabes, that I may briefly sum up the evidence in favour of this idea.

1. *The greater Frequency of the Disease in Man.*—Erb states (*Ziemssen's Cyclopaedia*, vol. xiii, p. 523) that of eighty-three cases seen by him, twenty-four were men and only nine women. My own experience is quite in harmony with that of others; almost the only case of undoubted tabes in the female sex which has come under my observation, was that of a woman aged 58, who presented no evidences of syphilis at first, but whose condition immensely improved by the administration of iodide of potassium. After she had recovered her power of walking and was made an out-patient, she one day made complaint of certain spots which had appeared on her leg, which on examination were found to be typical spots of syphilitic psoriasis, and which rapidly got well with antisyphilitic treatment. It need scarcely be pointed out that the female sex has no such exemption from syphilis as would account entirely for the great preponderance of tabes in men; other causes, such as exposure, occupations, and sexual excesses are likely to affect men more particularly. But in the female sex, says M. Lancereaux, locomotor ataxy is found almost exclusively in prostitutes, or in women exposed by their occupation to excitation of the genital organs (*Transactions of the International Medical Congress*, vol. ii, page 41).

2. *The expression of authorities is divided on this point.* Ross (*Diseases of the Nervous System*, vol. ii, p. 214) says, "Syphilis is a frequent cause of locomotor ataxy, although probably not so frequent as was at one time supposed." Schulze, cited by Erb (*Ziemssen*, vol. xiii, p. 528), gives a series of cases in which no other cause but previously existing syphilis could be brought into etiological connection with the tabes. Fournier (*loc. cit.*) insists on this connection as being comparatively frequent. Buzzard finds that, in 127 cases, 59.8 had a history of syphilis. Erb states in the same volume, that judging by his own (*Clinical Lectures*, 1882) experience, this connection seems doubtful. More recently, however, Erb has given evidence in favour of the connection, and he shows that in 90 per cent. of his cases of tabes, the element syphilis may be one etiological factor (*Transactions of the International Medical Congress*, vol. ii, p. 37). Dr. Althaus, in making an analysis of 1,000 consecutive cases of nervous affections, finds that in 90 per cent. of the cases of tabes there was a syphilitic history; he adds that the results of treatment speak somewhat strongly against any connection between the two diseases (*op. cit.* page 38).

Professor Gairdner, Dr. Lancereaux, Dr. Rosenstein, and Dr. Zambaco, at the discussion following Professor Erb's paper, all spoke against the inference drawn by the author founded on the statistical method of investigation. The conclusion drawn from Dr. Erb's statistics is that there must be a certain etiological connection between syphilis and tabes. He concludes his remarks on the discussion by remarking that the question can only be advanced in time by means of clinical and statistical observations. This leads me to the next point, viz.:

3. *The Effects of Treatment.*—Most observers seem to pass over

THE PREVIOUS SYMPTOMS IN CASES OF PERFORATION OF THE BOWEL IN ENTERIC (TYPHOID) FEVER.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association, in Worcester, August 1882.

By JOHN W. BYERS, M.A., M.D.,

Physician to the Hospital for Sick Children, Belfast.

THERE are few diseases which possess such interest for medical men as enteric fever, of which about eight thousand people are said to die annually in England. Although, from the circumstance that cases are being constantly brought under the notice of the general practitioner, as well as the hospital physician, very ample opportunities are presented for studying this disease, still it must be admitted that, in connection with enteric fever, there are many points upon which opinion is far from being unanimous, and in regard to which further information, based upon careful observation, is needed. If this Section were to debate the question of the etiology of enteric fever, or (what is of greater practical importance) of its treatment, opinions the most divergent would be expressed, each supported by very weighty evidence. A discussion on any of these subjects would be both interesting and instructive; but the object of the present brief paper is to draw attention to one of the most formidable of the many complications of this Protean and treacherous disease, and to ask for a reply to the question. Are there any previous or premonitory symptoms, the presence of which in a case of enteric fever would indicate to the practical physician that this complication is one likely to occur?

It has been calculated that in England, of every thirty-three persons who are the subjects of enteric fever, one dies of perforation; and that perforation is met with in nearly one-fifth of the fatal cases. Now, as, unfortunately, this complication, when it does happen, is almost invariably fatal, the object of a scientific treatment should be, if possible, to prevent its occurrence. Consequently, it is of the greatest significance to know what are the symptoms which would show that perforation of the bowel is to be dreaded; or, to put it in another way, that there is severe and deep ulceration of the intestine, as it is from this pathological condition that perforation arises.

A knowledge of the symptoms of this condition would be of the greatest value to the practical physician, as influencing his prognosis, and as indicating the adoption of certain precautionary measures in treatment, of which we shall speak further on. As having a direct bearing on the question which is raised in this communication, I may first of all detail the history of a case of enteric fever in which perforation was met with, and in which its occurrence was verified at the *post mortem* examination.

CASE.—A girl, aged 13, was admitted into the hospital for Sick Children, Belfast, on October 2nd, 1881. It was ascertained that she had been ill for ten days, during the last five of which she had been confined to bed, her symptoms being headache, loss of appetite, fever, and severe diarrhoea. From the date of her admission into hospital until November 1st, she was under the care of one of my colleagues, and during this period her symptoms were, briefly: pyrexia; rose spots on the lower part of the chest and abdomen, which came out in crops, but were not observed after the third week; a relaxed condition of the bowels during the first two weeks, the motions being of the usual pea-soup ochrey character; the tongue at first furred, with red tip and edges, but gradually becoming brown and dry; very distended abdomen; bilateral deafness; absence of delirium. When she came under my charge on November 1st (thirty-first day in hospital, and forty-first day of illness), her condition was as follows. The temperature (in the morning was 99° Fahr., the pulse 80, soft and compressible; there was a faint apical systolic *bruit*. A few bronchial *râles* were heard at the posterior part of both lungs, but no dulness; the tongue was moist, with a slight central furring; the abdomen was slightly distended, but there was no tenderness on pressure, and no rose spots; the face and body were very much emaciated; a good deal of tremor was noticed during any movement of the tongue, jaw, or arm.

From this date on to November 6th, she gradually improved; she took more milk, and her hearing returned. The bowels now acted, as a rule, once, and never more than twice in the twenty-four hours, the motions being formed. However, on November 6th, her morning temperature, which had been 99° Fahr. on the previous day, rose to 100° Fahr., and for the next few days the chart was as follows:

		Morning.	Evening.
November 7th	...	100.2 Fahr.	104.4 Fahr.
" 8th	...	100.4 "	103.4 "
" 9th	...	102 "	102.6 "
" 10th	...	102 "	104.6 "
" 11th	...	103 "	104.4 "
" 12th	...	103.6 "	103.4 "

Coincidentally with this change in temperature, she became decidedly weaker, and took less milk. The tremor, which had been a prominent feature in the case, became now much exaggerated. When she was told to put out her tongue, it and the lower jaw were seen to quiver, and when asked to raise her arm, the hand, as well as the whole upper extremity, was observed to be very tremulous. During this period she had no diarrhoea or abdominal pain, and no tenderness on pressure, and her mind was perfectly clear.

During the following ten days she seemed to be slowly gaining ground; the pulse became stronger, and the murmur heard at the mitral area could no longer be detected. She expressed herself as feeling much better, and the bowels acted once daily, the motions being formed. The temperature, however, still remained above the normal, although no signs of disease could be detected in any organ; and there was no change in the intensity of the tremor.

On the morning of November 25th (sixty-fifth day of illness) her temperature, which had been gradually falling, was 99° Fahr., and at the time of my visit she felt so well, that she was inquiring when she might get up. In the afternoon she complained of some abdominal pain, which, however, was of a temporary nature; between six and seven o'clock her temperature had risen to 103.4°, at eight o'clock that evening she awoke suddenly out of her sleep, and having asked for a bed-pan, she passed a small solid motion, which was unaccompanied with any blood. Immediately afterwards, she had severe abdominal pain, and vomited. During the night she continued retching, was restless, and moaned with the pain. There was no diarrhoea.

The next morning she was lying on her back with her legs drawn up, her face was pinched, and her features sharp; breathing less hurried, shallow, and thoracic; the pulse was 120, very feeble; temperature, 103° Fahr. The abdomen was distended and very tender. She had great pain during micturition, referred to the hypogastric region; her mind was quite clear. She gradually became worse, and died on the morning of November 27th, on the sixty-seventh day from the beginning of her illness.

Necropsy ten hours after death. The abdomen contained a quantity of opaque straw-coloured fluid, which emitted a distinctly faecal odour. The peritoneal surface of the intestines in the neighbourhood of the ileo-cæcal valve was injected, and at the distance of a foot and a half above the valve, a perforation about the size of a split pea was discovered in the wall of the bowel opposite its mesenteric attachment, through which some of the contents of the ileum had passed into the abdominal cavity. The edges of the opening were everted and covered with lymph. On opening the intestine, the perforation was seen to be situated at the lower edge of a deep ulcer in the position of a Peyer's patch. Several mesenteric glands in the vicinity of the perforation were enlarged. No further examination was allowed.

In reference to this case, the late period at which perforation occurred is noteworthy, viz., about the sixty-fifth day.

It is difficult to assign any cause for its occurrence; but it is worth remembering, that severe symptoms set in on the sixty-fifth day, after she had passed a solid motion, as Liebermeister has given as one of the causes of perforation, the presence of hard faecal masses.

For the peritonitis, the treatment consisted in the free administration of opium, because, although as I have stated, the complication is almost invariably fatal (Jenner and Rokitsansky think it is always fatal,) still, on the other hand, an observer of such enormous experience as Murchison thought that recovery does, in rare cases, follow perforation of the bowel in enteric fever, and Liebermeister has seen four cases of undoubted perforation of the bowel in this disease ending in complete recovery. Consequently, as there may be a slight chance of recovery, the patient should get the benefit of this, and opium should be given freely.

I think all careful clinical observers must admit that perforation of the bowel in enteric fever may occur in cases in which the previous symptoms afford no clue as to the extent of the intestinal lesion. It has been met with in extremely mild cases, and I have known it to occur during convalescence, when apparently everything was progressing favourably. Further, cases have been recorded in which the patient, although suffering perhaps from slight diarrhoea and *malaise*, never took to bed until the symptoms of the fatal complication set in, and the necropsy alone revealed the fact that the preceding illness had been enteric fever. Indeed, so far back as 1860 Dr. Bristowe, in a

of tubes, and consequent reabsorption of whatever little bile was secreted.

Cases occurring after severe mental emotion, I look upon as being probably owing to spasm of some of the tubes.

Many maintain that the bile already formed is not eliminated by the liver: that it remains in the blood and stains the tissues. Now, if bile be formed in the blood, and has only to be eliminated as such, surely, when the organ is extirpated, jaundice ought to follow. Lehmann, Müller, and others, have frequently extirpated the liver of frogs, and have not been able afterwards to find any of the colouring matter or biliary acids in the blood or urine.

Again, we often find the secreting tissue of the liver destroyed by disease, such as fatty and waxy degeneration, and cancer, to such an extent, that the gall-bladder and duct have not contained any bile, nothing but mucus, and yet jaundice has not occurred. Frerichs records such a case from fatty liver; Budd, cases of waxy liver and cancer; and numerous others of the kind have been noticed.

Lehmann has never been able to find bile in the portal vein; and Frerichs denies that it has ever been found in the blood. I think, therefore, we have pretty conclusive evidence that bile is not to be found in the blood; and that, when the liver is destroyed in the human being by disease, or extirpated in animals, jaundice does not take place.

Some maintain that bile is formed in the blood from hæmatin, independently of the action of the liver. Now, there is evidence to show that bile-pigment is originally derived from the colouring matter of blood, and that chemically the one is capable of being converted into the other; still, if it be present in the blood, and the influence of the secreting cells of the liver be not required, why does not jaundice succeed destruction of the secreting tissue of the liver by disease, or extirpation in animals? To show that there is a connection between the hæmatin of the blood and bile-pigment, the sputum in pneumonia, the changes which take place in the appearance of blood in contusions, and the colour of new-born infants, are mentioned. The appearance which blood presents, in the first two cases, proves that blood may assume a yellow colour, like bile, to the naked eye, but not that it is identical with blood. Newly born children, we know, have an immensely congested and enlarged liver; and we can easily understand that, in such cases, absorption of bile already secreted takes place.

Frerichs states that the biliary acids, which are generally thrown into the intestines, undergo changes which end in their conversion into urinary pigment; that in fever such changes do not take place, and bile pigment circulates with the blood in consequence. Now, we have no positive proof that biliary acids, as such, are absorbed, and that urinary pigment is formed from them. Of course, we know that the analyses of feces of adults prove that they contain very little of the bile secreted—not more than one-sixteenth part, and that this does not contain bilin, but colouring and fatty matter; but this does not prove that bile, as such, is reabsorbed: for it may form combinations in its passage downwards, quite altering its character. As I find that, in all these diseases, there is a congested state of liver, and as, when there is congestion of the liver to any great extent, there is jaundice, I cannot help coming to the conclusion, that this state alone is quite sufficient to account for the jaundice which occurs in the processes I explained before.

The liver may thus be looked upon as an organ whose functions are to purify the blood; to act upon new materials, first absorbed from the intestinal canal, rendering them capable of being retained in the blood (as sugar and albumen); to act upon several of the constituents of the already formed blood, so that that which passes out of the liver is very different from that which passes in; to secrete bile; and, provided that there be any deleterious matters in the blood, introduced from without or formed in any way, probably to act upon them.

The presence in excess, therefore, of any material, natural or otherwise, in the blood, tends to produce a congested state of liver. For instance: 1. Anything which may have been absorbed from the stomach or intestinal canal, as from excessive eating or abuse of alcohol, or which may have been absorbed in any other way; 2. The retention of certain matters, which in health are excreted by skin or lungs, but which, from some disorder of those excreting surfaces, are not thrown off; 3. The presence of certain morbid poisons, which produce general fever, as yellow fever, relapsing, etc. In addition to these, we have mechanical causes, as diseases of the heart or lungs, where the blood is thrown back.

Our treatment of this symptom of disease will depend in a great measure upon the views we adopt of its pathology, the condition of the liver giving rise to the complaint, and the exciting causes.

In the first class of cases, *i.e.*, in those arising from the presence of some material in excess absorbed from the intestinal canal or elsewhere, it is our duty to take care that the patient abstains from taking those

articles of diet and alcohol which are known to be hurtful. Exercise is, in all cases, if the patient be able to take it, beneficial, as by it is induced increased excretion of carbon through the lungs and consequent relief of the liver. The accelerated passage of blood through the lungs tends to relieve the congested liver; other constituents of the blood, which probably by their presence in the liver tend to produce a diseased state, are used up; the skin is acted upon; and thus, in several ways, the engorged state of the liver is relieved. Many have been fond, and are now, of applying friction over the liver with mercurial ointment. No doubt a certain amount of the mercury is absorbed, and acts beneficially; but I think much benefit is derived from the friction alone, especially where the liver is much enlarged and within reach. In-spissated bile and other obstructive matter is propelled; the congested lobules are relieved by the friction to which they are subjected; the muscular fibres of the gall-bladder and liver are stimulated to contract; feculent matter in the duodenum and part of the colon is often propelled by the pressure and stimulus to contraction of the intestinal walls; and the pressure upon the liver and its ducts is in this way taken off.

With regard to mercury, it is said by eminent authorities that, when given to dogs, it does not increase the secretion of bile. However it may act when given to dogs which are healthy, we know that it certainly acts beneficially in many derangements of the liver. It may influence certain diseased states accompanied by a congested liver; being one of the substances which the liver excretes, it may in its passage exercise a healthy influence; or it may only stimulate the duodenum, which stimulation may extend into the ducts of the liver, for, of course, the liver is only an offshoot of the duodenum. It certainly in disease causes the expulsion of a quantity of bile, with great relief of certain symptoms. I prefer giving one or two large doses to begin with. I know of no remedy which acts so beneficially as the mixture composed of sulphate and carbonate of magnesia, which empties the large and small intestines, thus probably stimulating the liver to act as well, which creates a watery evacuation and thus indirectly relieves the congested liver. I fear my paper is already too long; and, as it was not my intention to say much about treatment, I shall content myself with saying these few words about a few of the remedies.

ON THE IMPROVED SANITATION OF CANNES.

By C. J. B. WILLIAMS, M.D., F.R.S.,

Physician Extraordinary to Her Majesty the Queen.

ON the 4th of February last, at the request of the English physicians practising at Cannes, I made a statement, in the *BRITISH MEDICAL JOURNAL*, respecting the cases of typhoid fever which had occurred there during the preceding season, and which had been the subject of very erroneous and grossly exaggerated reports in several public prints.

The total number of cases did not exceed forty-five, in a population of upwards of 24,000. No new cases had appeared for several weeks; and Cannes continued to be remarkably healthy during the remainder of the season.*

During the summer, except five cases of typhoid fever which occurred in the month of July, near the railway station, there has been no return of the malady; and both town and neighbourhood have been, and now are, quite healthy.

In my former paper, I also stated that, after careful investigation of the causes of this outbreak of fever, it was traced, in almost every instance, to sundry faults and defects in drainage and other sanitary arrangements, which could be effectually corrected; and that the Mayor and Town Council were prepared to adopt and carry out to the utmost, the suggestions and advice which the medical men of Cannes, in consultation, had laid down on the subject. I have now to report a summary of the work done, and of the measures still in progress, to remove and counteract all causes of insalubrity in Cannes and its neighbourhood.

Early in the spring, there was formed a "Commission d'Hygiène," composed of members of the Town Council and other influential residents, under the presidency of the Mayor, to consider all questions relating to the public health; to take all steps necessary for its preservation; to bring the law to bear against all nuisances and offences; and to carry out any further measures in the way of cleansing and drainage, necessary for the security of the health of the town and its vicinity.

At the same time, there was established, in the Hotel de Ville, a

* That the mortality among the English visitors at Cannes, during the last season, was actually lower than usual, appears from a statement authenticated by the three resident English chaplains, published in several London papers. "There have been six funerals in the three Anglican churches." "To the best of our belief, only three other English have died here." Of the deaths, four were from typhoid fever. In the Protestant cemetery, there were six interments in freehold graves, instead of seventeen, or more, as usual.

cases, there was delirium. One of the most characteristic symptoms was an affection of the deep cervical glands near the angle of the jaw; the glands enlarged; there were a feeling of fulness about the throat, congestion of the tonsils, and pain along the course of the lymphatics of the side of the neck affected. In from twenty-four to forty-eight hours, the fever subsided, leaving the patient in a state of great exhaustion. In most cases, there was a relapse, which corresponded exactly with the first attack, with the difference that another set of glands and lymphatics were affected. After this relapse, there was again apparent recovery, and then a second relapse; in some cases, there were as many as six relapses, occurring regularly every second day. In nearly all the cases, recovery was slow, and, in some, abscesses formed near the angle of the jaw and in the region of the joints. In three cases, the disease proved fatal.

When an inquiry was instituted, it was found that over three hundred individuals had suffered from this disease, and that all the sufferers had been using milk from the same dairy. A sample of milk secured for examination when the epidemic was at its height was found to contain numerous micrococci, spores of fungi and spores which resembled those of *Bacillus anthracis*—the organism which is associated with splenic fever. When cultivated, the spores germinated, first into exceedingly delicate bacilli, and then into spore-bearing filaments. On inoculating rats with the milk containing the spores, death followed in from eighteen to twenty-four hours. The tissues of the rats, especially in the region of the neck, were infiltrated with bacilli, which, on cultivation, developed into spore-bearing filaments. Inoculation proved both bacilli and spores to be as virulent as the original spores found in the milk. Confirmatory evidence of the relation of the bacillus to the disease, and of the disease to the bacillus, was obtained by the examination of pus from an abscess over the angle of the jaw of one of the sufferers. This pus contained spores and bacilli similar to those found in, or developed from, the milk. Rats inoculated with a minimal quantity of the pus suffered and died in the same way as the rats infected with the milk and the milk-cultivations. Further investigations proved that the organisms had been added to the milk along with water. The water used at the dairy previously to the epidemic passed through a large concrete cistern (provided with a rough loose wooden cover) placed in the corner of the large byre immediately over the heads of several cows. The spores reached the byre along with the steamed hay used for food, and from the byre they had easy access into the cistern; how they reached the tank in which the hay was steamed has not yet been discovered.

Experiments after the methods employed by Burdon Sanderson, Pasteur, Greenfield, and Buchner, showed (1) that this bacillus could not be converted into the hay-bacillus (*B. subtilis*); (2) that the cultivations became gradually less active until they were quite innocuous; (3) that, when the filaments were kept for a time at a temperature which prevented the appearance of the spores, the virulence became attenuated, and ultimately disappeared. Further experiments may show that the attenuated forms are capable of affording protection from the active forms.

In conclusion, it was mentioned that the bacillus could be cultivated on the fresh cut surfaces of potatoes and in gelatine—the recent methods described by Koch.

CREMATION: WITH SPECIAL REFERENCE TO THE RECENT CASES IN DORSET, THE FIRST IN MODERN ENGLAND.

By J. COMYNS LEACH, M.D. Durh., B.Sc. Lond., S.Sc. C. Camb.

THE fact of the revival of cremation in England, after the lapse of many centuries, having taken place in Dorsetshire, must be my excuse for bringing this subject under notice, and asking attention: firstly, to the ordinary method of earth-burial, and its concomitant dangers; secondly, to urn-burial or cremation, its history, and the progress it has made within the last few years; and lastly, to the method of cremation adopted, and the circumstances attending the recent cases in this country.

The disposal of the dead, in a country like ours, where the land is valuable and the population is great, must ever, to the sanitarian and the political economist, be a question of the highest importance, as well as one of the greatest difficulty. In the neighbourhood of great cities, this difficulty assumes serious proportions, for not only is it there that the land reaches its limit as to value, whether for building or for food-producing purposes; but it is essential that their neighbouring areas should be kept in as perfectly a sanitary condition as possible, acting, as they do, as the great lungs of the community.

When a body is buried in the earth, it returns to the elements of which it is composed more or less slowly, according to the nature of the soil in which it is laid and the materials of which the coffin is composed. In some soils, this decomposition is very slow, hence the passage of impurities into the air and water long continues. In any case, under the most favourable conditions of soil and burial, six years at least are required before a corpse is decomposed—six years of pollution and danger to the living by the contamination of earth, air, and water! For it is an unquestioned fact, that the air over cemeteries is constantly contaminated, and the water-supply in their neighbourhood highly impure, derived, as it most frequently is, from percolation through its soil and decomposing horrors to find at last its level in the nearest well.

Need I refer to the experiments of the great Pasteur, related by Mr. Spencer Wells in his admirable paper on Cremation at the Cambridge meeting, which show a still greater danger that doubtless often results from earth-burial, viz., the agency of the earthworm in bringing to the surface the germs of disease from animals that had died of charbon or splenic fever? For instance, he found in a field, where a diseased cow had been buried seven feet deep and two years before, that the surface-mould contained germs, which, when introduced by inoculation into a guinea-pig, produced splenic fever and death; and further that, in a worm taken from the infected spot, the earth in its alimentary canal contained those spores or germs of charbon, which, when inoculated, propagated the disease; and Pasteur suggests that, in cemeteries, it is very possible that germs capable of propagating specific diseases of different kinds, quite harmless to the worm, may be carried to the surface of the soil ready to cause disease.

How then are these dangers to be avoided? It has been proposed to bury the dead in leaden coffins and air-tight vaults, where the decay would be more slow; and although the products of decomposition must eventually escape, there would be less contamination. Here, although the sanitarian is partially appeased, the political economist comes to the fore; for the expense, and the amount of land required, would render it impracticable as a general system. The earth-to-earth method, and the wicker coffins of Mr. Seymour Haden, whilst far preferable to the sealed coffin and the vaulted grave, are met by our former objections; we are still contaminating air and water. Deep burial, with only one body in each grave, with the free use of plants and shrubs to purify the air, has also been advocated; but here, again, we are withdrawing large areas from our already proportionately scanty food-producing acres; and I cannot do better than quote that well-known speech of the Bishop of Manchester, wherein he says, in commenting upon his recent consecration of a large cemetery:

"Here is another hundred acres of land withdrawn from the food-producing areas of the country for ever. I do not think we always observe or calculate how much this area is being gradually contracted by the infinite number of works and processes, requiring space but not producing food, which are encroaching on it more and more every year, nor to what extent the power of the country to support its population is reduced thereby. I feel convinced that before long we shall have to face this problem, 'How to bury our dead out of our sight,' more practically and more seriously than we have hitherto done. In the same sense in which the 'Sabbath is made for man and not man for the Sabbath,' I hold that the earth was made not for the dead but for the living. No intelligent faith can suppose that any Christian doctrine is affected by the manner in which, or the time in which, this mortal body of ours crumbles into dust and sees corruption," and he concludes: "This is a subject that will have to be seriously considered before long. Cemeteries are becoming not only a difficulty, an expense, and an inconvenience, but an actual danger."

In cremation alone, in my opinion, is to be found a remedy for all these evils; and cremation simply and properly carried out, will, I trust, ere many years shall elapse, be the recognised and generally adopted system of burial, whereby the grave is not only robbed of half its terrors, but the safety and welfare of the living is assured.

Cremation is a revived rite, and was practised by our remote ancestors, for we find urns containing burnt bones and implements of iron in the barrows that abound in this our country. That the Greeks and Romans practised it, is shown by the many descriptions to be found in the writings of Homer and of Virgil. The former, describing the funeral of Patroclus, says:

"A spacious pile the mournful Grecians made,
And on the top his comely body laid;
Next stript the sheep and oxen there that stood
In solemn ranks before the flaming wood."

At a more recent period, viz., in the third century of our era, Severus, that Emperor of Rome who built our northern wall, before he died at

stated that her husband was 42 years of age, that about seven years ago he had been in a railway accident, and had been rather nervous ever since; that he had at times spat blood, but was never seriously ill until last spring; that he was then recommended to try a change of air which did him a little good, but that soon after his return he was as bad as ever; that about the beginning of August he became much worse, complained of headache and pains all over his body, vomited frequently, had convulsions, became unconscious, and died on August 26th; that at the commencement of his last illness she had seen a well marked blue line on his gums. Dr. Jack, who was attending him, called her attention to it. In answer to inquiries, she also stated that, up to the time of his becoming unconscious, she thought her husband had the free use of his hands. In reply to the coroner, she likewise mentioned that her husband had been in the habit of drinking large quantities of water at home, and that he was often "the first to use the water from the tap in the mornings;" that for some years he had had a good deal of worry about business matters.

I was the next witness examined, and stated that about two years ago the deceased consulted me, and that he was then suffering from colic and constipation. There was a blue line on his gums. These facts led me to conclude he was suffering from lead-poisoning. He got so much better that I lost sight of him until about a week before his death, when, at the request of Dr. Jack, who assists me, I looked in to see Riley. He was then suffering from colic. There was a distinct blue line on the free border of his gums. There was also the history of constipation and convulsions. I did not observe wrist-drop.

The results of the *post mortem* examination, which I made 57 hours after death, in the presence of Dr. Eddison, of Leeds, Mr. Roberts, medical officer of health for Keighley (both of whom had seen the patient alive, and were present at the request of the Local Board), Mr. Chaffers, Mr. Holman, and Dr. Jack, were then given. There was nothing very noticeable in external appearance except the position of the left wrist, which drooped. The body was not extremely wasted. The extensor muscles of the forearms appeared healthy. No morbid changes were visible in the brain or its membranes. The lungs were healthy, but extensive old-standing pleuritic adhesions existed, especially on the left side. The heart was pale and hypertrophied. The left auriculo-ventricular opening was enlarged. All the abdominal organs were normal, except the colon and kidneys. The former was constricted and thickened in its ascending and transverse portions. The mucous follicles were enlarged in the neighbourhood of the constricted parts. The kidneys were in the condition of what is known as granular degeneration. Taking all these facts together, I expressed the opinion that they were not inconsistent with the fact that death had resulted from chronic lead-poisoning. The peculiar appearance of the left wrist, I added, and the condition of the large bowel, especially pointed in that direction. The granular condition of the kidneys, I likewise mentioned, was frequently caused by chronic lead-poisoning. I also stated that the case would not be complete unless the viscera were subjected to chemical analysis. In this opinion the coroner and jury concurred. They also thought it desirable that specimens of water from Riley's house, and from the adjoining main pipe, should be examined. The investigation was intrusted to Mr. Allen of Sheffield, analyst for Yorkshire. The organs sent were a portion of the brain, the spleen, liver, kidneys, and heart. The inquest was adjourned for a month.

When the inquiry was resumed, the coroner read a report from Mr. Allen, in which it was stated that no lead had been found in the brain and heart; that only a doubtful trace was discovered in the kidneys; but that a "notable" quantity had been got from the liver and spleen, one-half of these organs having yielded one-eighth of a grain of lead. This, Mr. Allen observed, was a small quantity for a case of lead-poisoning; but he was bound, at the same time, to admit that he had often been struck with the very insignificant quantities he had found in the bodies of animals which had undoubtedly died from lead-poisoning.

After the report had been read, Mr. Allen was examined, and admitted that the small amount of lead found might be accounted for if the deceased had been under medical treatment. Iodide of potassium, he said, might remove all trace of lead from the system in a fortnight.

The result of the analysis of the water showed that the specimen from Riley's house contained about three-fifths of a grain of metallic lead to the gallon, a proportion "amply sufficient to produce poisonous effects". The water in the main pipe was free from lead, but, after a strip of clean lead had been immersed in it for eighteen hours, it became contaminated with lead to the extent of rather more than half a grain to the gallon. This action upon lead was due, the analyst thought, to the presence of a free mineral acid in the water.

At the conclusion of Mr. Allen's evidence, I was again examined; and, in answer to questions by a barrister on behalf of the Keighley Local Board, stated that I had never before made a *post mortem* examination in a case of chronic lead-poisoning; that the disease of the kidneys, although advanced, was not sufficiently so to account for death; that the disease made its way insidiously, and might be caused by mental anxiety, although I should feel disposed to regard that as more a predisposing than an exciting cause; that the commonly recognised causes of granular kidney were gout, rheumatism, excessive use of alcohol, lead-poisoning, etc. As an evidence of the part chronic lead-poisoning played in the production of granular kidney, I mentioned the fact quoted by Dr. Johnson, at page 47, in his lectures on Bright's disease, "that, out of forty-two men exposed to lead-poisoning who had died in St. George's Hospital, twenty-six had (on the authority of Dr. Dickinson) granular degeneration of the kidneys, which, in most cases, was so advanced, as to have caused death." I also mentioned that a common immediate cause of death in granular kidney was serous apoplexy, in which case serous effusion was found beneath the arachnoid membrane, and in the ventricles of the brain (there were no such appearances in Riley's case).

I likewise stated that, although paralysis occurred in the most of cases of chronic lead-poisoning, it was not always present. In answer to the foreman of the jury, I said that I had had a large experience in chronic lead-poisoning, and that, about a year ago, I reported to the local board sixty-four cases that had been under the care of Dr. Jack and myself. They all occurred in Keighley or the immediate neighbourhood. I was of opinion that the deceased died from chronic lead-poisoning.

Dr. William Jack was then examined. The deceased had consulted him last Easter, when he was suffering from dyspepsia associated with sleeplessness; and again about a fortnight before his death. He had colic with constipation, and there was a blue line on the gums. It was difficult at first to get either medicine or food retained, but after a few days the vomiting subsided. Riley took iodide of potassium for more than ten days before he died. Questioned as to the condition of the kidneys, Dr. Jack stated that he did not consider them sufficiently diseased to account for death.

At this stage of the inquiry, the inquest was adjourned for a week, in order to obtain the evidence of Dr. Tidy of London, which the Local Board considered "absolutely necessary to the verdict." In accordance with this arrangement, Dr. Tidy gave the following evidence. He had had a very large experience in cases of chronic lead-poisoning, and he had often been called upon to make an analysis in connection with such cases; but, in point of fact, he had never seen nor read of a well authenticated death from such a cause. He had carefully read over and considered all the evidence in this case, and was of opinion that death might have resulted perfectly independent of lead-poisoning. In all advanced cases of this disorder, paralysis—generally of the extensor muscles of the forearms—was invariably present. There was no exception to this rule. He could not understand that part of the evidence which described drop-wrist as a *post mortem* symptom. In all cases of advanced wrist-drop, the extensor muscles were wasted, pale, and sometimes white. With regard to the thickened and constricted state of the large intestine, he held, from its limited extent, that it must have been due to local inflammation. He agreed with Mr. Allen that the amount of lead found in the body was small for a case that was supposed to have died from chronic lead-poisoning, but dissented from the opinion that the smallness of the amount might be explained by the fact that the deceased had been taking iodide of potassium. In one case that he had examined, where lead-poisoning was not the immediate cause of death, he found five grains of lead in the spleen, and four in the liver. While admitting the difficulty of giving an opinion when he had never seen the patient, either dead or alive, he nevertheless was convinced that the symptoms of lead-poisoning were not sufficiently pronounced to account for death. When asked what he considered to have been the cause of death, Dr. Tidy replied, granular degeneration of the kidneys. He would not, of course, deny that lead-poisoning might have originated and accelerated that disease. He also stated that, in granular kidney from lead-poisoning, the disease was seldom found much advanced. In answer to the coroner, Dr. Tidy maintained that iodide of potassium had very little effect in eliminating lead; that it tended rather to leave the lead in an insoluble and inert form. The lead would still, to a great extent, be left in the tissues.

Dr. Jack was, at his own request, recalled, and said there were several important points in Riley's case, about which he was not asked at his last examination. When called to see the deceased, about a fort-

a snake was found to be in the room. It was close to the wall, and making for the door, when he went at it, and put his foot upon it to crush it. The sole of his foot rested on the snake's back, leaving about twelve inches of the head and neck free, so that the head had full play under the instep. The snake struck his thick boot several times, then he put down his hand to catch it by the tail, intending to swing it swiftly round, and break its head against the wall (a common practice), when it bit him severely on the back of the middle finger of the right hand, at the articulation of the first and second phalanges. The blood flowed freely, but he only wound his handkerchief round the finger to check the hæmorrhage. The snake was killed, and the prayer-meeting continued till 10 P.M. After that, he had some supper, and shortly afterwards got into bed, when he fell asleep quickly. At 1.30 A.M., the pain of the finger and hand aroused him, both being much swollen; and he got up. He also felt very giddy and drowsy. Finding matters becoming serious, he had recourse to hospital, where I found him. The hand and finger were much swollen (a ligature had been put on the wrist when he arrived at the hospital). Breathing was quiet. Pulse 72, and eyes natural. The marks of the bite were very distinct, with a slight areola of redness about them. I at once injected a solution of permanganate of potash into each puncture, and applied a poultice of ipecacuanha, giving half-drachm doses of liquor ammoniac, brandy being objected to by the patient. He was kept walking about all that morning, and, on my seeing him again, he said he felt all right. This happy state continued daily till his discharge, seven days afterwards, no untoward symptom ever having arisen. I subsequently examined the snake, and found it to be a black cobra, thirty-three inches long, and beginning to desquamate. To this latter fact, and that it had expended all its poison on the man's thick leather boot, I attribute the man's safety, as the remedies given by me could have had no possible effect, considering the time that elapsed from the bite to their application. Only this year, a poor native woman was bitten by a cobra, about 100 yards from where I am now writing, and was immediately carried across to me, but died in ten minutes after, or about thirty minutes from the infliction of the bite.

In 1875, when serving at Faizbad, I had a man in the 5th R.O.L.I. who appeared innocuous to snake-bite, and he used to bring plenty of all kinds to me for experiment. One I remember, a large grey cobra, which he had caught the evening previous, we experimented with, and he allowed it to coil round his neck, arms, and legs, and then it was made to bite a large pariah, which succumbed in thirty-three minutes. A few days afterwards, in my presence, a krait bit him on the little finger; but prompt remedies were applied, and although for two days he was in great danger, still he recovered. An account at length of his case was published in the *Medical Times and Gazette*, November 9th, 1875. The patient referred to as having been bitten on September 3rd, 1882, tells me (and I have no reason to doubt his word) that he was bitten about three years ago by a krait, and suffered no ill effects from it.

JAMES D. GUNNING, Surgeon-Major,
Army Medical Department, Bareilly, East India.

UNDEVELOPED TESTES ASSOCIATED WITH EARLY TOBACCO-CHEWING.

ON Thursday, October 26th, a young man attended among my out-patients at Guy's Hospital, to seek advice for a lymphatic abscess, situated above the internal condyle of the femur, and excited by a sore heel. On raising his shirt to examine the state of the glands in his groin, one was at once attracted by the undeveloped condition of his generative organs. He was twenty-five years of age, and five feet nine inches and a half in height. He had a somewhat small head, but, for a labourer, was unusually quick and intelligent in his answers. He was one of a family of four, an elder brother being married and the father of two children.

His penis was small and the prepuce rather long, but not in a condition of phimosis. The testicles were remarkably small, neither being larger than a French bean, or, perhaps, what more nearly expresses their size and shape, no larger than the testes of a rabbit. The scrotum was not relaxed, nor was there any varicocele. There was short dark hair on the pubes.

The voice was somewhat high pitched, yet not like that of a woman or eunuch. Though twenty-five, he had not a trace of beard, whisker, or moustache; nor was there any hair on the chest or around the nipples. The breasts were flat, yet the contour of the lower extremities and lower part of the trunk resembled that of a woman more than that of a man. In observing this man, one could but be struck with the evidence of development on a manly type up to a certain period, and then of a cessation of further virility.

His manly height and muscular development ill accorded with the

entire absence of beard and weakness of expression. In these respects he differed from the short, rounded, plump eunuchs produced by robbing children early of their testicles.

In searching for a cause of this arrest of development, we ascertained that he had not suffered from mumps, nor from any inflammation of the testes. There appeared, indeed, to have been no disease which could have checked the growth of these organs. He, however, stated that he was an inveterate tobacco-chewer, preferring a good "quid" to victuals; and that he had commenced this habit at the early age of nine, by stealing from his father's pouch what he could not afford to buy. His mouth, at the time of examination, was occupied by a "plug," and there was further evidence of the habit in the staining of the teeth where the dentine was exposed. In the absence of any other cause to which this condition of generative organs could be referred, I am inclined to attribute their arrest of development to the poisonous effects of excessive chewing of tobacco.

R. CLEMENT LUCAS, B.S., Lond., F.R.C.S.,
Senior Assistant-Surgeon to Guy's Hospital.

REPORTS

OF

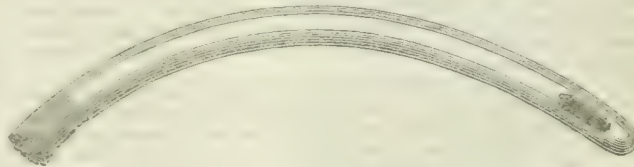
HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

CUMBERLAND INFIRMARY.

EXTRACTION OF A BROKEN INSTRUMENT FROM THE BLADDER.

(Under the care of HENRY A. LEDIARD, F.R.C.S. Eng., M.D. Edin.,
Surgeon to the Cumberland Infirmary.)

AN old man, aged 70, was admitted on June 16th, 1882, owing to the end of a catheter having been fractured in his bladder by an amateur neighbour. The desire to micturate was constant, the urine was bloody, and there was pain in the bladder; a sound immediately struck a foreign body, of some length, lying across the trigone, and having a smooth surface. On passing a lithotrite, the broken catheter was easily seized, but extraction was not attempted, as it was feared that the broken end was probably near the mouth of the bladder. At a consultation on the following day, Mr. W. B. Page agreed with me, that immediate extraction was the only treatment to be thought of. Accordingly, the patient was removed to the theatre, and was, after chloroform had been given, tied up in the lithotomy position. A finger in the rectum did not touch the foreign body. A staff having been introduced, a central incision was made in the perinæum, a second cut opened the urethra, and the finger then readily touched the catheter; the jagged end having been directed from the oblique position it occupied into a straight one, a curved pharyngeal forceps was used to seize and withdraw the instrument, which consisted of $3\frac{3}{4}$ inches of silver catheter, of No. 12 size, according to English gauge.



There was little or no bleeding, and a silver lithotomy tube was introduced for forty-eight hours.

On June 28th, the wound was closing, most of the urine passing *per vias naturales*.

July 5th. The patient had been doing well up to this morning, when he had a rigor, with a rise of temperature to 100.8° Fahr.; more rigors occurred during the day, the evening temperature being 102.4° .

July 6th. The metacarpo-phalangeal joint of the middle finger of the right hand was red and swollen, not painful on pressure. Pain in the right shoulder was also complained of, and there was tenderness in the perinæum, but no sign of abscess. More urine now passed through the wound than by the natural channel.

On July 7th, he was better. The temperature was 99.4° ; but he had a slight rigor, and the evening temperature was 101.8° . The patient wished to go home, and on the following day was removed. On August 9th, he died.

For some time prior to Christmas 1881, the patient had suffered from pain in the left iliac region, together with constipation; and, on exami-

nation, he was found to have malignant disease of the sigmoid flexure. Subsequently, he was an in-patient in the infirmary for three weeks.

About May 25th (the month preceding the event above recorded), he began to suffer from retention, and applied to a neighbour in the village for relief, who had in his possession an old silver catheter which had belonged to his father; it had been broken about three inches from the lower end, and repaired with common soft solder. This instrument gave way whilst the operation of passing it was being performed, and the end was left in the bladder. No urine was drawn; and, still suffering from retention, the patient sent for Dr. Carlyle, who relieved him, and advised him to go to the infirmary. The patient, however, remained at home for three weeks, suffering no pain or inconvenience; but, two or three days before admission, the bladder became painful; and it was then found that the disease about the intestine had extended towards the bladder—in this way, probably, causing the need of catheterism.

REMARKS BY DR. LEDIARD.—It could scarcely be expected that much good could come from an operation upon an old man emaciated from cancer, and my own feeling was that the symptoms after removal of the catheter were far too favourable to last. His removal from the hospital at such a critical period was, no doubt, a most unwise proceeding, but I question whether, if he had remained he would have recovered. Rigors, pyrexia, joint-pains, dry glazed tongue, and the reopening of a nearly healed wound, would answer to nothing but septic poisoning.

Even in the limited experience I can claim, this case is the third of the kind I have had under my own care. The first occurred in March 1872, when I was house-surgeon to the Manchester Infirmary. A middle-aged man presented himself in the accident room, saying that he had broken a gutta-percha catheter in his bladder, an instrument he had made himself with his fingers, and the aid of a little heat. On passing a catheter, it was found that something was fixed in the membrane of the urethra, but it was possible to get past the obstruction into the bladder. A finger in the rectum was of great diagnostic use, for the hard stick-like body could be felt behind the prostate, and, with another finger of the right hand in the perineum, the length of the foreign body could be estimated. I commenced by trying several of those ingenious urethral forceps beautifully figured in surgical catalogues, not one of which was of the least service; but a lithotrite of small size easily caught the instrument, although it was only projecting a short distance into the urethra. The gutta-percha, however, broke off just as withdrawal was effected as far as the glans, the blades of the lithotrite retaining three-quarters of an inch; the remainder immediately slipped back to the neck of the bladder, but was again easily seized as before, and brought up to the mouth of the urethra, but no effort either of pulling or pushing from behind succeeded in extraction; the jaws of the lithotrite were now so imbedded in the gutta-percha, that they could not be released. I now made a small incision behind the glans penis into the urethra, and with dressing-forceps withdrew the remainder of the instrument, which measured exactly three inches and a half, and was of No. 10 size. The patient returned in ten days to show himself, the urethral incision having entirely healed.

The other case occurred in October 1877, at the Cleveland Street Infirmary, London. A baker allowed a fellow-workman to pass a gum-elastic instrument into his bladder, the result being that one inch remained inside, and a calculus formed upon it. I performed lateral lithotomy successfully.

It is satisfactory to note that, in all three cases, the instruments were used by uneducated hands. I am indebted to Dr. Carlyle of this city for the remainder of the silver catheter used in the first case, which, on examination, showed that it had been twice mended, once with hard solder about four inches from the mouth, and the junction was well made; but the second join was made with soft or common tin-solder, and easily gave way when used.

BIRMINGHAM EYE HOSPITAL.

ACUTE VASCULAR KERATITIS: PERITOMY.

(Under the care of Mr. SOLOMON.)

[Reported by Mr. E. W. WOOD WHITE.]

P. G., aged 9, of a markedly scrofulous diathesis, was admitted as an out-patient of the Birmingham Eye Hospital, under the care of Mr. Solomon, on June 10th, 1882. The patient was suffering from acute vascular keratitis of the right eye, the iris and ciliary body evidently participating in the inflammation, the former, however, being completely obscured by the tumourous blood-vessels which ramified on its surface, and by the white line of the cornea in front of it, and the sclerotic corresponding to the latter being intensely injected. The central portion of the cornea was clouded and pointed, and pain and photophobia were considerable.

The girl's mother stated that her daughter's health was always indifferent; that she frequently suffered from skin-eruptions about the face, and ulcerations of the mucous membrane of the nose; but that her eye had never been affected till three weeks before she came to the hospital, when it became suffused and painful, and grew rapidly worse. General tonics and sedative applications to the eye were ordered.

On June 26th, when she was again seen, the objective and subjective symptoms were found to have much increased; the central part of the cornea was undergoing purulent necrosis, and had almost perforated, and the eye looked as if rapidly going to destruction. Mr. Solomon admitted the girl into the hospital, and, as a last resource, decided to do a peritomy. The operation was carefully performed in the usual manner, the conjunctiva and subconjunctival tissue being dissected away to the extent of about two lines from the corneal margin, and the central sloughing portion of the cornea was divided by a Samisch's section; bleeding at the time was freely encouraged, atropine instilled, and both eyes padded with antiseptic cotton-wool. The operations were attended with immediate relief to all the symptoms. On the following day, pain had completely subsided; in a week the patient could bear light without discomfort; the adventitious blood-vessels had almost all disappeared, and the iris could be clearly defined through the marginal part of the cornea. The patient rapidly improved in every way, and was discharged on August 2nd, when she went to the country for change of air. She was again seen on September 27th, much improved in health. Her eye seemed perfect, excepting for a central leucoma of small dimensions, and the curvature of the cornea was apparently normal; it would have been difficult indeed to tell that a peritomy had been performed. She is shortly coming into the house to have an artificial pupil made, after which, I have no doubt, she will have fair vision.

Peritomy was first recommended to the profession by Dr. Furnari, for cases of persistent pannus following granular lids. English surgeons, as a rule, have looked on the operation with little favour, seldom performing it, and many have discarded it altogether, the principal objection urged being that its results are not permanent, the condition being liable to relapse. I think this may specially be the case when the operation is performed for the relief of pannus, as the cause of the vascularity, the granular lids, generally persists. I have had abundant opportunity of observing the effects of peritomy in Mr. Solomon's practice in cases of chronic vascular keratitis, and have been much struck by the manifest improvement which has taken place in nearly all his cases. It is, of course, impossible to draw correct conclusions from a single example; but I think the favourable termination of the present case, indicates that the operation may be extremely useful in a certain number of those tolerably rare cases of acute keratitis, where an eye is going to rapid destruction from the very intensity of the inflammation.

ROYAL ISLE OF WIGHT INFIRMARY.

A CASE OF BLOOD-POISONING.

[Reported by THEO. M. KENDALL, B.A. Sydney, N.S.W.,
L.R.C.P. Ed., Resident Medical Officer.]

ELLEN R., forty years of age, the wife of a cabman, was admitted on November 18th, 1881. She had led a very irregular life, and was extremely dirty in her habits. She was stout, with a very bloated appearance. For many months, she said, she had suffered from sore eyes, which had at times discharged greatly. For six months, she had been accustomed to wash the linen used to swathe her sores. During this time, the left eye became very much inflamed, and began to discharge freely. About October 18th, 1881, the eye began to swell and protrude, but, as this did not cause the patient any pain, she paid no attention to it; but during November it became painful, and on the 18th of this month she presented herself at the Infirmary, and was admitted as an in-patient. At that time, the left eye was greatly swollen and protruded, seeming to be pressed downwards and outwards by some growth from within. The eyelids were very red and cedematous. Along the left side of the nose was a longitudinal swelling, and the left nostril was blocked up. The throat was much swollen, and the pharynx was highly congested. There was constant dribbling of the saliva. No tumour could be detected behind the angle of the jaw, and there was no evidence of any growth in the mouth. The bowels were open; the tongue moist, with a slight fur; the temperature was normal. The family history was good. No one was ill in the house in which she lived. The eyelids were incised, evacuating a great quantity of serous discharge.

November 10th. She slept fairly well, and had taken a great amount of nourishment. About 10 A.M. to-day, she experienced a single smart rigor, with diffuse stabbing pain in the left chest, and there was great

dyspnoea. On examination, dulness along the front and back of the left chest was found, with minute crepitation at the left base. The temperature was 102.2°; the pulse 84; and the respirations 44. The bowels were not open. She was ordered a jacket-poultice and a stimulant expectorant mixture. The temperature fell during the night to 101°.

November 20th. She had passed a very restless night. Expectoration at times was rusty, and at times mucopurulent. The left eye was looking more swollen, and the cornea was very hazy. Dyspnoea was still great; a loud ronchus was heard over the right chest. The bowels were open once this morning. Four ounces of brandy were ordered to be taken daily.

November 21st. The pulse was quick and sharp. The urine was scanty, high coloured, and very ammoniacal, depositing crystals of the triple phosphate. The temperature in the morning was 99.8°, but towards 9 P.M. it rose to 101°.

November 22nd. A peculiar papular rash had appeared over the abdomen. Some spots were very large, and of oval shape. They were bluish in the centre, and pinkish at the edges, with a well-marked areola. The left eye was in much the same state as before; but there was a marked redness of the right half of the forehead. The sight of the right eye was good. The urine was still offensive. The tongue was of a dirty brown colour. The bowels had not been open since November 20th. The temperature this morning was 98.4°, but rose again in the evening to 100.6°. The left chest had cleared, and the dyspnoea was not so great. The respirations were 38.

November 23rd. The patient was bathed in an oily offensive sweat. The dyspnoea was greater, and the left eyelids were very cedematous. The bowels were open; the tongue blackish, and very slightly moist. The abdomen was much swollen, but there was no tenderness on pressure. The left chest was more resonant. Eight ounces of brandy were ordered to be taken daily.

November 24th. Some of the papular spots were sloughing. The urine was slightly offensive.

November 29th. There was great dyspnoea, and the patient was very drowsy. She passed very little urine, and her exhalations were extremely offensive. A fresh crop of spots appeared over the back and buttocks.

November 30th. The urine was offensive and scanty, and there was excessive diarrhoea; and the legs were much swollen. There was a foul, thin discharge from the left eyelids. Coma increased, and she died.

Temperature after death, 102°; before death, 98.6°.

Post mortem Examination.—The body was much decomposed. The left eye was disorganised; no tumour was present. There was no abscess of the antrum. The lungs were very emphysematous and pale, and there was old pleuritic adhesion. The pericardium was filled with thin serous fluid. The substance of the heart was very friable, but there was no valvular disease. The liver was much decomposed; there were no secondary abscesses. The kidneys were friable, and the medullary position was small. Examination of the papular spots of the abdomen proved them to consist of inflammatory exudation.

THE INFIRMARY OF HER MAJESTY'S CONVICT PRISON, PORTLAND.

ULCERATIVE ENDOCARDITIS: SUPPURATIVE ATHEROMA: SEPTICÆMIA: DEATH.

[Reported by G. HERBERT LILLEY, M.D.]

E. T., aged 25 years, formerly a blacksmith's striker, was admitted to the infirmary on June 24th, 1881, suffering from injuries sustained in a suicidal attempt, by throwing himself off a cell-landing on to the stone basement. On admission, he had a jagged, irregular, stellate wound of the scalp, over the left parietal bone, extending to the pericranium, although not denuding the bone. The longest diameter of the wound was an inch and a half. There was also a transverse fracture of the left acromion, with slight contusion of the surface over the seat of fracture. He was semi-conscious on admission. The scalp-wound was treated antiseptically, silver sutures and horse-hair drainage being employed. These were removed on July 4th, and, three days later, the wound had completely healed. On July 26th, pain was complained of over the left pectoral region, together with a sense of "tingling" and numbness along the inner side of the left arm. The muscles of this extremity were wasted. He made no further complaint of pain till August 15th, when greater numbness was present, following the course of the ulnar nerve in the forearm and hand. There was more wasting of the muscles, but the power of grasp was equal with both hands. On August 23rd, the pain in the left side became more

severe. The bony union was good, and he had free movements of the left shoulder-joint. Now, for the first time since admission, he appeared very depressed in spirits, and silent. Tonics were prescribed, and a liberal diet; he was to be allowed to do no more work than he cared to do, and to take easy exercise out of doors. On August 25th, he appeared extremely pale, his body being bathed in a cold perspiration; the extremities were cold; his pulse was quick and feeble, the heart-sounds were muffled, scarcely distinguishable at the apex from each other, and both sounds were accompanied by a whiffing *bruit*; the heart's action was regular, but its area was increased. Examination of the lungs revealed nothing; he suffered from excessive vomiting and diarrhoea. His voice was weak, articulation being difficult, owing to amnesic aphasia. Consciousness existed, and he appeared irritable when asked questions. There was intense pain in the chest at the left side. The collapse set in without any warning; no rigors were observed. Sinapisms to relieve the pain of the heart were ordered; and stimulants were unsparingly administered. Repeated enemata of brandy, eggs, and beef-tea were employed to give rest to the stomach. The body was enveloped in hot blankets, but no relief was obtained. The vomiting and diarrhoea persisted. At 5 P.M., there was no change for the better; the pulse was 120, and very small; the temperature in the axilla was 99.4°; the breathing was stertorous, and there was greater incoherence and lividity of lips, and extreme prostration; the pupils acted equally and well. An enema was retained at this hour, of starch two ounces, brandy one ounce and a half, and one egg; and a smaller injection was retained one hour later. At this time, no hemiplegia was present. Two hours later, however, right motor and sensory hemiplegia appeared; breathing became more stertorous; and unconsciousness only immediately preceded death, which took place at 3.30 on the following morning.

Necropsy, thirty-six hours after death. Rigor mortis had set in. The body was well nourished, but the muscles of the left arm and forearm were wasted; there was pallor of the surface generally, but flanks and dorsum were bluish-red. The abdomen was slightly distended. Six toes were present on each foot, and scars showing that each hand had had six fingers. The skull-cap was sawn through with difficulty. The dura mater was partially adherent; the brain-membranes were distended by fluid, and the vessels at the surface distended with dark fluid blood. The ventricles were filled with serum, the choroid plexuses were distended, and the puncta vasculosa prominent; the left optic thalamus was almost entirely destroyed by yellow softening, invading the adjacent white substance; a branch of the left middle cerebral artery was obliterated, evidently by an embolus of no recent date; the consistence of the remainder of the brain was good. The spinal cavity contained much fluid. There was much fluid in both pleural cavities, but no adhesions. The pericardium was distended; the heart was enlarged, and the right cavities filled with dark clot; the valves were healthy; the left cavities were empty, but enlarged, and the walls of the left ventricle were hypertrophied; the left auriculo-ventricular orifice was enlarged, but the mitral valve was healthy. The most anterior aortic semilunar valve, and the adjacent half of the next valve, were much ulcerated, with numerous semi-detached fibrinous vegetations at the margins. The internal coat of the thoracic aorta was thickened at the cardiac extremity, with two mammillary prominences visible, the result of old atheromatous ulceration. Behind the diseased valves was a cavity capable of admitting the tip of a finger, and presenting the appearance of an atheromatous cyst, undergoing suppuration. Several smaller atheromatous patches were found upon the aortic lining. The lungs were engorged throughout, and the lung-tissue was studded with numerous ecchymosis, the result of purulent injection. The pelvic cavity contained some fluid. The spleen presented superficially, at the upper and middle region, near the hilus, a large yellow patch, hard on section; the glands were much congested. Both kidneys also were congested, and on section the stomach contained about half a pint of thick fluid, found on analysis to be partially digested food and alcohol. Its mucous surface, as also that of the intestines, presented numerous ecchymoses. The outer surface of the stomach and intestines was likewise studded with ecchymotic patches. The liver was much enlarged and engorged throughout with blood.

REMARKS by Dr. LILLEY.—In this case, no reliable history could be obtained. He denied ever having had rheumatism. There was, however, a cachectic state, the result of great intemperance, vices of all kinds, and latterly of self-abuse, the combined effects of which may have been the starting point of the endocardial disease. The cerebral softening referred to, as the result of embolism, was not recent, and I could find no lesion to account for the aphasia, or for the hemiplegia present at the last. At the time of death, the atheromatous cyst behind the aortic valve was undergoing extensive suppuration, and it is to this source that I attribute the development of the general purulent infection, which produced in so short a space of time a fatal termination.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCTOBER 27TH, 1882.

JOSEPH LISTER, D.C.L., F.R.S., F.R.C.S., President, in the Chair.

Case of Gunshot Injury of the Lower Jaw.—Mr. W. J. WALSHAM read notes of this case. H. W., a woman, aged 20, was admitted into the Metropolitan Free Hospital, under Mr. Walsham's care, on July 16th, having been shot at with a revolver. The wound was situated about an inch above the angle of the jaw, and passed in a direction backwards, inwards, and upwards. The wound was enlarged, and the jaw was found perforated. The finger could be passed as far as the first interphalangeal joint, but neither with it nor with a probe could the bullet be felt. On examining the mouth, a slight fulness above the right tonsil was seen, but there was no wound, or definite indication of the bullet. Considering the importance of the structures amongst which the bullet was evidently imbedded, it was not deemed prudent to endeavour to extract it. The patient was quieted by opiates, and water-dressings were applied to the wound. Considerable swelling about the angle of the jaw in the region of the tonsil supervened, accompanied by a constant dribbling of saliva from the mouth. On the 25th, a spiculum of bone, accompanied by a small portion of the crown of the wisdom-tooth, and on the 26th the bullet, with the remainder of the wisdom-tooth imbedded in it, were discharged. The patient progressed satisfactorily, and left the hospital on August 16th, with the wound nearly healed. Mr. Walsham remarked that, in addition to other points of interest, the chief lay in the question of treatment. Three distinct courses presented themselves; to attempt the extraction of the ball through the external wound, to cut down upon it and remove it through the mouth, or to leave it in the hope that it might escape spontaneously or become encysted. The objections to the first were, that a large portion of the jaw would have to be cut away to obtain room for the necessary manipulations; that the exact situation of the bullet was not known; and that there would have been considerable risk of wounding some of the large vessels and nerves among which the bullet had evidently passed. Against the plan of removing it through the mouth, the fulness about the tonsil did not seem to point sufficiently clearly to that being the situation of the bullet to justify an incision in such a dangerous situation. The course pursued in face of these considerations was, to leave the bullet to come away spontaneously. —The PRESIDENT remarked that the case was interesting, from its being one of perforation, and not of fracture, of the lower jaw, a most unusual occurrence. As to the treatment, he did not think the presence of the bullet was as likely to be productive of harm as would have been the serious operative interference involved in searching for it. As there was no evidence of communication between the track of the bullet and the mouth, the wound admitted of strict antiseptic treatment; it might have been kept aseptic, and then there would have been no risk of secondary hæmorrhage. —Mr. WALSHAM remarked that the difficulty connected with the course of the bullet prevented him from carrying out such strict line of treatment.

Ligature of the Common Carotid Artery for Severe Bleeding from the Throat after an Attack of Scarlet Fever.—Mr. A. J. PEPPER read notes of this case. C. W., aged 30, was admitted into the Fever Hospital, under the care of Dr. Mahomed, on January 2nd, 1882, suffering from scarlet fever, which ran a simple course, with ordinary convalescence, until February 22nd, when the patient shivered and complained of sore-throat. Temperature 101.6° Fahr. On the morning of the 23rd, the uvula was large and translucent, and there were redness and swelling of the soft palate. On the 24th, he complained of great difficulty in swallowing, and throbbing of the left side of the throat. Two hæmorrhagic patches had appeared at the junction of the hard and soft palates, with a large gelatinous bleb on the left side. Three hours later, the throat, especially on the left side, became rapidly swollen, and the patient was unable to swallow; soon afterwards, the patient became unconscious, and the pulse of the carotid was felt; the swelling and throbbing of the throat continued; at the same time, the hæmorrhage passed quickly and silently into complete aphonia, which persisted. The alternate enlargement of the neck, hæmorrhage, and subsidence of the swelling, were repeated several times until the morning of the 27th, when the patient was in a critical condition, he having lost forty ounces of blood in all. On the 28th, on account of arrest of hæmorrhage. There was a considerable swelling of the left side of the throat, with marked dyspnoea. At a consultation between Dr. Mahomed and Mr. Pepper, it was decided to tie the left common carotid artery, as it was impossible to cut into the post-pharyngeal space. The patient was put under chloroform, and the artery tied by Mr.

Pepper at the upper border of the omo-hyoid muscle, considerable difficulty being caused by the greatly distended state of the veins. Carbolised catgut was used, and the operation performed antiseptically. For a time, respiration threatened to fail, but the patient rallied completely in three or four hours. Soon after the operation, he brought up six ounces of pus, and there was a corresponding diminution of the swelling. The temperature at once became normal, and the wound healed readily. On April 7th, there was numbness of the skin corresponding to the distribution of the superficial cervical nerve. The patient recovered only partially from the aphonia. There was fixation of the left vocal cord. The general health was good. —Dr. MAHOMED said that examination of the patient's throat at the end of March showed that the swelling and puckering of the mucous membrane at the entrance to the larynx were still present; both cords were normal in appearance, the right moving freely, but the left was fixed in a position of partial abduction. Secondary sore-throat after scarlatina was uncommon; it had occurred in fifty-seven out of the 3,957 cases treated at the Fever Hospital during the last ten years; it resembled the condition of the throat seen in the primary attack, but had never proved fatal in these cases; its occurrence depended upon the concentration of the poison, being more frequent when the wards were overcrowded or badly ventilated; they were, he believed, modified second attacks of the disease. Complete second attacks (with rash, sore throat, and fever) had occurred in twenty-nine cases out of the 3,957; all recovered, except one, who died from other complications; these second attacks also depended upon the concentration of the poison. Hæmorrhage from the throat was a rare but most dangerous complication, and might occur during the primary or secondary throat affection. It resulted either from sloughing of the soft palate or (as in this case) from opening of a vessel into an abscess cavity. There had been six cases at the Fever Hospital during the last ten years, and all the severe ones, with the exception of the present, had been fatal. The ligature of the artery appeared to exert a very beneficial influence over the inflammatory action, for the patient recovered most rapidly and completely. —Mr. HOWARD MARSH said that all surgeons had met with cases in which large arteries had been opened, from their proximity to large abscesses. He had recently seen, at St. Bartholomew's Hospital, a man admitted moribund, with psoas abscess and disease of the lumbar spine, in whom the abscess had not been opened. At the post mortem examination, it was found that the aorta had given way into the cavity of the abscess. In another case, Mr. Morrant Baker had tied the common iliac artery for hæmorrhage into a gluteal abscess which had been opened. Another man had hæmorrhage from a branch of the internal pudic artery into an ischio-rectal abscess, which was stopped by pressure. In another case, where there was hæmorrhage from the neck, the common carotid artery was tied, and the hæmorrhage went on as before through the collateral circulation at the base of the brain. In Mr. Pepper's case, the hæmorrhage happily ceased, as in a case at St. George's Hospital, where there was bleeding from a deep wound near the base of the skull, for which the common carotid was, after much discussion, tied. That child had recovered. In all these cases, the artery, being wounded, gave way into tissues that were soft and sloughing; and this rendered the operation of ligature more difficult. —Dr. DYCE DUCKWORTH thought Mr. Pepper's case unique; his own experience was that, with severe hæmorrhage from the throat in scarlatina, the patients all died in a few minutes. —Mr. HARRISON CRIPPS had read a paper before the Royal Medical and Chirurgical Society of a somewhat similar case; and had, besides, collected notes of fifty cases in which the common carotid artery had been tied for hæmorrhage from wounds or sloughing. The surgeon had to act at once in such cases; but he thought the plan of treatment adopted by Mr. Pepper, although successful, was yet wrong in principle. The amount of mortality after such operations was about 56 per cent.; from brain-symptoms or from subsequent softening of the brain, the mortality was 30 per cent.; in about half of the other cases, the mortality was due to secondary hæmorrhage from the wound. The operation should not, therefore, he thought, be performed unless it were the last resource which surgery could offer. The external carotid was, he considered, the vessel to be tied; the circulation through the brain was not then interfered with. Secondary hæmorrhage might occur from various sources, but it usually came from the branches of the external carotid; there were only two objections to the ligature of the external carotid, the fear of secondary hæmorrhage, which, however, in thirty such cases had only once occurred; whilst as to the difficulty of tying that vessel, no surgeon would have tied it as an operation. If the internal carotid were the source of the hæmorrhage, the fatal case was easy to see; but, even when the surgeon could arrive upon the scene. In the majority of the fatal cases, however, the patient died from the hæmorrhage not being antiseptic; but even had it been, the circumstance could not, he thought,

have made a difference in the cases in which death was due to brain symptoms.—Mr. GODLEE mentioned a case of psoas abscess, in which there were two sinuses at the groin. A finger being inserted into each sinus, the common iliac artery could be felt pulsating between them; and after death the vessel was found to be becoming ulcerated.—Mr. BLAKE said that, in a case of simple quinsy, at St. Thomas's Hospital, accompanied by hæmorrhage, Mr. Pitts had tied the common carotid; on the third day subsequently there was secondary hæmorrhage from the internal carotid, which was the vessel sloughed into.—Mr. ARTHUR BARKER asked if Mr. Pepper had seen the bleeding spot in his case.—The PRESIDENT thought that, as a rule, it was better to apply the hæmostatic measures to the bleeding-point than to the arterial trunk, where possible. Here the former method of procedure seemed not to be possible. He thought the hæmorrhage must have come from a smaller vessel. He had known hæmorrhage occur from mere tension of the clots and pus in an abscess, when the discharge could not freely escape. In a case of removal of the mammary gland, there had been such hæmorrhage continue from the wound for days, when the abscess being laid open, the bleeding at once ceased. If ligature of an arterial trunk was called for, he thought, with Mr. Cripps, that the external rather than the common carotid should have been tied. It was a rare thing for an artery to open into an abscess before the abscess was itself opened, as in Liston's known case. Mr. Marsh's cases corroborated the rareness of the occurrence.—Mr. PEPPER thought he would still prefer to ligature the common rather than the external carotid artery. The suppuration was somewhere in the neighbourhood of the tonsil; whilst it was most likely not a small vessel that bled, but probably the ascending pharyngeal, which usually came from the bifurcation of the carotid; therefore, ligature of the external carotid would, he believed, have been useless. If, too, he had attempted to tie that vessel, he would have gone into the sloughing cavity, which he was anxious to avoid. No bleeding-point could be seen. Here the hæmorrhage most probably did not come from the granulations, because at times it came in gushes.—Dr. MAHOMED said that the question of the position of the ligature was carefully considered. Surgeons seemed to see many more cases of arteries opening in abscess-cavities than did physicians. Surgeons, he thought, should be wary of opening fluctuating swellings in cases of splenic leucocythæmia. He had recently seen such a case, in which the swelling had occurred over the buttock. Being opened, it was found not to be an abscess, but a diffused hæmorrhage into the tissues of the buttock. The hæmorrhage had only been finally restrained by opening the wound and plugging it from the bottom.

A Case of Hæmaturia produced by Bilharzia Hæmatobia.—Dr. RADCLIFFE CROCKER showed the ova and embryos of the parasite, and related particulars of this case, which came under the care of Dr. George Bird at the beginning of the year. The patient was a boy at school, aged 13, and was born in the Orange Free State, but appeared to have caught the disease in Natal, where he passed blood both by the urethra and bowel, and had been treated for dysentery. A few months after his arrival in England, hæmaturia recurred in considerable quantity, and produced so much dysuria as to necessitate the use of the catheter; and a small clot of blood, which clung to the eye of the instrument, having been examined by Dr. Crocker, the characteristic ova of *Bilharzia hæmatobia* were discovered. All troublesome symptoms soon disappeared, and, with the exception of slight anæmia, the boy seemed to be in good health; nevertheless, the parasites were still present, and ova and a little blood were found in all three specimens of urine passed at different times of the day on October 4th. The spine on the ovum was always terminal, as was usual in those discharged from the veins of the bladder, and the head of the embryo showed no special preference for the spine end of the ovum. As the disease usually spontaneously recovered after puberty, no local treatment for the destruction of the parent *Distoma* had been employed. In blood taken at night from the finger, no filariæ were discovered.—Mr. PEPPER inquired what was the chance of killing the parasite by injections into the bladder, as the parasites were found located over an extensive portion of the urinary tract.—Dr. CROCKER said that Dr. James Allen of Natal was the author of this topical method of treatment, the success of which was often considerable. Possibly, in some cases, the parasite might be confined to the bladder.

REMEDY FOR CORNS.—Mr. Gezow, an apothecary of Russia, recommends the following, in the *Pharmaceutische Zeitung*, as a "sure" remedy for corns, stating that it proves effective within a short time, and without causing any pain: Salicylic acid, 30 parts; extract of cannabis indica, 5 parts; collodion, 240 parts. To be applied by means of a camel-hair pencil.—*Medical and Surgical Reporter.*

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

MONDAY, OCTOBER 20TH, 1882.

THOMAS BRIDGWATER, M.B., President, in the Chair.

Tumour of External Ear.—Mr. JOHNSON SMITH showed two specimens. In the first, the tumour had been growing eighteen months, and on account of its size and unsightly appearance the patient was very anxious to have it removed. It was cut away with scissors. It was similar in character to those tumours which sometimes follow from piercing the ears, and which in negroes become very large, are apt to recur, and if in one ear, generally come in the other also. In this case there was no recurrence, nor did the other ear become affected. Shortly after this case had been treated, the other, which proved to be a case of epitheliomatous disease, came under notice. In this latter, the whole of the external ear had to be removed with the tumour.

Public Vaccination.—Mr. J. BRINDLEY JAMES read a paper on this subject. He said that, among various wise and good laws enacted during the past few years for the benefit of the community, the law of compulsory vaccination, despite its numerous detractors and opponents, claimed a position in the first rank. It was not to the merits of vaccinators that he sought to invite attention, but to the vast field for improvement which still existed in the administration of this law. For the purpose of carrying it into operation districts have been laid out, and duly qualified gentlemen called public vaccinators, had been appointed to vaccinate the children of the public at places assigned for the purpose at stated occasions and hours. He did not intend to say a word in detraction either of this really beneficial law, or of its appointed practitioners; his object was to point out its existing defects, with a view to their ultimate removal. The public vaccinator attended on a fixed day for a limited time to vaccinate possibly a hundred children. He had his own private patients to attend to; he had but a limited period to vaccinate all the children brought to him; he had no acquaintance with their constitution nor with that of the parents. All classes of infantile constitutions were brought; some were healthy, but the majority were more or less diseased. The rule at public vaccination establishments was to vaccinate each child with lymph taken from the arm of another, the most favourable looking pock being selected, often without any inquiry into the child's family history. If any questions were asked the mother, they were invariably of the same vague and general character: "Are you healthy? Is your husband a healthy man? Has your child ever had a rash?" Either from ignorance, or from a desire to save time and trouble, or from many other equally obvious motives, the mother almost always gave favourable replies. She omitted to inform the vaccinator that, perhaps a week or a month before, the same child had been treated for a rash about the buttocks, soon removed by appropriate treatment; or, perhaps, that the father of the child was treated for an ulcerated sore-throat, etc. How could the public vaccinator be expected to divine all this; or, within the fixed period of his attendance, to investigate each case with due care? Under the above named circumstances, it would scarcely be fair to hold him responsible. The remedy was of the simplest description. Let every registered medical practitioner be empowered to act as public vaccinator, receiving the vaccine pay. The result in the long run would be beneficial in the extreme to the public health. Congenital syphilis would become scarcer every day; other constitutional diseases in like manner; and the occupation of the antivaccination agitator would be gone. Acquainted with the constitution of many of the subjects brought to him, and with more leisure to thoroughly investigate the sanitary history of others, the vaccinator would perform his duty with tenfold efficiency. A case which had recently come under Mr. James's observation illustrated the point. One of his patients brought her baby to him to be vaccinated. It was a fine plump child, with a clear skin. Three days after birth, this child was covered with a syphilitic rash, and suffered from purulent ophthalmia, which, under appropriate treatment, was soon removed. If any one unacquainted with the case had asked that mother if her child had ever been ill, she would undoubtedly have answered in the negative. Any practitioner, under such circumstances, misled by the healthy appearance of the child, might have inoculated dozens of children with unhealthy lymph obtained from its seemingly healthy arm. But, if every man vaccinated his own patients, he would prove by far the best judge for discriminating between favourable and unfavourable subjects, while the vaccination would be far more equitably distributed.—Mr. CABLE for some years had advocated the same thing as the author of the paper. He mentioned a case in which, knowing syphilis to be present in the system, he had refused to vaccinate from a child's arm; and since then the specific rash had appeared. Had the child been

taken to the public vaccinator, he would probably have vaccinated from it.—Dr. FORSYTH could not see the expediency of the plan. As a private practitioner, he did not wish to become a State official. He preferred only to vaccinate his own patients. How could we get rid of public vaccinators? and what would become, for instance, of that large number of children whose mothers were attended by midwives?—Mr. ROBERT OSWALD mentioned two cases which seemed to be cases of infection by vaccination, and which had come under his notice during the last few days.—Mr. NELSON HARDY thought we should be cautious in accepting evidence of infection by that means, and referred to some cases which had been published as such, in which it was afterwards proved that the mother, though in a respectable position, had led a loose life.—The PRESIDENT thought there was a little exaggeration of the danger of infection. For thirty years he had been parish surgeon, public vaccinator, and police surgeon, and he had very rarely had even a suspicious case. Public vaccinators had now to trace the cases from which they took lymph; and, by the safeguards taken, the risk was reduced to a minimum. Cal-lymph was also now available for both public and private vaccination. He did not think it was possible to make every man a public vaccinator without leaving a large number of children unvaccinated.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, OCTOBER 6TH, 1882.

E. HART VINEN, M.D., President, in the Chair.

President's Address.—The PRESIDENT delivered an inaugural address, in which he commenced by thanking the members for the honour they had done him by electing him their first president, and congratulated them on the large number of practitioners who had already joined their ranks, which augured well for the future progress of the Society, and encouraged a hope that it would hereafter take a high place among the medical, learned, and scientific societies of the metropolis. To this end he urged the members "to use their best endeavours to establish it on such a firm foundation that it will gather strength as it grows in years, so that hereafter, when we have passed away, those who will then tread in our footsteps will be mindful of the duties, and take a pride and pleasure in carrying out the traditions which we have handed down to them." After alluding to the numerous societies which exist for the prosecution of scientific pursuits, and the value of their labours to the general interests and welfare of mankind—he urged the members to look to science as the best aid to the successful practice of their profession, and as not without its moral results. "For, if the suggestion of Newton that, in proportion as natural philosophy is improved in its various branches, the bounds of moral philosophy will be enlarged also—if this be true, as it undoubtedly is, we may point to the labours of our scientific men, as not only serving to extend the boundaries of our intellectual horizon, but as exercising a refining and humanising influence over man's moral nature. But there is another light in which we may regard such societies as this—I mean their social aspects. The daily routine of professional duties too often restricts medical men to a very limited orbit, and furnishes them with few occasions for friendly intercourse with their brother practitioners. Here they have opportunity of meeting periodically on common ground, of exchanging opinions on professional and other topics, and, by other men's experience, enlarging and correcting their own. Acquaintanceships are made, new friendships formed, old ones revived and cemented, aspersions softened down, prejudice removed, and mutual esteem engendered, where, perhaps, something like jealousy had existed. No remedy is so effectual for healing professional animosities as frequent intercommunication; and, if I were asked to prescribe a panacea for their prevention, I should recommend an occasional dinner at the Star and Garter. Some may think this view of the matter savours too much of the sensual, but the periodical recurrence of such a reunion would, perhaps, be more productive of good results than the strictest code of medical ethics." Dr. Vinen then alluded to the fact that more than twenty years had elapsed since he had filled the presidential chair of another medical society, and referred briefly to the most prominent changes which had taken place during the interval, especially dwelling on the germ-theory of disease, which recent researches had done so much to establish, and to the benefits which resulted to public health from the advance of sanitary science, in which he claimed for the medical profession the honour of being foremost workers. "Our profession," he said, "is not to be regarded as a lucrative pursuit. However lofty may be our aspirations when we commence the practice of it, we must still feel that we are men of one *metier*, and that most of us at least must live by it. Too many of us, however, can tell, by bitter experience, of unrequited services, of ingratitude and neglect from those whose

lives have been rescued from misery or death by our efforts. It has been well said that :

"God and the doctor we alike adore,
When sickness comes, but not before.
The danger past, both are alike required,
God is forgotten, and the doctor slighted."

"But we have higher aims to engage our energies than the acquisition of wealth. Professional skill is, of course, required of us; but we shall form a mean estimate of the duties of our vocation if we conceive that our exertions are limited to a successful application of mere physical agents. While we are practical, we must also be scientific. It is our mission to relieve suffering and disarm disease of its power, not by becoming the slaves of routine, but by appealing for aid to every resource which advancing science places within our reach, in proportion as our minds become enlarged by a familiarity with art and science and general knowledge, we shall elevate both our social and our professional position.

"'Tis worth a wise man's best of life,
'Tis worth a thousand years of strife,
If we can lessen but by one
The countless ills beneath the sun."

A vote of thanks to the President for his address was put to the meeting by Dr. ROGERS, and carried unanimously.

On the Treatment of Lung-Diseases by Antiseptic Inhalations.—Dr. BURNLEY YEO read a paper on this subject. After alluding to the opposition existing in certain quarters to experimental pathology, Dr. Yeo called attention to the antiquity of antiseptic methods of treatment of pulmonary affections. These methods were, however, then merely empirical; but, thanks to modern experimental research, they now rested on scientific data. After giving a few historical illustrations of the statement, Dr. Yeo entered upon the description of the principles upon which such a method of treatment must be based, and confined himself chiefly to demonstrating that in phthisis (to which disease he thought it best at present to limit the question) an antiseptic treatment was true in principle and possible in practice. He called attention especially to the proved antiseptic influence of pure, cool, dry air, and suggested that at no distant future we should no longer confine our consumptive patients in hospitals in the centre of crowded cities, but receive them, perhaps, in scattered cottages, in a large pine-wood, with a dry subsoil, a few hundred feet above the sea-level, where, in fine weather, they might pass their time in hammocks suspended between the fir-trees and be "aired into health." He pointed out that the life of the tubercle-bacillus had yet to be fully worked out, and its true antagonists discovered. Analogy led to the belief that no insuperable difficulties would be encountered in this direction. Dr. Yeo concluded by saying that, for the first time we seemed to have grasped a principle in the treatment, both preventive and curative, of a class of diseases, which we had hitherto regarded almost with despair, and urged his audience to do their utmost to carry this principle into practical application.—Dr. THUDICHUM said that he was much interested in Dr. Yeo's paper, though he did not agree with him. There was no proof that the bacteria were destroyed by his process. Those who had examined the expectoration of a phthisical patient, and observed the bacilli present in it, must have been impressed with the awful nature of the disease. The incalculable number of the organisms present in the part seemed to him to render the question of total destruction mathematically impossible. Dr. Yeo admitted that advanced cases were not suitable for treatment, but he (Dr. Thudichum) thought that was no specific which did not cover all cases. He would ask, how could these antiseptic inhalations reach the brain, or heart, or any other organ (except the lungs) which might happen to be the seat of disease?—Dr. ALDERSON thought that great benefit was to be derived from the use of the respirator, and was most certainly ready in this, as in other points, to reiterate the President's cry for "more light."—Dr. RAYNER also endorsed Dr. Yeo's views. Dr. BROWN asked how long it was necessary to wear the respirator at a time.—Mr. JACK was of opinion that, whether the bacilli were destroyed or not, the process, in whichever form adopted, put the patient into a condition calculated to prevent a nidus being formed for the bacilli.—Dr. THOROWGOOD had no great experience of the subject, but he had most certainly noticed great improvement in those cases which he had so treated. He was accustomed to order the respirator to be worn for an hour in the morning and evening. He found it promoted expectoration. Of the various antiseptics, he himself preferred creasote. Sea air, obtained in a voyage, was, too, he thought most efficacious in the early stages of the disease; later on it seemed to do more harm than good.—Dr. YEO, in reply, said he did not wish, in the remarks he had made, to dogmatise in any way. He was only anxious to show that the theory he had been laying before them had a scientific basis. He must say, in answer to Dr. Thudichum, that he

was unaware of his having used the expression "specific". It was not his custom to use the word; and he failed to see anything detrimental to his theory in the fact, that advanced cases were not suited to the treatment. As regards the alarming number of bacilli pictured, he would simply suggest that, if Mr. Lister had frightened himself about the number of organisms to be encountered, there would never have been any such thing as antiseptic surgery. The advantage of the instrument, as suggested by himself, consisted in its lightness and comfort in wear—in fact, in its not being a muzzle. His patients wore theirs as long as possible during the working day, it being only necessary to remove it while eating or drinking. He agreed with Dr. Thorowgood in preferring creasote; but he had used eucalyptus and pine-wood oil with great advantage, though the latter was, to some, rather irritating. He saw no reason why still more direct treatment should not be attempted; and he hoped soon to see the effect of injecting, by the long needle of an aspirator, a small quantity of bichloride of mercury.

Mr. Savile Kent and Mr. Beck (of Cornhill) showed specimens of bacillus tuberculosis, etc.

CAMBRIDGE MEDICAL SOCIETY.

FRIDAY, OCTOBER 6TH, 1882.

G. M. HUMPHRY, M.D., F.R.S., President, in the chair.

A Case of Complete Inversion of the Uterus.—Mr. WHERRY related a case of a woman who was delivered of a healthy male child, born rather suddenly, and with a short, thick cord. She was given twenty minims of liquid extract of ergot after delivery; a pain followed, and the inverted uterus, with the placenta adherent, protruded from the vagina. There was not much hæmorrhage. The medical attendant detached the placenta and endeavoured to replace the uterus by his hand, but he was obliged to desist, owing to the great softness of the uterine walls, and the collapsed condition of the patient. Two days later, when called in, Mr. Wherry found the uterus completely inverted, and the patient, who was a thin, feeble, and small woman, with a roomy pelvis, was in great pain. Ether was administered, but it was impossible, owing to the doughy softness of the fundus, to replace the uterus with the unaided hand. Accordingly, a large rubber drainage-tube, prepared as described by the author in the *BRITISH MEDICAL JOURNAL*, June 24th, 1882, was blown up to about the size of an egg at one end, and ligatured. The hand, in the form of a cone, was passed into the vagina, and the finger-tips, pressed against this air-pad, were in no danger of lacerating the walls of the uterus. Half-an-hour's pressure, first with one hand and then with the other, against the most prominent part of the fundus, at length reduced the uterus, leaving the dilated tube in the cavity. The string was then cut, and the collapsed tube withdrawn. The replacement was gradual, and, as in the reduction of a paraphimosis, was evidently effected by squeezing fluid out of the oedematous tissues of the uterus. The patient made an excellent recovery. Mr. Wherry remarked that, in recent and in all chronic cases where the uterine walls were soft, he should strongly advocate the use of such an air cushion as he described. This principle of treatment was first suggested by Dr. Tyler Smith, and Dr. Atthill had described his horror at finding his unprotected fingers go through the uterus into the peritoneal cavity. It made a great difference whether the uterus had undergone involution. In chronic cases, with a small uterus, a good repositior, such as White's or Aveling's, could be used. Mr. Wherry referred to papers on this subject by Drs. Barnes, Aveling, and Atthill, in the *BRITISH MEDICAL JOURNAL*, September 6th, 1879. The inversion was produced by a combination of causes; first, the birth of a child with a short cord pulling on a placenta adherent to the fundus; and, second, the contractions artificially induced by the dose of ergot tending to expel the fundus and placenta.—Dr. INGLE said that complete inversion of the uterus must be a rare occurrence. Braun stated that of 150,000 births under the charge of Spaeth and himself, not a single complete inversion had come under their notice. There was one case in 190,000 confinements at the Rotunda Hospital, but much doubt had been thrown on these statements by later writers. Partial inversion was much less rare, and might be occasioned by several causes. He had not seen an example of complete inversion, but remembered one partial case, in which the patient died very quickly from hæmorrhage.—Dr. EASBY alluded to a case in which excision of the uterus had been performed owing to the impossibility of replacing that organ, and also referred to the question of spontaneous contractions.

Case of Membranous Cystitis.—Mr. T. LUCAS (Cambridge), produced a specimen from the bladder of a woman, aged 28, whom he had attended for this condition. On the ninth day after her confinement she had pain over the hypogastric region, and retention of urine. In a few days she had feverish symptoms, a temperature of 103°, and pain in the left groin, followed by swelling of the left thigh

and leg. The use of the catheter was required for twelve days, after which time the leg was well. The urine contained mucus and albumen. Ten days later there was complete and sudden retention of urine, and on passing the catheter an obstruction was met with, which proved to be a piece of membrane blocking the urethra. This was withdrawn in pieces, and then a quantity of ropy urine escaped through the catheter. A few days later, a piece of membrane, about six inches by four, was removed, and subsequently another piece, ten by twelve inches, came away. Ten days later, the woman had entirely recovered. The membrane consisted of a fibrillated network, in the meshes of which were enclosed leucocytes, granular matter, and crystals of phosphate of lime, and seemed to be a cast of the mucous surface of the bladder. Mr. Lucas considered the case interesting from its rarity, and as indicating the manner in which calculous deposits might occur in the bladder. Such cases were more frequent in females, and might be of a croupous nature, and caused by a septicæmic condition, similar to that giving rise to phlegmasia dolens, and affecting the vitality of the epithelium, and thus causing cystitis. He mentioned a case of Liston's in which the mucous membrane of the bladder was removed entire, a sac six inches by four, as a result of injury.—Dr. HUMPHRY said he had, in the case of a young woman, dilated the urethra with his finger, and removed a large amount of mucous membrane, covered with phosphatic deposit, and observed that the mucous membrane of the bladder had hardly any secretion, and very little glandular substance. In cases where the whole mucous membrane sloughed off, it seemed due to a process called by Leuchars necrosis of the membrane.

Case of Lateral Sclerosis.—Dr. W. A. SMITH (Newport) related a case under his care of a man, aged 44, who, eighteen years previously, had sprained his back by lifting a heavy weight, and had never been so strong since, and had, for the last two years, been getting more feeble and stiff in his back, and had pains in the legs. He was removed to Saffron Walden hospital, and, while there, the chief symptoms were general rigidity of the back and legs, excessive knee-jerk and ankle-clonus, slightly impaired sensation, especially in the left leg, and considerable wasting, also deep-seated tenderness at the lower part of the spine on pressure, and pain extending to the groin. There was also a general shaky condition of the head and lips, and fibrillary twitchings and stiffness about the muscles of the neck. He was treated with doses of iodine of potassium, blisters, and the actual cautery. Dr. Smith considered the case to be an example of lateral sclerosis, with very slight, if any, disease in the posterior columns, and that the stiffness of the muscles of the head and neck might possibly point to some patches of sclerosis high up in the spinal cord.—Dr. BRADBURY mentioned a case he had treated in hospital, and which had rapidly mended under the use of iodide of iron and the battery, after the failure of other remedies; and another case, in which ankle-clonus and knee-jerk had existed, and in which iodide of potassium had failed, but which had, after two months, nearly recovered under the use of syrupus ferri iodidi, and quinine.—Dr. PAGET referred to a case under his care, where spinal disease occurred in a man accustomed to violent exercise in cricket, skating, etc.

Case of Cerebellar Tumour.—Dr. BRADBURY narrated a case of this disease under his care this year. The patient was 22 years of age, had never had syphilis, and there was no history of injury nor of fits. He had been subject for years to neuralgia in the face and forehead, and for a month, before coming under Dr. Bradbury's care, to neuralgic pain on the top of the head and the occipital region. Sleep was disturbed, and the pain had exacerbations every few minutes, always increased at night. He had vomiting at first, but that abated. There was an expression of suffering in the face in May, pain in occipital region, but no signs of disease in the thoracic or abdominal organs, and the optic discs were normal. In June, he had had considerable relief from pain, and had taken belladonna and quinine, and afterwards iodide of potassium. During the next month he had occasional sickness, and the pain varied in amount. In July he could not hold his feces, but retained control over his bladder. He was unable to walk without help, but when assisted, took short hesitating strides, with some tremor of the legs. This gait was unaltered when his eyes were shut; he had no tendency to bear to one side more than the other in walking. Sensation was unaffected; the patellar reflex slightly exaggerated. No ankle-clonus was observed. In August there was no vomiting or diarrhoea, but a good deal of headache, with progressive weakness and emaciation. On September 9th, he died rather suddenly. The necropsy revealed a tumour in the right hemisphere of the cerebellum, as large as a hazel-nut, consisting of a white cheesy mass of irregular shape, surrounded by softened cerebellar structure, of a reddish colour, with a few hæmorrhagic spots. The rest of the lobe was softened and altered. In the left lung was a small cavity at the apex, surrounded by caseous tubercles, and there were miliary tubercles scattered in the lower

lobes of both lungs. In this case, Dr. Bradbury observed, two of the symptoms of an intracranial growth were present at an early stage, namely, vomiting and cephalalgia; another symptom, double optic neuritis, was absent throughout, as sometimes happened in cases of even large intracranial tumours. As there was no optic neuritis nor atrophy, the sight was not affected. The diagnosis of cerebellar tumour was founded on the seat of the pain, which was chiefly occipital, and from the peculiar gait of the patient, which was like that of a drunken man. This had been called the "cerebellar reel." Vertigo was not a prominent symptom in this case. There was no complaint of stiffness about the back of the neck, which was stated to be sometimes an early symptom of cerebellar tumour. The presence of tubercles in the lungs showed the cerebellar tumour to be of a tuberculous nature.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

OCTOBER 20TH, 1882.

J. W. TRIPE, M.D., President, in the Chair.

Some of the Relations of Meteorological Phenomena to Man.—The PRESIDENT read a paper on this subject. He said he did not propose to discuss the effects of all meteorological phenomena on man, as sufficient data were wanting for a complete inquiry; neither should he enter into the effects of climate, for that word included not only all the elements which were classified together under the term weather, but also the physical peculiarities of the locality in question, the nature of the soil, and the extent of forests and other vegetation, which modified the climate of a place to a great extent. He referred briefly to the part played by oceanic currents in making the climate of England temperate and pleasant, as he considered this was insufficiently recognised. The relations existing between man and variations of atmospheric pressure, temperature, and humidity, were next discussed; together with their influence upon disease and death. Dr. Tripe stated that it was only at considerable elevations, such as 8,000 feet above the sea-level, that the variations in the pressure of the atmosphere were appreciable. People were then affected with so-called "mountain sickness", which consisted of *malaise*, shortness of breath, palpitation of the heart, and nausea, with more or less giddiness and noises in the ears. Some persons suffered more than others; but nearly all in time became acclimated. Aeronauts suffered from the same symptoms, showing that great muscular exertion was not the chief cause of the attack. Those who lived on elevated mountain plateaus were observed to breathe more rapidly than those living at a lower elevation; their pulse increased in rapidity; and there was an increase in the evaporation from their skin and lungs, as well as a diminished secretion of urine. It was believed that all these symptoms were chiefly due to the diminution of oxygen in the air inspired, and consequently in the blood; and also to the imperfect exhalation of carbonic acid from the lungs. The influence on man, and especially on invalids, of diminished atmospheric pressure, and of a lessened amount of oxygen inhaled, had been much considered; and, while in some cases great benefit had been derived from a residence at high altitudes, in others, change of residence had been of little or no use. Dr. Tripe considered that the extreme cold also had something to do with the improvement manifested by phthisical patients. With regard to the effects of temperature on man, Dr. Tripe did not believe they depended so much on the mean temperature of the month and year as on the extent of range; for instance, when the day temperature was high and the night temperature was comparatively low, the cold at night assisted in procuring sleep, and restoring the energy of the system when the heat had reduced it. A variation in the pressure and temperature of the atmosphere exerted a considerable effect on the circulation of air contained in the soil, or in the air which consisted of atmospheric air, mixed with carbonic acid, hydrogen, and oxygen, and was saturated with hydrogen. Rain, by its fall, increased the circulation of the ground water, and caused a rapid evaporation from the surface of the soil. It was stated that, when the ground water was only a few feet from the surface, the humidity was increased, and also that a descending level led to ill-health among the troops in the spot. Outbreaks of typhoid fever had frequently followed heavy rain succeeded by drought, which were believed to have been caused by the rain increasing the quantity of typhoid excreta being washed down into the soil for drinking. Damp soil was thought to be the cause of the typhoid fever which had been shown that excreta drainage was a very important factor in the diminution in the mortality from the disease. It was also referred to, to a great extent, and meteorological phenomena, such as humidity, as well as the temperature of the air, and the pressure of the air. Dr. Tripe pointed out that, though much had been written concerning the effects of ozone on man, yet but little was really known about it. It was augmented by violent

winds, and was met with chiefly at the seaside, or in country places. There was but little doubt that it exercised an active oxydising action on the organic matter contained in the air, and was, therefore, absent in close confined places where the air contained excess of organic matter. Dr. Tripe then alluded briefly to some of the individual diseases with which man was afflicted. He stated that it was only with great difficulty that reliable statistics on this point could be obtained, and that, in an inquiry, one or more elements must always be uniform and definite. If population were taken as a basis, corrections should be made for increase or decrease, and the condition of the population should also be considered. Care should be taken with regard to the initial periods of the inquiry, and the time which should elapse after the occurrence of the weather discussed and the registration of death. The number of meteorological elements to be embraced in the inquiry should also be decided. Dr. Tripe then referred to some papers already published by him on medical meteorology, in which he had stated the conclusions at which he arrived concerning the relations between the mortality from scarlet fever, lung-diseases, diarrhoea, and meteorological phenomena. He believed that the periodical occurrence of epidemics did not depend on meteorological phenomena, but on the number of persons liable to the diseases living in the locality. In conclusion, Dr. Tripe made a few observations as to the temperature which induced the growth of bacteria so as to cause endemic or epidemic diseases; and also the influence of light on them, as illustrated by experiments made by Professor Tyndall and others.—On the motion of Dr. BRISTOWE and Dr. THOMAS STEVENSON, a vote of thanks was unanimously accorded to the author of the paper, and the society adjourned.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL SECTION.

ORDINARY MEETING, FRIDAY, OCTOBER 27TH, 1882.

F. E. MANBY, F.R.C.S., in the Chair.

A SHORT address was delivered by the Chairman.

Cephalhematoma.—Dr. A. HARVEY showed a specimen, and read notes of the case of a man who had come to him complaining of having a hole in his head. A year previously he had had a fall on the back of his head. On examining the occipital region there was a boggy swelling, in which a rounded portion of bone floated like a patella in effusion into the knee-joint. Later on, another swelling appeared in the left parietal region, and the left eyeball became prominent. He had a severe attack of epistaxis at one time. There was no albumen in his urine. At the necropsy, a mass of blood-clot was found lying beneath the pericranium over the occipital and left parietal region, while nearly the whole of the former bone above the superior curved line, and a great part of the parietal bone, had disappeared. There was another hæmorrhage in the orbit, and an erosion of the temporal bone. Microscopical examination did not disclose any sarcomatous growth.

Atrophy of Deltoid.—Dr. BARLING showed a patient who had had an injury to his shoulder, which had been followed by loss of power and atrophy of the deltoid. The question of dislocation had been discussed, but measurements showed that there had been no displacement, the elbow could be brought to the side, and, as Mr. Bartleet pointed out, the patient could touch his opposite shoulder with the hand of the affected arm, his elbow being close to his side; this latter test of Dugard's, Mr. Bartleet believed to be of value. Dr. Barling believed that the condition was due to injury to the circumflex nerve.

Sarcoma of Tibia.—Mr. W. F. HASLAM showed a sarcoma of the tibia, which he had removed by amputation through the tibia and the femur. The growth was a round-celled sarcoma, and had arisen from the medulla. The case had been seen previously by Mr. Bennett May, who had made a correct diagnosis of the disease, and had recommended amputation. Through some unknown chain of circumstances, the case had ultimately got to the General Hospital instead of to the University.

Flexus of Horse.—Dr. SAUNDY showed a tumour as large as an egg, which was found forming from the choroid plexus in the lateral ventricle of a horse which had been killed for incurable staggers. The horse was wasting rapidly, as it had ceased to eat, although there was no paralysis of the muscles of mastication. There was epistaxis, and in the ventricle, and the wall of the horse was found to be in a state of emaciation, and the tumour was found to be filled with cholesterol, and in structure was composed of a mass of granular cells.

OWENS COLLEGE, MANCHESTER.—The Dauntsey Entrance Scholarship, value £100, has been divided between Nathan Charles Marling and Charles Frederick Marshall, who were bracketed equal.

REVIEWS AND NOTICES.

HEALTH-RESORTS AND THEIR USES; BEING VACATION STUDIES IN VARIOUS HEALTH-RESORTS. By J. BURNEY YEO, M.D., Physician to King's College Hospital. London: Chapman and Hall. 1882. DR. BURNEY YEO has written a scientific, interesting, and readable book, which cannot fail to occupy a prominent position among the works devoted to the subject discussed. In most of the treatises on health-resorts, the aim of the author is to be comprehensive and scientific only. The result is, that they are dry reading, and are principally consulted as works of reference. Dr. Burney Yeo, having published the essays which, by their reunion, constitute his work, as he tells us in his preface, has tried to be readable, and has succeeded, which is a great merit. The book will be read with interest by all tarry-at-home travellers who wish to be enlightened as to the real character of the health-resorts constantly spoken of, more especially if they be medical.

After some preliminary remarks on the nature and action of sea and mountain air, Dr. Yeo divides his subject into five sections: 1. The Engadine and High Altitudes; 2. The Pyrenees; 3. The Health-Resorts of Auvergne and Central France; 4. Some Rhenish Health-Resorts; 5. Winter Quarters—the Western Riviera.

On each of these divisions of his work he has much that is both valuable and interesting to say. This remark applies more especially to the Engadine, and to the influence of high altitudes on disease in general, and on consumption in particular. Having a decided bias in favour of mountain-altitudes in the treatment of disease, and of the Engadine in particular (which, he states, has been his vacation playground for seven summers), Dr. Yeo's statements must be listened to with respect, and must carry weight with them. Such evidence from an impartial observer is more especially valuable just now, as it has become a fashion of late years to send consumptives to these regions in winter, and as the exponents of their curative powers are often persons directly interested in the material prosperity of the new health-resorts. An immense amount of capital has been expended on them; and, when this is the case in any health-resort, we are always sure to hear plenty about its curative virtues.

Dr. Yeo weighs with considerable impartiality the arguments in favour of mountain-elevation in phthisis, and clearly does not accept as gospel all that has been stated. Thus the principal factors which are asserted to promote the cure of pulmonary consumption in high altitudes are stated to be—1, purity of atmosphere; 2, elevation; 3, extreme cold. At page 135, he says: "Purity and stillness of atmosphere are two important, and may be the most important, conditions at work. Elevation in itself, as I have already said, may also be of some importance; but it cannot be an essential. It brings with it other conditions, however, such as dryness and purity of air, which are of great consequence. The Tartar steppes, where the Prussian physicians send their consumptive patients, and where, we are told, they are cured, are sometimes below, and not above, the sea-level. It is not the low temperature alone that is the cause of immunity from phthisis in these mountain valleys, for in some of the coldest parts of Russia the mortality from phthisis is more than 20 per cent. of all deaths; but the cold in these places is probably associated, amongst the poor peasantry, with overcrowding and other insanitary conditions of life, to which the mortality from phthisis is doubtless due."

Thus mere altitude and mere cold are disposed of. We will now see what Dr. Yeo has to say about the purity of the atmosphere in the principal place of resort of consumptives in the Engadine, "Davos Platz." After quoting from an article by Mr. J. E. Symonds, which appeared in the *Pall Mall Gazette* of January 1882, he says (p. 122), "Mr. Symonds's former able advocacy has done so much for Davos, that this timely warning of his ought to be laid to heart by those directly interested in the prosperity of the place, and by those who, perhaps somewhat too indiscriminately, recommend its winter-climate to consumptive invalids; for the advocates of Davos, both in the medical profession and out of it, have become numerous and influential, and the cases which have undoubtedly derived great benefit by wintering there now amount to a considerable number. Personally, I have long been fully convinced of its importance and value as a winter sanatorium in suitable and selected cases. But it would be unfair and disingenuous to conceal the fact that my personal experiences of winter at Davos is by no means unshaken by calamities, and some fatal occurrences there have been exceedingly sad and unexpected. The experience of different winters has varied also greatly as the seasons have varied."

We extract part of the quotation from Mr. Symonds's paper, which Dr. Yeo endorses by the prominence given to it (p. 121). "The

Nemesis which attends sudden prosperity already hovers over Davos, and, if the place increase at its present rate, the ruin will be as speedy as the rise. Four years' experience has not shaken my belief in the value of a high mountain-climate for certain classes of pulmonary invalids, though I am bound to say that the hopes I entertained and publicly expressed after a few months' residence in Davos, have been considerably damped by what I have since observed. At the same time, this long experience convinces me that the principles upon which an Alpine cure can be expected, have been steadily neglected here. When I first knew the place it was a little village, furnished with a few hotels for the reception of strangers. The life was primitively simple, the air pure, the houses far apart, and of moderate dimensions. Since then it has rapidly expanded, and the expansion has brought the following bad consequences. 1. There is now a perceptible cloud of smoke always hanging over the valley, shifting with the wind but not escaping, and thickening the air to a considerable extent. This smoke arises mainly, no doubt, from chimneys; but it reminds one of the breath of many hundreds of consumptive patients aggregated at close quarters. 2. The houses, which have sprung up like mushrooms, are built with so little attention to the requirements of a sanatorium, that the main promenade is more than half in shadow. 3. The drainage of the whole place is infamous. One portion of the village carries its sewage down into a marsh, where it stagnates. Another portion is drained into the stream, which, in winter, is a shallow, open, ice-clogged ditch, exhaling a frozen vapour. To walk by the course of this river is now not only disagreeable, but dangerous. The largest hotel frequented by the English has a horrible effluvia arising from the cesspool beneath its windows. In the larger hotel frequented by the Germans, a species of low fever has recently declared itself. 4. The social amusements of a watering-place have been greatly developed. Dances, concerts, theatres, bazaars, private theatricals, picnics are multiplied. Some entertainments of the sort are, no doubt, not only necessary, but also beneficial. Yet it must be remembered that the peculiar severity of Alpine winter, the peculiar conditions under which consumptive people meet together, crowded into rooms, artificially heated with stoves, render all but the simplest forms of social gathering very dangerous. I might have gone into more alarming problems, and have raised the question whether the accumulation of sick people in big hotels, which are really consumptive hospitals, though not subject to the precautions used in consumptive hospitals, is not attended with the gravest disadvantages. So long as the hotels remained small, and there were only a few in them, the peril from this source was slight. But the tendency at Davos has been to enlarge each of the well known extensions, to pack the people together in as small a space as possible, and to build new inns at the doors of the old ones. All this is done in a climate where winter renders double windows and stove-heated buildings indispensable. All this is done for a society where the dying pass their days and nights in closest contiguity with those who have some chance of living. Within the last few weeks, two cases have come under my notice; one that of a native of Davos, attached to the service of the visitors; another that of an English girl, who have both contracted lung disease in the place itself, owing, as I believe, to the conditions of life, as they have recently been developed here."

At page 123, Dr. Yeo quotes a paragraph from a writer most friendly to Davos (J. E. Maddock, *Davos Platz as an Alpine Winter Station*), which is of importance with reference to statistics. "Another objectionable feature is the strong desire that exists amongst local medical men and others financially interested in the place, to suppress the number of deaths that annually occur, in order to give a false impression as to the marvellous powers of the climate to delay death; in fact, we do not hesitate to say that, in not a few cases, patients who were known to be hopelessly ill have been hurried elsewhere by order of the medical men, for no other reason than that the Davos death-rate might be kept low. We anticipate that this statement will lay us open to criticism, if it does not beget flat contradiction; but, fortunately, we are in possession of the most reliable data to prove what we have written."

We have made such long quotations from Dr. Yeo's work on the all-important question of mountain-altitudes in the treatment of phthisis, that the want of space prevents our following him in his all but equally impartial and interesting account of other well known places of resort, summer and winter. We will only remark that the short time spent on the Riviera, and probably his meeting with exceptional weather when there, makes him rather too severe on several of the places he describes; as, for instance, Nice and Mentone. Nice is not always, or, indeed, often, such a victim to wind and dust as he describes it. Nor is Mentone such a warm relaxing place as Dean Alford, whom he quotes, describes it to be. The latter must have been at Mentone during a south-east or sirocco wind, and then the

entire north shore of the region from Toulouse to Genoa must necessarily be close and warm. Under other conditions, there is always, everywhere, at Mentone as elsewhere, in fine winter, a cool down draught from the high mountains at night, a cool refreshing wind from the sea in the daytime. At Mentone, this is the case in the east bay, as well as the west. If Dr. Yeo had read one of the later editions of Dr. Henry Bennet's classical work on the Riviera, the first English work on the climate of this region that appeared, now more than twenty years ago, he would have found these facts clearly elucidated. Nor would he have been puzzled to know whence the winds come. He would have seen that the wet and dry bulb thermometer would, at any time, solve the question. If the wind be east, south, or south-east, it is a marine wind, moist, and the sky is more or less cloudy. If it be a north-east, north, or north-west wind, it is generally a land wind, a dry continental wind, and the sky is clear and blue, except with polar storms from the north-east or north-west. The hygrometer is the best guide in these conditions. Most, if not all, subsequent writers on the climate of the Riviera have adopted and reproduced Dr. Henry Bennet's explanations, with or without acknowledgment.

In conclusion, we advise our readers to procure Dr. Burney Yeo's work, to read it, and, for the next four or five summers, to accept him as their guide in their vacation. By so doing, they will derive both much pleasure and much profit.

FERMENTS ET MALADIES. Par E. DUCLAUX.
Paris: Masson. 1882.

MONSIEUR DUCLAUX, one of M. Pasteur's most able and distinguished pupils, has, in his work on *Ferments and Maladies*, supplied a want that has long been felt. This excellent volume offers, in a collected form, the methods of research adopted by the learned professor; also the doctrines taught by their results. M. Duclaux thus enables the scientific public, many among whom could not obtain the various scientific communications of M. Pasteur, which are scattered among different scientific publications, to study and arrive at an appreciation of the facts which indicate micro-organisms as powerful factors in pathological processes.

M. Duclaux, in the opening pages, sketches the birth and progress of the question. He reminds his readers that the problem of fermentation in its chemical aspect was solved by Lavoisier. Cagniard Latour some time afterwards affirmed that yeast acts on sugar, an action resulting from its vegetating and vital properties (*de sa végétation et de sa vie*); this was the first step towards those discoveries which, thirty years later, were destined to occupy a prominent and important place in science.

In 1851, MM. Rayer and Davaine detected, in the blood of animals which died from "charbon", thin cylindrical rods; but the presence of these minute organisms did not suggest any explanation of the cause of death. The bacillus of charbon remained an unexplained phenomenon until 1861, when M. Pasteur published his researches on butyric fermentation. The possibility was then suggested to M. Davaine, that the bacilli he had detected in the blood of animals dead from charbon were the agents of contagion; M. Davaine acted on this supposition, and inoculated a healthy animal with a drop of blood taken from another attacked by charbon; the animal thus inoculated became infected and died. Thus, M. Davaine's hypothesis, that the bacilli of charbon are agents of contagium, was apparently true. Nevertheless, it was opposed by many well-founded objections. Among these, we do not include the theory "of vital properties".

We pass on to others more worthy of consideration, which stated that the drop of blood with which M. Davaine inoculated the healthy animal contained, in addition to the bacilli, blood-corpuscles more or less mis-shapen, lymphatic corpuscles, granular bodies, and a liquid. It was equally probable that these elements were conductors of the poison in the form of a soluble ferment, instead of that of a morbid element. M. Davaine was unable to demonstrate the fallacy of these objections; but, as M. Duclaux reminds us, he had opened the breach. Other experimentalists followed him *en masse*, and, later on, proved the truth of his hypothesis.

In 1868 Chauveau and Kleber, Klebs in 1872, Hueter and Orth in 1873, studied the question of virus, the organisms in the vaccinal lymph, diphtheria, the periodic and remittent fevers, etc.; but the work done by them was more faulty than that of M. Davaine; they only demonstrated that the presence of living organisms is concomitant with pathological processes.

MM. Pasteur and Joubert at the same time carried out their now well known researches. They applied the system of artificial cultivation, producing successive generations of the charbon bacillus, and succeeded in obtaining them in a perfectly transparent liquid, free from

the presence of any other element. These bacilli, thus artificially cultivated from generation to generation, communicated charbon, whereas the liquid containing them, when filtered, was perfectly inert; thus M. Davaine's hypothesis was verified. There are virulent affections, which owe their origin to the presence of micro-organisms in the animal economy. Cagniard Latour suspected that micro-organisms exercised influence; M. Pasteur has irrefutably demonstrated the part played by them.

M. Duclaux, in a most interesting chapter, shows how M. Pasteur proves, step by step, the fallacy of spontaneous generation. The importance of this question is evident. Now that it is admitted that micro-organisms are the origin of certain virulent affections, if these micro-organisms find their birthplace in the animal economy at the expense of the cells of its tissues, the affections themselves are spontaneous. The methods used by M. Pasteur to estimate the unequal distribution of germs in air, in water, and in different localities, are well described by M. Duclaux. Sometimes the elements submitted to analysis were collected near a hospital, a large city, or in an inhabited room; at others in the heart of the country, from the heights of a mountain; water was taken issuing from the source, also after flowing on the earth's surface. The chapters which immediately follow are devoted to the question of the nutrition of microscopic life. A description of the *Aspergillus Niger*, studied by M. Raulin, shows the complex nature of the liquid necessary for the nutrition of these organisms; also that variation in its component parts affects the reproductive power and life of this and similar organisms. The presence of mercuric chloride and nitrate of silver, even in the smallest proportions, is fatal to them.

In the chapters on the Aerobic and Anaerobic ferments, details are given of an interesting experiment with beer-yeast and *mycoleure* exposed to, or secluded from, the air.

M. Duclaux concludes the first part of his work by a study on the saccharine and lactic ferments; also that of nitrogenous matter; and formulates a physical conception of vitality. In the second part, he treats the question of homeogenous maladies, which are defined as those maladies that, in the course of their development, produce the element necessary to communicate the same malady to a thoroughly healthy organism. Thus, necessarily, they comprise many affections which hitherto have been classed under the head of "contagious", "infectious", "parasitic", "epidemic", "endemic", etc., diseases. M. Duclaux adopts the title "homeogenous" because it does not give any indication of the origin of the malady, and can be applied with equal correctness to those due to the presence of an organism, as to those which at present are not demonstrated to owe their origin to that cause. The one large class of homeogenous maladies M. Duclaux divides into two subclasses. 1. The parasitic affections scabies and septicæmia are thus side by side, a curious contiguity; but there is no reason to separate them, as they are both transmissible. 2. Virulent affections, such as "charbon", small-pox, etc., which rarely attack the same person more than once, and can be averted by vaccination. M. Duclaux studies some well known parasitic affections—*i. e.*, scabies, charbon, ammoniacal urine, cholera of fowls, etc.; and lays particular stress on the fact that before the acarus was known and recognised as the origin of the itch, this affection was treated by many different and uncertain methods, whereas now it is cured in a few hours. Exceptions are unknown, simply because the cause is determined and combated by a rational treatment. He further cites this malady as a proof of the assertion that any given parasite does not indiscriminately find a habitat in living organisms; and reminds his readers of Delafond's and Bourguignon's experiments, which demonstrate that healthy sheep do not contract scabies; but the same sheep which enjoy an immunity from this affection, if put on a lowering diet, are quickly attacked by the acarus. They are soon cured by a healthy diet, without the administration of medical remedies; also, they resist future infection.

M. Duclaux regards inherent vital resistance as a myth, unless that proposition may be interpreted that every condition of soil is not equally fertile. The acarus attacks sheep only when they are unhealthy; the first parasitic victory weakens the animal, which falls more easily a prey to the invader on the second occasion, and so on.

M. Duclaux now passes on to the question of ammoniacal urine, and demonstrates that the torula, to which is attributed this alteration of the liquid, is of external origin, and decidedly not, as Béchamp asserts, the result of animal cellular change. The experiments of Cazeu-neuve and Livon support M. Duclaux's opinion. They artificially rendered urine albuminous, purulent and diabetic, etc.; the bladder of the animal was then tied and extirpated before death; the urine remained unaltered.

M. Duclaux studies at length this ferment, the conditions which encourage, delay, and prevent its development, also the general question of

parasites which follow as a natural consequence, is well exposed by M. Duclaux.

Some of the succeeding chapters he devotes to the study of a parasitic malady of another kind, the *pébrine* of silk worms. Formerly this affection caused those provinces where the silk-worm was raised to lose immense sums every year; now, owing to the scientific labours of M. Pasteur, it has almost entirely disappeared.

In the pages devoted to the study of charbon, M. Duclaux demonstrates the vitality of the germs that are the cause of this affection, and clearly sets forth the methods adopted by Touissant, and afterwards by M. Pasteur, to neutralise their virulence by preparing a vaccine which produces in the animal inoculated a mild form of charbon that renders it in future exempt.

Fowl-cholera, septicæmia, etc., are next treated; then we reach the pages devoted to the question of enteric fever. At the present time the fact that enteric fever is transmitted by water (Budd), and by milk (E. Hart), and by immediate contact (Bretonneau), is too clearly proved to be refutable. Nevertheless, although the discovery by Klebs of rods in the submucous intestinal layers has not sufficed to class this malady among those of parasitic origin, M. Duclaux does not hesitate to do so.

Finally, M. Duclaux gives a rapid *résumé* of the affections that are justly supposed to be of parasitic origin; among these he naturally places tuberculosis, Koch's discovery of the bacilli of tuberculosis and his experiments being of later date.

In the last chapter, devoted to the subject of prophylaxis, medical practitioners, hygienists, and general readers will find most useful advice. The successes obtained by the Lister dressing are also dwelt on; the statistics given by Lister, Thiersch, Walthmann, and Nussbaum, compared to those obtained before the Listerian dressing was adopted, are sufficient evidence of the power of microphytes.

The author, in his work on *Ferments et Maladies*, has left unmentioned several affections of which the parasitic origin is clearly proved: for instance, then numerous skin-diseases; neither has he treated what may be considered as the truly pathological aspect of his subject. His principal aim is to demonstrate that the study of microphytes leads to the discovery of the causes of several maladies. Notwithstanding these faults of omission, M. Duclaux's work will be read with pleasure and advantage. It furnishes much desirable information not easily found elsewhere, and cannot fail to suggest to medical men many ideas that will prove fertile in results.

It is to be regretted that what is so excellent is not perfect, and that M. Duclaux has not extended his work beyond its present narrow limits. He would thus have removed from it the taint of special pleading, in favour of researches, the value of which is now generally admitted; the only exception being a small section of persons who refuse to believe in the validity of experiments made in public, and therefore will probably not be converted by M. Duclaux's arguments.

THE SURGERY OF DEFORMITIES. By E. NOBLE SMITH, F.R.C.S. Ed., Surgeon to the Farringdon Dispensary. London: Smith, Elder, and Co. 1882.

This work is essentially practical and systematic. The author states that he has confined himself as much as possible to the discussion of those methods of treatment from which he has witnessed the best results, both in his own practice and in that of other surgeons. In those instances in which he differs in opinion from some other surgeons, his reasons for doing so are given fully, clearly, and with much force of argument. Sound surgical principles are adhered to throughout the work, and the author has evidently studied his subject very carefully.

The first chapter is devoted to a description of the nature of deformities, and forms an excellent introduction to the work.

Chapter II deals with club-foot. There is not much that is new to be said regarding this affection, but the author has brought together and epitomised material which, in most of the works hitherto published, has been either spread out so discursively, that the student has had much difficulty in gaining practical information from it, or given so shortly, that some of the important points have been left out. The author of the work before us describes the treatment of club-foot in a practical manner. The plan which he advocates of dealing with this deformity is simple, although necessitating much care and attention to the case for a considerable length of time. He is not much in favour of osteotomy, and he disapproves entirely of osteotomy for young children. The argument upon this subject is supported by references to published cases, one operator having had one death in fourteen cases operated on, and another having lost one in three; deaths which would have been avoided if the old-fashioned and perhaps more tedious treatment had been adopted.

In the chapters which follow, contractions of the thighs and arms,

deformities of the digits, wry neck, congenital dislocations, displacement of the semilunar fibro-cartilages of the knee-joint, and contracted and depressed cicatrices, are described, and the appropriate treatment of the various resulting deformities is given. Hip-joint disease is then dealt with in a thoroughly practical and instructive chapter. The author discusses the various plans of treatment. With regard to extension of the limb by means of a weight and pulley, as commonly applied, he shows that, if flexion of the limb exist (whether that be due to muscular contraction, or to effusion into the joint), the attempts to straighten the limb forcibly will produce increased pressure upon the diseased structures of the joint. This point seems to us deserving of more attention than it has hitherto received. The author considers that extension by weight and pulley in the line of the deformity, as practised by Mr. Howard Marsh, is the only manner in which extension can be judiciously used. He prefers, however, an apparatus which fixes the joint without extension, and he states that the results of this plan of treatment are excellent.

He points out that instruments which attempt to fix the joint by being attached to the pelvis and thigh only, do not control its movements; that, unless the apparatus control also the movement of the spine, the leverage of the body will easily overcome the effect of the instrument, and will cause motion in the joint.

When the joint is fixed, the author states that pain almost immediately ceases, and that then, by moving the form of the instrument slightly every few days, without paining the patient, bringing the limb gradually into a normal position, ankylosis is generally prevented. To some extent, these are the principles upon which Thomas's treatment is based, and the author of the work before us seems to aim at showing that, if Thomas's treatment is good, then the plan that he (Mr. Smith) recommends is better, because it effects all that Thomas's treatment is intended to effect, with greater accuracy and gentleness. When the acute symptoms have subsided, the instrument is extended to the boot, so that, when the patient walks about, the weight of the body is transmitted through the instrument to the ground instead of bearing upon the joint. Thus the raised sole and the crutches of Thomas's treatment are dispensed with.

The next chapter is devoted to ankylosis, and old unreduced dislocations, and calls for no special remark.

Chapter X is upon lateral and analogous curvature of the spine. This is a very good chapter. The author seems in favour of avoiding spinal instruments as much as possible; and when such instruments are really necessary, he employs an apparatus which is a great improvement upon those which we have hitherto seen. The pathology of lateral curvature is discussed, and the causes are divided into predisposing and exciting. "The predisposing causes are probably all circumstances which give rise to debility. This debility may act generally, or it may affect the dorsal muscles, and disenable them to retain the spine in an upright position for long periods. The condition of the bones may predispose to the rapid formation of curves, supposing always that more pressure is allowed to bear upon one side of the spine than upon the other side. The exciting causes are conditions which disturb mechanically the equilibrium of the spinal column, continuously, or for long periods." Then follows a systematic description of the various exciting causes of this affection. The principles upon which cases are to be treated without instruments are detailed, and the necessity of employing a suitable support in many cases is argued. In a large majority of cases of lateral curvature, the curves form chiefly, or only, when the muscles of the back are not being used. When the patient endeavours to support the trunk in an upright position, with as little expenditure of muscular force as possible, the spine subsides, forming lateral curves. Many surgeons acknowledge this to be the fact, and they therefore advise the patient to rest the back in a specially constructed chair, or on a couch, directly the muscles become fatigued. They, moreover, often object to spinal instruments, because they interfere with muscular action. Mr. NOBLE SMITH recommends an instrument which does not interfere with muscular action, but acts as a support only when the muscles cease to hold the spine erect. If this be so, we must look upon the introduction of this instrument as an immense stride in orthopædics; for, instead of our having to depend upon the patient always being able, or inclined, to assume the recumbent position, or the special chair, when necessary, he or she carries the chair about always ready, so that the subsidence of the spine already referred to is avoided, and the development of the muscles is not interfered with. The apparatus, moreover, appears to be much lighter in construction than the old-fashioned ones. It does not possess crutches, but acts by drawing the arms backwards instead of propping them up. In very severe cases a less simple instrument is recommended, but the principles above described are more or less acted upon in all cases.

Chapter XI treats of caries of the spine. The pathology is well dis-

cussed, and the treatment is that which was described in a paper by the author, which we published in the JOURNAL for May 13th. Mr. Noble Smith condemns Sayre's treatment by the plaster-of-Paris jacket. We think he would have done well to describe the method of application, but at the same time we must acknowledge that, in taking so bold a course as to discard the plaster-of-Paris jacket entirely, he seems to have acted with consistency, and not without carefully considering all the facts connected with the subject. The faults which belong to the jacket are described, and these are now mostly admitted even by many of the surgeons who still use it.

We believe that many surgeons besides Mr. Noble Smith, have lost faith in the plaster-of-Paris jacket; and, in fact, a paper by Mr. Howard Marsh was published in the JOURNAL a few months ago, which was entirely antagonistic to the use of the jacket; but Mr. Noble Smith is the first who has brought forward a substitute for Dr. Sayre's plan of treatment. Judging from the simplicity of the mechanical principles upon which his apparatus is constructed, and also upon the favour with which it was received at a meeting held lately of the Harveian Society, where Mr. Smith exhibited some patients, we are inclined to entertain a very favourable opinion of the plan of treatment, which in the author's hands seems to have been so successful.

The next chapter is upon spina bifida. Support to the tumour is recommended in the early stages. In cases that are becoming rapidly worse, and in which the continuance of life seems impossible without operation, the author recommends Dr. Morton's plan of injection of the sac as offering the best chance of success.

Chapter XIII is devoted to rickets, including knock-knee, osteomalacia, and osteomata.

A very simple splint is recommended for bowed legs. The patients are to be allowed to run about, and the straps for correcting the deformity are so arranged that they can be easily attended to by the parent or nurse. In the description of knock-knee, the pathology is thoroughly, although concisely, discussed. The various methods of treatment are described. The relative merits of gradual reduction by means of instruments, and osteotomy, are well argued. The author remarks upon the very small percentage of bad results from osteotomy when performed with strict antiseptic precautions, according to Professor Lister's method; but he urges that, notwithstanding that fact, osteotomy is a serious operation, and one which ought not to be performed if a safer means of treatment be available. He states that "up to twelve years of age, and even beyond this period," genu valgum may usually be cured by gradual reduction by means of instruments. Splints or instruments are advocated in which the patients can walk about and perform all ordinary occupations. Throughout this work, the author has certainly succeeded in being concise, practical, clear, and systematic; but we think that the first part, especially the chapter upon club-foot, would have been improved by a little more elaboration and "roundness" of expression.

The woodcuts show very practically the points which they are intended to illustrate, and materially help the reader. We can recommend this as one of the most practical, useful, and able hand-books of orthopaedic surgery. It is one which will be alike popular and useful with practitioners and students, and establishes for its author a high position in the department of science and practice which his hand-books illustrate.

NOTES ON BOOKS.

The Weather of 1880. By EDWARD MAWLEY, F.M.S. Remrose and Sons, 23, Old Bailey, F.C.—This is one of an annual series which was commenced in 1879, and contains a daily record and monthly summaries of the barometric readings, and of the highest and lowest temperatures observed at Addiscombe, Croydon, as well as of the relative humidity, wind, rainfall, and duration of sunshine. Each monthly table also contains a column showing the daily difference between the observed temperature and the mean recorded at Greenwich for twenty years. In addition to these, there are two or three pages of remarks for each month of the year; and near the end of the book, the observations are grouped into seasons, and the chief phenomena are explained. The winter is properly considered to consist of December, January, and February, so that the meteorology of December 1880 is included. Lastly, the weather of 1880 is treated as a whole, and compared with that of 1879. At the end there is a diagram showing the mean monthly barometric pressure, and the mean monthly temperature, as well as of the months from previous decades, and a list of the temperatures registered during all the months of the year for the six seasons of having a record of the weather near London.

Rainfall and Climate in India. By Sir J. FAYRER, M.D., F.R.S.

—This paper was read at the Victoria Institute on May 16th, 1881, and is a reprint of their *Transactions*. After referring to the manner in which rain is formed, and to its uses, Sir J. Fayrer gives an account of the monsoons, which are the great producers and distributors of rain in India. He states that the rainfall varies, as might have been expected, according to latitude, elevation, and the physical characters of the country; Northern India being less influenced by the south-west monsoons than the Deccan. He also points out, as occurs even in England, that dry air in motion is more tolerable than stagnant air loaded with moisture, although the former may be 20° hotter than the latter. The rainy season varies, but may approximately be taken to extend from July to October or November, but in the Great Desert region there is little rain at any time. In 1879, the rainfall at Kurra-choe was only 1.92 inches; at Peshawur, it was 8.84; at Calcutta, 63; Madras, 48.5; in Bombay, 74; in Delhi, 27.5; in Benares, 37; in Lahore, 21; in Bangalore, 35; in Poonah, 27; in Belgium, 49; and in Akyat, 198 inches. At the hill stations, the rainfall is moderate, the climate genial, healthy in summer and almost as bracing in winter as in Europe. These stations are from 5,000 to 7,000 feet above sea-level. There are two belts of excessive rainfall, one extending along the Aracan coast from the mouth of the Irawaddy up to the valley of the Burhampootra; the other on the west coast from Cape Comorin to the Tapti. At Chorra Poonjee, 4,000 feet above the sea, "600 inches of rain fell in half the year"; and Sir J. Fayrer says that he registered 610 inches in one year. At Mahabeshwar, in the Western Ghats, 300 inches fall on an average in each year. A table is given of the rainfall in twenty-one "rainfall provinces" taken from Mr. Blandford's Meteorological Report for 1879, which contains most reliable returns. Sir J. Fayrer says that heavy rains greatly diminish the number of deaths from cholera, whilst rain following unusual dryness increases the mortality from fever. Also that rain with "cold and high temperature range" slightly augments the liability to bowel-diseases. He also advocates the cultivation of trees in the desert regions to increase the rainfall.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A COMBINATION STETHOSCOPE.

This instrument combines (1) a very portable stethoscope, (2) a thermometer, (3) a nasal or aural speculum, (4) an ophthalmoscope, (5) a reflector.

The stethoscope is like an ordinary metal one. The ear-piece screws off, and can be screwed on to a nut on the stem, thereby greatly aiding portability. The thermometer is inclosed in the lumen of the stem, where it is held in by means of a screw-mount. It can be employed separately, or its mercurial bulb may be alone exposed during use, the stem thereby acting as a protector against breakage. After registration, the thermometer may be unscrewed from the stem to read off the degrees registered. The ear-piece is mounted, on one side, with a concave mirror, perforated in the centre; it thus forms a very efficient ophthalmoscope. The chest-piece also screws off, and is made of speculum metal, and can be used for nasal or aural purposes.

The ear-piece, when adjusted to the stem, forms a very good reflector, the stem acting as a handle, and is especially applicable for examination of the fauces, or for obtaining extra light in making examinations by specula in vaginal, anal, or nasal uses. The thermometer, being contained in the tube, does not impede the conduction of sound; but, if desired, it can easily be removed, temporarily, during auscultation. I think the combination will be found to be of great advantage to the general practitioner, as having several instruments included within the one that is the most useful and indispensable; and, being so easily carried about, it obviates the necessity of taxing the memory, and of carrying the innumerable cases of instruments that are often required in emergency when they are otherwise than at hand. Messrs. Arnold and Sons of West Smithfield are the makers, and have carried out my suggestions most satisfactorily, and, I think, at a very reasonable cost.

CHARLES FRED. POWER, L.S.A., Bexhill, Hastings.

LONGEVITY IN IRELAND.—During the quarter ending June last, among the deaths registered were nine reported as those of centenarians. Of this number three were alleged to be 100; one 101; one 103; two 104; one 105; and one 106 years respectively.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 4th, 1882.

THE MEDICAL ACTS AND THE ROYAL COMMISSION.—II.

OUR leader on the Report of the Royal Commission on the Medical Acts, in our issue of October 14th, p. 742, dwelt on the important fact that Sir James Paget, Professor Paget of Cambridge, Professor Humphry of Cambridge, and Professor Marshall, the representative of the Royal College of Surgeons on the Medical Council, had, in their evidence before the Commission, recommended the admission of the principle of the direct representation of the profession in the formation of the future Medical Council. In addition to these distinguished men, we have, as members of the Royal Commission, and signatories to the Report presented to both Houses of Parliament by command of Her Majesty, the well known names of Sir William Jenner, K.C.B., and Professor Robert McDonnell, F.R.S., of Dublin, formerly President of the Royal College of Surgeons, Ireland, also advocating the principle.

Mr. Simon, in a supplementary memorandum, is joined by Professor Turner in opposing direct representation. Their pleading on this one point fills six folio pages; while the complete report of the Royal Commission on all the subjects submitted to them, many of them most complex and difficult, occupies but twelve. The statements in this *rechauffé* embrace a recapitulation of the data and evidence submitted to the Select Committee of the last Parliament. The repeatedly disproved statement that the popularity of the demand was due to one particular journal, the *Medical Mirror*, which only existed for three short years, 1866-9, and which, in course of time, expired from inanition through lack of support by the profession, is again made—notwithstanding the distinct and incontrovertible proof given, that the demand was coexistent with the foundation of the Association fifty years ago. The great probability—nay, the almost certainty—is that the demand originated the *Medical Mirror*, and not the ephemeral journal the demand. Any weight that might attach to this memorandum has received its *coup-de-grâce* in the Report of the Commission, which declares that it is “advisable to give the general practitioner an effective voice in the body, which will be the principal authority of the medical profession”; and that there is “no reason to suppose that the members elected by direct representation will be less eminent than those nominated either by the Crown or the divisional boards.” Mr. Simon and Professor Turner are the only members of the General Medical Council who were imported into the Commission; and have conspicuously failed to gain acceptance for their views, notwithstanding all the advantages their position gave them. Their fellow-commissioners, Sir William Jenner and Professor Robert McDonnell, have remained uninfluenced by their arguments, and have thrown the great weight, which their prominent profession and scientific position, and constant intercourse with medical practitioners give them, on the side of the profession, by joining, without reservation, in the Report of the Commission.

The diminution of the number of the representatives of the universities and corporations on the General Medical Council has, during the many years of agitation for medical reform, been beset with such diffi-

culties, that very few of the Medical Bills brought forward have attempted to deal with it. In the earliest Bills promoted by the Association before 1856, some were left out, but, the omission obstructing legislation, all were included in the Bill of 1858. Since 1858, powerful Liberal and Conservative Governments have attempted legislation, but none ventured to approach the dangerous ground of disfranchisement. After the failure of the Government measure of 1870, the *Lancet* promoted a Bill, which would have entirely swept away their predominant influence in the General Medical Council. An attempt at partial disfranchisement was made by the British Medical Association, in the shape of projected amendments on the Government Bill of 1870; and in evidence before the Select Committee and before the Royal Commission, the Association has equally advocated some disfranchisement.

The Royal Commissioners have dealt with this delicate question in another manner. First, they propose to reduce the number of the Medical Council from twenty-four to eighteen, assigning eight to the representation of the universities and corporations. These eight members are to be elected by the divisional boards of each division of the kingdom—five for England, two for Scotland, two for Ireland. No individual corporation will be represented, but all will unite in establishing the divisional boards. Should any individual corporation cease to examine a certain number of persons, or grant a certain number of medical diplomas, a clause might be introduced, by which such corporation would lose its status. This seems to be implied by the questions 2,221-7 of the Master of the Rolls to Dr. Glover, and the recommendation in the report, paragraph 16 (3) where the number and proportion of delegates from each chartered university and medical corporation are to be fixed, with due regard to their special claims, in the first instance by Parliament, provision being made for a decennial revision by the Medical Council, subject to appeal to the Privy Council.

The composition of the Medical Council, proposed in the report of the Royal Commission, being disposed of, the formation of one conjoint examining board for each division of the kingdom, under “one supreme controlling authority,” (20) to be styled “the Medical Council,” which “shall be the sole licensing authority,” is also provided.

The establishment of conjoint boards has, by general agreement of the profession, been regarded as the only means of remedying the abuses resulting from the existence of nineteen different bodies, each granting a diploma, which, under the Act of 1858, for the first time entitled the possessor to practise the profession in all parts of the United Kingdom.

In the absence of a new Medical Act Amendment Bill, this glaring evil must continue. But so tenacious of their privileges are those bodies which have once acquired them, that it will require all the efforts of the profession to enable the Government to succeed in carrying any measure which threatens to infringe them.

The establishment of conjoint boards has of late been really the great stumbling-block in the way of medical reform. In 1870, the General Medical Council, by a majority of seventeen to one, passed a resolution in favour of establishing a conjoint examining board in each division of the kingdom, as the one only portal to the profession; and the Government Bill of 1870 aimed at making such single board compulsory. The Bill passed through the House of Lords; but, when it came down to the House of Commons, all the representatives of the Scotch universities and corporations, as well as Mr. Rawdon Macnamara, the present representative of the Irish College of Surgeons on the General Medical Council, and those who then represented the Irish corporations upon it, energetically opposed it, and would inevitably have wrecked it, even if the British Medical Association had not opposed it on the ground of its not including direct representation amongst its provisions. On that occasion, the Scotch colleges and faculty, as well as Irish corporations, supported the action of the Association by petitioning Parliament in favour of direct representation.

In the face of this combined opposition, the Government Bill of 1870 was withdrawn.

After this failure at legislation, the [General Medical Council being unable to agree as to a conjoint scheme, the English authorities loyally endeavoured to frame one for themselves. The Scotch authorities held aloof, and steadfastly maintained the position of opposition they had taken in 1870. It was thus rendered clear that a conjoint scheme in one division of the kingdom must fail, unless by compulsion extended to the others.

Fresh attempts at legislation were made by the late Government during the last session of Parliament, but in vain. The present Government appointed a Royal Commission, who, after a lengthened inquiry into all matters connected with the profession, and embracing the evidence given before the Select Committee, have completed their report and published the evidence.

Now, if ever, a probability of successful legislation exists, and the profession look forward to an early settlement of this long vexed question. In our last number (October 28th, 1882, p. 869), we published the proceedings at a meeting of the Fellows of the Royal College of Physicians of London on the preceding Thursday. On this occasion Dr. Acland moved :

"1. That, whereas, the Royal Commission on granting medical degrees has now affirmed the principle of diminishing the number of Examining Boards for Medical Licences, the Royal College of Physicians takes the opportunity of reaffirming that principle, already adopted and acted on by it."

"2. That the President be requested to name a Committee to consider and report to the College, at its next meeting, what combination the College can best enter into for examination purposes, so as to secure for England, without further delay, one complete Pass Examination Board, which shall be satisfactory to the profession, the Medical Council, and the Government."

We sincerely trust these resolutions indicate an approval of the Report of the Commission. The College of Physicians has ever been most loyal and untiring in its efforts to promote the conjoint examination system, and it has now had the opportunity of greatly aiding its establishment.

After years of labour devoted to the realisation of a compulsory conjoint examining board in each division of the kingdom, after repeated efforts at legislation, after the sitting of a select committee of the House of Commons on the Medical Acts and Bills during two sessions, and after the appointment of a Royal Commission, composed of several of the foremost men of the day, who have reported in favour of a compulsory conjoint examining board in each division of the kingdom, and have arranged for the formation of such board, we cannot but hope for the zealous concurrence of the Universities and Corporations in our efforts to attain the object.

At a meeting of the Medical Reform Committee, held at the office of the British Medical Association on October 17th, 1882, it was resolved, in accordance with a resolution passed at the jubilee meeting of the Association held in Worcester in August last, under the presidency of Dr. Strange, to memorialise the Government to introduce a Medical Acts Amendment Bill, as a Government measure, during the ensuing session of Parliament.

The committee attach especial importance to three conclusions of the Royal Commission, which the Association has always advocated as cardinal points of medical reform. These are :

1. The introduction of direct representation into the constitution of the General Medical Council.

2. The establishment of a minimum uniform qualifying examination for practitioners by conjoint examining boards established, one in each division of the three kingdoms.

3. The strengthening of the penal clause of the Medical Act, so as to afford adequate protection to the public against the false assumption of medical titles by unqualified and unexamined persons.

The committee confidently expect that any Bill introduced by the

Government will provide for the legislative enactment of these provisions, as recommended by the Royal Commission.

It was also resolved : "That the committee request the Branches of the Association to memorialise the Government to introduce a Medical Acts Amendment Bill, based on the report of the recent Royal Commission on the Medical Acts, during the ensuing session of Parliament ; and that the Branches shall support such Bill by petition, and by requesting members of Parliament connected with their respective localities to support it."

SUPERSESSON AGAIN IN THE BENGAL MEDICAL SERVICE.

WE learn from a late issue of the Allahabad journal, the *Pioneer*, and from other reliable resources, that another promotion out of turn will have been made, at the expense of the senior officers of the Bengal Medical Department, before these lines have been perused by our readers, under circumstances of such hardship, that it must cause serious heartburning and no little dismay in the minds of a considerable number of the most distinguished officers of the service. It is stated that, when Sir Alexander Christison completed his tour of service as Surgeon-General to the Government of the North-West Provinces, on the 24th October, Brigade-Surgeon W. Walker, Inspector-General of Prisons, was to be appointed as his successor. Our correspondents are so positive on the point, that we feel warranted by anticipation in basing our subsequent observations on the arrangement as a *fait accompli*, which, we fear, augurs in the future much confusion and discontent throughout the ranks of the service. Deputy Surgeons-General De Renzy (in receipt of a Good Service pension), Perkins, Townsend (in receipt of a Good Service pension), Beatson, Clarke, Tuson, Planck, Bellew, C.S.I., and Simpson ; and Brigade-Surgeons Dale, Hutchinson, Pichall, Currie, Sutherland, Eteson, Watson, Cowle, Loch, Rouse, Jackson, Brake, and Garden, have thus been superseded. A critical examination of these names will show that, in filling up the vacancy, a first-class appointment might have been made from the list of administrative officers. The important principle of selection might thus have been properly utilised, preserved, and tempered, as was always intended, prior to the date of the recent reorganisation, by seniority, without doing violence to justice and fair play, whilst the Government would have been safeguarded from anything like the serious charges which attach to the present appointment. With such a group of able, experienced, and pre-eminently qualified officers, available in the administrative grade, as Townsend, Beatson, Bellew, and Simpson, the Surgeon-Generalship might have been occupied without having recourse to the fourteenth name on the roll of brigade-surgeons. Such a reasonable and mitigated mode of selection would have been in accordance with usage and precedent, and received with approbation by the service at large ; but the nomination of Dr. Walker over the heads of eight deputy surgeons-general and thirteen brigade-surgeons, many of whom are in no way inferior to him in professional or administrative ability, is, by the most highly competent and most judicial minded men in the service, no less than by those concerned, and the rank and file, described as selection run wild, or shameless jobbery and favouritism.

It has been rumoured, on whatever foundation, that Dr. Walker has been promoted to make way for the advancement of a civilian to the gaol inspectorship previously held by him. If this be so, it only shows how little is thought of the interests and claims of the seniors of the Medical Department ; and that, under the new order of things, the ruling authorities, when they have friends to serve, are only too ready to sacrifice the members of the service, however distinguished they may be. We have nothing to say in disparagement of the ability of Dr. Walker himself. He is known to be zealous and efficient in the execution of his duties ; not more so, however, than the meritorious administrative officers from whose numbers a most excellent selection might have been made. Our criticism has been pointedly levelled at the Government for having unduly strained the principle of selection to serve him, to the serious prejudice of gentlemen, to say the least, every inch his equal. The

result of such an abuse, as we have exposed, cannot be otherwise than most injurious, not only to those immediately, but also to those remotely, affected by it. It intimates to the senior officers, in language which cannot be misinterpreted, that, no matter how conspicuously distinguished they may make themselves in their profession or in the administrative branch of the service, their just claims, hopes, and aspirations, may, at any moment be set at nought in the spirit of nepotism, with cynical indifference to their interests and covenants, and at that period of their service when supercession signifies ruin, because the blow can never be retrieved, beset at nought. It tells the juniors, with emphasis, which is calculated to chill their enthusiasm and devotion, that the attainment of the administrative prizes is now so uncertain—not, as of yore, by selection for merit, mitigated by seniority—that the realisation of such promotion is placed entirely at the caprice or mercy of any local Governor of the hour. In this matter we have no wish to be misunderstood. We repeat what we have always declared, that a judiciously regulated system of selection, according to merit, for the higher appointments in the medical services of the Queen, deserves the warmest approval. It is not to this, fairly exercised and honestly safeguarded, that we take exception, but to the manifest abuse of it, as lately illustrated in India since the reorganisation of the medical service there, and very notably in the case under consideration, in which the claims of ability, merit, and seniority have been scattered to the winds, in entire disregard of the general welfare of the department as a whole.

Before the re-organisation was carried out, about a couple of years ago, the service, whilst conducted on the principle of selection for the higher appointments, was fortified against such an abuse as we have laid bare, by the heads of the three medical departments in Bengal, Madras, and Bombay. We fear that the Surgeon-General to the Government of India, although vested with the privilege of conserving the interests of the gentlemen under his control, is either indifferent to this duty, or has allowed his power and influence in this direction to be neutralised by the local governments. In either case, the effect must be to create and foster discontent and heart-burning. We can scarcely bring ourselves to believe that he approves of the latest supercession. In former days, the department in Bengal possessed a certain amount of useful cohesiveness. The Surgeon-General knew personally, or from the official reports of his deputies, the worth of every one subject to his rule; and confidence pervaded all ranks that meritorious service would, in due course, be recognised and rewarded without fear or favour. Although it was known that appointments were not ostensibly made by him, it was equally well known that, in all important promotions, more especially those of the administration-grade, his opinion was sought, and rarely, if ever, ignored. Thus no officer could be superseded excepting for reasons—good, valid, and assigned. There was, under such an administration, that confidence and *esprit de corps* which—as was remarked by the late Marquis of Dalhousie—made the Indian Medical Service not only the best paid but the finest in the world. It was under such a *régime* that it commanded, both before and after the institution of competition, a considerable proportion of excellent men, many of whom have done much to extend our knowledge of eastern medicine and the natural sciences, directed not only the sanitation of the country, but many of the great botanical and scientific technological contributions and departments, and raised up a number of first-class medical colleges in various parts of India. Need we wonder, therefore, that every officer had a pardonable pride in having the honour to belong to such a service? But the reorganisation—is it not rather the disorganisation and disintegration?—begun and carried out by the Government of Lord Lytton have changed all this. The result has already been mortally injurious to the *prestige* of the service, which had done admirable work for Government and civilisation, and this cannot be conducive to the public welfare. Instead of three compact and well organised services, having a history and noble traditions, a long line of men distinguished in medicine, surgery, natural and physical science—such as

Twining, Morehead, Goodeve, Sir Simon Ewart, Sir James Annesley, Sir Ranald Martin, Sir Joseph Fayrer, Norman Chevers, Falkner Anderson, Sir William Brooke, and a host of others, and provided with administrative heads who commanded loyalty and respect, mainly by the sterling and even-handed justice which they saw distributed to all alike, according to their respective deserts, we have now a series of faggot departments, the units of which have no cohesiveness or common bond of union for the cultivation of an effective *esprit de corps* or the sensitive and tender plant *prestige*. In the aggregate, they are loosely held in hand, and practically, as we have shown, left without a strong and efficient head to enforce the administration, equally in the interests of individuals and the public service, of the strictest justice in the bestowal of patronage, appointments, and promotion. It is to be feared that, unless the present system be so modified that each of the three services—and notably that of Bengal or the Government of India—is furnished with a head possessing the unalloyed confidence of those serving under him, endowed with a predominance in the distribution of patronage, and held personally and officially responsible for the exercise of the power of making selections for the higher appointments on lines defined and prescribed by rule and regulation, what was once the best and finest, will go on—as it has been doing during the past two years—degenerating until it becomes the poorest and worst commissioned medical service under the Crown.

THE MAL DEL PINTO.

UNDER the name of the *mal del pinto*, or spotted disease of Central America, Dr. Iryz has recently described a rare, but very interesting form of skin-disease, which has hitherto escaped the notice of pathologists. Dr. Iryz's observations are based on a study of the disease, during a period of four years, in certain districts of Central America and Southern Mexico. In these regions, the affection is always more or less endemic; but it does not appear to exist elsewhere. So far, its existence has remained unnoticed in any of the standard works on nosology. An exception should possibly be made to this statement so far as Littré and Robin's edition of Nysten's *Dictionary* is concerned, in which work, under the name of *carriate*, reference is made to a malady apparently similar to the *mal de pinto*, or "spotted disease" of Central America. The authors, however, evidently had few data to go on, and have treated the subject in a very cursory and inaccurate manner. Dr. Iryz has embodied the results of his observations in a very complete and exhaustive monograph, which he has recently submitted to the Academy of Medicine of Mexico. This memoir is quoted at considerable length in the *Independencia Medica* of January 1882, a Mexican journal, from which the following remarks are taken.

The *mal del pinto* is a skin-disease, characterised by abnormal pigmentation, accompanied by pruritus and desquamation, and by a characteristic odour. It may commence as a patch of discoloration on any portion of the general integument. The discoloration is followed by itchiness and desquamation. The characteristic eruption radiates from several centres, and may either continue discrete, or, as in some cases, become in its later stages confluent. The general health suffers little, and there is no constitutional disturbance, except from the continuous itchiness, which is always more severe at night. The affection appears under four distinct forms—namely: the black, the blue, the red, and the white. In the two former, the pathological process is apparently superficial to the dermis; in the latter, it involves the whole of the true skin and rete mucosum. Hence, from these anatomical characters, all cases may be grouped as either epidermic or subepidermic. In the former, the eruption appears indiscriminately on all parts of the body, with the exception of the soles of the feet and the palms of the hands. The patches of discoloration, which may be either black or dull blue, are circumscribed and slightly elevated above the surrounding skin. At first, the affected surfaces are dry and rough, but, later on, they become moist, and exude a glutinous secretion. All signs of inflammatory action are absent, and pressure causes neither pain nor change of colour. When the process of desquamation has reached its

limit, the skin of an individual assumes the appearance of a mosaic pavement, composed of various colours. Not uncommonly, black is the prevailing tint, in which case the patient has very much the appearance of a negro, with an Indian or Caucasian type of face. In the later stages of the disease, a tuberculous eruption is often developed. In the blue variety, the discoloration is very similar to that caused by grains of fine powder lodged under the skin. It may be associated with patches of black or other altered pigmentation. Whatever the discoloration may have been in the first instance, it always remains unaltered, and is not displaced or succeeded by any other tints.

The subepidermic form of the *mal del pinto* may appear as patches of a dark red, pink, or brilliant white colour, like cicatricial tissue. The white patches are generally bordered by a dark ring, as though the colour had passed from the centre to the circumference. When touched, these patches convey a different sensation from the neighbouring healthy skin. The integument is hard and apparently condensed, and has lost, in great part, its faculty of sensation. The capillaries have also undergone diminution and destruction. Pruritus is constantly present, but desquamation is less abundant than in the black or blue forms. As a general rule, the patches are uniform in colour, but occasionally they present islets of pigment in their centres, as if this substance had, in some places, escaped destruction. It is not uncommon for the disease to spread from several centres, each distinct in colour. These centres become eventually more or less confluent, and impart to the whole body, or to a limb, a very singular and characteristic appearance. In such cases, the aspect of the face becomes peculiarly repugnant; and this, in conjunction with the specific and disagreeable odour of the disease, which has been compared to that of mouldy garments, sufficiently accounts for the dread and detestation it excites in those communities in which it is endemic.

The *mal del pinto* may sometimes commence in a portion of integument which has hitherto been perfectly sound. It more usually, however, follows some general eruption, such as herpes or eczema. Its course is essentially chronic. Sometimes, a patch of discoloration will remain indolent for months, neither advancing or receding. This is especially true of the white form. The black and blue forms, on the other hand, exhibit much greater activity, and spread both more quickly and more widely. One case, however, came under Dr. Iryz's notice in which complete albinism had been produced. The head, neck, thorax, limbs, and even hair of the patient, having become as white as if they had been dusted with flour.

The diagnosis of this peculiar affection presents but little difficulty. In well marked cases, it has only to be seen to be recognised. No other known skin-disease gives the same mottled or piebald appearance to the body. No other possesses the same characteristic odour, or exhibits the same furfuraceous desquamation.

In the earlier stages, however, the characteristic discoloration is absent, and then the dark patches may simulate Addison's disease. They are, however, darker and better defined, and there is also an absence of all constitutional symptoms. From ordinary chloasma, they may be distinguished by their roughness to the touch, by the pruritus and desquamation, and by the tendency they have to spread. From pityriasis nigra, they may be diagnosed by their more uniformly dark tint; and, in the later stages, by the presence of tubercles. The blue patches are like nothing so much as gunpowder lodged under the skin, but the history of the case will at once eliminate this source of error.

On the white form of the disease, especially at its earlier stages the distinction between it and vitiligo is not always easy. Both affections exhibit a similar series of dull or bright white patches encircled by a line of desquamation. In the affection we are considering the pallor is, however, as a rule, much more marked than in vitiligo. Neither heat, blisters, cauterisation or bruising can alter or remove even momentarily the peculiar whiteness of the skin, the capillaries of which have probably, in old standing cases been completely destroyed.

The prognosis, so far as life is concerned, is favourable. The *mal del*

pinto, in fact, causes but little constitutional disturbance at any period of its history. It is, however, very fatal to personal beauty, inasmuch as the pigmentation of the skin is nearly always permanent. If left to itself the affection will spread over the whole body, though it occasionally stops short of this, and even in very rare instances would seem to be capable of spontaneous cure. The white variety is, probably, in all cases incurable.

THE MEDICAL DEPARTMENT AND THE ARMY AND NAVY GAZETTE.

It may not at first sight appear a matter of much interest to the members of the medical profession that the *Army and Navy Gazette* should be convicted of inconsistency—of saying one thing to-day, another to-morrow. But it does so happen that, as our military contemporary has seen fit to throw such influence as it possesses, be it much or little, into the scale against our professional brethren in the army, and has done its utmost to discredit their services in the late campaign, it is a duty we owe to those whose just claims to the confidence of the country we deem it an honour to maintain, to show that, when military jealousy requires it, our contemporary is not ashamed to speculate on the forgetfulness of its readers, and to condemn to-day what it warmly advocated a short time ago.

We recently passed in review some of the suggestions offered by various reformers as remedies for the prevention of supposed "break-downs" in the field organisation of the Medical Department of the Army, and among others we noticed the favourite scheme of the *Army and Navy Gazette*, to deprive its officers of the command of the Army Hospital Corps. Turning to the issue of our contemporary for October 27th, 1877, at page 674 we find the following article, which we must give *in extenso*, not merely because it establishes the charge of inconsistency, which to our readers is of no consequence, but because it puts the argument for the policy it now condemns with convincing force.

"The requirements of modern war have necessitated the expansion of the original Army Hospital Corps into a much more extensive organization. Its members will in future be capable of acting not only as hospital nurses, but as carriers of the wounded from the field of battle. When employed in the latter capacity they will be styled 'stretcher-bearers,' and be formed into 'bearer-companies.' It is, therefore, quite evident that while the ultimate object to be attained is purely medical, the method by which it can be reached must be expressed in military nomenclature. In fact, to bring the bearers and the wounded together with any order or dispatch there must be a drill. This has been till now unwritten, and Surgeon Moore has conferred a boon upon the Army by putting into an available form these exercises, for the practical testing of which in this time of 'surprises' the opportunity may not be far distant. The book which treats of this drill is termed *Manual of Exercise for Stretcher-bearers*, and has just been published by Messrs. Clowes and Son. The manual consists of two parts—'The Training of Bearers' and 'The Training of Bearer-Companies.' In the former, the directions are given for the removal of wounded on stretchers, on two, three, or four-handed seats, or on improvised stretchers made out of rugs and rifles; also for the loading and unloading of every kind of conveyance from a country cart to a railway train. In the second part, the instructions are laid down for the formation by the bearer-companies of dressing stations and wagon stations, for the systematic searching of the battlefield for wounded, and for all inspections and parades which may be deemed necessary. It is perfectly obvious from the foregoing that these Army Hospital Corps' drills, although they may present a superficially military aspect, are so essentially professional that they could be efficiently carried out by medical officers only. There is, consequently, one weak link left in the chain of success which binds this new organisation to the future of the army, viz., the retention of the officers of orderlies under the misnomers of captains and lieutenants, when their duties are purely those of paymasters and quartermasters,

and confusion and collision must arise if such anomalies continue. These officers are remnants of a transition stage, and it is due to them that they should receive the special titles and advantages of the work for which alone they are retained. Dr. Moore's book is the first record of the new era which has dawned on the Medical Department, and reflects the greatest credit upon the industry and ability of its author. It must, of course, be in the possession of every medical officer, and is equally indispensable to all members of the different societies who undertake the help of the wounded in time of war.

THERE is a destructive outbreak of small-pox at Genadendal, Cape Colony.

WE learn that the number of students, who have entered the class of anatomy at the University of Cambridge this year, is fifty-five.

MR. M. A. LAWSON having been appointed Superintendent of the Government Cinchona Plantations (Madras), the Professorship of Botany at Oxford will shortly be vacant.

THE Khedive paid on Wednesday an unexpected visit to Lady Strangford's Hospital, established in Arabi's house. He spoke to the patients, and minutely inspected every detail; expressed a hope that it would be a permanent souvenir of the Anglo-Egyptian alliance; and accepted the joint patronage with the Duke of Connaught.

It is stated that the child of Arabi Pasha is dangerously ill, and as, in the present state of Egyptian public feeling, no native doctor could be found willing to visit it, the child is being attended and nursed by Mr. Sieveking and Lady Strangford. *A quelques choses malheur est bon.*

INTELLIGENCE received from Mecca states that the sanitary condition of that place has been excellent this year. Only 22,000 pilgrims have visited the city, whereas the number last year was 100,000. The number of pilgrims embarking at Suez has been only 2,800, as compared with 20,000 last year.

ON October 19th, the Viceroy laid the foundation stone of the new hospital at Simla, which is to be named the Ripon Hospital. Both Mr. Hume, the chairman of the Hospital Committee, and the Viceroy delivered amusing and effective speeches. A large attendance of Europeans and natives was present, and a considerable amount subscribed on the spot.

ON Thursday, his Royal Highness the Prince of Wales paid a visit to St. Bartholomew's Hospital, for the purpose of ascertaining the condition of Mr. Frederic Mustoe, who received a compound fracture of one arm and one lower extremity, when handling a shell brought from Alexandria by Lord Charles Beresford. The injured leg had been amputated. His Royal Highness, in the company of Mr. Savory and the house-surgeon, Mr. Bagshawe, visited the patient, who is proceeding as favourably as can be expected.

THE VICTORIA UNIVERSITY.

AT a recent meeting of the University Court, a resolution was passed accepting the bequest of Mr. Mercer, of Accrington, of £1,000 for a scholarship in chemistry. Mr. T. Ashton said it should be understood that these bequests did not cover the costs of examination. The University was being overwhelmed with examinations for very small bequests; and he thought it would be better if the Council were recommended to consider this subject of incidence of expenses of examinations for scholarships. An addition to the resolution embodying this instruction to the Court was adopted without discussion. Professor Roscoe moved that a petition be presented to Her Majesty in Council to grant a supplemental charter to the Victoria University,

empowering the University to grant degrees in medicine and surgery. The Archbishop of York seconded the motion, which was adopted.

THE ORIGINATOR OF HOSPITAL SUNDAY.

THE project for the erection of a suitable memorial to the late Canon Miller, Vicar of Greenwich, the originator of Hospital Sunday, has at length taken tangible form in the proposal to build to his memory a new wing in connection with the Royal Kent Dispensary. Last Sunday, collections in aid of this object were made in eleven churches in Greenwich, Lewisham, Lee, and Forest Hill, and in other places of worship in the district. Offertories to be devoted to the same purpose have been arranged.

ST. MARY'S HOSPITAL.

THE extensive additions to St. Mary's Hospital which, it was announced last year, would be undertaken, in consequence of the receipt of a large legacy for building purposes, have now been in progress for about three or four months, and the walls are beginning to rise from their foundations. The new buildings will consist, firstly, of a wing or extension of the hospital itself, built in rear of the present house, and capable of accommodating about sixty patients; and, secondly, of an out-patient department, which will be erected on the northern side of the hospital, in the angle lying in front of the medical school.

THE ROSE CORMACK FUND.

THE subscriptions to the Cormack Memorial Fund, received by the Paris Company, amount to the sum of 13,477 francs 75 centimes. This sum has been employed in paying small outstanding debts in the funeral expenses of Sir John and Lady Cormack. It will be remembered that Lady Cormack's death followed shortly after that of Sir John. The remainder was divided between the surviving unmarried children of Sir John and Lady Cormack. The committee take this opportunity to thank the press and the subscribers to the fund for their generous and timely help.

THE MISSING AND UNRECOGNISED DEAD.

PERHAPS no more striking picture could be given of the hidden workings of the seething life of this vast metropolis, than the following extract from the official report, just published, of the Commissioner of Police for the Metropolis: "11,835 children under ten years of age, and 3,416 adults, were reported as lost or missing during the year, making a total of 15,251 persons. Of these, 7,523 children and 720 adults were found by the police, 60 adults and 1 child committed suicide, and the remainder returned home or were found by their friends, except 23 children and 154 adults, who have not been found. Fifty-four bodies of persons found dead and unknown were photographed, but have not been identified."

SIR THOMAS WATSON.

WE publish in another column the clinical report of the illness of this illustrious physician, for which we are indebted to Dr. Walters. Drs. Greenhow and Walters are attending him; and, in addition, he has been visited several times by his friend Dr. George Johnson. It is supposed that a thrombus has formed in the neighbourhood of the corpus striatum. The chief change in Sir Thomas Watson's condition during the past week has been a gradually increasing weakness. Since Thursday, the 26th ultimo, he has been confined to his bed. The amount of nourishment he takes scarcely exceeds a pint of milk in the twenty-four hours. The illness is of a grave character; but all the hopes and the wishes of the profession will attend this venerable and much beloved physician in his progress towards a much desired convalescence.

SPORT AND CHARITY.

HERE is a hint for the enterprising secretaries of our London hospitals, gathered from the sporting column of a daily paper. The Edin-

burgh Football Association have received a handsome silver challenge cup, presented by the Earl of Rosebery. The cup will be competed for annually, in the same manner as the Glasgow Merchant's Charity Cup, by clubs selected by the Association, and the proceeds of the various matches handed over to the charities in the town. Last year the Glasgow Charity Cup Competition realised £450, while the total amount since its institution has reached £3,025. And still London footballers never think of helping the many charities that stare them in the face at every corner. The very least metropolitan players could do would be to start an annual Hospital Saturday.

THE BRADSHAW LECTURE.

THE sum of £900 has been received by the College of Surgeons from the legacy of the late Mr. Bradshaw of Reading, and according to the terms of the bequest, one lecture is to be delivered in the College every year, the lecturer to be "chosen" by the president of the year. This year the choice of Mr. Spencer Wells is a very happy one; for Sir James Paget has been appointed, and has consented to deliver the first of the Bradshaw lectures in the College of Surgeons on Wednesday, December 13th. We are certain that all our readers will receive this information with the greatest pleasure; for to everyone who is fortunate enough to hear one of Sir James Paget's eloquent orations, as well as to the far larger number of those who read them in our pages, a real intellectual delight is always afforded.

THE HEALTH OF CANNES.

WE learn from Dr. De Valcourt, of Cannes, that in the town hospital, which contains 94 beds, open not only to the inhabitants of Cannes, but to the Italian and other foreign workmen who, to the number of about 5,000, are employed on public and private works, 27 only of the beds are occupied, and of these 27 cases the greater part are surgical, and the rest chronic, none being of fever or dysentery. The following are the meteorological observations of the summer months:

	Temperature.		Days.	Rain.	
	Minimum.	Maximum.		Inches.	
June	61	86	11	0.0	
July	65	87	5	0.35	
August	65	87	2	0.15	
September	58	88	8	4.20	

INDEX CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, UNITED STATES ARMY.

THE third volume of this splendid and most valuable work reaches us this week. This third volume includes 9,043 author-titles, representing 10,076 volumes and 7,386 pamphlets. It further includes 8,572 subject-titles of separate books and pamphlets, and 28,846 titles of articles in periodicals. There are also catalogued, under the heading "Collection of Portraits", 4,335 medical portraits. The following is a summary of the total contents of the three volumes now issued: 30,629 author-titles, representing 23,041 volumes; 23,594 pamphlets; 29,122 book-titles; and 100,760 journal articles. This important work will be of great value to medical readers and students throughout the world; and reflects the highest honour upon the patient industry and skill of Dr. Billings, the compiler of the catalogue, as well as upon the enlightened generosity of the United States Government.

DR. SEGUIN.

WE read with deep regret of the lamentable domestic calamity which has recently befallen Dr. Seguin of New York. Mrs. Seguin, during a temporary fit of insanity, killed her three little children, and then killed herself. She tied the children's hands behind their backs, blindfolded them, and then shot them, apparently while playing "blind-man's buff" in an empty room at the top of the house. Mother and children were all shot through the head, three pistols being found in the room. She had been depressed for several days. The discovery of the corpses in the evening caused much horror. Dr. Seguin's father was well known and much beloved in this country; his tenderness and

philanthropy equalling his scientific ardour. Dr. Seguin, the son, has established for himself a great and deserved reputation in the study and treatment of nervous disease. He holds an eminent position in America, and this terrible catastrophe will have produced a profound sentiment of sorrow and sympathy, in which his British colleagues will join.

RECKLESS MIDWIFERY.

A HORRIBLE death has occurred at the village of Eye, near Peterborough. A woman was attended in her labour by two neighbours, one of whom professed to be a midwife, the other a nurse. She was delivered shortly after midnight on Saturday last, of a living child; and when Mr. Beecroft, a retired surgeon living close by, was called in soon after delivery, he found the unfortunate woman dead, with her uterus, one ovary, and Fallopian tube lying in the bed beside her, these parts having been actually torn or cut away by the women in attendance. A coroner's inquest has been held, the verdict being an open one: "That the woman died from the tearing away of the womb and its appendages, but that how this was brought about there was no evidence to show." We understand that the coroner has forwarded a copy of the depositions to the Public Prosecutor, who will, without doubt, institute proceedings against the person or persons who have been guilty of that reckless violence which inflicted the terrible and fatal injury.

PAGET'S DISEASE OF THE NIPPLE.

IN a note in the October number of the *Glasgow Medical Journal*, Dr. McCall Anderson supports the view that the affection of the nipple described by Sir James Paget is from the first of a malignant nature. He believes that the diagnosis, which is sometimes difficult, will be facilitated if the following points are borne in mind. Paget's disease occurs especially in women who have passed the grand climacteric; whilst eczema of the nipple and areola occurs generally in women earlier in life, and particularly during lactation, or in persons labouring under scabies. In the malignant affection, the affected surface in typical cases is of a brilliant red colour, and is raw and granular-looking after the removal of crusts; in eczema, the surface is not so red and raw-looking, and is not granular, but often punctated. In Paget's disease, there is often superficial induration, which is absent in eczema. In the former, the edge of the eruption is abrupt and sharply cut, and often elevated; in the latter, the edge is not so abrupt, and is not elevated. Lastly, whilst eczema, although sometimes obstinate, yields to suitable treatment, the malignant affection only yields to extirpation or other treatment applicable to epithelioma generally.

THE IMPROVED SANITATION OF CANNES.

INTENDING visitors to Cannes will be glad to know that, at the present time, both town and neighbourhood are quite healthy, and there have been no cases of the typhoid fever which was slightly prevalent there last winter since July last. Nevertheless, the Mayor and Town Council of Cannes have voted a large sum of money for the carrying out of the suggestions and advice which the medical men of Cannes, in consultation, had laid down, so as to avoid the probability of any recurrence of epidemic disease due to imperfect drainage and water-supply. A Commission d'Hygiène and Bureau d'Hygiène Publique have been instituted, under whose auspices 584 hotels and villas have been inspected; and, with the exception of five recalcitrant householders, all the other proprietors have corrected various defects and errors in drainage, cleansing, and ventilation which were pointed out to them by the constituted authorities. New sewers and main-drains have been, and are, in course of construction in the frequented thoroughfares of Cannes. The present system is being adapted, as far as possible, to approved sanitary requirements. Another excellent reform in Cannes, is the sanitary inspection of dairies now carried out under the new régime. Visitors to Cannes are much in the habit of walking out to the dairies in the neighbourhood to drink the excellent milk for which they are

famous. It is, therefore, obviously of the highest importance that the drainage and water-supply of these establishments should be of such a character, as to preclude the possibility of the propagation of zymotic disease by the drinking of the milk to be obtained at them.

SCURVY IN THE MERCANTILE MARINE.

MR. WILLIAM COLLINGRIDGE, the Medical Officer of Health for the Port of London, states, in his last half-yearly report, that a very noticeable feature to one acquainted with the health of seamen in the port of London has been the gradual increase in the number of outbreaks of scurvy. He remarks that, since the compulsory issue of lime-juice to British vessels, it is to be feared that owners and others have been too ready to rely mainly upon its antiscorbutic properties, to the exclusion of other important and essential articles of food. It appears that there is, at the present time, no compulsory diet-scale in existence; and such dietary-scales as are in use have been handed down from generation to generation. Many of these are naturally utterly unfitted for the purpose; and, where rigidly adhered to, which, as Mr. Collingridge observes, is happily not often the case, they are inadequate to preserve the health of seamen. It cannot be too strongly urged that the issue of lime-juice can only serve, as it was only intended to, as an extremely useful adjunct to a generous and liberal diet-scale; and is in itself incapable of preventing scurvy, unless such rational scale be allowed. Mr. Collingridge, therefore, comes to the conclusion that, unless shipowners are prepared to recognise the true economy of proper and suitable food for their seamen, it will doubtless become necessary to adopt a legal minimum scale. It appears that scurvy, not being in any sense an infectious disease, cases, even when discovered, cannot be dealt with by the medical officers of the port of London, but are by them reported to the Board of Trade.

SURGICAL OUTFITS FOR RAILWAYS.

THE Pennsylvania Railroad Company has, we learn from the *New York Medical Record*, purchased two thousand tin boxes containing a few simple surgical materials likely to be used in cases of accident. The boxes are kept on the locomotives. Each one contains one rubber compress, one package of absorbent cotton, six rolls of bandages, one pyramid of pins. This outfit must always be kept up, and when anything is needed requisition should be made at once. With the box are the following simple directions. When an arm or leg is crushed, causing hemorrhage, pass the compress around the limb immediately below the injured part. In case of rupture of a vein, tie it lightly until the arrival of the surgeon. The rupture of an artery can be distinguished by the colour of the blood, which is red, and spurts out, while a vein has black blood, and flows continuously. For wounds on the head or face apply absorbent cotton, and bind with a bandage. The company deserves great credit for the humanity and forethought shown in the adoption of this scheme.

THE HARROGATE COTTAGE HOSPITAL.

FOR twelve years past there has been a cottage hospital in Harrogate, which has relieved, during that period, 4,000 cases of sickness or accident. It has lately been proposed to erect a new and enlarged hospital, capable of accommodating eighteen beds. A site for the new building was given by Mr. Greenwood of Swanciffe Hall, and £4,500 have been contributed towards the necessary expenses. On September 28th, a large party assembled to witness the ceremony of laying memorial stones by Mr. Greenwood, and by Mr. Ellis, the chairman of the committee. The arrangements of the new building, and the objects it was intended to serve, were set forth by Dr. N. Williams. The hospital will be in the pavilion style, and the committee are most anxious that all the arrangements should be in accordance with the scientific requirements of the day. We congratulate the inhabitants of Harrogate on the improved accommodation which is thus about to be provided for their sick poor; but we observe, with regret, that there is no element of self-help, either in the in-patient or in the out-patient

department. It was remarked that the persons for whom the hospital was intended might be divided into two classes—the one included all kinds of mechanics, artisans, and labourers; the other was the great class of domestic servants, both in and out-door. But both of these classes are very comprehensive, and include persons whose actual condition varies much in the social scale. Many, undoubtedly, are proper objects of charity, but a large proportion of them ought surely to be encouraged to make some provision for themselves on the provident system.

MR. CRITCHETT.

IN another column, we publish an obituary notice of Mr. George Critchett, whose serious illness during the last few weeks has given rise to anxiety in the minds of his friends, which has proved only too well founded. Mr. Critchett was a man whose personal character and kindness of heart had endeared him to a large circle of friends. His skill and conscientious care as an operative surgeon had, for many years, obtained for him, a leading position not only among the operators of Great Britain, but among the ophthalmologists of the world. He lived through a period of progress in which the science and art cultivated so successfully by him have made unexampled strides. He saw the birth of the ophthalmoscope, the introduction of the new methods of research and operation for which we are so largely indebted to Helmholtz, Donders, Grafe, Bowman, and Liebreich; and, in this progress, Mr. Critchett himself took an active part. His fame was greatest as an operator, but he kept himself well acquainted with the progress of ophthalmological science in all its departments; and, while his career commenced in what may almost be said by comparison to have been the pre-scientific period of ophthalmology, he thoroughly appreciated, and carefully mastered the intricate details of modern ophthalmological literature and practice. Although well advanced in years, his robust frame, energetic character, careful habits of life, and thorough enjoyment of athletic exercise, as well as social amusements, gave him all the characteristics of a much younger man, and seemed to promise a prolonged lease of life; thus, to his friends, his death seems premature and sudden, and will give to many a shock as of an unexpected misfortune. Mr. Critchett, during the latter years of his life, has been relieved of many of the cares and responsibilities of an arduous practice by his son, Mr. Anderson Critchett, Ophthalmological Surgeon to St. Mary's Hospital, whose devoted affection for his father, and constant care, has soothed and cheered his later days of sickness.

EGYPTIAN WAR FUND.

A PUBLIC meeting has been held to appoint a committee to carry out the proposed National Fund for the relief of the families of the killed, and the soldiers, sailors, and marines wounded or disabled in the Egyptian campaign. Lord Elcho, who presided, said the fund, which had been originated by General and Lady Jane Taylor, in no way clashed or interfered with the movement at the Mansion House, to which Her Majesty had subscribed, and which the Duke of Cambridge was supporting. That effort had for an object the raising of a large permanent fund, the interest only to be used for cases of distress not met by the State; whereas the fund he now advocated, to which, he believed, about £1,000 had been already subscribed, had for its primary purpose the relief of the distressed until such permanent fund as was suggested should come into operation. The wounded alone during the campaign amounted to 600, and 4,000 men had been in hospital at one time or another. It was intended, he added, that the fund should apply to all combatants, including the Indian contingent. A resolution was passed, expressing the opinion that steps should be taken for the temporary alleviation of the suffering caused by the war; and it was also agreed that, the primary objects of the fund having been satisfied, any surplus should be vested in trustees, and they should hand it over to "such permanent corporate fund as might be considered desirable". A subcommittee was then appointed to carry out the resolutions, and a vote of thanks passed to Lady Jane and General

Taylor, the latter of whom was unavoidably absent, owing to the illness of his brother. It does not appear that in this fund any provision is made for the Army Hospital Corps, whose duties were scarcely less onerous than those of the actual combatants, and who had to be under fire, to pick up the wounded, and attend on the sick in all infectious cases. If this be the case, and if it still be intended that this fund "should apply to all combatants, including the Indian contingent", only, it might be well that a separate fund should be started, with the object of relieving those who are no less sufferers by the war, and who are equally deserving of public sympathy.

ON A NEW METHOD OF AMPUTATION OF THE UPPER EXTREMITY.

At a meeting of the Académie des Sciences, M. Josselin presented a note by M. Desprès, on a new method of amputation of the upper extremity. For a case of osteosarcoma of the scapula, M. Desprès performed with success "amputation of the shoulder," that is, entire removal of the arm, scapula, and part of the clavicle. His method of operating was as follows. 1. He tied the subclavian artery, external to the scalenus muscle, by a double ligature, to avoid secondary hæmorrhage. 2. He made an incision *en raquette*, commencing at the centre of the space separating the eminence of the spine of the vertebra, at the internal border of the scapula, and at a level with its spine, and following its dorsum, turning round the salient portion of the shoulder and passing under the axilla as far as its centre, and afterwards rejoining the original incision at its starting point. 3. He dissected a superior flap without interfering with the incision for the ligature of the vessel. 4. He divided the clavicle as near as possible to its middle. 5. He tied the axillary vein. 6. The scapula was detached after division of the pectoralis minor and dorsi latissimus, and then dividing the muscles inserted into the scapula. The suprascapular artery should be tied if necessary, and the wound brought together by sutures. The dangers of this operation consist in 1. the loss of venous blood; 2. the possibility of the entrance of air into the axillary vein; but they are not necessarily mortal. One complication occurred: the extremity of the clavicle perforated the skin; but M. Desprès thinks that it is better to have such a condition than to remove the entire collar-bone, and that this portion of the clavicle preserved covers in the superior aspect of the thoracic. The operation, he thinks, is of value in cancer of the scapula, and less formidable than removal of the scapula, leaving the arm, and may be well applied to cases of white swelling of the shoulder involving the scapula. It would seem very practicable in patients below 28 years of age.

COMMON LODGING-HOUSES IN THE METROPOLIS.

ACCORDING to the just published Annual Report of the Commissioners of Police for the Metropolis, there were, at the close of last year, 1,210 common-lodging-houses, accommodating 27,240 lodgers, open on the register; 98 new houses were registered, 60 reopened, and 183 closed. Eighteen of the last named were demolished under the Artisans' Dwellings Act; but most of the others will doubtless be again opened, after necessary alterations and improvements. Although this shows a decrease of 25 houses, as compared with the previous year, there is an increase of 1,175 lodgers; the demolished houses having been supplemented by others of a much more extensive and superior class. Four hundred and eighteen notices to register were served; of this number, 297 applications for registration were made; and 280 houses were surveyed, and apportioned to accommodate 4,571 persons. One thousand four hundred and ninety-nine non-registered houses are periodically visited to enforce the Acts. Some of these are occasionally visited by night. Twenty-six keepers of common lodging-houses were summoned for infringing the regulations, one of whom, after being convicted, and two former convictions having been proved against him, was ordered by the magistrate to close his house for twelve months, or until such time as the inspecting officers could report favourably on the same. This house is still closed. Two other summonses took place against persons for receiving lodgers and

not registering their houses after receiving notice. Seventy-seven sudden deaths occurred in common lodging-houses during the year; and 118 cases of infectious diseases have arisen, viz., small-pox 90, scarlet fever 6, typhus fever 16, fever 1, scarlatina 1, measles 3, diphtheria 1, being an increase of 95 cases on that of last year. In all these cases, the officers have acted under the instructions of the several medical officers of health with regard to the closing and disinfecting of the rooms, etc. One house, situate in the parish of St. George's, Southwark (in which a number of small-pox cases had occurred), was closed for fourteen days for the purpose of thorough disinfection. A number of better class houses are being converted into common lodging-houses, and new ones are in course of erection, expressly designed for the purpose. These houses will give superior accommodation, and will, no doubt, thin out the lodgers of, and in some instances do away with, a number of the old houses.

INFANTICIDE.

AN inquest was recently held at Martock, in Somerset, resulting in a verdict of manslaughter by the coroner's jury. A female servant was delivered of a child during the temporary absence of her mistress, and the body of the infant was subsequently discovered, wrapped up in a calico skirt, between the bed and sacking. According to the medical evidence, there was not the slightest doubt that the child was born alive and had breathed. The neck showed some appearance of having been constricted, as if something tight had been around it. The mark was a narrow one, irregular both in depth and width, but there was very little bruising; and Mr. Ford was of opinion that the mark of pressure around the neck was caused by the pressure of the umbilical cord, causing strangulation. The lungs fairly filled the cavity of the chest, and they, together with the heart, floated in water. He thought the child had lived five or ten minutes. The deputy-coroner, Dr. Weatherley, drew the medical witness's attention to the fully inflated condition of the lungs, and very properly said that, if death resulted from strangulation by the cord after the child had been alive five or ten minutes, the case was unique. The result proves that the jury appreciated the point of Dr. Weatherley's criticism. It appears that the suspicions of the mistress of the girl, and also those of an elderly fellow-servant, had been aroused as to the girl's condition, and she had been repeatedly taxed with being pregnant; but she persisted in denying that such was the case, and no further steps were taken. Before the jury separated, the deputy-coroner, addressing the two women, is reported to have said he thought it would have been wiser for the mistress to act more decisively when her suspicions were aroused, and not be content with the girl's simple denial of her condition. This was the second case of infanticide occurring within a month in his district, and he believed that, if a medical man had been consulted by the mistress when her suspicions were aroused, such steps would have been taken which would have prevented the sad termination of the case. It would be improper for us—seeing that the woman stands committed for trial—to offer our opinion as to the respective probabilities of the correctness of Mr. Ford's opinion that the death of the child might have been accidental, and of Dr. Weatherley's that the case was one of infanticide. With Dr. Weatherley we cordially agree, when he urges the advisability of a mistress consulting a medical man when she has strong grounds for suspecting the pregnancy of a servant. One precaution, nevertheless, we must emphatically press upon our readers: no master or mistress can compel a servant to submit to an examination, or even to see a medical man; and no medical man, even at the request of a master or mistress, has the right to insist upon a servant undergoing an examination. Should an examination be insisted upon against the girl's wishes, she may successfully maintain an action for damages against the person making or assisting at the examination.

QUAIN'S DICTIONARY OF MEDICINE.

THE new *Dictionary of Medicine*, edited by Dr. Richard Quain, F.R.S., and published by Longmans, the appearance of which has been much

looked forward to, was published this week, and will be found to be a goodly volume of an extremely interesting and important character. The rapid progress of scientific and practical medicine makes it highly valuable to a practitioner, to be able to find in one volume of easy reference a summary of the most recent views put forward in the vast number of monographs, transactions, and treatises through which medical information is now diffused. The task is one of very great difficulty, and requiring special qualifications. It has been fulfilled in this book with unusual success, owing, no doubt in a great measure, to the fact that the editor chosen is a physician, whose many years of practice on the one hand give him the position, judgment, and experience necessary for the work, while they have not dulled his youthful and scientific ardour in this work. Dr. Quain has succeeded in bringing together and conducting a work numbering a body of contributors of whose co-operation any editor might feel proud, and whose combined work could not fail to produce a work of the highest authority and practical value. Among the leading contributors whose names at once strike the reader as affording a guarantee of the value of their contributions, are Sir William Jenner, who writes on chest-deformities; Sir James Paget, on pathology and on the symmetry of disease; Sir Henry Thompson and Mr. Cadge, who treat of the bladder and the urinary organs in their medical aspects; Captain Douglas Galton, C.B., who writes the article on hospitals; Mr. Simon, on contagion; Dr. Brown-Séquard, on epilepsy and spinal irritation; the late Dr. Parkes on hygiene, his article being revised by Dr. Buchanan. Brain-diseases are treated among others by Dr. Jenner, Dr. Charlton Bastian, Dr. Gowers, and Dr. Buzzard; Dr. Bristowe treats of heart-disease and stammering; Dr. Broadbent of typhoid fever; Dr. Lauder Brunton of morbid conditions of the urine and various therapeutical subjects; Dr. Jones (New Orleans), discusses yellow fever; Dr. Binz (Bonn), alcohol; Dr. Greenfield, malignant pustule; Dr. Clifford Allbutt, pleurisy; Mr. Spencer Wells, ovarian disease; Dr. Balthazar Foster, valvular diseases of the heart; Dr. Playfair, Dr. Barnes, and Dr. Priestley, uterine and gynaecological subjects; Sir Joseph Fayrer, tropical diseases. Miss Florence Nightingale contributes two admirable articles on nurses and nurses' training; Dr. A. T. H. Waters (Liverpool) on bronchitis; and Dr. Hermann Weber deals with mineral waters. These are only a few of the names which strike the eye at once on looking through the volume, but they will serve for the present to indicate the wide range of subjects treated, and the success with which Dr. Quain has been able to obtain the aid of the most accomplished experts in each subject. It is noticeable that the most recent questions are dealt with, Dr. Stevenson including, in his valuable contributions to toxicological subjects, a discussion on the ptomaines; while bacilli, anthrax, and tubercle are all treated according to most recent researches and knowledge.

THE HEALTH OF PARIS.

DR. BERTILLON gives a more satisfactory account of the typhoid fever epidemic in Paris, in his report of the forty-third week of the year. The number of deaths had diminished to 173, against 244 in the previous week, and 406 admissions to hospital, against 741 in the preceding. This notable diminution of attacks, though still very large, shows, in Dr. Bertillon's opinion, a real improvement, and raises hopes that the disease has now definitively entered on the stage of decrease. It is to be noted that, though the epidemic has lost somewhat of its virulence, it is becoming more diffused into districts hitherto free from it; whilst the districts which have suffered most from its ravages still retain their unfortunate pre-eminence. The French physicians, however, seem to be by no means strict in the nosology of typhoid fever. Another striking point in the measures adopted to stamp out the present formidable fever epidemic in Paris is the singular absence, in the directions for prophylaxis and treatment issued by the Municipal Council of Hygiene, of any warnings as to the use of the probably polluted water-supply of Paris. Experience has shown that, in this country most, if not all, outbreaks of enteric fever are caused and intensified

by pollution of the water-supply. Of this fact, the recent epidemic at Bangor is a patent example. It is well known that the water-supply of Paris is always, from the cesspool arrangements of the city, liable to pollution; and at the present time, with some hundreds of enteric fever cases in full blast, nothing is less probable than that the ejecta of the patients are carefully disinfected before becoming a possible cause of the spread of the disease by its communication to the water-supply. Nevertheless, there are no directions issued to the population at large as to the prudence of not drinking any water without its being previously boiled, a simple but highly necessary precaution; neither do we find any directions as to the disinfection of the linen and dejecta of the patients, precautions which, in this country, have been found to be of paramount importance in checking the spread of a malady which, as we have already pointed out, is generally found to owe its origin and spread to some pollution of the drinking-water.

MENTAL AND PHYSICAL CHARACTERISTICS OF CONVICTS.

THE recently published report of the Commissioners of Prisons contain some interesting remarks by the Medical Inspector, Dr. R. M. Gover, in reference to the mental and physical characteristics of prisoners of the habitual criminal class. Dr. Gover says that an examination of the figures of the census made last year of habitual criminals confined in the local prisons in England and Wales shows that, out of 21,917 prisoners of this class, as many as 18,519 (or 84 per cent.) are returned by the medical officers as fit to perform hard labour. This, as might be expected, is larger than the percentage of convicts in similar physical condition, and it may be partly accounted for by the fact that those of the inmates of the local prisons who are habitual criminals are younger in years and in crime than the convicts. Of the former, 51 per cent. are from fifteen to thirty years of age; of the latter, only 27 per cent. range between those ages. But, comparatively young as are the 21,917 habitual criminals enumerated in the census of local prisons, they are known to have incurred 86,682 previous convictions, or nearly four previous convictions per head, nearly every conviction involving a sentence of imprisonment. Notwithstanding, however, that they have passed through this amount of imprisonment, as many as four-fifths, as already stated, are found to be fit for hard labour. When allowance is made for the fact that a large proportion of those who are unfit for hard labour are in that condition on reception into prisons, it would certainly appear that residence in prison is favourable to the maintenance of health and strength. These facts will doubtless be re-assuring to those philanthropists, who are inclined to the opinion that the discipline and management of the prisons are in some respects unduly severe. It is necessary to bear in mind that, for every previous conviction known to the police and prison authorities, there is probably at least one that is not known. Indeed, nothing is unfortunately more certain than that large numbers of criminals pass a great portion of their lives in prisons; yet most of them are in excellent health, and fit for hard labour. The greater the proportion of habitual criminals among the inmates of the prisons, the better would it seem to be not only for the public, but for the criminals themselves. The number returned as fit for light labour is 3,122, leaving only 276, or 1.25 per cent., who are found to be unfit for any labour. The great majority of these are in the prison hospitals. Many are admitted into hospital on reception into the prisons, and are never subjected to any discipline other than that involved in being under lock and key. Perhaps one of the most remarkable features in the census is the very small number returned as scrofulous. The number given is eighty-five, or only 3.8 per 1,000. The result of the two censuses of the habitual criminals cannot, Dr. Gover thinks, fail to give satisfaction to the public as to the general management of the prisons.

THE CAUSE OF SICK-HEADACHE.

DR. SAVAGE, of Jackson, Tennessee (in *The Medical and Surgical Reporter and Edinburgh Medical Review*), announces that he has discovered the real cause of sick-headache to be hypermetropia and

astigmatism, either alone or combined, and that its successful treatment consequently consists in the use of a properly fitted glass. In support of his views, he gives a detailed account of four cases occurring in the persons of his mother, his sister, his preceptor, and himself. His mother had long suffered from sick-headache; but, as she grew older, the attacks became less frequent, and, at the age of 58, she became entirely free from them. At the same time, she noticed that her vision for distant objects was failing. Dr. Savage examined her, and found that her once latent hypermetropia had been converted by loss of power in her ciliary muscle into a wholly manifest hypermetropia. The question occurred to him, could not her far-sightedness have been the predisposing cause of her sick-headache, and would not the simple glasses he was then able to give her have transformed her years of suffering into years of ease? He was a sufferer himself. In the latter part of March of this year, premonitory symptoms of an attack of sick-headache appeared. Instead of taking his accustomed dose of chloride of sodium, he put three or four drops of a one per cent. solution of atropia into his left eye, the headache being confined to that side. In half an hour, his ciliary muscle was at rest, he was free from pain, and had no inclination to vomit, as on former occasions. The atropia had relieved the tension of his ciliary muscle, putting it to rest, and thus relieving its pain; and, there being no further cause for sympathy on the part of the head and stomach, the pain and nausea ceased. His vision was perfect before; now, however, hypermetropia and astigmatism existed in his eye; so that, to overcome the defect, he required a combination of a convex spherical lens of forty-two inches focal distance, and a convex cylindrical of sixty inches focal distance, with its axis set at an angle of 90°. He afterwards found the right eye also hypermetropic and astigmatic, and gave it the proper correction. Since then, with one week's exception, he has done all his reading, etc., with the aid of the glasses. During the week he laid them aside, he had a severe attack of sick-headache, and does not, in consequence, intend to repeat his folly. In his sister's case, the doctor found one eye hypermetropic, the other hypermetropic and astigmatic. The proper glass for each eye was given her, and now her sick-headache is a thing of the past. His preceptor he found hypermetropic; and in his case, also, after the use of convex lenses, the sick-headache disappeared. The predisposition to sick-headache, in most persons, ceases between the ages of 50 and 60. Dr. Savage offers as an explanation of this, that, about this time, a latent hypermetropia is converted into a manifest hypermetropia, the ciliary muscle that has had to work so hard during so many years being worn out, and ceasing its labours, and thus there is no further cause for sympathy on the part of the head and stomach. The periodicity of the attacks, he thinks, may be explained by the eye being able to bear for a time the excessive work it is made to do, when at length its distress is made known by an explosive attack of sick-headache, the eye and head aching indescribably, and the stomach, through sympathy, so desperately nauseated as to unload itself of its contents. Even before the attack comes on, the stomach performs its functions sluggishly, through sympathy for the overworked eye. The exciting cause of the sick-headache, he is of opinion, is always to be found in the over-use of a hypermetropic or astigmatic eye.

MORTALITY IN INDIAN JAILS.

THE public has heard a good deal during the last few sessions of the undue mortality amongst prisoners in Indian jails. Mr. O'Donnell, especially, has been persistent in his questions and remarks on the subject. There is no sort of doubt that the mortality in question is much higher than it ought to be; but opinions seem to be greatly divided as to its probable causes. A variety of reports and minutes on the subject by Indian officials have recently been printed as a Parliamentary paper; but they do not throw much further light on the subject. The correspondence with the Government of India and with a despatch by the Marquis of Hartington dated May 26th last, which sums up sufficiently well the various ideas bearing on the question. According to the figures

of the Sanitary Commissioner with the Government of India during the three years 1877, 1878, and 1879, the death-rates in Madras of the free population were 53, 27, and 18 per thousand respectively; those of the jail population were 176, 125, and 56. In Bombay, the death-rates of the free population were 38, 32, and 23; those of the jail population were 54, 118, and 109. In the Punjab, the death-rates of the free population were 20, 36, and 38; those of the jail population were 33, 109, and 140. In the Central Provinces the death-rates of the free population were 23, 46, and 34; those of the jail population were 45, 118, and 67. The statistics of the free population in Bengal Proper are said to be too defective to be of use for comparison, but during 1879 the death-rate in the jails of that province was 97, a higher rate than in any year since the famine year of 1866. The Council of the Viceroy is of opinion that the disastrous results of the last few years are, in the main, to be ascribed to influences affecting the general population of the country, and among these, in no small degree, to the privations arising from scarcity and high prices. Great weight must be given to such considerations; for, although the wide discrepancies apparent between the mortality among the jail and among the free population point to the existence of some special causes seriously influencing the former and not the latter, it is important to remember that the jail of every district "fulfils to a large extent the functions of a poor-house as well as of a jail," and, in times of scarcity, is filled with a population "suffering in different degrees from the effects of privation." The conditions, moreover, affecting the mortality of Indian jails are, no doubt, at all times mixed, uncertain, and difficult of discovery. But making every allowance for these considerations, Lord Hartington observes that he cannot admit that the heavy mortality represented by the above figures, lies beyond reach of remedy by an energetic and vigilant administration. There is a conflict of opinion as to the effects of the Prison Conference diet scale on the recent mortality in the jails, especially in those of Bengal; but according to the Indian Council, there is no reason to believe that the prisoners anywhere died in excess numbers in 1879 because they were insufficiently fed. There is much force in the statement of the Sanitary Commissioner that it is of little use to fix good dietaries, unless measures be at the same time taken to insure that prisoners receive their allowances of food in full. The necessity for vigilant supervision, not only in this respect, but also throughout the various branches of the jail department, appears to be of paramount importance. In a number of recent jail reports, reference is made to overcrowding in jails, which is rightly described as a great sanitary evil which should be prevented by all possible means. The importance of this subject, especially in times of scarcity, cannot be exaggerated, and Lord Hartington trusts it will continue to receive careful attention. He thinks there is great reason to believe that the remarkable improvement in the health of the British soldiers in India during recent years is mainly attributable to the increased space allotted to them in their barracks, and that the peremptory orders of the Government issued in 1865 to provide additional accommodation where a certain fixed minimum standard space was not given in the old buildings, led to an immediate and important improvement in the health of the men.

SCOTLAND.

DR. ROBERT BARNES has been elected an Honorary Fellow of the Obstetrical Society of Edinburgh.

THE FEVER EPIDEMIC AT JOHNSTONE.

THE epidemic of scarlet fever, which has been prevalent in Johnstone for some weeks, shows as yet no decided symptoms of abatement. During last month, there were 12 deaths; and in the present month, there have been 19; so that the mortality has increased considerably. Among the causes mentioned as keeping up the epidemic is the state of the drainage, which is said to be defective. Steps are being, however, taken to adopt more stringent measures for stamping out the disease, and the propriety of closing the schools is under discussion.

THE CHAIR OF SURGERY IN THE UNIVERSITY OF ABERDEEN.
THE Crown has appointed Dr. Alexander Ogston to the Chair of Surgery in Aberdeen University, vacant by the retirement of Dr. Pirrie. This appointment is sure to give universal satisfaction to the profession in the North of Scotland, and throughout the country.

PUBLIC HEALTH AND TRAMCARS.

LATELY, the Medical Officer of Health for Glasgow, in his unceasing vigilance, made a complaint to the Glasgow authorities regarding the tramcars. As a result of this, 212 cars were re-examined, in view of renewal of their licenses by the police authorities; 123 were found in a satisfactory condition, the remainder were refused licenses on account of defective ventilation.

ST. ANDREW'S UNIVERSITY.

ON Saturday last, Dr. William Mackintosh, lately medical superintendent of the lunatic asylum, Murthly, and examiner in Natural History in Edinburgh University, and the author of many contributions on zoological subjects, was installed as Professor of Natural History in the University of St. Andrew's, the chair having been vacated by the translation of Professor Alleyne Nicholson to Aberdeen University.

THE DUNECHT MYSTERY.

FOR the time being, at least, the "Dunecht mystery" seems nearly as much a mystery as before, notwithstanding the fact that Charles Soutar was sentenced to five years' penal servitude at the Justiciary Court in Edinburgh, for being concerned in removing the body of the late Earl of Crawford. The evidence made it clear that more than one person must have been concerned in the act. Although there are several cases on record where sentence of imprisonment has been passed for lifting and removing dead bodies for anatomical purposes, no such case as the Dunecht case has ever before been tried.

THE GLASGOW MEDICAL SCHOOLS.

WITH the commencement of November, the different medical schools in Glasgow show signs of resuming work; and at the University the introductory lecture in the Faculty of Medicine was delivered by Professor Gairdner, who referred to the condition and progress of medical science and instruction in Scotland since the passing of the Medical Act of 1858. In the course of his address, Professor Gairdner dwelt at some length on the question of vivisection, and characterised the present Act as one of the most monstrous, inconsistent, and hypercritical enactments of any legislature.

ENTERIC FEVER AND MILK-SUPPLY.

AN outbreak of enteric fever has occurred at Grangemont, which, there was good reason to believe, was closely connected with milk-supply, as the cases occurred in families supplied by milk from a house in which there was a case of enteric fever. The local authorities caused their sanitary inspector to consult the Board of Supervision, and Dr. Littlejohn in Edinburgh. On Friday last, the local authorities issued an order, directing that the milk of the cows belonging to a certain dairyman should be destroyed, until a case of enteric fever in his house had been removed and his premises thoroughly disinfected, and to the satisfaction of the medical officer of the burgh.

HOME FOR INFIRM CHILDREN.

THE eighth annual meeting of the supporters of the East Park Cottage Home for Infirm Children was held on Monday afternoon, at the home. New accommodation has been provided for twenty children additional, and the home can now accommodate fifty. The report submitted showed that twenty-nine new cases had been admitted during the year, and fifteen discharged, while at present there are forty-seven inmates. The receipts amounted to over £1,160 and the expenditure was about £2 less than the income. The recent additions have cost £2,000,

and of this sum about £1,000 has already been received as subscriptions and donations, leaving about £1,000 to be made up; and it was hoped this would be done during the year.

DEATH OF DR. J. F. ARTHUR.

DR. JOHN F. ARTHUR, son of the Rev. David Arthur, Free Church minister, of Banchory Devenick, near Aberdeen, was fatally burnt this week while proceeding to Aberdeen in a Pullman sleeping car. Ten years ago he graduated at Aberdeen University, and almost immediately afterwards proceeded to Ceylon, where he was engaged in the Government medical service at Dimbula, where he remained until about five weeks ago, when he left Ceylon to take up his residence in Scotland. He arrived in London on Monday last, making a brief stay there. He left St. Pancras Station on Saturday evening for Aberdeen. He was thirty-three years of age, and was unmarried.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending October 21st, it appears that the death-rate in the eight principal towns during the week was 19.7 per 1000 of estimated population. This rate is 1.7 below that for the corresponding week of last year, but 0.5 above that for the previous week of the present year. The lowest mortality was recorded in Greenock—viz., 11.9 per 1000; and the highest in Paisley—viz., 27.5 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 4.1 per 1000, or 0.1 below the rate for the previous week. There was an increase in the number of deaths from scarlet fever. Acute diseases of the chest caused 108 deaths, or 8 more than the number registered during the previous week. The mean temperature was 48.2°, being 4.6° below that of the week immediately preceding, but 3.4° above that of the corresponding week of last year.

GLASGOW EAST PARK COTTAGE HOME.

THE eighth annual meeting of the supporters of this institution for infirm children was held on October 30th. The report, which was adopted, showed that there were 33 children in the home at the last annual meeting, and 29 were admitted during the year, making a total of 62, of whom 47 still remained in the institution. As the list of applicants for admission was becoming continually larger, and as few removals were taking place from the home, the directors decided to enlarge the building, and this they have done by the purchase of an adjoining cottage, so that there is now accommodation for 50 children. These alterations will entail increased annual expenditure, which it is hoped will be met by increased liberality on the part of the public. The home is in connection with the Glasgow Association for aiding infirm children and those in an imbecile condition; and the children are either visited at their own homes and assisted there, or removed to the cottage home, where they can be better aided. No fewer than 240 children have passed through the home since its establishment eight years ago, and many have been very much benefited by their residence in it.

GLASGOW VETERINARY COLLEGE.

THE opening ceremony of the winter session of this college took place on October 24th, and the chief interest in the proceedings centred in the introductory address, delivered by Professor Cleland of the University, who devoted his remarks almost entirely to a defence of vivisection. The position he took up was, that without experiment the information necessary for the cure of suffering in man or in domestic animals could not be obtained; and in the course of his address he took the opportunity of exposing many of the popular ideas about vivisection, and all that it implies. He showed that the highly wrought pictures often drawn of the sufferings of animals from experiment and otherwise, were full of exaggerations, depending on the ignorance or want of consideration of those who drew them, and he supported this view by producing evidence to show that the capability

of feeling pain was, even in the higher domestic animals, far less than in man. He dwelt, too, at some length on a fact not always borne in mind, that speaking of pain itself, apart from the power of bearing it, there could be no doubt that the pain occasioned by a given lesion varied according to the fineness of the impressibility of the nervous system, and that the amount of intelligence had an important bearing on the character of the suffering possible to an animal. Since his appointment at the University, Professor Cleland has delivered several opening addresses, but of them all there is not one that deals with a more important subject than the one to which we now draw attention, and his plain spoken arguments and numerous facts should be brought under the notice of those popular agitators who strive to influence public opinion on a question which is as yet very imperfectly understood by the general public.

UNIVERSITY OF EDINBURGH.

At the first professional examination in the subjects of botany, chemistry, and natural history, held last month, 122 candidates passed, and of these, three passed with distinction. On Wednesday, Professors Rutherford and Greenfield, on delivering their first lectures in the splendid new premises now occupied by them, expressed to their classes the satisfaction they experienced in having obtained accommodation for teaching, theoretical and practical, and for original investigation of such a complete character. They both referred to the late Professor Hughes Bennett as having had largely the credit of inaugurating practical classes in the medical curriculum; and the full measure of justice done him by Professor Rutherford (who, as a former assistant and successor in the chair, was well qualified to appreciate Professor Bennett's services), will be received with satisfaction among the army of practitioners who received their first training in microscopy and practical medicine in Hughes Bennett's classes. The lecture room of the surgery class having been found too confined for the number of students attending the class, Professor Chiene has been compelled to deliver his lectures in the anatomical class-room, the most commodious of the new lecture rooms.

IRELAND.

THE collection for the Dublin Hospital Sunday Fund will be made, this year, on November 12th.

A MOST successful concert was given in the Ballymena Town Hall on October 15th, under the presidency of Lord Waveney, in aid of the funds of the Ballymena Cottage Hospital.

THE ROYAL UNIVERSITY.

At a meeting of the Senate of the University last week, Dr. Banks, Physician in Ordinary to the Queen in Ireland, and Regius Professor of Physic in the University of Dublin, was elected representative of the University on the General Medical Council for three years, from January 1st, 1883. Dr. Banks represented the Queen's University on the Council from the death of Sir Dominic Corrigan to the disestablishment of that University. Owing to the omission in its charter of provision for a representative of the Royal University on the General Medical Council, a Bill to supply this oversight was passed last session; and it is under this Bill that Dr. Banks will resume his seat at the Council.

CORPORATION GRANTS TO HOSPITALS.

THE Corporation of Dublin have increased their customary annual grants of £400 each to the Mater Misericordiae and to St. Vincent's Hospitals to £400 each. As usual on the occasion of these annual presentations, efforts were made to curtail the grants to certain other hospitals, but unsuccessfully. The Corporation claim the right of having at least two of their members as representatives of their body

on the board of each hospital to which they make a grant. The absence of such representation was, in most cases, made the ground for desiring to curtail some of the grants. Both the hospitals, however, which have received an increased annual grant have no Corporation representative on their respective boards, inasmuch as they are managed, and that most admirably, by the Sisters of Mercy and the Sisters of Charity.

REFORMATORY AND INDUSTRIAL SCHOOLS: ANNUAL REPORT.

THE deaths among children in industrial schools in Ireland during 1881, numbered 77; of these 70 were inmates of the schools at the time of their death, and seven girls suffering from consumption were on licence, having been placed outside with friends. The death-rate in 1881 was one in every 75 of the inmates, being 1.3 per cent. of the total number of children in charge. A very large majority of the deaths last year, as in previous years, was from scrofula and tuberculosis in their various phases. Only four deaths from zymotic diseases were reported, viz.: three from fever, and one from scarlatina. The inspector, in his report, alludes to the increased mortality from tubercular diseases, and states that he finds the greatest difficulty in inducing managers, especially those of girls' schools, to take the necessary precautions to prevent the spread of the malady, by a separation of the children suffering from this class of diseases from the healthy inmates of the schools, and to avoid overcrowding in the dormitories and classrooms.

DUNDROM CENTRAL ASYLUM FOR CRIMINAL LUNATICS.

THE daily average number of patients in this asylum, during 1881, amounted to one hundred and seventy-four, of which twenty were admitted during the year. The deaths were five, giving a percentage of 2.87 on the daily average number of patients, and of 2.5 on the total number resident during the year. Dr. Ashe, in his report for the past year, states that the health of the inmates has been generally satisfactory; but that there was a tendency to tubercular disease of the lungs, from which the asylum had hitherto been remarkably free. It is satisfactory to learn that a regular and ample supply of water has been insured, hitherto so much needed, not only for domestic purposes, but also as a protective against the danger of fire, the highest level of the building being now commanded by pressure from the city reservoirs. The marked disparity which exists between the married and unmarried inmates of Irish asylums is shown also in this institution. For example: of the one hundred and seventy-three patients in the asylum on the 31st of last December, twenty-one were married, an equal number widowers or widows, leaving one hundred and thirty-one, who were single. This peculiarity in the social condition of lunatics in Irish asylums has never been accounted for.

CONSPIRACY AGAINST A MEDICAL MAN.

A CONVICT, named Harvey, who was recently liberated from Portland Prison, has given publication through the Rev. Dr. W. Meagher, Catholic priest at Weymouth, Dorset, to a conspiracy in which he was engaged, for the purpose of ruining a medical man called O'Hare, who was then practising in Belfast. The cause of the conspiracy is alleged to have been some irreparable injury effected to Harvey's relations by Dr. O'Hare's wife's parents. O'Hare was convicted at the Belfast assizes of forging and serving writs for the purpose of extorting money, and was sentenced to lengthened imprisonment. His name was at this time taken off the *Medical Register*. Harvey solemnly avers that O'Hare was absolutely innocent of this criminal charge, and that he and a disreputable process-server managed the entire business. He also states that another charge brought against O'Hare, of stealing a gold watch and jewellery, was utterly false; that O'Hare had nothing whatever to do with it. A third charge, of having caused the death of a gentleman, who lived near Grey Abbey, county Down, by the administration of medicine, is stated by Harvey to have

been also untrue; the drugs having been supplied by his own household. It is also alleged that O'Hare had become obnoxious to a certain secret society in the neighbourhood of Belfast, and that money was subscribed by leading merchants and others to effect his ruin. The whole story is very ingenious; but there are many who know of the actions in which Dr. O'Hare was engaged, who will be inclined to place very little belief in it. During his imprisonment, pending his trial at the assizes, he feigned a variety of diseases for the purpose of evading the prison discipline. These various illnesses culminated in aphasia with left (?) hemiplegia. This was his condition at the assizes, and he answered all questions, and made all his statements from the dock in writing. After his sentence he made a marvellously rapid recovery from this anomalous paralytic condition.

POISONING BY LAUDANUM.

A CASE of poisoning by laudanum recently occurred in Belfast, in which the coroner and jury commented strongly on the laxity of the law in reference to the sale of this poison. The subject of the inquest was found in a public-house in an insensible condition, and the proprietor, believing him to be drunk, had him removed to the police office. When there, the smell of laudanum was detected in his breath, and four small empty bottles labelled "laudanum," were found in his pocket. He was immediately taken to the Royal Hospital, where the stomach-pump was used, but he expired in the course of a few days. It was stated at the inquest that the deceased, who was a publican, had been drinking heavily for some time, and it was proved that the day on which he was found insensible, he had purchased three and a half ounces of laudanum in two chemists' shops, and he had two other bottles in his pocket which had contained a similar quantity, but it was not stated what time these had been procured. It was stated that the medicine was purchased for a horse; and one of the chemists was so satisfied that this was the purpose for which it was bought, that he did not think it necessary to even take the name and address of the purchaser, but the Act of Parliament, as far as laudanum is concerned, does not require this precaution to be taken. It is not long ago since a similar suicide was prevented by the vigilance of a druggist's assistant. A young man, of rather strange manner, came into his shop and purchased an ounce of laudanum. When he left, he immediately suspected his intention, and followed and had him arrested. It was clear from the evidence at the police court, that it was his intention to commit suicide. From a knowledge of cases similar to these, we are decidedly of opinion that some further restrictions should be placed on the sale of drugs, such as laudanum, which are well known to possess poisonous properties, and which are frequently purchased on this account.

QUARANTINE AND BLACKMAIL.

THE *Times of India*, of September 19th, gives an interesting account of the voyage of the steamship *Columbian*, the first vessel falling under the recent quarantine regulations. It left Bombay for Jeddah three months ago, with a large number of pilgrims on board, and had to perform quarantine at the island of Camaran. Here the Turkish Sanitary Board have established a quarantine ground, with about half-a-dozen Turkish medical officers in charge of the station, and two hundred and fifty Turkish troops to protect the pilgrims. The expense of landing the cargo, the quarantine dues on it, and the cost of reshipping it, have to be borne by the ship. The pilgrims have to pay their boat-hire, and are mulcted to the extent of twelve annas per head per day. If a case of sickness, resembling small-pox or cholera, occur among the pilgrims while they are ashore, an additional ten days' quarantine is imposed; and so, *ad infinitum*. The dues levied on the pilgrims of the *Columbian*, for fifteen days' detention, amounted to £1,800 sterling, besides those levied on the cargo. When the vessel arrived at Jeddah, there was a sick man on board, and it had a narrow escape of being sent back again to Camaran for another ten days' quarantine. However, a medical board was assembled with considerable difficulty; and it was decided that the pilgrim in question was not suffering from either small-pox or cholera, and the steamer obtained *pratique*. Complaint is made that only ranges of mat huts are provided for the pilgrims at Camaran, and that the blackmail extorted is "frightful."

THE EGYPTIAN EXPEDITION.

SPECIAL REPORT ON THE BRITISH ARMY HOSPITAL AT CAIRO.

Continued Defects of the Transport and Commissariat.—Sir Garnet Wolseley's Visit.—Want of Beds and Linen.—Serious Character of the Typhoid Cases.—Want of Female Nurses.—Malarial and Infectious Form of Disease.

OUR special correspondent writes on October 10th.

"There is something wrong here; I don't understand it", are ominous words to come from a General Commanding-in-Chief on his official inspection of the largest base hospital here; they came, however, and were justified from the light in which he saw. It was only a few days (two) before he made this visit, that the hospital had been formed into what is known in the service as a "dieted" hospital; and, in the transition state, unavoidable disorder, when so much red tape had to be introduced, was apparent. He was surprised that a few men were still lying on the floors unprovided with bedsteads, mattresses, and mosquito-curtains; and remarked: "Expense is no excuse. If the sackings and bed-pins for the cots are at Alexandria, I will at once sanction the purchase of three hundred native cots. I don't mind what expense is entailed, provided the sick are cared for." He left unfavourably impressed with his visit. It is fair to the Army Medical Department to explain that the fault did not lie with them; bedsteads there were here in plenty; but, by some fatality, the sacking-ropes and bed-pins were either in another ship, or, at any rate, could not be found at Cairo. The bare bedsteads were, therefore, useless, and would have remained so, had not a happy thought struck the brigade-surgeon in charge, who ordered a stretcher to be tied on to each frame, and so improvised a sacking. In this way, every man was, within twenty-four hours, off the floor, and on a good hair-mattress—a luxury, I can assure you, after the sand of the desert, and the equally disgusting soil of Gazerah and Abasseyah, where our camps now are, appreciated to its full. Sir Garnet paid another visit within the week; and, on his departure, turned round to the senior officer present, and exclaimed, "I congratulate you on the improvement visible since my last visit."

The medical officers observe that it is no easy matter, even at home, to organise a dieted station hospital, even when every appliance is at hand, and stores near, from which one can draw according to regulation; but here, with a few bales of one article, none of another, and so on, the task is doubly difficult. I find, on inquiry, that the stores used in organising this hospital have been drawn from those sent to Cyprus, and, in transit, some have doubtless gone astray. For instance, one bale of white linen sheets was all that could be found; and these, I need scarcely say, were soon used up, and there were none to replace them in the typhoid fever ward, which is full of most serious cases. Then, again, no lanterns could be found, and native ones had to be bought. Now, things are pretty straight; and if cases which are likely to become chronic could only be drafted to England, the military hospitals, both here and at Alexandria, would not be so blocked as they are at present. The officers are looked after much better now than a short time ago. A French cook, at £10 a month, has been engaged to attend to the cooking. Ice there is in abundance, and presses for the extraction of beef-juice have been purchased. The citadel being some three or four hundred feet above the level of the town, the air is much purer, and, with the improved sanitary arrangements, should prove a healthy resort for the sick. It is to the soldier, however, that the improvement tells with such marked effect. From a waterproof-sheet on a bed of sand, with everything, even their food, smothered in dust and grit, they are removed, when sick, to a comfortable bed, with hair-mattress; their extras cooked by a skilful chef, and extras ordered in the most serious cases *ad libitum*. It is amusing sometimes to hear the answers given to such questions as "Would you like some arrowroot?" "Don't know what it is, sir." But when they are asked if they will have some brandy and milk, with egg beaten up, they say, "Yes, sir", with a gleam of delight on their countenances. Champagne, brandy and soda, port, sherry, or other extras are ordered in every case where the medical officer thinks necessary. No restriction except the usual one at the foot of every diet sheet is enforced; and that restriction ought to be sufficient, for you solemnly certify that the extras were absolutely necessary, in your opinion, for the case, and were actually consumed by the patient.

In spite of all these luxuries, however, great fatality exists among the enteric fever cases, of which at the present time I suppose there are about forty in the hospital. It is of the most virulent type I have ever seen, and I have gone through more than one epidemic. Possibly the

explanation may lie in the fact that they postpone, till very late, reporting themselves sick, and only at the last moment, when utterly done up, "go to hospital." They are then retained at the provisional camp hospital for a day or two, and these hours develop the case. On arrival at the base hospital they are sometimes delirious and sinking; several, I have heard, have died a few hours after admission. It cannot be due altogether to the virulence of the disease, for this fever, as is well known, is insidious in its attack with symptoms masked by less serious complaints. Nevertheless, the fact remains, that patients die very rapidly; and, long before the usual complications of what is known as enteric fever can have time to develop, they are gone. The day has gone by when one expects to see the typical development of enteric fever, or a case which coincides identically with the typical cases laid down in students' text-books. That there are as many varieties of the fever known as enteric as there are of scarlet fever, and possibly phthisis, I think now is pretty well understood; if not, a short residence at the citadel of Cairo would soon convince any one. Even the temperature would lead one to think there must be more than one variety. Then again, the rapidly fatal results in some, and prolonged gastric symptoms in others, must point to this, even if other complications did not do so. As a rule, the spots are regular in their appearance, and the gastric complication also; but we have seen cases where both were absent, and yet the opinion was forced on one that it was a form of enteric fever with which we were dealing. The fever varies in severity from a simple attack of headache, languor, loss of appetite, thirst, dry, brown, coated tongue, with a tendency to looseness of the bowels, to a form that begins with delirium, and the fatal nervous twitching, where the patient succumbs in a few hours, or, at the most, days, to a knock-down, overpowering dose of poison. And yet I think it quite possible that one and the same poison produces both fevers, varying in degree as the virulence and quantity of the poison vary, and the germs find a congenial bed in a suitable patient wherein to propagate. Little or no medicine is given. Acute symptoms are combated; and when the temperature is high—104 and 105, as I have seen it—one-drop doses of tincture of aconite every quarter of an hour for the first two hours, and afterwards every hour, have been found useful. It must be remembered that our cases lay among men exhausted by hardship and exposure, unavoidable in campaigns, with a system abused for weeks by impure water, and, on arrival at Cairo, worse abused by bad spirit; and the result is not to be wondered at. It is, therefore, the custom to administer stimulants freely, and to rely on them more than on medicine for treatment; and, for the rest, nursing, good trained nursing, does more than the doctor towards recovery. For some days past, two French ladies of the Franciscan Order have been working bravely in the fever wards. Their good efforts are hampered in the same way as I pointed out at Ismailia, by an utter ignorance of the English language. When asked one day how they knew what cases to go to, they replied, "We hear a poor fellow moan, and then run to him; for we know he must be bad to do that." It seems strange that, whilst we are gratefully employing these two Sisters of Mercy in the largest hospital in Egypt, our own trained sisters from Netley should have been sent home, without waiting to see whether their services would be required or not. Oh, how thankful we should be to see the little red caps at the citadel now!

Speaking of the different varieties and forms this fever presents, it is well to remember that we are in a malarial district, and some of the cases may be due to malaria and dysentery. Anyone who has been at Netley, and seen the "rock" or "Mediterranean fever," "remittent fever," or "febris complicata" of Veale, will not fail to see the similarity that this fever has to it; and yet it is not the same. It seems a mixture of several types, based on a few prominent symptoms common to all, and must be the result of several causes, including several forms of disease, varying as the quantity and quality of the poison varied, and the constitution of the system that is called upon to withstand the onslaught.

Whether it be infectious or not is uncertain. I know of one case: a man had been in hospital ten days with a local affection, and was then taken with the fever. Of course, the germs might have been laid down in the ward, or some other very condition of the ward might have caused the fever; and, indeed, as if the disease had been contagious, he was in the ward next to the "fever" ward. On the other hand, some of the men in attendance have been found with the fever, and it is to be feared they must work, for the cases are as numerous and unpleasant enough without the risk of life as addition.

We understand that, according to intelligence received at the Army Medical Department on Thursday morning, the sick at Cairo were progressing very favourably. During the past few days there had been a

slight increase in the actual number of admissions; this is not owing to an increase of sickness in the Army of Occupation, but to the cessation of the process of evacuation of Egyptian territory, the troops being now mostly centred in Cairo, where they have settled down comfortably, and made themselves at home; the climate of the Egyptian capital at this season and the coming few months, does not render necessary any hurried removal of the invalids.

THE COMMITTEE ON THE ARMY MEDICAL DEPARTMENT.

THE first sitting of the Parliamentary Committee on the Reorganisation of the Medical Department of the Army was held on Wednesday last, the Earl of Morley, President of the Committee, being in the chair. The business transacted was the close examination of one witness on the arrangements made by the Army Medical Department before the Egyptian campaign had actually commenced. The committee intend to make their investigations as thoroughly searching as possible, and it invites the evidence of witnesses who are able to contribute facts, or even valuable suggestions. Its one and only object is the discovery of any defects in the medical organisation of the army that may have been disclosed by the practical experience of the medical and nursing staff in the recent campaign, with a view to obviating these evils in future. There is no question of examining into any charges of misconduct or wilful mismanagement on the part of individuals, since no such cases exist, notwithstanding the persistent assertions of certain paragraphs in the daily and weekly press. This subject, however, has been thoroughly discussed in our pages. The committee will sit daily during this month, and, after adjourning for a short period early in December, will reassemble and continue its investigations. Every endeavour will be made to complete the report before the opening of the next session of Parliament.

THE ILLNESS OF SIR THOMAS WATSON.

SIR T. WATSON, now in his ninety-first year, had returned a few weeks ago from the seaside, and was staying with his son at Reigate Lodge, previously to returning to London for the winter, and was in the enjoyment of his usual good health. On Sunday afternoon (October 22nd), after rising from his chair, he found he was unable to stand, and, inclining to the left, would have fallen if he had not received support from those at hand; subsequently, in trying to write a letter, he could not remember how to open the simplest words.

On visiting him two hours after, I found him perfectly rational and collected. He said he could not explain his symptoms; he felt perfectly well, but could not stand without help; when he tried to do so, he fell over to the left side. The pupils were somewhat contracted, equal, and answered to the stimulus of light. Pulse 78, regular; arteries somewhat rigid and tortuous; heart-sounds very feeble, with a metallic ring over the aortic valves; extremities rather cold. There was no apparent paralysis, but the face was slightly flattened on the left side, and the tongue inclined somewhat to the left. He was able to walk upstairs to bed with assistance. The urine was found afterwards to be alkaline, but contained no albumen. The temperature was subnormal. He passed a fair night. On the 25th, he was seen by Dr. G. J. [name] with me. His condition was much the same as when first seen, but he was able to take a fair amount of nourishment and some sleep. On the 26th, after slight exertion, an alarming attack of paralysis set in, with coldness and lividity of the extremities. This was followed by the administration of some stimulant, and he walked to his bedroom with assistance.

On the 27th, he took but little nourishment, and was much exhausted; he was unable to move his arms, and his legs were rigid and paralysed. A medical consultation was held, and Dr. G. J. [name] was called in to see him with me. The paralysis was not complete, but much improved; the temperature normal; tongue moist, but coated with a white fur; the pulse 84, and regular. He had taken little nourishment, and slept for some hours; he was now conscious, and had no further paralytic symptoms. Since then, his condition has varied but not improved, and on the 28th, he was seen by Dr. G. J. [name] with me. During the last few days, the temperature has been normal, and the pulse regular, but the paralysis has not improved; the face and tongue remain as when first seen, but the paralysis of the left side of the face is more marked. The urine has become acid, and now contains a trace of albumen. The breathing is of the Cheyne-Stokes type when asleep, approaching the Cheyne-Stokes type known as "Cheyne-Stokes's" respiration; the patient has been unable to sleep without assistance; and the urine is voided naturally. He only takes the lightest kind of nourishment, and a good deal, and usually sleeps several hours during the night.

He has not been able to leave his bed since the attack on October 26th; he is easily roused if dosing, and his mind remains quite clear.

The opinion we have formed is, that there is thrombosis of some of the smaller cerebral arteries on the right side (probably supplying the region of the parieto-occipital fissure). The prognosis is naturally grave.

JOHN WALTERS, M.B., Reigate.

THE PARKES MUSEUM.

THE first general meeting of the Parkes Museum, since its incorporation under Act of Parliament, was held on Saturday, October 28th, 1882, at the new premises recently acquired by the Council in Margaret Street, Regent Street (opposite the church of All Saints). The chair was taken at a quarter past three o'clock by Captain DOUGLAS GALTON, C.B., F.R.S., and he was supported by Mr. Twining, Mr. George Godwin, Professor De Chaumont, Mr. Davenport Hill, and numerous other gentlemen interested in the welfare of the Museum.

The Secretary, Mr. JUDGE, read the formal notice convening the meeting.

The first business was the election of a president. Mr. THOMAS TWINING, well known for his labours, especially in the department of personal hygiene, and as the owner of the Twickenham Economic Museum, so unfortunately destroyed by fire about ten years ago, said that it gave him the greatest pleasure to learn that His Royal Highness Prince Leopold, Duke of Albany, had graciously consented to become the first President; and he then formally proposed the election of His Royal Highness.

Mr. GEORGE GODWIN, F.R.S., spoke in warm terms of the suitability of the Prince to such a post, and of the interest which he always exhibited in any movement which tended towards the amelioration of the social condition of the people. It was resolved to convey to His Royal Highness the resolution of the meeting.

Dr. G. V. POORE proposed that the following twelve noblemen, ladies, and gentlemen (whose consent had previously been obtained) should be elected Vice-Presidents: the Duke of Northumberland, the Duke of Westminster, the Earl of Derby, the Earl Fortescue, the Baroness Burdett-Coutts, the Right Hon. Sir Richard A. Cross, M.P., Sir Joseph Fayer, K.C.S.I., Mr. Edwin Chadwick, C.B., Professor Huxley, Miss Florence Nightingale, Mr. Robert Rawlinson, C.B., and Professor Tyndall. The proposal was duly seconded, and carried unanimously.

Dr. DAWSON WILLIAMS moved that the following gentlemen, who had signed the Memorandum of Association, and had served as the Provisional Council, should be elected as the Council of the museum: Professor W. H. Corfield, Mr. Rogers Field, C.E., Captain Douglas Galton, C.B., F.R.S., Mr. George Godwin, F.R.S., Dr. W. R. Gowers, Professor Hayter Lewis, Professor John Marshall, F.R.S., Mr. Charles Parkes, Dr. Russell Reynolds, F.R.S., Mr. E. C. Robins, F.R.I.B.A., Dr. Sieveking, Professor T. Roger Smith, Dr. John C. Steele, Mr. Thomas Twining, Mr. Alfred Waterhouse, A.R.A., and Dr. Dawson Williams.

The motion was seconded by Mr. ROBINS, and carried unanimously. Professor DE CHAUMONT moved a vote of thanks to the Chairman for presiding.

Captain DOUGLAS GALTON, in responding, said that the building in which they were assembled had been recently obtained by the Council, and seemed to him to be, on the whole, fairly well adapted to the present wants of the museum. Alterations were already in progress, and it might eventually be necessary to make still more extensive improvements. There was every probability that the museum would be open to the public soon after Christmas. The work of rearranging the various objects would take up a considerable amount of time, and this duty had been delegated to a very competent committee of experts, chosen from among the members of the Council. It was their intention that every apparatus shown should be an example of the application of sound sanitary principles, and the best existing specimen of its kind. It was hoped that the museum might soon grow to be an important educational centre; and one considerable step in that direction had just been taken. The drainage of the museum building itself had been thoroughly examined by Dr. Corfield and Mr. Rogers Field, who had proposed a well considered scheme, which would exemplify the best means of overcoming some of the various difficulties met with in such a city as London; every detail of the new system was to be so constructed, that it might open to inspection, and thus be available for teaching purposes. Mr. Rogers Field, who had already devoted much time and labour to the service of the museum, had generously offered to defray the whole expense of the new system of drainage out of his own pocket. One of the departments of the museum would be a collection of the various articles suitable for food, or presenting certain dietetic

advantages; and this Mr. Thomas Twining was about to present, free of cost, and systematically arranged in suitable cases.

A vote of thanks to Mr. Rogers Field for his offer (above referred to) was, on the motion of the Chairman, unanimously carried.

At a meeting of Council held on the same day, Captain Douglas Galton was elected Chairman, Dr. George Vivian Poore, Vice-Chairman, Mr. Berkeley Hill, Treasurer, and Dr. Dawson Williams, Honorary Secretary. Mr. Mark H. Judge, who assiduously discharged the duties of Secretary to the museum before its incorporation, continues to occupy that office.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL:

NOTICE OF QUARTERLY MEETINGS FOR 1882: ELECTION OF MEMBERS.

A MEETING of the Committee of Council will be held on Wednesday, January 17th, 1883. Gentlemen desirous of becoming members of the Association must send in their forms of application for election to the General Secretary not later than 21 days before the meeting—viz., December 27th, 1882, in accordance with the regulation for the election of members passed at the meeting of the Committee of Council of October 12th, 1881.

FRANCIS FOWKE, *General Secretary*.

PROCEEDINGS OF COMMITTEE OF COUNCIL.

At a meeting of the Committee of Council, held at Exeter Hall, Strand, W.C., on Wednesday, October 18th, 1882—present, Mr. C. G. Wheelhouse, President of Council, in the chair; Dr. W. Strange, President; Dr. A. T. H. Waters, President-elect; Dr. W. F. Wade, Treasurer; Dr. J. T. Arlidge, Mr. B. Barrow, Dr. M. M. de Bartolomé, Mr. T. H. Bartleet, Surgeon-Major J. P. H. Boileau, Dr. L. Borchardt, Dr. A. Carpenter, Dr. C. Chadwick, Dr. J. Ward Cousins, Dr. A. Davidson, Dr. W. A. Elliston, Dr. B. Foster, Dr. E. Long Fox, Dr. J. H. Gibson, Dr. W. C. Grigg, Mr. A. J. Harrison, Dr. C. Holman, Professor G. M. Humphry, F.R.S., Mr. A. Jackson, Dr. T. E. Jones, Dr. H. Lanchester, Mr. C. Macnamara, Mr. F. E. Manby, Mr. F. Mason, Dr. C. Parsons, Dr. E. Rickards, Dr. R. C. Shettle, Mr. S. W. Sibley, Dr. E. H. Sieveking, Dr. E. M. Skerritt, Dr. A. P. Stewart, Mr. T. Sympson, Mr. J. Wood, F.R.S.;

Read letters of apology for non-attendance from Mr. Alfred Baker, Dr. Duffey, and Mr. W. D. Husband.

The minutes of the last meeting were read.

Read communication from Mr. Shirley Deakin, and requisition from members of the medical profession of Allahabad, of which the following is a copy:

Allahabad, N.W.P., India, June 1882.

From Medical Practitioners resident in India to the President and Council of the British Medical Association.

Gentlemen,—We, the undersigned members of the medical profession, resident in India, request the sanction of the General Council of the British Medical Association, to our constituting the North-West Provinces and Oudh Branch of the British Medical Association.

A copy of the by-laws proposed for the Branch is appended; and here follow signatures of members of the medical profession of the district.

Resolved: That the North-West Provinces and Oudh Branch be, and it is hereby, recognised as a Branch of the British Medical Association.

Resolved: That the warm thanks of the Association be given to Mr. Shirley Deakin for his able and successful efforts in founding the East Indian Branch.

Read Resolution of Council, 1882-83, of which the following is a copy:

That the Committee of Council be requested to consider in what way the direct representation of Branches can best be secured.

It was moved: That in place of the words Honorary Secretary, in By-law 25, the word *Representative* be substituted.

Whereupon an amendment was moved:

That the subject of the representation of the Branches on the Committee of Council be referred to a Subcommittee to report to the next meeting of the Committee of Council, viz., the President of Council, the President, the Treasurer, Dr. Alfred Carpenter, Dr. Ward Cousins, Dr. Alexander Davidson, Dr. Grigg, Dr. Holman, Mr. Arthur Jackson, Dr. Parsons, and Dr. A. P. Stewart.

The amendment having been put from the chair, the same was declared to be carried.

The amendment was then put as a substantive motion, and declared to be carried.

Next Meeting.—It was decided that the next meeting should be held at Sherborne.

A grant of two guineas was made to the British Medical Benevolent Fund.

Dinner.—The members dined together at the hotel.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

THE first meeting of this District for the session was held at the Royal Naval School, Greenwich, on October 20th; THOMAS BRIDGWATER, M.B., President of the Branch, in the Chair.

President's Address.—THE PRESIDENT, in his opening remarks, referred to the successful jubilee meeting of the Association recently held at Worcester, and said all who had the good fortune to be present at that meeting must have been deeply impressed with the conviction how much medical science had advanced in fifty years, and how deeply society was indebted to the Association for the good work it had done during that time. All who witnessed the energetic manner in which everything connected with the Worcester meeting was carried out would also take hope for progress in the future at least equal to that in the past. In that progress, he trusted that the Metropolitan Counties Branch would not be behindhand, and that each of the Districts into which it was divided would take its share. Referring to the proposed notification of infectious disease, he believed he would be in accord with the general sentiments of the profession when he said that medical men should not be compelled to notify, and that the proposal to fine them for not reporting was an insult.

Dr. FORSYTH, in moving a vote of thanks to the President, said, with regard to the question to which he had alluded, it would be like whipping a dead horse to say much on the subject of compulsory notification in Greenwich. He thought Dr. Carter of Liverpool had done a great service to the profession.

Mr. H. W. ROBERTS seconded the vote of thanks, which was carried by acclamation.

Communications.—The following communications were made.

1. Mr. W. Johnson Smith showed a Tumour of the External Ear.

2. Mr. Brindley James read a paper on Public Vaccination.

Election of Secretary.—Mr. Nelson Hardy, who had held office for four years, having resigned, Mr. Johnson Smith was requested to act as Honorary Secretary *pro tempore*; and thanks were voted to the outgoing Secretary.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.

A MEETING of the above District took place at the White Hart Hotel, Reigate, on Thursday, October 12th, at 4 P.M.; Dr. H. S. STONE of Reigate in the chair.

Collective Investigation Committee.—Dr. MAHOMED explained the purposes for which the Collective Investigation Committee of the British Medical Association had been formed, and invited the co-operation of all the members of the Branch. A local committee was nominated, and Dr. Stowers elected Honorary Secretary.

Communications.—The following papers were read.

1. The Chairman: Two Cases of Congenital Umbilical Hernia.

2. Mr. Hallows: Notes of two Cases of Paralysis.

3. Dr. Walters: Notes of a Case of Compound Depressed Fracture of Skull, followed by Trephining.

4. Dr. Walters exhibited the Upper Cervical Vertebrae of a Lad, dislocated and fractured by a fall.

5. Mr. W. A. Berridge: Notes of a Case of Hæmaturia.

6. Mr. Berridge showed a specimen of Epithelioma of the Bladder.

Dinner.—The members and several visitors afterwards dined together at the hotel.

BATH AND BRISTOL BRANCH: ORDINARY MEETING.

THE first ordinary meeting of the Session was held at the Museum and Library, Bristol, on Wednesday evening, October 25th, Dr. Spender, President, in the chair. There were also present fifty-five members and one visitor.

New Members.—The following gentlemen were elected members: F. Taylor, M.R.C.S., Bristol; J. H. L. Macintire, M.R.C.S., Bristol; W. F. Tuckett, L.R.C.P., M.R.C.S., Bath.

Communications.—The following were read:

1. Dr. Waldo read a paper on a Case of Consolidation of a Large Aneurysm without Surgical Interference, and exhibited the patient. Mr. Dowson, Dr. Shingleton Smith, Mr. Greig Smith, Mr. Munro Smith, Dr. Steven, Dr. Markham Skerritt, Mr. Michell Clarke, and Mr. Cross, took part in the discussion which followed.

2. Mr. Nelson Dobson read some Remarks on some of the More Important Operations During Ten Years' Work at the Bristol General Hospital.

3. Mr. Harsant related Two Successful Cases of Colotomy.

CORRESPONDENCE.

TREATMENT OF SUBCLAVIAN ANEURYSM.

SIR,—My attention has been directed to a letter from Mr. A. F. McGill (Leeds) in your last issue, in which a statement of mine on the subject of temporary compression of large arteries, made during the discussion at Worcester on Mr. Thomson's remarkable case of subclavian aneurysm, is referred to. Mr. McGill states that I am apparently not aware that this treatment has been already adopted; and refers to vol. 58 of the *Medico-Chirurgical Transactions* for particulars of a case in which he put this treatment into practice in 1875.

In reply, I beg to state that I was quite aware that the treatment has been already adopted. It was tested by the late Mr. Abraham Colles and Sir Philip Crampton about half a century ago; and an ingenious instrument, which can still be seen in the Royal College of Surgeons, Ireland, for carrying out the practice, was devised by the late Mr. L'Estrange of this city. The principle of temporary deligation has been, however, more efficiently carried out by means of an instrument devised by Mr. Porter; one which I applied to the abdominal aorta in 1869, for the cure of an ilio-femoral aneurysm; and again to the femoral artery in 1870, in a case of large popliteal aneurysm. These facts, though not reported in your account of the discussion above alluded to, were stated by me at Worcester.—I am, etc.,

WILLIAM STOKES, Professor of Surgery Royal College of Surgeons, Ireland.

Dublin, October 31st, 1882.

SCARLET FEVER.

SIR,—In his criticism of my notes, Dr. Field shows that he has merely skimmed them over, as he proves a conclusion by a fallacy, which is this—that scarlet fever was rife in Harrogate. My patients had too long a stage of incubation for them to have caught the disease in Knaresborough, therefore, they caught it in Harrogate. Now, unfortunately for Dr. Field's view, there was no case of scarlet fever in Harrogate; and, if he reads my notes through, he will see that I stated "Harrogate was full of visitors (not scarlet fever patients), therefore, isolation of the cases was most urgently called for." Lower down, he will find the words, "sitting in the court-house, where a number of people, who carried with them the contagion of scarlet fever, were packed, it being epidemic in the town."

How again does Dr. Field account for the fact that the valet must have been at least eleven days in the stage of incubation, as there was that length of time between his brushing Mr. L.'s clothes, and showing the ordinary signs of the disease?

That the period of incubation in all these cases was unmistakably a long one, was partly my reason for publishing the report. Mr. S. and Miss A. B. were, on no other occasion, exposed to the contagion of scarlet fever; and, as they were never alone again together, and as none of their friends had had scarlet fever, it is reasonable to suppose some of them would have been infected had it been contracted in any problematical place.

Dr. Field also gives no statement as to where the infection could have come from in the case he mentions, if it were not brought by a boy from home; which, being asserted and not disproved, tends greatly to strengthen my cases by adding his testimony to mine.

J. A. MYRTLE, M.B., C.M., Harrogate.

THE TREATMENT OF RHEUMATIC FEVER BY THE INTERNAL ADMINISTRATION OF TINCTURE OF CANTHARIDES.

SIR,—Nothing is farther from my wish or intention than to interfere with Dr. John Brunton's claim of originality in this matter; and if my communication (*JOURNAL*, October 7th) be compared with his letter (*JOURNAL*, October 27th), it will be seen that I have already done him there the justice which he hastily complains that I withheld from him. He objects especially to my ascribing merely a suggestion to him. I have not at any time seen notes by Dr. Brunton, or by any other person, of a case of rheumatic fever treated with the tincture of cantharides; and, in point of fact, the only collected evidence of which I was aware at the time of writing existed in my own case-books, and in those notes which (he reminds me) I submitted to him at a very early period. Nevertheless, he had told me at first that he found this drug especially useful in rheumatic fever; and it was this assertion which set me upon the investigation of which I have just offered you the result. But this is a suggestion; and to a mind of ordinary caution it would amount to no more, though *Æsculapius* should appear to make it. However, Dr. Brunton tells us that he has

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Monday, October 30th.

The Army Medical Department.—Mr. CARINGTON asked the Secretary of State for War whether, taking into consideration the complaints made against the Medical Department in Egypt, he would consent to the institution of some tribunal to inquire into the alleged breakdown of the system of medical service lately introduced into the Army, other than a War Office Committee presided over by the Under-Secretary of State for War; whether he would consent to the appointment either of a Committee of that House, or of a Royal Commission, to inquire into and report upon the working and results of the new system; and, further, whether there was any truth in the report that Deputy Surgeon-General Hanbury had demanded a Court of Inquiry to investigate the charges made against the Medical Department during the recent operations in Egypt.—Mr. CHILDERS: I have already answered the first two questions in replying to the hon. member for Portarlington on Friday. I certainly shall not advise the appointment of a Committee of this House or a Royal Commission to deal with a departmental question for action upon which, as Secretary of State, I am responsible. The Committee which I have appointed is a strong one, calculated to act fairly to all concerned. In reply to the third question, I have to state that Surgeon-General Hanbury has not asked for a Court of Inquiry, but has expressed a wish that the fullest investigation of the complaints made against his officers by certain correspondents may take place. Of course, the Committee will have the advantage of the evidence of these gentlemen.

Artisans' Dwellings.—Sir R. CROSS asked the Chairman of the Metropolitan Board of Works what steps were being taken by the Board under the Artisans' and Labourers' Dwellings Acts, 1875 to 1879, as amended by the Act of this Session.—Sir J. M'GAREL-HOOG: The Metropolitan Board of Works have given instructions for the preparation of draft schemes under the Amending Act of last Session, with regard to four areas situated in Lambeth, St. George-in-the-East, Limehouse, and Greenwich respectively. The orders of the Board are now being carried out, and if the schemes be approved by the Home Secretary they will be ready to be submitted to Parliament for confirmation in the Session of 1883.

Tuesday, October 31st.

Treatment of the Sick in Egypt.—Mr. GOURLEY asked the Secretary of State for War whether there was any foundation for the allegation that the medical service necessary for the proper treatment of the sick and wounded brought home on board Her Majesty's ship *Malabar* was insufficient; if so, would he be good enough to state the cause; and, further, why measures were not adopted, when the troops left for Egypt, to insure in every respect an efficient medical service in connection with each regiment; and if it were a fact that the care of the sick and wounded depended mainly upon the assistance of lady volunteer nurses sent out under the auspices of the Ambulance Society.—Mr. CHILDERS: In reply, I have to state that the committee presided over by Lord Morley will minutely investigate the allegation as to the treatment of the sick and wounded on board the *Malabar* and other ships on which they were embarked, and that I prefer not to pre-judge the committee's report. With reference to my hon. friend's inquiry, why what he considers an inefficient medical force was sent with the expedition, the whole of this question will come before the committee, but I am bound to say that, beyond dispute, no former military expedition ever left this country with anything like the proportionate strength of medical officers and attendants. The number of medical officers actually embarked from England, not including India, was 163, besides 13 who would have left had not the additional craft been stopped, the numbers of the Army Hospital Corps were 18 officers and warrant officers and 817 non-commissioned officers and men; and, in addition, 29 nursing Sisters were sent out by the War Department. Of course, I do not include Sisters of Mercy or nuns sent by private societies, of whom we have no knowledge. Of the 29 Sisters, six were obtained from the National Aid Society, to which I presume my hon. friend's last question refers. I may take this opportunity to say that, after considering the suggestions made to me yesterday as to enlarging the committee, I came to the conclusion that, without in any way qualifying my absolute responsibility in the matter, I might make an addition to the committee which, from every point of view, would strengthen it; and I accordingly asked the hon. and gallant member for Berkshire, Sir Robert Loyd Lindsay, if he were willing to give us the benefit of his assistance. I am happy to say that he has consented, and the first meeting of the committee will take place to-morrow.

Fatality from Vaccination at Norwich.—Mr. HOPWOOD, on behalf of Mr. P. Taylor, asked the President of the Local Government

Board whether he could say when the report of the inquiry into the vaccination fatality at Norwich would be in print.—Mr. DODSON replied he could not answer the question with any degree of precision; but he hoped the report would be in the hands of members in about a fortnight.

Wednesday, November 1st.

The Royal Irish Constabulary.—Mr. W. CORBET asked the Chief Secretary to the Lord Lieutenant of Ireland whether it was true that the men of the Royal Irish Constabulary were compelled to pay a certain sum, regularly, every month for medical attendance; whether it was true that complaints were made by the men quartered in the town of Arklow, county Wicklow, through the head constable, of the non-attendance upon them and neglect of duty of the medical attendant; whether it was the duty of the head constable to lay the complaints made by the men before the proper authorities; whether it was true that an investigation had been held by the county inspector into these charges, which resulted in the removal of the head constable to some remote part of Connaught; and whether he would inquire into the matter, and repair any injustice that might have been done.—Mr. TREVELYAN: Members of the Royal Irish Constabulary force do not pay any sum for medical attendance, as they are provided with such attendance free of cost. Complaints were made by the men quartered in Arklow, through the head constable, against the medical attendant. It was the duty of the head constable to lay the complaints before the proper authorities. The complaints were carefully inquired into by the county inspector, who reported that they were exaggerated. The removal of the head constable had no connection whatever with those complaints, nor had the result of the inquiry anything to do with his removal.

MILITARY AND NAVAL MEDICAL SERVICES.

HONORARY DISTINCTIONS IN THE NAVAL MEDICAL DEPARTMENT.

THERE is a very general opinion in naval circles that honorary distinctions are about to be distributed among the chiefs of departments at the Admiralty, to whose excellent provision at home is due much of the success of the naval part in particular, without which that of the army would have been greatly retarded in its shore operations in Egypt. We take this as an occasion to express a hope that, if this be the case, we shall find that the head of the Medical Department is not omitted from that list, as we believe that it will be gladly received by the officers under him, not only medical, but official, as a due recognition of the tact and skill with which he has elevated the department from the confusion and discontent long prevalent previously to his accession to office, thus rendering the results of the medical work of the naval expedition so satisfactory. We can speak with pleasure of the tone of communications from officers as to the growing sentiment of confidence arising from the sense of justice to the services and merits of officers, that has characterised the courteous superintendence of Dr. Reid, through his tenure of office as Medical Director-General; and we believe that all would hail with gratification the announcement that their chief had received, from Her Majesty, a similar title and decoration to those graciously conferred on his predecessor in the office he now holds so beneficially to the public service. We consider that this would be accepted as a compliment to the medical profession in the Royal Navy, as opportune as it is well deserved.

THE ARMY MEDICAL DEPARTMENT AND ITS CRITICS.

SIR,—Will you permit me, in that spirit of fairness and candour you claim for the press in general, and which I have generally experienced, to be allowed to correct a mistake you have committed in your leading article on the above subject, where you attribute to me a desire to revert to the old regimental system as it formerly existed. No such inference can be fairly drawn from my letter to the *Times* of October 19th to which you advert; on the contrary, I have there, and for years, advocated a modified or mixed system: in fact, an amalgamation of the two, by which the advantages of the regimental system—and they are many—might be retained, while the improved organisation of the Army Hospital Corps might be incorporated with it. It you will take the trouble to read my pamphlet on the subject published in 1874, which was sent to all the medical and military journals, you will perceive that I fully admit the unsuitability of the regimental system *pur et simple* to the present altered condition of the army; and suggest a modified one, with at least one medical officer permanently attached to each regiment, and a certain proportion of field equipments, which would render each regiment more or less independent when detached on field service or on board ship. This equipment should consist of field panniers, A and B canteens, bell tents, and stretchers with a certain number of orderlies of the Army Hospital Corps. I maintain had this, or some such organisation as was adopted by me in the New Zealand war of 1862-63, now existed, the change of base which so completely upset the unification system as followed in the recent Egyptian campaign could not have occurred, or would have been very much mitigated, if not avoided, as the union of the whole of the regimental equipment of brigades and divisions would have been adequate

failed to secure an order from the relieving-officer, he was refused admission, and returned home to die. Having regard to the fact, that large sums of money have been expended in providing hospital accommodation for the pauper sick, it is not a little astonishing that the resident officials of these places should be permitted to draw so hard and fast a line as to the admission, or otherwise, of such unfortunates. An occasional error, on the side of humanity, may give perhaps a little additional trouble; but it would at least obviate such scandals as that which Joseph Tomlinson's case exhibits.

OBITUARY.

GEORGE CRITCHETT, F.R.C.S.

It is with feelings of deep regret that we record the death of this amiable and accomplished surgeon. He died on the morning of November 1st, from cystitis, with enlarged prostate. During the eight weeks' illness which preceded his death, he was attended by Mr. Henry Morris, and was seen at various periods by Drs. Andrew Clark and Liveing, as well as by Sir Henry Thompson and Mr. Walter Coulson. He only became unconscious a few hours before his death. George Critchett was born in 1817, at Highgate. He was the pupil of Mr. John Scott, surgeon to the London Hospital, and was apprenticed to the Royal College of Surgeons, of which he became a member in 1839, and a fellow in 1844. Shortly after obtaining his membership of the College of Surgeons, he was appointed Demonstrator of Anatomy at the London Hospital, where he afterwards became surgeon. Almost from the commencement of his career, he was attached to the Royal London Ophthalmic Hospital, filling the posts of Assistant-Surgeon, Surgeon, and Consulting Surgeon in succession. In 1870, he was elected a member of the council of the College of Surgeons. He was President of the Hunterian Society during two years, Vice-President of the Ophthalmological Section of the International Medical Congress at London in 1881, as well as Vice-President of the Ophthalmological Society. Mr. Critchett was also Corresponding Member of the Imperial Academy of Medicine of Rio de Janeiro, and an Honorary Member of the Academy of Medicine of Brussels. He held the appointment of Ophthalmic Surgeon for some years at the Middlesex Hospital. Mr. Critchett enjoyed a wide reputation as a most successful and skilful operator; but, in addition to this, he possessed, in a high degree, that excellent quality of knowing when not to operate. He introduced several new methods of great value into practice. Among these, the operations of tying the iris, or irido-desis as it is called, for the formation of an artificial pupil, and the operation now usually performed in this country for the enucleation of the eye. Among various contributions to the literature of the department he adorned, may be mentioned a course of "Lectures on Diseases of the Eye," published in the *Lancet* in 1854; a pamphlet on the "Operation for Strabismus by the Subconjunctival Method," including a new plan for correcting divergent strabismus by readjustment of the internal rectus muscle; a valuable Dissertation on the Linear Extraction of Cataract, read before the Ophthalmic Congress at Heidelberg in 1864, and a paper on the Treatment of the Superficial Affections of the Eye, read at the meeting of the British Medical Association in 1873. Of Mr. Critchett's private character it is impossible to speak too highly; he was a true and generous friend, and a loving and beloved husband and father. He has left three children to mourn his loss, one of whom, his son, Mr. Anderson Critchett, is well known to have inherited that skill as an operator, which went so far to make his father's success as an ophthalmic surgeon. George Critchett had, by his unvarying kindness, courtesy, and benevolence, endeared himself to a large circle of friends, who will long regret his sympathetic smile and gentle word.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—Admitted Members, October 26th, 1882.

Benham, Frederick Lucas, M.D. Lond., Notting Hill
Edwardes, Edward Joshua, M.B. Lond., 55, York Street
Oliver, Thomas, M.D. Glasgow, Newcastle-on-Tyne
Oxley, Alfred J. R., M.B. Dublin, Junior Oxford and Cambridge Club

Admitted Licentiates.

Abrath, Gustav Adolph, M.D. Heidelberg, Sunderland
Adkins, George, London Hospital
Beattie, Henry, Jun., 37, Albert Square
Birch, Henry Priestley, 61, Harley Street
Birt, Cecil, Wadsley, Sheffield
Bollen, Frederick James, South Australia
Crick, William Throne, 50, Fentiman Road

Dale, Walter Frederick, London Hospital
Dequé, Laurent, St. Mary's Hospital
Dixon, Henry Charles, Portinscale Road
Dun, Walter Angus, M.D. Miami, 79, Queen Street, Cheapside
Howard, Robert J. B., M.D. McGill, 103, Guildford Street
Hull, Walter, Swallow Place
John, David, Swansea
Khan, Mohamed Ismail, 18, Montague Place
Massey, Henry Massey, Peckham Road
Myles, James Perceval, St. Mathias Vicarage, Bristol
Pantory, John Emanuel, 28, Green Street
Penn, John Evans, 4, Cumberland Terrace
Powell, John James, Jun., Heathlands, Weybridge
Robinson, Frederick Gardner, Pendleton, Manchester
Sinclair, John, Queen Adelaide's Dispensary, Bethnal Green
Skipper, Edward, University College Hospital
Stand, Geoffrey, Birmingham
Thane, Philip Thornton, 15, Montague Street
Tripp, Charles Llewellyn Howard, Royal Free Hospital
Williams, Edward Richard, St. Bartholomew's Hospital
Wise, Charles Henry, Westminster Hospital
Wohnitz, Ferdinand B. M., 89, Albert Street

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At a meeting of the Board of Examiners in Dental Surgery, held on October 25th, the following candidates, having passed their examinations to the satisfaction of the Board, were admitted Licentiates in Dental Surgery.

Messrs. John James Andrew, Belfast, Frederick William Bate, Alexandra Road, N.W., Richard Edwards, Pontdolgoch, Horace John Gould, Exeter, Frank Hill Kissack, Douglas, Isle of Man, Jonathan Royston, Douglas, Isle of Man, William Fryer Cornelius, Teignmouth, Alfred Horace Tester, Preston Park, Brighton, William Todd Patterson, Kingsland, students of the Dental and Middlesex Hospitals; John McKno Ackland, Elston, Exeter, of the Dental and Charing Cross Hospitals; Henry Louis Albert, Sloane Street, S.W., of the Dental and St. George's Hospitals; Morgan Hughes, Redhill, of the Dental and Westminster Hospitals.

Thirteen candidates presented themselves for examination, of whom twelve passed to the satisfaction of the Board, and one was referred for the period of six months.

At the same meeting, Mr. John Cooper Forster, Vice-President of the College, the recently elected member of the Board, took his seat.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 26th, 1882.

Smith, Percy William Bassett 62, Alexander Road, N.W.
Willey, Alexander Gascoigne, Dunbar House, Southsea.

The following gentlemen also on the same day passed their Primary Professional Examination.

Kirby, Alfred, Middlesex Hospital.
Sheppard, Henry Anderson, Charing Cross Hospital.
Tuckett, Walter Reginald, London Hospital.

UNIVERSITY OF EDINBURGH.—The following gentlemen have passed the first professional examination, October 1882.

William Anderson, William A. Anderson, Edmund Antrobus, John Bardgett, T. W. Barraclough, Georges Bascher, William J. Bell, Charles Bennett, Reginald Bowman, Joao Francisco Braga, J. D. Broadfoot, Harbit Brown, R. F. Burt, Ernest Kenneth Campbell, David Cassels, Ernest James Cheetham, Stephen Frazer Clark, Frank Gerard Clemow, Frederick William Collinson, Robert Swan Coulthard, James Cunningham, George Scott Davidson, Joseph W. Dawes, John Henry Deamer, Kenneth Mackinnon Douglas, David Somerville Doughty, J. J. Drinkwater, Walter Musgrave Eaton, Ahmed Fahmy, Peter Fraser, Edwin Sargood Fry (with distinction), John Garvie, William Gregory Gibson (with distinction), James Gray Glover, Robert Gordon, J. W. Grant, Alexander M. Gray, Allen Edward Lambton Gray, David Campbell Gray, David Middleton Greig, Thomas Howard Griffith, Joseph Griffiths, George Lovell Gulland, Charles Robert Hailes, Joshua Jacobus Hoffman, Robert Wilberforce Inkster, Samuel Baker Jones, Robert Conwy Joyce, H. L. St. P. Keelan, Frederick Truby King (with distinction), Ernest Cory Kingdon, John Charles Lamont (with distinction), John Dickinson Leigh, Charles Lewis Lempiere, Charles James Lewis, Edward Linton, William G. Little, James Richardson Thomas Logan, A. L. E. Loubser, Wilton Wood Russell Love, Donald Campbell Archibald M'Allum, Duncan M'Diarmid, J. R. M'Gavin, George Donald Macintosh, John M'Jarrow, Francis Wallace Mackenzie, Wm. Henry M'Lean, Robert MacLelland, John M'Donald MacLennan, Robert Charlie MacWatt, Daniel Groves Marshall, Charles G. Mathew, David Macleisla Moir, David Morgan, Thomas Morris, Robert S. Morrison, Charles James Morton, John Kemp Murray, Andrew W. Nash, William Ramsay Nasmyth, F. A. Neal, John M'Donald Nicoll, Maurice Paterson, John Pirie, George Porter, Edward Thomas Pritchard, Trevor John Pritchard, Selwyn Hall Puckle, James Reid, Francis Mortimer Reynolds, J. B. Ridley, John Richards, Ernest Robertson, Ernest Theophilus Roberts, Frederick Charles Roberts, Hugh L. Roberts, Arthur MacLeod Ross, John Ross, D. Wilson Scotland, Gerald Affleck Scott, W. E. S. Scott, Harold Scurfield, Robert William Smeedle, George Purves Smith, John William Smith, George Laird Somerville, Gabriel H. Steyn, Robert Stewart, Robert Stirling, William James Sym, Charles C. Teacher, Caleb Terry, John Bolton Thackwell, William James Thomas, Francis Courtenay Thorp, John William Travell, Ernest B. Turner, J. C. S. Vaughan, Quintin Macadam Wallace, John Warnock, Clarence Henry Waters, Adam D. Wilson.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the October meet-

ing of the examiners, the following gentlemen passed the primary examination for the double qualification.

L. M. Dunlop, M.A., Glasgow; John Mackie, Aberdeen.

Two candidates were remitted.

The following gentlemen passed the final examination, and were admitted Licentiates of both Colleges.

F. O. Adams, Glasgow; Sheridan Dean, Glasgow.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the October meeting of the examiners, the following gentlemen passed the first professional examination of the Faculty.

L. P. Banks, London Hospital; A. C. Bootham, Glasgow; G. Hunter, Glasgow; D. Jamison, Belfast; G. G. Jones, University College, London; I. Mason, Glasgow; W. Somerville, Glasgow; A. A. Sutton, Glasgow.

Ten candidates were remitted.

The following gentlemen passed the final examination, and were admitted Licentiates of the Faculty.

J. H. Blayney, Manchester; A. Dickson, Glasgow; W. Dunlop, Glasgow; S. Eminson, Misingham; W. Gibb, Glasgow; G. Hunter, Glasgow; E. J. Kauffmann, Michie; A. McAusland, Glasgow; A. L. Macphail, Glasgow; John Mathie, Glasgow; A. D. Naismith, M.D., Toronto; N. N. Parakh, Bombay; James Wilson, Glasgow.

Twelve candidates were remitted.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examinations for the Licences of the College, held on Monday, Tuesday, Wednesday, and Thursday, October 9th, 10th, 11th, and 12th, the following candidates were successful.

For the Licence to practise Medicine and Midwifery.—Henry Adcock, Liverpool; John Mary Harrington, Tralee, Co. Kerry; Claudius O'Donell, Castlebar, Co. Mayo; J. W. W. W. W.

For the Licence to practise Medicine only.—Thomas Hitchen, Bradford; John Henry Jones, Liverpool; W. Henry Wright, Liverpool.

For the Licence to practise Midwifery only.—William Halloran Bennett, Dublin.

At a special examination, held on Tuesday, September 19th, the following candidate received the Licence to practise Midwifery.

John William Williams, M.D.R.U.L., Dungarvan, Co. Waterford.

The following Licentiates in Medicine of the College, having complied with the by-laws relating to Membership, have been duly enrolled as Members of the College.

John Alexander Scott, 1859, Freshwater, Isle of Wight; Frederick Ffolliott, 1863, London; Walter Charles S. Burney, 1872, Greenwich; William Henry O'Meara, 1877, Carlow.

(The names are arranged in the order of seniority as Licentiates of the College.)

MEDICAL VACANCIES.

The following vacancies are announced:—

AYR.—*Medical Superintendent.* Salary, £700 per annum. Applications by November 21st.

BRAND.—*Medical Superintendent.* Salary, £700 per annum. Applications by November 21st.

CAN.—*Medical Superintendent.* Salary, £700 per annum. Applications by November 21st.

CITY OF LONDON.—*Medical Superintendent of the Chest.* Salary, £700 per annum. Applications by November 21st.

DENTAL.—*Medical Superintendent.* Salary, £700 per annum. Applications by November 21st.

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UPTON-UPON-SEVERN UNION.—Medical Officer and Public Vaccinator for No. 3 District. Salary, £65 per annum. Applications by November 7th.

VICTORIA HOSPITAL FOR CHILDREN. Queen's Road, Chelsea, S.W.—House-Surgeon. Salary, £50 per annum. Applications by November 7th.

WANDSWORTH AND CLAPHAM UNION.—Assistant Medical Officer and Dispenser. Salary, £120 per annum. Applications by November 11th.

YORK DISPENSARY.—Resident Medical Officer. Salary, £130 per annum. Applications by November 7th.

MEDICAL APPOINTMENTS.

APPLEFORD. S. Herbert, M.R.C.S.E., appointed House-Physician at the London Hospital.

JONES. A. L., M.R.C.S., appointed Honorary-Surgeon to the Royal Kent Dispensary.

PENRUDDOCKE. C., M.R.C.S., appointed Medical Officer to the Winchcomb Union.

RAITT. Thomas, M.D., appointed Medical Practitioner to the West Allendale Medical Association, vice J. R. Fringie, M.R.C.S., resigned.

SAYER. T., M.B., appointed Medical Officer and Public Vaccinator to the East Ward Union.

WALLBRIDGE. H. A., A.P.S., appointed Dispenser to the Victoria Hospital for Children, vice H. Hyne, M.P.S., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

ALLEN.—On October 29th, at Kilcully, Cork, the wife of Surgeon W. H. Allen, Army Medical Department, of a Son.

MARRIAGE.

HANDYSIDE.—McNICOLL.—On October 26th, at the Parish Church, St. Helen's, Lancashire, by the Rev. Henry Siddall, M.A., vicar of Ashton-in-Mackerfield, Arthur Handyside, surgeon, Earlestown, to Emily, second daughter of Robert McNicoll, M.R.C.S., St. Helens.

DEATH.

MOULD.—On the 29th instant, Caroline, wife of George W. Mould, of Cheshire, and daughter of the late Venerable Edward W. Mould, of Cheshire, and Rector of Northenden, Cheshire.

HEALTH OF FOREIGN CITIES.—Statistics, published in a table in the Registrar-General's last weekly return, show that the death-rate in the three principal Indian cities recently averaged 28.0 per 1000, and that it was equal to 23.2 in Calcutta, 27.2 in Bombay, and 34.4 in Madras. Small-pox caused 7 deaths in Madras, and fever mortality was excessive in each of these Indian cities, but was proportionally largest in Madras. According to the most recent weekly returns, the average annual death-rate per 1000 persons, estimated to be living in twenty-two of the largest European cities, was equal to 24.3; this rate exceeded by 3.4 the average rate last week in the twenty-eight large English towns. The death-rate in St. Petersburg was equal to 39.1, but showed a decline from still higher rates in previous weeks; the 502 deaths in this city included 43 from diphtheria, and 24 from scarlet fever. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged only 18.8; it was but 14.5 in Christiania, while the highest rate was 20.1 in Copenhagen, where 3 fatal cases of typhoid fever were recorded. The Paris death-rate was equal to 25.0, although it showed a decline from the rates in recent weeks; the 173 fatal cases of typhoid fever were fewer by 71 than the number in the previous week, and the 29 deaths from diphtheria, as well as the 5 from small-pox, showed a decline from recent weekly numbers. The 132 deaths in Brussels included 2 from small-pox, but the rate did not exceed 16.6. The rate in Geneva showed an increase, but was not higher than 21.1. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 22.2, the highest being 23.4 in Amsterdam; the rate in Rotterdam was only 19.8, but the 60 deaths included 4 from small-pox. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 24.3, and ranged from 20.9 in Hamburg to 26.0 in Munich and 29.0 in Prague. Typhus fever caused 20 deaths in Berlin, small-pox 3 in Vienna, scarlet fever 10 in Budapest, and diphtheria 16 in Dresden. The mean rate in three of the large Russian cities was but 18.3, the highest being 20.3 in Moscow, where 1 death was referred to small-pox; 4 fatal cases of typhus were recorded in Turin. In the four large American cities, the death-rate averaged 22.1, and ranged from 20.1 in Philadelphia to 28.1 in Baltimore. Small-pox caused 16 deaths in New York and 4 in Philadelphia; 24 fatal cases of diphtheria were also recorded in Baltimore, and 9 of typhoid fever in Philadelphia.

It has been decided by the Swedish Government to employ no individuals on railways, or on board ship, in that country, until he has successfully passed Professor Holmgren's test of colour-blindness.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopaedic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.....St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopaedic, 10 A.M.

THURSDAY.....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.

FRIDAY.....King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu, F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu, 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu, F., 12.30; Ear, Tu, F., 12.30; Skin, Tu, 12.30; Dental, Tu, Th, F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu, Th, S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 7; Ear, Th., 2; Skin, Th., 1; Throat, Th., 3; Dental, Tu, F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu, F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear, and Throat, Tu, 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu, Th, S., 2; o.p., W. S., 9; Eye, Tu, W. Th, S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopaedic, F., 12.30; Dental, Tu, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu, F. S., 1; Obstetric, Tu, S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu, 2; Skin, Th., 1; Throat, M., 2; Orthopaedic, W., 2; Dental, Tu, S., 9; Th, 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu, F., 9.30; o.p., Tu, F., 2; Eye, Tu, F., 9.15; Ear, M. Th., 2; Skin, Tu, Th, 1.30; Throat, M. Th., 1.45; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu, 12.30; Skin, Th., 12.30; Throat, Tu, 12.30; Children, S., 12.30; Dental, Tu, F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu, Th, F., 1.30; Eye, M. Tu, Th, F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th, 2.30; Dental W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu, F., 3; Eye, M. Th., 2.30; Ear, Tu, F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. General Meeting. Mr. Edmund Owen: On two cases of Congenital Cystic Hygroma (living specimen). Mr. Sampson Gamgee (of Birmingham): On the Treatment of Wounds and Fractures.—Odontological Society of Great Britain, 8 P.M. Dr. Alfred Carpenter: Consideration of some of the Causes which give rise to Dental Decay. Casual communications from Messrs. C. Tomes, Coleman, Sewill, etc.

TUESDAY.—Pathological Society of London, 8.30 P.M. Specimens: Mr. W. H. Kesteven: Traumatic Hematoma of Vertebral Column. Dr. Hadden: 1. Meningocele simulating Nasal Polypus; 2. Disseminated Sarcoma. Mr. Malcolm Morris: Xanthoma Tuberosum, with microscopical specimens. Dr. Robert Barnes: Pigmentation of the Cervix Uteri. Dr. Norman Moore: 1. Double Hydrosalpinx; 2. Renal Calculus in a Child; 3. Lung with Impacted Foreign Body; 4. Ulceration of Vermiform Appendix in Typhoid Fever. Dr. Samuel West: Sarcoma of Bladder and Prostate.

WEDNESDAY.—Hunterian Society, 7.30 P.M., Council Meeting. 8 P.M., Dr. Stephen Mackenzie: 1. A Case of Hemianopia, with Hemiplegia; 2. On Paroxysmal Hemoglobinuria. Dr. Coxwell: Demonstration of Reflexes in a Case of Hemiplegia.

FRIDAY.—Clinical Society of London, 8.30 P.M. Mr. Golding-Bird: On a Case of Removal of the Uterus for Fibroid Disease (specimens shown). Mr. Clutton: On a Case of Spina Bifida. Mr. C. Heath: On a Case of Separation of the Epiphysis of the Clavicle by Muscular Action. Dr. Goodhart: On Six Cases of Diphtheria treated by the local application of Borax or Boracic Acid. Mr. Golding-Bird will exhibit a case of Transpatellar Excision of the Knee.—West London Medico-Chirurgical Society, 8 P.M. Clinical and Pathological Subjects.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication. PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with Duplicate Copies.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

THE SEWAGE OF THE THAMES.

THE first step towards purifying the waters of the Thames is, to find out the sources whence the chief impurities are derived; and this has, according to the *Pall Mall Gazette*, to some extent been shown by recent experiments. It has long been an accepted tradition that the sewage which is poured into the river near Barking finds its way in a day or two to the sea; but the belief has been rudely shaken in the last few weeks. Several floats were placed in the river at the point whence the sewage is mixed with the stream, and were left to the action of the winds and tides. One of them never left the place at which it had been deposited, and, after the lapse of nearly three weeks, three more had only reached a mile or two below Gravesend. If the sewage of nearly three weeks is being tossed to and fro in the Thames from Richmond to Gravesend, it is not a matter for surprise if its waters are scarcely so pure as they might be.

INQUIRER.—Women are admitted to the examinations of the Pharmaceutical Society, London, and can qualify as dispensers. The Apothecaries' Society has definitively declared its opinion against examining women for membership.

LONDON SCHOOLS.

SIR.—For many months, I have had the intention of writing to the JOURNAL on the subject of the great London schools; those where there are between five and seven hundred boys. I went to one of them for between two and three years, and now that I can look back with quiet impartiality to what was good and what bad in the one I went to, and seventy-five years have passed since then, the more clearly do I see the importance of bringing the subject under discussion. It is a bad system to work boys from 9 A.M. to 3 P.M., with ten minutes at 11 o'clock and thirty minutes at 1 o'clock; thirty or forty boys in a room, badly ventilated, when the number is considered, and perhaps the room in the basement of the building. And what are they taught? We received a religious and classical education, at the expense of health and all that makes life worth having for a boy. Some of us actually came up from pure country air to this school in the heart of London. Why cannot Clapham, and Wimbledon, and every suburb of London have its public school, and let parents who must live in London send their boys away. The centre of a great city is not the place to educate boys. When I see them coming home by the underground railway in numbers, I pity them, and think how unwise their parents are to strain their minds and weaken their bodies, and prepare them so ill for the struggle of life.—Yours, etc.,

A MEMBER OF B.M.A.

"SURGEON" (High Barnet).—We have asked for an explanation of the circumstance stated, and the answer given is, that the notice of change of address was forwarded only to those who had been in personal communication with the physician in question, and that the particular case must have been an error of the person entrusted with the duty.

TEST FOR TRACES OF ALCOHOL IN ORGANIC FLUIDS.

ALCOHOL forms a definite hydrate with four molecules of water, which does not crystallise till a temperature of 34° Cent. is reached. Ice separates from a weaker spirit, when cooled, till this ratio is reached (*vide* Bloxam's *Chemistry*, fourth edition, p. 526). This process might be useful as a preliminary to distillation.

MR. S. STANTON STANLEY.—We should be happy to give any support in our power to the project of a sick club for medical men, if it were brought forward on a basis of which actuaries would approve, and supported to an extent which should give some promise of stability.

PROFESSOR PACINI'S LETTER.

IN the letter to Dr. George Johnson from Professor Pacini, published in the BRITISH MEDICAL JOURNAL for October 14th, page 762, the following alterations and corrections should be made. In paragraph 1, line 6, for "maravigliare", read "meravigliare"; line 7, for "attribuirla", read "attribuirla". In the last paragraph, line 2, for "integra", read "intera". In the address of the letter, "Professor" should be "Professore"; and at the end, for "September 28th", read "28 Settembre". In the superscription, the words were in the original abbreviated thus: "Illmo. Sig. Prof. Johnson"; and, at the end, "affettuosissimo" was shortened to "affso". The literal meaning of "R. Accademia dei Lincei" (rendered in the translation "Royal Academy of Sciences") is "Royal Academy of the Sharp-sighted" (Latin *lynceus*, Italian *linceo*, like a lynx, sharp-sighted). "Affettuosissimo" is better translated "very affectionate" than "most affectionate".

SIR.—I send you measurements of a child which I brought into the world this week. The shoulders gave some difficulty, but otherwise the labour was normal. Circumference of head, 17 inches; breadth of back from points of shoulder, 9 inches; length of child, 1 foot 9 inches; weight of child, 11 pounds 4 ounces.—Yours faithfully,

W. J. LAND.

Bordyke House, Tonbridge, Kent, October 30th, 1882.

INTRODUCTORY ADDRESS ON MAN'S PLACE IN CREATION; HIS EDUCATION AND DEVELOPMENT FROM A SCIENCE POINT OF VIEW.

Delivered at the University of St. Andrew's.

By JAMES BELL PETTIGREW, M.D., F.R.S.,
Professor of Medicine and Anatomy in the University.

THE spectacle presented by creation is a great and sublime one, and it rises in grandeur and sublimity in proportion to the intellectual grasp and acumen of the beholder, and according to the amount of law and design which it reveals to his astonished gaze.

The theories of the formation of the universe are numerous, but there are two leading theories, and to these I will refer very briefly. 1. There are those who attribute everything that exists to a spiritual agency, or, what is the same thing, a divine power. 2. There are those who persistently maintain that the universe and all it contains is due to an accidental assemblage of parts mutually acting and reacting upon each other. Newton and Swedenborg, *e.g.*, support the former view, and Haeckel and Tyndall the latter. These four philosophers equally assume the existence of matter for their systems of the universe, but there is this fundamental difference between them: Newton and Swedenborg attribute the disposal, arrangement, and movements of matter directly to divine interposition and agency; whereas Haeckel and Tyndall refer everything to a power inhering in the matter itself. In other words, Newton and Swedenborg admit that matter, once created and placed in certain conditions, will obey certain laws; they, however, deny that matter can accomplish anything of itself, which is the position defended by Haeckel and Tyndall.

These two theories, I need scarcely remark, are diametrically opposed to each other. In the one case, we have matter, even the particles of matter as well as the larger masses, controlled and directed by intelligence divine in its origin and operation; in the other, we have the same matter asserting itself and obeying certain inherent laws in the absence of a creator, *i.e.*, of a divine, intelligent first cause. It is impossible, even in these advanced days, to pronounce with any degree of certainty on the gigantic problem of creation. Our intelligence, as well as our experience, are too limited to be of much value in forming a correct estimate. By assuming a first cause, in other words, a power which is capable not only of creating, but also of controlling matter, we evade many of the difficulties, if we do not solve the mystery of creation. It is natural for us to believe that whatever exists was created. In other words, we are not accustomed to think anything makes or fashions itself. This is according to revelation, tradition, and human experience. *Ex nihilo nihil fit*: there is nothing from nothing. The sceptists, however, maintain that this reasoning is essentially false or vicious—that it begs the question to be proved. They in fact assert that, if a first cause be insisted upon as necessary to creation, then the first cause itself must have had an origin or been preceded by another cause, and so on, *ad infinitum* or indefinitely. According to the strict rules of logic, the sceptists are quite entitled to press the argument in this direction and to this issue; but in so doing they land themselves in a *reductio ad absurdum*, for, in denying a beginning or first cause to their adversaries, they are themselves compelled to evolve a world out of nothing, which is impossible. One of two things is quite evident; either there must have been a first cause or power capable of creating and directing matter; or matter—inert, senseless matter—must have formed itself out of nothing, which, to say the least of it, is exceedingly improbable. If we accept the sceptists' view, *viz.*, that matter is self-forming and self-regulating, we encounter many difficulties; for this conclusion is at variance, not only with revelation and tradition, but also with our everyday experience.

We have no proof that matter can form itself, and we feel we can control matter in spite of itself. The theistical is more natural than the atheistical view, inasmuch as we see in the design everywhere present in the universe the exercise of an intelligence akin to our own. While we can control matter, we cannot form it. The existence of matter is utterly inexplicable, unless we assume it to be the creation of a power superior to all matter. Given matter, however, we can readily understand how force acts upon it—the force inhering in it,

and being inseparable from it. Particle attracts particle, the larger mass attracts the smaller, gravitation tends to bring everything into its proper place. While science has not been able to clear up the gigantic mystery of creation, it has been able to prove two things in connection with it of great importance—*viz.*, that matter and force are both indestructible. We can alter the form of matter and direct its forces; but we cannot annihilate matter, neither can we destroy its potential or inherent energy. There is a store of matter and a store of force in the universe which are indestructible and inexhaustible. This is a great fact; as all plants and all animals, even man himself, are formed from the matter of the universe, and are impelled, within certain limits, by the forces of the universe. If matter and force are taken from the universe to build up a plant or an animal, they both return to it when the plant or animal dies. The universe is not only the great laboratory where everything living is fashioned; it is also the vast lumber-room where everything dead is stored. It is the huge magazine of extinct or geologic forms. The organic rises out of the inorganic, and returns to it. We cannot speak of even the lowest plant or animal, still less of man, without referring to the matter of the universe. In all the transformations of plants and animals, even up to man himself, we behold the action and reaction of matter upon matter and force upon force. Geology, stretching far back through the vista of ages, has come to the conclusion that at one period our earth was uninhabitable, even for plants. There is nothing improbable in this. We see the rocks moulder in the light; and the rocks themselves, originally bald and barren, in due time furnish a soil which supports a low form of vegetation—this, after a while, affording the conditions necessary for a higher form of vegetation. The coral reefs, in like manner, crumble to pieces from exposure, and ultimately support groves of palms and other tropical plants. A certain degree of preparation was therefore necessary before plants could exist on the earth. But the great race of animals could not exist without the great race of plants. Plants, consequently, had to be formed before animals could be formed; and the last animal to be formed was man. Geology and Scripture quite agree as to the order of creation. The points of difference and divergence chiefly relate to the time required. It is quite evident, from geological records, that the world and the inhabitants thereof were not created in six ordinary days. Theologians of late years have expanded each day into a thousand years, and have fixed six thousand years as the time required for creation; but even this time, vast as it may seem, is considered by many of the most profound thinkers as altogether inadequate. Indeed, not a few of the most advanced philosophers regard creation rather as a progressive than a finished work; and many weighty arguments can be adduced in support of this view. The geological or scientific account of the order of creation has been stated with great force by Sir Humphry Davy as follows. "In those strata which are deepest, and which must, consequently, be supposed to be the earliest deposited, forms even of vegetable life are rare; shells and vegetable remains are found in the next order; the bones of fishes and oviparous reptiles exist in the following class; the remains of birds, with those of the same genera mentioned before, in those of the next order; those of quadrupeds of extinct species in a still more recent class; and it is only in the loose and slightly consolidated strata of gravel and sand, and which are usually called diluvial formations, that the remains of animals such as now people the globe are found, with others belonging to extinct species. But, in none of those formations, whether called secondary, tertiary, or diluvial, have the remains of man, or any of his works, been discovered; and whoever dwells on this subject must be convinced that the present order of things, and the comparatively recent existence of man as the master of the globe, is as certain as the destruction of a former and a different order, and the extinction of a number of living forms which have no type in being." Sir Charles Lyell writes in a very similar strain. He observes: "We have been fairly led by palæontological researches to the conclusion that the invertebrate animals flourished before the vertebrate; and that in the latter class fishes, reptiles, birds, and mammalia made their appearance in chronological order analogous to that in which they would be arranged zoologically, according to an advancing scale of perfection in their organisation. To crown the whole, the series ends with the archencephala, of which man is the sole representative."

It is customary to speak of man as the lord of the creation; nor can this lofty title be well denied him, since revelation and science equally support it. He is mentally and physically fitted for command. While claiming for man the first place in creation, I am not of those who seek to elevate man by depressing the lower animals; all are perfect after a fashion. To argue otherwise would be to attribute imperfection to the Deity. Man has very many points in common with the brutes, not only physically, but mentally; and, so far from denying those points

of analogy, affinity, and, it may be, of actual consanguinity, I am proud to think that God, in his great goodness, has surrounded us with so many beautiful creatures, not a few of them having even beautiful dispositions. Granting, however, that man is, as to his animality, not far removed from the highest of the lower animals, and that he possesses certain mental traits in common with them, he is still *facile princeps*, and there is a great gulf between him and his congeners, which science has hitherto failed to bridge. The gulf is chiefly an intellectual gulf, for it cannot be doubted that there is a greater chasm between man and the higher apes, as regards intelligence, than there is between the several kinds of apes and the organic forms immediately below them.

If, as I have endeavoured to show, man's true greatness is traceable not to his physical structure, where he touches the lower animals at many points, but to his intellectual attributes, where he leaves them untold leagues behind, it follows that the chief business of science and university and other training, is to teach or educate man. The burning question of the day is education. We have our board and other schools, high and low; we have our colleges, technical and otherwise; we have our universities; and, within the last few years, even our Professor of Education. Education, from the earliest times, has been a subject of solicitude. Our views regarding it are, and ever have been, fluctuating. The ancients were not agreed upon it, neither are the moderns. The term education, as you are all aware, is from the Latin *educō*, to lead, or draw out, and represents the ancient idea of what intellectual training should be. The ancients believed, and I think rightly, that men varied as to intellectual capacity and endowment, and that it was the province of education to draw out of the man that which naturally inhered in him. The more modern (and I believe the less philosophic) view takes for granted that men vary little to begin with, and that everything may be put into them by a process of cramming. The ancients aimed at teaching men to think and judge; the moderns have no soul above passing examinations, and getting on in the world. As a physiologist, my sympathies are wholly with the ancients. I feel and believe that men vary infinitely, even from childhood. One has only to watch the progress of the innocent and helpless babe, as he progresses in consciousness and strength, to be convinced of this. The little cherub reveals, amid all his smiles, a certain something which is vaguely designated temper, but which in reality is disposition, or intellectual idiosyncrasy, or endowment. This deepens as he grows older, and it is in this sense that Wordsworth regards the child as "father of the man". The germ of certain things (mental as well as physical) exists in the child from the beginning, and urges him, *volens volens*, to do certain things, and to leave other things undone, or to do them in a very perfunctory or careless manner. The intellectual differences in the child altogether outweigh the physical differences; and hence it follows—and this is a matter of daily experience—that, of two children similarly placed as regards opportunities for learning, the one becomes ultimately a scholar, and it may be a philosopher, while the other barely attains a position of mediocrity. This shows that, while education can do a great deal for an individual, it cannot do everything. It explains how the immortals, Shakespeare and Burns, and a galaxy of great and distinguished men, towered like pyramids above their fellows with very little education, and, as it were, in spite of it. The vigour of some minds is such, that they are superior to education; and their greatness wells out of them like springs of living water, irrigating and beautifying the barrenness of mankind as a whole. These are the geniuses of our race. They spurn all mental direction and restraint, and soar above the common herd as the huge lammergeyers soar in mid heaven above the loftiest Alpine peaks. Some there are who deny the existence of genius, and accredit mere plodding with everything that is lofty in design and execution. Such men are plodders themselves, and incapable of appreciating the situation. It requires genius to appreciate genius, in the same way that it requires diamond to cut diamond. The unanswerable reply to all such is, that the genius cuts out new paths for himself; he even creates the tools with which he works; he, in fact, indirectly supplies the materials and appliances which enable the plodders to proceed. The geniuses, unfortunately, are few in number, as compared with the great mass of mankind; and it is for the latter that education is called upon more strictly to provide. That geniuses exist, and that they are, with few exceptions, the great leaders of the people, is as certain as that the sun shines above our heads. This holds true from Moses downwards. The movements of genius are often very erratic; but the grace and splendour of those movements delight and dazzle mankind. It is intellect which rules, and one of the great problems of the day (as it has been of all time) is how to develop and cultivate that intellect. How can we, in short, make the most of intellectual man? Is he to be educated by mere symbols, and taught by rote like a parrot, exer-

cising his tongue to the detriment of his head and heart? or is he to be confronted with Nature in her vastness and her grandeur, and to be taught that he forms part of the mighty universe, and that his chief business on earth is to understand himself and the universe of which he is a part; and, more important than all, to realise in the universe and in himself the omnipresent Creator of both?

The two great modern schools of education are widely divergent: the one seeks by symbol and cypher to impart to the young and inexperienced head abstract ideas and truths about men and things: the other aims at instructing youth, not by symbols and the mere names of things, but by the things themselves; these, fortunately for science, being strewn around us in prodigal profusion. The former method (the symbol teaching) leans principally upon memory, and is eminently unattractive to the young mind. It has, as a consequence, proved a comparative failure. The latter method (the object lesson method) is quite a seduction for children. It leans less—indeed, comparatively little—on memory, and provokes thought and reflection. The object lesson method expands the reason, and develops and corrects the judgment. As an illustration of what I mean, take the following. The symbol teacher, if he wish to convey an idea of a butterfly to his young audience, describes, or, at most, shows a picture of it; the object teacher, on the contrary, shows the butterfly in all its gorgeousness of colour, and very probably causes it to fly in their delighted presence. It is not difficult to understand which system of teaching is most agreeable to the young mind, and which system makes the most profound impression on the highly sensitive and susceptible brain of youth. There is a mighty difference between the abstract and the concrete as vehicles of education, and between the symbol and the thing the symbol represents; and the question naturally arises, Why deal so largely with symbols, when we can, in the majority of cases, deal with realities? Why cram the young head, all too small, with roundabout descriptions of things, when the things themselves may more conveniently be stowed away? I cannot conceive anything more painful than a child endeavouring to understand and remember a thing which he has never seen, and of which even his teacher (from the faulty system of education at present in vogue) has a very hazy conception.

So much for the school, and now for the university. Matters are, I regret to say, little better here. The vicious system of teaching which degrades the schools, also degrades, within certain limits and with certain exceptions, the universities, and especially our much cherished and boasted Scottish universities. I allude now more particularly to the training given for the Master of Arts degrees in the Scottish universities—the teaching in medicine and surgery and a few other departments having of late years improved to a very remarkable extent. For two centuries at least, the Scottish universities, as far as the Master of Arts degree is concerned, have made little advance in their methods of instruction. During that period, however, science has made enormous strides, and the country is clamant for the admission of a more liberal importation of science into that degree. In the University of St. Andrew's, that grand old institution of which all true and patriotic Scotsmen are so justly proud, there are five science chairs, viz.: Mathematics, Natural Philosophy, Chemistry, Physiology, and Natural History; but the first two only are permitted to take part in educating for the Master of Arts degree; the three latter, viz.: Chemistry, Physiology, and Natural History, being left out in the cold. The University of St. Andrew's, considering the number of its professors, is strong in science; but, owing to existing regulations, three of the science professors, as stated, are kept, much against their will, at an outside.

In their case, the rich stores of knowledge are spread out as a dainty repast, of which the students can only partake very sparingly. There are many reasons for this. 1. Attendance on chemistry, physiology, and natural history is not required for the Master of Arts degree (this is true of all the Scottish universities). 2. The classes for the Master of Arts degree are numerous and repeated, and so arranged that it necessitates a very considerable effort, and not a little sacrifice, on the part of the student to attend chemistry, physiology, and natural history, a still greater effort being required to graduate in science. 3. Lastly, the chairs of Chemistry, Physiology, and Natural History (and I say this with extreme regret) have no bursaries or scholarships attached to them. Science, in the case of the three chairs in question, is to be cultivated and wooed for herself alone. There is, however, this consolation, that science, like virtue, is its own reward. The difficulties with which the chairs of Chemistry, Physiology, and Natural History have to contend, I regard as a misfortune to the University of St. Andrew's, and an especial misfortune to its students, for I cannot help feeling that an university is strong and useful in proportion to the amount of science taught in it. Science (natural and otherwise) forms, it appears to me,

the very pinnacle of all learning and all culture; and no student, I take it, can be regarded as either learned or cultured, in the highest and best sense, who is ignorant of science. In saying so much, I think I have the feeling of the country with me.

The Scottish Universities' Commissioners, so recently as 1878, have fully recognised the importance of science in the Scottish universities; and one of their recommendations is to the effect that the Master of Arts degree shall be opened up to admit more of science. According to the recommendation in question, the Master of Arts degree of the immediate future will be approached by any one of five avenues: (1) Literature and Philology; (2) Philosophy; (3) Law and History; (4) Mathematical Science; and (5) Natural Science. If this recommendation be carried out by the forthcoming Universities' Executive Commission a year or so hence, it will then be possible to obtain a Master of Arts' degree on science lines, as in the physical tripos of Cambridge. Another important recommendation, and one which will probably be adopted by the Executive Commission at the same time, is the institution of a first or entrance examination: this entrance examination to be passed before the student enters on the curriculum for the degree of Master of Arts. The entrance examination will be the test for general culture, and when it is passed the student will be permitted to select any one of the five avenues or lines which lead up to the Master of Arts' degree. It will then be the privilege of the student to choose his own intellectual pabulum, inasmuch as he may select any one of the five routes indicated for the degree in question. A certain amount of differentiation in the subjects for the Master of Arts degree has become a necessity. Every one feels that he can do some things better than others, and that it is a matter of the last consequence to his happiness and prospects in life to be permitted to pursue his studies on congenial lines. Some love languages, some mathematics, some physics, some chemistry, some physiology, some natural history, and so on; but as every one is not an Admirable Crichton, it will be for him to choose, when the new régime is established, those subjects and those professors calculated to give him the greatest pleasure and the greatest amount of profitable instruction. Then, and not till then, will learning and culture in the highest sense abound in the country: then, and not till then, will there be variety in learning and culture; then, and not till then, will the so-called learned professions produce men of originality and power. It is hopeless with our present university regulations and crippled university machinery, to secure the greatest good to the greatest number, or the highest intellectual attainment to any. At present, the Faculty of Arts, in all the Scottish universities, educates principally for the Church and for the profession of teaching; but, as I have endeavoured to show, the training of the Arts Faculty errs from defect, because of its inadequate supply of science. The pulpit cannot in any sense be regarded as scientific, with a slight smattering of mathematics and natural philosophy; and the teacher, with simply a Master of Arts degree in his pocket, is in no sense efficiently equipped for educating the rising generation. The clergyman occasionally requires to cope with science, to do battle with it, and should know it; and the teacher of the present day is ever and anon called upon, even in primary schools, to descant upon Nature and Nature's works. As science can only be properly taught in the laboratory, it is sincerely to be hoped that the promised forthcoming Executive Commission will deal liberally with the Scottish universities, in everything that pertains to laboratories and practical science-teaching. These are, there is reason to believe, the very thews and sinews of education in the widest and best sense, and progress and civilisation are both retarded by their absence. Book-lore may be got anywhere, but practical science-teaching can only be had at fully equipped colleges and universities. The laboratories of the Continent, especially those of Germany (a comparatively poor country), are stupendous institutions. There the student has everything provided for him by the State. In Britain, the richest country in the world, the laboratories are few in number, and poorly equipped—the State, unfortunately, doing next to nothing for them. I need scarcely remark, that I anticipate the very best results from the opening up of the Master of Arts degree. It is quite evident that, if our youth are to have an opportunity of making themselves acquainted with all available knowledge, the greatest possible latitude must be allowed in the number of subjects for the degree in question; and the Scottish universities, and the University of St. Andrew's in particular, must not only avail themselves of all their existing chairs, but they must aim at founding new chairs, in order to afford scope and variety in learning. As I said, in my introductory lecture of last year, learning, if it means anything, means universality; and an university, to be strong, must abound in professors as well as students. Given the professors, their mode of teaching is still a matter of the utmost importance. Is the present generation to be satisfied with second-hand information, tradition, and books? or, is it to go, whenever practicable, to the fountain-head, and interro-

gate Nature directly? Tradition and book-teaching lead to prolixity, weariness, and error; laboratory and practical science-teaching lead to original research, progress, and truth. To my mind, mere book-lore is comparatively worthless, when compared with actual knowledge acquired from Nature. The most advanced educationists are disposed, and very properly, to make their teaching more and more practical; and hence the sudden outgrowth of late years of technical schools and colleges. The laboratory is at length beginning to supplant the closet. In science, the laboratory is a necessity. The science chairs of the University of St. Andrew's are eminently practical. This is especially true of the chairs of chemistry, physiology, and natural history. The last-mentioned chair is about to take a new departure, as regards the practical teaching of natural history. Our newly appointed Professor, Dr. W. McIntosh, LL.D., comes among us at great sacrifice, but with much enthusiasm and a splendid reputation; and the aim and ambition of his life is, I understand, to found a zoological station and great practical school of zoology at St. Andrew's. His opportunities for this will be of the very best, as our magnificent St. Andrew's Bay is second to none in Europe for the richness and variety of its botanical and zoological treasures. I sincerely hope that Dr. McIntosh's practical teaching will be duly appreciated, and that the St. Andrew's students will give him an enthusiastic reception, when he appears in our midst a few days hence. The object of the present lecture, as its title indicates, has been to show, so far as that was practicable within a limited time, the nature and order of creation—man's place in creation—man's intellectual supremacy; and the necessity for extending that supremacy by education, based, to a large extent, on Nature and Nature-teaching.

The importance of practical science training can scarcely be over-estimated. In all the walks of life, professional and otherwise, it has a high value. The pulpit is never grander, or more convincing, than when it ransacks heaven and earth for illustrations of unity and design; the bar pleads, nor pleads in vain, when it reveals an intimate acquaintance with nature, and especially human nature; and medicine is never so efficient or so profound, as when it studies, and extracts from the botanical and mineral kingdoms, those subtle essences which act like magic on the languishing human frame. As I have already stated, and I wish to repeat and emphasise that statement, I cannot regard anyone as thoroughly educated, who is ignorant of his surroundings and of himself. The educated man, whatever his proclivities, should know geography, astronomy, natural philosophy, mathematics, chemistry, anatomy, physiology, and natural history. "The study of mankind is man;" but man, as I have endeavoured to show, is an integral part of the great universe. He is more. He is a *Cosmos* in himself. To know man, we must anatomise him; we must know his mental and physical configuration; we must be acquainted with his various systems—his nervous system—his vascular system—his muscular system, and so on. We must also analyse his intellectual and emotional nature; we must sound the depths of his philosophy; must tap the springs of his passions and emotions before we can comprehend Shakespeare's sublime panegyric on the greatest of all created beings:

"What a piece of work is a man! How noble in reason; how infinite in faculties! In form and moving, how express and admirable! In action, how like an angel! In apprehension, how like a god! The beauty of the world! The paragon of animals!"

TO DISGUISE THE TASTE OF QUININE.—Mr. J. K. Lilly proposes the syrup of *yerba santa* for the above purpose. Very little seems to be known about this substance. The purest state in which the writer has as yet been able to obtain it is in the form of an amber, mucilaginous mass, soluble in water and alcohol, insoluble in ether, benzene, and chloroform, precipitated by strong acids, and redissolved by alkalis. It may be prepared by mixing a fluid extract, made with a menstruum of not less than 75.9° alcohol, with an excess of water, boiling to drive off alcohol, shaking with finely powdered pumice, allowed to stand, then filtering, and the filtrate evaporated to the consistency of an extract. The following formula is proposed for the preparation of a syrup, which has proved to be very satisfactory: Fluid extract *yerba santa*, four parts; water, eight parts; powdered pumice, one part; granulated sugar, fourteen parts. Mix the fluid extract with the water, evaporate to seven parts, shake with pumice, allow to stand, decant, add sufficient water to preserve measure, then with heat dissolve the sugar. The addition of fluid extract of liquorice in the proportion of half a drachm to the ounce of syrup, or of aromatics, adds somewhat to the elegance of the preparation. When quinine or other bitter substances are suspended in this syrup, their taste is completely masked. It is far superior to the liquorice preparations used for the same purpose, is pleasant and agreeable, and is easily prepared.—*Chicago Medical Review*, August 15th, 1882.

BRITISH MEDICAL ASSOCIATION, FIFTIETH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

A SUCCESSFUL CASE OF TREPHINING FOR GUNSHOT INJURY OF THE SKULL: WITH REMARKS.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By T. LONGMORE, C.B., Surgeon-General, H.P.,
Professor of Military Surgery at the Army Medical School, Netley.

GENERAL REMARKS.—Attention has been frequently directed to the difficulties in the way of deciding upon the cases of gunshot injury to the cranium which call for trephining, *i.e.*, under what conditions the operation may be reasonably calculated to benefit a patient, and under what others the patients' welfare will best be attained by abstention from trephining. There has been for many years past a gradual disuse of this operation in the treatment of gunshot injuries in military practice. There is evidence enough to prove that, at the latter part of the last century, it was constantly employed. It was resorted to as a preventive measure, in cases where no grave symptoms were present. Even in simple cases of gunshot contusion of the skull, without cerebral symptoms having been evoked, the performance of this operation was authoritatively advised with a view to prevent inflammatory consequences. Trephining gradually declined in estimation during the time of the Peninsular wars, and in Europe has become more and more restricted since, until, as regards some of the most recent wars, the Italian war of 1859, the war of 1866, and the Franco-German war of 1870-71, it was hardly employed at all; and in the few recorded cases in which it was employed, was mostly attended with unfavourable results. There was a large experience as regards this operation during the United States war of the rebellion, as many as 200 instances of trephining for gunshot injury having been tabulated in the surgical history of the war, but even this number must not be accepted as showing that trephining was relatively a frequent operation in the United States. As a fact, the proportion of cases of trephining to gunshot injuries of the head of all kinds was larger in the Crimean war during the period that the records can be relied upon—from March 1st, 1855, to the end of the war, 3.11 per cent. in 898 cases of gunshot injuries of the head—than they were during the four years' war in the United States, where they were not quite 2 per cent. in 10,089 injuries of the head. But the proportion of recoveries was far greater in the United States. In the Crimea the recoveries were only 14.28 per cent., while in the United States they were 42.5 per cent. This has really, to some extent, reopened the question of the propriety of trephining in gunshot wounds; for it has become a matter for consideration in the minds of some surgeons whether the operation might not be more frequently employed with advantage than it has been of late years. A hope has been entertained that, with the development which cerebral localisation has received from the investigations of late years, the particular seats of intracranial lesions, as indicated by symptoms, might be determined more accurately, and surgeons thus guided to the special parts of the cranium where the trephine might be applied with fair prospect of affording relief. Unfortunately, in severe gunshot wounds, such as would be likely to raise the question of trephining, there usually exist such complications, and such mingled symptoms, that the precision hoped for from the scientific knowledge just alluded to can rarely be attainable. Even when the large practical experience gathered during the United States war is studied, it becomes apparent that, in many of the cases in which trephining proved successful, there were no more grounds for anticipating success, as regards the symptoms presented, than there were in numerous others in which the operation proved unsuccessful. It seems well, therefore, to preserve a record of every instance of trephining for gunshot injury, where there has been an opportunity of observing the progress of the case with sufficient care. This opportunity was afforded in the case which I now bring to your notice, and it possesses many features of interest. It is one in which a comminuted fracture of the cranium by a pistol-bullet, attended with laceration of the dura mater and impaction of the projectile for seven months, became complicated with meningitis cerebri, and afterwards with symptoms of extreme cerebral irritation. Trephining, which was then resorted to, was followed by very rapid improvement, and eventually by complete recovery.

The following is a record of the principal features of the case.

CASE.—Sergeant C. McL., aged 37, on September 10th, 1879, while quartered at Gibraltar, attempted to commit suicide by shooting himself in the right temple with a bullet from a revolver of the ordinary service pattern. He immediately became unconscious, and in that condition was removed to hospital. Consciousness had returned on his arrival there. His pulse was slow, but his respiration reported to be normal. Great pain was complained of behind the right ear. A wound was seen two inches above the outer part of the right eyebrow, from which some arterial blood was escaping. On exploring the wound, the skull was found to have been penetrated, and a channel existed of such a depth that, according to the report from Gibraltar, the probe sank into it to the extent of half its length in a direction downwards and inwards. The soft parts were incised sufficiently to admit of more thorough examination. The brain could be felt pulsating under the apparently uninjured dura mater, but the bullet could not be detected. The wound was ordered to be kept open.

From September 10th, the day of admission, to September 21st, there seems to have been no change in the man's condition, the pain behind the right ear being the most marked symptom. On the evening of the latter date, however, he had an attack of rigors; there was great uneasiness at the epigastrium, and vomiting of bilious fluid occurred. He also complained of frontal pain, and the discharge from the wound became thin and watery. A week afterwards, on September 28th, his condition became much worse, and the following symptoms rapidly became developed: unconsciousness till roused; picking of the bed-clothes; insensibility of the left pupil; complete left hemiplegia, coming on gradually, without loss of sensation, but attended with elevation of temperature of the paralysed arm and leg; incomplete paralysis of the tongue; impaired power of deglutition, coughing being induced on every attempt to swallow; and retention of urine. The discharge from the wound had increased, and became purulent in character. Between September 29th and October 7th, the symptoms just mentioned diminished in intensity, and the left side gradually regained power; and by October 7th, the paralytic symptoms had nearly disappeared. From this date, there was a continued improvement in the patient's condition until February 11th, 1880, when he was sent as an invalid from Gibraltar to England. The wound had not been allowed to close, and a slight purulent discharge constantly came from it.

He arrived at Netley on March 1st, 1880, and his state was then as follows. The patient presented a pale emaciated appearance. He was quite rational and collected, but had a reserved and rather desponding manner. He had no symptoms of paralysis. He complained of a constant pulsating pain behind the right mastoid process, where also there was some tenderness on pressure and percussion, of sleeplessness, and of dizziness on stooping and on exertion. His hearing on the right side, and the power of sight of his right eye, were slightly impaired. The right pupil was contracted. A small opening existed over the right frontal eminence, of about the diameter of an ordinary quill: its edges were inverted and adherent to the adjoining bone, and it freely admitted a probe to the depth of three-quarters of an inch. A greyish discharge escaped from it, and that which was accumulated in the sinus had pulsation communicated to it from beneath. The pulse was 80, full and compressible, and temperature normal.

The symptoms remained much the same as described until April 18th, 1880. Several small fragments of bone, some showing marks of lead upon them, had been removed by the forceps, and the sinus had been kept open and free, and had become somewhat enlarged, by the insertion of drainage-tubes. On April 8th, a dark substance was noticed at the bottom of the sinus, lying partly covered under the inner table of the bone, and this, on being tested by the electric probe, was found to be metallic. The patient was at once put under the influence of ether, the external wound enlarged by reflecting back the adherent integuments, small loose pieces of bone were picked away, and the bullet was grasped by a small forceps and drawn forward. Owing, however, to the relative smallness of the wound opening in the bone, the missile could not be removed until several projecting portions had been nipped off and the points of the forceps pressed into the soft lead until the blades did not protrude at any part. The bullet, on removal, was found to be much altered in shape. Its weight was 130 grains. The operation was performed with full antiseptic precautions, and the dressing was gently applied to the wound.

The history of the case, during the next few months, is that of contraction of the coverings of the cranial wound, and the gradual extrusion of a small hernia cerebri from its centre.

At the beginning of July, the patient's condition is thus described in the case-book: "He is in fair bodily health, but silent and occasionally depressed. He suffers from singing noises in the head, and disturb-

ance of sleep by dreams. Deafness in right ear, and dimness of vision in right eye, continue. The pupil of this eye is contracted. The ophthalmoscope shows general choroidal congestion. The site of the wound is marked by a depression one inch in diameter, in the middle of which lies a soft reddish-brown mass, with pulsation independent of the surrounding tissues. The hernia is connected with the parts within the skull by a slender pedicle, which passes through an opening in the centre of the depression." On July 7th, on a probe being passed alongside the pedicle of the fungus a short distance, for the purpose of ascertaining if a piece of dead bone were lying loose in that direction, the tumour became quickly puffed up to the size of a marble, and giddiness, nausea, and headache were produced. These symptoms subsided on the following day, and the tumour returned to its previous size. A graduated compress applied to the hernia caused it almost entirely to disappear; but it had to be discontinued, owing to the resulting headache and giddiness. The tumour then returned to its former shape and size.

No change worth mentioning occurred from this time till December. On the evening of the 6th of this month, he complained of sore-throat and a sensation of stiffness in the nose. There were no physical signs to account for these symptoms. During the night, he had three fits. The next morning (the 7th), his manner became rather wild, and he answered questions with obvious difficulty when spoken to. His temperature was 100.1° Fahr., pulse full, and skin hot but perspiring. As the day went on, he became very drowsy, and had three more fits; they were of an epileptic character, and each lasted about five minutes. He became more restless; and during the night, at intervals of one or two hours, had four fits up to 3 A.M., when they began to recur at intervals of about half an hour.

On December 8th, at 10 A.M., he was in the "status epilepticus," unconscious, foaming at the mouth, breathing shallowly, with a pulse 104, and thready in character, and his body bathed with sweat of a strong odour. His head was persistently turned from the injured side, and his pupils were dilated. He had now in quick succession, the interval never being longer than fifteen minutes, paroxysms of the following character. Both eyes opened widely, and the pupils contracted. The left hand made several to-and-fro movements, and these were quickly followed by similar action on the part of the right hand; the whole body then became convulsed; the eyes turned upwards, and to the right, and the muscles then relaxed. After each fit, respiration became suspended, usually for about half a minute, and, on one occasion, for a minute and a half, necessitating artificial respiration. The pulse also became very weak. The condition just described lasted till 1 P.M., when the operation of trephining, which had been determined upon after consultation, was performed by Surgeon-Major Tobin. The patient being insensible, no anæsthetic was required. The wound was enlarged upwards and laterally by a crucial incision, and a circle of bone, $\frac{1}{8}$ ths of an inch in diameter, was removed. The lower border of the circular opening, thus made, corresponded with the upper margin of the opening left by the bullet. The parts being thus exposed to view, the pedicle of the hernia cerebri was seen to be tightly embraced by a ring of dura mater, which was thickened, but otherwise natural in appearance. The stricture was relieved by dividing the edge of the ring of dura mater upon a director; and, in doing this, a small piece of bone was found to be firmly wedged between the pedicle of the hernia cerebri and the thickened ring of dura mater. The piece of bone was rough, of an oval shape, six lines long and three broad, not unlike a wheat-corn in shape. As it was thought this alone could hardly have occasioned the extremely severe symptoms previously described, and as the presence of an abscess was suspected, a grooved needle was passed into the substance of the brain to a depth of about two inches, in two different directions, but no pus was detected. The hernia cerebri was then removed by cutting through the base of the pedicle, the edges of the incision in the dura mater were brought gently together, and an antiseptic dressing applied.

The character of the fits changed immediately after the operation; they were much milder, and no suspension of respiration succeeded them. At 4.45 P.M. the sister in attendance noticed a great change for the better in the patient's aspect, and reported that he had become conscious, having recognised her and called her by name. The history from this date, with some relatively unimportant variations during the week succeeding the operation, was one of gradual improvement. After the 16th of the month, eight days after the trephining, convalescence was rapid and uninterrupted. No return of the cerebral hernia occurred, nor of the head-symptoms, and he gained strength day by day.

On January 2nd, 1881, the wound was completely healed, leaving only a slight cicatricial depression, and his general health was excellent. He was constantly under observation for some months after this date.

The man was detained, for military reasons, at Netley until July 12th, 1881, when I made a careful examination of him. His general health was good in all respects. The pain and tenderness behind the right ear had entirely gone. He did not feel giddy on bending down, or on remaining in a stooping position; but, on suddenly resuming the erect position, he felt dizzy for a minute or two. He read a good deal, and had no difficulty in remembering the subjects of books he had read prior to the date of the wound. Slight relative deafness remained on the right side, but the acuteness of vision of the right eye, like that of the left, was normal. The cicatrix of the wound was free from tenderness, and firm. The edges of the opening in the frontal bone could be felt to be surrounded by elevated, rounded, thickened osseous deposit. Sensation and muscular power everywhere were normal. He slept well. The only complaint he made was a tendency to costiveness, which required medicine to relieve it, and a feeling of general headache when the bowels were confined.

CONCLUDING REMARKS.—There can be no doubt, I think, that, in this case, had trephining not been performed, the patient must have speedily succumbed to the results of the intense cerebral irritation to which he was subjected on December 8th, 1880. The convulsions became at that date so aggravated in character, were so violent in degree, and so rapidly repeated, that his life was placed, on the occurrence of each attack, in the most imminent hazard. All other remedies having failed, there remained trephining as a last resource, the hope being that, through its means, the source of irritation might be reached and removed. It was considered, too, that the operation itself could offer no risks in the instance under notice. The arachnoid membrane had already been opened. A long period had elapsed, during which there had been fungus cerebri, and a certain amount of discharge; so that, from long-continued inflammatory action, adhesions must have taken place for a considerable distance around the focus of injury, and there was thus very little danger, if any, of diffusion of air or septic fluids in the arachnoidean space, or of diffused meningitis from the operation. As it turned out, the removal of a minute fragment of necrosed bone, which was acting as a foreign body, and exerting pressure against the dura mater on the one side, and the fungus cerebri on the other, sufficed to stop the irritation and its alarming effects. The enlargement of the opening through which the fungus protruded, and by the fibrous edge of which it was compressed, almost ligatured, also appeared to be the means of enabling it to subside, and the wound to become healed.

A noticeable feature in the case was the apparent impunity with which the exploration was made by the grooved needle for the detection of suspected abscess. The case also seems to form a good illustration of the truth of the deductions, which have been drawn by Ferrier and other physiologists from experiment, that the dura mater is extremely sensitive to irritation, and that certain zones exist on the surface of the brain in the fronto-parietal region, which, if irritated, give rise to convulsions of a violent character.

A SUCCESSFUL CASE OF NEPHRECTOMY.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association at Worcester, August 1882.

By LAWSON TAIT, F.R.C.S.,

Surgeon to the Birmingham and Midland Hospital for Women.

M. A. L., aged 24, was placed under my care by Dr. Mark Fenton of Coventry in December 1880, on account of a tumour of the right kidney. The girl was in wretched health, suffered constant pain in the mass, and her urine was loaded with pus.

I admitted her into the hospital, and, after some preliminary treatment, I opened the abdomen in the middle line on January 28th, 1881, for the purpose of removing the kidney. In this I failed, for the intestines were matted in front of it, so that I could not reach it. I had the satisfaction of learning, however, that the left kidney was healthy. She recovered speedily from the exploratory incision, and left the hospital. As very often happens, she improved immensely in health after this proceeding, the tumour got less, and she was under the belief that nothing more would be required. The improvement was only temporary, however, and she came back to me in April last quite as ill as she originally was, and desirous of having the kidney removed. I had informed her, after the exploratory incision, that I could remove the kidney from the back, should she wish another attempt made. On May 8th, in the presence of Dr. Bishop of Edinburgh, the Messrs. Garman of Wednesbury, and Dr. Savage, and assisted by Mr. Raffles Harmer, I made a transverse incision over the curvature of the ribs, about four inches long, cutting carefully down till I reached the renal fat, which was very abundant. I separated

the mass entirely with my fingers, and then dragged the upper part of the kidney through the wound. In this I made a mistake, for I tore a vein so large as to give me a few seconds of great anxiety. I secured it with three pairs of forceps, eased out the rest of the tumour, and tied its pedicle in a lump, by means of the "Staffordshire knot". I cut the ligature short, and then tied the vein I had torn, cutting that ligature also short. These ligatures were both of common silk. I then found that I had torn the peritoneum at the upper part of the tumour, and the edge of the liver was protruding. I put in a large-sized drainage-tube, and closed the wound. The operation was performed without a drop of carbolic acid or any other of the so-called disinfectants touching the patient. The drainage-tube was removed on the sixth day, and the patient recovered without giving me five minutes' anxiety. She is now (August 3rd, 1882) in perfect health, and her urine is perfectly normal.

Dr. CHARLES J. CULLINGWORTH (Manchester) mentioned the case of a single woman, aged 36, who was admitted into St. Mary's Hospital, Manchester, on account of a large cystic tumour in the abdomen, which was first observed five or six years previously. She had been tapped several times in the infirmaries of Leeds and Manchester. The tumour now occupied almost the whole of the left side, extending from the spine to about an inch on the right of the umbilicus, and from within one finger's breadth of the left lower ribs above to the level of the superior spinous process of the ilium below. Over the area thus bounded there was dulness on percussion; below this, namely, from a line two inches below the umbilicus to the pubes, there was resonance, which extended outwards to the outer border of the ilium. The urine was clear, acid, slightly albuminous, of specific gravity 1012. The diagnosis was cystic tumour of the left kidney. As the general health had not materially suffered, and as the constant pain having rendered her incapable of following her occupation as a dressmaker had made her most anxious to have an operation, it was decided to attempt removal by abdominal section. This was accordingly done, with full antiseptic precautions, on June 9th, 1882. An incision, six inches in length, was made in the linea alba. The layer of peritoneum in front of the tumour was thickened and traversed by a number of very large veins. This was carefully divided, and the tumour (which, with its contents, weighed 5 lbs.) was then shelled out, with some difficulty, without rupturing the cyst. The ureter was divided and tied, as also was the pedicle containing the renal vessels. The intestines were scarcely seen during the operation. All bleeding vessels having been secured, and the abdominal cavity well sponged out, the omentum was drawn down, and the parietal incision closed by ligatures of carbolicised silk. In spite of free stimulation, the patient never rallied, and died twelve hours after the operation. The specimen, a typical example of hydronephrosis, with nothing remaining save the bare walls of the pyramids, without a trace of kidney-structure, was exhibited to the section. The microscope detected cloudy swelling of the epithelium of the convoluted tubes of the right kidney, which otherwise, however, was healthy.

ON PRIMARY ENDOCARDITIS.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By ALFRED J. HARRISON, M.B.,

Physician to the Bristol General Hospital.

THE subject of endocarditis is of primary importance in more senses than one. For a long time, I have felt convinced that endocarditis is of more frequent occurrence than is generally supposed; and I have often found, during the examination of people, apparently healthy, for life-assurance and other societies, that slight abnormalities existed in the sounds of the heart, which made one incline to the idea that there must have been, at some time or other, endocardial inflammation; and I feel sure now that many of these people had suffered from endocarditis without being aware of it.

Many authors make allusion to endocarditis as a possible complication; but yet, so far as my knowledge goes, no one has yet recorded an actual case with the exception of the case of Dr. Williams, recorded by M. L. Williams, in his *Practical Medicine*, and by M. L. Williams, in his *Practical Medicine*, and by M. L. Williams, in his *Practical Medicine*. The case of Dr. Williams, recorded by M. L. Williams, in his *Practical Medicine*, and by M. L. Williams, in his *Practical Medicine*, and by M. L. Williams, in his *Practical Medicine*. The case of Dr. Williams, recorded by M. L. Williams, in his *Practical Medicine*, and by M. L. Williams, in his *Practical Medicine*, and by M. L. Williams, in his *Practical Medicine*.

Dr. Fothergill says "it is found rarely as an idiopathic affection."

The American writers Meigs and Pepper say: "In a few instances,

an acute cardiac affection cannot be traced to any of the causes above mentioned, but appears to occur idiopathically."

Then Dr. Pye-Smith, in a very able "Analysis of Cases of Rheumatism," in the *Guy's Hospital Reports* for 1874, makes this statement: "One almost doubts whether cardiac inflammation should not be counted an integral part rather than a complication of rheumatic fever; at all events, there are several parts which escape more often than the heart." "Thus, out of 400 cases, 227 had some cardiac murmur, pericardial or endocardial."

Now I wish to go a step further; and I trust I shall carry conviction to your minds, when I say that primary endocarditis is not merely a possible event that may arise, but that it has actually occurred, and will occur again.

I propose, then, to lay before you briefly the notes of three cases (and since I commenced this paper a fourth case has come before me, and is now under treatment). The first case had a marked symptom of rheumatism—viz., acid perspirations—the connecting link, so to speak, between an unquestionable rheumatic origin and a case where there is no evidence of any other complaint but endocarditis: the second was one of endocarditis without any apparent rheumatic complication; the third has had no acute symptoms of endocarditis whilst under my care, but shows the results of it in a diseased heart without any direct rheumatic affection; and now I can add a fourth, also free from any rheumatic symptoms, unless—and this appears very probable—the endocarditis be one form of rheumatism. Strange to say, the first two cases occurred in my own house, and consequently were under observation from the commencement of the earliest symptoms.

CASE I.—J. N., aged 15, an active, intelligent, but excitable boy, with light hair and very florid complexion, was taken ill with a feverish attack on Friday evening, September 9th, 1881. He had always had good but not robust health; no rheumatic affection of any joint. He went to bed early, and slept until about three o'clock, when he was disturbed by a sharp pain in the left cheek. This evidently arose from inflammation in a decayed tooth. His pulse was quick and throbbing, and face very much flushed; he had slight headache. However, he got up to breakfast, and later in the morning seemed better, and took his food well. In the afternoon, he was languid and lay on the sofa, and went to bed early. At 9 P.M., his pulse was 110; temperature 101°.

September 11th. He had slept well, waking up only once, when he drank half a pint of milk. 8 A.M. Pulse 104; temperature 100.9°. He complained of pain in the left cheek still, which was swollen, and of slight headache, but mostly of sore-throat. Examination showed that the tonsils and fauces were very red, but there was no ulceration. He had no pains whatever in any joints or muscles. His face was very flushed, and his skin perspiring, with a sour smell about it. He had no cough. He looked and smelt like a patient with acute rheumatism; and, bearing in mind that his father had suffered from several severe attacks of acute rheumatism—so much so that he was obliged, some years ago, to relinquish a very lucrative practice in Birmingham, and settle in a milder climate—I examined his chest very carefully, and then discovered that he had a soft systolic murmur, heard best along the left edge of the sternum, commencing opposite the nipple, and in an upward direction, reaching its maximum over the cartilage of the third rib. It could also be heard to the right of the sternum, below and over the sterno-clavicular articulation. I considered the *bruit* to be an aortic systolic one. Under all the circumstances of his being a visitor in my house, the unusual occurrence of his symptoms, and the family history, I naturally felt very anxious about him; and therefore asked my friend, Dr. E. Long Fox, to see him, which he most kindly did, and confirmed my opinion. 10 P.M. The pulse was 106, and temperature 102°. Of course, he was kept in bed, and put on milk diet, chicken-broth, etc.; but I will not trouble the meeting with details. The temperature chart, containing also a brief outline of treatment, shows that he made very good and rapid progress; and, on the 16th, his pulse was 66 and temperature 98.4°. The action of the heart was a little irregular, and the *bruit* could be heard. On the 17th, he was able to travel home; and, at the end of the month, he was examined by an eminent medical man (a friend of his father's), who expressed the opinion that there was then nothing much the matter. I should add, that he examined him in a standing position, and not lying down.

CASE II.—This is the case of my own son, G. A. H., aged 15½. He goes to the College at Clifton; and, three days after the end of last autumn term (December 22nd), he complained of feeling cold and shivering, and of headache; and, about 6 P.M., he was actually taken ill, and vomited the food which he had taken during the day. He lay in bed, feeling chilly whilst standing about with a friend in the room, and feeling better; and on the morning of the day on which he was taken ill, he had been engaged in a carpenter's work in the room, with his coat on, and exposed to a draught of cold frosty air.

went to bed, was feverish and restless through the night, but did not complain of pain anywhere except in the head. He took an aperient pill when he went to bed, and aperient water in the morning. He was very irritable, and said he felt internal shiverings. The tongue was furred, and the urine darkish-coloured. He has been subject to occasional bilious attacks, and I was inclined to regard this as one of them. The bowels were obstinate, and he had to take stronger aperient medicine; and the sickness was more or less troublesome, but relieved by effervescent mixture.

On December 25th, his pulse was 96 and temperature 102°, in the morning; and the pulse 68 and temperature 99.7° in the evening.

December 26th. He had a very good night, sleeping all through until six o'clock. I found that, though his pulse was 72, his temperature was 102°, and I naturally felt disappointed at the result. He had no pain anywhere, but complained of an internal soreness about the ribs when he moved in bed. I examined his chest very carefully, and then discovered, to my sorrow, that he had a systolic *bruit*, heard very distinctly over the third rib on the left side of the sternum, also under the right clavicle, especially by the sterno-clavicular articulation; and also, though not so loudly, under the left clavicle. The *bruit* was fainter at the apex. There was no pain in the joint; no acid sweats; the skin was dry, and rather pungent. I will not trouble the meeting with any unnecessary details of the case; but the temperature chart I hand round shows that the temperature varied a great deal; that it was often higher in the morning than in the evening; and that it was not until about the fifteenth day of the illness that a normal condition was obtained.

I asked my friend and colleague, Dr. Markham Skerrett, to see my boy, which he most kindly did, and he came to the conclusion that the abnormal sounds must result from endocarditis affecting the aortic semilunar valves. The boy's pulse was excitable, affected by slight movements in bed, and he had a curious tingling sensation in the fingers, like that produced by striking the "funny bone" slightly, he said. We gave him twenty-grain doses of salicylate of soda, but he could only take a few doses, as it produced violent buzzing in the ears and deafness, and made him feel almost frantic, and as if his head would split open.

December 29th. His temperature was 100.8°; pulse, 80; not so excitable. The apex-beat was rather heaving, and extended outwards. Distinct reduplication of the first sound was heard to the right of the apex; a faint systolic *bruit* to the left of the apex, more distinct at the base, where the second sound was reduplicated. He took food well, and the tongue was clearing.

January 11th. He went down stairs, and from this time he made very good progress.

February 25th. Dr. Skerrett examined him, and my note is as follows. "In the erect position scarcely any murmur can be heard, but there is reduplication of the first sound at the apex, and the second at the base, but when he lies down the murmur is heard in its old localities."

July 30th. The murmur was faintly heard as he lay in bed. He was wonderfully well in himself.

CASE III is one of a patient of mine, William L., who was admitted into the Bristol General Hospital on February 2nd, 1882. His age was 25; he was a bookbinder. He had been ailing for the last eight months; he complained of pain in the back, slight cough without expectoration, dyspnoea, faintness, and pain after food. He had no palpitation. He had never had rheumatic fever, nor pain in any joint. I questioned him most particularly on these points, and also his mother. The father had had several attacks of acute rheumatism. My patient had a double aortic murmur, a mitral systolic one, and much hypertrophy of the left side of the heart. The pulse was rather anæmic. There was nothing remarkable to record about his temperature. He improved a good deal in the hospital, and on February 21st was discharged. I have seen him several times since, and he is very well considering his extensive heart-disease. Taking all the circumstances of his case into consideration, we cannot, I think, regard his disease as the result of congenital derangement of the heart, and feel sure now it may be accounted for by endocarditis having occurred most likely some years ago.

CASE IV.—I saw for the first time, on August 5th, N. P., a fair-haired girl, aged 13, tall for her years, who had grown a good deal lately. She was of florid complexion. On Monday and Tuesday last, she went to some swimming baths, and on both days remained a long time in the water. On the 2nd of the month, she complained of feeling chilly, and lay on the sofa wrapped up in a rug. When I saw her on the 5th, I found the following condition of things. Her pulse was 104; temperature 103.5°; skin hot and dry. She had no pain anywhere except in her head when she raised it from the pillow, and then

a sharp pain shot through the temples; and she said her left side was rather sore, more especially towards the spine. Over the second and third ribs on the left side of the sternum, a systolic *bruit* was distinctly heard, which could be traced up to the right sterno-clavicular articulation, and beyond under the clavicle; and also, though more feebly, under the inner third of the left clavicle. She had never had a trace of joint-rheumatism or rheumatic fever. I gave her ten-grain doses of salicylate of soda, which she took well; and, on the 7th, her temperature had come down to 98°, her pulse to 84, and I hear she is doing well.

REMARKS.—I have no doubt in my mind that, in three of the cases I have related, I have seen them during an attack of endocarditis; or, if not endocarditis, what has it been? And I cannot help giving an opinion that it is quite possible to have acute endocarditis without any symptom of rheumatism, or rather, as I am inclined to put it, without any other symptom of rheumatism. There is one feature which is common to all the cases; and that is, that the father of each patient had had one or several attacks of acute rheumatism; but, strange as it may seem, the mother had never suffered from it. I cannot believe that these cases can be very rare. It must surely be a curious coincidence, if they be that I, individually, should have come across three cases in less than twelve months. I am sure that, two years ago, I should not have probably thought it necessary to examine the heart with the symptoms complained of; but I have done so of late in every case, and I hope I shall continue to do so. I trust that other medical men here to-day will be able to confirm my cases by the record of similar ones; but, whether this prove so or not, I feel confident that I have the unanimous voice of the meeting that, when such cases do occur, they cannot be recognised too early, nor treated too promptly. I attach great importance to the salicylate plan of treatment, where it can be carried out; for the more we can subdue the inflammatory process, the more we shield the cardiac valves from injury and incompetency. On looking back over a period of a good many years now, I can call to mind many so-called feverish attacks which resulted in a long and unsatisfactory convalescence; and I think, if I had then carefully examined some of these cases, I should have found the solution in damaged cardiac valves. In conclusion, I think I am not straining a point in assuming that, if endocarditis can occur in foetal life, and affect the fetus *in utero*, without the mother herself suffering from rheumatism, as happened in the case to which I alluded at the commencement of this paper, surely endocarditis can arise in children without being necessarily associated with acute rheumatism affecting the joints.

Dr. CLIFFORD ALLBUTT (President) said a more interesting or more important paper than that of Dr. Harrison could not be brought before the Section. It had been his habit for years to urge very strongly upon clinical students that they were not to take heart-disease as any competent measure of the severity of rheumatic fever. The heart-disease was just about as useful, and just as little, as the affection in the left ankle, or right knee, or any other local affection, in estimating this question. It was by no means unusual to find that endocarditis was the first, and the solitary event perhaps, of acute rheumatism. He had recently had a very instructive case, which strengthened the idea that heart-disease might stand alone in a case of rheumatic fever. He remembered also, in the case of a young lady in the north of Yorkshire, a very sad series of events of this kind ending fatally. There was a very bad rheumatic and phthisical family history. Shortly afterwards, her brother was similarly affected, and had to retire from public life. Neither had any joint-affection. He felt confident that both of these were cases of rheumatic fever, and for the reasons given by Dr. Harrison in his paper. He had very frequently found pericarditis. Some cases of ordinary influenza he had found to be of this same character. The paper was one which, besides its intrinsic merits, had peculiar importance, as regarded both diagnosis and prognosis.

Dr. BALFOUR (Edinburgh) said he agreed with the President as to the importance of the paper, but wished at the same time to point out that they ought not to consider that every case of systolic murmur was one of endocarditis, that even they might have a certain amount of rheumatism with a systolic murmur without endocarditis. He had never seen any case of rheumatic fever in which one could not detect a systolic murmur; and in every case of febrile disease, and especially in debilitated patients, the ordinary spanæmic murmur, could invariably be detected and, if treated properly in the acute—certainly in the chronic disease—could be checked. And, indeed, it was to point out the importance of taking note of it in every form of disease, that he had brought forward his own paper. Pericarditis was a far more common thing than anyone was at all aware of. But there was another note of warning he had to give—namely, not to regard every case of friction as a case of pericarditis; at all events, he had seen several

cases in which the friction came and went—indeed, not a mere slight, but a loud rub. He was not aware whether or not the ordinary milk-spots gave rise to such murmur.

Mr. YATES (Birmingham) remarked that the presence of murmurs of the heart could not necessarily be considered as of endocardial inflammatory action, but frequently might be considered to arise from over-action of the heart, induced by exertion. He mentioned two cases, which he had recently seen in two young girls who had been playing tennis with undue energy, in which there was a distinctly marked systolic bruit at the apex, extending upwards along the right side of the heart. The application of a vesicant was, in each case, very beneficial in lessening the abnormal sound. In reference to Dr. Harrison's cases, he noticed that the high temperature was referable to a nervous or excitable condition, associated with debility, as had been remarked by Sir W. Jenner. In one of the cases, the abnormal sounds of the heart were completely removed, after a visit to the seaside.

Dr. HARRISON, in reply to the President's remark that he remembered well a case of acute rheumatism which came under his care, in which a relapse was attended with endocarditis without any further joint-symptoms, said that he had seen such cases, but that they scarcely came under the category of primary endocarditis. He was glad to hear that the president was inclined to the opinion that cases, like those related in his paper, should be regarded as rheumatic in their origin. He agreed with Dr. Balfour's remark that influenza was associated with, or, rather, resulted in, pericarditis, and endocarditis. Dr. Balfour also remarked that murmurs were not necessarily due to endocarditis. To this Dr. Harrison assented; but in cases where there was much deviation of temperature, and no other symptoms to account for the murmurs, and especially where the murmurs were so well marked as in the cases related, he could not well attribute any other cause than endocarditis.

CHOREA AND ITS RELATION TO RHEUMATISM.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By EDWIN RICKARDS, M.B.,

Physician to the General Hospital, Birmingham.

THE purport of this paper is to support the view, that chorea is a functional disease of the brain. From my observation of a large number of cases, of many of which I have records, I have been led to believe that chorea occurs exclusively in individuals of an excitable nervous temperament, and at a time of life when the mind is least stable; that it may arise solely from excessive nervousness, which is frequently brought to chorea-point by fright, or some condition calculated to produce nervous debility. If it were not that I think that all will admit that fright is of itself capable of causing the disorder, I should cite cases which would, I think, carry conviction that such was the case. The fact, that mental disturbance is a potential cause of chorea, is, to my mind, presumptive evidence that it is the constant cause. In three of my cases, choreic movements followed the occasion of excitement within twenty-four hours. Now, if organic changes were brought about in so short a time, it is reasonable to suppose that, in protracted cases, terminating fatally, constant grave structural alterations would be found. Such, however, in my experience, is not the case. The proposition, that chorea is caused by mental disturbance, is supported by the fact, that the movements are to a variable extent under the control of the will; and when the mind is at rest, as in sleep, cease. The shifting, too, of the movements, seem to contraindicate any fixed lesion. It might be urged: Why does not fright more frequently cause chorea? To this objection, I would reply, that an attack of chorea from fright is determined by the nature of the terrifying agent, and the mental constitution of the individual. A trivial incident may seriously impress a nervous child, while a child who is not of a nervous temperament might not be shocked by a far more formidable occurrence.

And, now, as to the connection between chorea and rheumatism. The causal relationship between these two diseases must, I think, at present be purely speculative, as the etiology of rheumatism is as yet undetermined. I am inclined to think that we must look to the nervous system for the primary cause of that disease. It seems to me probable that functional nervous disorder may lead to blood changes, which give

the pain they suffer, and the regimen they undergo. My experience, up to the present time, has led me to the conclusion, that valvular disease of the heart is associated with chorea only through rheumatism. Four, and only four, chorea cases, have been admitted into my hospital under me without heart-disease, and discharged from it with damaged valves. In these four cases, the endocarditis was accompanied by well-marked symptoms of acute rheumatism. In no one instance have I seen valvulitis develop in a choreic patient unconnected with rheumatism.

URETHRAL CARUNCLE.

Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By T. W. H. GARSTANG, M.A. Oxon., M.R.C.S., L.S.A.,

Fellow of the Obstetrical Society of London; and Late Resident Midwifery Assistant, St. Bartholomew's Hospital.

THE subject of my remarks—urethral caruncle—has been more or less before the profession since the year 1750. I am indebted to Dr. Fleetwood Churchill for the information that it was then introduced by Sharp; was noticed by Morgagni in 1751; by Hughes in 1768; by Blomfield; by Norman in 1849; by Sharp, Warner, Jenner, Sir Charles Clarke, Wardrop, Velpeau, Mosack, Rosenmüller, Vogel, Kaldebrand, Drokaska, and of course all modern writers. It has, therefore, received an amount of attention which may appear surprising to those who have not happened to meet with a case, who probably will be inclined, at first sight, to set down the whole matter as trivial. Yet the suffering caused by the disease is often so great as to transcend description. At least two cases are on record where the patient has eventually sought relief from her misery in self-destruction; therefore, I submit, the subject is just as much worthy of all the attention that can be bestowed upon it as any of the more generally known or more common affections, which involve larger portions of the human frame. When I add that, in many details, there are considerable divergencies of statement among the authorities, I trust I shall have said sufficient to warrant me in asking you to believe, *in limine*, that there is yet room for observation and discussion.

Dr. Churchill states that the disease is more common in young or middle-aged women; Sir Charles Clarke never met with it beyond middle age; Thomas does not recognise age or the married state as factors at all; while Galabin believes it to be more common in the married. One authority gives the usual size of a caruncle as varying from that of a pin's head to that of a large nut; another says, from that of a cherry-stone to that of a pullet's egg. One author describes the tumours as originating exactly at the meatus, while another insists that they always originate within the canal. The disease has received various names, such as "irritable urethral caruncle", "vascular tumour", and "irritable vascular excrescence". It is agreed that there may be one tumour, or more; and that, if they be multiple, they extend some distance up the urethra; and that this latter form of the disease is much the more grave, both as regards treatment and eventual result. It is generally admitted that the tumours are the seat of exquisite sensibility; but I have seen it stated also that they may exist without causing pain. Those that we are asked to treat must, of course, always be painful, otherwise we should not hear of them. It is just possible, on the other hand, though I do not myself think it at all probable, that a painless caruncle might be discovered during the progress of an examination for another purpose. But all the authorities that I have been able to consult are agreed on one main point; they all describe the tumours as definite vascular excrescences, generally pedunculated; and, as a consequence, all the means of treatment advocated proceed upon this basis. Passing over simple astringent injections into the urethra, and simple application of caustic to the growth, the chief methods of procedure are two; viz., (1) ligature and scissors; and (2) scissors and nitric acid.

The one fact which it is the object of this paper to bring most prominently before you is, that there also exists in some cases an allied disease, which I have been unable to find previously described. It is an extremely vascular and painful condition of the general lining membrane of the urethra, and may appear as a patch, or as a ring, or involve the whole canal, without the existence of any visible tangle of tumour or excrescence, yet exactly resembling in its character and symptoms and in its entire resistance to all forms of treatment, except the total destruction of the diseased part. It is a condition overlooked by any one who does not go far enough into the details of the case.

That this condition is a very serious one, will appear to be evident from the patient's general mental and bodily health; that it is unresponsive to all the ordinary remedies for cystitis, urethritis, and allied diseases,

that it is not generally known to the profession; and that it is capable of great alleviation, and, sometimes, of radical cure, it is my hope to demonstrate by a brief allusion to a few cases, which have occurred under my own observation.

On August 30th, 1880, I was consulted by a patient, a widow, about sixty years of age, complaining of the usual symptoms of urethral caruncle. The affection had been coming on for two years, and was gradually becoming worse. Micturition was frequent, both by day and by night, and was always accompanied by most excruciating pain. In the intervals there was a sensation of heat and weight, increasing to actual pain on any prolonged exertion, such as walking. The general health was steadily failing. On examination, I discovered a small caruncle of the usual kind. In order that the patient might make arrangements for a few days' rest in bed, operation was postponed till September 9th, when I called upon her, and applied nitrate of silver to the growth. On the 11th and on the 14th, the application was repeated; and on the 19th, or in ten days from the commencement, she was so much relieved, that I discontinued my attendance. Micturition and walking were both comparatively comfortable. A month afterwards, however, she returned to me, saying that her symptoms, never completely relieved, were again becoming more urgent. On examination, I could find nothing externally to account for it; but, on separating the lips of the urethra, I was much struck by the extreme redness and vascularity of the mucous membrane within, and all around, the orifice. The gentle use of a common catheter demonstrated at once that this vascular area was the seat of the pain; and, as far as I could discover, the disease did not extend beyond from a quarter to half an inch up the canal. The question naturally arose, was this a result of the previous application of caustic? The evidence was not conclusive; but I leaned to the belief that I had to deal with an extension of the disease itself. No one knows the cause of a caruncle; but, whatever the cause may have been in this case, I did not see anything impossible, or even improbable, in the supposition that, besides producing the caruncular tumour, it might have also produced this caruncular state (so to speak) of the adjacent membrane. At all events, I determined to try the same treatment. The end of the case is soon told. I rubbed over the painful area freely with solid nitrate of silver, and in a week the patient was completely cured; and, during the last two years, has enjoyed life without any return of the ailment which, in the two previous years, had been so terrible an affliction.

Her sufferings had been intense; the relief was complete, and, on November 3rd, 1880, I was specially sent for to a large town at some distance, to see an acquaintance of hers, who was suffering in a similar manner. My new patient was a married woman, aged about 45. She had been ill for five years, and almost entirely bedridden for the last two years, and I do not know what language of mine could adequately express her suffering. She had been, she told me, under the treatment of eleven different medical men, without receiving benefit from any. For the last twelve months she had not been under treatment. On examination, there was no appearance of caruncle at all, but the urethral mucous membrane, so far as could be seen, presented exactly the appearance described in the last case. I attempted to judge of the extent of the diseased surface by noting the pain caused by the introduction of a catheter; but this was so uniform and excessive, that I could only conclude that the whole surface was diseased. No speculum or dilator could be tolerated at all; and, had it not been for my previous case, I should have been completely puzzled, as, indeed, must have been my eleven predecessors. I concluded that they would have tried all ordinary remedies; so, as a last resort, I determined to cauterise the whole surface of the urethra. This I effected by sponging it out with nitric acid. The operation was repeated in three days; and, after the pain caused by it had subsided, a remarkable improvement was manifested in the patient's condition. On November 11th, only eight days from my first visit, I found the patient downstairs, able to walk a little, and in comparative comfort—at all events as contrasted with her five years' sufferings.

On the same day, November 11th, I quite by accident came across an entirely independent case. This was a married woman, aged 40. She had been ill for six months; and her symptoms resembled these other cases, only in a far milder degree. There was no redness within the orifice of the urethra, but the catheter discovered a tender spot higher up the canal. I cauterised this by guess work, in the dark, so to speak, cutting a short piece of an ordinary flexible male catheter, and using it as a shield to the parts at the orifice, and passing a piece of fine wire through it, tipped with cotton-wool, with a drop of nitric acid. The one operation effected a permanent cure.

On November 24th, my second patient sent for me again. She was no worse, but still had a certain amount of pain and discomfort; and she earnestly begged me to repeat the operation and try if I could not

effect an absolute cure. I found the case now in the condition of the last described; the catheter caused no very great pain until it was about to enter the bladder. I treated her exactly as I have described for the third case, with the result that there was temporary improvement. I was sent for again, five weeks later, on December 31st, and on repeating the treatment, so much pain was experienced with so little fresh improvement, that further interference was abandoned. I rely on this case, rather than on the one first described, to prove that I had to deal with a distinct disease of the urethra; for here there was no original caruncular tumour at all, and, had the affection been any form of inflammation, or any other known affection of the urethra, I fail to explain its long persistence, and its entire resistance of all internal remedies, as well as its immediate relief by active local treatment. An amount of relief had been afforded which was priceless; but I felt doubtful about its permanence. I have not seen the patient for eighteen months, but have made inquiries about her present state for the purpose of completing my record of the case in this paper. Her husband writes as follows, under date, July 26th, 1882. "My wife is still a sufferer from the ailment; the pain is sometimes very severe. She is able to do her work about the house, but not able to walk far away. She is in other respects quite hearty, and is also grown rather stout." So the woman's life has at all events been made bearable; and the failure to effect an absolute cure may be put down either to the want of a speculum to aid in discovering the exact seat of the remaining disease, or (as I think probable) to the fact that the disease involves the neck of the bladder also.

My first case now led to a fourth, which I have only time to mention very briefly. This was a married woman aged about 60. Her symptoms, and the condition on examination, were as last described. The same treatment was confidently adopted. Nitrate of silver was applied on February 3rd, 1881, and again on February 24th. Nitric acid was used a month afterwards, on March 15th and 20th. The result was complete relief. I am bound to add, however, that recent inquiries into the present condition of this case show that the disease returned in about nine months. The patient then went, for some unexplained and to me inexplicable reason, to a quack; and, receiving no benefit, in another six months called in another medical man. According to the history I have received, the urethra was dilated by means of a tent, I suppose preparatory to some operation; but the patient died within a fortnight. I do not for a moment mean to suggest that the *post hoc* was also *propter hoc*, and merely mention the fact to make my report as complete as possible.

Next I will briefly state that I have had two or three similar slight cases; all perfectly cured, so far as I know; but, not having considered them worth special note-taking, I will say no more of them.

I will only call your attention to one more case, which is the last I have seen. The patient was a married woman, aged 38. She resides in a large town at some distance. She had been attended by one of the leading practitioners of the town, who had treated her for nine months for cystitis, without any benefit. There was no appearance of caruncle, as usually described; but the catheter showed the tender place high up in the urethra. I tried nitrate of silver, as an experiment, on February 27th, 1882, and again on March 10th. The result was extremely favourable. Nearly four months elapsed, and then the patient came again. On June 28th, I used nitrate of silver; on July 4th, she was much better; and on July 25th, she wrote, in answer to my inquiry, that she was quite well.

In this series of cases, the first, third, and fifth are completely cured; the fourth was relieved for nine months; and the second was relieved, in proportion to the original suffering, almost more than any of the others. The coincidence of an ordinary caruncle in the first case, together with the naked eye appearance of it, and of the second case, lead me to consider the affection only a modification of the ordinary caruncle; which view is also strongly supported by the results of the treatment. At the same time, I quite admit that in some of my cases, the diagnosis would have been all the more trustworthy, could I have made a more thorough examination. Could I have had my cases in a special hospital ward, with all hospital facilities and assistances, I might possibly have made my report more satisfactory. I must, therefore, emphasise the fact that my cases all occurred in private practice, and my patients were all of the middle and lower classes. I had no assistance, nor any chance of obtaining it, in any single operation. Anæsthetics, therefore, were out of the question; and I never succeeded in using a speculum or dilator, simply because of the pain produced by the attempt.

Dr. EDIS (Chairman) thought that possibly some of the cases mentioned scarcely came under the denomination of urethral caruncle.

They seemed to be more instances of irritable or vascular conditions of the urethra. The application of nitric acid, if often repeated, would tend to produce contraction of the urethra. Nitrate of silver was not sufficiently potent to destroy urethral caruncles, though it was of service in allaying irritation in the cases mentioned. A saturated solution of carbolic acid would be found extremely useful, and had the advantage of being far less painful than the application of acid or nitrate.

Mr. DEWAR (London) thought Mr. Garstang's second case was not one of vascular tumour, but of fissure or neuralgia. Nitrate of silver did little good, but a stronger caustic, as acid nitrate of mercury, or sodium ethylate, was better; and when the disease extended up the canal, pressure by dilatation with a tangle-tent might do good.

Dr. CULLINGWORTH (Manchester) said those who were acquainted with the out-patient rooms at the larger hospitals for the diseases of women, would recognise in Mr. Garstang's cases examples of a class of affections which were amongst the most painful and intractable that came before them. The fact was, there was almost always a considerable element of hysteria in the patients who suffered from them, which caused the discomfort and pain to be magnified until they became agonising. At the same time, there was a real pathological basis which needed local treatment, and the best form of which in his experience was dilatation of the urethra, in the manner proposed by Mr. Teale of Leeds; supplemented, if necessary, by the application of strong carbolic acid or solution of silver nitrate to the affected part. Mr. Garstang's cases were not instances of urethral caruncle, but of irritable urethra, and he suggested that the value of the paper would be increased by omitting from the title the word "caruncle". In true caruncle, he (Dr. Cullingworth) had long since abandoned the use of silver nitrate for more thorough measures.

Mr. GARSTANG, in reply, said that his paper was the result of original work, and that its deductions were merely his own opinions, formed from his own observations. He admitted that the cases were not all truly urethral caruncle. He had learnt much from the President's remarks, and acknowledged his indebtedness to him and to Dr. Cullingworth for the light they had thrown on the points which were puzzling to him, and for the kind manner in which they had conveyed their corrections. The use of carbolic acid had been already suggested to him, and he intended to give it a trial.

ON BROMIC ETHER AS AN ANÆSTHETIC.

Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By WILLIAM SQUIRE, M.D., F.R.C.P.

CONTINUING the inquiry as to bromic ether at the point where I left it last year at the International Medical Congress, I would observe that the energetic local effects of this agent in its liquid state entirely vitiate the results of Wood's experiments, then brought forward, as to the arrest of cardiac action he obtained by injecting it into the jugular vein, and so into the right cavity of the heart. On my arm now is the mark of an eschar produced by it a month ago, after a few minutes' contact. We might equally infer that iron and steel act as cardiac depressants, from introducing small nails and needles into the heart, because of the physical injury produced. Compare the effects of bromic ether vapour on the irritability of the frog's heart, in the experiments published in the *Practitioner* just before my paper, and you see that it acts like an ether as it is, and not at all like chloroform or iodoform. One or two minims of chloroform sufficed to arrest the ventricle, while twenty of bromic ether were required to weaken the ventricular action. Fifty minims of ether would lead to the same result, both at first stimulating the ventricle. One hundred minims of ether arrested the ventricle, and fifty-five of bromic ether were necessary to produce this extreme effect of over-stimulation.

At the meeting of our Association in Cork, three years ago, Dr. Turnbull of Philadelphia brought forward the special adaptability of this agent for lessening the pains of parturition. Had bromic ether been first used by a surgeon, instead of by Nunneley, the surgeon, it would have taken its place in the ordinary practice of midwifery, and chloroform or ether would have been reserved for the operative procedures where it is necessary that anaesthesia should be complete: not that bromic ether will not produce complete anaesthesia, but that, for this purpose, advantages may be claimed for the others, and especially for ether. The great advantage of ether is, that the density of its vapour is only 2.66; so that it is much more readily dispersed in the lung by ordinary diffusion after inhalation has ceased. Now, the density of chloroform-vapour is nearly 4.2; that of bromic ether is 3.75. Nitrous oxide has a density of only 1.5; hence the rapid return

of consciousness after its administration. Nitrous oxide has lately been given in parturition, combined with oxygen, at repeated intervals, with good effect. But, during labour, unconsciousness need not be complete; and the intervals between the pains allow the denser vapour of bromic ether to be completely cleared off. The suffering is removed while consciousness remains; and the patient is able to ask for a timely recourse to the inhalation, and even to manage it herself.

I now come to the most important point that has struck me in renewing these investigations, after about thirty-five years have elapsed since I first experimented with anaesthetics. This is the enormous waste and dangerous excess with which anaesthetics are used. In the first capital operation under ether performed by Liston, where I was the administrator, an ounce or so sufficed; I see recent records of three pounds of ether being used. Dr. Snow calculated that five drops of chloroform, yielding ten cubic inches of vapour, should have a dilution of at least one hundred cubic inches of air, for safe and efficient—i.e., complete—anaesthesia. By means of Dr. Junker's inhaler, as made by Krohne and Sesemann, not only a much more dilute vapour is found to be sufficient, but only a drachm or two of chloroform is used to maintain unconsciousness for twenty minutes. I exhibit a table of results obtained by Mr. Krohne, by which it will be seen how small a proportion is needed for anaesthesia. The table for bromic ether is the result of my own observations, conducted in exactly the same way, and with Mr. Krohne's assistance.

Vaporisation of Chloroform, Bromic Ether, Methylene-Bichloride, and Ether, on passing 42 Cubic Inches of Air per Minute, at Temperature 68° Fahr.

CHLOROFORM.		BROMIC ETHER.		METHYLENE.		ETHER.	
Quantity.	Loss.	Quantity.	Loss.	Quantity.	Loss.	Quantity.	Loss.
Minims.	Minims.	Minims.	Minims.	Minims.	Minims.	Minims.	Minims.
360	11	270	30	420	10	—	—
—	—	240	20	360	3	—	—
—	—	220	30	300	6	—	—
—	—	100	25	240	5	—	—
—	—	165	30	180	4	—	—
—	—	135	20	120	—	—	—
—	—	115	20	60	—	—	—
—	—	95	20	—	—	—	—
—	—	75	15	—	—	—	—

Less chloroform is required to produce unconsciousness; for, as soon as only one minim of bromic ether is vaporised in five cubic inches of air, with the further dilution occurring at the time of respiration, only an incomplete effect is produced. With methylene-bichloride, on the other hand, much less is required; as little as five minims in twenty-five cubic inches of air has caused complete anaesthesia. Hence, methylene requires more caution than chloroform in administration; and the chief reason why bromic ether needs all the care we can use is not fear of any danger from it, but to save expense and waste.

Again, I call attention to the fact that bromic ether is an ether, one equivalent of hydrogen of which is replaced by one of bromine. Doubtless, this has a physiological effect in diminishing the sensibility of the nerve-ends, and for this purpose it is not necessary that the bromine should be liberated; it acts in this combination, just as it does in combination with potassium, and not as free bromine. I have met with no small of bromine about anyone who has used it, and fancy, where this has been noted, the fluid was not colourless and pure, but already containing some free bromine. Bromic ether will mix with water, 1 to 20, just as chloroform does, and is well administered in this way for spasmodic affections.

Mr. SPANTON (Hanley), having had some experience of the use of ethyl bromide since Dr. Squire brought its use before the International Medical Congress last year, remarked that he had found it of great use in some cases of asthma supervening on cases of old-standing bronchitis, and in one instance associated with mitral disease and anasarca. After many remedies, including inhalation of ether (which seemed rather to aggravate than to relieve), had been tried, the inhalation of ethyl bromide gave immediate and most marked relief. He had also used it as spray in some surgical cases for the removal of small tumours, and found that insensibility of the skin was produced, sufficient for the purposes of painless operation, without producing actual freezing of the skin. The preliminary red stage of freezing appeared to be sufficient, which was clearly an advantage. He believed inhalation of ethyl bromide would be found of great service in obstetric practice, judging from his experience of it in other cases.

Dr. SPATLEY (Burkenhead) said the most important advantage seemed to be that complete or partial anaesthesia was produced without unconsciousness, and that, during the pains of labour, relief from pain was produced without interference with uterine contraction. With regard to its application locally in surgery, the great value in compari-

son with ether was, that it was not necessary, as in ether, to go to the absolute freezing stage; the operation could be carried on during the red stage, in which the tissues were soft, instead of having to cut through ice, as in the case of ether. Again, pain on the thawing of the parts was avoided.

Mr. DEWAR (London) thought that, judging theoretically from the lighter specific gravity of the bromic ether, its effects would not be so lasting in obstetric practice as those of chloroform, and that it would therefore require of the practitioner more attention in its administration.

Dr. SQUIRE, in reply, said that he was highly gratified to hear from Mr. Spanton of the marked relief to spasmodic dyspnoea procured by the inhalation of small quantities of bromic ether. His observation that local anæsthesia was produced before freezing of the part occurred, was also in accordance with those of others. In reply to Dr. Spratley, it was pointed out that, as no freezing was caused, none of the pain felt after the reaction from freezing followed. The small quantity necessary to give relief from pain by inhalation, made the plan the preferable one. For the relief of spasmodic affections, bromic ether given in water (1 to 200), just as the aqua chloroformi of the *Pharmacopæia* was useful, and could be so given in whooping-cough, as well as for angina and spasmodic pain. Instead of the anæsthetic effect being transitory, as is that of nitrous oxide, it was nearly as persistent as that of chloroform, because its vapour had nearly as high a density. In the interval between the pains of labour, this heavy vapour was cleared from the lung by diffusion; the patient then felt the effects passing off, and could either ask for more, or even take it herself. One of the great reasons for using this agent in ordinary parturition was, that the medical attendant need give very little attention to the inhalation of the anæsthetic, so that he could devote all his care to the exigencies of the labour.

LIFE AND DEATH IN ENGLAND:

OR A FEW INFERENCES FROM THE REGISTRAR-GENERAL'S LATEST ANNUAL REPORT (THE 43RD), WITH ORIGINAL TABLES.

By D. BIDDLE, M.R.C.S.Eng., KINGSTON-ON-THAMES.

DURING the discussion which has been carried on in the *BRITISH MEDICAL JOURNAL*, on the question "Has the duration of human life in England increased during the last thirty years?" the suggestion has been thrown out that the only proper way in which to study the death-rate is to compare it with the birth-rate. This suggestion originated, I believe, with Dr. Bristowe, of St. Thomas's Hospital, and it has afforded me much pleasure to work out the idea of one of the high priests of my Alma Mater.

The method adopted by the Registrar-General of comparing the number of deaths at a given age with the number of persons living of that age, though useful in some respects, and especially for insurance companies, is unsatisfactory as an index of the comparative health and vitality of the people at different epochs. An exaggerated instance will show how fallacious its declarations might be. Suppose that on an island, at the beginning of a given year, 800 males were alive, each 66 years of age, but that some fearful pestilence arose which carried off 400 of them before the year closed. The Registrar-General would report that the deaths of males aged 66 were for that year 500 per 1000. The next year the males aged 67 would be 400 in number, and if only 200 of these died during that year, the death-rate would still be entered as 500 per 1000 for males aged 67, the same as in the previous year for those aged 66. In fact, the second of the two years would gain a bad name, simply from the fact that it was preceded by a bad year, which is manifestly unfair. The unfairness is but slightly mitigated by grouping persons together whose ages extend over five or ten contiguous years. If in the above instance, the deaths were compared properly with the births, the death-rate in the latter year would rightly appear as only half that of the former.

But it is of importance to remark that the births with which the deaths at given ages in any given year should be compared, are not those of the same year in which the deaths occur, but those of the years in which the deceased persons were severally born. By this means only can we obtain an accurate idea of the mortality at the various ages in any given year.

Now on examining, as far as possible, the birth-years of the several groups of persons given by the Registrar-General, we shall find that in numbers they are always one year more than the number comprised by the particular group. Thus for a group extending over ten years, say 55-65, the birth-years will be eleven; for a group extending over five years, say 20-25, the birth-years will be six, and for a group extending over only one year, the birth-years will be two, namely, the year in

question and the one preceding. For, a child dying on January 1st, 1880, aged barely one year, was born early in 1879; and another dying on December 31st, 1880, aged one hour, was of course born at the end of 1880. The births of the two children are as nearly as possible two years apart, but they both die in the same year and are both under one year of age. To compare, therefore, the deaths occurring under one year of age in any given year with the corresponding births, we take the births occurring in that and the preceding years. For children of one year and under two, we take the births occurring in the last year and the year before. And, in fact, a simple rule for obtaining the birth-years of any group is to take the two limiting numbers indicating the age of the group, and deduct each from the year in which the deaths occur. The remainders will invariably indicate the years inclusive within which the deceased persons were born. Thus, for persons dying in 1880 aged 55-65 the birth-years are 1815-1825; for persons dying in 1876 aged 10-15, the birth-years are 1861-1866.

Unfortunately, our data as to births in England are not sufficiently trustworthy farther back than 1840, or at most 1838, to enable us to make a complete table of deaths compared with births. The Registrar-General's returns of births, male and female, and total, in England for each year, from 1838 down to 1880, are given in table A, together with the deaths, male, female, and total, occurring in the same years, and also the proportions for each year between male and female births, and between male and female deaths. The several facts are not similarly arranged in the Registrar-General's report, and, in fact, the numbers of male and female births had to be worked out from the totals by aid of the table of proportions.

In Table B is shown the varying rate of increase in the number of births occurring five years apart. The ratio is in each case taken between the sums of contiguous years: and various averages are struck in succeeding columns. I had hoped by this means to arrive at a sufficiently constant law of progression in the birth-rate to enable me to carry back the Table of Births into the middle of the last century. I also called in the aid of the estimated population for each year as far back as 1801, given in Table 100 of the Registrar-General's Report, and of Table 2, which gives the ratio of births to population in each of the years 1838-1880. But the law of progression in both cases defies accurate determination. The ratio of births to population diminishes considerably as we go back, but fluctuates greatly. The ratio of births in one year to those five years back becomes much greater in the long run, but there is no certain progression, nothing to give one confidence in calculating the number of births of males and females for any year, or even for any group of years, concerning which we have no direct information. Such being the case, I determined to keep strictly to facts, and simply to guard the relation of Deaths to Births, by not losing sight of any cause which might interfere with such relation.

If it were a question of the death-rate in an isolated spot of earth, or even of the death-rate over the whole earth, it would be comparatively easy to find how many per 1,000 born arrived at such and such an age, provided we had accurate returns to go upon, of births, deaths, and ages at death. But, in England, people are constantly coming and going. The population is increased and diminished by causes which do not come under the category of births or deaths, and of which no strictly accurate return is ever made. Many persons born in England die abroad; and, on the other hand, many persons born abroad die in England. Have we any means, then, of learning approximately what changes are wrought in the population by such causes? I think we have, and for the information I go, not to the Statistical Department of the Board of Trade, which says that the number of emigrants from the United Kingdom has been (including foreigners) 2,228,396, in ten years 1871-1880, and that 970,565 of these were of English origin; but I go to the Registrar-General's report once more, and I compare the excess of births over deaths for each of the years 1845-1880, there given, with the increments of population for each year, which are also easily found by subtracting the population of one year from that of the next, as given in the same report. The result is to be seen in Table C, which I consider to be far from uninteresting. Under the title of emigrants, I include not only those who are commonly so-called, but all who cross the boundary line of England from within outwards; and also under the term immigrant, all who cross this boundary the reverse way, whether it be from some foreign port, or only from Scotland. It will be observed that although at the latter part of the 36 years there was a considerable excess of emigrants, there was at the beginning a still greater excess of immigrants, and that during the intervening portion, the excess was sometimes on one side and sometimes on the other, so as to render the total excess of emigrants over immigrants for the whole period only 78,833, or on an average about 2,150 per annum. This fact, taken in conjunction with the Board of Trade return of emigrants above referred to, is enough to

make every true Briton's blood boil; for it proves incontestably that our own people are sent adrift to make room for aliens.

It is not with this burning question, however, that I have now to deal. I am simply concerned with the effect produced by emigration and immigration upon the death-rate in this country, and especially upon the deaths at specified ages as compared with the corresponding births.

If, as seems undoubted, the English race has greater vitality than most others, and if a certain portion of it reared within our coasts and afterwards sent to form some colony, be replaced by a less hardy set of foreigners, it is natural to expect that the death-rate in England will be affected to a corresponding extent. It probably accounts for the falling off in the proportionate number of persons over 85 years of age which has been noticeable for some years past. But so far as mere numbers are concerned, the excess of emigrants over immigrants or of immigrants over emigrants is rarely of sufficient magnitude to affect the decimal figure in the death-rate for all ages, and would have still less effect upon the death-rate for any specified age, unless the proportion between the several groups were also altered. Even if all the numbers indicating the excess of emigrants over immigrants in the several years in which there was such an excess, from 1845 to 1880, be added together, they amount to only 467,464, and the excess of immigrants over emigrants, similarly treated, gives only 388,631. The former of these sums is one-fortieth of the average population during the same period, the latter sum is only one-fiftieth of it. It is easy therefore to see that when we are concerned, not so much with the total number of deaths in any year (which would be affected to the extent of about one-fortieth of the number of persons added to or subtracted from the population), but chiefly with proportionate numbers (per 1000 of the population, or per 1000 corresponding births), we have little need to fear that our calculations will be materially disturbed by such causes as those of emigration and immigration, unless the limits of former years be greatly exceeded.

Such being the case, it is with no little confidence that I submit Table D to the notice of all who are interested in vital statistics. The numbers given in this table are correct, independently of any such consideration as that to which I have referred, representing the absolute proportion which subsists between deaths in England, at given ages and in given years, and births in England occurring in the year which correspond; that is, in the years in which the deceased persons were born. Nothing can alter this relation, if the Registrar-General's returns, and my calculations based upon them, be correct, as I believe they are. I have already pointed out one element of weakness in those tables, which profess to give the death-rate for a specified age in a given year, in relation to the number of persons supposed to be living in that year and of that age—namely, that, even if correct, they operate unfairly. But this is not the only weak point; for, during nine out of ten years, there is no certain return of the number of persons living, of the specified ages, and, consequently, their numbers must be estimated by reference to previous census returns, and the rate of progression therein found to prevail—a most uncertain basis of calculation, as may be inferred from what we found in the case of the birth-rate (Table B).

In the table now submitted, however (Table D), the calculation is wholly based on facts—namely, on the actual returns of births, deaths, and age at death. The table is incomplete at present, because the returns of births are not to be relied on for any year earlier than 1840. But this is a fault which time will remedy. The group of births, which now serves as a denominator to show the death-rate of persons between the ages of 25 and 35, will, in fifty years, similarly serve to show the death-rate of those between 75 and 85.

In Table E, which is formed upon Table D, the mean death-rate, as far as we can accurately go, is given for each of seven quinquennials, the several figures in the parentheses being based on the method as directed, in accordance with the number of years included in the several birth-groups—so as to give the number of persons, per 1000 born, who died at specified ages in the several epochs, supposing emigration and immigration to have produced no definite effect upon the population.

But here we are confronted with the fact that the number of children dying under five years of age is made to appear so much less than it is generally stated to be. For the years 1876-1880, the deaths under five years of males appear only 25.14 per 1,000 born; of females, as only 22.0; whilst even for 1846-50 the numbers do not exceed 29.6 and 26.0 respectively. Dr. Rabagliati, on the contrary, says: "If we compare the average of the period of twenty-eight years, 1851-78, with the year 1879, it appears that, on the average of the twenty-eight years, out of every 1,000 male children born, 360.5 died before attaining the age of five years; while, if the rate obtaining in the year 1879 were to last, only 319.5 would die." (*vide Letter* in *BRITISH MEDICAL JOURNAL*, December 10th, 1881.) Now, it is a singular

fact, that the mean of the numbers given by the Registrar-General for the twenty-eight years 1851-78, indicating the death-rate of males under five years of age per 1,000 living, is 72.01; and this, multiplied by five, gives 360.05. Moreover, the number for 1879 is 63.4; and this, multiplied by five, gives 317.0. Both results are near enough to Dr. Rabagliati's to lead us to believe that he has adopted this easy method of arriving at the deaths under five per 1,000 born from the death-rate per 1,000 living. But the true method is not quite so simple; in fact, it involves an algebraical problem of a complicated character, requiring for its solution data which are not supplied by Dr. Rabagliati. The ratio, however, between the figures obtained by his method and those which are correct is the same, if I mistake not, as that between the number of children born and the number of children living under five years of age. For, if x = the number per 1,000 born who, according to a given death-rate, die before attaining five years of age, and if y = the number per 1,000 born who can at a given time be said to be living under five years of age; then, if a = the number given by the Registrar-General who die per 1,000 living under that age in any one year,

$$y : \frac{x}{5} :: 1000 : a \text{ and } x = 5 a \frac{(1000)}{y}.$$

Here, nevertheless, we have two unknown quantities, and only one equation. The problem would be easier if the birth-rate did not materially increase (and that with varying speed), even in the short space of five years. It would also be easier if an equal number of children died during equal periods of life. But, as a matter of fact, the children dying under one year of age more than equal those dying in the next four years; and those dying in the earlier months of the first year of life greatly exceed those dying in the later months. Such being the case, though we know that 1,000 x = the number who survive to the age of five, and though we know that y , or the number at any time living under five years of age, must exceed 1,000— x , it is impossible to deduce from any data at our disposal a formula which will enable us to determine the value of y in all cases. For the quinquenniad 1876-80, its value seems to be about $1000 - \frac{1}{5} x$. Thus, $1000 - \frac{1}{5} x : \frac{x}{5} :: 1000 : a$ or $x = \frac{2000 a}{500 - a}$. The Registrar-General gives 67.2 as the number of

males, who, on the average per 1,000 living under five years of age, died annually in 1876-80. Let 67.2 therefore stand for a . Then $x = \frac{2000 \times 67.2}{500 - 67.2} = 254.7$, which differs only slightly from the number given in Table E for the same epoch, viz., 254.4, found by adding the first five numbers together: 159.2 + 50.8 + 21.0 + 13.4 + 10.0 = 254.4.

But it is useless to pursue the problem further. The Registrar-General's tables serve their own purpose even better than might be expected, considering how many of the bases of calculation are mere estimates; but they will not serve a purpose which is totally different. The method adopted in Tables D and E, for arriving at the numbers dying under given ages, is, as compared with that employed by Dr. Rabagliati, both easier in reality, and, I submit, more correct.

Nevertheless, these tables are incomplete. For want of proper data, they do not go beyond thirty-five years of age. Is there, then, any way, still based upon hard and incontrovertible facts, by which we can arrive at a knowledge of the true progress in England, during the last few years, of the death-rate at the several specified ages? Is there any way, without having recourse to mere estimates, of comparing the death-rate at a given age in one year with that at the same age in another year? Unless I am woefully deceived, I can truthfully affirm that there is; and I produce Tables F, G, H, and K, to prove it.

Those who read the column of births, marriages, and deaths in the *Times* or other newspaper, and take note of the age of those who are stated as deceased, will find it natural to rejoice, not only when the number of deaths is short, but when the old people predominate in number over the young; and, when there is a continued improvement in this respect, we naturally think well of the vitality of our race. But a newspaper is a very poor exponent in this way of the death-rate of the people of England as a whole, since it concerns itself, in the column referred to, only with those who can pay. The Registrar-General, on the contrary, makes a note—at least, supposedly—of every person who dies, and also of that person's sex and age, together with other particulars; and, at the end of each year, a table is produced, giving not only the total number of deaths occurring in that year, but how many were of males and how many were of females, and how many of each sex died at certain specified ages (sixteen or seventeen in number). Here, then, are our data; and what I have done in the tables now produced is to compare these deaths with each other, and to show the proportion of the deaths which occur at the several specified ages to the total number occurring in the given year. But, having in the previous tables paid sufficient attention to the infantile department, I have in these grouped together

those in each sex who die under five years of age. A period of thirty-six years is taken—1845-80; and the deaths in each year are similarly treated. The proportions are found by an easy and unerring process—that, namely, of making the total deaths the common denominator, and the deaths at the specified ages the several numerators, of a series of fractions, which are afterwards raised to equivalent segments of 1,000. Table F gives the distribution of a specimen 1,000 deaths over the several ages in each of the thirty-six years. Table G enables us to compare the various portions of the thirty-six years with each other, and to see where there has been improvement and where decline. But in Tables H and K the several proportionate numbers given in Tables F and G are added together, so as to form a gradually increasing sum under each year, and so as to show clearly how many per 1,000 deaths occur before each given age is reached in the several years and groups of years.

And to make the view still more complete, a chart is added, in which (Chart I) the varying distribution of deaths, from year to year, can be seen at a glance. Moreover, the death-rate for all ages, per 1000 of the male or female population, is set forth on one side of the column of years; and the proportion, per 1000 deaths, occurring in each sex, at and before the several ages, is set forth on the other—so that the varying intensity of death's general onslaught, which is chiefly revealed in the former, and the varying power of resistance exhibited by human flesh and blood, which is chiefly revealed in the latter, are set over against each other, and the ebb and flow of the death-waves tell their own tale.

Another chart, which is formed upon the *Carlisle Table of Mortality*, is appended (Chart II), not because it is reliable, for the deaths in early life are made too numerous, but to show the peculiar form of the curve produced. This curve is triple in character, consisting of a central portion, which is boldly convex, and covers the greater portion of life; and of two concave portions, which wear off by gradients, long drawn out to the two extremities. The lower of the two concave portions represents (to excess) the rapidity with which infants are cut off by death; the upper of the two concave portions represents how tenacious old age is of life.

It may be asked, however, why have I not constructed a similar curve from my own tables? The answer is plain. I do not wish to send out, as my own, anything which is vitiated by being dependent in any degree upon mere estimates. I might, it is true, have constructed a fragment of the curve, by reference to Tables D and E; but the attempt to construct the complete curve from Tables F and G would have necessitated recourse to estimates, as distinct from facts, throughout. In the first place, it would be necessary to render the figures, in the several columns, of uniform value, by having regard to the very different birth-rates which obtained, and to the very different numbers of births which occurred, in the several groups of years in which the deceased persons were born. In other words, the numbers in the several columns would have to be brought up to what they would have been if the births had been equal in number every year. This would necessitate the multiplication of the numbers in each succeeding column by a continuously increasing factor, to compensate for the retrogressively diminishing births; and the said factor, in the absence of trustworthy returns, would have to be estimated. We are at once on uncertain ground, and our confidence deserts us.

If we take the average rate of retrogressive diminution, as to births, which obtains in the thirty-six years 1880-1845, according to Table B, we have good ground for believing that it does not adequately represent the rapidity of the diminution further back. But supposing we take this rate, invert it, and raise the amount to the requisite number of powers, the factors for the twelve columns devoted to males will be as follows: (1) 1; (2) 1.0601; (3) 1.1238; (4) 1.1914; (5) 1.2630; (6) 1.3786; (7) 1.5493; (8) 1.7411; (9) 1.9567; (10) 2.1990; (11) 2.4713; (12) 2.8596. These, used in relation to the year 1880, will produce the following numbers: 441.75; 38.65; 18.62; 24.82; 31.12; 71.83; 99.45; 125.40; 172.94; 212.52; 172.07; 47.79. The sum of these numbers is 1456.96; but, reduced to proportionate parts of 1000, they are as follows: (1) 303.2; (2) 26.5; (3) 12.8; (4) 17.0; (5) 21.4; (6) 49.3; (7) 68.2; (8) 86.1; (9) 118.7; (10) 145.9; (11) 118.1; (12) 32.8.

—These numbers are too high in the earlier years of life, and too low in the later years; but they are better than Dr. Rabagliati's after all. He based a good deal of his argument upon the death-rate obtaining in 1879; but that was an exceptional year—a year in which the death-waves beat violently, even beyond their wont, upon the aged, and treated the young with more than average tenderness. The death-rate of children under five years of age was much greater in 1880; and yet the number who would die before attaining the age of five, according to that death-rate, is found, by an unfavouring process, to be actually

less than the number indicated, according to Dr. Rabagliati, by the deaths which occurred in 1879! It does not do to single out any one year for comparison with others, but due regard must be had to the fluctuations which occur; and it is almost always best to combine several years in one average, so as to make full allowance for the play of the death-waves, which ebb and flow at uncertain intervals.

As to what may be learnt from the tables and charts now produced, I need say little. They can speak for themselves. But I will just indicate a few particulars in which they give interesting information.

1. The bill of mortality is not quite like Blondin's balancing-rod, heaviest at the two ends, although it bears a strong resemblance in that respect. Death falls heavily on early infancy, and then gradually recedes until, between the ages of ten and fifteen, the death-rate is lowest. After that there is, in the case of males, a gradual and continuous rise in the number of deaths until the period between sixty-five and seventy-five is reached, which, next to the infantile period, is that in which the deaths are most numerous, both in males and females. In females, there used to be a hummock in the ascending gradient, between the ages of twenty-five and thirty-five, from which period there was a partial decline until between fifty-five and sixty-five, when the ascent was renewed; but this hummock does not appear in the mean of nine years for 1872-80. From seventy-five onwards, in both sexes, there is a gradual and prolonged decline until the vanishing point is reached.

2. So far as infant mortality is concerned, the improvement during the thirty-six years has not been so marked as many persons imagine. A mere glance at Table D will scarcely suffice to convince any one that a decline has actually occurred in the deaths of children under one, two, three, four, and five years of age. But Table E will be found more cheering, showing that the decline in thirty years (that is, from 1846-50 to 1876-80) has been, for male children under 1, 1.4; 1.2; 5.8; 2.3; 8.8; 3.4; 6.2; 4.5; 5; or a total of 40.2 per 1000 born; and for female children under 1, 12.6; 1.2; 7.4; 2.3; 9.0; 3.4; 7.0; 4.5; 5.4; or a total of 41.4 per 1000 born. In other words, it shows that, out of every 1000 born, whether males or females, forty more reached the age of five years according to the death-rate of 1876-80 than according to the death-rate of 1846-50. But forty does not represent a very large percentage, when compared with 294.6 and 266.0, the number of males and females respectively out of which the gain has been made. The percentage in later childhood and adolescence is much greater. Thus, for ages four to five, the deaths of males, per 1000 born, were reduced from fifteen in 1846-50 to ten in 1876-80; for ages five to ten, from 33.8 in 1851-55 to 23.4 in 1876-80; for ages ten to fifteen, from 17.2 in 1856-60 to 12.1 in 1876-80; and of females more still. There is immense scope for improvement in the management of infants. Their deaths, like those in old age, appear to be due to more or less constant causes, which ought to be counteracted. There are grave faults in the dietary of infants, in the giving of prepared (and unprepared) solid foods during the early months of life, and in the recourse which is had to soothing syrups; also in the reckless exposure to cold and damp from which many children suffer. But there are some things about infant mortality which seem inscrutable. Why, for instance, should about one hundred and four males be born to every hundred females, only to be cut down to less than an equality with them before the fifth year of life is passed? Is Herod still abroad? We have been told that more males are born to compensate for the greater risk incurred by men; but the truth is, that the women are those who have to face the greater risk in "the great pain and peril of childbirth." The proportionate number of deaths during the more active period of human life—that is, from ten to forty—is greatest in women. Are we to believe that the law which governs the mortality of females during the catamenial period, was introduced after that which regulates the proportion of males to females born, according to the announcement: "I will greatly multiply thy sorrow and thy conception;" and that, consequently, an increased death-rate amongst males in early infancy became almost a necessity? Or, are we to regard this curious instance of "waste" as due to the more highly organised character of the male infant? Or, again, is it due to the fact that our little boys are given over to the tender mercies of mothers and maids, instead of being reared by those who understand them? Whatever the explanation, the fact remains. But there is consolation even here: for the decline in the deaths of male infants has been greater than in the case of female infants, and this goes far to nullify the effect of the diminution, which, for several years, has been apparent in the proportion of males to females born.

3. Another point of considerable interest, which my tables enable me to bring into strong relief, is the reversal which has surely and steadily been brought about, during the thirty-six years, of the proportion of males to females dying between the ages of thirty-five and forty-five. The deaths of males in that group have increased from 63.4 to 68.0 per 1000 deaths of the same sex, whilst the deaths of females at

the same ages have declined from 67.6 to 66.5 (*vide* Table G). The improvement in the bill of mortality for females, from fifteen to thirty-five years of age, is still more marked; and we cannot be surprised to find, therefore, from the Registrar-General's returns, that deaths from childbirth declined from 122.6 in the years 1850-54, to 72 in 1880, per million of the population.

4. There has been, however, a falling off in the deaths of very old people. The deaths of males over eighty-five years of age have declined from 20.5 to 17.9 per 1000 deaths of the same sex, whilst the deaths of females in this group have declined from 29.4 to 27.9. We may be tolerably sure, therefore, that there are not so many extremely old people alive now as formerly, in proportion to the population. The Registrar-General informs us "that, in the course of the ten years 1871-80, the number of reputed centenarians (I suppose he means dying) was 767, out of whom 204 were males and 563 were females;" but, in the year 1880, only "68, namely, 20 males and 48 females, were stated to have reached the end of their hundredth year of life."

TABLE D.—A Table showing the Death-rate in England, at early ages, per 1,000 corresponding Births, for each of the years 1880-1845 retrogressively.

N.B.—This table gives the proportion of deaths, at the ages specified, to the births which occurred in the 2, 6, or 11 years, as the case may be, in which the several groups of deceased persons were born. To arrive at an uniform notation, therefore, multiply the figures in the several columns as directed. Each column, however, is at unity with itself.

AGES.—MALES.											AGES.—FEMALES.										
Years.	1	2	3	4	5	6	7	8	9	10	Years.	1	2	3	4	5	6	7	8	9	10
	Multiply by 2.			by 6.			by 11.					Multiply by 2.			by 6.			by 11.			
1880.	23.7	27.9	11.0	6.7	5.1	3.95	1.92	2.50	3.31	4.28	1880.	68.9	27.3	11.3	7.0	5.1	3.87	2.03	2.93	3.63	4.66
1879.	24.3	28.5	10.4	6.7	4.9	3.87	1.85	2.43	3.24	4.20	1879.	60.0	22.6	10.4	6.8	5.0	3.73	2.05	2.93	3.63	4.94
1878.	83.4	26.9	11.3	7.1	5.2	4.05	1.91	2.57	3.38	4.35	1878.	69.0	26.2	11.8	7.4	5.3	3.91	2.19	3.10	3.91	4.97
1877.	74.8	24.0	9.9	6.2	4.7	3.72	1.86	2.47	3.28	4.25	1877.	61.0	22.7	9.9	6.5	4.5	3.58	2.17	3.06	3.88	5.11
1876.	73.0	24.1	10.0	6.6	4.9	3.90	1.87	2.49	3.30	4.27	1876.	67.3	23.1	10.5	6.7	5.0	3.77	2.20	3.16	4.14	5.21
1875.	74.5	24.2	11.0	7.3	5.5	4.21	1.93	2.57	3.40	4.37	1875.	71.1	25.4	11.3	7.4	5.4	4.06	2.23	3.41	4.49	5.86
1874.	75.4	24.3	12.4	8.2	6.0	4.50	1.99	2.65	3.50	4.47	1874.	69.0	25.1	12.5	7.5	5.9	4.53	2.25	3.38	4.53	5.90
1873.	76.3	24.4	9.9	6.2	4.3	3.61	1.83	2.41	3.22	4.19	1873.	73.1	23.1	10.2	6.4	4.5	3.54	2.27	3.31	4.21	5.58
1872.	77.2	24.5	10.5	6.5	4.8	4.25	1.94	2.59	3.42	4.39	1872.	69.3	24.2	10.9	7.0	4.9	4.12	2.45	3.69	4.74	6.11
1871.	78.1	24.6	11.6	7.7	6.0	5.01	2.04	2.77	3.60	4.57	1871.	72.0	25.9	12.4	8.0	6.0	4.78	2.73	3.96	5.12	6.49
1870.	79.0	24.7	12.7	8.8	6.7	5.41	2.14	2.95	3.78	4.75	1870.	73.2	25.8	13.1	9.1	6.7	5.29	2.76	3.85	4.80	6.17
1869.	80.0	24.8	12.9	8.6	6.3	5.03	2.07	2.79	3.62	4.59	1869.	70.0	25.5	13.6	9.0	6.5	4.93	2.64	3.91	4.64	6.01
1868.	81.0	24.9	13.5	9.1	5.9	4.76	2.00	2.71	3.54	4.51	1868.	71.8	26.8	13.1	8.4	6.0	4.72	2.55	3.80	4.97	6.34
1867.	82.0	25.0	10.9	6.7	4.7	3.97	1.92	2.47	3.28	4.25	1867.	69.5	24.9	11.4	7.2	4.9	3.93	2.36	3.92	5.01	6.38
1866.	83.0	25.1	13.5	8.1	5.6	4.79	2.03	2.73	3.56	4.53	1866.	72.6	28.5	14.2	8.6	6.0	4.62	2.75	4.21	5.54	6.87
1865.	84.0	25.2	12.9	8.4	5.9	4.93	2.06	2.75	3.58	4.55	1865.	73.1	27.6	13.4	8.7	6.2	4.97	2.81	4.23	5.57	6.90
1864.	85.0	25.3	14.7	10.4	7.7	6.01	2.14	2.95	3.78	4.75	1864.	69.9	27.7	15.0	10.9	7.8	6.00	3.11	4.33	5.61	6.93
1863.	86.0	25.4	16.2	11.3	8.4	6.29	2.20	3.07	3.90	4.87	1863.	67.2	27.1	16.9	11.6	8.5	6.35	3.19	4.44	5.72	7.04
1862.	87.0	25.5	13.7	8.7	5.9	4.68	2.05	2.76	3.59	4.56	1862.	64.4	26.9	14.5	9.1	6.5	4.73	2.83	4.26	5.59	6.96
1861.	88.0	25.6	12.7	7.4	5.1	4.10	1.92	2.47	3.28	4.25	1861.	69.3	28.9	13.4	8.1	5.5	4.31	2.70	4.14	5.47	6.80
1860.	89.0	25.7	11.7	7.3	5.2	4.18	1.93	2.49	3.30	4.27	1860.	65.7	24.5	11.9	7.7	5.6	4.42	2.75	4.19	5.52	6.85
1859.	90.0	25.8	14.4	9.9	7.3	5.69	2.10	2.91	3.72	4.69	1859.	71.0	27.5	14.7	10.4	7.9	6.02	3.31	4.31	5.64	6.98
1858.	91.0	25.9	15.9	11.2	8.0	6.07	2.17	3.02	3.83	4.80	1858.	71.5	28.3	16.5	11.6	8.5	6.26	3.30	4.30	5.63	6.99
1857.	92.0	26.0	17.0	12.9	8.3	6.40	2.22	3.12	3.94	4.91	1857.	71.0	27.4	13.9	8.9	6.3	6.11	3.31	4.31	5.64	6.99
1856.	93.0	26.1	24.3	12.2	8.1	5.8	4.56	2.08	2.84	3.70	1856.	75.3	25.3	12.7	8.6	6.1	6.11	3.31	4.31	5.64	6.99
1855.	94.0	26.2	11.1	9.1	6.8	5.18	2.01	2.71	3.54	4.51	1855.	75.8	25.8	13.8	9.0	6.5	6.11	3.31	4.31	5.64	6.99
1854.	95.0	26.3	10.3	7.2	5.7	4.81	1.95	2.54	3.35	4.32	1854.	77.1	26.5	16.1	10.8	7.5	6.11	3.31	4.31	5.64	6.99
1853.	96.0	26.4	11.1	7.9	6.4	5.18	2.01	2.71	3.54	4.51	1853.	71.4	26.7	14.0	9.0	6.5	6.11	3.31	4.31	5.64	6.99
1852.	97.0	26.5	11.1	7.9	6.4	5.18	2.01	2.71	3.54	4.51	1852.	71.6	27.2	14.1	9.5	6.9	6.11	3.31	4.31	5.64	6.99
1851.	98.0	26.6	11.1	7.9	6.4	5.18	2.01	2.71	3.54	4.51	1851.	71.1	27.4	14.4	9.1	6.7	6.11	3.31	4.31	5.64	6.99
1850.	99.0	26.7	11.1	7.9	6.4	5.18	2.01	2.71	3.54	4.51	1850.	66.1	24.5	12.6	8.6	6.6	6.11	3.31	4.31	5.64	6.99
1849.	100.0	26.8	11.1	7.9	6.4	5.18	2.01	2.71	3.54	4.51	1849.	71.0	27.5	14.7	10.4	7.9	6.02	3.31	4.31	5.64	6.99
1848.	101.0	26.9	11.1	7.9	6.4	5.18	2.01	2.71	3.54	4.51	1848.	71.0	27.5	14.7	10.4	7.9	6.02	3.31	4.31	5.64	6.99
1847.	102.0	27.0	11.1	7.9	6.4	5.18	2.01	2.71	3.54	4.51	1847.	71.0	27.5	14.7	10.4	7.9	6.02	3.31	4.31	5.64	6.99
1846.	103.0	27.1	11.1	7.9	6.4	5.18	2.01	2.71	3.54	4.51	1846.	71.0	27.5	14.7	10.4	7.9	6.02	3.31	4.31	5.64	6.99
1845.	104.0	27.2	11.1	7.9	6.4	5.18	2.01	2.71	3.54	4.51	1845.	64.2	25.7	11.9	9.4	6.8	6.11	3.31	4.31	5.64	6.99

The curtailing of the returns, from 1845 to 1880, of the table generally is due to the fact that our data as to births in England, whether taken from the Registrar-General's or from any other available source of information, are not sufficiently trustworthy earlier than 1845.

TABLE E.—A Table of Averages deduced from the Table of Deaths, at early ages, compared with corresponding Births.

N.B.—In this table, the various averages obtained from the former table have already been multiplied as directed; and the several results are, therefore, the numbers of persons dying at the specified ages and epochs, out of 1,000 born, leaving the effects of emigration and immigration out of calculation.

AGES.—MALES.											AGES.—FEMALES.										
Years.	1	2	3	4	5	6	7	8	9	10	Years.	1	2	3	4	5	6	7	8	9	10
	Means of 5 years.											Means of 5 years.									
1871-75	10.0	21.4	12.1	16.6	21.7	57.1					1871-75	10.0	21.4	12.1	16.6	21.7	57.1				
1876-80	10.0	21.4	12.1	16.6	21.7	57.1					1876-80	10.0	21.4	12.1	16.6	21.7	57.1				
1881	10.0	21.4	12.1	16.6	21.7	57.1					1881	10.0	21.4	12.1	16.6	21.7	57.1				
1882	10.0	21.4	12.1	16.6	21.7	57.1					1882	10.0	21.4	12.1	16.6	21.7	57.1				
1883	10.0	21.4	12.1	16.6	21.7	57.1					1883	10.0	21.4	12.1	16.6	21.7	57.1				
1884	10.0	21.4	12.1	16.6	21.7	57.1					1884	10.0	21.4	12.1	16.6	21.7	57.1				
1885	10.0	21.4	12.1	16.6	21.7	57.1					1885	10.0	21.4	12.1	16.6	21.7	57.1				
1886	10.0	21.4	12.1	16.6	21.7	57.1					1886	10.0	21.4	12.1	16.6	21.7	57.1				
1887	10.0	21.4	12.1	16.6	21.7	57.1					1887	10.0	21.4	12.1	16.6	21.7	57.1				
1888	10.0	21.4	12.1	16.6	21.7	57.1					1888	10.0	21.4	12.1	16.6	21.7	57.1				
1889	10.0	21.4	12.1	16.6	21.7	57.1					1889	10.0	21.4	12.1	16.6	21.7	57.1				
1890	10.0	21.4	12.1	16.6	21.7	57.1					1890	10.0	21.4	12.1	16.6	21.7	57.1				

TABLE G.—A Table of Averages deduced from the Table of Distribution of Deaths during 1845-1880 (TABLE F).

This table shows, for the several groups of years, the proportion of deaths occurring at the different ages in England, or how 1,000 deaths have been distributed among twelve groups of persons classed according to age.

N.B.—The column at the left, next to that of the years, gives the death-rate at all ages per 1,000 of the male or female population; and if a number found here be multiplied into one found in the same line, indicative of the proportion of deaths occurring at a given age in the same years and the same sex, the product will be the number of deaths occurring on the average in those years at the specified age, per million of the particular sex.

YEARS.	AGES.—MALES.											
	At all ages.	—5	—10	—15	—20	—25	—35	—45	—55	—65	—75	Be- yond.
1845-80	23.3	423.6	41.9	21.3	26.5	32.3	60.5	65.0	69.7	80.3	90.3	18.6
	Death-rate.	Mean of 36 years.										
1863-80	23.3	423.3	39.1	19.2	24.0	29.5	59.8	66.7	73.0	85.1	93.5	17.6
1845-62	23.2	423.8	44.6	23.4	29.1	35.2	62.1	63.2	66.5	75.4	87.2	19.6
		Means of 18 years.										
1872-80	22.6	419.0	35.7	17.8	22.6	27.7	58.5	68.0	74.9	89.1	97.4	17.9
1863-71	24.0	427.7	42.5	20.6	25.3	31.2	61.1	65.4	71.1	81.2	89.6	17.4
1854-62	22.9	431.1	42.6	22.4	28.1	33.2	59.5	63.0	67.0	77.0	88.1	18.7
1845-53	23.5	416.6	46.6	24.4	30.2	37.2	64.6	63.4	65.9	73.9	86.3	20.5
		Means of 9 years.										

YEARS.	AGES.—FEMALES.											
	At all ages.	—5	—10	—15	—20	—25	—35	—45	—55	—65	—75	Be- yond.
1845-80	21.1	381.6	42.0	22.5	30.5	35.6	69.6	66.6	63.9	78.3	97.9	27.9
	Death-rate.	Mean of 36 years.										
1863-80	20.7	387.1	39.1	20.3	27.2	32.3	66.0	66.1	66.4	82.5	101.7	27.2
1845-62	21.5	376.2	44.8	24.7	33.7	38.9	73.3	67.1	61.4	74.1	94.1	28.6
		Means of 18 years.										
1872-80	19.9	383.1	35.9	19.0	25.4	30.4	63.5	66.5	68.0	86.9	106.9	27.9
1863-71	21.5	391.1	42.4	21.5	28.6	34.2	68.4	65.8	64.7	78.0	96.5	26.5
1854-62	21.2	384.0	43.6	23.4	32.3	37.2	70.5	66.6	61.3	74.9	95.2	27.8
1845-53	21.9	368.4	46.0	26.0	35.2	40.6	76.1	67.6	61.5	73.4	93.1	29.4
		Means of 9 years.										

TABLE K.—A Table of Averages deduced from the Table of Proportionate Numbers dying under a given age.

This table is formed upon that of Distribution by simple addition, and shows how many per 1,000 deaths in each sex have occurred in England in the several groups of years before the specified ages have been reached. The deaths per million of each sex may be arrived at in the same way as in Table G.

YEARS.	AGES.—MALES.											
	At all ages.	—5	—10	—15	—20	—25	—35	—45	—55	—65	—75	Be- yond.
1845-80	23.3	423.6	465.5	486.8	513.3	545.6	606.5	671.2	741.2	821.5	911.9	981.4
	Death-rate.	Mean of 36 years.										
1863-80	23.3	423.3	462.4	481.7	505.6	535.1	594.9	661.6	734.6	819.7	913.2	982.4
1845-62	23.2	423.8	468.4	491.8	520.9	555.1	618.2	681.4	747.9	823.3	910.5	980.4
		Means of 18 years.										
1872-80	22.6	419.0	454.7	472.5	495.2	522.9	581.4	649.4	724.3	813.4	910.9	982.1
1863-71	24.0	427.7	470.2	490.8	516.1	547.2	608.3	673.7	744.8	826.0	915.6	982.7
1854-62	22.9	431.1	473.7	496.1	524.2	557.4	616.9	679.9	746.9	823.9	912.0	981.3
1845-53	23.5	416.6	463.1	487.5	517.7	554.9	619.5	682.9	748.8	822.7	909.0	979.4
		Means of 9 years.										

YEARS.	AGES.—FEMALES.											
	At all ages.	—5	—10	—15	—20	—25	—35	—45	—55	—65	—75	Be- yond.
1845-80	21.1	381.6	423.6	446.1	476.5	512.1	581.7	648.4	712.3	790.6	888.5	972.1
	Death-rate.	Mean of 36 years.										
1863-80	20.7	387.1	426.2	446.5	473.6	505.9	571.9	638.0	704.4	786.9	888.6	972.8
1845-62	21.5	376.2	421.0	445.7	479.4	518.3	591.6	658.3	720.1	794.2	888.4	971.4
		Means of 18 years.										
1872-80	19.9	383.1	419.0	438.0	463.4	493.8	557.3	623.8	691.8	778.7	885.6	972.1
1863-71	21.5	391.1	433.5	455.0	483.8	518.1	586.4	652.3	717.0	795.0	891.5	973.5
1854-62	21.2	384.0	427.6	451.0	483.3	520.5	591.0	657.6	718.9	793.7	888.9	972.2
1845-53	21.9	368.4	414.3	440.4	475.5	516.1	592.2	659.8	721.3	794.7	887.8	970.7
		Means of 9 years.										

ON RHEUMARTHROSIS, CARDITIS, AND CHOREA; WITH A NEW THEORY OF THEIR UNITY OF ORIGIN.

By WILLIAM STEWART, F.R.C.P.E.,
Honorary Surgeon to the Beckett Hospital, Barnsley.

No theory of sufficient breadth or potentiality has yet been advanced that will cover all the varied and apparently contradictory facts surrounding the etiology of this group of diseases. That they are connected with each other in the closest manner, I think we are all agreed; but, in our attempts to discover the nature of this connection, our efforts have been too frequently directed to determine how each stands to the other in the relation of cause and effect. This manner of looking at the question has probably arisen from the fact that, the various affections have usually followed each other at decided intervals in point of time; and in many instances this sequence has been pretty regular in order. Thus, rheumatism usually precedes the cardiac affection, and the cardiac affection often precedes the chorea; but, on the very threshold of the subject, a cursory glance is sufficient to decide in the negative this view of the question; for, although we have in many cases the above regular sequence, yet how many cases of chorea can be presented to our view standing out prominently and independently without the previous intervention of either carditis or rheumatism; and the same may be said in turn of all the other affections of the group. In illustration of this, I may state that I am at present in attendance upon a patient whose severe carditis was followed by affection of the joints twelve days after the incidence of the heart-affection.

When studying the etiology of these affections, such undisputed facts as the foregoing fatally condemn the idea of ever establishing a causal connection between any of them. It is, therefore, more logical to attribute their genesis to a pre-existing cause, that equally gives rise to all the three affections, or to any one of the three independently of the

others. We thus get rid of the necessity of establishing any regular order of their occurrence.

In his "Remarks on Chorea," published in the BRITISH MEDICAL JOURNAL, 1877, vol. i, p. 65, Dr. Bastian says: "It occurs in individuals either (1) in relation to rheumatic fever, (2) as a sequence to fright, (3) in association with anæmia, chlorosis, or other cachectic condition. These are the known facts, and the question is, how are we to deduce a pathogenesis for the disease which shall be broad enough to be compatible with the whole of them?"

My theory not only fulfils this requirement as regards chorea, but it is also broad enough to explain the genesis of all the other affections and diseases of the group.

The first necessity, then, of such a theory is to go back to a point of time in the life-history of these complaints, where we can pick up the root or factor whose potentiality is of sufficient breadth as to be able to beget any one of them separately, or all of them together. In such a theory, the different affections would then stand to each other in the relationship of branches of the same common root, or of children of the same parent, but having their own special individuality stamped upon them by their interference with, and perversion of, the functions of those different organs with which they are for the time being individually connected. Thus only can harmony be evolved out of what appears at present to be little more than a chaotic accumulation of disordered facts.

So long as we continue to look upon this group of diseases as separate entities, having their location in such varied organs as the heart, the brain, the lungs, or the joints, and presenting to our view their characteristic features by a varied series of phenomena, the attempt to explain their mutual relationship is impossible; but if we regard their origin as being the common result of an abnormal and devitalised condition of certain elements of the blood, we are prepared to expect that, when the capillary circulation and nutrition of the brain are thereby affected, we shall have disturbance of its function, and thus the nervous

phenomena—both psychical and physical—of chorea arise; that, when the nutrition of the heart is affected, we shall have the cardiac symptoms; and so on in like manner with the lungs, the joints, or the liver. The question, which of these affections will first have birth? is decided by certain existing or determining conditions peculiar to the idiosyncracies of the case or its surroundings.

In advancing this theory of the production of this group of affections from one common source, I may here state that I have been led up, and in a measure forced, to its invention, by the result of clinical observation alone.

The pith of my theory lays in the introduction of a cell to the general current of the circulation, to which cell I give the name of pathogenetic or disease-producing cell. In its nature and appearance I believe it to be analogous to, and resembling a white blood-corpuscle; a devitalised white blood-corpuscle which acquires at the same time, and to the same extent as it loses its vitality, a pathogenetic power. This pathogenetic cell is introduced to the blood by the well-known process of absorption through the medium of a lymphatic vessel and gland. It is manufactured from healthy blood-corpuscles by a degree of local inflammation which seems to me to stop short of the production of tubercle-cells on the one hand, or of ordinary pus-cells on the other.

The pathogenetic properties of these three varieties of devitalised cells seem to differ from each other only in degree.

1. *The Rheumatic Cell* is of the first degree of devitalisation. It is so little altered from its normal vital condition that it is in time perfectly revitalised, and capable of restoration to further healthy function and activity; thus, the great majority of these cases recover.

2. *The Tubercle-Cell* is of the second degree of devitalisation. It undergoes greater loss of vitality, and acquires more virulent pathogenetic powers, probably because the primary local inflammatory condition conferring this alteration has occurred in a constitution whose vitality is primarily, perhaps hereditarily, of a lower order. The result is that this cell is nearly, if not completely, incapable of further reorganisation, and must be extruded from the economy. When it is permanently interrupted in the gland through which it is seeking admission into the blood, scrofula is the result; or if it succeed in effecting an entrance to the circulation, tubercle of the various organs arises.

3. *The Pyæmic Cell*.—The blood-corpuscle has acquired septic properties, and, when re-absorbed into the blood, produces symptoms of pyæmia. This degree of cell-devitalisation is still more incapable of restoration, and its pathogenetic properties are of a yet more virulent order than either of the previous degrees.

Thus, according to my theory, the rheumatic group forms a link in the chain of other pathological processes taking their origin in the absorption of pathogenetic cells.

Although the vital functions of healthy white blood-corpuscles are still somewhat *suo jure*, we know sufficient to be able to affirm that they play a high rôle in all the processes of healthy nutrition. We know also, that in their circulation through the capillaries they occupy the place nearest to the walls, travelling very slowly; while the red blood-corpuscles occupy the centre, travelling at a more rapid rate; that sometimes the white blood-corpuscles travel so slowly that there is a natural tendency for them to stop and adhere to the walls; that they also have a tendency to pass through the wall of the capillaries into the connective tissue. When they do so pass through, they probably by the property of accommodating themselves to their environment, and so build up in a healthy manner the structure or the special cells of the organ in which they are extruded.

We may also feel sure they can play as great a part in the production of disease, should they by any means become bereft of their vitality; and I claim for them, when devitalised by the effects of previous inflammation, a vitiation or deterioration of those properties which are natural to them in a state of health: and they become invested with a greater tendency to adhere to each other and to the inner wall of the capillary. Thus, by their aggregation and adhesion to each other, minute thrombi of the capillaries are produced. They also migrate through the capillary walls in abnormally large numbers; and as they cannot be converted into the normal structure of the tissue in which they find themselves, they form distinct deposits in the adjacent connective tissues.

Thus, by interference with the circulation and nutrition of the tissue where the stasis and deposits take place, the functional and organic activity of the organ is perverted, and the phenomena of disease are caused.

After having thus, in a very imperfect manner, endeavoured to illustrate the theory of production of this group of diseases by the supposed introduction of a pathogenetic cell to the blood, I am clearly under the necessity of pointing out, if possible, the locality where it is manu-

factured, and the manner in which it is introduced to the circulation. In doing so, I approach the most practical part of the subject—viz., the clinical facts which indicate to my mind the theory itself.

First of all, a local inflammation is necessary in which the white blood-corpuscles are devitalised, and the pathogenetic cells are manufactured, to be afterwards reabsorbed into the circulation. Now, of all the places of the body, the tonsils are the parts where these conditions are most easily fulfilled; firstly, because of their very great liability to the inflammatory process; and, secondly, because at those organs absorption takes place so easily, this being clearly one of their natural functions. Besides, Virchow thinks that the tonsils have something to do with the formation of white blood-corpuscles.

Be this as it may, the clinical facts remain the same, that, following upon an inflammatory affection of these bodies, at a greater or less interval of time, we have joint-affections, cardiac affections, chorea, and affections of other organs, due to the interruption of the corpuscles in their parenchyma. Elsewhere (*Lancet*, 1881, vol. i, p. 154) I have indicated that the initial inflammation necessary to the production of these cells is not limited to the tonsils only, but may occur in the neighbourhood of other mucous cavities, such as the urethra, the anus, or the middle ear; but that this group of sequences is of more frequent occurrence after the tonsil inflammation, because of the facilities which exist there for absorption.

Cases illustrating the positions I have advanced could be multiplied indefinitely; but I prefer giving a few typical cases which I have met recently. A rough outline of these cases is all that is necessary for illustration.

CASE I.—Male, aged 35, coachbuilder. Follicular tonsillitis, followed by severe swelling of the left ankle-joint. Subsidence in a week. No other joint affected. No further affection of any other organ. The message to see this patient was characteristic and original. The patient was described as having sore-throat, which had fallen into his foot.

CASE II.—Female, aged 13. Follicular tonsillitis. Ten days after recovery, nearly every joint became affected with rheumatism, during the course of which a systolic mitral murmur appeared, which remained permanently.

CASE III.—Female, aged 52. Follicular tonsillitis. Second week afterwards, two joints slightly affected, followed by liver-affection, with icterus and hiccough; lastly, pericarditis, with prolonged and tardy, but complete recovery.

CASE IV.—Female, aged 18. Follicular tonsillitis. In three months, chorea.

CASE V.—Male, aged 9, scarlet fever, June 1880. Three weeks after rheumatism, accompanied by nodic deposits in fibrous tissues. Three months afterwards, chorea. Follicular tonsillitis during Christmas week 1881. One month after, severe pericarditis with effusion. Fibrous cardiac deposits on mitral valves, producing double murmur, obstructive and regurgitant. Consolidated patch of lower lobe of right lung. Liver-affection. During the second affection of the blood, in 1882, more node-like deposits took place in the fibrous tissues of the extremities; and, some time after the incidence of the pericarditis, several of the joints were affected by rheumatism. The skin was also at various times affected by a pinkish-brown rash, accompanied by a peculiar roughness of its surface.

This case is most instructive, not only as having nearly all the affections possible to be produced by the absorption of devitalised cells, but as being the only child, in a group of four cases of similar kind in the same family, having any ulterior affection, and also as being the only one of the same family (in which all the children recovered from follicular tonsillitis) who was affected by any sequelæ depending upon absorption at the throat. But in the same house.

CASE VI.—Female, aged 14, nurse-girl in the family of Case V, was affected by right unilateral chorea in July of this year, accompanied by pain in the left half of the head, and concurrent swelling of two joints. When asked if she had sore-throat when the chorea was affected, or since, she replied in the negative, and denied having sore-throat at the time of examination; but, on looking into the throat, decided evidence of recent tonsil-affection was apparent, and on the left side of the uvula ragged pale-yellow exudation was observed. The glands at the angle of the jaw were enlarged and incarcerated.

This case illustrates well what I have often observed in cases of the throat-affection. At the time of its existence, the pain or discomfort arising from it is often so slight as not to attract the patient's attention during its course, and the very existence of the affection might be altogether overlooked unless the physician examined the throat in every case or carefully inquires into its previous history.

The throat-affections in this family seemed—in fact, I may say, were

proved—to have an undoubted connection with the inhalation of escaped sewer-air from the soil-pipe of a water-closet; for, after repeated attention by various plumbers to the drains indicated by me as a possible source of the affection, frequent cases of the follicular tonsillitis still continued to crop up among the children. At last, the master of the house placed some oil of peppermint in the water-closet basin, and allowed it to flow through the soil-pipe. In a few minutes, the peppermint odour was perceived in the children's nursery. This simple experiment led to a further examination and the detection of a deficiency at one of the joints of the soil-pipe, which had a communication with the nursery through a crack in the floor.

It may be well to describe here the character of the throat-affection that seems to have *par excellence* the power of generating these affections. Whatever be the essential nature of the cause of the throat-affection, it seems to have some close affinity with the scarlet fever poison, as I have seen cases of it occurring in members of a family where scarlet fever was at the time prevalent. In the majority of cases, however, it occurs separately from cases of scarlet fever: it then seems to be due to the inhalation of sewer-air. Possibly it might then even be due to the particular poison of scarlet fever lurking (from previous epidemics) in the drains until they are opened for some purpose or another, as I have repeatedly seen cases follow after the opening of sewers. But there is no real need to draw a distinction, as rheumatism, carditis, and chorea may follow the real scarlet fever throat,* though not, in my experience, quite so frequently as they follow the throat-affection I now describe.

In a typical and moderately severe case of the disease, its onset is sudden, like that of scarlet fever. On the first day, there are shivering, prostration, and general *malaise*. On the second day, there is pretty high fever; and on looking into the throat, we now discover two or three discrete spots of pale yellow exudation on an inflamed and enlarged tonsil. On the third day, the opposite tonsil will present the same appearance as the first did on the second day; the affection of the second tonsil being usually about a day behind the other, and never quite so severe. These spots of exudation, by close observation, are clearly seen not to be a growth upon the surface of the tonsil, as in diphtheritic membrane, but an exudation from the tonsil itself through the follicular openings on its surface. In moderately mild cases of the affection, the spots never become confluent, but maintain their discrete character throughout; and in these cases, the exudation clears off about the fourth day, and at the same time defervescence is complete, and convalescence begins. In more severe cases, the exudation-spots on the tonsils approximate each other and merge into one general patch from the third to the fourth day; and if seen now for the first time, the diagnosis between this affection and real diphtheria is often very difficult, many such cases being mistaken for true diphtheria, and thus we sometimes hear of such marvellously rapid and wonderfully easy cures of diphtheria, which in reality illustrate no truth so forcibly as that of a mistaken diagnosis. The histories, both up to this point and afterwards, of the two affections are so different (at least in my experience) that a certain diagnosis may be given with safety. Usually about the third day, or in some cases later, by applying the finger behind the angle of the jaw that enlargement of the lymph-gland there situate will be felt which tells only too truly that the first step towards the deterioration of the vital fluid has already been accomplished.

In very mild cases of the affection, which are numerous, the patient experiences very little discomfort from the condition of the throat, and frequently never mentions the throat as being affected unless his attention be drawn to this point by the physician; so that, in a great many cases, medical attendance has never been sought for the throat-affection, and it is only by particular inquiry on the part of the medical attendant, when afterwards called to give relief to the rheumatic or other sequences, that the history of the throat-affection will be elicited. Under the microscope, the exudation presents the appearance of leucocytes; but it is evident, from the tenacious manner in which they adhere to the surface of the tonsil, that the leucocytes have not acquired the properties of true pus-cells. That they are more or less devitalised is certain; and they are by virtue of this devitalisation rendered unfit to discharge the proper function of white blood-cells should they again by absorption find their way into the general circulation.

Should the patient continue to be exposed to the primary conditions which produce the tonsillitis, repeated, though often milder, attacks of the throat-affection supervene, and more pabulum for the blood-affection is produced, and that anæmic or cachectic condition is established which often precedes the various affections of the group. But failing this mode of multiplication, I think it possible that, when these de-

vitalised cells meet healthy blood-cells in the circulation, they may have the power of communicating to them the same devitalised condition; so that, though few may have been primarily absorbed at the tonsils, in this manner, and in course of time, a sufficient number may be produced as to form the multiple thrombosis already alluded to.

Having arrived at the foregoing conclusions from the clinical observation alone of cases occurring in my own practice, I have endeavoured to gather from the anatomical and pathological studies of the most recent writers upon these affections any observations in support of my theory. With regard to the rheumatic phase of the affection, Hueter is the only author who speaks of the presence of granular corpuscles in the synovial capillaries; but the minute morbid anatomy of the joints in rheumatism has not yet been very extensively investigated. It would appear that the minute composition of the deposit in cardiac exudations consists largely of errant leucocytes (Bauer, Bristowe, and others) mingled with fibrin; but whether they are deposited from the general current of the blood flowing through the cavities of the heart (this deposition being favoured by the temporary stasis produced by the closing of the valves, and as their common situation upon the surface of the valves facing the blood-current would go to prove), or in the manner already indicated, by thrombotic accumulation in, and migration from, the capillaries of the tissues themselves, facts and observations are not yet sufficiently accumulated to decide.

With regard to the minute morbid anatomy of chorea, the support of my theory is very strong. In an article in the *BRITISH MEDICAL JOURNAL*, 1877, vol. i, pp. 36-65, Dr. H. Charlton Bastian gives an account of several *post mortem* examinations of the brain of choreic cases, in which he found minute multiple occlusions of the capillaries of the corpora striata and other adjacent parts of the brain, which were produced by the aggregation of numbers of white blood-corpuscles; also in a case of chorea, which was accompanied by delirium, the vessels of the grey matter of the convolutions were blocked in the same manner. In this manner, arterial and capillary repletion is produced, and subacute inflammation is the result. Derangement of the normal nutrition and function of the part is established, and the conduction of motor power through the fibres of the corpus striatum from the higher centres of volition is perverted and disordered.

With regard to the apparent influence of chill in bringing on attacks of rheumatic fever, I believe it only acts as an exciting cause, and holds the same relation to the rheumatic affection as does fright to chorea, which is thought by many to be a sufficient and only cause for inducing the latter affection. A chill applied to the surface of the body acts principally and more especially on the capillaries of the fibrous tissues surrounding the joints, because here there is a nearly total absence of that subcutaneous fat which acts as a non-conductor of heat over the other parts of the body. The cold produces contraction of the capillaries, and thus establishes a condition which favours the blocking of the capillaries by the altered blood-corpuscles. Fright, in like manner, seems to me to act in an analogous way upon the capillaries of the brain by producing, for the time being, some disproportion between the size of the corpuscles and the calibre of the capillaries, which favours the commencement of that occlusion of the capillaries which is found to exist in these cases.

With regard to cases of chorea associated with pregnancy, I would merely point out that pregnancy is no bar to the production of chorea, because this state does not prevent the occurrence of those etiological causes which develop the blood-condition necessary to the production of the disease in non-pregnant subjects.

The following *résumé* of my theory will place the subject very briefly before those who take an interest in it. 1. Follicular tonsillitis, by the process of a mild inflammation, originates the discharge of altered white blood-corpuscles through the follicular openings on the tonsils. 2. These, or others in the tonsils not extruded, are reabsorbed into the blood by the lymphatic vessels through the glands at the angle of the jaw. 3. By the initial inflammation, the white blood-corpuscles are deprived, to a certain extent, of their normal physiological qualities; and to the same extent as they have been devitalised they acquire pathological properties, by virtue of which they have an intensified tendency to adhere to the inner walls of the capillaries and to one another, and also to pass through the capillary walls into the connective tissues, and there form deposits. 4. They in this way become pathogenetic cells, and produce disordered nutrition and perverted functions in those organs in which they are interrupted or extruded, and thus establish the phenomena of disease. 5. These devitalised cells are revitalisable, and therefore the diseases which they produce as a rule terminate in recovery. 6. My theory explains the altered blood-condition observed in these affections, which is established by repeated absorption of cells or by the individual cells communicating to other cells they meet in the blood the same impress which

* See Fothergill's *Heart-Diseases*, 2nd edition, p. 339; Arlidge, *BRITISH MEDICAL JOURNAL*, vol. ii, 1877, p. 799; Shann, same pub., p. 516; Roger, Ziemssen's *Cyclo-pædia*, vol. xiv, pp. 426-7.

they have already received. 7. It accords with the apparent origin of rheumatism from damp and cold, and of chorea from fright, by according to them the power only of acting as exciting causes. 8. It does away with the necessity of a causal connection between any members of the group; and, finally, that it explains, in a rational and probable manner, the known clinical connection between, and the morbid anatomical conditions existing in, the various diseases of the group.

A CASE OF PROSTATIC RETENTION OF URINE.

By S. WILSON HOPE, L.R.C.P., Petworth, Sussex.

PERHAPS these notes on the course of a case of prostatic retention treated by suprapubic puncture, and the little matters of detail in after treatment, upon which the surgical success of the operation, from the patient's point of view, really turns, may be interesting and useful to some one; but my motive in writing them is chiefly to suggest to those under whom retention cases may fall, whether it might not be well to adopt suprapubic puncture; sometimes, where catheterising is possible, or believed to be possible; and generally, to consider suprapubic puncture, and the making of a permanent new channel for the urine as an alternative treatment to catheterising in cases of retention from chronic prostatic disease. An old man, aged 79, a great walker, and very strong and active, whom I had treated for retention two years before, by drawing off his urine with a gum catheter, twice a day for ten days or so, was forced last April to seek for like help again. I found a bladder reaching a little way above the pubes. The old man said he passed a little urine nearly every ten minutes day and night, and was never free from pain. I tried to pass the catheter, as in his last attack. I tried many and different catheters, but failed to pass one into the bladder. It seemed best to leave him for twelve hours, and think over, meanwhile, what it were best to do. After carefully going over what Sir Henry Thompson says in the eighth and twentieth lectures of his *Diseases of the Urinary Organs* (4th edition), I went back with my mind made up either to get a catheter into his bladder, or to puncture above the pubes, with a view not only to relieve his present distress, but to provide him with a new and permanent channel for the urine, through which it should not be so troublesome to empty the bladder as it had been through the natural passage for some years past, and particularly at night.

Again, I was unable to find a way into his bladder with a catheter; so, with his consent, I put him under ether, and punctured the bladder in the usual way. Now, the only thing I have to note at this stage is that, as I used a small trocar and cannula (No. 5) both he and I were afraid of a wooden spigot, lest it should break off in the tube; and it seemed to us that, if the instrument-makers had made a separate short tube to screw into the cannula, and provided it with a stop-cock, they would have much increased his comfort; for, being afraid of the wooden spigot, we used an ivory one, and this not only leaked a little and soiled the old gentleman's night-shirt, but on one or two occasions it came right out during the night, and soiled the bed abominably. However, we worked our way with few or no greater drawbacks than these, till we reached the stage of convalescence; and now the question was, how to find a soft instrument which we could put in, and keep in the bladder when the old man should get about as usual. And here I have to note that I found no suggestions in books of surgery, where one naturally looks when in a difficulty. First, I had a soft instrument attached to a plate, made after the model of the ordinary silver cannula, but I felt persuaded it would lead to nothing but disaster; for, either the plate and catheter would separate, or the catheter would slip out; or the thing would leak somewhere. I forgot to say that to the instrument made on the model of the silver cannula, I had a soft tube attached, provided with a stop-cock for the purpose of conducting the urine away from his clothes when emptying the bladder. Next, the happy thought struck me of using a Jacques's catheter; and I hoped that, by passing a bone tip (from another catheter) of a suitable size, to a suitable point along the catheter, we should be readily able to fix the catheter in position. But our difficulties only now began. For my active old patient, though pleased with his tube, and the manner with which the ivory spigot passed it, was plagued beyond measure to find that, however cleverly, as we thought, we had fixed the tube, it was sure to work out after he had moved about a little.

At last we gave up all tapes, elastics, belts, etc., and hit upon the following plan. Upon each side of the puncture, we stuck a piece of resin plaster of a suitable length; then, a circular piece of soft leather, perforated just to size, being passed over the proximate end of the catheter up to the bone-tip, it was kept in position by passing two cross pieces

of black silk gelatine plaster, one above and the other below the puncture, stuck down to the upright pieces of the resin plaster. Now, over this he wears a perforated home-made belt, of bed-tick, to prevent the clothes from rubbing the plasters; and upon this, at a suitable place, a piece of tape is caught down at both ends, under which he stows away the plugged extremity of his urinary tube. This plan answers very well, and enables him, by drawing in the belly somewhat, to pass a feather behind the bone-tip, and remove any discharge that may show itself there.

It is now six months since the operation was performed. He takes his long walks as he used to do. He has better nights than he used to have for a year or two before the operation, though he still has to rise to empty the bladder three or four times during the night. And on the whole, as he says, it has been a great comfort to him, though it is not equal to nature.

CLINICAL MEMORANDA.

INCUBATION-PERIOD OF SCARLET FEVER.

HAVING perused the communications of Dr. Myrtle of Harrogate, and Dr. Field of Bath, with reference to this subject, in the two last numbers of the JOURNAL, it seemed to me that the contribution of some recent evidence bearing on the question would not be altogether inopportune. This evidence is afforded by the cases of four members of the staff of this hospital (which now contains close upon eighty scarlet fever patients), who were attacked with the disease at various times after entering the service of the institution; and it may fairly be postulated that the determination of the incubation-period, in these particular cases, should be considered to be free from much of the uncertainty which usually surrounds it. They are the following:

1. F. W., aged 16, entered the hospital as ward-servant on October 9th, and was attacked October 14th.
2. T. B., aged 24, entered the hospital as porter on October 10th, and was attacked October 24th.
3. M. C., aged 23, entered the hospital as assistant-nurse on October 14th, and was attacked October 26th.
4. E. W., aged 22, entered the hospital as ward-servant on October 18th, and was attacked October 26th.

It will thus be seen that the incubation-period in these cases was respectively five, fourteen, twelve, and eight days.

There are some points in (2) and (3), which, being taken into consideration, might possibly tend to reduce their long incubation-periods. These are, first, that T. B., although he undertook duty as a porter on October 10th, did not actually assist in removing patients from the reception-room to the ward until October 11th, which would make his period thirteen days; and, secondly, that M. C., although she arrived at the hospital on October 14th, at 9 P.M., did not actually go on duty in the ward until October 15th; and further, that no patients were received in this ward until October 16th, which would make her period ten days. But these refinements of determination are open to the obvious and fatal criticism, that a member of the staff, who newly arrives here, is at once exposed to infection, apart from actual contact with patients, both directly from polluted atmosphere, and mediately by mingling with others of the staff employed in the wards. Hence we may at once lay them aside.

Without committing the fallacy of making a final deduction from such a small number of cases, yet the points that seem to impress themselves upon one's mind are, the marked variability of the incubation-period; and that a period of fourteen days is by no means so impossible as Dr. Field would have us believe.

I may, perhaps, have further opportunities of investigation of this important practical matter, the results of which I shall hope to report at some future time.

R. D. R. SWEETING, Medical Superintendent.
Fulham Fever Hospital, October 31st, 1882.

THERAPEUTIC MEMORANDA.

TINCTURE OF IODINE IN ERYSIPELAS.

HAVING seen the external use of tincture of iodine in erysipelas highly spoken of by correspondents in the JOURNAL, I determined to try it, and have done so in two cases that came under my care. The first was that of a young man, with the face affected. After one application there was marked improvement; the redness had diminished, and the swelling was considerably less. The patient expressed himself

as much benefited, and was soon well. The second case was a married woman, aged 32, also with erysipelas of the face, extending from the forehead to the chin; the features were obliterated, and the eyes closed. I prescribed tincture of perchloride of iron, and the liquor ammoniac acetatis internally, and painted the margin of the inflamed surface with tincture of iodine, and, as recorded, could see the blood receding. I then applied it to the whole inflamed surface. The next day I found the face much relieved from the feeling of tightness, and the swelling had diminished so much, as to render the features more natural; but the erysipelas had spread to the scalp and the ears. I soaked the hair with iodine and painted the ears, and these also quickly showed signs of improvement. The following day the patient was unconscious, and, at times, violently delirious, in which state she remained for five days, when I found that she was paralysed on the right side of the face, tongue and soft palate, the left arm, and both legs. She is now rapidly regaining power in the paralysed parts, and is improving generally. The appearance of delirium, etc., succeeded by paralysis, may be but a coincidence, and quite independent of the use of iodine; but I shall be interested to know if any member has seen similar symptoms following its use in his hands.

FREDERICK H. TINKER, L.R.C.P., M.R.C.S., Eng.,
Hyde, Manchester.

REPORTS

OF

HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.

CASE OF BELL'S PARALYSIS IN A HYSTERICAL SUBJECT.

By HENRY S. GABBETT, M.D., Assistant-Physician to the
Hospital.

ON November 19th, K. H., a married woman, aged 27, who had been attending as an out-patient for slight bronchial catarrh at the Royal Chest Hospital, came to me, accompanied by her sister, both in a state of great alarm and excitement. The first thing which attracted attention was the condition of the patient's face: the mouth was drawn strongly to the left, and the muscles of that side twitched convulsively, the right half of the face remaining immovable. To an inquiry as to what was the matter, the sister replied in a frightened manner, "She has had a fit". Here the patient herself attempted to explain, but her words were almost unintelligible; several of the consonants were slurred over or misplaced; sometimes she seemed to forget a word, or to find it impossible to pronounce; and her struggles to make herself understood increased her condition of nervous flurry, and rendered her speech still more indistinct. It was ascertained from her, however, that her face had been drawn for five days, and that, in addition to this, she complained of severe headache on the left side, dizziness in walking, and numbness of the right hand and arm. After allowing her to make these statements (which was done chiefly for the purpose of observing the nature of her defective articulation), I made her sit down and calm herself, whilst I tried to obtain further information from the sister. It was then easily elicited that there was no history whatever of a "fit".

The patient, who had always been of a nervous temperament, and had lately suffered from domestic troubles, was observed on November 13th to be in a peculiarly excitable condition; the sister asserted that all the family (including the patient herself), were "afraid that she would have a fit". On the next morning, the patient awoke with severe left hemiparesis, to which she was subject, and noticed at breakfast that she had some difficulty in drinking; according to her own account, she could not get the tea to flow from her cup straight into her mouth; it trickled down her lip on the right side. Curiously enough, she herself did not at this time observe any drawing aside of the mouth, but it would seem that her relatives did, and refrained from alluding to the fact out of well meant consideration for her feelings, they being now convinced that the threatened "stroke" had occurred. It was not till a day or two afterwards that the patient's speech became much affected; at the same time, the distortion of the face gradually increased.

On examination, I found almost complete facial paralysis of the right side, affecting the upper part as much as the lower; the eye could not be closed, frowning was impossible, and the face on this side was absolutely expressionless, contrasting markedly with the emotional

twitchings and contortions of the other side—the patient being all this time in an excited, semihysterical condition. The pupils were equal, the excursions of the eyes normal, the tongue was protruded in the median line, and there was no evidence of implication of any cranial nerve except the portio dura. The soft palate acted well, and the uvula was not obviously deflected. Hearing was good on both sides. She said she could not taste well with the right half of the tongue. She also stated (but this was in reply to a leading question), that the sight of the right eye was impaired. Notwithstanding her assertion of numbness in the right upper extremity, I could find no defective sensation, and she was quite capable of performing delicate movements with the fingers on that side. Her gait was perfectly normal. With regard to her speech, it was obvious as soon as she became comparatively calm, that there was no true aphasia: her difficulty mainly consisted in imperfect pronunciation of the labials, and was almost wholly due to the paralysis and distortion of the lips; it was noticeable that she attempted to overcome this by using her fingers to draw the mouth into its proper position. When she first attempted to explain herself, there appeared to be two elements of imperfection in her speech, viz., the mechanical difficulty just mentioned, and a sort of temporary amnesia due to her nervous state; and it was clear that the effect of the two causes was heightened by their combination; on the one hand she was evidently scared by the thickness of articulation produced by the lip-paralysis, and so became more nervously incapable of remembering words; on the other hand, her amnesia and consequent vexation increased her excitability, and exaggerated the mechanical imperfection. Thus, she would attempt to hurry over a sentence with the consciousness that her pronunciation was indistinct, thick, and blurring, and suddenly break down in the middle at a loss for a word; then, with every appearance of irritation and distress, she would recommence in a manner still more unintelligible. It thus came about that her utterances rather closely resembled those of a truly aphasic person; but as soon as her nervousness had partially disappeared, and when she used her fingers as above described, it was evident that she could pronounce words with perfect ease. Reverting to the condition of the face, it was ascertained that at her daily occupation she was exposed to a draught affecting the right cheek, and that she had suffered from earache for some days before this attack. The diagnosis being now clear, the patient was encouraged by the assurance that she had had no "stroke" whatever, and that in all probability she would soon be well—an assertion which she received with no little astonishment and incredulity. Counterirritation about the mastoid process was ordered, and afterwards the paralysed muscles were treated by faradisation. The subsequent progress of the case presents no features of interest; the paralysis had wholly disappeared after the lapse of a few weeks, and there was no recurrence of the pseudo-aphasia.

REMARKS.—Cases resembling the above are probably not very uncommon, but may be worth recording for the sake of showing how the ordinary phenomena of Bell's paralysis may be complicated in a hysterical subject. In the present instance there was of course no real difficulty in diagnosis; the facts rendered it in the last degree improbable that the paralysis could be of cerebral origin, and everything pointed to implication of the facial nerve at or near its exit from the stylo-mastoid foramen. The patient's speech was the most interesting point: at first it really afforded some ground for suspicion of a central lesion, when taken in connection with the facial paralysis and complaint of right-sided numbness; but further examination showed the true nature of the defect in articulation. It was not an instance of that typical aphasia which is said to be occasionally met with in cases of hemiparesis, but was really mainly due to the paralysis of the seventh nerve, a paralysis which ordinarily produces a slight or scarcely noticeable thickness of utterance, but which, in the present instance, had its effects altered and exaggerated by the patient's mental condition. The "numbness" of the right upper extremity was, I believe, wholly imaginary. It may be added, that I could not ascertain that the patient had ever seen or read of cases of right hemiplegia with aphasia, although her symptoms led me to suspect that she had some acquaintance with the subject.

HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S PARK.

(Cases under the care of Dr. ALTHAUS.)

CASE 1. *Posterior Sclerosis of the Spinal Cord.*—A house-porter, aged 42, widower, and father of two healthy children, had for many years past suffered from dyspepsia (gastric crises), and had habitually slept in a damp bedroom. He denies having had any syphilitic infection, but has large patches of psoriasis all over the limbs, with the exception, however, of the palms of the hands. The psoriasis has existed for years past. He has been subject to "rheumatic" pains in the legs for

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, NOVEMBER 7TH, 1882.

SAMUEL WILKS, M.D., F.R.S., President, in the Chair.

Report of the Committee on the Specimen of Narrowing of the Ventricles below the Aortic Valves, shown at a previous meeting by Dr. Norman Moore.—Dr. PYE-SMITH said that the Committee had agreed with the description given by Dr. Norman Moore, they had not been able to find a similar case on record, they thought the narrowing had occurred after the complete formation of the heart and the valves, but from the condition of the valves and endocardium they were inclined to consider that the condition was a malformation produced during intra-uterine life.

Paraplegia caused by Traumatic Hematoma in the Dorsal Region.—Mr. W. H. KESTEVEN related the particulars of this interesting case, and exhibited the specimen. There had been some pre-existent disease which had caused the destruction of the body of the seventh dorsal vertebra. About three months before death occurred, the patient had received a blow on the back which had caused some displacement at the diseased part, and rupture of some blood-vessels, thus giving rise to an effusion of blood into the spinal canal, and consequent pressure on the cord. Some of the blood had also escaped anteriorly, forming a hard tumour in the posterior mediastinum, which had pushed forward the sympathetic ganglia and caused destruction of the *rami communicantes* of the seventh ganglion on each side. The heads of the seventh and eighth ribs, on each side, were also diseased. The symptoms which had been noticed during life pointed chiefly to pressure on the spinal cord produced by the hematoma, and to damage also caused to the sympathetic by pressure.—Mr. ROGER WILLIAMS thought the case illustrated the fact that pressure on the cord in disease of vertebrae was, in many cases, not produced by the displacement of bones, but by some disease of the soft parts.—Dr. HORROCKS observed that this was the first case where ankle-clonus had been recorded without descending degeneration.—Mr. BUTLIN asked whether examination of the clot had been made; he suggested that it might have been a blood-clot which had been extensively bled into. The history seemed to point to a tumour rather than to a hæmorrhage, and it had rather the appearance of a tumour in its mode of growth.—Mr. KESTEVEN said that the tumour had not been examined microscopically.—The PRESIDENT said he did not suppose that Dr. Horrocks meant to say that the exaggerated reflexes were due to the tumour directly, but to some condition of the cord induced by it; it was of course possible that this condition might be produced in various ways.

A Case of Disseminated Sarcoma.—Dr. W. H. HADDEN showed the organs from a case which he was of opinion presented an instance of this disease. The patient, some weeks before his admission into St. Thomas's Home, had been operated on for fistula. Death was preceded by delirium and coma, and some irregular pyrexia. The sarcomatous growth was found in the pericardium, in the endocardium, and in the myocardium; also in the pleura, in the mesentery, omentum, and in the surface of the spleen and liver. The right kidney showed many masses of a whitish colour which contained calcareous matter. In the left kidney, there were small tubercle-like growths, and on the surface of the arachnoid were a few granules, which were due to simple fibroid overgrowth. All the growths were round-celled sarcoma. In some places, the intercellular matrix had undergone calcareous degeneration. The disease had probably originated in the right kidney, and the changes were most advanced there.—Dr. NORMAN MOORE wished to know whether the growth in the kidney was the same as in the heart. The growth on the surface of the kidney somewhat resembled the thickenings observed in chronic peritonitis, which often undergo calcification.—Mr. BUTLIN had examined Dr. Hadden's sections, and, though the appearances were most similar to those of sarcoma, he had doubted whether they did not almost as nearly resemble some of the conditions produced by chronic inflammation or by tubercle.—Dr. B. FENWICK said that, in new growth affecting the heart, the pain was generally paroxysmal; he wished to inquire whether it were so in this case.—Dr. HADDEN said that the growth did not altogether correspond with ordinary sarcoma, and, in some respects, there was a marked difference, so that he regarded the case as almost unique. The clinical history was incomplete, but he believed that there had been no paroxysmal dyspnoea. The specimen was referred to the Morbid Growths Committee for report.

Xanthoma Tuberosum in a Diabetic Patient.—Mr. MALCOLM MORRIS exhibited a man who presented an unusual form of skin-disease. The patient was a mason, aged 48; he was a man of regular habits, married,

but without children. He was very stout. His family history was good; the patient himself used to suffer from sick headache, and from somnambulism in youth, and still suffered from headache and other indefinite nervous symptoms. The eruption commenced about two years ago, on the outer side of the thigh and the extensor aspects of the arms. Tactile sensation was normal except about the heels, where there was anæsthesia. He had never had jaundice; the urine was pale tinted, and contained much sugar. The eruption consisted of tubercles, fawn-coloured where large, pink where in an earlier stage. On the tongue and on the mucous membrane of the mouth were a few tubercles. The patient now complained chiefly of giddiness and soreness of the feet and the scalp. Many of the papules on the extremities had recently disappeared, but a few fresh ones had appeared on the scalp. A nodule, removed and examined microscopically, consisted, in the early stage, of a certain cellular overgrowth in the corium. There was no evidence to show that the growth was connected with the cutaneous glands. It was not a case of ordinary xanthelasma; but few cases exactly similar had been observed. Mr. Hutchinson had described cases of vitiligoideus tuberosum in combination with diabetes, and had been inclined to consider it a distinct disease. Mr. Morris referred to cases reported by Drs. Addison and Gull, and by Dr. Bristowe. In all the cases, the eruption tended to disappear after a time. In these cases, the eyelids always remained free, and the eruption appeared suddenly, and disappeared gradually, whereas, in the majority of cases of true xanthelasma, the eyelids were affected, and the eruption was very persistent.—Mr. MORRANT BAKER thought that it was not well to call the case xanthelasma at all; it would be better to find a new name. The case was one of great interest, and it would be well to refer it to a special committee for report.—Dr. DYCE DUCKWORTH said that he would not be in any way inclined to call the case one of xanthelasma. In examining it himself, before the meeting, the idea of xanthelasma had not suggested itself.—Dr. RADCLIFFE CROCKER agreed with the last two speakers. In this patient the nodules lacked the yellow colour of xanthoma, the nodules were hard, not soft, and disappeared with considerable rapidity. The microscopic examination had not, he believed, revealed any of the stellate cells containing fat, so usual in xanthoma.—Mr. MALCOLM MORRIS said that the eruption, when fully out, had a distinct resemblance to the cases of xanthelasma tuberosum, which he wished to regard as a disease distinct from ordinary xanthelasma. It had certain alliances with molluscum, and might, perhaps, most properly be placed in the class "fibroma," formed by Virchow.—Dr. CARRINGTON would compare the eruption to those observed in some gouty patients; in the earliest stage it seemed to be a form of acne, while in the later stages it seemed to have a strong resemblance to molluscum.—At the suggestion of Mr. Morratt Baker, a committee, consisting of Mr. Hutchinson, Dr. Crocker, and Mr. Sangster were requested to examine the case.

Pigmentation of Cervix Uteri.—Dr. ROBERT BARNES drew attention to an unusual condition which he had observed in a case of hypertrophic elongation of the cervix uteri. The specimen, which consisted of the two lips of the cervical portion of the uterus, had been removed from a Hindoo woman. The surface was remarkably pigmented; a patch of the colour of the woman's skin occupied the mucous membrane, where it had become dry, owing to the exposure produced by the disease. The microscopic examination presented the usual appearance of skin, showing conspicuously the various laminae. The pigmented granules were seen to lie in the normal cells of the rete mucosa, and appeared to occupy the nuclei. Dr. Barnes thought that the changes seemed to point to a nearer approach in the mucous membrane under the peculiar circumstances in which it was placed in this case, to the structure of true skin than was generally acknowledged. The condition of the pigmentation was new to him, but might, perhaps, not be unfamiliar to Indian physicians.—The PRESIDENT said that the question of pigmentation was surrounded with great difficulties; in some cases it was a part of a general cachexia, in others it was due merely to some local condition. Even in Addison's disease, the pigmentation was most marked on the parts most exposed, as in the face, or liable to friction or some other prolonged irritation, as about the knees or armpits, or where pigment was naturally present in large amount, as about the genital organs. Dr. Laycock, he remembered, had held that the dark colour, often noticed, of the skin below the eyes in young women, was connected with some derangement of the generative organs. Dr. Dyce Duckworth, as an old pupil of Dr. Laycock's, could confirm the statement that he attributed the dark bands under the eyes to some affection of the genital organs.

Lung with Impacted Foreign Body.—Dr. NORMAN MOORE exhibited the right lung of a child, aged 12, who died of typhoid fever. The lung was partly collapsed, and in its lowest lobe were several reddened patches. In one of these, near the pleural surface, was fixed

a spicule of bone, one third of an inch long. The spicule, which looked like the neural spine of a vertebra of a fish, had one end in a minute bronchus, the wall of which it had penetrated. Four years earlier the child had suddenly been seized with pleurisy. The pleura was tapped in St. Bartholomew's Hospital, and pus was let out; and, as the wound continued to discharge, a drainage-tube was put in. The child attended with this as an out-patient, and at length the wound was closed. The scar was distinct; the lung was firmly adherent to the chest-wall. The spicule of bone, passing deep into the lung, probably set up a pneumonia, which was followed by the empyema. The empyema was recovered from, but the bone remained fixed in the lung, a very exceptional circumstance. The typhoid fever of which the girl died was remarkable, owing to the large extent of intestine affected, and to the fact that the middle part of the vermiform appendix was externally tumid, and internally ulcerated all round. Perforation of the vermiform appendix had occasionally been a cause of death in typhoid fever, and had been thought a condition preceding the fever. In this case, and in another necropsy which he had lately made, the ulceration of the vermiform appendix was clearly one of the results of the typhoid fever. A further point of interest was that in the middle of the epiglottis, there was a small ulcer.—Dr. GOODHART believed that foreign bodies found their way into the lungs, and produced disease more frequently than was generally believed. Many obscure cases of lung-disease probably owed their origin to this.—Dr. MACLAGAN observed that, in many cases of foreign body in the lung, the foreign body was expectorated, and led to a peculiar odour of the expectoration.—Dr. BEGGIE had been able to make a diagnosis from this symptom in the case of a gentleman, in whom a thorn had entered the air-passages while he was hunting. Turpentine, administered internally, was found of much benefit, and the thorn was finally coughed up.—Dr. SHARKEY was of opinion that pleurisy might be produced simply by blocking of a bronchus, as was often observed in cases of aneurysm. Dr. Sharkey had now under his care a patient, in whom a tooth, after extraction, had apparently entered the lungs, and caused partial obstruction. A little later, an attack of localised pleurisy occurred.

Malformation in a Lamb.—Mr. EVE showed the head and neck of a lamb, in which all the parts developed from the first visceral arch were absent. The brain and cranial nerves were normal, except that the fifth and seventh nerves on the right side were smaller than natural. The condition might possibly be due to some congenital disease of an artery—perhaps the internal maxillary.

Card Specimens.—Dr. NORMAN MOORE: *Double Hydro-salpinx.* Both Fallopian tubes were adherent to their ovaries, and were greatly dilated with clear fluid. The specimen was obtained from a woman aged 33.

Mr. F. TREVES: *Congenital Malformation.* The part of the vault of the skull formed in men-brane appeared to be entirely absent.

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, OCTOBER 25TH, 1882.

E. MALINS, M.D., President, in the Chair.

Suppurating Node of Tibia.—Mr. FURNEAUX JORDAN exhibited a specimen of a suppurating node situated on the upper portion of the diaphysis of the tibia. The child was the subject of inherited syphilis, and its general condition was such as to necessitate removal of the affected limb above the condyles. The subsequent recovery was rapid.—Mr. CHAVASSE thought that the bone-disease of inherited syphilis originated in the medulla of the diaphysis, as suggested by Waldeyer, and was not an osteo-chondritis commencing in the cartilage.

Uterine Sound.—Dr. MALINS showed a new form of uterine sound, of ingenious construction.

Foreign Body in Bladder.—Mr. CHAVASSE exhibited a specimen extracted by lateral lithotomy from the bladder of a man forty-seven years of age. It consisted of three inches of solid India-rubber tubing, thickly coated with phosphates. The patient had introduced the tubing to himself of scalding pain in the urethra.

Injury of Skull by bursting of a Pistol.—Mr. E. L. FREER showed a portion of the cranial vertex, about two inches square, devoid of both aponeurosis and dura mater, which had been blown off a boy's head by the bursting of a small pistol. The weapon contained neither bullet nor any other foreign body.

Gunshot Injury of Head.—Mr. FURNEAUX JORDAN gave the details of three cases of gunshot injury to the head, in which recovery took place with retention of the bullets. The first case was that of a man who shot a woman through the ear, and afterwards himself, with a fatal result. The bullet entered the woman's external auditory meatus, and passed into the petrous portion of the temporal bone. With difficulty,

a portion of the bullet was extracted by one of the three surgeons who were called in; but it was deemed advisable not to interfere with the remaining part. The patient made a perfect recovery. The second case was that of a middle-aged clergyman and magistrate, seen in association with Mr. Walker of Gornal, who was deliberately fired at three times. The first bullet entered behind and above the right mastoid process, and penetrated to the interior of the cranial cavity, as evidenced by an escape of cerebral matter through the wound. The second bullet entered the mouth, passing upwards, perforating the palate. The third bullet entered the side of the neck, and probably lodged in the body of one of the cervical vertebræ. On receipt of these injuries, the patient did not fall, although some amount of shock was present. When examined, the wounds were dry and covered with blood-clot, therefore no attempt was made to dislodge the bullets. With care and quietude, a complete recovery resulted; and now, after three years, a hard substance could be felt along the floor of the right orbit. This was probably the second bullet, which had worked its way into the orbital cavity, where it gave rise to no inconvenience. The third case was that of a gentleman who was seen in consultation two days after an attempt had been made at suicide. The pistol had been pointed just above the right zygomatic arch, and the bullet had probably passed towards and fractured the roof of the right orbit. There was complete unconsciousness, and an enormous sanguineous extravasation around the orbit; outside the wound, some brain-matter was found. The aperture made by the bullet was small, and covered with a dry blood-clot. Expectant treatment was adopted; consciousness gradually returned, the extravasation subsided, and ultimately recovery took place. Mr. Jordan agreed with the general rule that no attempt should be made to extract bullets which had perforated any of the great cavities of the body, unless they could be easily and certainly reached: the retention of the bullets giving the patient a far better chance of life than that afforded by vigorous or prolonged efforts to extract them. To trephine in such cranial injuries was held to be a dangerous expedient, and, if needed, should only be undertaken with strict Listerism. If any foreign body were driven into the wound, the prognosis was rendered more grave, but pieces of bone were not regarded as such a bad complication as were portions of clothing.—Mr. GREENE cited a case of attempted suicide, in which the bullet was found quite flattened out against the parietal bone.—Mr. EALES mentioned the instance of a man about sixty years of age, who, in the dissecting-room at Queen's College, was found to have a bullet encysted in the mastoid process of the temporal bone, impinging on the lateral sinus. On inquiry, it was found that the man was an old soldier, who had served in both the Crimean War and the Indian Mutiny. He had lived many years after the receipt of the injury.—Mr. PRIESTLEY SMITH, who had charge of a hospital in the Franco-German War, and had many hundred cases of gunshot-wound under his care, did not see or hear of any case recovering in which the cavity of the skull had been opened. Such patients died before they could be sent back from the front.—Mr. E. L. Freer, Mr. Bennett May, Mr. Jordan Lloyd, and Mr. Harman, also made remarks.

The Treatment of Epilepsy.—Dr. SAUNDBY read a paper on the treatment of epilepsy, in which the following points were insisted on: 1. The value of combining the bromides of potassium, sodium, and ammonium, as recommended by Professor Brown-Séquard; 2. The advantage of adding tincture of digitalis, and sometimes theine, to the mixture, to counteract the depressing influence of the bromides; 3. The utility of zinc as an adjuvant in the treatment; 4. The successful use of borax in some cases of obstinate epilepsy, of which two illustrative cases were given; 5. The value of theine or caffeine and nitroglycerine in the treatment of epileptic vertigo.—In the discussion which followed the reading of the paper, Messrs. R. Smith, John Greene, J. H. Palmer, Jordan Lloyd, Dr. Robinson, Mr. Eales, and Mr. Chavasse took part.

SOUTH-EASTERN BRANCH; EAST SURREY DISTRICT.

THURSDAY, OCTOBER 12TH, 1882.

H. S. STONE, M.B., in the chair.

Congenital Umbilical Hernia.—The CHAIRMAN read notes of two cases of congenital umbilical hernia. In the first case (that of H. G.) considerable difficulty was experienced in delivering the trunk of the child after the head had been expelled. This was due to the presence of a large umbilical hernia, measuring eleven and a half inches around its largest circumference, and ten and a half inches around the base. Nearly all the intestines, and a portion of the liver had passed into the sac, which had, as a covering, a thickened layer of peritoneum, and on its outer surface the expanded umbilical cord. Numerous cysts were found in the placenta and the funis. The child survived its birth three

weeks. In the second case (that of R. C.) the hernia was almost as large as the preceding. There was a large cleft in the abdominal wall, extending from immediately above the umbilicus down to the urinary meatus. Over this extensive surface the only covering for the intestines was peritoneum, which was studded on its outer surface with granulations of a bright red colour, and bled when touched. Distension of this peritoneum had taken place, so as to form a large hernial sac, and from its most prominent part, which was about one inch below the entrance of the umbilical cord, a portion of the intestine protruded. This external piece of bowel was rather more than two inches long, was curled, and had an opening at its extremity. It was in reality the rectum with its anal orifice projecting from the centre of the abdomen, the ordinary anal orifice being absent. A scrotum and urinary meatus existed, but no penis. The explanation of this abnormal state was to be found in the absence of the abdominal coverings. The peritoneum expanded, and the hernia formed, owing to insufficient resisting force. In the study of the development of the fœtus, an explanation of the abnormal position of the anus could thus be found. The rectum, formed by a dipping or growing downwards of the large intestine, extended in the same direction; while an invagination of the skin took place, and the anal opening occurred by the time the rectum arrived in its vicinity. In this case, the bowel would have a tendency to grow in the direction where least resistance existed. The penis was absent, owing to insufficient tissue, and the anal orifice did not appear, there being no demand for it. Meconium, and afterwards fæces, passed from the orifice in the abdominal wall. The child was extremely feeble at its birth, and died on the fourth day.

Cases of Paralysis.—Dr. HALLOWES read notes of two cases of paralysis; the first, following eclampsia, occurring the fifth day after delivery. The patient, a multipara, had suffered severely from headaches for the last twelve years, apparently not due to reflex uterine disturbance. Convulsions were very severe, seven or eight following in rapid succession. Inhalation of chloroform stopped them. Coma continued for ten days, hemiplegia for about three weeks. The patient gradually recovered, and continued well. There was no cardiac affection, no albumen or sugar in the urine. The cause of the attack was believed to be thrombosis of the cerebral veins. The second case was that of a lady attacked after mental strain and fatigue, with aphasia; she also wrote aphasically. There were no other paralytic symptoms; no cardiac affection. The urine was normal. The patient completely recovered in about a fortnight. Rest, bromide of potassium, and slight aperients were the treatment adopted.

Trephining for Compound Depressed Fracture of Skull.—Dr. WALTERS related the following case. A man, aged 28, was admitted into hospital on July 6th, 1882, with an extensive lacerated wound above and behind the left ear, leading down to a rough depressed fracture of the skull caused by a blow from the hoof of a horse. He had been very sick, but was quite rational and sensible; pulse, 90, soft. He complained of headache, but no great discomfort. The fracture was an inch and a half long, three-fourths of an inch wide. The fragments of bone were much comminuted. Anæsthetic mixture was given, and as the fragments could not be otherwise raised, the wound was enlarged, and a trephine applied to the upper edge of the fracture, after which they were raised and drawn out. The dura mater was slightly lacerated, but not torn through. The hole left in the skull was two inches long by one inch at the widest part. The edges of the wound were brought together with silver wire sutures; a drainage-tube was inserted, and antiseptic dressings applied. With the exception of an attack of cystitis from imperfectly emptying the bladder, the patient made an excellent recovery, and was discharged quite well on August 31st.

Fracture and Dislocation of Cervical Vertebra.—Dr. WALTERS showed the upper cervical vertebra of a lad, aged 16, who six weeks before death had fallen off a load of tares. The injury was followed by paralysis, complete in the lower limbs, and almost complete in the arms. The fifth cervical vertebra was dislocated backwards, compressing the spinal cord. The bodies of the fifth and sixth vertebrae were fractured vertically, and the spinous process of the sixth was also fractured.

MANCHESTER MEDICAL SOCIETY: MICROSCOPICAL SECTION.

OCTOBER 24TH, 1882.

J. DIXON MANN, M.D., in the Chair.

Acute Yellow Atrophy of the Liver in a Child.—Dr. ASHEY showed the liver and kidneys of a boy, aged four years, who had died of acute yellow atrophy. He was admitted to hospital four days before his death, having suffered for four weeks with jaundice, vomiting, and de-

lirium. On admission, it was noted that he was moderately jaundiced; the edge of the liver was distinctly felt one inch below the costal arch; the tip of the spleen was also felt; the fæces were of a brown colour; the urine deposited no leucine or tyrosine; the patient was semiconscious, and constantly mumbling to himself. The day before his death, he had left facial paralysis, affecting only the lower half of the face; and, twelve hours before death, he became quite comatose; his limbs were rigid in extension, the head turned to the right, with conjugated deviation of the eyes, and he constantly ground his teeth. The liver did not appear to undergo any diminution in size. The fæces, at first dark, after a purgative became pale. The urine was only twice obtained, but neither time were there any deposits of leucine and tyrosine detected by the microscope. At the *post mortem* examination, the liver weighed twelve and a half ounces (one-fourth smaller than normal); it contained both "yellow" and "red" portions—the former occupied most of the right lobe, the latter most of the left, and were more shrunken. There were various hæmorrhages found in the mesentery, lungs, and the sheath of the aorta. The kidneys and heart were pale and fatty. There was a patch of croupous pneumonia, involving the anterior surface of the left lung, and corresponding in position with a bruise on front of the chest (the result of a fall out of his cot before admission). The convolutions in the convex portion of the brain were flattened, the lateral ventricles distended with serum, and the parts around the ventricles softened. No special lesion, accounting for the facial paralysis, could be found. Microscopic examination of the yellow portion of the liver showed some healthy cells; but mostly the hepatic cells were enlarged and very fatty, and the vessels surrounded by leucocytes; the red portion showed no hepatic cells, but only stroma, leucocytes, capillary vessels, and ducts.

Dementia from Hereditary Syphilis.—Dr. J. S. BURY showed sections of cerebral arteries, of kidney, and of spleen, from a girl aged fifteen years. She presented numerous evidences of congenital syphilis, and had been demented since she was eight years old. She had never had a convulsion. During the last year of life, she was subject to "screaming fits", marked contractures of the limbs, and progressive emaciation. The membranes of the brain were found much thickened, and the convolutions distinctly atrophied. The middle cerebral arteries showed thickening of the intima, made up of well formed round-cells. The kidneys presented numerous small, round, whitish nodules; they consisted of well formed round-cells, and presented no trace of caseation; they were regarded as gummata. There was fibrosis of the spleen.

Recurrent Tumour of the Sclero-corneal Region.—Dr. A. H. GRIFFITHS exhibited sections of a recurrent growth of the sclero-corneal region, which microscopically showed numerous round cells and delicate fibres; whilst its free surface was covered with epithelium. The tumour appeared twelve months after the removal of a similar growth from the same situation, which had existed for about ten years. Dr. Griffiths also showed sections of a round-celled sarcoma of the orbit from a child aged 3½ years, as well as sections of a glioma of the retina from a child aged 18 months.

Perforating Ulcer of the Foot.—Mr. J. PRIESTLEY showed some sections of the posterior tibial and plantar nerves from a case of perforating ulcer of the foot. The subject of this condition, a man aged 42, contracted syphilis twenty years ago, and had suffered from intractable ulcers on the soles of both feet for the last five years. Ulceration persisted even after the resection of portions of necrosed bone; and in 1881 the right foot was amputated at the ankle-joint by Syme's method, when the exposed posterior tibial and plantar nerves were found much thickened. In June 1882, it was found necessary to remove the left foot. Mr. Heath amputated by Fergusson's method through the leg. At the site of amputation, the posterior tibial nerve appeared normal; but lower down, close to its division into plantar nerves, the trunk was twice as thick as at a higher level. Microscopic examination of the thickened portion showed great increase of perineurium, epineurium, and of endoneurium; whilst the average size of nerve-bundles was less than normal. The lymph-spaces round the nerve-bundles were much enlarged—a condition probably due to the contraction and shrinking of the sclerosed nerve-trunks. There was distinct evidence of atrophy and disappearance of nerve-fibres in the affected region; but it was not distinguishable that the fibres which possessed a small medullary sheath of Schwann had suffered more than others.

Epithelioma of the Temporal Bone.—Mr. A. H. YOUNG showed preparations and sections from a case of destructive ulceration and caries involving the left ear and surrounding region, which had extended deeply, affected the cranial bones, caused perforation of the dura mater, and permitted a hernia cerebri. Sections of the soft parts revealed only evidences of inflammatory changes, with cell-infiltration

hyperæmia and congestion happen to claim in such processes in man, for we find them in plants where these factors have, at the most, but rudimentary homologues.

At the end of the volume are a series of cross references as to specimens in all parts of the museum illustrating "specific diseases," which could not very readily be made into a special series, as their general features are purely clinical, and their local manifestations particularly required in series devoted to the diseases of special parts. This is essentially the case with typhoid ulcers, and rheumatic diseases of bone; and, on the same principle, all specimens of scrofulous and tubercular disease have been placed in special series. The cross references at the end of all the series in this volume are very complete. They are arranged after the plan of the same references in the former edition. Under the heading of each series, a list of subseries, not complicated by any system of lettering or numbering, is placed. In cases where specimens in the series illustrate features appertaining to two subseries, the numbers of such specimens are placed under each of the latter. Thus, under the series "hypertrophy," No. 9 is placed under the two subseries "Hypertrophy from Increased Blood Supply," and "Hypertrophy from Occasional Pressure," since it illustrated both conditions. In short, groups of cross references are established, not only between different series, but also between specimens included in the same series. We understand that the second volume of this catalogue, consisting chiefly of the very large series that illustrate injuries and diseases of bone, is already in the press.

A HISTORY OF UNIVERSITY COLLEGE HOSPITAL, FROM ITS FOUNDATION TO THE YEAR 1881. BY NEWTON H. NIXON, Secretary. London: H. K. Lewis. 1882.

ACCORDING to this treatise compiled from official documents, University College Hospital may be said to have had its origin in the "University Dispensary," which was established in George Street, Euston Square, in the autumn of 1828. If we glance back over these fifty-three years, we find a condition of things in the educational world very different from that with which we of this generation have grown familiar. The "Corporation and Test Acts" were still in force, and the University of London had only just come into existence as a proprietary undertaking. Though Mr. NIXON does not enter into the subject, it may interest our readers if we recall the small beginnings of this now powerful body. Fifty-eight years ago, Thomas Campbell, the impecunious poet of *Hope*, was talking to the wealthy Mr. Isaac Lyon Goldsmid at the "Literary Union," a small but select club, of which both were members; the poet propounded a scheme, which he had long been meditating. It was no less than the foundation of an university in London, where religious tests should not exist, and where the teaching should be thoroughly liberal and comprehensive. Mr. Goldsmid, next morning, arranged an interview between Campbell and Henry Brougham; and Brougham threw himself with characteristic energy into the scheme. Joseph Hume took upon himself the responsibility of raising by subscription the necessary funds. So earnest were the workers, and so rapid their progress, that, in April 1825, two months after the scheme was first mooted, the first meeting of the provisional committee was held at the "King's Head Tavern, in the Poultry." A great effort was made by the Nonconformists, headed by Irving, to obtain the foundation of theological chairs, partly Church of England, partly Presbyterian, and so on. "You cannot conceive," writes Campbell, "what anxiety I have undergone, whilst I imagined that the whole beautiful project was likely to be reduced to a mere dissenters' university." Chiefly through the firmness of the poet himself, it was decided "that the university shall be without religious rivalry;" and the active co-operation of such men as David Ricardo, the Mills (father and son), Zachary Macaulay, Lord John Russell, Sir James Mackintosh, Romilly, and, though last, not least, George Grote, was obtained. The success of the undertaking became assured; and, in October 1828, the "University of London" was opened to students in the buildings now occupied by University College. In the Medical Faculty, the first professors were: Mr. (afterwards Sir) Charles Bell, who held the chair of physiology; Dr. Anthony Todd Thomson, who held that of materia medica; and Dr. John Conolly, who held that of medicine. "The two first lectures," says Henry Brougham, writing to Lord Grey, "Bell's and Conolly's, have had the greatest success; and the entry of students at starting exceeds (the medical men say) anything before known in London at the opening of a course—namely, fifty-four." The clinical instruction of the students was carried on partly at the Middlesex Hospital, and partly at the University Dispensary above referred to, which was founded by Drs. Thomson and Davis, and Messrs. Samuel Cooper and Jones Quain, who had as their demonstrator Mr. Richard Quain. Great exertions were made to build a hospital; and in 1833, the first stone of a building, which was to contain accom-

modation for 230 patients, and was to cost rather over £58 per head, was laid. The government of the hospital was vested in the Council of the University; and it was arranged that the fees of the students should be received by the university, and applied, if necessary, to the support of the hospital—the medical teachers agreeing to devote their fees exclusively to this purpose. When the hospital was opened, in November 1834, for the reception of patients, the first physicians were Drs. Elliotson, Thomson, and Carswell; the first surgeons were Messrs. Samuel Cooper, Robert Liston, and Richard Quain; and the obstetric physician was Dr. David Davis. The Rev. H. Stebbing, D.D., F.R.S., became the first chaplain, and, by his varied knowledge and genial courtesy, endeared his name to many generations of students. Of this goodly array, there remains now among us only Mr. Richard Quain, who, as Emeritus Professor, enjoys in a green old age his well-earned laurels; but still feeling himself urged to continue his life-work, is, we learn, about to give a fresh proof of his literary industry. The University of London put forward a claim to confer degrees; it met with much opposition; finally, the difficulty was adjusted by creating a new body, which should confer degrees, but should not teach, and which henceforth was called "The University of London." The body which formerly bore that title then became "University College, London;" and the hospital, previously known as the "North London," took the name by which it is now known. The hospital at this time consisted only of the centre block; the south wing was added in 1841, the north wing in 1846. As the material prosperity of the hospital became more assured, so the reputation of its medical school did not diminish. A quarter of a century after foundation of the hospital many illustrious names had already become connected with its short career: Liston, Cooper, and A. T. Thomson were dead; but, in their place, we find such names as Erichsen, Henry Thompson, John Marshall, Cadge (for a short time); and among the physicians, C. J. B. Williams, Garrod, Parkes, Walshe, Jenner, and Hare.

It would be tedious to follow Mr. Nixon in his history of the varying pecuniary fortunes of the hospital; but we may notice a few events of some general interest. In 1860, an arrangement was made by which the managers of the All Saints' Home undertook to supply nurses for some of the wards; this arrangement being found to work satisfactorily, the whole management of the nursing was given over to the sisterhood, who have not only completely discharged the duty, but have founded an admirable school for nurses. In 1874, through the exertions of the late Dr. Tilbury Fox, the erection of a very complete set of baths was undertaken; these have now been for many years in active operation, and their benefits have been extended by rendering them available to medical practitioners in the treatment of private patients. In 1878, the energetic Secretary started a scheme, under the name of the "People's Contribution Fund," which applied the provident principle to the ordinary system of hospital letters; small clubs or "societies" were formed, each member of which made a small weekly contribution. The club nominated annual governors or life donors, in proportion to the yearly aggregate of the subscription; each club thus became possessed of a certain number of letters, available for the use of its members in case of illness. The plan is said to work satisfactorily.

THE GARDEN OF HYÈRES: A DESCRIPTION OF THE MOST SOUTHERN POINT ON THE FRENCH RIVIERA. BY ADOLPHE SMITH.

THIS little book is a well got up local guide to Hyères, written by a non-professional man, and is likely to be very useful to visitors and residents. At the same time, as the opinions given and statements made are second-hand, deduced from various medical and other sources, they can have no personal weight.

Hyères, as the title indicates, is the most southern point of France, half a degree—about thirty miles—more south than Cannes or Nice. Thus the sun is quite as powerful as at these places, and the summer heat quite as great. This is proved by the vegetation, which is very nearly the same. Hyères has an advantage over its neighbours, inasmuch as it is three miles from the sea. Those who find that sea-air disagrees with them—and there are some with whom this is the case, even in England—often get on well there, and sleep, although they would not sleep elsewhere on the seashore. But then it labours under a disadvantage: and a great one, which its residents try in vain to conceal. It is open to the north-west wind—the Mistral. Turning to Dr. Burney Yeo's work on *Health Resorts*, page 278, we find the following: "Owing especially to its protection from sea-breezes (Isles d'Or), and also from the north and north-east winds, and to the rarity and mildness of the east wind, at this distance from the coast, the atmosphere at Hyères is sometimes exceedingly still and calm, unlike the other health-resorts on this coast, where perfect stillness of atmosphere is most rare. And the air here is neither so dry nor so sharp as at

Cannes, Nice, or Mentone, and its climate is therefore less exciting and more soothing. But these advantages are mitigated by one very serious drawback. The valley is completely exposed, in its whole length, to the Mistral, which from February onwards blows with great force and great frequency. A French physician (Dr. Caryalis), who had passed a winter there, says of this wind: 'It rakes the valley from end to end, with no obstacle to stop or turn it; it blows sometimes for six or seven days together and nights too. In February and March, this fearful wind prevails at least one day in three, bringing with it much dryness and dust. I confess I cannot understand how an invalid can remain in such a climate without taking harm. Favourable as I believe this station to be up to the time that the Mistral begins to blow, equally dangerous do I believe it to be from that moment.'

On the other hand, Dr. Yeo further on states, "that the objections that have been urged against the climate do not apply to a resort situated on the southern slopes of the hills opposite Hyères. Here there are valleys admirably situated, sheltered from the Mistral and from all but southern winds, warmed all day by the sun, and provided with many most charming and picturesque walks. This refers to the valley of Costabelle, about two miles south-west of Hyères, and destined probably to become equally famous."

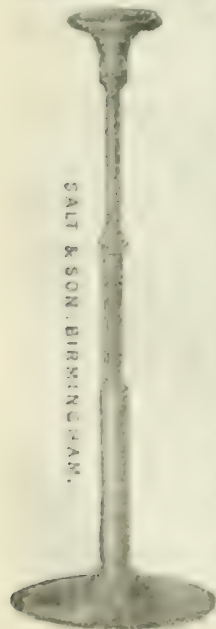
The municipality and residents of Hyères are making, says Mr. SMITH, most vigorous efforts to secure the patronage of the profession. They are improving the town in every way, and forming boulevards, avenues of palm trees, which thrive perfectly, and are gradually giving to the town a most Oriental appearance. Already the numerous palms dotted over the place, and growing in avenues, make Hyères appear like Africa. The residents begin to understand that the palm tree is the best advertisement of their climate they can offer. Indeed, they feel that several old and tall palm trees, which grow in a place or square in the centre of the town, have been the making of it as a winter-resort. They are determined that their town shall deserve the new name they have given it, viz., Hyères les Palmiers; and they are wise in their generation.

REPORTS AND ANALYSES AND DESCRIPTIONS OF NEW INVENTIONS IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A NEW PORTABLE STETHOSCOPE.

THE stethoscope of which we give an engraving is the most portable which has come under our notice. Its extreme length, when fully extended, is that of an ordinary stethoscope, viz., seven inches, whilst it admits of being closed respectively to five inches and a half and three inches and three-quarters; this is effected by two telescopic slides which lock at the limit of extension by a simple bayonet-catch at each point of junction, by a single and slight movement to the right, whether one or both tubes be employed. The ear-piece is removable and the instrument can be conveniently carried in the waistcoat pocket. The tubes are made of aluminium, and the mounts of celluloid in various colours, as amber, tortoiseshell, and coral.

The stethoscope, shown to us by Messrs. Salt and Son of Birmingham, is an improvement upon a somewhat similar one made by them with a single slide, a notice of which appeared in our columns. We may add that the conduction of sound is excellent, the price is exceedingly moderate, and the appearance very carefully brought up to an artistic standard.



BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 11th, 1882.

SMALL-POX AND FEVER HOSPITALS.

REPORT OF THE HOSPITALS COMMISSION.

III.

HAVING presented our readers with a general statement of the report of this important Commission, and put forward the recommendations which the Commission have made, it follows that a critical review of their work may be useful. The report itself is well drawn up, and presents a most difficult subject in as concise a form as we could expect. Evidently prepared by an official mind, it has been moulded by the medical members of the Commission to suit their views, and has not been emasculated by the non-medical element contained in it. We may conclude that the legal members addressed themselves to the legal difficulty of the work, and left the purely medical aspect of the report to be settled by their more competent colleagues.

We find that the witnesses were such as would be certain to command attention, from their thorough acquaintance with their subject. They seem, on the whole, to have been chosen with a good deal of judgment. It might have been better, when considering the behaviour of small-pox, to have studied its incidence a little more, by obtaining evidence as to its habits in the country, as well as in town life. Perhaps there would not then have been that difficulty which was experienced when considering the report of Mr. Power. If the country medical officers of health had been consulted, the Commission would have found that there is not, as a rule, any serious difficulty in tracing the course of a given outbreak. The reports of rural medical officers of health tell us pretty clearly that they are generally able to trace case by case the spread of small-pox in a given district; they do not have to go to atmospheric influence for a prime factor, or to expect that a case of small-pox in a given place will shoot out its rays over a district, like those emanating from a lighthouse, striking objects with a force varying in intensity according to the square of the distance. It would have been better if a little more evidence had been taken on this point, by calling witnesses from rural districts; there are plenty of men thoroughly able to have given information. It would have assisted to explain something which is missing. The multiplicity of movements, the difficulties of isolation, and the knowledge as to persons and families, are all difficult to follow. In small towns, the evils which result from the concentration spoken of by Mr. Power must have had existence in fifty places, and the one case of Fulham would have been put altogether into a greater minority than it is if such a course had been followed. The evidence which was thought to be forthcoming many years ago, as to the origin of cases of infectious disease *de novo*, is now very much diminished by the knowledge which is obtained of the behaviour of those diseases. The proofs that small-pox is taken from the preceding case, without the cause being shot, as it were, a long distance through the air (though that case may have had its day many months before the second appears), are far too numerous to be doubted. We have carefully studied Mr. Power's report, and we cannot come to the same conclusion as some of the witnesses did who appear to have read it, and to have been struck by its conclusions. We do not at all think that by the plan of simple exclusion he

has proved his point. He infers that his unexplained residuum is due to atmospheric influence extending many hundred yards. He has not a single point to support his view, except that he could not connect each case in this residuum with a predecessor. If Mr. Power's conclusions could be sustained, they would tell with as great a force against the conveyance of small-pox patients through crowded streets under any circumstances; for it is quite impossible to have them carried in hermetically sealed conveyances, and it is possible—nay, we think, much more likely—that conveyance in ill-designed ambulances, and in a careless manner, has had far more to do with the extension of disease around a given hospital than the cases in the hospital. That ventilation through open windows would be a thousand times less injurious to houses five hundred yards away, than a single case in the district which was not properly isolated, must be manifest to every sane person.

As regards the notification of disease, the Commission appears to have been very decided upon the necessity of notification being conveyed to the local authority; but they did not adopt Mr. Hastings's view. All the witnesses who were examined upon the point assented to the necessity for such notification; but the majority thought that the householder should certainly give the information, except in those cases in which an official of the Local Government Board was concerned, who ought to inform the local authority at once. A poor-law medical officer should be compelled to give the notice; but he, as well as every other medical man who did report, should be entitled to a small fee. The negative evidence given by Mr. Hastings is worthy of study, and we commend it to the notice of our readers. The suggestion that a local authority should have power to isolate a case which cannot be removed from a given house, is an important provision, which we hope to see enacted into law. Early notification, isolation, and, where this is not possible, removal to hospital, are measures which, we feel sure, will materially lessen the intensity of any future epidemic.

But we may remark, as we have often done before, that compulsory notification, without the power either to isolate or to remove, will, as the report says, be of comparatively little avail. It may appear that there is some circumlocution in the medical officer of health notifying the case to the Metropolitan Asylum Board, and not himself ordering the removal of the patient; but, as it is proposed that the sanitary authorities should be at one with the Asylums Board on this matter, there will not be any real circumlocution.

The report is to be commended for striking out a decided line upon the subject of pauperism. In matters of public health, the question as to whether a sick person is a pauper or not should not be raised. The report makes no uncertain sound upon this point; and, if our information be not incorrect, is not quite pleasing to some of the red-tape holders in the Local Government Board. The whole sanitary administration should be separated, as is suggested by the report, from the control of the destitution authority; and we are glad to see that the report strikes directly upon this blot of the present system. We shall also be glad to see the control of the vaccination of the nation placed in the hands of the sanitary rather than the destitution authority; it will help, we think, to make more easy the enforcement of vaccination, as well as to promote revaccination, whenever the latter becomes necessary.

The proposed new board is a proper sequence upon the recommendations in the report. We are glad to support the tribute of praise which was deservedly bestowed upon the Metropolitan Asylums Board by several disinterested witnesses. The operations of this body have been undoubtedly of great benefit to the metropolitan community, and it would have been more than ungrateful to have recommended the deposition of the board from its present place. We should think that there would be no difficulty in giving force to the recommendation of the Commission, and having a board elected who should be the board of management for infectious diseases; whilst a part only of that board, viz., the present board, less the sanitary members, should continue to have control over the pauper asylum which has been already

created. There are two or three points in the evidence which should be taken into consideration by the powers that be. The errors of diagnosis from the number of mistakes which are made in sending cases into hospital which are not small-pox, or sending small-pox cases into fever hospitals, and *vice versa*, appear to be considerable. There is a reason for this, in the fact that no clinical instruction can be given to students upon the practical points of diagnosis. The suggestion, which appears in the evidence, that the hospitals of the Board should be used under proper regulations for the instruction of young medical men, is well worthy of consideration. It does appear that some such course is requisite, so that a case may be recognised in its early stages, and be dealt with as quickly as possible. How is it likely that young men can recognise cases which they have never had any opportunity of seeing in the flesh? Another point also occasionally creeps out; its direction is indicated in Mr. Hastings's examination, viz., the counter-practice, which is a large part of the druggist's business. How is this subject to be dealt with? We know that a large number of these cases are prescribed for in druggists' shops before the eruption is very manifest. Counter-prescribing is a danger to the State, and it will have to be dealt with.

A NARRATIVE OF QUARANTINE.

ON October 23rd, a Mahometan festival commenced at Mecca. On November 1st, cholera was reported as existing at the goal of the pilgrims; and, on the next day, there was a single case at Jeddah. Orders have been issued, imposing fourteen days' quarantine on all vessels coming from Arabian ports, but ships are allowed to pass into the canal under quarantine. Luckily, this year the crowd is not a great one; and it is hoped that the epidemic will be quickly suppressed. The recent record by Surgeon-General Murray on the influence of "jatra," or fairs, on the development of cholera, has enabled us to realise how impossible it is to enforce sanitary regulations where pilgrims assemble in millions, as in the Koom Ke Mela at Hurdwar. But, at Mecca, they are only in their thousands, and the Ottoman Medico-Sanitary Commission may now, with advantage, exert its powers. Removal from an infected camp to high ground, though only three or four miles from the cholera ground, has frequently stayed an epidemic. This simple remedy, first tested by Surgeon-General Murray at Agra, in 1851, and since extensively practised during many epidemics, was recommended, after a minute and searching investigation by the Special Commission held in 1861, under Sir John Strachey. It was endorsed and developed by the commission of 1868 at Simla, who advised the strictest attention to sanitary and hygienic rules, the camp to be frequently changed, the ground to be high and well drained, and the troops, if possible, to be taken across a river, the advantage of which is found to be great. In his Sanitary Report for 1878, Dr. Cunningham says: "The medical officers are almost unanimous in the opinion that the evacuation of the affected buildings, and movement into camp when this more decided measure was required, was attended with the best result. In very many instances no further case occurred." By this method the mortality of European troops in India has been reduced, in sixteen years, from 14.90 per 1,000 to 6.69 per 1,000, with a total saving of life of 18,152 men. The present outbreak at Mecca may be usefully compared with that which occurred during the pilgrimage of 1877; a full description of which has been supplied by Mr. Fettes Radcliffe, from a report of the Egyptian Board of Health. One hundred thousand pilgrims, of whom four-fifths came from the far east, assembled on December 14th, 1877, the great day of the rites, at Arafat, and on the 16th they began to disperse. On the 23rd, a case of cholera was recognised at Mecca, and next day 102 deaths were recorded. From December 23rd to January 11th, there were 785 deaths from cholera in Mecca, and from December 25th to January 8th, 186 deaths from the same disease in Jeddah. Nothing appears to have occurred at the time of landing of the pilgrims at Jeddah, or during their assembly from various places at Mecca, to lead the medico-sanitary authorities to suspect the presence of the infection of cholera, or

any tendency to cholera, among the multitude. Failing any information or suspicion of previous infection, the conclusion was arrived at, that the outbreak was of local origin.

Local outbreaks are certainly more numerous than the dogmatists are willing to admit. Dr. Tholozan, physician to the Shah of Persia, after a careful study at Teheran of the recurrence of cholera in Persia in 1868, was forced to the conclusion that it was only a recrudescence of the cholera already existing in Persia. At Kiev, in 1869, cholera also re-appeared at a time when the city was crowded from all parts of the Russian Empire. The freedom from the disease of the immense tract of country lying between Kiev and the Persian frontier, preceding the outbreak, seemed to preclude any conception of infection from that source, and other evidence showed it to be a recrudescence of the unexhausted epidemic of 1865. Dr. Pelikan, Director of the Imperial Russian Medical Department, and a member of the Conference of Constantinople, before arriving at these conclusions, made an elaborate investigation of the cholera at Kiev, and the only reply of the upholders of the theory of foreign importation was that there was cholera in Northern India in the previous year, which might have spread. Again, during the first three months of 1875, there were 364 deaths from Asiatic cholera in Ceylon, while during that time there were only 30 deaths from it in the whole of the Madras Presidency, and not one of them at a port which had any communication with Ceylon. About the same time, cholera broke out at Hama and throughout large tracts of Northern Syria. Dr. Pestalozza, sanitary physician at Beyrout, after full inquiry and personal inspection, furnished a full report of the nature and course of the disease to the Ottoman General Board of Health, a summary of which, by Dr. E. D. Dickson, the British representative at the Board, was transmitted to the Foreign Office. He confirmed the report that the disease was true cholera, but was unable to discover any source exterior to the town from which it could have been derived. It was impossible for the disease to have been imported by troops recently returned from Yemen, or by Persian pilgrims from Bagdad, for there was no cholera amongst them, nor in the valleys of the Tigris and Euphrates. The conclusion adopted by him, and by the medical men in Syria and Turkey, was that the disease was of local origin, and possibly a recrudescence of the cholera which appeared in Hama in 1865. The outbreak of cholera in Central Morocco in August 1878 was ascribed to the return of the Moorish pilgrims from Mecca. But, on the other hand, the measures of quarantine adopted against the Hedjaz by the International Sanitary Council have been spoken of as a crucial example of a well-devised and maintained quarantine in arresting the course of an extension of cholera into the basin of the Mediterranean. If the cholera was imported, the quarantine was a failure; while if, as is most probable, it was of local origin, quarantine was needless.

This year, the Council has again been busily engaged keeping cholera out of Europe. Since August, all pilgrim-ships from Bombay or Aden have been compelled to undergo strict quarantine at Namaran. The troop-ships pleaded urgency, and our Indian troops landed in Egypt without undergoing quarantine and without importing cholera. It is against the patient pilgrims that the Council issues its severest regulations. A single example of the hardship which is inflicted on them, of the needless delay in a wearisome voyage undertaken solely from religious motives, and of the high-handed fashion in which they are treated by the Turkish officials, will serve to show the necessity of the effort of Her Majesty's Government to secure the observance of the resolution of the International Sanitary Council. The *Hesperia* has already become the subject of a report in the *Journal of the Medical Association*, alluded to in an able paper in the current number of the *Revue d'Hygiène*. The account we give of its voyage from Bombay to Liverpool can readily be verified; and we ask M. V. to inform us whether, who are not officially bound to support at all hands the resolutions of the Council, if a word can be said in defence of a system which permits such occurrences.

The steamship *Hesperia*, of the "Anchor" line, sailed on July 14th,

1882, from Bombay, having on board 498 pilgrims for Jeddah, and a cargo, chiefly of grain and cotton. A large number of the pilgrims were aged men, and infirm, some of them suffering from kidney disease, dropsy, and chronic dysentery, but all having passed a medical inspection, under the Native India Passengers' Act, and pronounced free from symptoms of cholera. She arrived off Aden on the 26th, and while off that port one of the firemen died from cholera, and a ten days' quarantine was imposed. On the 31st, a pilgrim died, but not from cholera. On August 6th, the vessel was allowed to proceed, but was ordered to perform further quarantine at the island of Namaran, before going on to Jeddah. On the 7th, a second pilgrim died, but not from cholera, and on the 8th Namaran was reached. Next day she was boarded by a quarantine officer, who ordered the pilgrims to be landed, and the vessel to perform ten days' quarantine. On the 17th, the quarantine officer again boarded the vessel, informed the captain that deaths had occurred amongst the pilgrims on shore, and that another ten days' quarantine was necessary. On the 28th, the quarantine officer boarded the vessel for a third time, with the news that other pilgrims had died, and that an additional ten days' quarantine was ordered. On September 8th she was still in quarantine. As, however, the dangerous nature of the quarantine moorings made it necessary to keep up steam continually, so as to be prepared for any emergency, coal began to run short, and after consultation with his officers, the captain decided to return to Aden for a fresh supply of coal and provisions. By leaving her moorings, the *Hesperia* broke her quarantine. The Turkish gunboat threatened to fire into her, and would, doubtless, had she been able to get up steam in time, have prevented this course. But on the 10th she arrived safely at Aden, and on the 17th, having taken in fuel and provisions, left (again in quarantine) for Namaran, where she arrived on the 19th. Finally, on the 23rd, she was allowed to re-embark her passengers and sail for Jeddah. It was believed by the officers that the *Hesperia* then got *pratique* solely because the pilgrim season was about over, and the officials were preparing to leave the island. Even while the pilgrims, much debilitated by their prolonged stay in unhealthy quarters, were embarking, two of them died in the boats. Their deaths were known to the quarantine officers, but no inquiry was made and no certificate of death demanded. The drinking water of the quarantine camp is in a foetid condition, and causes both vomiting and diarrhoea. The food is insufficient and of inferior quality. Each pilgrim was mulcted in the sum of ten rupees for sanitary dues, and the master of the ship had to sign a bond for sanitary dues on ship and cargo of 12,232½ piastres. On the 26th, the *Hesperia* arrived at Jeddah, and on the 28th, having landed her passengers, got *pratique*, and sailed for Suez. There she arrived on October 2nd, and was ordered a quarantine of twenty-four hours. Then she entered the Canal, and ultimately reached Liverpool on October 24th, after a detention of forty-six days in quarantine. It is poor consolation for the owners to know that the *Hesperia*, not being technically a pilgrim ship, i.e., not solely employed for the transit of pilgrims, the whole action of the Council was *ultra vires*, and that fresh instructions have since been issued, in accordance with their nominal powers. But it must be remembered to reflect that they have not imported cholera into the port of Liverpool. Not all vessels are so fortunate. For example, on September 28th, 1873, a French vessel, the *Rosaire*, arrived in the port of Liverpool from Havre with sick men on board, and held communal quarantine for ten days. She was boarded by the medical officer, who found three cases of cholera, and three more were buried, and on return, the vessel was placed in quarantine until it was thoroughly disinfected. Thereafter it received free *pratique*, and there was no further trouble.

Her Majesty's Government has faithfully respected the propositions of the Conference of Constantinople, and has endeavoured to secure enforcement by the Council of Egypt. The British representative voted against the imposition of excessive quarantine restrictions, but

being out-voted, the decision of the Conference has been obeyed ever since. At home, the scheme was immediately condemned by sanitarians of such eminence as Sir William Jenner, Farr, and Gavin Milroy, as neither rational nor practicable; and since then, a vast amount of evidence has been patiently collected in India, which fully sustains the original objections, and which has never yet been brought before the nations of Europe. The communications of MM. Fauvel and Proust at the Conference of Geneva utterly fail to show cause why pilgrims returning from Mecca should be herded in the lazarettoes at Tor, El-Onedj, and Moses' Wells. Ten days in a lazaret will not stamp out cholera, much less forty-six days. Such quarantine is condemned alike by humanity and science. Simple detention has been so long the sole practice of the Council in Egypt, that that body can only be thoroughly reformed by receiving fresh instructions from a new International Conference, the inauguration of which, we trust, will not be long delayed.

THE PULMONARY CIRCULATION.

MOST medical writers of the present day assume that the pulmonary circulation is under the influence of the vaso-motor nerves. Some physiologists are, however, less assured of the existence of such nerves; and a considerable amount of experimental evidence has been brought forward to prove or to disprove this important point.

For the proof, Badoud (*Verh. der Phys. Med. Ges.*, Würzburg, N. F., vol. viii) had brought forward the fact that the blood-pressure in the pulmonary artery is diminished by section of the medulla, increased by its faradisation: Lichtheim (*Die Störungen des Lungen Kreislautes*, etc., Berlin, 1876), that the pulmonary pressure is increased by dyspnoea when the aorta has been closed, while the carotid shows no increase of systemic pressure.

On the other hand, Zuntz (Pflüger's *Archiv*, Band xvii) had failed to convince himself of pulmonary vaso-constriction; and Waller (Du Bois-Raymond's *Arch.*, 1878), under Ludwig's guidance, had come to the conclusion that the increase of pulmonary blood-pressure consequent on medullary faradisation is only secondary to the constriction of systemic vessels, and independent of any pulmonary vaso-constriction.

Th. Openchowski has methodically examined the whole question, under Stricker's guidance ("Ueber die Druckverhältnisse im Kleinen Kreislaute", Pflüger's *Archiv*, 1882, p. 233). His experimental discussion appears as satisfactory as the case will admit; the problem being to decide whether the increase of pulmonary blood-pressure by medullary excitation is due to the obstacle of a pulmonary vaso-constriction, or to the expulsion of blood by systemic vaso-constriction, or to the obstacle constituted by an insufficient left heart. To prove the first supposition, it would have been necessary to demonstrate an increased pressure in the pulmonary circuit in the absence of increased pressure in the systemic circuit. Lichtheim attempted this by ligation of the aorta; but the increased pressure consequent on dyspnoea, which he saw, might quite well have been due to systemic vaso-constriction; and, in effect, Openchowski found, under these conditions, that the pulmonary increase never occurred without simultaneous (or, more correctly, antecedent) systemic increase; and that previous section of both splanchnics prevented the increase both in the aortic and in the pulmonary systems. Conversely, he found that excitation of the splanchnics, or merely pressure on the abdomen, raises the blood-pressure in the lower circuit. All these facts argue that the increased pressure in the lesser circuit is passive—a mere engorgement due to the expulsion of blood from the greater circuit. Against the possibility of the pulmonary engorgement being due to the obstacle caused by a congested and inefficiently beating left heart, the author observes that the pressure is much greater in the pulmonary artery than in the left auricle; and that, therefore, the former pressure cannot depend on the latter by any retrograde influence. This observation applies to the dog, on which animal the author's experiments were exclusively made. It shows clearly that the engorgement of the left heart, which in the rabbit is so great as to bring the auricle to a standstill, is not the essential factor of

the increased pressure, since the latter can occur as well without as with that excessive engorgement. The conclusion that can be legitimately drawn from the above experiments is, that an action of vaso-motor nerves (and therewith their existence) in the augmentation of pulmonary pressure by medullary excitation, whether by dyspnoea or by faradisation, is not at all proved, but to a great degree disproved; and, until their existence is proved, they must be considered as non-existent.

THE EPIDEMIC OF TYPHOID FEVER IN PARIS.

THE Municipal Commission of Statistics has recently issued a long report on the progress of the epidemic of typhoid fever which has raged in Paris during the last two months. The epidemic commenced in the early part of August of this year. In the week ending August 10th, the deaths from that fever, which had been 31 in the previous week, rose to 47, the average weekly number being from 25 to 35. In the following week, the deaths further rose to 106, or about three times the average rate. After this date, the mortality fluctuated slightly from week to week, always keeping high, and showing, on the whole, a decided tendency to increase. In the week ending October 12th, the death-rate reached its highest figure, 250; and this, it is hoped, will prove the greatest maximum of the mortality-curve throughout the whole of the epidemic. In the two weeks following, there was a well-marked fall in the death-rate; but that is still sufficiently high to give rise to serious alarm. The following table shows the progress of the epidemic in weekly deaths:

Week ending August 3rd,	Deaths from Typhoid Fever...	31
" " 10th	" " "	47
" " 17th	" " "	106
" " 24th	" " "	74
" " 31st	" " "	82
" " Sept. 7th	" " "	63
" " 14th	" " "	75
" " 21st	" " "	53
" " 28th	" " "	57
" " Oct. 5th	" " "	134
" " 12th	" " "	250
" " 19th	" " "	244
" " 26th	" " "	173

Up to the end of August, the prevalence of the disease was confined chiefly to the poorer districts of the city, the 10th, 12th, 18th, and 19th arrondissements. After that date, the fever began to spread to the other arrondissements, and, by October 26th, it had become general throughout the city.

From August 14th to August 26th, there were in all 1,358 deaths registered as due to typhoid fever, and of these 763 were males, and 595 were females. The greatest number of deaths occurred among persons whose ages were from 15 to 35. No fewer than 914 (554 males and 360 females) having died of this fever between those ages. "At from 5 to 15 there were 68 males and 139 females, and but 20 males and 31 females less than five years. At ages from 55 to 60, there were 112 males and 57 females, and only nine males and eight females of upwards of 60 years."

Various causes have been adduced for this outbreak. The Conseil d'Hygiène, in their recently issued code of instructions for prophylaxis, seem to be of opinion that it has been largely brought about by overcrowding, and they appear to view this factor as of more importance than sewer-emanations and water-pollution, to which they do not even allude. This is surely a serious error; for, while it is tolerably certain that typhoid fever spreads by personal contagion, it is, at the same time, beyond doubt that it spreads largely by means of polluted water, and other channels of a like kind. The possibility of its having been spread to a considerable extent in the present epidemic by these latter channels, ought surely to have been taken into account, having regard to the notoriously unsanitary condition of the French metropolis. It seems to us to be probable that the causation of the epidemic has been of a complex nature. On the one hand, we believe, personal contagion may have been at work; and, on the other hand, pollution of

water and emanations from sewer have also had their share in the spread of the disease, while to these factors we may add some still unknown social, and atmospheric conditions which have brought them more fully into play. While, therefore, we think the sanitary authorities of Paris do well to attempt to lessen overcrowding, and thus diminish the influence of personal contagion, we think they would do better still were they to take measures also to prevent the possibility of the pollution of the water-supply, and the possibility of the existence of sewer emanations. There is a large amount of truth in the Scotch proverb, "It's an ill wind that blows naeboddy guid;" and if the present epidemic be the means of arousing the Parisians to a true sense of the dangers of their city, and of leading them to ameliorate its present deplorable sanitary condition, future generations will have reason to be thankful for its occurrence. There is surely no necessity in the nature of things that the "City of Pleasure" should be also, in so large a measure, the City of Disease and of Death.

THE MEDICAL OFFICERS OF THE EGYPTIAN EXPEDITION.

WE have great satisfaction in announcing that the date of the banquet of welcome to the medical officers of the army, navy, Indian medical service, and marines, who took part in the Egyptian expedition, is now fixed for Tuesday, the 21st instant. It will be seen, from our report in another column, that, at a highly influential meeting at the College of Physicians on Monday last, the final steps were taken, on the motion of Sir James Paget; and resolutions requesting Sir William Jenner, Bart., K.C.B., to preside at the banquet, were adopted. The committee-list includes, in addition to the names above-mentioned, those of Sir William Gull, Bart., Sir Joseph Fayrer, Sir Risdon Bennett, Mr. Spencer Wells, Mr. Prescott Hewett, Mr. Lister, Mr. John Marshall, Dr. Wilson Fox, Dr. Wilks, Dr. Barnes, Dr. Glover, Sir Trevor Lawrence, Bart., M.P., and, indeed, of nearly all the most representative men in the metropolis. It is anticipated that eminent provincial practitioners will join in the movement, of which Dr. Strange, Mr. Wheelhouse, and others have expressed their warm approval. We are glad to be able to add that Sir Garnet Wolseley has expressed the kindest feelings in the matter, and has accepted an invitation. The Directors-General of the Army and Navy Medical Departments are also expected to be present. The dinner will take place at Willis's Rooms. Already, in the course of the few days in which the matter has been mooted, the list of those who can possibly be accommodated is two-thirds filled.

SIR THOMAS WATSON.

WE regret to learn that during the last week Sir Thomas Watson has lost flesh, and become gradually more helpless. There is no increase of his paralytic symptoms. His pulse has varied between 70 and 80 per minute, and is still of fair quality. His voice is distinct, and his mind quite clear. He has taken little nourishment except milk, and not much of that. On Tuesday and Wednesday, he suffered much from strangury, caused by scanty secretion of urine, which contained red sand and blood; this symptom had increased so much on Wednesday, that he requested that a telegram might be sent to Professor Lister to come to see him. He has also been visited by Dr. G. Johnson and Dr. Greenhow.

We learn by telegram on Thursday, through the kindness of Dr. Walters, that the illustrious patient has been much easier since the measures taken by Mr. Lister; but he takes hardly any nourishment, and is sensibly weaker, although still in possession of his mental powers.

PROFESSOR VIRCHOW is, we hear, if anything, slightly better.

MR. HUGH MALCOLM ROBINSON has been appointed one of Her Majesty's Inspectors of Factories and Workshops.

THE British Consul at Jeddah telegraphs under date, November 7th, that according to unofficial advices received from Mecca, cholera had disappeared from that city.

SMALL-POX, which, for some months past, has been almost epidemic in the district on the outskirts of Wolverhampton, has now made its appearance in the town.

THE vacancy on the staff of the Middlesex Hospital caused by the death of Mr. Robert Lyell has been filled up by the appointment of Mr. Alfred Pearce Gould, M.S., F.R.C.S., lately Assistant-Surgeon at the Westminster Hospital.

THE names of Sir Peter Bensor Maxwell, Knt., and Colonel Charles Brisbane Ewart, C.B., R.E., have been placed on the Royal Commission appointed to inquire into and report upon the system, under which sewage is discharged into the Thames by the Metropolitan Board of Works.

WE are officially informed that there is at present only one case of cholera at Jeddah; and that, in view of this fact, and considering that the number of pilgrims this year is very small comparatively, the Egyptian Government have decided to send only frontier guards, instead of soldiers, to El Wedj.

WE have received to-day a telegraphic bulletin, announcing that the Countess Somers, who is suffering from the fracture of two ribs and serious contusions, received in the recent collision at Boulogne, is progressing favourably. She is under the charge of Mr. C. Macnamara, surgeon to the Westminster Hospital, who was telegraphed for from London.

A MOST distressing catastrophe is reported from Halifax, Nova Scotia. The asylum for the poor in that city was destroyed by fire on the 7th instant. Thirty-one of the inmates were in the hospital wards, which were situated on the top storey, and they were all burned to death. The fire, it seems, originated in the basement and ascended, that great danger in cases of fire, the elevator shaft. It was impossible to rescue the sufferers as no ladders of sufficient length could be obtained.

IMPORTATION OF SALT PORK INTO FRANCE.

M. DUCLERC has received a deputation from Havre, urging upon the Government the expediency of repealing the decree of 1881, restricting the importation of salt pork into France. The delegates advocated the substitution of sanitary inspection for the present system of micrographical inspection. The Premier, in reply, stated that he was fully cognisant of the importance of the interests affected by this question, and promised to insist upon the matter being again examined with the serious intention of arriving at a prompt solution.

DIPHTHERIA AT THE EAST END.

WE regret to learn that diphtheria is very prevalent in the East End of London. Mr. J. Scott Battams, resident medical officer of the East London Hospital for Children, Shadwell, performed tracheotomy in three cases within eight hours on Monday evening last, and Mr. Parker operated on a fourth case on Wednesday morning. The eldest of the children was four years old, and the youngest ten months. All of them had injection of the fauces, and one false membrane on the soft palate and pharynx. These children all lived within a radius of a mile from each other; and the laryngeal symptoms dated from the same time—Sunday evening last.

UNIVERSITY COLLEGE HOSPITAL.

MRS. NATHANIEL MONTEFIORE has presented £2,600 to this hospital, to be invested for the permanent endowment of a bed, to be named the "Francis Henry Goldsmid Bed," and of a cot, to be named the

"Leonard Montefiore Cot," in memory of her late brother and son respectively. We are informed that there are still fifteen cots unendowed, and that collecting cards for use by children and others, to be used in soliciting contributions in aid of the children's cot endowment fund, can be obtained of the secretary.

CONTAGIOUS DISEASES ACTS.

THE Society for the Extension of the Contagious Diseases Acts is about to circulate a large edition of the Report of the Committee of the House of Commons on these Acts, which has sat during four sessions to take evidence. The report, a summary of which has already appeared in the *BRITISH MEDICAL JOURNAL*, is most exhaustive, and treats the question of their repeal thoroughly; it finishes by expressing a strong opinion in favour of their maintenance, and even extension, when the religious scruples of many excellent persons shall have been overcome.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

At the meeting of this Society next week, on the 14th instant, a very interesting exhibition of parasites in man and the lower animals will be brought before the Fellows. Drs. Cobbold and Radcliffe Crocker will illustrate the paper on endemic hæmaturia with specimens of the *Bilharzia hæmatobia*, in all its phases of development. Mr. A. P. Thomas of Oxford will show his preparations, which demonstrate his discovery of the life-history of the liverfluke in sheep. Drs. Cobbold, Bastian, and Stephen Mackenzie, and Mr. Ray Lankester, will show some rare forms of fluke and other parasites in man and the lower animals.

SIR GARNET WOLSELEY'S REPORT.

THE following gratifying testimony to the way in which the duties of the Army Medical Department were performed in Egypt, under Surgeon-General Hanbury, C.B., appears in Sir Garnet Wolseley's recent report. He says: "The Medical Department, under Surgeon-General Hanbury, C.B., have done everything that could possibly be done for the care and comfort of the sick and wounded. The manner in which the wounded were removed from the fighting line by the Bearer Company was most satisfactory. The following officers are brought specially to my notice: Deputy Surgeon-General J. Ekin; Deputy Surgeon-General W. G. N. Manley, V.C.; Deputy Surgeon-General J. A. Marston; Brigade Surgeon O. Barnett, C.I.E.; Surgeon-Major G. S. Davie; Surgeon-Major T. F. Dwyer."

ORDER OF ST. JOHN OF JERUSALEM.

THE Committee of the Jerusalem Hospice Fund have made arrangements for opening immediately a temporary dispensary at Jerusalem, pending the erection of the building, a site for which has been granted by the Sultan to the Order of St. John. Dr. J. C. Waddell, who has had special experience in ophthalmia, has left England for Jerusalem to commence work. Letters have lately been received from Mrs. Burton, the well known authoress, Sir Austin Layard, and others, testifying to the fearful suffering caused by this disease. Subscriptions will be gladly received by Lady Lechmere, 13, Bolton Row, W., and Capt. Dallas, treasurer, St. John's Gate, Clerkenwell, E.C.

DR. ABRATH AND THE NORTH-EASTERN RAILWAY COMPANY.

THE case of Abrath v. the North-Eastern Railway Company has recently come before Justices Field and Stephen at the Queen's Bench Division, Westminster, with a view to setting aside the verdict arrived at in this case, or for a new trial on the grounds of misdirection, and that the verdict was against the evidence. Sir Hardinge Giffard, Q.C., and Mr. McClymont, were the counsel employed. The action was for a malicious prosecution brought against the defendant company under the following circumstances. A person, named M'Mann, brought an action against the company for injuries received in an accident on their line, and for which he was attended by Dr. Abrath.

When the parties went down for trial at the Durham Assizes, the case was compromised by the defendants paying M'Mann £750. Afterwards certain information reached the company, and in the November following the assizes at Durham, they summoned Dr. Abrath and M'Mann before the magistrates for conspiracy to defraud, on which charge they were committed for trial, but were ultimately acquitted. The plaintiff then brought his action for malicious prosecution, which resulted in a verdict for the defendants. On the conclusion of the learned counsel's argument, their lordships granted a rule *nisi*.

THE MEDICAL SOCIETY OF LONDON.

At the meeting of this society on Monday last, Mr. Owen exhibited two cases of congenital cystic hygroma. An interesting paper was read by Mr. Sampson Gamgee of Birmingham, on the Treatment of Wounds and Fractures. Extensive structural alterations are at present taking place in the Society's house. When these are finished, there will be a very handsome new meeting-room, and the present meeting-room will be converted into the library. As the Medical Society of London possesses an almost unique collection of old medical authors, it will be very satisfactory when they are so arranged, as to be readily accessible to the members of the Society.

AMBULANCE TRANSPORT FOR SERVICE IN TIME OF WAR IN AUSTRIA.

THE wealthy and influential Maltese Order in Austria have now seven complete railway sanitary trains, ready for immediate service for the removal of sick and wounded in case of the occurrence of war. At the same time, the Teutonic order has been devoting its funds to the formation of depôts of materials for supplementing the official hospital establishments in the field, especially in the direction of field hospital transport. It has now a complete field hospital column, ready to move with every division of the army. On the Prater, in Vienna, the stores of the Teutonic order comprise two hundred sick transport carriages ready for immediate use. They are well looked after, and maintained in perfect order. All these establishments and materials have been formed and collected under Government authority. The vehicles and other stores are strictly in accordance with War Department patterns; and the regulations provide that, directly they are employed to supplement the provision made by the military authorities for service in time of war, they fall under the same disciplinary rules as those by which all other parts of the army are bound. These volunteer establishments owe their existence solely to patriotic and humane motives.

UNSANITARY BURIALS IN CHURCHES.

THE law as to burials in vaults under churches appears to be in a very unsatisfactory state, as a corpse, not inclosed in lead, has lately been buried in the parish church of Ippledon, Devon. This, it appears, can still be done in rural churches. The precautions taken to prevent the gases, and other noxious effluvia resulting from the decomposition of the body, escaping into the church, were utterly inadequate, and were based upon the idea that gases cannot find their way through a thin layer of concrete. The churchwardens state that the coffin was closed in with perforated bricks, over which was spread a layer of concrete, one inch thick. The vault was then built in, and closed in a similar manner, and the space between it and the flags filled in with earth and rubbish, and the flags relaid in Portland cement. These arrangements of bricks and cement failed to prevent a nuisance, as three families have been driven away by the sickening smell. There does not appear to have been any illness caused by the smell, but surely it is time that interments under the flooring or paving of churches shall entirely cease, even although the bodies may be encased in lead. There is nothing whatever to recommend the practice; whilst on hygienic, and even on sentimental grounds, it is highly objectionable. The churchwardens, or, at any rate, those who carried out the work, ought to have known that gases readily pass through most kinds of bricks, and, if under pressure (as in the case of a decomposing body in a wooden

coffin), will also find their way through a thin layer of concrete. It may be said that the flags ought to have kept the smell away; but, unless the stone-paving extended all over the church, and all the joints were sound, the effluvia would escape at the defective places, especially in hot weather.

THE REGIMENTAL SYSTEM.

It has been asserted that there is a strong desire on the part of the military authorities to get the old regimental system reintroduced, and that to this desire, in a large measure, is due the agitation connected with the alleged breakdown of the army medical service in Egypt. We are, however, assured that whatever the outcome of Lord Morley's Committee, now sitting at the War Office, may be, that this certainly is not one of the proposed changes.

THE NOTIFICATION OF INFECTIOUS DISEASES.

NOTHING can more strikingly illustrate the practical difficulties that surround the question of the compulsory notification of infectious diseases, than the result of proceedings in Liverpool, of which we published a report in a recent number. It is a very significant fact and one which points strongly to the desirability of a full parliamentary discussion of the subject, that on this, the first occasion, when a decision has been come to after the consideration of evidence gleaned in towns subject to compulsory Acts, which, though *ex parte*, are not obtained entirely from those favourable to compulsory notification by medical men, it is practically opposed to any scheme which embodies that principle. The deputation from Liverpool wisely heard some few of the general medical practitioners of the towns which they visited; and where this was done the existence of such an amount of "friction" was made manifest, as to render it obviously necessary that serious modifications be introduced into any system yet in force before it can be hoped to make it generally satisfactory, either to the medical profession or the public. It is very significant that the Vice-Chairman of the Health Committee of Liverpool, who last year made strenuous efforts to carry through a Bill to impose indirect compulsion on the medical men of that city, should this year be one of its strongest opponents, and should be reported to say, "Anyone who read the whole of the evidence," *i.e.*, the evidence collected by the Liverpool deputations, "would come to the conclusion that the system in the towns where it was nominally compulsory was, in reality, voluntary, for the authorities winked at the infraction of the law;" and that to impose compulsory notification on medical men, was shown to be "neither equitable nor expedient."

THE OXFORD PROFESSORSHIP OF PHYSIOLOGY.

AFTER some delay, owing to an informality in the unexpected convening of a meeting of the electors during the long vacation, when the Linacre Professor (Mr. Moseley) was absent from England, the new chair of Physiology at Oxford, founded by the recent University Commissioners, is about to be filled. At the informal meeting already held, the electors were, it is understood, not able to fully consider the claims of the candidates, owing to the absence of the most important member of their body, namely, the gentleman who at present has the direction of the teaching of anatomy and physiology in the University. The electoral board is composed as follows: the Bishop of Winchester, the President of Magdalen College, Professor Acland, Professor Moseley, Sir William Jenner, Sir James Paget, and Mr. Spencer Wells. The candidates for the chair whose names are now before the electors are Professor Burdon Sanderson, of University College, London, and Professor Gamgee, of the Owens College, Manchester. Professor Gamgee's candidature is supported in the very strongest terms in a series of letters written for this purpose and placed before the electors. It is not too much to say that these letters give evidence that the leading physiologists of this country are unanimous in wishing the task of inaugurating a new school of physiology at Oxford to be confided to Professor Gamgee. Among those who thus write are Dr. Michael Foster, Professor Gerald Yeo, Professor Rutherford, Dr. Lauder Brun-

ton, Mr. Henry Power, and Dr. Pye-Smith. At Oxford, those who have done so much to promote the foundation of the chair and to take the first steps towards the restoration of medical teaching in the University are equally anxious to secure Professor Gamgee, as is shown by the letters of Dr. Frank Payne of Magdalen College, of Mr. Thistleton Dyer of Christ Church, and of Professor Ray Lankester of Exeter College—the leading spirits in the revival of medical teaching in the University. Professor Sanderson has not sought to bring before the electors any expression of opinion in favour of his candidature, and is rather an induced than a spontaneous candidate. Great regret will be felt in scientific circles should Dr. Sanderson be taken from his position in London, where his services and influence are appreciated in the highest degree. The organisation of new laboratories at Oxford, and the constant and assiduous attention to the smallest details of elementary, as well as advanced instruction, which will be the first condition of success in the work of the new Oxford Professor, must seriously interfere with the profound series of researches upon which Dr. Sanderson is engaged. It is not the work which suits his age, his character, or his genius. It will be a disaster for Oxford, and for the cause of the highest medical education, should the Waynflete Professor of Physiology do less teaching than the Jodrell Professor.

HYDROPHOBIA.

A CASE of hydrophobia, which presented some unusual features, was recently the subject of an inquest held by Mr. W. J. Payne at Guy's Hospital. The victim was a young girl, aged 14 years, who about two years ago was bitten in two places on the right hand by a small dog, the property of a lady residing at Surbiton; nothing occurred to arouse suspicion at the time, and even at the present date the friends of the deceased do not know whether the dog be alive or dead. The girl lived at Surbiton, and, though delicate, suffered from no definite illness until Thursday, November 2nd. On the morning of that day, she complained of headache, and some pain and stiffness of the right arm. This pain was described as commencing near the scars of the bites, and gradually creeping up the arm. During the morning she was very restless, complaining of headache and *malaise*, but refusing to lie down. She went out for fresh air, but almost immediately returned, saying that she had met a dog; immediately after this, she had the first convulsive seizure, which was but slight. She could not eat her midday dinner, and when she attempted to drink, she at once had another convulsion. After breakfast on Thursday morning, she took neither food nor drink, professing her inability to swallow. She grew rapidly worse, the convulsions became more frequent and more severe, until about three or four o'clock on Friday afternoon (November 3rd) when they were almost continuous; consciousness remained, and she seemed to understand her condition, for she said frequently to her friends, "Do not be afraid, I will not bite you." At about eleven o'clock that evening she was brought to Guy's Hospital in a cab, and was then affected by convulsions of a markedly hysterical character, crying out, struggling and beating with her feet on the floor of the cab, so that the stamping could be distinctly heard in the houses surrounding the square of Guy's. Dr. Steele, the medical superintendent, met the cab at the door; and, after a few inquiries, finding that the girl was struggling violently and foaming at the mouth, he directed her to be carried into the surgery, a distance of a few yards. When she arrived there, she appeared to be already dead, and no efforts at restoration were of any avail. The necropsy gave no very definite evidence. The throat was not red; but the salivary glands were enlarged, and there was a little bronchitic congestion. The solitary glands of the intestine were large, and the grey matter of the brain and spinal cord was very distinct; but, beyond these trifling deviations from the healthy state, there was nothing to show the cause of death. This case is in several respects very unusual. The long interval between the bite and the development of the disease is remarkable, though there are cases on record where it has been supposed to have been much longer, as in one published by Dr. Hughes in the *Guy's Hospital Reports*, where the

period was apparently five years. The terrible rapidity, however, with which the earliest symptoms were followed by the severest, and then by death, is altogether exceptional, and renders the case one of peculiar interest. The whole duration of the illness, even including the period of indefinite *malaise*, could not have been more than forty hours.

INJURY BY EXPLOSION OF A SHELL.

CAPTAIN LORD CHARLES BERESFORD, R.N., brought home from Alexandria a 64-pounder shell, which had been driven into the roof of a house in that town, but had not exploded. Thinking it an interesting memorial of recent events, he proposed to present it to H.R.H. the Prince of Wales. He announced his intention to H. R. Highness; but, before carrying it into effect, sent the shell, we understand, to the Martini-Henry Rifle Barrel Factory. The duty of sawing the shell in two was entrusted to one of the workmen of the factory, named Frederick Mustoe. Fearing that the shell might still contain some explosive material, Mustoe filled it with water, and, steadying it on the ground between his feet, stirred the contents of the shell about with a stick. This action was immediately followed by the explosion of the shell. The man was at once removed to St. Bartholomew's Hospital, and admitted under the care of Mr. W. S. Savory. The posterior half of the right foot was completely blown away, and it was, therefore, necessary to amputate the foot by a modification of Syme's amputation. The bones were sawn through just above the ankle-joint, and a long flap was obtained from the front of the joint and foot. The injuries on the left side of the body were exceedingly extensive and severe. There was a compound comminuted fracture of the tibia and fibula at the junction of the lower and middle thirds of their length; a compound and comminuted fracture of the ulna just below the elbow-joint; an extensive lacerated wound of the hand, traversing the palm obliquely, and penetrating as deep as the muscles between the metacarpal bones; and a burn, involving the whole thickness of the skin on the outer side of the leg, just above the seat of fracture. The wounds were all dressed with the simple oil dressings always employed by Mr. Savory, and are all, we learn by inquiries made at St. Bartholomew's, doing extremely well. The patient, who is a young man, aged 26, in good general health before the accident, has never had a bad symptom. The fractured limbs are kept entirely at rest, and he, during the last week or more, has been quite free from pain. The highest temperature was 102° Fahr., a few days after the accident. Ten days after the accident, the temperature ranged from 98° to 99.6°. The wounds were in a good condition, the stump nearly healed, and the patient's appetite and digestion sufficiently good to allow him to take solid food.

THE ANTIVACCINATORS AND MUNICIPAL ELECTIONS.

THE municipal elections that have just been held, have been, on the whole, of little interest, save to the communities more immediately concerned. In one case, however, the election possesses considerable interest, more particularly to the medical profession, inasmuch as one of the candidates is a member of that profession, and inasmuch as the issue turned principally on the question of compulsory vaccination. For the Babington ward in Derby, the sitting members, Messrs. Boden and Sayer, both sought re-election; but the Liberal section of the constituency, being dissatisfied with the latter gentleman, determined to support another candidate along with Mr. Boden, in opposition to him. The candidate chosen was Mr. Thomas Lawrie Gentles, an esteemed practitioner in Derby, who, it was hoped, would prove a valuable addition to the council, especially in matters connected with public health. Unfortunately, however, Mr. Gentles is medical officer to the Derby union, and in that capacity acts as public vaccinator; and it soon became evident that his connection with vaccination would tell heavily against him. At the first general meeting in support of Messrs. Boden and Gentles, the question of compulsory vaccination was brought forward, and created great excitement. Mr. Gentles at once boldly and explicitly gave expression to his strong faith in the efficacy

of vaccination; and Mr. Boden also admitted his belief in its value. The position thus taken up by the candidates, and especially by Mr. Gentles, who was, of course, more nearly identified with it, created considerable dissatisfaction; and, although it was pointed out that the corporation had nothing whatever to do with vaccination, and that, consequently, it was unfair and foolish to make it a test question, the meeting remained unsatisfied. At its close, while a motion in favour of the candidates was passed by a large majority, a resolution was also carried by a considerable majority, condemning compulsory vaccination. At subsequent meetings the same question occupied a prominent position, and a large amount of warm feeling seems to have been manifested. In the result, the antivaccinators proved too strong; and Mr. Sayer, who professed to be averse to compulsory vaccination, was returned by a majority of 70 over Mr. Gentles, Mr. Boden heading the poll. We congratulate Mr. Gentles on the good fight he has fought against ignorance and sentimentalism, and we trust that his failure on this occasion may not deter him from becoming a candidate at a future opportunity. We also sincerely hope, if the feeling exhibited in Babington ward be an index of that existing throughout the borough, that Derby may not be visited by a small-pox epidemic until its inhabitants have become wiser.

THE MATRON OF GUY'S HOSPITAL.

WE understand, on good authority, that the matron of Guy's Hospital, whose changes in the nursing arrangements brought about so much controversy between the medical staff and the governors, is about to retire from her post. The circumstances of the dispute will be still fresh in the minds of our readers, and the moral to be drawn from it is scarcely likely to be lost upon the governing body. It is certain that no attempt will again be made to introduce a system of nursing in opposition to the wishes of the medical officers, or to appoint a matron with whom they may be unable to work in harmony. The grave scandal, which so long exerted a deleterious influence upon the reputation of this hospital, gradually subsided when two members of the staff were elected to a house-committee, in order to revise and control the code of nursing regulations. This arrangement was a substantial gain; but we are still of opinion that, not only at Guy's, but at all the London hospitals, the opinions of the medical officers are inadequately represented upon the governing body, for the public interest and protection. Some further changes in this direction are essential to the proper administration of all the medical charities. The governing body and the medical staff ought never to be so distinct, that it should be within the power of any individual to place them in direct opposition; and this will continue to be the case in all those institutions where medical men are excluded from the general committee. During the controversy which took place two years ago, a valuable suggestion was made by Mr. Clement Lucas, that the medical officers, who retire from hospital practice at the age of sixty, should be elected on their retirement to the governing body. This would be a very conservative reform, but it well merits consideration: for no gentlemen could be elected more devoted to the welfare of a hospital, than those physicians and surgeons who have served it, in a professional capacity, during the greater part of their lives. Some such reform we hope to see carried out at all the London hospitals; for it has become very evident, that the link between the professional and lay committees is essential to prevent, what occasionally happens, a gradual divergence into direct antagonism.

"SENTRY-GO."

IN an important article on "The Present State of the Army", in the current number of the *Nineteenth Century*, Sir Frederick Roberts makes the curious observation that, after about thirty-one or thirty-two years of age, the private soldier usually ages rapidly, and becomes a veteran both in looks and habits, whilst his commissioned, and even non-commissioned contemporary is, comparatively speaking, a young man. This early decay is, in the opinion of many, mainly caused by sentry

duty. It is known that sergeants do not become thus prematurely aged, nor do men employed in the orderly-room, or as soldier-servants. "Now, as the soldiers thus exceptionally cited lead much the same kind of life in all other respects as the rank and file, there must be some reason," says Sir Frederick Roberts, "for this difference. The true one, I believe, to be the excessive night duty which falls to the lot of a private soldier." Commissioned officers and private soldiers lead such entirely different lives, that it would be rash to attribute any difference which may be proved to exist in the rates at which they age to the exemption of the former from sentry duty, and the effects of that duty and the loss of sleep which it entails upon the latter. And even in the case of non-commissioned officers, it must be borne in mind that there are other circumstances, besides their freedom from night vigils and the most irksome part of a soldier's routine work, which may tend to keep them in a better state of preservation than those who remain in the ranks, and to protect them against premature decay. They are promoted generally because they combine good physical development with steady habits; and, as a class, they are more temperate and somewhat better fed than private soldiers, while at the same time their general emotional state may be supposed to be more complacent and contented. Orderlies and soldier-servants approximate more closely to private soldiers in their style of living, although they too often receive a more liberal supply of nourishment. But, while pointing out these necessary qualifications, we are not inclined to dispute the justice of General Roberts's allegation that sentry duty has an effect on those who are subject to it which is manifested in the premature appearance of certain senile changes. In the climate of India, its injurious consequences, whatever they may be, are, of course, more strongly marked than in this country; and it is in India that Sir Frederick Roberts's observations have been chiefly made. All medical men will concur heartily in his conclusion: "I am quite sure that soldiers should be spared 'sentry-go' as much as possible, and that that army will be healthiest in which the men have the greatest number of nights in bed."

THE HEALTH OF PARIS.

THE general health of Paris appears to be improving, the number of deaths from all causes registered in the week ending November 2nd being 995 against 1,018, 1,174, 1,111, and 1,077 in the four preceding weeks. The number of deaths from typhoid fever in the same week was 125, amongst whom were eight soldiers, against 173 in the preceding week. The number of attacks of typhoid was, however, slightly larger than in the previous seven days—428 against 406; but the total number of sick under treatment in the hospitals was smaller—2,085 against 2,175 in the last week registered.

THE HEALTH OF VENTNOR.

SEVERAL of the medical practitioners of Ventnor—Dr. J. G. Sinclair Coghill, Dr. J. L. Whitehead, Dr. James M. Williamson, Dr. Walter A. Harvey, and Mr. Horace Lowther—have written in reference to Mr. W. J. Ebbett's recent statement that cases of typhoid fever have occurred and originated in Ventnor, to the effect that they have not had any cases under their notice during any part of the present year which would lead them to infer the presence of drain-poison (typhoidal symptoms), as Mr. Ebbett's letter would appear to suggest. Dr. Woodford, the medical officer of health for Ventnor, also affirms in the most unequivocal manner that during the year 1881 there were only three cases of typhoid fever in Ventnor, and up to this date in 1882 there have only been three cases, two of these cases being known to have been imported. To Mr. Ebbett's assertion that the drainage of the town of Ventnor is defective, Dr. Woodford gives an official denial, and testifies not only to absence of structural imperfection of the drains, but to the evidence of their efficiency, derived from the state of the public health, the remarkable immunity from typhoid fever, diarrhoea, or other signs of drain-poisoning. In the face of so overwhelming a body of evidence, it is clear that Mr. Ebbett is in error in

his statements. It is greatly to be regretted that persons making these serious accusations against the sanitary condition of localities, more especially of health-resorts, are not more careful with regard to the amount of fact contained in them. The public mind is unaccustomed to weigh evidence, rushes hastily to conclusions, and is easily influenced by any adverse statements. The amount of injury inflicted on the bread-winners of a previously thriving town by reckless statements impugning its healthiness would probably surprise the disseminators of such slanders if the losses so caused could be placed before them in a concrete form.

THE SITE OF LONDON.

At a meeting of the Epidemiological Society, held at University College, Gower Street, on Wednesday, November 1st, Dr. George Buchanan, President, in the chair, a paper was read by Dr. Norman Chevers on "The Sanitary Defects of the Site of London and its Environs." Dr. Chevers was of opinion that, notwithstanding all that modern drainage of land and towns had effected in the way of improvement, the most prevalent and worst diseases of the United Kingdom are due to the survival of thousands of acres of unreclaimed marsh-land, and to the presence of thousands of miles of sewers, drains, and ditches, which retain, exhale, and exude as much as they void. The Celtic and Roman founders of London chose their position mainly because it was defensible in war, and without any knowledge of the laws of malaria. The superficial geology of London may be represented by an oval cup of London clay and brick earth, extensively traversed and margined by marsh alluvium, across the longest diameter of which irregular heaps of more or less sandy gravel form a broken line of slight elevation. The greater part of Roman London was seated on good building ground; but marshes or swampy soil surrounded the entire land aspect of modern London, with the exception of an isthmus on the north-west. The whole line of the northern hills had, at its foot, oozy soil, into which the drainage of the uplands sank, to be only partially carried off by streams. The city was also protected on the north side by Finsbury and Moorfields, formerly a vast swamp. To the east, London is bordered by the extensive marshes of the river Lea and the Thames, and still further eastwards extend vast tracts of the Essex and Kentish marshes, sixty miles to the sea. The Kentish marshes also extend to the south border of London; and those parts of the city now bearing the names of Bermondsey, Southwark, and Lambeth, were especially famous, almost down to the present time, for the occurrence of ague, dysentery, and remittent fever amongst the inhabitants. Originally, the marshes westward were as injurious to the public health as those to the east: Westminster was almost an island even in Queen Elizabeth's reign; and St. James's Park was liable to be flooded up to the year 1682. Even now, South Belgravia is threatened with inundation from the Thames. Northward of this part of London, the ground is more or less elevated, and gravel and clay are found more abundant. Dr. Chevers next pointed out that much of the ground upon which houses have been for centuries, and are now built, consists of made earth; for instance, that, in Finsbury Field, in 1549, one thousand cartloads of bones were deposited, and upon this was laid the soilage of the city, all of which has long since been built over. He then briefly alluded to the significance of the Anglo-Saxon word *ey* (or *ea* = island) in many of the names of places in London, as showing that the localities were originally paludal; and he mentioned a few facts which indicated the great prevalence in old times, and as late as the end of the seventeenth century, of dysentery and intermittent fever in London. Dr. Chevers urged the necessity for a great national movement for the reclamation and utilisation of marsh-lands near London, and that a Royal Commission should be appointed to inquire into the whole question, and adequate funds raised. He believed trees might be planted on the Essex and Kentish marshes, which would, in a few years, mitigate the severity of the east wind; that all kinds of manufactures, not requiring night service, might be carried on there; and that market-gardens and reservoirs for fish for markets might also be made, and thus render the lands not only more

salubrious, but more valuably productive than they are at present. He concluded by saying that every landlord should be under legal obligation to satisfy his tenant whether the site of his house had been a marsh, a brick-field, a burial-ground, or a plague pit; whether the house be built upon concrete, and whether there are disused cesspools near the building. In the discussion which followed, the President, Sir Joseph Fayrer, Surgeon-General Hunter, Surgeon-Major Don, Dr. Balfour, Dr. Thorne Thorne, Dr. Henderson, Mr. Long, and Mr. Shirley Murphy, took part.

THE CORPORATION OF BRIGHTON AND THE "LANCET."

THE solicitors of the corporation of Brighton have formally announced their intention of abandoning the legal proceedings, which they some time ago commenced against the *Lancet* for its remarks on the unsanitary condition of the sewerage of the town. In announcing this to our contemporary, they make a handsome acknowledgment of the fairness of spirit which has led it to publish in full the whole of Dr. Richardson's recent report. We are glad to hear that a stop has been put to what at one time threatened to be a very disagreeable contention. Our contemporary, no doubt, believed that it was performing an important public duty in making the remarks which have caused so much heart-burning; but even if these have, in some respects, gone beyond the mark, it will have the satisfaction of knowing that they have acted as a wholesome stimulant to the sanitary authorities of Brighton. We congratulate our contemporary that no harm comes to it from the dispute, and we hope that much good may come to Brighton from the agitation which it has caused.

SCOTLAND.

ASYLUM MANAGEMENT.

WE are pleased to observe that, at the meeting of the Montrose Asylum Board held on Tuesday, it was resolved, after adequate discussion, to raise the income of the medical superintendent, Dr. Howden, from £700 to £850 *per annum*.

ROYAL HOSPITAL FOR SICK CHILDREN.

DURING the month of October, 118 patients were treated in the Royal Sick Children's Hospital, Edinburgh. There were 61 new admissions during that time. In the out-door department, 581 were treated in the dispensary, while 28 were vaccinated. Mr. H. Melville Dunlop, M.B., has been appointed resident physician in place of Mr. Skene Keith, M.B., whose term of office has expired.

THE FEVER EPIDEMIC AT JOHNSTONE.

WITH the view of arresting this epidemic, to which reference was made in last week's JOURNAL, it has been decided to insist on the closure of the different schools in the burgh; and it is to be hoped that the School Board authorities will see their way to comply with this request of the inhabitants, especially as it has the support of the local medical men, as well as of Dr. Russell of Glasgow. It is also satisfactory to note that, under the circumstances, the sanitary authorities are making special exertions to limit the spread of the disease.

GLASGOW SICK CHILDREN'S HOSPITAL.

CONSIDERABLE progress has been made with this institution, and all the work in connection with its furnishing and equipment are so far advanced, that it is expected the hospital will be opened before the close of the year. At a meeting of the directors held on the 1st instant, the election of the medical staff took place, when the following appointments were made. Physicians, Professor Leishman and Dr. Finlayson; Extra-Physician, Dr. Gemmell; Surgeons, Drs. William MacEwen and H. C. Cameron; Extra-Surgeon, Dr. J. W. Fleming; Pathologist, Dr. Joseph Coats; Oculist, Dr. Thomas Reid; Aurist, Dr. Thomas Barr; Dentist, Mr. Rees Price.

THE GLASGOW UNIVERSITY GENERAL COUNCIL.

THE ordinary half-yearly meeting of this body was held on the 1st instant. The chief business was the consideration of the report of the Committee on the subject of Entrance Examinations. With a few minor alterations, the scheme submitted was adopted, a recommendation, however, being added, that the examination in time be made compulsory to all entrants. At present, the examination is only to apply to students under seventeen years of age, and to those attending classes with a view to receiving a public certificate. Those who have matriculated, and are enrolled in classes merely for the purposes of instruction, and have no intention of proceeding to the degree, will be at present exempt from any entrance examination.

ROYAL MEDICAL SOCIETY, EDINBURGH.

THE Royal Medical Society of Edinburgh has entered on the one hundred and forty-fifth session of its useful existence; and on Friday, November 3rd, the session was inaugurated by an opening address delivered by Professor Grainger Stewart. In his address, Dr. Stewart referred to many points of interest and importance to his audience, especially the advantages they possessed in their University, Infirmary, and Royal Medical Society. Mr. R. Mackenzie Johnston, M.B., Senior President, occupied the chair, and there was a good muster of members of the Society, and a good attendance of students and of the profession.

THE HEALTH OF GLASGOW.

THE report of the medical officer of health for the fortnight ending October 28th states that there were 469 deaths registered, representing a death-rate of 24 per 1,000 living. This is the same as the rate in the preceding fortnight. Considerable discussion is still going on as to the merits of the proposed Police Bill for Glasgow, and not the least severely handled are the sanitary clauses, a short statement of which appeared in the JOURNAL of October 28th. The points which seem to call forth most opposition are the powers sought for removing persons from infected houses to corporation reception houses, and the removal of dead bodies to mortuaries, in those cases where an apartment cannot be set apart exclusively for the body awaiting interment. We are sure that the authorities would never have asked for these powers unless a sad experience had shown their necessity, and the public may rest assured that no uncalled for invasion of their rights as citizens is aimed at.

REGISTRAR-GENERAL'S RETURNS.

THE returns of the Registrar-General for the week ending October 28th, shows that the death-rate in the eight principal towns was 21.4 per 1000 of estimated population. This rate is 0.2 below that for the corresponding week of last year, but 1.7 above that for the previous week of the present year. The lowest mortality was recorded in Perth—viz., 13.8 per 1000; and the highest in Paisley—viz., 25.7 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 3.8 per 1000, or 0.3 below the rate for the previous week. Acute diseases of the chest caused 113 deaths, or 5 more than the number registered during the previous week. The mean temperature was 43.0°, being 5.2° below that of the week immediately preceding, and 0.2° below that of the corresponding week of last year.

UNIVERSITY OF ABERDEEN.

THE following is a copy of the resolution of the Senatus of the university concerning the retirement of Professor Pirrie: "The Senatus, having received intimation of the resignation of Dr. Pirrie, resolves to enter upon its records an expression of deep regret at losing, through infirm health, the services of one who has filled so long one of the most important chairs with honour and success, reflecting distinction on the university, and contributing greatly, by his professional eminence, to the growing success of the Medical School, of which he has

been for a long period the distinguished head. The Senatus deems it right also to record very grateful remembrance of the notable service which he was recently instrumental in rendering to the University in connection with the founding of the Erasmus Wilson Chair of Pathological Anatomy, as a striking proof of that zeal which, at all times, animated both his public efforts and his private influence in promoting the interests of our Medical School, and generally of the University, of which that school has now become a branch so prominent and influential."

THE ACTION AGAINST GREENOCK DOCTORS.

SOME time ago, an action was raised in the Greenock Sheriff Court against Drs. Cluckie and Dobie, for £500 damages for having caused the death of a child while under chloroform, in Greenock Infirmary. The case came up for trial on the 2nd instant, and at the conclusion of the proof, and after witnesses had been heard, the judge, without calling on the defender's counsel, at once gave an oral judgment in favour of the medical men. In the course of his remarks he pointed out that it was quite clear that every reasonable care had been taken, that the nature of the required operation (removal of a tumour from the orbit), and the necessity for the use of chloroform, had been pointed out to the parents, and that no blame had been brought home to either Dr. Cluckie or Dr. Dobie in the slightest degree. It must be some satisfaction to these gentlemen, while suffering under the anxiety attending this unwarrantable attack on their professional skill, to have this public expression on the part of the judge of the propriety of their conduct; and one gratifying feature in connection with the case was the very hearty manner in which leading members of the profession in the West of Scotland came forward to give their evidence in favour of their professional brethren.

THE GLASGOW INAUGURAL ADDRESSES.

FOLLOWING closely on the formal opening of the winter session at the University, the other Glasgow medical schools have had their opening addresses. At Anderson's College, Dr. Christie, and at the Western Medical School, Dr. McVail, were the speakers; and they both chose for their subject intramural and extramural teaching, dwelling on the history of it, and its advantages to all concerned. At the Royal Infirmary, the chief interest centred in the inauguration of the new buildings, which have been erected in connection with the school of medicine attached to the hospital. The Lord Provost of Glasgow presided at the opening ceremony, and in the course of an excellent address pointed out that, with the western Infirmary and the University at the one end of the city, and the Royal Infirmary and this new medical school at the other, a spirit of friendly rivalry would spring up which would ultimately, he thought, benefit both institutions. Dr. Ebenezer Watson afterwards addressed the students, the substance of his remarks consisting of sound advice as to the line of conduct to be pursued in their studies, and the great advantages of cultivating the *maxima in modo* in the exercise of their professional duties. In the evening a conversazione was given in the buildings, when, on the invitation of the lecturers, about 300 medical practitioners and students were present; and there was a very general feeling expressed as to the admirable manner in which the different parts of the structure had been arranged for meeting the requirements of a medical school. The anatomical department may be specially mentioned as leaving nothing to be desired.

UNIVERSITY OF EDINBURGH: RECTORIAL ADDRESS.

ON Sunday last, the Rector of Edinburgh University, Lord Rosebery, delivered his address to the students of the University. Owing to the want of sufficient accommodation within the walls of either of the University buildings, the meeting was held in the United Presbyterian Synod Hall, Castle Terrace. Over two thousand students were present; who, during the time they had to wait previously to the address, amused themselves in the somewhat meaningless and childish fashion common

to such occasions. The Chancellor of the University, Lord Inglis, presided; and on the platform with him were Principal Sir Alexander Grant, the Senatus Academicus, the assistants to the professors, curators, etc. The degree of LL.D. was conferred on Lord Rosebery and various other noblemen and gentlemen considered worthy of the distinction. Thereafter, Lord Rosebery delivered his address. In the beginning, he referred gracefully and at some length to the late Sir Robert Christison, who had been his opponent for the rectorial chair; after which, selecting patriotism as the theme of his address, he spoke for an hour, dealing with his subject in such a manner as makes the speech well worth reading. He was listened to with attention during the greater part of the time he was speaking. Occasionally there was interruption, however, when the susceptibilities of any section were specially roused. The peroration was splendidly delivered and thoroughly appreciated and applauded, and altogether the address must be looked upon as a decided success. The usual procession in the evening followed; and it is to be regretted that students will, by their conduct, encourage the public to consider them as equally blamable with the roughs who invariably associate themselves with the students in the riotous proceedings that too frequently occur on such occasions.

IRELAND.

SUDDEN DEATH OF A MEDICAL MAN.

ON the morning of October 6th, Dr. Henry, Medical Officer of the Stewartstown Dispensary District, while in the act of washing himself, dropped suddenly to the floor, and expired in a few moments. He had been in delicate health for some time; but was, nevertheless, able to attend to his various duties. An inquest was held on the remains, and a verdict of "Death from disease of the heart" was returned.

ADVERTISEMENTS OF MEDICAL BOOKS.

FOLLOWING in the steps recently taken by the Royal College of Physicians in London, the Irish College has adopted, and ordered to be published, the following resolution: "That the advertisement of medical works in other than medical publications, and the giving by any of the licentiates, members, or fellows of the College, whether for publication or not, laudatory certificates of medicinal or other preparations, or of medical or surgical appliances, is misleading to the public, derogatory to the dignity of the profession, and is censurable by the college."

HEALTH OF DUBLIN: QUARTERLY REPORT.

DURING the quarter ended September 30th, the births registered in the Dublin Registration District amounted to 2,434, being equal to an annual ratio of 1 in 35.8, or 28.0 in every 1,000. The deaths numbered 2,007, affording an annual ratio of 1 in 43.4, or 23.0 per 1,000; omitting the deaths (50) of persons admitted into public institutions from localities outside the district, the rate was 22.5. Zymotic diseases caused 281 deaths, being 3 over the number for the preceding quarter, but 180, or 39 per cent., under the average for the third quarter of the ten years 1872-81. Of these, measles caused 14, scarlet fever 11, diphtheria 9, fever 51, and diarrhoea and dysentery 134. There were 227 deaths in children due to convulsions, while phthisis caused 279 deaths: diseases of the respiratory system 260; bronchitis 162; pneumonia 52; and croup 15. Forty deaths were ascribed to apoplexy, 11 to epilepsy, 40 to liver-disease, 97 to diseases of the circulatory system, and 29 to diseases of the urinary organs. The mean of the weekly temperature for the quarter was 55.7°; and the rainfall during the thirteen weeks measured 9.42 inches.

THE ROTUNDA LYING-IN HOSPITAL.

DR. LOMBE AITCHILL's seven years' term of office, as Master of this hospital, having expired on the 3rd instant, a general meeting of the governors of the hospital was held on that day to appoint his successor.

On the motion of the Right Hon. Mr. Justice Lawson, Arthur V. Macan, M.B., M.A.O. Dubl., Fellow and ex-Censor of the King and Queen's College of Physicians in Ireland, was unanimously elected Master of the hospital for the ensuing term of seven years. Dr. Macan is Lecturer on Midwifery in the Carmichael College of Medicine, and Gynaecologist to the City of Dublin Hospital. He has made his mark already as a scientific and educated practitioner in his speciality; and is known to possess, in a marked degree, those other qualities of tact, energy, and power of organisation, which have made Dr. Atthill's mastership a success in the history of the hospital. The following well-deserved and complimentary resolution, with reference to the ex-master, was unanimously adopted: "That we, the board of governors of the Rotunda Lying-in Hospital, on Dr. Lombe Atthill's retirement this day from the office of master of our hospital, hereby tender him our very best thanks for the great attention, care, and distinguished skill he has given and displayed in the said office during the last seven years; and we most warmly congratulate him on the high state of efficiency in which he leaves the hospital, and on the marked success he has achieved in maintaining it as a medical school equal, if not superior, to any other of its class in Europe."

HEALTH OF BELFAST.

DURING the four weeks ending the 21st ultimo, the births registered amounted to 536, and the deaths 401, showing a natural increase of 125 individuals. During this period, 99 cases of zymotic disease were registered as fatal, which included 2 from small-pox and 11 from fever. Phthisis caused 40 deaths, and diseases of the respiratory organs 68, making a total of 108 fatal cases of lung-disease. There has been a considerable increase in the return of zymotic diseases amongst the class of dispensary applicants, and an increased mortality from some of these affections in all classes of the community; yet it cannot be urged that any epidemic in a severe form has prevailed, though the mortality from measles, scarlatina, and diarrhoea, has been above the average. The cases of small-pox removed to hospital occurred in a few houses closely adjoining each other, and where there was constant intercourse among the residents. At first, these cases were concealed from the sanitary authorities; but as soon as the fresh outbreak was discovered, every precaution was adopted to limit and prevent the spread of the infection; and Dr. Browne, superintendent medical officer of health, does not dread any reappearance of the late epidemic.

THE ACADEMY OF MEDICINE.

THE draft scheme for the amalgamation of existing medical societies of Dublin under the above title was brought up for report, and finally approved and adopted last Saturday. The scheme had previously been subject to a good deal of revision at several well attended meetings of members of the different societies, and much interest was shown in the consideration of the proposed rules. The Obstetrical Society has withdrawn itself from the amalgamation, but we trust only temporarily, especially as some of its most distinguished and active members are strongly in favour of joining the Academy, and will do so in any case. The title of the Academy itself was the source of considerable discussion. At the instance of some members of the Surgical Society, and, greatly to the umbrage of the Obstetrical Society, it was resolved, at the first meeting, to add the words "and Surgery" to the title as originally fixed. This addition, however, was removed at the next meeting, after a long debate, by a large majority, on the motion of the Professor of Surgery in the Royal College of Surgeons (Mr. Stokes), seconded by the Professor of Surgery in the University of Dublin (Dr. Bennett), on the broad ground that "medicine" included surgery as well as the other more special branches of the profession. There are to be three grades in the Academy—Fellows, Members, and Student Associates. The proceedings will be conducted in four sections—Medicine, Surgery, Pathology, and Obstetrics—each meeting once a month, on Fridays, during the session; with two subsections—Anatomy and Physiology, and State Medicine. Each section is to have a president and council

of ten members, and each subsection a chairman. The sectional councils are each to send two of their members (one of the two being the sectional secretary), in addition to their president, as their representatives on the General Council, by which body the Academy is to be directed. The president of the Academy is to be elected by a general meeting, and is to hold office for three years. The presidents of the Colleges of Physicians and Surgeons for the time being are to be the presidents of the medical and surgical sections. The presidents of the obstetrical and pathological sections are to be elected by the Fellows at the annual general meeting. It is proposed to publish a volume of *Transactions*, consisting of such communications made to the Academy as the General Council may deem suitable for publication. A general meeting will be held on Saturday next, the 18th instant, to elect the officers of the Academy. Pending this, the usual meetings of the societies in November will not be held.

CERTIFICATES IN SANITARY SCIENCE.

As recently announced, the King and Queen's College of Physicians in Ireland have adopted regulations for granting a certificate in sanitary science to such Licentiates of the College as shall succeed in passing the prescribed examination. Stated examinations are to be held quarterly, in January, April, July, and October. The fee for the examination is five guineas, which will not be returned to a candidate if rejected. The examination comprises the following subjects. 1. *Engineering*: including Hospital and House Construction; Sewage; Drainage; Ventilation; Water-Supply; 2. *Law*: The Acts relating to Public Health; Duties of Health-Officers; 3. *Etiology and Prevention of Disease*: Epidemiology; Contagion; Infection; Hereditary Influence; Accommodation and Conveyance of the Sick; Management of Hospitals; 4. *Chemistry*: Air; Water; Food; 5. (A) *Meteorology and Climatology*; (v) *Vital Statistics*. Certain books on each of these subjects are recommended. The examination will be conducted by five printed papers. Each paper is to have three questions on one of the above five subjects. One hour is allotted for the answering of each paper. The candidates will also be examined in the analytical chemistry of air, water, and food. The examination is to be conducted by five examiners; three of whom will be selected from the censors and additional examiners of the College, with one examiner in sanitary engineering, and one in sanitary law. Notice of the intention of the College to appoint an examiner in each of the latter subjects, at its next (December) meeting, has been announced; and candidates are requested to send in their applications to the Registrar.

BANQUET TO THE MEDICAL OFFICERS OF THE EGYPTIAN EXPEDITION.

A MEETING of subscribers to the Invitation Fund was held, by permission, at the Royal College of Physicians, on Monday last, the 6th instant. There were present Sir W. Jenner, Bart., Mr. Spencer Wells, Mr. Aikin, Dr. R. Barnes, Sir J. R. Bennett, Dr. Bristowe, Dr. Cholmeley, Dr. Andrew Clark, Mr. G. Cowell, Mr. G. Eastes, Mr. Erichsen, Dr. Wilson Fox, Mr. Ernest Hart, Mr. Lister, Dr. R. Martin, Mr. F. Mason, Dr. H. Monro, Mr. John Morgan, Sir J. Paget, Bart., Dr. F. W. Pavy, Dr. Pitman, Dr. W. H. Platt, Dr. Quain, Dr. Russell Reynolds, and Dr. C. B. Sewell. Sir W. Jenner, Bart., was unanimously requested to take the chair, and presided.

Sir J. PAGET moved, "That a banquet of welcome be given, at the earliest convenient date, to all the medical officers who have recently served in the Egyptian expedition, in recognition of their gallant services." Mr. HART seconded the proposition, which was carried unanimously.

Dr. WILSON FOX and Mr. ERICHSEN respectively proposed and seconded the following resolution, which was carried unanimously: "That the following gentlemen now present (names given above) do form a committee for the purpose of carrying out this object, with power to add to their number; and that Sir James Paget, Bart., be requested to act as chairman of the committee."

Dr. ANDREW CLARK proposed, and Mr. LISTER seconded the proposal, "That the following gentlemen be requested to act as a Dinner Committee to arrange the details of the banquet, and to report to the General Committee, if it seem advisable; viz., Sir W. Jenner, Sir J. Paget, the Honorary Treasurer, and the Honorary Secretary,

ex officio: Mr. Hart, Chairman of Dinner Committee; Dr. T. Bridgewater, Dr. Cholmeley, Dr. A. Clark, Dr. Farquharson, M.P., Sir J. Fayrer, Mr. Cooper Forster, Dr. J. G. Glover, Mr. P. Hewett, Mr. Lister, Mr. John Marshall, Dr. W. M. Ord, Dr. Quain, and Mr. Sibley; with power to add to their number." This resolution was unanimously adopted.

Dr. QUAIN proposed, and Sir J. R. BENNETT seconded the proposal, "That Mr. Spencer Wells be requested to act as Honorary Treasurer, and Mr. George Eastes, M.B., as Honorary Secretary to the banquet." This resolution was carried unanimously.

Dr. R. BARNES proposed, and Dr. CHOLMELEY seconded the proposition, "That Sir W. Jenner, Bart., President of the Royal College of Physicians, be requested to take the chair at the banquet; and that the invitations be issued in his name and that of the Committee." This proposal was unanimously adopted.

Sir J. PAGET proposed, and Dr. RUSSELL REYNOLDS seconded the proposition, "That medical men only take part in the banquet, except as guests." This resolution was unanimously carried.

Dr. PITMAN proposed, and Mr. F. MASON seconded the proposition, "That all the medical officers of the Egyptian expedition, with any other gentlemen whom the Dinner Committee may consider it desirable to ask, be invited to the banquet." This proposal was carried unanimously.

Mr. SPENCER WELLS proposed, and Dr. R. MARTIN seconded the proposal, "That the best thanks of this meeting be and are hereby given to Sir W. Jenner for the use of this room, and for kindly presiding on the occasion." This resolution was unanimously adopted.

At a meeting of the Dinner Committee, held on Wednesday, the 8th instant, it was resolved that the banquet take place on Tuesday, November 21st, at Willis's Rooms, King Street, St. James's. The price of the dinner-ticket is 30s. All applications for places at the banquet must be made to Mr. George Eastes, M.B., 69, Connaught Street, Hyde Park, London, W.; and notice is hereby given that, "the number of places being necessarily limited, applications will be attended to in the order in which they are received." The following sums have been subscribed to the Invitation Fund.

	£	s.	d.		£	s.	d.
Sir Wm. Jenner, Bart..	2	2	0	Dr. C. Holman	1	1	0
Mr. Spencer Wells	2	2	0	Mr. Timothy Holmes...	1	1	0
Dr. H. W. Acland	2	2	0	Mr. J. W. Hulke	2	2	0
Mr. W. Adams	2	2	0	Dr. G. M. Humphry ...	2	2	0
Mr. C. A. Aikin	2	2	0	Mr. Jonathan Hutchin-			
Dr. James Andrew	2	2	0	son	2	2	0
Dr. R. Barnes	2	2	0	Dr. George Johnson ...	2	2	0
Mr. R. Barwell	1	1	0	Mr. Sydney Jones	2	2	0
Sir J. R. Bennett	1	1	0	Sir Trevor Lawrence,			
Mr. W. Bowman	2	2	0	Bart., M.P.	2	2	0
Dr. J. S. Bristowe	1	1	0	Mr. Joseph Lister	2	2	0
Dr. W. H. Broadbent..	2	2	0	Dr. Robert Martin	2	2	0
Dr. T. Bridgewater	2	2	0	Sir W. Mac Cormac ...	1	1	0
Mr. T. Bryant	2	2	0	Mr. Francis Mason	2	2	0
Dr. W. B. Cheadle	1	1	0	Mr. John Marshall	2	2	0
Dr. W. Cholmeley	1	1	0	Dr. H. Monro	2	2	0
Dr. Andrew Clark	2	2	0	Mr. John Morgan	2	2	0
Mr. O. Clayton	2	2	0	Dr. R. N. Mitchell	2	2	0
Mr. W. White Cooper...	1	1	0	Mr. T. W. Nunn	2	2	0
Mr. G. Cowell	2	2	0	Dr. W. M. Ord	2	2	0
Mr. John Croft	1	1	0	Sir James Paget, Bart..	2	2	0
Dr. L. T. Cumberbatch	2	2	0	Dr. F. W. Pavy	2	2	0
Mr. T. B. Curling	2	2	0	Dr. W. S. Playfair	2	2	0
Sir J. Fayrer	2	2	0	Dr. H. A. Pitman	2	2	0
Dr. J. Matthews Duncan	2	2	0	Dr. W. H. Platt	1	1	0
Mr. A. E. Durham	2	2	0	Mr. Henry Power	2	2	0
Mr. S. Eastes	1	1	0	Dr. W. O. Priestley ...	2	2	0
Mr. J. E. Erichsen	2	2	0	Dr. R. Quain	2	2	0
Mr. J. Cooper Forster..	2	2	0	Dr. G. Owen Rees	2	2	0
Dr. Wilson Fox	2	2	0	Dr. J. Russell Reynolds	2	2	0
Mr. W. Fuller	1	1	0	Mr. E. Saunders	2	2	0
Mr. E. H. Galton	1	1	0	Mr. W. S. Savory	2	2	0
Mr. John Gay	2	2	0	Dr. C. B. Sewell	2	2	0
Surgeon-General Dr. G.				Dr. A. B. Shepherd ...	2	2	0
A. Gordon	1	1	0	Mr. S. W. Sibley	2	2	0
Sir W. W. Gull, Bart..	2	2	0	Sir Henry Thompson...	2	2	0
Dr. S. O. Habershon	2	2	0	Dr. James Wakley	2	2	0
Mr. Ernest Hart	2	2	0	Dr. S. Wilks	1	1	0
Mr. Christopher Heath	2	2	0	Sir Erasmus Wilson ...	2	2	0
Mr. Prescott Hewett	2	2	0	Mr. John Wood	2	2	0

THE EGYPTIAN EXPEDITION.

The correspondent of the *Standard* telegraphs from Cairo on Tuesday, that the health of the troops is causing great anxiety to the military authorities. The present is perhaps the worst time of year in Egypt. The sharp alterations of temperature night and day, and the dampness of the atmosphere caused by the wide extent of mud left bare by the sinking of the Nile level, render the climate of Cairo exceedingly dangerous. Moreover, the camps are situated so far from the town that the soldiers very seldom have the opportunity of such change and recreation as would be afforded by visits to it, but are condemned to the monotony of tent life, at a season when it is dark for twelve hours out of the twenty-four. The result is an alarming increase of sickness. The largest hospital, that at Abassayeh, which makes up four hundred beds, is now always full, the fresh admissions averaging forty a day, and indeed the vacancies created by death, invaliding home, and discharges, are more than filled up. The chief maladies are intermittent fever, dysentery, and typhoid. From the latter cause six deaths occurred last Sunday alone. The sickness does not spare the horses, and the Cavalry are suffering severely from an epidemic form of anthrax fever. It has been, therefore, decided to remove the greater part of the artillery and cavalry to Helouan sulphur baths, a health-resort in the desert fourteen miles from Cairo.

The entries into hospital from the time of the landing at Ismailia to October 25th, out of a total of 25,092 officers and men, were 462 wounded, and 7,038 sick. The returns of the Cairo hospitals for November 7th, show that there were 832 patients, chiefly suffering from enteric fever. The list of deaths from the 3rd to the 7th, both inclusive, shows 15, nine from enteric fever, two from dysentery, one from diarrhoea, and the remainder from other causes.

THE FRENCH ARMY MEDICAL DEPARTMENT.

A NOMINAL roll of the medical officers of the French army actually on service on the 30th ultimo has just been published in the *Revue des Médecins des Armées*. The list shows that there were on that date on active employ, 1 médecin inspecteur-général; 8 médecins inspecteurs; 40 médecins principaux of the first class; 42 médecins principaux of the second class; 279 médecins-majors of the first class; 340 médecins-majors of the second class; 386 médecins aides-majors of the first class; and 108 médecins aides-majors of the second class. This gives a total of 1,204 medical officers of different grades. The full number allowed for the medical service is 1,394 officers, so that there was a deficiency on the date named of 190 officers. The vacancies are shown to be chiefly in the ranks of the médecins-majors of the first and second classes. The two lowest grades are complete in their numbers.

INTRODUCTORY ADDRESSES AT THE MEDICAL SCHOOLS IN DUBLIN.

THE ADELAIDE HOSPITAL.

THE session at this institution was inaugurated by an address from Mr. KENDAL FRANKS, surgeon to the hospital. In the course of some preliminary remarks to the students, he said: "In the hospital, you learn to deal with disease in the numerous forms in which it presents itself, without responsibility. Hereafter, when you are qualified, if you have been an idler, deaf to advice, and neglectful of opportunities, you will find your hands paralysed by a sense of that responsibility of which the physicians and surgeons of this hospital relieve you now. In offering this advice, I am conscious that there are many listening to me who have put it in practice, and who will soon be fitted, like those who have already passed out from among us into the world, to carry the fame of the Adelaide Hospital far beyond the limits of this island. If you would prosper in your profession, if you would do the greatest amount of good in it, you must make yourselves fitted to the best of your abilities to undertake its duties. The doctrine of evolution will prove correct in your case. The fittest will survive. The idler and the incompetent will eventually go to the wall, or must rest satisfied at best with the humbler spheres of work. The men in the past who raised themselves to highest eminence, were not the men whom Fortune bore along on her fickle bosom; they were men who worked hard, and spared no toil to climb the ladder, and, step by step, they gained each rung, till they had reached the highest. This is the way you also must rise. Fortune often favours the brave, but, to benefit by her favour, you must ever be ready to avail yourself of it when the opportunity occurs." The remainder of the address consisted of an able résumé

of the literature of the germ-theory. Mr. Franks brought forward most of the facts relating to this subject which have already appeared in these columns, and have furnished materials for so many addresses, in Dublin as well as elsewhere.

CATHOLIC UNIVERSITY SCHOOL OF MEDICINE.

THERE was no formal introductory address delivered this session, but Mr. Coppinger, the Dean of the Medical Faculty, in commencing the course of lectures on physiology, briefly addressed the students, calling their attention to the growing importance of this subject, and to the alterations and improvements that have recently been made for its teaching in the school, including a new histological laboratory, etc. The lecturer alluded to the large number of students present who were preparing for the examinations of the Royal University, and said: "This medical school has always formed an important part of the Catholic University; but it, happily, has never suffered from the overwhelming disabilities which have pressed on the other portions of that institution. Although its students could never attain the higher medical titles conferred by universities, they could always obtain the licences of the Colleges of Physicians and Surgeons in Ireland and elsewhere; and they, in this circumstance, possessed a great advantage over their brother the unlucky student in arts, who, after years of labour, found himself debarred from any degree, and, of course, from those professional and other privileges which a registrable degree gives to its possessor. With respect to our future prospects, the institution of the Royal University has thrown open to all of you those higher degrees, exhibitions, and prizes, from which you have been so long unjustly excluded. It was instituted for your benefit, and the benefit of those of your co-religionists who were prevented, by conscientious objections, from availing themselves of other existing institutions. We make no claim for anything more than equality with those against whom we are engaged in friendly rivalry; but it ought not to be forgotten that, as this institution represents the most important professional school of the Catholic University, it can fairly claim not alone the recognition which it has earned, and which it possesses, but the same advantages and endowments enjoyed by the professional schools of other and rival institutions."

MATER MISERICORDIÆ HOSPITAL.

MR. HUGH KENNEDY, Assistant-Surgeon of the Hospital, delivered the inaugural address in this institution. Starting with the well worn aphorism that anatomy and physiology form the great groundwork and basis of all medical and surgical knowledge, and are inseparable elements in the study of disease, he proceeded to display in detail the exceptional opportunities afforded for such study in the Mater Misericordiæ Hospital, and the unrivalled teaching capacities of individual members of its staff. He gave the junior member for Dublin the credit of rejecting "a Bill that, if once made law, would compel us to become the public informants of domestic affliction, and would destroy the confidential relations that exist between patients and their doctors." He also expressed the opinion that the State would hardly enact a law to enforce a violation of such solemn confidence, and did not think that it was "within the power or right of the State to compel a gentleman over whom it could have no control (?) to reveal a knowledge acquired under such exceptional and trying circumstances." He compared the prejudice at present existing in regard to vivisection with the prejudice and superstition of an age when to touch the dead body was considered a profanation. In conclusion, Mr. Kennedy called upon the students not to neglect the eminent advantages afforded them in that hospital. They could have in it, he said, everything that can stimulate and gratify the greatest thirst for medical and surgical knowledge, everything that the lover of medicine and surgery can covet and desire. They would have opportunities, also, of becoming moralists and philanthropists, and learn the lesson of disinterestedness from the religious ladies who conducted it.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE address introductory to the winter session of the school of this College was delivered by Dr. A. H. JACOB, Professor of Ophthalmic and Auricular Surgery in the College. Mr. J. K. BARTON, President of the College, occupied the chair; and the President of the King and Queen's College of Physicians and a large number of visitors were present. Dr. Jacob stated, with commendable pride, that this was the first occasion on which he had the honour to assume in its entirety the mantle of his worthy and well-beloved father. That day they inaugurated the last session of the hundredth year since the foundation of the

College; and, moreover, upon that day was to be opened the new school of anatomy attached to the College. The College had a few days ago initiated the first examination held under its new system, which they looked forward to as a regenerative step. Legislation was also impending, of which no one could tell the results, but which was fraught with the highest importance to the College and to surgery in general. He proceeded to give a sketch of the progress which had been made in Irish surgery from the time of Henry VI, when barbers and surgeons—women also being included—were incorporated as a society by charter. In 1776, an Act was passed for the establishment of county infirmaries in Ireland; and, four years later, a most important step was taken by the establishment of the Dublin Society of Surgeons; but it had no worthier habitation than the Elephant Tavern in Essex Street. It, however, laid the first stepping-stone for the advancement of surgery, which found its culmination in the new school they to-day inaugurated. One of the first acts of this Society was the passing of a resolution praying for a Royal charter to dissolve the disgraceful union between surgeons and barbers. The society laboured without ceasing for the establishment of an incorporated college; and on February 11th, 1784, the original charter of the Royal College of Surgeons was granted. It was not until the year 1805 that the building now occupied by the College was commenced; the Government having contributed, within a few years, a sum total of £35,000 for its construction and that of the lecture-theatre and old school. A museum and library were established by the College out of its own funds in 1835. In 1844, a supplemental charter was obtained, transferring the power and authority of the College from the Censors and Members to its Fellows. The last act of the College had been to establish a new scheme of educational examination, the purpose of which had been to subdivide the students' education into four parts—preliminary, preparatory, primary, and practical. Their recognition of the intermediate education system would place the College within the reach of everyone. Henceforth it would be open to the young student, having been examined in the country, to come up with his certificate and enter upon the College training; and at the end of each year there would be examinations for those who thought they had qualified themselves. The new school which had been established would provide the professors with a dissecting-room, would contain a physiological laboratory second to none, and a chemical laboratory in which they might perform the necessary practical work of chemistry.

THE RICHMOND, HARDWICKE, AND WHITWORTH HOSPITALS.

MR. WILLIAM THOMSON, Surgeon to these Hospitals, delivered the introductory address. He referred to the distinctions recently gained by former pupils of the Hospitals, and to the loss they and medical science had sustained by the death of Dr. Reuben J. Harvey. He pointed out that a surgeon, in order to be successful, must be a trained physician as well. Not that he meant to say surgery held a secondary position; on the contrary, he believed it had far outstripped medicine. They could now cut out a larynx and supply a new one; they could remove portions of the stomach and intestines; they could excise the kidneys; they could open the thorax by removing portions of the ribs, and wash out abscess-cavities; they could make an artificial mouth in the stomach, and feed the patient through it. But they must have the patient in the most favorable condition for operating. The science of sanitation had helped to reduce the death-rate in operations. The lecturer entered into an elaborate vindication of the value of Lister's antiseptic surgical treatment, especially in large and crowded hospitals, which are the most liable to contamination with the germs of disease, and gave statistics to show how much it had reduced the death-rate in operations; and, in conclusion, said the schools of medicine and surgery in Dublin to-day were in no sense inferior to anything that had gone before. Its physicians were as able, its surgeons as bold and dexterous, and its teachers as profound at least as they had been at any time in their history. Very lately (JOURNAL, September 30th, 1882, p. 612), a comparison had been drawn between the men of to-day and those of thirty years ago; and he need not say that the judgment had not been flattering to Dublin. He repudiated, with all the energy he could, the statement that the teaching in that city was degenerating. He did not dissent from any eulogium upon the dead past; but he did dissent from the miserable doctrine that with it had been buried all genius and power, and that for them there only remained an inheritance of commonplace capacity.

ST. VINCENT'S HOSPITAL.

DR. QUINLAN, in opening the session at this hospital, selected as the subject of his address "Recent Researches upon Infective Zymotic

New Member.—Dr. Thomas Jackson, of Whitehaven, was elected a member.

President-elect.—The Secretary having reported that Dr. Robertson of Penrith, whilst thanking the Branch for the honour of electing him President, begged to decline, it was moved by Dr. BARNES, and seconded by Dr. L'ANSON: "That the election of President for next year be deferred until the spring meeting, and also that the place of the annual meeting be then reconsidered." This was carried unanimously.

Spring Meeting.—It was moved by Dr. BARNES, and seconded by Dr. SPURIS: "That it be a recommendation from this meeting to the Council of the Branch, that the spring meeting be held in the evening at Carlisle, in February." This was carried unanimously.

Discussion.—Dr. MACLAREN then introduced a discussion on "The Treatment of recent Wounds," in which most of the members present joined.

Papers.—The following papers were then read:

1. *On the Treatment of Malignant Ulceration of the Tongue.* By H. A. LEDIARD, M.D.—After briefly alluding to the operations for removal of the tongue practised by Regnoli, Syme, Fergusson, Nunneley, Paget, Sédillet, Collis, Buchanan, Morratt Baker, Trendelenburg, and others, he dwelt upon and recommended the method introduced by Whitehead of Manchester, as an operation likely to be generally adopted. One entire tongue, removed in February 1881, was shown. The patient, a man aged sixty-nine, died in fourteen hours from shock. One-half of another patient's tongue was also exhibited, the operation having been performed with scissors also; on October 17th, the patient was convalescent. Dr. Lediard concluded by urging a trial of Whitehead's method in such cases of malignant disease of the tongue, if the surgeon could depend upon his eyes and fingers, and on the ability of those who afford the assistance required.

2. *On the Abuse of Narcotics.* By HENRY BARNES, M.D.—After referring to the great increase in the number of those who habitually misuse narcotic drugs, reference was made to the provisions of the Pharmacy Act of 1868 which regulate the sale of poisons, and the dangerous facilities which exist for obtaining enormous quantities of highly poisonous drugs were pointed out. It was shown that the narcotic habit may very quickly set up, and the necessity for watching the uses to which prescriptions may be put was indicated. Examples were given in which large quantities of narcotics had been obtained. The morphia habit was also discussed in some detail, and its symptoms described. A case was reported, in which a patient had purchased very large quantities of chlorodyne, a patent preparation which has been proved by analysis to contain morphia, prussic acid, and chloroform, and which has been supposed to contain also Indian hemp and belladonna, the presence of which has been inferred from the physiological symptoms which it produces. The necessity for placing restrictions on the sale of all patent remedies that contain poisonous ingredients was pointed out, and the action of the Parliamentary Bills Committee in regard to this matter was strongly approved.

Dr. BARNES then made an explanatory statement of the work of the Committee for the Collective Investigation of Disease.

Dinner.—The members afterwards dined together; Dr. Knight in the chair, Dr. L'Anson in the vice-chair.

STAFFORDSHIRE BRANCH: ANNUAL MEETING.

THE ninth annual meeting of this Branch was held on Thursday, October 26th, 1882, at the Bell Medical Library, Cleveland Road, Wolverhampton. Dr. Arlidge, in the absence of the president, Mr. J. K. Wynne, introduced the president-elect, Dr. TOTHERICK, who took the chair.

Letters were read from Mr. Ernest Hart, the chairman of the Parliamentary Bills Committee, Mr. Vose Solomon, and Mr. Ernest Elkington, of Newport.

Vote of Thanks.—Mr. WESTON proposed: "That the best thanks of meeting be given to the retiring president, Mr. J. K. Wynne, for his services during the past year." This was seconded by Dr. LYCETT, and carried unanimously.

President's Address.—The PRESIDENT delivered an address upon "The Relations of the Medical Profession to the Public." On the motion of Dr. MILLINGTON, seconded by Mr. SPANTON, a cordial vote of thanks was passed to Dr. Totherick for his address.

New Members.—The following gentlemen were elected members of the Branch: Dr. Gibson, Stone; Mr. E. T. Collins, Wednesbury; Mr. R. W. Collings, Wolverhampton; Dr. Hatton, North Staffordshire Infirmary; Mr. R. J. W. Orton, Newcastle; Mr. J. P. Edwards, Tunstall; Dr. Malet, Wolverhampton.

Report of Council.—Mr. VINCENT JACKSON read the annual report, as follows.

"Your Council has to report that the usual number of general meetings has been held during the year; and at two, in addition to the purely professional subjects detailed and discussed, important debates have taken place upon, on the one hand 'The relations existing between homœopaths and the Association,' and on the other hand, 'The Journal of the Association.' Both debates were concluded by resolutions, which were sent to the secretary of the Association for presentation to the Committee of Council. The discussion on the first subject was initiated by a letter which was received from the South Western Branch, asking the Branch to record its opinion upon two resolutions which had lately been passed by the members of that Branch. Not only did this Branch affirm these resolutions, but they unanimously passed an additional one, requesting the Committee of Council to put in force by-law 3 of the Association, 'with regard to those who practise homœopathy whether such persons have been admitted members of the Association prior to, or subsequent to their profession and practise of homœopathy.' The President of the Council, in a lengthy reply to the above resolution, informed the Branch that in the present state of divided professional opinion on the homœopathic question, the Committee of Council felt themselves unable to do anything in the matter. At the last general meeting of this Branch, communications were read from the Collective Investigation Committee of the Association. These were referred to the Branch Council for consideration, and at a special meeting of the Council, held at Stafford on July 6th, it was unanimously agreed to ask the following gentlemen to become members of a local Collective Investigation Subcommittee, viz., Dr. Arlidge, Dr. Cooke, Mr. Gray, Dr. W. G. Lowe, Dr. McAldowie, Dr. Malet, Dr. Monckton, Dr. McMunn, Mr. Vincent Jackson, Mr. Phillips, Dr. Reid, Mr. Sharp, Dr. Totherick, and Dr. J. H. Tylecote. Your Council beg to thank these gentlemen for their ready acceptance of increased duties, and they trust that their labours may be rewarded by great and beneficial results. The following petitions, after being signed, have been presented to the House of Commons: a petition in favour of Officers' Superannuation (Ireland) Bill; a petition praying for exemption from the proposed increase of the tax on carriages; a petition in favour of militia surgeons being allowed a retiring allowance upon resignation. Your Council desires to thank Mr. A. S. Hill, Q.C., and Mr. H. H. Fowler, for their kindness in presenting these petitions. The following members have, by their contributions at the various meetings earned the thanks of your Council: Mr. J. G. U. West, Mr. Alcock, Mr. Spanton, Dr. Orton, Dr. Monckton, Mr. Folker, Dr. Reid, Dr. McAldowie, Dr. J. H. Tylecote, Mr. L. Tait, Mr. Edgar Flinn, and Mr. Vincent Jackson. The number of members, sixteen being new, is now 131, being a gain of eight upon last year's total."

The adoption of the report was moved by Mr. NEWNHAM, seconded by Dr. McAldowie, and carried.

Financial Statement.—Mr. SPANTON, in the absence of Mr. J. G. U. West, Financial Secretary, and of Mr. Folker, Auditor, read the statement of accounts for the past year, which showed a balance of £24 1s. 5d.

Next Annual Meeting.—Dr. ARLIDGE proposed that the next annual meeting be held at Stoke-upon-Trent. This was seconded by Mr. BUNCH, and agreed to.

Election of Officers for 1882-83.—The following were elected. *President-elect:* Dr. C. Orton. *Vice-Presidents:* Mr. W. H. Folker, Mr. J. K. Wynne. *General Secretary:* Mr. Vincent Jackson. *Financial Secretary:* Mr. J. G. U. West. *Auditor:* Mr. Folker. *Representatives of the Branch upon the Parliamentary Bills Committee:* Dr. C. Orton, Mr. Spanton. *Council:* Dr. Arlidge, Stoke; Mr. Boltero, Penkridge; Dr. Reid, Stafford; Dr. E. Fernie, Stone; Mr. Gray, Cannock; Mr. H. M. Morgan, Lichfield; Dr. McAldowie, Stoke; Mr. J. T. Hartill, Willenhall; Dr. Millington, Wolverhampton; Mr. G. G. Sharp, Walsall; Mr. Mulville Thompson, Newport; Mr. J. W. Wolfenden, Tutbury. *Representatives in Council of the Association:* Dr. Arlidge, Stoke; Mr. J. Alcock, Burslem; Mr. W. H. Folker, Hanley; Dr. Monckton, Rugeley; Mr. W. D. Spanton, Hanley; Mr. F. E. Weston, Stafford.

Votes of Thanks were passed to the auditor and secretaries, on the proposition of Dr. TOTHERICK, seconded by Mr. J. Hartill.

Collective Investigation Committee.—Dr. Mahomed of London was present at the meeting, and explained the objects of the Collective Investigation Committee. He hoped that a large local committee would be formed, and that each member of the committee would use his influence with other medical men, so that as many reports as possible upon the four diseases at present selected for investigation might be obtained.

A Vote of Thanks to Dr. Mahomed for his address was proposed by Dr. TOTHERICK, seconded by Mr. MANBY, and carried with the utmost cordiality and unanimity.

Dinner.—The members dined together at the close of the meeting. The Mayor of Wolverhampton (H. C. Owen, Esq.), the Rev. J. T. Jelicock, rector of St. Peter's Church, and Dr. Mahomed, were present as guests.

CORRESPONDENCE.

TYPHOID AT VENTNOR?

SIR,—A charge of the most mischievous nature was brought on the 1st instant, in two of the London evening papers, against the sanitary state of Ventnor, by a Mr. W. J. Ebbett of London: that several (unspecified) cases of typhoid fever had occurred at Ventnor this autumn.

The allegations have naturally caused a sensation in the town, and terrorised intending visitors, of which I have two examples among my own distant friends. The medical practitioners have promptly confuted the general charge as to the prevalence of typhoid; but no one, so far, has analysed Mr. Ebbett's injurious communication, and replied *seriatim* to his statement of fact. Let me do this as briefly as possible in the ear of the faculty.

1. Mr. Ebbett states, that the outflow of the main sewage is "close to the shore"; 2, that "the sewage is seen at the outflow, at low tides"; 3, that said "outflow is near the pier" (a public promenade); 4, that it is "in proximity to the bathing-place".

If these four imputed facts were *truths*, no more serious indictment could be framed against the authorities of the town; but the facts are each of them untrue, and, in their combination, give a distorted colour to the whole case. 1. The outflow is *not* "close to the shore", but is carried far out into the flow of every tide-wave, at high or low water, at the instance of a sanitary engineer. 2. The sewage *cannot* be seen at the lowest possible tide. 3. The outflow is distant from the pier, on the *east* side of it. 4. The bathing-place is on the *west* side, at least a quarter of a mile distant.

So much for the discrepancy between facts and truths. One word of comment. I suppose there is not a town in the United Kingdom, of 5,000 inhabitants and upwards, where there are not one or more isolated cases of typhoid fever every year, be the situation littoral or inland; and so an isolated case may be at Ventnor. But this is no reason why the place should be blazoned and vilified as it has been. One of the local journals urges the authorities to institute legal proceedings against the libeller. If I might advise, I say No. Leave him to the slings and arrows of his own conscience; but let him understand that no remorse of conscience can atone for the gratuitous injury he has inflicted on this health-giving winter resort.—Yours truly,

CORNELIUS NICHOLSON, J.P. & D.L.

Ashleigh, Ventnor, November 5th, 1882.

SIR,—We, the undersigned medical practitioners in active practice in the town of Ventnor, can, from our personal knowledge, emphatically contradict Mr. W. J. Ebbett's statement made in the *Globe* of the 1st inst., and the *Standard* of to-day, to the effect that typhoid fever is or has been prevalent at Ventnor during any portion of the present year. We are able to aver that there is not a single case under treatment at the present time in the town.—We are, etc.,

J. G. SINCLAIR COCHILL, M.D., F.R.C.P. Edin.

JOHN L. WHITEHEAD, M.D.

JAMES M. WILLIAMSON, M.D.

WALTER A. HARVEY, M.B.

HORACE LOWTHER, L.R.C.P.

Ventnor, November 2nd, 1882.

SIR,—My attention has been called to a letter in the *Globe* of the 1st inst., and the *Standard* of to-day, in which a correspondent takes upon himself to state that typhoid fever is raging at Ventnor. My official position as Medical Officer of Health of Ventnor enables me to give an unqualified denial to such an assertion—the statement is false. My published report states that there were only three cases of typhoid fever in the town during the year 1881. Up to this day there have been only three cases under treatment this year; of these, two were imported—visitors who arrived with the disease fully developed; the third was that of a resident; all of these cases recovered. For the accuracy of this information I can vouch.

Were it not for the violence of the correspondent's letter, and the injustice he does to a town which in its sanitary arrangements can now,

as proved by my health statistics, vie with any town in the United Kingdom, I should have preferred allowing the calumny to die its own death.—I am, etc.,

E. RUSSELL WOODFORD, M.D., Medical Officer of Health.
Marboro' House, Ventnor, November 2nd, 1882.

MEDICAL EDUCATION.

SIR,—In his short letter to the *JOURNAL* of October 28th, Dr. Sawyer has called attention to a grave defect in the present system of medical education, viz., its failure to teach men to appreciate the significance of those general symptoms of disease visible to the naked eye, an acquaintance with which is universally admitted to constitute the first and most important step to the proper understanding of any particular case.

The natural result is, that men leave the hospitals utterly unfit for the duties of general practice, having studied almost everything but this—the most essential. No sooner does a patient present himself, than they rush at him with a stethoscope, or something of that sort, without having formed any previous idea as to the nature of the case; hoping, I suppose, that something will turn up in the course of their haphazard examination. In the art of interrogation they are equally deficient, generally asking pointless questions, and then jumping at hasty and erroneous conclusions. In short, they do not know how to observe or what to ask.

"It verily seems, I deliberately repeat," says Trousseau, "as if the medical intellect had been upset by Laënnec's discovery. Physicians rushed into excesses of physical inquiry; one would give the medical world his *petit bruit de souffle*, and another would point out some *nuance*, which had been neglected by the otherwise comprehensive genius of Laënnec."

In the midst of these excesses, we have forgotten that Hippocrates and his successors, more than 2,000 years ago, were able to discriminate and treat diseases with notable skill, the lack of modern developments of medical science notwithstanding. They regarded the phenomena of disease in their mutual bearings, in their order of succession; in short, as nature presents them, and not as so many artificial entities, having no actual existence, except in the imagination of certain persons, who think they can prescribe limits to natural phenomena by straight lines.

If medicine were a perfect science, no doubt we might proceed from theory to practice with something like mathematical certainty; but, in its present state of imperfection, the futility of such attempts must be admitted, and we ought to acknowledge more than we do the necessity for studying our profession otherwise than as the mere outcome of theoretical considerations.

There is, indeed, in the present system of medical education, much that is hypothetical, fallacious, and unsatisfactory. Possibly this may explain the remarkable fact in connection with medical examinations mentioned by Sydney Smith, that nearly all the subjects they embrace may be discarded immediately the ordeal is over, without the slightest detriment to any future professional prospects.

For my own part, I regard the unbridled licence so unwisely accorded to the present system of education by examination as a monstrous evil: since, instead of educated gentlemen, it tends to produce mere examination-passing machines, as well stuffed with pedantic learning to gratify the unreasonable demands of insatiable examiners, as Michaelmas geese with piquant seasoning, to suit the depraved tastes of confirmed gourmards. It seems to me high time to rouse the examiners from their sleep of complacency, and to inform them that great changes have taken place in the village of Falling Waters since they climbed up the Catskill Mountains, and that the aspirations of the rising generation can no longer be submitted to their unbridled caprice. Here is a fine field of activity for the British Medical or any other Association.—Yours, etc.,

October 30th, 1882.

W. ROGER WILLIAMS.

POST MORTEM EXAMINATION IN PRISONS.

SIR,—It may ease the minds of some prison medical officers if they read the following. I am medical officer to one of Her Majesty's prisons. Soon after the order was issued by the Home Secretary directing that *post mortem* examinations upon the bodies of all persons dying in prisons were to be made by independent medical men, I met the coroner (a lawyer), whose duty it is to examine into the cause of such deaths at the prison to which I am attached.

Without a word upon the subject from me, he told me he considered the order an insult to the medical officers of the prisons; and, after looking into the matter, he found that it was at the coroner's option as to whom he should direct to make a *post mortem* examination in such cases, and for his part, he always intended asking me to do so if he

thought one necessary. From this, it would seem that the order of the Home Secretary cannot take away the option of the coroner on the subject.—I remain, Sir, yours obediently,

A PRISON MEDICAL OFFICER.

THE USE OF OPIUM.

SIR.—As chairman of the meeting of the Medical Temperance Association referred to in your issue of September 23rd, p. 589, kindly allow me to point out that the therapeutic employment of opium was not under discussion. The resolution passed unanimously, condemned the "non-medicinal use of opium as injurious to health and happiness."—Your obedient servant,

NORMAN KERR, M.D.

42, Grove Road, Regent's Park, London, N.W.

SPECIAL CORRESPONDENCE.

BELFAST.

The Amalgamation of the Belfast Hospitals.

A PROPOSAL to amalgamate the various special hospitals in Belfast with the Royal Hospital, for medical education, was made by the committee of the Ulster Eye, Ear, and Throat Hospital at their last meeting, and has been favourably received by the local press, and by many interested in the efficiency of the Belfast Medical School.

It is urged by those friendly to this scheme, that a glaring defect exists in the clinical department of the Belfast Medical School, owing to the want of wards for the treatment of special diseases in the Royal Hospital. This institution, until recently, was the only one in Belfast: whose certificate was recognised by the Queen's University and the other licensing bodies. The new department of Midwifery and Gynecology, established in connection with the Ulster Hospital for Children, has been now recognised by the Royal University.

The Royal Hospital is principally devoted to the treatment of medical and surgical cases, and while no special wards were set apart for ophthalmology, or the diseases of women, yet cases of such kind were constantly treated in the hospital. Since, and even previously to, the establishment of the Queen's College in Belfast, the Royal Hospital has been doing the work of clinical teaching in connection with the school; and the success which has invariably attended the students of this school in the several public competitive examinations, is a sufficient guarantee of the manner in which that work has been performed.

However, besides this hospital, which contains 160 beds, there are in Belfast a number of other hospitals for the treatment of special diseases, having an aggregate bed-accommodation equal to that of the Royal Hospital, and presenting a field for clinical instruction which, if properly utilised, would be of immense advantage to the Belfast Medical School. There are six of these special hospitals in Belfast: two are for diseases of the eye and ear; two for diseases of children; one for the diseases of women; and a small lying-in hospital. It is not obligatory on the students to attend any of these hospitals; however, some do attend, and receive clinical instruction for a nominal fee. By the scheme of amalgamation, the Royal Hospital would be asked to refuse a certificate of attendance to a student unless he presented one for attendance at some or all of these special hospitals; or the Royal Hospital would be required to compel all students to pay a joint fee for all the hospitals, and then to distribute the excess over the present fee amongst the special hospitals, according to the work done or the arrangements made.

Such an arrangement would clearly be of no advantage to the Royal Hospital, and it is, therefore, not to be wondered at, if the committee decline to have tacked on to it a number of hospitals which have no educational recognition at all. But, on the other hand, it cannot be denied that by amalgamation an excellent field for instruction in special diseases would be thrown open to, and made compulsory on the students, which, though previously available, was only optional. There is no doubt that the demand by the public for men competent to deal with all forms of disease, is increasing. And, besides, we are of opinion that there is nothing better calculated to prevent the evil which specialism exercises in medicine, than a wide and thorough education in every branch of the profession.

However, the circumstances under which this system of clinical instruction is to be presented to the students of Belfast, make it doubtful whether it would really be of much advantage. Time is a very important consideration with medical students. If all these hospitals were within a small area, so that little or no time would be lost in passing from one to another, no one would for a moment hesitate, in the interests of students, to recommend amalgamation; but then they are scattered

over the town, some of them being as much as two miles apart from each other.

If a student attended faithfully to his lectures and dissections at the College—which, by the way, is also a considerable distance from any of the hospitals—he would scarcely be able to afford the time or physical energy required in order to fully gain the advantages of this extended scheme of hospital instruction. No doubt, arrangements might be made to meet this difficulty by limiting the course of instruction at the special hospitals.

Again, the existence of complete harmony between the staffs of the various hospitals and the committees would be essential to the success of the scheme. To those who know much of the management of hospitals, especially in towns of only moderate magnitude, it would appear too much to expect the continuance of friendly co-operation. There is always a certain amount of rivalry between hospitals supported by voluntary contribution, and their interests are not unfrequently antagonistic. However, such occurrences might not injuriously affect their educational arrangements. Want of unanimity and co-operation amongst the several medical staffs would be more likely to interfere with the success of the arrangement than anything else.

If the Royal Hospital consent to amalgamate, it ought to have some kind of control over these other hospitals and their arrangements for clinical instruction, as well as the appointment of men who would be willing and competent to teach.

These and other details connected with the scheme might occasion so much difficulty in its working as to render it altogether impracticable. But, notwithstanding all these objections to amalgamation, we are convinced that if no better counter scheme were proposed, it would be an improvement on the present scope of clinical teaching in Belfast. However, if special departments were established in connection with the Royal Hospital for Diseases of Eye and Ear, and Diseases of Women and Children, it would be more practicable and advantageous to the students. This, the Committee of the Royal Hospital purpose doing. Arrangements are in process of completion for the opening of two well equipped extern rooms for diseases of the eye and ear, and diseases of women. Bed accommodation will also be provided for these two departments, and competent men appointed for each. If this project be carried out, though it will not increase the bed accommodation for clinical instruction to the extent amalgamation would do, yet being under the same roof and management, it will offer facilities for education which ought to counterbalance this deficiency.

The easy access of these specialties to the students, and the opportunity which they will afford of studying ophthalmology and gynaecology not for one session only, but *pari passu* with medicine and surgery, are advantages which, as far as we can see, amalgamation could not supply.

ABERDEEN.

Opening of Medical Session.—Introductory Addresses by Professors Struthers, Stephenson, Stirling, and Hamilton—Munificent Donations for Medical Bursaries.—Emeritus Professor Pirrie.—Monument to the late Surgeon-Major Simpson.

THE medical session of this university commenced on November 1st, when there was a very large number of students present. There is no falling off in the attendance in any of the classes, and the number of beginners is quite up to, if it does not exceed, that of previous years.

Important changes have taken place in the professoriate since last session. Professor Pirrie has retired, after half a century's work of brilliant and successful teaching; and his place, as professor of surgery, is supplied by the appointment of Dr. Alexander Ogston. A new chair has been added, through the munificence of Sir Erasmus Wilson; and the first occupant thereof—Professor D. J. Hamilton—gave his introductory lecture on November 1st. Professor Hamilton referred, in graceful terms, to the munificence of Sir Erasmus Wilson; and afterwards gave a sketch of the bearings and relations of pathology—above all, making it clear that the time had now arrived when the professor of pathology ought to devote himself entirely to the duties of the chair: for only in this way can the subject be advanced, or successfully taught.

Professor Struthers, in opening the anatomical classes—which were crowded—alluded to medical bursaries, and gave some good advice to the students regarding medical education.

Professor Stirling gave a special lecture in the physiological class room on "Mental Evolution, and some Aspects of Physiology." In doing so, he discussed the two views regarding mind held by evolutionists—the two views as represented by Mr. Darwin and Mr. A. F. Wallace; particular reference being made to the question of mind in the lower animals, and to the development of the mind in infants. In this con-

nection he referred to the work of Mr. Darwin, Paine, and others, and to the most recent methodical work on the subject of infant psychology, by Professor Preyer of Jena. He also referred to the great loss which the university had sustained through the retirement of Professor Pirrie, and expressed the hope that he might long be spared to enjoy his well won leisure, and that Dr. Pirrie's long, intimate, and almost paternal connection with this university, might soon be signalled in some more tangible and enduring form.

There was a large muster of students at the preliminary examinations, which were held immediately before the commencement of the session.

The recently founded Marr and Watt Medical Bursaries will be competed for this session, and so will two of the Town Council bursaries.

Aberdeen medical students have to congratulate themselves that at last the tide seems to have set in for supplying them with bursaries. At a meeting of the senatus, on Saturday last, a letter was read, intimating that George Thompson (jun.), Esq. of Pitmiddden, had placed £6,000 at the disposal of the senatus, to found ten medical bursaries. This is the second large gift that this university has received for its medical school within the year. It will form a fitting compliment to the recent munificence of Sir Erasmus Wilson and the gift of the Messrs. Mars. In all, Aberdeen has received upwards of £18,000 for its medical school within the present year; £10,000 for a Chair of Pathological Anatomy from Sir Erasmus Wilson, and over £8,000 for medical bursaries.

At the same meeting of Senatus, it was agreed to engross in the minutes a fitting tribute to the valuable services which Emeritus Professor Pirrie had conferred on the university, both as one of its most successful professors, and also on account of his active interest and endeavours in securing for the university a Chair of Pathological Anatomy.

Professor Stephenson gave an introductory lecture on Thursday, and referred to the necessity of attaching two assistant-physicians to the Royal Infirmary, to the want of special wards for the treatment of diseases of women. He also suggested that the tenure of the office of physician and surgeon to the Royal Infirmary should be for a definite number of years, and thus to afford young men the opportunity of gaining hospital experience.

A handsome and very chaste tablet in white marble, and after the form of a partly unfolded scroll, has recently been erected in the vestibule of the Free Church, Kintore, bearing the following inscription: "Surgeon-Major John Simpson, H.M. 23rd Regiment, Bombay, N.L.I. Died at Sibi, Southern Afghanistan. In affectionate remembrance, this tablet is erected by his brother officers." Surgeon-Major Simpson was the fourth son of the late Dr. Robert Simpson, first minister of the Free Church at Kintore.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Thursday, November 2nd.

The Royal Commission on the Medical Acts.—Sir TREVOR LAWRENCE asked the Vice-President of the Council whether it was his intention to introduce a Bill to carry out the recommendations of the Royal Commission on the Medical Acts; and, if so, when.—Mr. MUNDRELL: The report of the Royal Commission is at present under consideration; but we have not arrived at that stage of our deliberations which enables me to inform the House of the nature of any legislation we may contemplate, or the order in which it will be taken.

The Army Medical Department.—Mr. FORT asked the Secretary of State for War whether, seeing that Sir W. Mends held the office of Director of Transports, Dr. Thomas Crawford that of Director-General of the Army Medical Department, and Mr. George Lawson that of Assistant-Director of Supplies and Transports, and are thus all officially connected with the departments which are alleged to have failed in properly carrying out their duties in the late war, it would not be more satisfactory if they appeared as witnesses before, rather than as members of, a committee appointed to inquire into matters so intimately connected with their own departments; and whether he was aware that there was a feeling abroad that, before a committee thus constituted, subordinate officers of the Transport and Medical Departments would be unlikely to give the requisite evidence.—Mr. CHILDERS: In

reply to my hon. and gallant friend, I have to state that Admiral Mends is Director of Naval Transports, and that the two other officers whom he names are correctly described; but that, as the main object of the committee is to improve the arrangements in certain respects of these departments, no one would be so fitted to take part in the inquiry as Dr. Crawford and Mr. Lawson. My hon. friend will remember that, besides these, the committee and its secretary comprise six gentlemen, four of whom are military officers. As to the last question, I cannot conceive that any such feeling could exist, inasmuch as the subordinates of these departments, so far from being complainants, will naturally look to their chief to see that they have fair play against attacks which have been made on them. I can only repeat that, having very well weighed all the circumstances, I am of opinion that the committee is a fair one, and that I cannot alter its constitution.—Mr. W. H. SMITH: I wish to ask whether there has been any suggestion of any failure of these departments from any quarter.—Mr. CHILDERS: I should not like to say that there has not been such a suggestion from any quarter. Some of the statements in the newspapers do touch remotely the transport service as regards the arrangements on transport ships. Admiral Mends is a most able administrator, and the service in connection with the present expedition has been beyond all praise.

Alleged Infection through Vaccine.—Mr. HORWOOD asked the President of the Local Government Board whether he had received further and complete information through the Foreign office from the French Government on the subject of the infection of fifty-eight soldiers of the 4th Zouave Regiment, to whom it was alleged that an infectious disease was communicated by vaccination with matter taken from Arab children; and whether he had any reason to doubt the correctness of the fact as reported in *Le Petit Colon* and the *Journal d'Hygiène* of Paris on June 30th and August 25th, 1881.—Mr. DONSON: I regret that I have not succeeded in obtaining any fresh information on the subject to which the question of my hon. friend relates, and it does not appear that the French Government have any in their possession. With regard to the alleged fact that the disease referred to was communicated by vaccination with vaccine matter, I am advised that the statement in the *Journal d'Hygiène* that two children served as vaccinifers for two hundred and eighty men; and that fifty-eight of these men—and it does not appear how many more—were operated upon with lymph from one single child, is so opposed to all experience of vaccination, that it cannot possibly be accepted. My hon. friend must, therefore, permit me to say that, so far from admitting the fact that the disease was communicated by vaccine matter, I cannot but entertain the gravest doubts on the subject, and the more especially as it is expressly mentioned that the children from whom the lymph was said to be taken were in excellent health.

Friday, November 3rd.

Scarlatina in Arklow.—In reply to Mr. W. CORBET, Mr. TREVILYAN said: I find that scarlatina did break out in the constabulary barrack at Arklow, and that two children died of the disease. The barrack is the most isolated building in the town. It has but one vacant wing, which, in consequence of the outbreak of scarlatina, has been occupied by the head constable's family. The medical attendant did not order the removal of the men's families from the barrack. The children were removed in accordance with the regulations of the force. Those affected were sent to hospital, while the remainder went with their parents into lodgings. The subinspector states that he is not aware that there was any consternation in the town, and that all the children had left the barrack before nine o'clock in the evening. The medical attendant did complain of Head Constable M'Coy for inviting the men to express dissatisfaction and want of confidence in the medical officer; but, while the Inspector-General considered that the head constable was wanting in discretion on the occasion, no censure or punishment was administered. The head constable's removal to Castle-reen, some time afterwards, was wholly unconnected with the question relative to the medical attendant. The Inspector-General informs me positively that there is no stoppage made from the men's pay for medical attendance; and I cannot see why inquiry on oath should be asked for.

Saturday, November 7th.

The Condition of Killeshandra.—The CHIEF SECRETARY, replying to Mr. BRIDGES, stated that the attention of the Local Government Board in Ireland had been on several occasions called to the unsatisfactory condition of the sanitary arrangements of the town of Killeshandra, county Cavan. There seemed to have been very unfavorable reports on the subject from the medical officer of health. The Local Government Board had frequently brought the matter under the notice of the local sanitary authorities, and they had referred it to a committee

to report. The Local Government Board had not yet seen the report of that committee; but, if they found that the sanitary authorities did not take rapid and efficient measures to remedy the evil, they would send down their own inspectors to make investigations and take such other steps as might be necessary.

Condemned Houses at Bristol.—Mr. S. MACLIVER asked the President of the Local Government Board if his attention had been called to the action of the sanitary authority at Bristol, in summoning the owners, chiefly working men, of seventy-four houses condemned by the medical officer of health, those houses having been erected on the strength of the official sanction to the plans; and whether such proceedings, without compensation to the owners of the property, were approved by the Board.—Mr. DODSON: I have communicated with the sanitary authority on the subject. I find that the medical officer of health has reported a number of houses as being unfit for human habitation, because they are built on low lands, which are liable to be flooded whenever there is an excess of rain. It is true that the houses have been built in accordance with plans submitted to the sanitary authority in pursuance of their by-laws; but when the plans were before the sanitary authority, they had only to consider whether the requirements of the by-laws were satisfied; and the by-laws referred to the structure of the buildings, and not to the fitness of the site. The sanitary authority, therefore, gave no approval to the site. The Local Government Board have no control over the sanitary authority in this matter; but the case will be brought before the Justices before the houses are closed, and it will, of course, be necessary to satisfy them that the houses are, in fact, unfit for habitation.

Importation of Drugs into Japan.—Mr. Alderman FOWLER asked the Under-Secretary of State for Foreign Affairs whether, referring to the answer he gave on August 6th, 1880, Her Majesty's Minister in Japan had been able to induce the Japanese Government to permit the importation of drugs and other chemicals into that country.—Sir C. DILKE: Her Majesty's Government are not aware there has been any interference with the importation of drugs and other chemicals into Japan other than medicinal opium. Restrictions are placed by the law of Japan on the sale of bad or spurious drugs, and they are submitted to an examination by the Board of Health before they can be sold to Japanese. Complaints were made in 1879, that certain drugs had been unfairly condemned; but since that time no further complaints have been received.

Thursday, November 9th.

Regimental Surgeons.—Sir HENRY FLETCHER asked the Secretary of State for War if he would consider the advisability of reverting to the old system of appointing regimental surgeons and assistant-surgeons to every regiment in Her Majesty's forces.—Mr. CHILDERS said: In reply to the hon. and gallant baronet, I have to remind him that the present arrangement of the medical service, commonly called the general, as opposed to the regimental system, was finally decided upon by the late Government when Lord Cranbrook was Secretary of State for War, so recently as in 1878. Lord Cranbrook's words were: "The regimental system has gone, and it would be impossible to re-establish it." If the general system should appear to me faulty, I shall not hesitate to reform it; but at this moment I have no intention to revert to arrangements so recently condemned.

Employment of Surgeons by the Irish Government.—Mr. HEALY asked the Chief Secretary to the Lord Lieutenant of Ireland, whether it was the custom to send experienced surgeons from the Castle to persons wounded in Ireland, whether by the police or from agrarian causes; if not, on what principle one was sent to attend to Mr. Shaen Carter, and out of what fund their fees were paid, supposing poverty on the patient's part.—Mr. TREVELYAN said, that in several cases during the last two or three years, eminent surgeons were employed by the Irish Government to attend upon persons in indigent circumstances, whether injured by the police or from agrarian causes, and paid out of the vote for law charges. He was informed that the charges were all of a moderate amount.

MILITARY AND NAVAL MEDICAL SERVICES.

HONORARY QUEEN'S CADETSHIPS.

We call attention to Mr. Childers's answer to a question by Dr. Lyons on this subject. The answer cannot be considered satisfactory: so further steps must be taken to remove the existing injustice.

"Medical officers, no matter how long or distinguished their services, are, as non-combatants, denied the privilege of obtaining honorary Queen's cadetships for their sons. Ten of these nominations are

allotted to combatants, and an invidious distinction is thus drawn between two classes of officer. (*Vide Army Circular*, August 1880, issued with General Order 113 of 1880.) Though these nominations confer no direct pecuniary advantage, inasmuch as the recipients have to pay the full charge at the Royal Military College, still, as they have only to score a limited number of marks to qualify for entrance, less outlay for military tutors is necessary, and, therefore, a material saving to the parents results. To remedy this hardship it would merely be necessary to grant to non-combatants a fair proportion of these nominations, leaving to combatants their present allowance of ten. Moreover, the public would not lose by this boon, the recipients having, as already stated, to pay the full charge at Sandhurst."

BRIGADE-SURGEON R. W. JACKSON, C.B.

A COMMUNICATION that has reached us from an influential member of the Army Medical Department, informs us that some of the surgeons-major and brigade-surgeons are apprehensive that the powerful recommendation of the late Commander of the Forces in Egypt for the promotion of Brigade-Surgeon R. W. Jackson, C.B., in his despatch from Cairo of September 24th, may give rise to an act which will be felt as one involving a great injustice to many officers who are now retired from the ranks of the department, as well as to many others who are still on active service. We do not think it at all likely that any such act of injustice will be done; but, as the apprehension exists, we think it right to call attention to the circumstances which are the source of it. It may at once be stated, that no exception is taken to the laudatory terms in which Sir Garnet Wolseley has spoken of the medical members of his personal staff. On the contrary, Brigade-Surgeon Jackson is admitted to deserve fully all that has been said of him, and to be, from his kind disposition and agreeable manners, a general favourite. It is only to his special promotion, in contravention of the distinct terms of the Royal Warrant, by which the Army Medical Department is at present governed, that exception is taken.

The facts are these. Paragraph No. 30 of the last Royal Warrant concerning the Army Medical Department lays down the following rule: "A medical officer of the rank of brigade-surgeon, surgeon-major, or surgeon, shall be placed on the retired list at the age of 55, and a surgeon-general, or deputy surgeon-general, at the age of 60 years." This rule has been applied in numerous instances. In each case, from the very day the medical officer has reached the age named in the rule, he has been taken from the active list of the department and placed on the roll of retired officers. Even in the instance of Surgeon-General Ker-Innes, who at the time he attained the age of 60 years was at the head of the medical department in India, and in the midst of conducting the medical affairs of the army in the field in Afghanistan, the rule was inexorably applied, although the Commander-in-Chief in India made an application at the time, we understand, that the existing arrangements should not be disturbed while the war lasted. Brigade-Surgeon Jackson, who entered the service in May 1854, and attained the rank of brigade-surgeon only last year, became 55 years of age on August 11th of the present year, and was, consequently, at that date placed on the retired list. Although he was on half-pay, however, Sir Garnet Wolseley took him out to Egypt on his staff as his personal medical attendant, and now seeks to have him rewarded by special promotion. This means that Brigade-Surgeon Jackson is to be promoted to be a Deputy Surgeon-General, although he has been placed on the retired list by the terms of the Royal Warrant, and to be brought back into the active service of the department. Sir Garnet Wolseley writes: "Brigade-Surgeon Jackson, C.B., who has seen service in all parts of the world, has, through the many wars he has taken part in, distinguished himself throughout by his coolness under fire, and in zeal as a medical officer. I would venture to recommend him for special promotion."

The injustice to which this would give rise, if it were done, is sufficiently obvious on the slightest reflection. Each executive medical officer who has been laid on the shelf simply because he had reached the age of 55 years, irrespectively of all consideration of his efficiency and of his previous services, would have a strong ground of complaint. Why should the rule, which was not applied to Brigade-Surgeon Jackson, be applied to him? Brigade-Surgeon Jackson, when he reached the age of 55 years, was nearly at the bottom of the list of brigade-surgeons. There were 41 brigade-surgeons above him. If he were now promoted to be Deputy Surgeon-General, as recommended by Sir Garnet Wolseley, he would pass over the heads of the whole of this number of medical officers. What would they think of such a step being taken? The injustice of such a proceeding would be

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Walter Leaf (Trinity), £100. The total amount of the fund is nearly £6,000.

UNIVERSITY OF OXFORD.

WAYNFLEETE PROFESSORSHIP OF PHYSIOLOGY.—The electors to this professorship give notice that they intend to proceed to the election of a professor in the present term. The Waynflete Professor of Physiology is to lecture and give instruction in Human and Comparative Physiology with Histology. He will be entitled to the emoluments which, by the statutes of Magdalen College, are appropriated to his professorship—viz., the annual sum of £600, and the proceeds (£200 per annum) of a Fellowship in the College attached to the Chair. The Professor will be subject to the statutes of the College so far as they may concern him, and to the statutes of the University; made or to be made, in reference to professorships in general, and to the Chair of Physiology in particular. Candidates are requested to send in their names and any papers which they may wish to submit to the electors to the Registrar of the University on or before the 18th of November.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Board of Examiners, on the 6th instant, and when eligible will be admitted to the pass examination.

Messrs. John Sykes, Henry Worsley, Lawson Gifford, Stanley M. Roome, Charles H. G. Brown, James E. A. Ferguson, students of the University of Edinburgh; Thomas G. Alexander, Robert R. Hunter, Mark Sharman, Henry H. Ballachee, of Glasgow; Edward Armitage, Richard P. Halliday, John O. Ward, of the Leeds School; William Graham, of the Dublin School; Alfred F. G. Watts, of the Cambridge School; Frank Woods, of St. Bartholomew's Hospital; John W. Crowther, of the Birmingham School; Alfred C. A. Houston, of the Sheffield School; and George E. Deamer, of University College.

Four candidates were referred to their anatomical and physiological studies for three months, and one candidate for six months.

The following gentlemen passed on the 7th instant.

Messrs. Oliver R. A. Julian, James R. Forrest, William J. Wordsworth, and Charles Downing, of St. Bartholomew's Hospital; Robert R. Giddings, George M. Reid, and Upendra Nath Mukerji, of the Edinburgh School; Thomas J. Davis, Thomas H. Sykes, and Thomas M. Angior, of Liverpool; Richard F. Castle, of the Cambridge School; Benjamin R. Johnston, of the Dublin School; Henry J. Butler, of the Leeds School; Leonard W. Burton, of St. Thomas's Hospital; and Frederick Brentnall, of the Manchester School.

Nine were referred for three months.

The following gentlemen passed on the 8th instant.

Messrs. Charles Strickland, Gerald S. Leggett, Robert H. Barrett, Frederick Sloman, students of St. Bartholomew's Hospital; Charles E. Brooke, of the University of Cambridge and St. Bartholomew's Hospital; Robert Denman and Richard G. Silverlock, of Guy's Hospital; John C. Michell, Stephen F. Smith, and Thomas G. Langhorne, of the London Hospital; Walter A. Dun, of Cincinnati; Alfred E. Woods, of St. George's Hospital; William F. Pridham and James E. Roney Grant, of St. Mary's Hospital; J. R. Abrahall Bennett, of University College; J. FitzWilliam Howitt, of the Toronto School; Middlesex Hospital; Thomas Leicester, of the Liverpool School and St. Thomas's Hospital; Arthur Prigg, of the Cambridge School and Charing Cross Hospital.

Six candidates were referred to their anatomical and physiological studies for three months.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 2nd, 1882.

Smith, Ebenezer Thomas Ayden, Abbey Street, Bermondsey.
Spencer, Walter, Doughty Street, W.C.
Statham, Reginald Whiteside, St. Peter's Rectory, Walworth.

The following gentlemen also on the same day passed their Primary Professional Examination.

Banfield, Harold William, London Hospital.
Buksh, Raheem, London Hospital.
Jollye, Arthur Dixon, Charing Cross Hospital.
Slader, George William Burgess, Guy's Hospital.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH.—**DOUBLE QUALIFICATION.**—The following gentlemen passed their first professional examination during the October sittings of the Examiners.

Albert William Beaumont, Cambridge; Samuel Aspinall, Blackburn; Thomas James Randolph Clarkson, Yorkshire; Herbert George Harold Clarkson, Yorkshire; Challoner Clay, Wiltshire; Thomas Alexander Papillon, Berkshire; Alfred Thomas Masters, Dorsetshire; William Griffith Evans, Cardiganshire; Edward Isdale Shields, St. Louis, U.S.A.; David Anderson, Dollar; Arthur Charles Turner, Derbyshire; Joseph Macnab, County Cork; Thomas

Kean, Galway; Henry Edward George Johnson, Liverpool; Herbert Heyworth Nelson, Lancashire; Thomas Patterson, County Donegal; David Mathewson Navin, Dundee; James Beattie, County Antrim; Smollett Samuel Clerk, Madras; James Donigan, Cork; Richard James Sadleir Wheeler, Clonakilly, Cork; Milton Romanis Callender, South Shields; Thomas Berkeley Martin, Sunderland; Duncan Clark, Argyllshire.

The following gentlemen passed their final examination, and were admitted L.R.C.P. Edinburgh and L.R.C.S. Edinburgh during October and November.

Thomas Ross, Sutherlandshire; John Steell, Poonah; James Munday, Poonah; John Cundell Wood, Sunderland; William Cody, Longford; Millice Culpin, Buntingford; Arthur Keess, Madras; William Waddell, Ballymena; John Foggie, Newcastle-on-Tyne; William Francis Fryer, County Carlow; Robert Griffith Roberts, Liverpool; Jeremiah O'Callaghan, Cork; Denis Scully, Tipperary; John Joseph Tisdall, Mullingar; Edmund Lewis Rowe, York; David Huey, Ballynaries; Henry Green, Manchester; Henry Horbury Preston, Manchester; William Holdsworth, Whitby; William Davidson, Motherwell; Samuel Frazer, County Down; William Stephen Johns, Wells, Norfolk; Daniel Rees Davies, London; Harry Cornelius Edwin Rogers, Plymouth; John Powell, South Wales; Robert Aloysius Hamilton Williams, Dungarvan; Richard Wagner, Poonah; Edwin Douglas, Edinburgh; George Cooper Harrison, Nottingham; James Ross Irwin, County Kerry; Samuel Mackay, Letterbratt; William Bedford Silverwood, Shelly, Huddersfield; John Beamish Hamilton, Drogheda; William Morrison Storrar, Aberdeenshire; Alexander Oswald Cowan Watson, Bombay; John Barfield Adams, Carmarthen; Charles Theodore Uvo Babst, Newcastle; William Carden Cousins, Ottawa; Michael Joseph Molony, County Tipperary; Edward Patrick Walsh, Coolnagour; Alexander Brown Murdoch, Elgin; Charles Joseph Blake, County Galway; John Lusk Torrens, County Kerry; Daniel Patrick Coady, County Kildare; Walter Frederick de Watteville, Berne, Switzerland; John Richard White, London; John Gorham, Clifden, County Galway.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—During the October sittings of the examiners, the following gentleman passed his first professional examination.

Joseph Henry Zepero, Trinidad.

The following gentlemen passed their final examination, and were admitted Licentiates of the College.

Alfred Edwin Schmidt, London; Frederick William Kirkham, Tilney, Norfolk; Howard Bennett Fletcher, Lincoln; John Mair Robertson, Galston; William Wilson, Edinburgh; John Logan, Milngavie; John Salter Gettings, Staffordshire; Walter Stannes Snell, Stonehouse, Devon; Creighton Hutchinson, Kilrea; John Robert Clark, Cobourg.

The following gentleman passed his first professional examination for the Licence in Dental Surgery of the College.

William Thomas Elliott, Diss.

The following gentlemen passed their final examination, and were admitted L.D.S.

Joseph Smithson Thomson, Dublin; Henry Blandy, Chesterfield; Hume Purdie, Alford.

ROYAL UNIVERSITY OF IRELAND.—At the Autumnal Examinations in the Faculty of Medicine, held recently, the following were the successful candidates for Degrees in Medicine and Surgery and for the Diplomas in Obstetrics.

Degree of M.D. Those marked thus (a) were declared qualified to present themselves at the Honour Examination.—(a) F. E. Adams, C. W. Allport, J. J. Austin, W. S. Barnes, T. G. Bell, (a) Thomas Cromie, Charles Heanen, (a) Mark Jackson, (a) Michael Kelly, (a) J. A. Lindsay, (a) J. M. Murray, (a) W. O'Keeffe, J. M. Prendergast, John Riordan, S. A. L. Swan, (a) Daniel White, (a) Charles H. Wise. **Lower Pass Division.**—H. E. Brown, A. B. Chambers, James Cooke, William Gibson, William Good, J. S. Graham, William Graham, William R. Hamilton, A. W. Hathorne, S. D. Henderson, James Henry, J. F. Hunter, R. J. Legge, J. M. Cambridge, Cornelius M'Dermott, L. S. M'Manus, R. H. Mathews, R. M. Moynan, J. Morrison Orr, R. Strafford Smith, James Wilson.

Degree of M.Ch.—M. H. Atock, J. J. Austin, W. S. Barnes, T. G. Bell, J. G. Black, A. B. Chambers, James Craig, Thomas Cromie, P. J. Galloway, W. Walter Gibson, H. A. Haines, Samuel Hamill, William R. Hamilton, A. W. Hawthorne, Charles Heanen, S. D. Henderson, James Henry, J. Alexander Lindsay, J. M. G. Lithgow, J. M. Cambridge, T. S. M'Connell, C. M'Dermott, J. R. M'Donnell, L. S. M'Manus, J. M. Murray, R. H. Mathews, L. D. Morell, R. M. Moynan, D. V. O'Connell, William O'Keeffe, J. M. Prendergast, John Riordan, G. A. Rountree, Daniel White, James Wilson, J. V. Young.

Diploma in Obstetrics.—F. E. Adams, C. W. Allport, A. B. Chambers, Thomas Cromie, William Gibson, H. A. Haines, R. W. S. Lyons, J. M. Murray, C. J. O'L. Maguire, R. H. Mathews, William O'Keeffe, J. Moran Prendergast, G. A. Rountree.

The following honours and exhibitions have been awarded by the Senate in the Faculty of Medicine.

M.D. Degree Examination.—First-Class Honours, Charles H. Wise; Second-Class Honours, J. M. Murray, F. E. Adams.

Second Examination in Medicine.—Exhibitions: First-Class, £40 each, James Chambers, Benjamin Hosford; Second-Class, £20, Thomas Grainger, John Kearney, R. B. Gorsuch. First-Class Honours, James Chambers, Benjamin Hosford; Second-Class Honours, Thomas Grainger, John Kearney, R. B. Gorsuch, James Morwood.

First Examination in Medicine.—Exhibitions: Second-Class, £15, T. R. Leonard. First-Class Honours, J. Wilson, T. D. Smith; Second-Class Honours, T. R. Leonard, W. E. M'Quitty.

HEALTH OF FOREIGN CITIES.—Statistics, published in the Registrar-General's last weekly return, show that the death-rate in the three principal Indian cities recently averaged 20.0 per 1000; it was equal to 26.3 in Calcutta, 27.1 in Bombay, and 35.0 in Madras. Small-pox caused 5 deaths in Madras, and fever mortality, excessive in each of these Indian cities, was proportionally greatest in Madras. According to the most recent weekly returns, the average annual death-rate per 1000 persons, estimated to be living in twenty-one of the largest European cities, was equal to 24.4; this rate exceeded by 3.1 the average rate last week in the twenty-eight large English towns. The death-rate in St. Petersburg was equal to 42.1, and showed an increase upon the declining rates in recent weeks; the 541 deaths in this city included 47 from diarrhoea and 24 from scarlet fever. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged only 17.3; it was but 14.1 in Christiania, while the highest rate was 18.5 in Stockholm, enteric fever causing 3 deaths both in Copenhagen and Stockholm. The Paris death-rate was equal to 23.1, showing a further decline from the rates in recent weeks; the fatal cases of typhoid fever, which had been 244 and 173 in the two previous weeks, further declined to 125 last week. The 31 deaths from diphtheria, however, showed a slight increase. The 144 deaths in London were equal to a rate of 18.2; one fatal case of small-pox was recorded. No return is published from Geneva. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 20.2, the highest being 21.8 in Amsterdam; small-pox caused 2 deaths in Rotterdam and 1 fever 2 in Amsterdam. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 24.0, and ranged from 19.7 and 21.7 in Hamburg and Vienna, to 28.4 and 20.0 in Breslau and Prague. Small-pox caused 5 deaths in Buda-Pesth, and diphtheria showed fatal cases in Vienna, Prague, and Berlin. In the five Italian cities the death-rate was 22.0, ranging from 17.0 in Milan to 27.7 in Naples and 31.7 in Venice; fatal cases of small-pox were 2 in Turin. In the four large American cities, the death-rate averaged 21.7, and ranged from 17.5 in New Orleans to 24.5 in New York. Small-pox caused 10 deaths in New Orleans and 12 in New York, Philadelphia

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopaedic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.....St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopaedic, 10 A.M.

THURSDAY.....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.

FRIDAY.....King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu, F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. W., 1.30; Tu, F., 12.30; Ear, Tu, F., 12.30; Skin, Tu., 12.30; Dental, Tu, Th, F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu, Th, S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th., 2; Throat, Th., 3; Dental, Tu, F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M, Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu, F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu, Th, S., 2; o.p., W. S., 9; Eye, Tu, W. Th, S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopaedic, F., 12.30; Dental, Tu, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu, F. S., 1; Obstetric, Tu, S., 1; o.p. Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopaedic, W., 2; Dental, Tu, S., 9; Th.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu, F., 9.30; o.p., Tu, F., 2; Eye, Tu, F., 9.15; Ear, M. Th., 2; Skin, Tu, Th., 1.30; Throat, M. Th., 1.45; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu, F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu, T, F., 1.30; Eye, M. Tu, Th, F., 2; Ear, S., 1.30; Skin, W., 1.45; S. 9.15; Throat, Th., 2.30; Dental W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu, F., 3; Eye, M. Th., 2.30; Ear, Tu, F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Dr. Richardson: On Ammoniated Chloroform as a Preservative of Animal Tissues. Mr. J. Knowles Thornton: Three Cases of successful Nephrectomy, with Remarks on Operation.

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Dr. Vacy Lyle of Durban: On the Endemic Hematuria of the South-east Coast of Africa. The paper will be illustrated by specimens of the Bilharzia Hematobia exhibited by Dr. Cobbold and Dr. Radcliffe Crocker. Mr. A. P. Thomas, M.A., of Oxford, will exhibit drawings and microscopic preparations, and make some remarks on his discovery of the Life-History of the Liver Fluke, and its introduction into the Bodies of Sheep. Dr. Cobbold will also exhibit specimens of the various forms of Fluke from Man, the Elephant, and the Giraffe. Flat and Nematoid Worms will be exhibited by Dr. Bastian, and illustrated with models and drawings by Professor Ray Lankester. Dr. Stephen Mackenzie will show the Filaria Sanguinis Hominis from Human Blood, and also from the Stomach of the Mosquito.

THURSDAY.—Harveian Society of London, 8.30 P.M. The Report of the Alcohol Committee. Dr. Francis: The Treatment of Neuralgia.

FRIDAY.—Society of Medical Officers of Health, 7.30 P.M. Mr. Rogers Field: Some of the less recognised but important points in the Drainage and Ventilation of Houses.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with Duplicate Copies.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

A MEDICAL BENEFIT SOCIETY.

SIR,—The British Medical Association has already done much for the profession; let it confer one more boon on its thousands of members by establishing a sick fund.

As medical officers to benefit societies, we have daily evidence of the advantages the labouring and artisan classes, Odd Fellows and Foresters, have over the poor professional man when disabled by illness. We can assure in life and accidental assurance offices, but how are many of us to weather an attack of prolonged illness? What is to become of us if permanently incapacitated? The organisation of the association is so complete, that but little difficulty would arise in working a medical benefit society, once it were fairly floated.

Every candidate for admission would have to be in sound health, and the annual subscription would depend on his age on entering. Will you, sir, do something to rouse us from our apathy on this subject, and cause us to direct a little of our hospital and dispensary fervour to ourselves?—Believe me, sir, your obedient servant,

G. J. MALCOLM SMITH, M.B. Edin.

Hurstpierpoint, October 30th, 1882.

SIR,—In answer to several gentlemen who have written to me on the above subject, I beg to say that I still adhere to my original statement, viz., that two guineas per annum would be sufficient subscription to allow a man £10 a week during an ordinary illness. I would certainly place a limit to the time a man is ill; but that, and all details, would have to be decided by a committee. As far as I can see, the thing could be easily worked, and divided into branches if necessary. The expenses would not be heavy. One gentleman suggested that the sick-pay should be in proportion to the amount of annual subscription. But I think it would be fairer to treat all alike; and if any can and would like to subscribe more, let it be placed to the "widows and orphans" branch, or "burial fund" branch.

I think, if the "club" were started, many of the leading consulting men (if not all), who have already feathered their nests, would swell the funds by being honorary members, and subscribing annually. There is no doubt that such an institution is badly wanted, and hundreds would be glad of the boon; and each branch would take care to elect such men that would look after the interests of the "club", and see that it was not abused.

Now, as to the question as to whether it would pay. Presume 1,000 men in one branch join, at £2 2s. a year; that makes a fund at once of £2,200. Suppose, out of that, 20 men (a large percentage?) are totally disabled for six weeks, that would draw £1,200, leaving them £1,000 in the funds. If this would not be enough for the expenses, I should imagine the club was being worked extravagantly. As regards myself, I think the importance of the club so great, that I would subscribe three or four guineas a year to it gladly. Hoping to see it soon in working order,

I am, faithfully yours,
Pill, near Bristol.

A. H. BOYS.

F. J. A. asks in what works, or from whom, he can ascertain the normal temperatures of the cow, rabbit, guinea-pig, frog, etc.

MEDICAL OFFICERS OF PRISONS.

SIR,—I enclose copy of two circulars sent to the governors of local prisons, which will show how little cause for satisfaction can be derived from the evasive letter to Sir Walter Eucharman from the Home Secretary.

Had I been able to attend the Worcester meeting of the Association, it was my intention to invite all prison medical officers, who could conveniently do so, to meet and quietly discuss the subject of these circulars.—I am, sir, your obedient servant,

"Circular 10,284.

Copy (61).

"Prison Department, Home Office, Whitehall, August 6th, 1881.

"Referring to clause 48 of the Prison Act 1865, Governors are requested, whenever an inquest is about to be held, to inquire of the Coroner whether a *post mortem* examination is to be made; and, if he should reply in the affirmative, to inform him that the Secretary of State wishes such examination to be made by a medical practitioner not connected with the Prison Service, and request him to give the necessary instruction to the person he may select to perform that duty.—(Signed) R. ANDERSON, Secretary."

"Circular 8998

Copy (129).

"Prison Department, Home Office, June 21st, 1882.

"With reference to my circular of August 6th, 1881, requesting Governors to inquire of the Coroner, whenever an inquest is about to be held, whether a *post mortem* examination is to be made, and, in the event of the reply being in the affirmative, to inform him that the Secretary of State wishes such examination to be made by a medical man unconnected with the Prison Service; the Commissioners wish to be assured that all coroners have, in every case, fully understood the Secretary of State's wishes in this matter; and I am to request that Governors will, for this purpose, put themselves in communication with the coroners in their several jurisdictions, and forward their replies when received.—(Signed) R. ANDERSON."

NOTES should consult the works of Drs. Sydney Ringer, Lauder Brunton, Royle, Thorowgood, and Whitla, for systematic information on the latest discoveries in therapeutics. All these works are issued by London publishers.

SYRUP OF PHOSPHATE OF IRON.

SIR,—If any of your readers should care to make syrup of phosphate of iron, I would suggest the following as the simplest and most economical plan. Place at the bottom of a beaker or flask a slip of platinum foil, and over it (say) two ounces of fine iron-wire; then pour in one pound of dilute phosphoric acid, *P. B.* Under the influence of the electric current excited, the equivalent of iron soon dissolves, and the action should be allowed to go on for a day or two, or until the formation of a light blue cloud shows that the acid has formed as much of the salt as it can hold in solution. Then filter through white blotting-paper, add one ounce more acid, twenty-four ounces of white sugar, and eight fluid-ounces of syrup of black-currants. This will make three pounds of a very pleasant non-styptic syrup, with an average dose of one teaspoonful, and costing altogether (without the platinum foil, which is, of course, untouched) but two shillings.

But to those who do not care to take this trouble, Hearne and Co., of 5, Coleman Street, London, will supply the syrup, *P. B.*, at 1s. 3d. per lb., or Parrish's Food at 1s. And now comes the question, Is the phosphate or the hypophosphite of iron really superior to the sulphate or the perchloride as a tonic? And, in the same dose and the same sweet vehicle, are they one whit the nicer or more "elegant" than those very vulgar salts?

To children or fastidious people, I give reduced iron, which is tasteless, and certainly not expensive; or the proto-sulphate in one or two grain doses, in syrup of black currants, which is very nice, and, as it costs but threepence per pound to make, cheap enough. And I see, moreover, plenty of roses in cheeks aforetime pallid and pasty to show that it is efficacious as well. Are we not rather overdone now-a-days with "elegant" preparations?—I am, etc., G. F. M.

MEDICAL PRACTICE IN PENDOCK, WORCESTERSHIRE.

SIR,—Kindly allow one who knows every yard of the country described by Mr. C. Trapnell, a word in reply to his letter; my opinion may be of some service to others. Mr. Boughton's residence at Staunton, in which I began my professional work, now many years ago, has been occupied by medical men for thirty years; and, so long as it continues to be tenanted by one who retains, as I am informed Mr. Boughton does, the confidence of the substantial people in the neighbourhood, the pecuniary prospects of a second practitioner ought, I think, to be very carefully considered. It is for Mr. Trapnell to show, which he has not yet done, that there exists within two or three miles of Pendock a sufficient number of substantial people anxious to change their medical man, who can guarantee a newcomer the most modest income, say £100 cash.

I quite agree with Mr. Trapnell that "work" could be found for another—in my time, there was often more than enough for two; but adequate remuneration for two is a very different matter. Perhaps, however, the general agricultural depression of the past few years has increased the number of wealthy people about Pendock. Will Mr. Trapnell kindly state the number of medical men, other than those who have practised at Staunton, who have set up in the parishes named by him within the past twenty years, and what has become of them?

Mr. Trapnell names parishes belonging to several unions, but does not state to which the fat living of £80 a year appertains, nor if it is now vacant. If it is, it might be well to know the reason why. However, if any enthusiastic tyro is on the look out for such an appointment, out of which he will have to keep a horse—perhaps two—and certainly to find medicine for paupers, in a proportion to the paying population quite astounding, and likes to spend five shillings to earn two, and to be persistently "neglected, and huffed and cuffed and disrespected," and worried and browbeaten, by those who are his social inferiors, dressed in a Poor-law guardian's "little brief authority," to such a medical modern job, I say, the neighbourhood in question is most eligible.—I am, sir, yours, etc., C. M. CAMPBELL, M.D.

Torquay, October 28th, 1882.

SIR,—I shall be glad if you will allow me a few lines in your valuable columns, to reply to a letter which appeared in your last edition. Mr. Trapnell has, in very flowing terms, advertised his residence at Pendock as suitable for a medical man, and has further thought fit to write a letter, which I think very misleading. He states that his late tenant held an appointment, which, he is informed, is worth from £70 to £80 per annum. He did hold this appointment for less than a twelvemonth; my brother has held it since, and during the twelve months ending Midsummer last it was worth £64 1s. Mr. Trapnell has very cleverly shown that, within a radius of five miles, a population of over 6,000 exists, but he has omitted to state that there are four medical men at Tewkesbury, three at Upton, and several at Newent, Ledbury, and Gloucester. If you take a radius of five miles from each of these places, you will, I think, find every parish included in the Pendock five miles radius in one or other of them, or so near to Mr. Boughton's residence at Staunton as to give a second man a bad chance.

I never heard before that Mr. Trapnell's house was on the main road from Gloucester to Ledbury; I always thought this road went through Staunton, Redmarley, etc.; neither do I think you can get to Great Malvern in seven miles by road; I always thought it over ten miles. Mr. Trapnell has also forgotten to say that the late tenant he mentions remained there a little over a year, and was then made bankrupt. I think this should be sufficient caution to any young man starting in a district like this in these impoverished agricultural times. I am sorry to trouble you at such length.—Yours obediently, A. W. ALLARD.

Tewkesbury, November 1st, 1882.

SIR,—I did not, nor do I now, accuse Mr. C. Trapnell of Clifton of intentional misrepresentation respecting his villa at Pendock, which he advertises in your columns as a promising centre for a medical man. My advertisement, which he reproduces in his letter in your paper of October 28th, was not intended as an attack upon him, but as a protection to myself, and a caution to my professional brethren. He believes in his villa as a medical centre; I do not; that is the point of contention between us.

I reside at Staunton, Worcestershire, two miles from Pendock. Staunton has been a medical centre for the last fifty years, a medical practitioner having been always resident there. To the north of Staunton, I practise in the parishes of Redmarley, Eldersfield, Corse Lawn, and Pendock. The boundaries of Redmarley are within three miles from the towns of Newent and Ledbury to the west, and adjoin Staunton to the east. The boundaries of Pendock lie about three miles from Upton to the north, and Tewkesbury to the east, while the southern boundary adjoins Eldersfield, and Eldersfield joins Staunton. The village of Chaceley is three miles from Tewkesbury; Fortampton is two miles from Tewkesbury. The Berron, Birtsmorton, Castlemorton, and the medical men of Upton. Although I am the only resident medical man, yet the professional men from Newent, Ledbury, Upton, and Tewkesbury, practise in these parishes.

Mr. Trapnell states that there are at least two parish appointments either exclusively attached to or connected with these villages. No doubt. And there are

medical officers holding them. He adds, "one worth £70 or £80 a year, and this was held by my late tenant, a medical man." All I can say is, that this appointment was held for several years by my father, Mr. J. H. Boughton of Tewkesbury, and is now held by Dr. Allard of that town; for about a year between, this appointment was in the hands of Mr. Trapnell's late tenant at Pendock. It is clear, therefore, that any practice which a man might get together working from this villa at Pendock, must necessarily be obtained by preying upon those of myself and others.

The populations are strictly agricultural. They are scattered, and the agricultural interest has been, as is well known, for several years, and yet continues to be, greatly depressed.

With regard to a very important point, the antecedents of this presumed centre, the following medical men have been in practice there during the last thirty years. Mr. Prior was the first; he was placed there by his brother, the late Mr. Prior of Tewkesbury, about the year 1847; he remained three years. After him, no medical practitioner was in residence for some years. A Mr. Davis then became tenant, and practised for two years. There was then no medical man residing at the villa and practising in Pendock for the long period of twenty years. Some time in 1879, a Dr. Batten took the villa and practised until the spring of 1881, when he removed from the scene. Since this, no medical man has been seen on the premises.

I may add (though it has no direct bearing on the matter) that, a few years ago, a medical man attempted to establish himself at Corse Lawn, and in a few months was "found drowned."

With regard to this remote locality being "a desirable place" for the treatment of "the mentally afflicted," this I leave, as I do "the Sedbury Hunt, which is not far distant," to be determined by those acquainted with such pursuits.—I am, sir, truly yours, W. E. BOUGHTON, L.R.C.S. Edin., L.S.A. Lond.

Staunton, Worcestershire, November 1st, 1882.

* * This correspondence must now cease.

THOUGHT-READING.

SIR,—You have taken up the subject of "Thought-reading"; so perhaps you will allow me very briefly to narrate some experiences which surpass, I think, those of any public exhibitor, such as Mr. Bishop or Mr. Cumberland. I have two young relatives, sisters, of the respective ages of 20 and 14. If the younger one be blindfolded and led out of the room, and if, in her absence, a number of persons mutually fix upon some act she shall perform, and of the specific or generic character of which she receives not the slightest hint, she will, on her return, under the silent influence of her sister, not fail once in fifty times to accomplish what has been determined. To give a few instances. A coin was secreted in a crevice of a piece of furniture; it was settled that she should advance to the furniture, go straight to the crevice, then find the coin, carry it to another part of the room, and place it inside a particular closed book. Again, she was to walk up to a certain gas-bracket and turn out the light. Again, she was to carry a footstool from one part of the room to another, then stand upon it, and raising her arm above her head touch a particular object, as a certain part of a chandelier. Again, she was to walk up to a solitary board, take up one particular ball, and deposit it in some particular place, or choose some particular photograph from an album, and do with it likewise; or, once more, go to a particular gentleman, feel in his waistcoat pocket, take thence a penknife, open it, walk to another part of the room, find there a parcel of books tied together, and cut the string. I might go on enumerating instances without end, did time and space permit. There has been difficulty in varying the experiments, so as never to set the same thing twice over. Now to produce these marvels, the only connection between the "thought-reader" and the thinker is either that practised by Stuart Cumberland, or by the elder sister placing her hands as lightly as possible one on each shoulder of the younger.

I do not wish to propound any theory to account for these phenomena, if such a scientific term be permitted me; but I would simply say that one explanation which will probably occur to some, viz., that a conscious or unconscious direction is given by pressure, cannot account for the various and diverse actions often embraced in a single feat, generally performed rapidly and without hesitation.—I am, sir, yours obediently, T. MORLEY ROOKE, M.D.

Cheltenham, October 17th, 1882.

ERRATUM.—In the JOURNAL of November 4th, page 917, column 2, line 5 from bottom, before "rheumatic fever," insert "rheumatism and".

WIESEN AND DAVOS PLATZ.

SIR,—It may be interesting to some of your readers to know that the weather at Davos and Wiesen has, up to the present time, been comparatively bad for these high stations. Much south wind (Föhn) has prevailed, bringing with it fogs, wet, snow, and rapid thaws. The winter season cannot be said to have yet commenced. As I pointed out elsewhere (*Davos Platz, and the Effects of High Altitudes on Phthisis*), intending visitors should make a short stay at half the altitude, remaining at Chûr for a few days, not only to avoid the sudden rise, but to be informed of the state of the weather existing at the upper stations. Acclimatisation to the bright, calm, and dry atmosphere of these health-resorts is not to be obtained by a residence during unsettled weather. It would be highly desirable if some reliable persons could, each season, inform intending visitors of the state of the weather before the latter start from England. This plan would avert not only disappointment, but the necessity of otherwise incurring a certain amount of risk.—I am, etc., ALFRED WISE, M.D.

Wiesen, Canton Grisons, Switzerland, October 30th, 1882.

AN OBSTETRIC QUESTION.

MR. W. E. WYLLYS (Great Yarmouth) writes that "Gironde," in his query in the JOURNAL of October 28th, does not mention the amount of distortion of his patient's pelvis. But, assuming it is not excessive, the induction of premature labour at the seventh month would undoubtedly be the proper course to advise and adopt. The risk and suffering to the mother would thus be reduced to the level of an ordinary accouchement, while there would be a good prospect of the survival of the child. The mere fact of the patient "dreading and abhorring" her labour would not justify the recommendation by her medical attendant of any further "precautionary measures." In a somewhat similar case, after twice performing craniotomy at full term, a patient of Mr. Wyllys consented to the induction of labour at the seventh month, which was easily and safely accomplished on two subsequent occasions, with the result, in one instance, of a living child, which did well.

M.D. advises "Gironde" to recommend his patient, who is incapable of giving birth to a child without considerable risk to her life, to abstain from "conjugal rights" for three days (Raciborski) prior to the expected catamenia, and ten days (Eischoff) after its cessation.

AN ADDRESS ON THE STUDY OF PATHOLOGY.

Delivered at the University of Aberdeen, Session 1882.

By D. J. HAMILTON, M.B., F.R.C.S.E., etc.,

Professor of Pathological Anatomy (the Sir Erasmus Wilson Chair), in the University of Aberdeen.

IT is usual, when delivering an inaugural address in connection with a professorial appointment, to commence by relating the past history of the Chair, and by sketching the lives of those who have been the present occupant's predecessors. On this occasion, however, these time-honoured customs are uncalled for, seeing that predecessors I have none, and as yet historical traditions have no had time to accumulate.

As regards the history of the foundation of the Chair, however, it will be incumbent upon me to say a few words, seeing that this is a subject upon which we all, as connected with this university, ought to be familiar. For many years past, the want of a Chair of Pathology has been much felt among those who had the interests of the university at heart. Hitherto, pathology has been taught, and has been well taught, so far as the circumstances would admit, not as a special subject, but simply as a part of the courses of physics, surgery, the institutes of medicine, obstetrics, and medical jurisprudence. It has not formed a separate branch in the medical curriculum. Of late, however, the subject has grown so rapidly, and has now assumed such colossal dimensions, that the necessity of teaching it separately, and in a systematic manner, has become more and more called for. The chief obstacle in the way of accomplishing this has been the procuring of an endowment: but, after several schemes had been proposed, the difficulty, as you all know, was solved by the munificent gift of £10,000 to this end by Sir Erasmus Wilson.

Sir Erasmus Wilson was the son of Dr. Wilson, a native of the parish of Gartly, about a mile from Huntly. His father was in the King's navy, and was educated in this university. At some period after this, however, he removed to London in order to be nearer his ship, and Sir Erasmus Wilson owes his medical education to the southern metropolis. It may be conjectured, however, that, like all true Scotchmen, Sir Erasmus Wilson had a warm side for his birthplace and scene of his early youth. Amidst the distractions of a large practice, and after the greater part of a life spent in London, he has not forgotten Aberdeenshire; and, in a princely manner, has done honour to the memory of his father by establishing the present Chair in the university where the latter received his education. There are few in the medical profession at the present day, whose pursuits present such a varied aspect, and whose career has been marked with such signal success. Commencing life as an anatomist, Sir Erasmus Wilson made this subject a specialty; and did much, by writing and otherwise, to advance its claims, and to make its teaching easy. You all know, I dare say, the *Vade Mecum*, *Dissector's Manual*, and *Anatomical Plates*, which bear his name; and I doubt not many of you have profited by their use. In the course of time, the founder of our Pathological Chair however, renounced his anatomical teaching to engage in the specialty—that of the diseases of the skin—with which his name medically is chiefly associated, and in which his world-wide reputation has been gained. The number of works which he has published on this subject is too great to be enumerated on the present occasion; but well worthy to be classical models to you in your study of this most important set of diseases. In the year 1869, he founded the Chair and established the Museum of Dermatology in the London College of Surgeons, and was appointed its first professor. The College of Surgeons has of late done him the further honour of electing him its president. One of the subjects on which Sir Erasmus Wilson is best popularly known is that of Egyptian archaeology. I need hardly remind you of the works he has published in this domain, and of the national benefit he has conferred by the transference of one of the Alexandrian obelisks to the banks of the Thames; and, lastly, although not least of his charitable gifts, is that of the new wing to the Margate Royal Sea-Bathing Infirmary, built at a cost of over £30,000. It is something for a man to leave money in bequests for educational and charitable purposes; but, when it is handed over as a gift during the life of the donor, it means a very great deal more; and, as such, the act demands correspondingly greater admiration. There is, however, always this to be remembered, that gifts made during a lifetime

for educational or charitable purposes, such as the present, reflect their reward in the pleasure afforded by watching the progress of the object which they are intended to foster. I trust that the founder of the Pathological Chair in this university may be able to visit Aberdeen before long, and that a band of ardent young pathologists will be ready to welcome him to the precincts of Marischal College.

The example set by Sir Erasmus Wilson might well be imitated by many outside the profession. Medical education in this country is sadly in want of support such as that afforded on the present occasion, for, while our Government will vote enormous sums to fit out expeditions to seek for the North Pole, and other such schemes, the subject of equipping medical men so as to render them competent for the responsible duties before them, seems to be a matter of second or third-rate importance. Seeing that it is the community at large who really gain by the higher education of their medical men, or rather, knowing as we all do that it is they who suffer by their blunders, one would think that, under the circumstances, it should be their direct interest to encourage a higher standard of proficiency by affording teaching bodies the means of rendering their instruction as comprehensive as possible.

There is another, however, who, in connection with the foundation of this Chair, must also be mentioned. I refer to Emeritus Professor Pirrie. It would ill become me to speak of the deserts of one whom you have had opportunities of knowing so much better than I; but, when I remind you that it is to the lifelong friendship which has existed between Professor Pirrie and Sir Erasmus Wilson that we possess the present Chair of Pathology, you will understand that the whole of us owe him a debt of gratitude. Natives of the same village, and steadfast friends when grown into manhood, they have borne into old age the freshness of a schoolboy friendship—a friendship which to us has been of the most material benefit. Retiring from office with the consciousness of a life well spent, of duties thoroughly performed, and with the feeling of having aided in doing a good act as a climax to an illustrious university career, it will be an additional comfort to Professor Pirrie to think that his name will be handed down to posterity as one of the fathers of the medical department of this University, and that the many generations of surgeons he has sent out into the world will cherish his memory with the kindest feelings. I am sure that I but reiterate the heartfelt wish of you all when I say that we trust to see him spared for many a day to give us his valuable counsel, and to watch the growth of the seedling which he has been instrumental in planting. We are also much indebted to others who have taken a warm interest in the founding of the Pathological Chair, and who from time to time have ventilated the question both in public and in private. You all know how strong the feeling of Professor Struthers has been in regard to it, and how, on every available occasion, he has impressed upon the profession and the public in general the urgent necessity which exists for the teaching of this subject. I trust that the wide experience he has had in matters of medical education, and the thoroughly sound views that he entertains in regard to it, will bear fruit in guiding us in making the teaching of pathology effective.

And now that the Chair has been founded, what are the objects we have in view; what is it that the subject of pathology is intended to teach? In former times, pathology was termed the theory of medicine. The foundations of its teaching were the various theoretical notions of the structure and mechanism of the animal body, held by different sects of speculative philosophers. Thus the humorists, solidists, methodists, and dogmatists represented different schools, each founding upon a hypothesis whose truth could not be experimentally demonstrated. It was not until the beginning of the 17th century that the curious notions of these speculative philosophers received their death-blow. Then it was that anatomy and physiology began to be systematically studied, scattering to the wind the theoretical notions of disease which had existed for the previous 2,000 years. The immortal Harvey had announced the facts of the circulation through the heart and larger blood-vessels (1628), and this was followed by the discovery of the capillary circulation by Malpighi (1661), and the fuller description of its phenomena a few years later by Leeuwenhoek (1674). The history of generation was also becoming a matter of inquiry. Men's eyes were, further, being opened to the great discoveries in other domains of natural science. Newton had imbued the philosophical world with a love of exact research. In Italy, a school of physicians, known as the *iatro-mathematici*, arose with Borelli (1669) as its chief supporter, who endeavoured to explain the functions of the body and action of remedies on the principles of mathematical and mechanical philosophy. The origin of animal heat was now referred to the friction of the circulating blood, the difference in secretions was explained by the proportional differences between the diameter, length, and curvature of

the secreting vessels, and by the size of the angles at which an artery left the main trunk. Digestion was attributed to the grinding action of the stomach; convulsions and pains to the tensions and vibrations of nerves. Although we now know that these ideas were in great part untrue, yet they formed a step in the right direction. The iatro-mathematicians, although they lacked the necessary preliminary knowledge to initiate such investigations, yet did much good by endeavouring to introduce exactitude into their work, and to build statements upon a basis of fact. Something like a definite foundation for a true system of pathology was at length obtained, when, the beginning of this century, Bichat and Bécclard divided the animal body into tissues, and when Schwann showed the cellular structure of these. It is from this epoch that all our modern pathology dates; and since then a host of investigators has arisen, whose labours have accumulated, and are accumulating, with such rapidity that the assimilation of all that is written on the subject has become by no means an easy task.

It will be clear to you, therefore, that the old definition of pathology as the "theory of medicine" is no longer compatible with the nature of its investigations, nor is it in keeping with the spirit of those who are engaged in pathological research. The old definition of pathology as the "theory of medicine" has therefore been discarded, and that of the "science of disease" has been substituted.

Pathology, or the Science of Disease, is, therefore, a young science. It has been begotten of previous investigations in normal anatomy and physiology. We are but on the threshold as yet, many of the facts already revealed being mere preliminaries in the elucidation of the problems which lie ungrasped before us. And in explanation of what I mean, I may here mention that the great aim which pathology as a science has in view at the present day, is the working out of the causes of disease. It is in this direction that the hills of difficulty lie; it is here that the great opportunities for original research exist. In illustration of the darkness which prevails in regard to the cause of disease, let us take a single example—namely, that of the diseases of the skin. What do we know of their essential pathology? We recognise the appearance of a psoriasis or an eczema, and we give each a particular significant designation, but as to what their essential cause is, and why the skin should be so commonly an index of what we term a constitutional malady, we do not possess as yet the faintest conception. We have seen what, within a few years, has been revealed by the investigation of the etiology of zymotic diseases, but there are countless other problems equally as important, on the pathology of which we have no definite information. Depend upon it, the key to advancement in the treatment of disease is the study of its cause. We may grope about in the dark, treating disease empirically, and occasionally making a happy hit; but, as such, we are like an astronomer studying his subject without a knowledge of mathematics, or a mariner sailing without a compass.

The subject of pathology has resolved itself, at the present day, into three departments, which each require special attention. The first is that of morbid anatomy; the second, the knowledge derived from experimental inquiry; and the third, the valuable information we acquire through the comparative study of the diseases of the lower animals. As regards the first of these, I may say at once that it is the foundation of all therapeutical deduction. Unless we possess an accurate knowledge of the condition of diseased organs and tissues, and unless we have a clear mental picture constantly before us of what is occurring in the cells, vessels, and fibres of a part or organ in any disease, how is it that we can be expected to treat it rationally? Such of you as have not studied the subject, will be surprised to find what a new light is thrown upon disease, as you meet with it at the bedside, when you have gained a sound and thorough acquaintance with the changes parts undergo when subjected to this or that injurious agency.

No mere book-work will afford you this. You may have read all the text-books on morbid anatomy and histology, and yet you are far from being pathologists. Before you can conclude that you really possess a knowledge of any branch of natural science, you must observe for yourself, commit all sorts of blunders, have these pointed out to you, read about it, forget it in great part, and, coming back to it again, at last get into the quiet haven of properly balanced opinion. A wise man has said that there are three stages in acquiring true knowledge of a natural science—first, that in which you suppose you know everything about it; second, that in which you, in despair, seem to know nothing of it; third, the stage in which the *pros* and *cons* of the subject are properly adjusted in your mind. When you have gone through these three stages in the study of morbid anatomy, you will then be possessed of something which is no trouble for you to remember, and which you can conjure up when occasion requires it of you.

In bringing about this happy result, it is essential that you gain a practical idea of the things that you are expected to learn. It is of

no use my merely talking to you for an hour daily, and imagining that thereby you are gaining instruction in morbid anatomy. This is a delusion long since expoded on the Continent, and, at last, beginning to force itself upon teachers in the medical schools of this country. For what is the advantage of teaching a scientific subject like this by merely repeating to you what can as well be set down in a text-book, and which you can peruse at your leisure? The only difference which I know is, that the latter is a much more agreeable method of gaining such instruction, being unaccompanied by the necessity of listening to what may prove to be anything but polished oratory. It is my earnest wish that the knowledge you acquire should not merely be book-work, but that, in every respect, the instruction you receive should be made as practical as possible. In gaining this practical knowledge, it is necessary that you learn it in a systematic manner. You must be taught, in fact, to observe. You may, perhaps, think it strange that I tell you this is necessary. Have we not all the faculty of vision you may say? Are we not all gifted with the power of looking at things? My reply is this; looking at things and observing them are two totally different processes. We are constantly looking at objects around us, but very few of us have the power of observing them. I never yet met with a beginner in the study of morbid anatomy who could describe, in even comprehensible language, the simplest object set before him. The difficulty of the task you will find out only when you try it. Even among those who consider themselves authorities on this subject, the incongruity of their descriptions is, occasionally, lamentable. Want of accuracy is what is apparent, and no amount of mere words will suffice when this is deficient. You should be able to describe what you see in the shortest language possible. You should aim at cuttness in all your writings or verbal statements. Avoid too many words, but let those you do employ be to the point.

Now, in order to learn this, you will have to go through a regular training. You will have to be shown your errors, and you will have to avoid these. No exercise could be better for teaching you to use your observing faculties than the study of morbid anatomy. The variety of the objects you meet with is so great, that it may practically be said no two specimens of the same morbid lesion are alike.

For several years past I have endeavoured to impress upon my students the urgent necessity of the study of ordinary naked-eye morbid anatomy. With beginners, there is always the tendency to imagine that naked-eye pathology, and the making of *post mortem* examinations, are uninteresting and unimportant studies, and that it requires a microscope to see anything worth while noticing. Nothing could be more fallacious. I would impress upon you not to rush to the microscopic examination of diseased parts and organs without having first exhausted all the information to be derived by your unaided vision.

I am inclined to think that histological or microscopic is easier than naked-eye or macroscopic observation; at least, I always find that you learn it more readily. You must undoubtedly become efficient observers with the microscope in order to make any progress, but remember that this ought to come secondarily to what I have told you in regard to the naked-eye description. The microscopical or histological study of lesions has made such rapid advances of late, and has become of such eminent importance, that no young medical man can be said to be educated at the present day, unless he be competent to examine any organ or tissue microscopically, and to form a correct opinion as to what the nature of the disease is. You will soon become competent to do this, if you are put in the right way of accomplishing it. Otherwise, you may spend years in useless labour, as I know too well from personal experience, without making much advance. It is a difficult matter, you will admit, to learn to play on a musical instrument without some one to instruct and guide you. The same may be said in acquiring a knowledge of morbid histology.

It is, therefore, apparent that, in order to carry out this practical kind of teaching, we must have accommodation and appliances for the purpose, and these we have so far already acquired. We are now possessed in this University not only of laboratories for teaching practical chemistry, natural history, botany, anatomy, physiology, and medical jurisprudence, but we have also accommodation for teaching pathology in a similar manner, which will compare favourably with any in the country.

It has been a scandalous state of matters that this subject, which has been practically taught in every small university on the Continent for many years past, has, in this country, up till lately, been totally neglected. A student, ardent to acquire a practical knowledge of pathology, had formerly to seek for this the best way he could. There was none to guide him, no systematic training which he could receive. Why is it that we have had to betake ourselves to foreigners to learn that which is the very backbone of all good medicine and surgery?

Why is it that in this wealthy and enlightened country there was, until lately, only one university possessing a Pathological Chair? The necessity of pathological teaching has been recognised by the State for many years past in all other parts of Europe. Great Britain has, in this respect, been a by-word among European schools. Young graduates, on visiting the teaching medical centres of Germany and France, are taunted with the reproach of being incompletely educated. "You have obtained your degree in medicine", they say; "you come to us to get your education." Although this is certainly not a correct statement of the case, yet there is an air of truth in it; for not only does it hold good of the subject of pathology, but inspecial clinical instruction, such as that of the eye, ear, and throat, we are as yet sadly deficient. In these, as was formerly the case in pathology, the student or young graduate is allowed to pick up a little knowledge here and there, as best he can. There are few institutions in this country where they are systematically taught. There are no qualifying bodies, I believe, that require a special knowledge of them. The result is that, probably, the first patient the young physician encounters, when launched out into practice, is a sufferer in one of these organs. What is he to do? He has, perhaps, never seen an ear properly examined, has had few opportunities of using the laryngoscope, and his knowledge of the eye is decidedly limited. The results that he must hide his ignorance as best he can under the cloak of a ponderous lengthy prescription, which may please the patient, and, let us hope, does him no harm.

It was not so long ago since there was hardly a laboratory in this country in which efficient accommodation for original research, even in physiology, could be obtained. Where did students formerly go to carry out the investigations necessary for a good physiological graduation thesis? To Germany and to France. And why was this so? Simply because neither were there the necessary appliances, nor did there exist those who were competent to guide or direct them to their studies. The usual answer to the student seeking to follow the paths of original work, either in physiology or pathology, was: "We have no leisure for instructing you; our practices are growing so extensive, that they absorb the whole of our time and energies. Go to the Continent, where men are especially supported by the State for imparting the knowledge you desire. You will find none in this country willing, or competent, to do so." The result was, that those who had the means and time at their disposal, journeyed abroad in search of the knowledge they thirsted for; while those who were poorer, or whose engagements withheld from them the necessary leisure, were "unsatisfied in getting", and had to remain so.

I am very far from discouraging you from making a tour through the different medical schools of Europe after you have graduated; but what I do say is, that we ought, in the thoroughness of our education, to be in no respect inferior to that of our continental neighbours. I trust that such days of darkness are now past, and that the coming decade will see our medical schools provided with all the means and appliances necessary for making the education of their alumni what it ought to be.

There is another matter, however, to which it may be well that I here draw your attention, namely, that all instruction in medical science ought to have a direct bearing upon the clinical features of disease. Medicine is what you are to profess. Medical practitioners you are intended to become. Most of you are not to be pure physicists, chemists, physiologists, or pathologists, but all these subjects have to be correlated with the great aim of your life. You have to treat disease. That is the main object you must keep in view, and the successful accomplishment of it is that by which you will be chiefly judged by your patients. Never forget that it is the welfare of the patient that you have at heart, and bring all your acquirements in collateral studies to bear upon this.

Pathology is essentially one of those branches of medical science which is eminently utilitarian in its tendencies. Every observation you make in pathological work, every revelation you bring to light in its pursuit, has an immediate relationship to the treatment of disease. Any rational being will tell you that it is only natural to ascertain what is wrong before attempting a remedy; but, unfortunately, the reverse has only too often been the case in therapeutics. I have little hesitation in saying that it is by perfecting our knowledge in pathology that we may look to rendering therapeutics successful; and it is thus that our present empiricism may be swept away.

I have so far told you in general terms what are your duties as students of the subject. Let me now similarly divert for a little to a more personal matter—the qualifications of the teacher. In times gone by, before medicine could be said to have become a science at all, one man considered himself competent to teach several departments of the subject, and he was expected to be an authority on each. To a certain extent this was possible; for, in those days, medical education

may briefly be said to have been comprised in the practice of medicine and surgery, and the teaching imparted was very much the sort of thing that an average general practitioner at the present day could impart to an apprentice. In this University, for example, there existed until the year 1839 a chair, the occupant of which was expected to teach the whole art and science of medicine. The *Aberdeen Mediciner* was the most ancient foundation (1522) for instruction in medicine in Great Britain.

In course of time, as medical science and practice began to develop, the impossibility of one man professing the whole subject became apparent. Separate professorships of anatomy, combined with surgery, and ultimately of anatomy pure and simple, became established. Others followed soon afterwards, until at the present day we find ourselves in Aberdeen with eleven Chairs of Medicine, the occupants of which devote themselves to teaching a particular branch. The reason for pathological anatomy being so long unrecognised as a subject worthy of special teaching was, that the preliminary subjects of normal anatomy, histology, physiology, and embryology had not become sufficiently well known. In fact, at the end of last century and beginning of this, the only subject in medical education which had any pretension to being a science was anatomy. It was not until Bichat, Johannes Müller, Henle, Schleiden, and Schwann had demonstrated the structure of the various tissues, that a pathologist such as Virchow became a possibility. Hence it is, I dare say, that in this country there are so few centres of teaching the subject as a specialty. A specialty, and a very large and intricate one, it certainly has become; and, as such, I hold it ought to be taught by one who is willing to give his whole time and energies to it.

Do not let me send you away with the idea that, in making a pathological teacher, I would recommend a young graduate to commence the study of pathology, as a specialty, immediately after his student's career is over. If he does so, he will always be a narrow-minded observer, and will be apt to run in a particular groove. He will be unable to take a broad view of his subject, and will also fail in the all-important point of connecting his teaching with the practice of medicine and surgery. Let him spend several years in the study of the clinical aspects of disease, before he begins to devote himself particularly to its causation.

And, further, do not let me be understood as implying that he should devote himself exclusively to the practice of physic. It is a common error to suppose that a pathologist must be a physician pure and simple. That, I hold, is an entirely false position for him to be placed in. Are the problems of surgery less worthy of being studied from a pathological point of view, than those of pure medicine? Is there in nature any hard and fast line between them? The pure physician now-a-days is apt to look down upon matters surgical. They are to many physicians quite foreign to their calling, and they would feel like the patriarchs of old, "unclean until the evening", did they, in the course of practice, meddle with anything out of their particular demesne. This is the man who is supposed to be cut out for a pathologist! Could anything be more narrow-minded? Is it not in the observation of surgical disease, so called; in the study of the wonderful manifestations of physiological pathology as seen in repair, inflammation, supuration, new growth, necrosis, septic infection, and a host of other problems that the most instructive lessons are to be derived? I go even further, however, and ask why should pure medicine or surgery form the limit of clinical study in a man wishing to teach the Science of Disease? Is the pathology of obstetrics and of gynecology to be overlooked? Is there, in fact, any domain in medicine, taken in its comprehensive meaning, with which an intending pathologist should not be familiar? It is not necessary for him to become a specialist in any of its various departments, but the first thing for a teacher of the subject to do is to acquire a practical acquaintanceship with physic, surgery, obstetrics, and every other branch of medical practice, before laying himself out for the special labours of his life. It is of no use beginning to discuss the causes of disease, without, in the first place, knowing what disease is; and I hold that, even when engaged in the special duties of his office, a pathologist should always have his eyes open to the clinical history and living phenomena.

Not that I regard, as some do, the study of morbid anatomy as a "dead science", as it is called. If there is the eye to see, the lessons to be derived from morbid anatomy are all living studies. You call the inanimate material before you dead. Then so are the studies of ancient Greek statuary. There are some who can never see further than the marble. Its texture, to them, is everything. They are china fanciers, not artists. The classical lesson expressed by the marble is unperceived. So is it in the lessons left unprinted on the human marble. It is the classical lesson we wish to understand; the material in which that lesson is expressed is a matter of secondary importance.

A great composer is reported to have said that there was music in the clinking of pots and pans. So is it with every study in morbid anatomy. The something to be learned from it is not to be found by the superficial observer. It is the perceiving mind and the educated eye which alone will profit by it, and be able to reason from it.

Having acquired sufficient knowledge, not to make him a specialist either in medicine, surgery, or obstetrics, but such as will enable him to understand the usual manifestations of disease, I hold that if a man is going to be an efficient teacher of pathology, he should on no account be engaged in practice; and the real work of his life ought now to commence. Medical practice and the teaching of pathology are incompatible, for not only must a teacher, in order to be efficient, be capable of explaining other men's views, but he must investigate everything for himself. Did the teaching of modern pathology consist in haranguing an audience for an hour daily for five months in the year, there is no reason why it should not be taken as a pleasant amusement in the course of the day's labours. This, however, I think, is hardly the sort of thing that it ought to be. The mere acting as a *middle-man* between those who are engaged in arduous investigation, and the listeners who are supposed to imbibe such teachings is, to say the least of it, not a very dignified position. It was not with this spirit that Carl Rokitansky, Rudolf Virchow, and John Goodsir made their fame. Their teachings were seasoned all through with the results of their personal labours; not a *résumé* of the theories of this, that, and the other man. It is, no doubt, a convenient thing for a man to receive a large compensation for delivering a paltry hour's lecture for five months in the year, and to occupy the rest of his time by attending to the duties of a lucrative practice. I cannot but think, however, that such is extremely bad for the institution with which he is connected. It is bad in several respects. It is bad as evincing a commercial instead of a truly scientific spirit. It is bad as an example to those who are supposed to profit by his teaching. It is bad as degrading the science he professes; and it is bad as showing that he is not in earnest with the work he has undertaken. Teachers of practice of physic, surgery, therapeutics, obstetrics, and such like branches require to be constantly engaged in bedside study, and the fact of their practising means that they are getting so much more experience of that which they undertake to teach. The pathologist's labours should, however, be directed in quite a different line. It is the etiology, or cause of disease, that he is expected to reveal, and it is not his domain to be engaged for the greater part of the day in its diagnosis and treatment. So long as we are in the bondage of darkness which at present exists in regard to our knowledge of the causes of disease, pathologists ought to spend the whole of their energies in throwing light upon them. In this way we aid in the advance of therapeutics; and, by showing how diseased conditions are brought about, confer a direct benefit both upon suffering humanity and the brute creation.

This is not to be accomplished by mere bedside observation. Far be it from me to lead you to suppose that you as pathologists should neglect the clinical features of any disease. I have said enough previously to warn you against this, but what I most emphatically state is, that little progress in the special study of modern pathology will be made, if attention be chiefly directed towards this. Mere symptoms and diagnosis have been observed and noted from the days of Hippocrates downwards, while the causation of disease is a study of a few years old. All the easy means of tracing disease to its origin have been exhausted. Methods much more intricate than those hitherto employed must be called in to our assistance. We must aim at the precision of the exact sciences. We must reduce our statements to the accuracy of chemical formulæ.

All the more time, and I think that those of you who know what original research means, will agree with me that it is simply an impossibility for a man to teach the subject properly and to be engaged in complicated original research, while at the same time he lavishes his services upon the public as a practitioner of medicine. The Latin proverb—"Duos qui sequitur lepores, neutrum capit," holds good of pathology as of other undertakings in this life. "No man can serve two masters." We have had enough of the rough-and-ready self-confident investigator who professes to be able to make all the studies of the human body, and who cannot tell why everyone else should not be as good as he. Such people merely make a pretence of knowledge, and waste their energies; it is idle boasting. In order to carry on research in the great problems of pathology, we must have a man whose sole business is the study, we must possess instruments of precision, and must follow the results of other sciences, studying their means of investigation, and adapting them to the end we have in view.

I have spoken thus strongly on a subject which I have thoroughly at heart. I feel that there is too much of the commercial element con-

nected with scientific medical appointments in this country. Such a state of things is radically bad, and I have not the slightest hesitation in publicly denouncing it.

In this University, however, there is no chance of the Professor of Pathology being misled in the way I have indicated, seeing that he is bound down by the deed of foundation not to engage in practice. It seems to me that this is a wise regulation, and I trust that the benefit of it will be manifested in the illustrious line of professors of pathology who shall succeed me.

When I think what an intricate subject I have to teach, and when I consider how much responsibility rests upon me in teaching it, I fear for the result. Where the traditions and the practical working of a class are already established, it is a comparatively easy thing to slip into the beaten track. In the present instance, however, we shall be for some time, so to speak, exploring; and I only trust that we may be guided in all we do by a sense of justness and thoroughness. Above all things, let us discourage a supercilious dilettantism, and reach forward with a determined purpose, "Heart within, and God o'erhead." Remember the advice given by a personage not usually considered to be a sound adviser, but, nevertheless, good advice, to the ardent young student—

"(gebrauch der Zeit, sie geht so schnell von hinnen,
Doch Ordnung lehrt euch Zeit gewinnen."

The greatest of poets has declared that "All the world's a stage, and all the men and women merely players." In drawing aside the curtain from this, which, to you and to me, is one stage in our history, knowing, as I do, that you will play your part satisfactorily, I only trust that you will forgive the many shortcomings in the performance of mine. In the cruce remarks which I have placed before you, there are many points which perhaps you may not see the force of at present; but, in any respect these remarks have inspired you with zeal for a subject which is fraught with the deepest interest, I shall consider that my purpose in addressing you has been accomplished.

A CONSIDERATION OF SOME OF THE CAUSES WHICH GIVE RISE TO DENTAL DECAY.*

By ALFRED CARPENTER, M.D., Croydon.

GENTLEMEN,—When I consented, at the request of your President, to address you this session, I somewhat underrated the importance of the work I undertook to perform. I ought to have hesitated before agreeing to do a duty, which involved something more than the expression of my own views upon points concerning which I might have felt myself competent to advise you. But, having accepted the duty, it would scarcely be in accord with my ideas of an Englishman's character, if I did not at any rate attempt to do the work I had undertaken to perform. I propose, therefore, to follow up the line of thought which is ever in my mind upon the causation of disease, and to consider that subject in its relation to the teeth, on the principle that prevention is better and easier, in a large proportion of cases, than cure: and also, that there is a field for observations and practice here, as well as everywhere else in the domain of medicine and surgery.

This will especially apply to caries, and several other maladies which naturally come to the notice of the surgeon-dentist in the practice of his profession.

Are diseases of the teeth more common in our time than they were in the early days of civilisation? Has the artificial life in which we live now seriously damaged the dental organs, and has it promoted their earlier decay than was the case in the time of our forefathers?

To solve this question, we must go to ancient history. I believe the teeth were not unknown to those nations regarding whom we have early records. We gather from Herodotus that there were dentists in Egypt in the times of the Pharaohs, and it is said that Imhotep discovered artificial teeth in the sarcophagi of the Egyptians. Eusebius, Hippocrates, Heracleides of Tarentum, and other Grecian writers, speak of diseases of the teeth as if they were not uncommon in their day: whilst Celsus describes the dentist's duty very accurately, and gives us a clear insight into the system in operation among the Romans in his time; Galen also is particular in his descriptions of dental diseases. Dental caries was common enough among the ancients; and, from all that we can learn, these diseases are not a new class, and do not therefore show a new departure in pathology. Yet there is sufficient evidence to tell us that luxury, indolence, and vice, tend very much to promote the development of such diseases, and to lay the foundation for those conditions which produce decay of all kinds in the dental organs, as well as elsewhere. This evidence is given by the fact that

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which the teeth are generally found in the mummies of ancient Egypt, and in the jaws of those skeletons which have been preserved to us from the early days of Christian sepulture; disease in the teeth was the exception in those times, whilst in our day it is the rule. It may be true that those teeth which decay had touched during the lifetime of their possessors had been unable to stand against continuing decay after death, and that sound teeth alone remain in the original form to our time. This is not, however, all true, for decayed teeth are sometimes found. Teeth giving evidence of decay which had existed during the lifetime of the owner, do continue to remain *in situ*. There would be also vacancies in the jaw-bone indicating the position of the absent teeth, if such decay had taken place.

According to the accounts of some travellers the majority of Egyptian mummies which are unrolled to-day exhibit perfect sets of teeth; and the majority of those jaws which have been examined in some of the catacombs in which the early Christians were buried, are perfect, whilst it is the exception now to find a middle-aged person who has not lost many of his dental appendages.

Before proceeding to discuss the principles which promote decay I will run over a list of conditions which, in my opinion, may be first causes for the foundation of change, and for the continuance of active decay. These causes are very various, and each may be distinct in itself, or conjoined with one or more in the class; and thus a kind of hybrid may be produced, which prevents distinct classification.

In the first place, there cannot be any doubt as to the effect of inherited tendency; some state which has been engrafted into the constitution by the acts, the habits or the vicious conduct of preceding generations. This state may give rise to irregular development as to shape and size, or the order in which the teeth are set in the jaw-bones, and may introduce a race of beings in which the new condition becomes all but natural; or it may show itself in those forms of constitutional disease, the presence of which does not appear to have arisen in the early days of the world, as far as we can learn from ancient history; for syphilitic conditions, which are common now, find no representative in the Egyptian tombs.

These conditions, descending in later times from grandfather to grandson, or even from ancestors more distant still, show the taint in the unnatural form and early decay of both the temporary and the permanent sets of teeth. Syphilitic states have their first causes in alterations of the protoplasm or primary germ of the new life; for when the tooth is developed, as I shall show later on, conditions and consequences arise, for which the parent must be responsible. A similar condition is met with to some extent, though not with so determined a result, in those persons who have had gouty ancestors. Children who have inherited a gouty constitution, suffer to some extent according as to whether that gouty state was inherited by the parent himself, or purchased by his own acts. In some cases, it falls with double vengeance upon the child; for the parent has not only inherited the condition, but he has added to it by his own love of vicious feeding and strong drink. The young man who makes a god of his belly, and thinks more of his eating and drinking than of his children's welfare, or of his own future state, may procreate a generation of persons, who may suffer much from dental as well as from other defects; and the plums which the children innocently endure in this world are, to my mind, the punishments which will have to be borne by the father in the next. They assist to make up the measure of that future punishment, which we are taught to regard as the result of the wrath of our Maker for our own sins, whilst, in reality, it is simply the sequence of our own acts and deeds. This sequence arises in consequence of the immutable laws which the Creator has given to matter; it is the result of those laws and not the anger of a revengeful deity. Besides syphilis and gout, both of which have a direct action upon cutaneous surfaces, and, as I wish to show, a special action upon the teeth, we have constitutional diseases affecting development of the other parts of the primordial utricle, or first layers of the original protoplasm. This shows itself in defective nerve-power and in the want of that nutritive force which promotes the growth of the homunculus. Then there are all the consequences of accidental damage or injury to the foetus, or to the young child, producing immediate effects, or shewing themselves later on in life. Causes which have been in temporary operation, or which may have been continuous; causes which have produced immediate results, or which have only developed their natural sequences years after such causes have ceased to be; causes connected with the simple wear and tear of the organ itself, and which has been induced by a wrong kind of food, by defective muscular action, one muscle acting stronger than its fellow, or by an improper proceeding on the part of the nurse or guardian, or, perhaps, of the family doctor in prescribing dangerous remedies at the wrong time, or in wrong doses; and causes which have been induced by the cupidity of man, in adulterating food with articles which were not intended for the human teeth to grind,

or the human stomach to digest—all these causes and conditions operate to provide work for the dentist, and all are, more or less, preventable in future generations, if not in our own time.

I need not detain you by a discourse upon the chemical constituents of the teeth. The nature of those constituents, as well as of bone in general, is well known to you. I will simply recall to your mind the fact that phosphate of lime is the principal inorganic matter in the substance of the teeth, but that, when all the mineral matter is removed from a tooth, there is a skeleton of organic matter remaining, which is equal in volume to that of the tooth itself; but that, whilst dentine contains twenty-eight parts per cent. of organic matter, it falls to less than three per cent in the enamel. I may also remind you that the crusta petrosa is closely allied to, if not identical with, true bone. You are fully acquainted with the course which is taken in the development of the teeth, the first step in that development being a visible thickening (in the sixth week of foetal life) of the epithelium which covers the free border of the jaw; that a groove, which has been styled the primitive dental groove, forms upon it; and that it is from the epithelium in this groove (from a part of the system which, therefore, corresponds to the skin) that the teeth have their primary origin; that the deeper layers of this epithelium send processes down into the substance of the mucous membrane, which is indented by a papilla; but the sides of the indentation are separated by loosely arranged star-shaped cells. The embryonic tooth is the speck which is now entirely enclosed in its dental sac. The papilla moulds into the shape of the crown of the tooth; the epithelium upon it, in the course of time, changes into enamel and dentine. The latter increases in thickness by addition to its interior, which is in close contact with the vessels from which it soon gets its own nourishment. Ossification commences by the deposition of calcareous matter in the cells of the membrane at the top of the pulp. It appears in the ivory membrane first, and soon afterwards is seen in the cells of the enamel membrane, for so these two layers are styled. The point of most importance in this description is, that the teeth are epithelial structures, and differ, to some extent, from bone, like that of the thigh-bone, in their liabilities to disease; for the ordinary bones are derived from a different part of the skeleton, and are not liable to those mischiefs from which the teeth suffer.

A study of the teeth among the lower animals is especially interesting to the searchers after first causes, and throws a flood of light upon development. Among some of the invertebrata, the teeth are clearly gastric, being a part of the stomach. In this position, they do not depart from their epithelial character, for the mucous membrane of the abdominal tract is as epithelial as is the skin, and has the same origin. These teeth are composed of chitine, impregnated with lime or silica. The teeth of the sea-urchin are made up of prisms of carbonate of lime, with leaflets interspersed between the prisms, and in them we find a fine plexus of anastomosing canaliculi. It is among the shells of the molluscs that we first find a division into an outer prismatic or fibrous, and an inner laminated tissue, similar to that in vertebrate teeth. Among the terebratulæ, we find (according to Dr. W. B. Carpenter) tubes traversing the substance forming branched horizontal channels, sometimes connected with rounded cavities, which seem to be analogous to the lacunæ and canaliculi of the crusta petrosa. The shell of the mollusc which has become calcified corresponds to the epidermis of the higher animals, and thus their teeth have the same origin as those of vertebrata, viz., being epithelial. The prism-like appearance is due to the cellular structure, and the transverse striae corresponding to the thickenings of the cellular membranes, where the layers come into contact with one another. My great namesake states that, in his opinion, the calcareous network, which is seen in the shells of the invertebrata generally, corresponds to the fibrous structure of the cutis of the higher animals, which has obtained a calcified condition.

Let us now ask a question or two as to epithelium, and the duties it has to perform. 1. It is protective; of that there can be no doubt. 2. It is excretory.

That which applies to the whole may apply to any part. The nails and the hair are undoubtedly epithelial, and equally liable to changes which indicate alteration in the primary cells from which those organs spring. There is a difference, however, between the teeth on the one hand and the hair and nails on the other, inasmuch as the latter are made up principally of organic substances, and are of a horny nature, which is almost indestructible; it is allied to, but somewhat different from, gelatine, and is sometimes styled keratin. This material, therefore, occupies the position of indestructibility which is held by the enamel of the teeth, but which, in the latter case, is mainly due to inorganic matter. Its chemical character is not clearly set out; but, whilst enamel has a minute portion of organic matter in its composition, horn and nail have but little inorganic deposit—perhaps even less of the inorganic matter than enamel possesses of the organic. There is

a skeleton. I wish you to bear in mind that it is in the albuminoid material, and not in the skeleton of the plant, that phosphoric acid, or some salt of which phosphorus is the base, is most abundant; and that at least some plants cannot perfect their seeds, and prepare seed for future developments, if phosphorus be withheld. There is also a point in which there is no antagonism between plants and animals, and which is worthy of notice as bearing directly upon our subject. There is a special liability to disease among plants as well as animals under certain conditions. The epidermis of plants which are not sufficiently supplied with phosphoric acid is prone to suffer from disease; and a wheat-crop in a field in which the soil no longer contains phosphate salts is very liable to blight and rust, and to mildew. There is a kind of defective nerve-power, so to speak, in the structure, which lays the plant more open to the attack of outside enemies. Whilst there is absolute failure in its ulterior development, it cannot perfect its epidermis properly. If there be no phosphate in the soil at all, the plant will grow as long as there is phosphorus in the seed itself, but no longer. As soon as this reserve is used up, the nerve-force is lost, and the plant decays. Can we not, in this view of the matter, which we obtain from the vegetable kingdom, draw some inference which may be of service in considering the cause of decay of teeth in animated nature? If phosphorus, in some form or other, be not provided in the food we eat, it is found by every-day experience that the constitution suffers exceedingly. There are conditions of life in which it is not so provided.

In some of the great cities of the empire there is, or was, a great deficiency in the natural food which infants require for proper growth. In those places, rickets (or rachitis) abounds. This is a disease of bone in which the phosphate of lime is very deficient; the bones are soft and cellular; the teeth are also defective; and the intellect inferior, from inertness of cerebral action. I am of opinion that this state is brought about by a deficient supply of proper pabulum, for natural development. The child is not nourished by its own mother's milk, and cow's milk cannot be obtained in sufficient quantity and quality by the poor people in such cities; they either do not get it all, or if they do get it, it has been watered; or it is supposed by the ignorant parents that something else is better for their children. They do not get fresh vegetables which contain phosphates in the soluble form, and they are supplied with farinaceous food, in which the larger portion of the cuticle which contains much of the phosphate salt has been removed by decortication. The result of this kind of feeding is, that the nervous system does not get its proper supply of food for healthy development; and, as a sequence, those organs which are dependent for their own development upon the composition which results from the act of brain-cell growth, cannot be perfected; the teeth fail in their proper construction, there is more organic than inorganic matter in their structure, and, like the proper skeleton, they cannot perform the functions which nature intended that they should do. A purely flesh-diet, one that is too nitrogenous, will produce rickets and lead therefrom to failure in the teeth.

On the other hand it has been noted that, if phosphorus be given in excess of the requirements of the system, as has been done sometimes by experiment, it will itself set up mischief in the bones, especially if the lime-salts be withdrawn; and it is found that in those animals in which rickets have been thus produced, another material called lactic acid is found in excess in their structure and in their excretions. If lactic acid, such as usually develops in milk which has been kept too long, and which the poor children in our great cities so often get every day when they get milk at all, be given as a food, whilst phosphorus and lime-salts are withheld, rickets may be rapidly developed. In some large cities, such as Glasgow, for instance, it happens that lime is not a constituent of the water-supply. Children, therefore, run the chance in that and in similar cities of having no lime provided in the water, whilst no phosphate is provided, such as mill and vegetables give; they ignore the advantage which oatmeal supplies, and which Scotchmen, as a rule, think much of; and as a consequence rickets and states allied to it are common diseases.

There is another disease which used to be very common in the naval service of this country in the last century, viz., scurvy. Two centuries ago, it was a complete scourge in all northern Europe, as well as in our own marine service; but the discovery of its cause has materially diminished its incidence, though it is even now in our own day much more frequent than it should be, and its effects are not always recognised in the minor form in which it does even now appear amongst us, both in the sick-room and also amongst poor people in thickly peopled districts. Its first incidence is upon the gums; the teeth loosen, there is a tendency to hæmorrhage and effusions of blood from mucous membrane; the slightest injury to the skin produces a bruised appearance. The cause for this condition, in my opinion, is the

absence of fruit and vegetables from the common diet of the sufferers. The effect of fresh fruit is to diminish those acids which result from the consumption of a flesh food which is too highly nitrogenous. The alkaline vegetable salts which fresh fruits contain, become decomposed into carbonates which pass off with the urine, and take with them some of the nitrogenous matter which exists as *débris*, which would, if left there, form lithic acid and its allies. The small quantity of a phosphate salt is used up in nerve-nourishment, and a phosphate of lime is formed. Fruit and vegetables are extremely advantageous, therefore, in those conditions of the system in which there is a lithic acid diathesis, and prevent the formation of urate of soda, which often by its deposition in the circumdental membrane produces those diseases of the teeth to which the gouty classes are especially liable. Improper food in infant life does lay the foundation of disease in the dental appendages, which, following upon those produced by hereditary causes, are very serious in their result; so improper feeding in our later days will do the same. I sometimes meet with people who never touch fruit and vegetables in their daily diet. They are on the high road to suffer from those diseases which result from a diet which is too nitrogenous, such as gout, fatty degeneration, or scurvy; they are depriving themselves of the pabulum which is necessary for the proper nourishment of both nerve and bone, and are keeping within the precincts of their bodies material which ought not to be there. They either have lost or will lose their teeth sooner than other people, simply because the supply of necessary material is not afforded. I sometimes meet with sick persons who have bleeding gums, continuous neuralgia, and a tendency to hæmorrhage which is produced by the slightest injury, who never touch fruit and seldom eat vegetables, because they believe that those articles disagree with them, by setting up dyspepsia and other gouty complaints; just as some people will not allow the housemaids to dust their libraries and book-shelves, because of the dust they are likely to kick up, and the displacements which are sure to follow. Is it a wonder that dust and dirt abound in that library, and *débris* of a wrong character finds a settlement in those positions in which such *débris* is out of place? It is just so in the human economy. If the diet be not of a proper kind—if some elements be ignored altogether, which nature intended us to take—there is sure, sooner or later, to be a defect in our excretions, and the fundamental condition of the body is altered. It is possible that the teeth are the depôts for the deposit of the phosphate of lime, which is formed in very minute quantity in the first months of human life, and before the bones are ready to receive, it may be, the *débris* of the first nerve-cells which form in the infant. Let there be some defect in innervation, as may arise in the progeny of a syphilitic individual, and we see the result in the defective character of the phosphate of lime which is deposited in the cells of the ivory and the enamel membrane of the new development. It is not a pure salt; it contains something else besides phosphate, and, as a result, the cells themselves are imperfect, both in shape and number; the stræ upon them are unerring witnesses of the taint which the father has inflicted upon his own progeny, and which taint will probably show itself later on in the life of the child, by defective nerve-centres, by a mental weakness, or it may be by paralysis or by insanity, and other nerve-disorders, which will require much care to stay their progress even if they can be prevented.

The dentist has a duty, when these cases come to his notice—viz., to inform the parent of the constitutional taint which exists in the child, and to advise that measures be taken to diminish its incidence by counteracting its influences, by temperance, by chastity, and correct diet. The children of this class are more prone to nerve-disorder than other people, that nerve-disorder being of the most painful kind. A warning should be given to the parent, and, if the child be old enough, a warning to himself, that there is very much to be done to get rid of a taint which touches the foundation of life itself, and affects the battery before it can show its results in the *débris* of that battery. How this effect is first produced is unknown to us; but that it does show itself in the second, and even a third generation is now fully acknowledged; and it ought to be taught to young men as one more argument against the vice of unchastity and the danger of uncleanness. The sequence is probably due to failure of nerve-growth as much as to caries, and the teeth are sometimes shed even before they are fully formed. The teeth cannot develop, because the material required for their production is not properly formed; there is no *débris* of the right kind.

Caries is also favoured by the condition which promotes tubercular tendencies; a minute particle of perverted protoplasm is laid down in the cell-membrane which forms the dentine, and which is chemically defective from having a tendency to fatty degeneration rather than to a proper deposit of phosphate salt. A

single cell may be thus invaded by defective structure, or half-a-dozen cells may be touched. As time goes on, the defective cells soften; and, by means of the imperfection of the organic matter which pervades the tooth in excess of the latter's requirements, there is a want of proper balance in the enamel, and the dentine, as regards the organic matter; the latter is defective in its composition, as well as in the support which it requires, and, in consequence, is more liable to wear and tear than would have been the case if the inherited defects had not existed; a small hole is punched in the tooth, which, if not remedied by the dentist's drill, will give a *locus standi* to foreign bodies, to vibrios, and to bacteria, and thus allows assaults being made upon the tissue which is still sound, by the secretions which the living organisms produce in the tooth, and caries then arises. An attempt is generally made, though unsuccessfully, by nature, if not assisted by art, to remedy the mischief. A small amount of chemical action takes place in the hole, which, failing in its object, in the course of time leads to extension into the pulp-cavity, and ultimately to the total loss of the tooth. It is necessary, for the best interests of the children of tuberculous parents, that their teeth should be frequently inspected by the dental surgeon, and those punch-like holes cleared out and stopped before the pulp-cavity is reached. In these cases, the conservative power of the dental surgeon is very manifest. He should advise a close attention to the rules which the tendencies to tubercle require to be observed, and urge upon the parents of such children to beware of the mischief, which, unless due care be exercised, must be in store for them; because it is manifest that, if germs of perverted protoplasm are to be found in the dental organs, it is certain also to be found in other tissues. I have reason, however, to believe that, when such tendencies show themselves on epithelial structures in early life, and when the deeper-seated organs are not at the same time affected, there is a much greater chance for hereditary conditions to be overcome. The tendencies to disease being limited to epithelial tissues, it is reasonable to hope that, with due attention to the rules which should be observed for securing a healthy state of body, there will be an evacuation of the *materies morbi*, and so the child may escape from the evil consequences which it has inherited. I have seen in some families, where the syphilitic taint has been undoubted, that those children with defective teeth, and who have skin-eruptions, and in whom the defect has been recognised, and all exciting causes for further mischief withheld—such as the use of mercurial medicines—and when an excessive animal diet—that they have escaped the evils which have befallen other members of the family, in whom the epithelial structures have not been at first affected, but in whom cerebral mischief has been the first to show itself, sometimes at an early date. I have seldom seen the presence of tertiary eruptions on young children, without finding evidence of mischief in the teeth, the hair, the nails, the epidermis—all more or less showing the taint; but, in other instances, I have also seen the teeth alone giving such evidence, and in those cases the individuals have grown up to man's estate in fairly good health, though the chances of such result were not great. But if, in addition to the taint as shown by the epidermis, there is also some organic disease in some of the splanchnic viscera, there is no likelihood that the child will make old bones. A large number of those cases in which early death arises from cerebral disease, are closely connected with hereditary syphilitic or tubercular taint; and the insight as to cause is obtained from the irregular, the jagged, and stained condition of the dental organs. We get a similar insight into tubercular tendencies in certain families. The teeth are not irregular, and jagged and stained, but they are thoroughly carious; there is a want of true bone and of true enamel. The material provided is fatty and friable; and, with this state of the teeth, we have often a tendency to bow-legs and soft irregular skulls. In these cases, it is defective innervation, which has arisen from foul and deficient sunlight and bad food. All these causes have been at work in the organisation of the parents, and show themselves in their progeny. A continuance of such causes, acting upon the child, increases very much the tubercular tendencies which are in the constitution, and render him more easily liable to the invasion of septic or septic bacteria, which are developed and flourish in foul air and dirty crowded dwellings. Children, therefore, having the first set of teeth carious, require something more than surgical aid. The parents should be advised to avoid the causes which tend to the development, to cultivate the benefits which are to be derived from the influences of sunlight, from a pure dry air, and from simple unstimulating food. The surgeon who only attends to the teeth has done only a part of his duty. I have seen conditions in strumous children similar to those met with in children who have been born of syphilitic parents. When the evil has fallen upon the epidermis, and has shown itself in defective teeth, with scaly or vesicular eruptions upon the skin, the children may have escaped; and the children, having the taint in the blood, may have

which they appeared to have inherited, have grown up into healthy and well developed individuals; provided the laws of health have been observed, good unstimulating food, fresh milk, and vegetables, being provided, and fresh dry air, with sunlight, used and sought for. I have, on three or four occasions, seen two or three children in the same family, with bad temporary teeth and eczematous eruptions, grow up satisfactorily, whilst those with clear skins and not showing any defects of the epidermis, have died in early life of cerebral or mesenteric disease of a tubercular character.

The effects of the gouty diathesis do not show themselves so markedly upon the teeth in early life as is the case with the syphilitic and the tubercular states. The tendency to disease which this diathesis does promote among the descendants of gouty people is more likely to manifest itself in another way, and other tissues suffer more than the teeth, though caries is not uncommon. The quality of the nerve-cells is not necessarily damaged in a gouty man, and, as a consequence, the teeth do not suffer so much in their first development.

The children of gouty people suffer from tendencies to blood-maladies which (just as syphilis does in the beginning) affects, in the end, every organ of the body, but it is in connection with nitrogenous material, and not the phosphorus in which changes arise; the organic rather than the intellectual regions of the body suffer from its incidence. The rise of gout and its sequences are connected with excess of material, and with derangement of the digestive organs, which is the consequence of that excess, rather than with the introduction of an extraneous poison or arrested growth. Syphilitic taint is probably due to a parasitic life, and tubercular growth arises from the presence of perverted protoplasm in the blood, in which bacteria or other forms of parasitic life can increase and multiply. Syphilitic conditions are due to a taint which will affect every person into whose organisation its first cause finds admission, and from whose tissues it has not been immediately ousted. The tubercula will only develop in those persons who have lived: unhealthy lives; it is caused by their surroundings: whilst gout is not produced by either of these conditions; it is a state induced by excess, and its sequences are in different lines; the surroundings may be quite healthy, but the habits of the victim are vicious, indolent, self-indulgent.

The conditions which induce it are not common to young people, and are not obtained in early life. They more often arise after the man has attained his full growth. His progeny are born into the world, in the majority of cases, before the humours of the body have been able to act injuriously upon the sexual organs. It is seldom that a constitution is thoroughly gouty before a man is forty or fifty years of age; and thoroughly gouty men do not have families to any extent after they have become saturated with gout; thus the specimens afforded are limited as far as children are concerned. Still it is, I think, a fact that the teeth do decay sooner in those who are descended from gouty parents; they are more subject to caries, which disease has its origin in fatty degeneration of the dental cells, and the subjects of it are especially liable to those periodontal inflammations which ultimately lead to necrosis. Gouty men and women also suffer very much from neuralgia and other conditions of the system which have their origin in a lithic acid diathesis; and they can only be properly cured by associating the dental treatment with a proper diet, and the judicious use of remedies against the gouty diathesis. The presence of a lithic acid diathesis is often accompanied by pain, which reflects itself upon every function which the body has to perform. Indeed, the state of the mouth is frequently the Nemesis which attends upon over-indulgence, for the tender state of the gums and teeth puts an end to feasting, and induces that fast which is the true cure for excess of nitrogenous material in the blood.

Future history will show whether the children of total abstainers have an advantage over those of non-abstainers as regards soundness of teeth. At present, there is no proof that the acknowledged benefit of total abstinence does give any immunity as regards necessary dental disease; but there is evidence that abstinence does assist to save the teeth of the goutily inclined. I have had too many instances before me to doubt the fact that the suffering which is attendant on those who indulge in them is also as manifest. Celsus writes, in his sixth book, *De Medicinis*, "Indulgentia in cibo, quippe quoque maxime tormentum primo animi, postea potest, vinum ex toto circumcidendum est; cibo quippe non temperandum."

That ancient and generally accurate writer is very decided upon this point, and yet it is curious how many modern physicians up to the founding of the ante-septic era, and even in the middle of the nineteenth century, and in the middle of the nineteenth century, with the moral certainty that they are only postponing the evil day, and are doing no ultimate remedy. The physician who is devoted to the study of the vascular system, the patient who gives temporary relief to the

pain of to-morrow is all the greater from the anesthesia of to-day. Of two patients suffering from dental caries and who are intent upon continuing the presence of the offending organ in the mouth, the one who submits to the pain without using anæsthetic remedies will get over the action which is causing the neuralgia much sooner, and will get better with a far less expenditure of patience in suffering than the man or woman who flies to stimulants for temporary relief from distress. The alcohol simply delays the action which is necessary for the removal of the exciting cause, and does not at all assist to its cure. In theorising, however, upon the subject of alcoholic indulgence, we must bear in mind that, as a rule, children are total abstainers; and I believe that, if we could separate those who have no hereditary taint in their dental appendages, and then follow the total abstainers through life, and compare them in their decline of years, it would be found that the total abstainers had suffered comparatively little from neuralgia or any painful malady in the dental organs, as compared with the wine-bibber.

I do not yet know enough of the alliance between dental diseases and rheumatism, or of the connection, if any, with the cancerous cachexia, to make any specific allusion to those tendencies, even if time would allow me to do so; but there is a field for observation in connection with the development of lactic acid in the constitution, and the rheumatic diathesis, which the state of the teeth might assist to determine. I leave that for others to follow out. If I have given lines for future thought to those who have a more immediate connection with the results of dental disease than I have, I shall have effected my object. I think that our design should be, not the establishment of a foregone conclusion by bending our facts to our theories, but a steady observance of facts, a correct registration of conditions; and then in the end a proper generalisation may be obtained, which will be based upon the truth. This should be the desire of every one of us to get established upon a sound and satisfactorily line, even if its establishment should lead to a large diminution of that work, which diminution has already made conservative surgery of more importance than heroic performance, and which will materially diminish extractions, and render prevention of disease of greater importance even to the surgeon-dentist than its radical cure can ever be.

THE TREATMENT OF RHEUMATISM BY BLISTERS

By A. B. R. MYERS, M.R.C.S. Eng.,
Surgeon Coldstream Guards.

ABOUT twenty-five years ago, I had the opportunity of studying the treatment of rheumatic fever by two physicians in the same wards. One of them prescribed opium freely, and the other gave no internal remedies; both had the affected joints carefully enveloped in cotton-wool, as they became attacked, and then firmly bound with flannel bandages, free perspiration being encouraged also by blankets, etc. The result seemed to me to be much the same: that the affected joints rapidly ceased to be painful, and that the patients made, as a rule, a good recovery.

Since that time, my treatment of rheumatic fever has kept very much within those lines (with, in some cases, the addition of salicin); and though I have seen many methods of treatment tried, and much extolled, I cannot say that they have appeared to me to have any special recommendations. But against one treatment I cannot resist, at the present moment, raising my humble protest, viz., the "garter blister". As again advocated by Dr. Davies in the *JOURNAL* of October 28th. When so eminent a physician, with all the authority of long experience of a treatment originated by himself, can still advocate it, he must be very confident of its specially beneficial action, and no doubt must have many followers; but of all treatments (except packing) it is the one which I would not have tried upon myself. I had quite hoped that, long ere this, it had died a natural death. I have seen patients suffer such great discomfort from the raw surfaces of these circular blisters above the knee-joints when other joints have become affected, as to make them beg not to have any more applied. I ask, therefore, why should patients be given this additional suffering as a local treatment, when rapid freedom from pain can almost certainly be obtained by careful bandaging, as above stated; and if it be intended as a constitutional treatment, why choose such a specially painful form of blister as the "garter"?

It is some time since I have been able to watch closely this circular blister treatment; but it made a very decided impression upon me that it did not cut short the attack, and that it was very objectionable from the patient's point of view.

BRITISH MEDICAL ASSOCIATION.

FIFTIETH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

ON THE RADICAL CURE OF HERNIA, BY REMOVAL OF THE SAC AND STITCHING TOGETHER THE PILLARS OF THE RING.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By W. MITCHELL BANKS, F.R.C.S.,
Surgeon to the Liverpool Royal Infirmary.

A HERNIA which demands radical cure appears to me to be one which cannot be kept up by a truss, so that the patient shall be in comfort, and shall be able to follow his avocation. But, what is meant by a radical cure? In the strict sense, it means that the patient shall be restored to the original state of integrity in which he was before the hernia appeared. If a man have a hernia which no truss will keep up, which is a perpetual source of misery to him, and which prevents him from earning his living; and if, by an operation, you put that man in such a condition that, with a light truss, he can go about his work in comfort, I think the title of "radical" should hardly be grudged to such an operation. While, therefore, no patient, who, after an operation, is still obliged to wear a truss, can strictly be said to be radically cured, yet his condition is so little different from that of a sound man, and so enormously better than his previous state, when a truss was useless, that to him the operation has been much more than palliative. It has been practically curative, and so, in that sense, radical.

I need not enter into the history of the various operations for radical cure, beyond saying that the plan of invagination, practised by Wutzer, and that of injecting the neck of the sac, originated by Velpeau, and recently revived in America, are, to my thinking, useless. With Mr. John Wood's operation, you are all familiar; nevertheless, although it is twenty years since it was first brought out, it does not seem to have become a generally popular proceeding. Although, in the hands of the inventor, it is probably easy enough, to those who only read it up, it seems a complicated proceeding; and, moreover, there is a strong feeling that so large a percentage of cases turn out failures, that the game is not worth the candle. I am not in a position to adduce figures in support of this statement. I only mention it as a current opinion among operating surgeons, and as a reason why they do not more frequently perform the operation. Again, everything that can be got by Mr. Wood's operation, can be obtained by the simple and beautiful device of Mr. Spanton of Hanley, whose corkscrew operation fulfils all that is required for a simple case of inguinal hernia in a young person, where the sac is capable of being returned.

But, of late years, there has been a revival of one of the oldest methods of cure—that by removing the hernial sac. That surgical bogie, the peritoneum, has been exposed; and we now know that, if not poisoned, it is a very tractable and inoffensive membrane. Indeed, even in cases of death after operation for strangulated hernia, it is very rarely that peritonitis kills the patient. Moreover, the confidence inspired by Listerism has made an astounding change in our views of the surgery of serous membranes; and to Lister is due the credit of having been early in the field, even in the department of curing hernia. So far back as 1871, he related two cases to the British Medical Association, at Plymouth, which stimulated many surgeons to follow in his footsteps. Among the most indefatigable has been Professor Annandale, who, in December 1880, contributed an admirable article on the radical treatment of rupture to the *Edinburgh Medical Journal*. He there enumerates four operations that have been performed upon the sac: 1. ligature of the neck of the sac alone; 2. ligature of the neck of the sac, with invagination of the ligatured sac into the abdominal opening; 3. Ligature of the neck of the sac, and excision of the sac below the ligature; 4. Ligature of the neck of the sac, with excision of the sac and stitching together the margins of the abdominal opening. He says: "Having used all these methods, I have no hesitation, from my experience, in giving the preference to the fourth plan." This is the plan which I have myself adopted; and I have no hesitation in saying that it is the best plan yet found out, and the one which will, in a short time, prove by far the most popular. It is applicable to every case of hernia that requires to be interfered with, and every surgeon can do it.

In performing it, I use thorough antiseptic treatment, and make a point of having the pubes, and parts around the anus, most carefully

SYNOPSIS OF CASES.

No.	Nature.	Age.	Occupation.	Duration.	Condition.	Nature of Operation.	Inter- val.	Present Condition.
1	Ventral hernia.	27	House- wife.	14 years.	Unable to wear a truss. In much dis- comfort, and unfit for her domestic duties.	Sac rumbled up, and stitched with catgut.	2 years 6 mths.	Patient neglected herself, wore no support, and gave way to dissipated habits. Never came back to report herself, but was found, July 1882, with hernia, pretty much as before the operation.
2	Umbilical hernia.	Child	Con- genital.		Chafed so much under the truss, that it could not be kept on. Small hernia.	Adherent omentum tied and re- moved. Sac ligatured and cut away. Remains in situ.	weeks.	Too soon to say anything about case.
3	Inguinal hernia, with unde- scended testicle.	M. 22	Fireman.	5 weeks.	Atrophied testicle was forced down and remained irreducible just outside ring, thus preventing application of effectual truss. Bowel descended behind it.		1 year 6 mths.	Quite firm, and without cough-impulse. Has been working since dis-charge, wearing a truss, as a fireman on an ocean steamer.
4			Sailor.	8 days.	Precisely similar history to preceding	Treatment same as in preceding case.	1 year 5 mths.	Quite firm, and with cough-impulse. Has been discharged, and is working as a day-labourer without a truss.
5	Inguinal		Dock la- bourer.	5 years.	Enormous reducible scrotal hernia, in- capable of support by a truss. Could not follow his occupation.	Usual operation	1 year 3 mths.	Quite firm, and without cough-impulse. Works at the docks loading ships. Wears a light truss for security, but does not need it.
6			Painter.	8 years.	Hernia reducible, but increasing in size. Had considerable pain with it, and was distressed at his work.	Usual operation. Piece of adherent omentum cut away.		Within four weeks after discharge, did the heaviest work at the docks, viz.: lifting lead weights. Has no cough-impulse, and no cough- impulse.
7			Dock la- bourer.	10 months.	Quite reducible, and capable of being sustained by a truss, but desires cure in view of lifting heavy weights.	Usual operation	1 mths.	Hernia in much the same condition as before.
8			Flatman	1 month.	Small reducible hernia	Usual operation		Very firm, and no cough-impulse. Works as a day-labourer without a truss.
9			En- gineer.	Con- genital.	Could wear a truss, but wanted to get rid of it.	Peritoneal tube much diminished by truss. Cut away. Pillars stitched.		Quite firm, and no cough-impulse. Expresses no desire to wear a truss.
10			Ho- usewife.	5 years.	Very large hernia down in labium. Could not keep it up with truss, and was much distressed in doing her work.	Usual operation		Without being likely to re- turn. Too recently done to say any- thing.
11		M.	Farm la- bourer.	Weeks.	Could not get a truss to keep it up. Had to go into the workhouse in con- sequence of inability to work.	Usual operation. Adherent omentum, size of hen's egg, removed.		Has just recovered from the operation.
12			Man.	1 year.	Hernia reducible, but increasing in size. Could not wear a truss, and was much distressed.	Usual operation		Recovered from the operation.
13			Man.	2 years.	Wore a truss, but could not keep hernia up. Said "it was more bother than it was worth."	Usual operation		Recovered from the operation.
14			Clerk.	20 years.	Great scrotal hernia. Could not wear any truss.	Usual operation		Recovered from the operation.
15	Femoral hernia.	37	Sailor.	4 months.	Easily reducible, but patient could not go aloft with a truss.		4 mths.	Went to sea without a truss, and without the cough-impulse. Not yet returned.
16			H- ousewife.		Irreducible. Could not wear truss, and was laid up at intervals with pain and distress.	Usual operation	1 year 5 mths.	Quite firm, and no cough-impulse. Works as a housemaid without a truss.
17			Washer- woman.	1 year.	Irreducible. Could not wear truss. Was laid up at intervals with pain and distress.	Usual operation. Adherent omentum, size of a walnut, removed.	1 year	Has been working since operation without a truss. No cough-impulse. Expresses no desire to wear a truss.
18			Seam- stress.	7 years.	Irreducible. Increasing in size. Actually unable to move about, and quite un- able to wear a truss.	Usual operation. A tumour, size of small walnut, removed.	4 mths.	Recovered from the operation.
19			Lady.	3 months.	Irreducible	Usual operation. Small adherent omentum removed.	1 mth.	Recovered from the operation.
20			H- ousewife.	1 year.	Irreducible. Could not wear a truss, as it hurt her so much.	Usual operation. Large omentum removed.	1 mth.	Recovered from the operation.
21		M. 44	Painter.	4 years.	Strangulated about 60 hours. Had pain in the groin. Left it off because it pained him.	Bowel tumour	1 mth.	Recovered from the operation.
22					Strangulated 11 hours. Wore a truss.	Bowel and lowered by	10 mths.	Quite firm. No cough-impulse. Works as a day-labourer without a truss.
23			Miller.	20 years.	Strangulated 10 hours. Never wore a truss.	Hernia in form of a bubono- cele.	1 mth.	Recovered from the operation.
24			Plas- tician.	10 mths.	Strangulated		1 mth.	Recovered from the operation.
25					keep the hernia up			Recovered from the operation.

SYNOPSIS OF CASES—(continued).

No.	Nature.	Sex.	Age.	Occupation.	Duration.	Condition.	Nature of Operation.	Interval.	Present condition.
28	Strangulated femoral hernia.	F.	62	Housewife.	Recent	Strangulated 6 days.	Bowel reduced, followed by usual operation.	1 year 9 mths.	Quite firm, and no cough-impulse. Does her domestic work without a truss.
29	"	M.	38	Yard-man.	5 years	Strangulated 30 hours. Was always partly irreducible, and so could not wear truss.	Bowel reduced, $\frac{3}{4}$ lb. of omentum cut away, followed by usual operation.	1 year	Quite firm, and no cough-impulse. Works in a cement yard, lifting bags of cement, without a truss.
30	"	F.	64	Housewife.	Since childhood.	Strangulated 3 days. Never could wear truss, hernia being irreducible.	Bowel reduced, adherent omentum size of fist cut away, usual operation.	6 mths.	Quite firm, and no cough-impulse. Does her household work without a truss.

In 21 cases, the operation was done for relief; in 9 cases, as part of the operation for strangulated hernia. There was complete failure in 2 cases; only partial success, the patients requiring to wear a truss, but able to keep the hernia easily up with it, and all expressing themselves relieved by it, in 4 cases. In 15 cases, the patients are now at work, with the parts firm and without cough-impulse: some without a truss, some wearing a light one for precaution, but not really requiring it. Seven cases are too recently done to be tested. One case of strangulated hernia died from collapse, and one patient died, apparently from disease of the nervous system, about a fortnight after the operation for radical cure, having quite recovered from the operation.

shaved. In an inguinal hernia, the incision should commence at least an inch above the upper margin of the external ring, so that plenty of room may be given thoroughly to clear the pillars for the stitching. The sac is next freed from the surrounding tissues, and this is often much more troublesome than might be imagined. One is almost always tempted to think that it has been reached long before it really has; so that frequently, after a considerable amount of stopping has been done, it is found that it is not the sac at all that is being cleared, and the process has to be done over again. It is this mauling of the loose cellular tissue of the scrotum that gives rise to nearly all the trouble that occurs in the way of suppuration. The sac ought to be fairly reached before any stripping of it is done. Another point is that, in the case of an old sac, the lowest point is intimately adherent to the tunica vaginalis; and, if it be roughly pulled upon, the testicle enclosed in the tunica comes bodily out of the scrotum—not a very serious matter, it is true, but unpleasant to look at. The sac having been cleared, its contents are pressed up into the abdomen. When I is thin, there is no difficulty in making sure that it has been completely emptied; but, if there be the slightest doubt, it should be slit up and its interior examined. Adherent omentum, if in small quantity, I separate carefully, tie with catgut in one piece, and cut off; if in large mass, I split it up into two or three portions, and ligature with carbolised silk to ensure a good knot that will not slip. One cannot be too careful about the securing of the omental stump before it is finally pushed into the abdomen, and every drop of bleeding should have ceased, both from the omentum and from the neck of the sack, before the next proceeding. This consists in pulling the sac well down, and tying it as high up as possible. I use two ligatures of strong catgut, as that material is apt to be treacherous. In case anything should happen to one, the other is there. With a curved needle, armed with strong silver wire, I next pull together the pillars of the external ring, leaving only room for the spermatic cord at its lowest part. Two or three stitches suffice. These are cut short off, and left *in situ*. A clean carbolised sponge, put beneath antiseptic gauze for the first twenty-four hours, makes the best dressing.

The only point of novelty for which I take any credit to myself in this operation (and very likely others have done it as well as myself) is the use of strong silver wire to draw together the pillars of the ring, which is left permanently in position. Catgut I distrust, where there is any strain upon it; it yields too soon. Silver-wire seems to bury itself so harmlessly, that I cannot see any objection to it; while it must of necessity hold the pillars together for a considerable time, until they are well agglutinated. I tried magnesium wire once, with the idea of its oxidising and disappearing, but it was too brittle; and, after all, silver wire is just as innocuous. In the case of femoral hernia, I content myself with mere removal of the sac, the introduction of sutures to pull down Poupart's ligament to Gimbernat's would be very troublesome, while there is not the same necessity for suture that there is in inguinal hernia. The femoral rupture is very rarely so large as the inguinal, and, consequently, the femoral ring is not dilated so enormously as the inguinal canal is, while its walls are more rigid and unyielding.

As the table, which is appended, sufficiently describes the nature of the cases operated upon, I shall only refer particularly to two, which were absolutely identical as regards the form of hernia and the treatment. They were both powerful, well made, young fellows, aged two-and-twenty, one a cooper, and the other a sailor. Each man had a small undescended testicle, lying in the inguinal canal. One fell from a ladder, and the other fell down a bunker-hole on board-ship. There was immediate sickening pain, and the appearance of a lump just outside the inguinal ring. In both cases, the atrophied testicle had bolted out of the inguinal canal, and lay just below the external ring,

being followed by a piece of gut. The gut was reducible, but the testicle was not, and lay in such a position, as to preclude effectually the use of a well-fitting truss. I, therefore, cut down upon the ring, opened the sac, and reduced the bowel. The tissues of the spermatic cord were carefully separated from the sac, and the testicle cut away. In one case the sac, being small, was crumpled up, stitched with catgut, and pushed into the canal. In the other, it was tied and cut away. The pillars of the ring were then stitched together. Since January 1881, one man has been continuously engaged as a fireman on board an Atlantic liner without any truss, and has not a symptom of return. If anything would try a hernial opening, that would. The other has been acting for about eighteen months as quartermaster on board an ocean steamer without a truss, and without any return whatever. So great is the fatality in cases of strangulated hernia accompanying undescended testicle, that I hope to see this operation not unfrequently done. The testicle is always a feeble, useless affair. Its removal saves the patient from the actual danger of hernia, and from the possible one of cancer, which is prone to attack such organs.

In estimating the merit of an operation, which is not one of necessity, but of expediency, the first thing to be considered is the danger which it involves. I have now performed it in thirty-two cases, of which the table gives the particulars of thirty. In twenty-one it was done directly for curative purposes, and in eleven it was done as part of the operation for strangulated hernia. The latter cases clearly cannot be taken into account in considering the danger of the operation, but they are of value as showing its effect from a curative point of view, and, therefore, require to be mentioned. I can safely say that nobody has died as a direct result of it. One patient, with strangulated inguinal hernia, succumbed from collapse; but, as I have just pointed out, in that case the radical cure was a mere addendum, and cannot be held responsible for the death. In one of the instances of radical cure for relief, the patient, as was subsequently discovered, was a dissipated man. He was broken down in health, and was the subject of locomotor ataxy. His hernia, however, gave him so much distress, that he was most desirous of having it cured. He recovered from the operation without the slightest bad symptom. The wound was healed, all but a minute portion at the upper end; and he was going to get up on the following day, when he suddenly became ill with delirium, dilatation of one pupil, and other symptoms, which finally ended in coma and death. In no way could I directly trace his death to the operation, as his condition might quite well have come on independently of anything having been done for him. Although permission to examine the body was not obtained, we inspected the abdomen. The only thing amiss with any of the abdominal organs was the fact that the spleen was soft. The removal of the hernial sac had made the peritoneal lining of the abdominal wall absolutely smooth. The pillars of the ring were agglutinated together with lymph in such a way, that the inguinal aperture was completely closed, and, in the lymph, the sutures were deeply buried. Although it was a subject of great vexation that what, I feel certain, would have proved a permanent cure, was thus prevented, nevertheless, there was a satisfaction in finding that the operation is evidently capable of producing a thorough occlusion of the ring, and of restoring the uniformity of the peritoneal wall.

At the present moment, I believe that the choice of an operation for the radical cure of hernia, lies between Mr. Spanton's method and that which I am now advocating. Quite recently, in the BRITISH MEDICAL JOURNAL, that gentleman has published a record of thirty-four cases which deeply interested me, as affording an excellent basis of comparison between the two plans. In the first place, looking at the ages of the persons operated upon, of the thirty-four, twenty-two were children below 11 years of age, and the remaining twelve were young persons

between the ages of 13 and 27. Turning to my thirty cases, it will be found that twenty-two were between 30 and 64 years of age, and six between 18 and 30. Only once was the operation done upon a child. Mr. Spanton very candidly says: "The most suitable cases are, I think, those occurring among the young." But many may question whether the young need to be operated upon at all, except in very rare cases. Personally, I must confess that I have a strong belief that, in children under ten years of age, a well-fitting truss, worn constantly to the age of fifteen, will cure the great majority of their ruptures. Nevertheless, there are cases, even in children, which demand operation; and to these Mr. Spanton's operation seems admirably adapted, inasmuch as the patients are always thin, with their fibre firm and in good condition, and seldom troubled with cough. To keep the hernia up, the restraining force required is seldom great, and a moderate amount of irritation will suffice to close the neck of the sac, and so effect a cure.

Passing from the age of the patients to the character of the complaint, it will be observed that Mr. Spanton can do nothing with ventral, umbilical, or femoral hernia; he can only attack the inguinal variety. All inguinal ruptures? By no means. Only those cases where the sac can first be thoroughly emptied and then invaginated, and that is why his patients are young men and little boys. But, turning to the occupations and condition of my patients, it will be seen that they are persons well on to the middle period of life, or over it, at an age when the vigorous fibre of youth has become yielding and flaccid, and when corpulence and weak tissues come on. A hole once dilated in persons of that age never contracts. If all these persons had worn the best of trusses to the end of their lives, their ruptures would have come down as readily on the last day as the first. Nature does not assist them as it does children. Then they are mostly persons engaged in hard work; not children or schoolboys, but heavy men working as plasterers, painters, sailors, firemen, labourers, and so forth. To cure these men at their time of life, and with their occupations, is a much more formidable proceeding than anything that Mr. Spanton has attempted. I have said that the corkscrew can only deal with inguinal ruptures; but, unfortunately for the worst cases of these even, it is ineffectual—I mean the cases where there is adherent, irreducible omentum sticking in the ring and keeping it open, or where there is an undescended testicle just outside the ring. These are the most serious of all cases of hernia, because no truss is of service, and descent and strangulation of bowel are always imminent. I maintain that they can be cured alone by the operation I am advocating, and by no other. You must remove this stumbling block of omentum or testicle first, before anything else at all can be of service.

With regard to the introduction of the radical cure, as part of the ordinary operation for strangulated hernia, I think it will mark an important epoch in the history of that operation; and that, in future, the description, in place of commencing with directions to cut down upon and open the sac, will commence with directions to dissect the sac clear, so that it may be removed when its contents are restored to the abdominal cavity.

In instituting a comparison between Mr. Spanton's operation and the one under consideration, I should not for a moment desire to be considered as undervaluing the former. All I wish to show is that, compared with what may be called the sac operation, its capabilities are limited. Nevertheless, I regard it as a most ingenious device; and I firmly believe Mr. Spanton in all that he says with regard to its success in the cases in which he has tried it. I have not performed it myself, because I have been so interested in the other, that I have only looked out for those serious cases to which it is specially adapted. But I think that, if a parent thought that his son would be the better of having his hernia radically cured while a boy, I would recommend Mr. Spanton's operation for the lad as the safest, and as probably equally effectual. Both operations have their sphere, and both will become popular in due time—for the simple reason that they are easy and can be done by anybody. I trust we may both be successful in exciting, in the minds of our fellow practitioners, a desire to do something for the relief of a vast body of suffering men and women, whose lives, by reason of rupture, are often rendered very miserable and useless, and, not unfrequently, put in deadly peril.

The following are the chief divisions at which I have arrived.

1. For simple inguinal hernia in boys, where the sac and its contents are reducible, Mr. Spanton's operation seems highly suitable.

2. The sac operation is applicable to hernia of all conditions, and specially to those reducible ruptures where there is adherent omentum in the sac.

3. As far as my thirty cases go, it is shown not to be a dangerous operation; while its results from a curative or a remedial point of view are most satisfactory.

4. Radical cure should form a necessary part of all operations for strangulated hernia.

Mr. SPANTON (Hanley) congratulated Mr. Banks on the success of his operations, which afforded an encouraging proof of the change of opinion which was now taking place with regard to the cure of hernia. It was quite refreshing to find a subject of this kind received with interest and kindness in such a meeting of the profession; the more especially as in all modern text-books on surgery, all operations for the cure of hernia were alluded to only to be condemned as unnecessary or unjustifiable. Nevertheless, it was essential to keep quite distinct operations performed for cure of hernia in cases of reducible hernia; and those performed as an adjunct to imperative operations for relief of strangulation. Remembering that nearly 1,200 deaths occurred annually from strangulated hernia in this country, and that of these nearly 300 took place after operation for its relief, it would be manifestly unfair to include any such cases among those which were classed as operations for the radical cure of hernia. Of his own operation, Mr. Spanton had notes now of about sixty cases in which it had been performed without any fatality, or indeed any serious condition to cause real anxiety. Such a satisfactory result had not been obtained from any other similar operation in this country. Mr. John Wood met with a fatal case in his twentieth operation; and in Mr. Banks's very interesting series of twenty-one cases (omitting those after operation for strangulation) the first death occurred in the fifteenth case. Mr. Spanton regarded the operation, as compared with others of expediency, such as that for varicocele, osteotomy, and so on—after which numerous deaths were known to have taken place—as not only a safe and justifiable one, but one which would, before long, be considered obligatory on the part of the surgeon in the case of all young persons with reducible hernia. With regard to the mode of operation, it would probably be found, as Mr. Banks had stated, that the best method would be that of ligature in some form or other for adults, and for cases of irreducible and strangulated hernia; and his own screw method in those cases, especially congenital, occurring in the young. Among such patients, the best results had hitherto been obtained, and no advantage had, so far, been found in the adoption of Listerian measures. Those instances did best in which adhesive inflammatory action occurred: suppuration had always an injurious influence upon the result. The operation with the screw was one which might safely be performed even on very young patients, and with the best possible results. He had performed a similar ligature operation to that so well described by Mr. Banks, in numerous instances of strangulated hernia, both inguinal and femoral; and his colleague, Mr. Folker, made it a rule to do it in all suitable cases of strangulated hernia in which an operation was required; and this year, out of six kelotomies, Mr. Spanton had ligatured the sac and abdominal rings in one hospital and three private patients, to effect a permanent cure with the best possible results. This operation was one which it would seem right to perform in every instance in which the condition of the patient at the time was sufficiently favourable to warrant it.

Mr. HENRY MORRIS (London) criticised Mr. Mitchell Banks's remarks, saying, that discrimination was necessary between the two classes of cases, simple or strangulated. Mr. Banks's own table appeared to show only a small proportion of complete successes; seven out of the entire number.

Mr. KENDAL FRANKS (Dublin) said that, in Dublin, Listerism was opening up new operations, and rendering some safe which formerly were fraught with danger. Treating hernia radically, by a method which might be termed the method by dissection, came under this category. He could speak from experience of the perfect safety of the method of exposing the ring, returning the sac with its contents and hernia into the cavity of the abdomen, and stitching the margins of the ring firmly together with wire. He agreed with Mr. Banks in the advantage of leaving the wire *in situ*. He had operated twice this year by this method, and had assisted his colleague, Mr. Barton, in a third case. All were most satisfactory, though, in two of the cases, the wire had been removed. He thought a safe method, like the one described, was preferable in most cases to condemning patients, and especially young ones, to the use of a truss through life.

Mr. MITCHELL BANKS, replying to Mr. Henry Morris, said that, out of the number, there were only two complete failures; that only four cases, in his opinion, really needed a truss; that fifteen were doing heavy work in docks, etc., and did not appear to need a truss. He could not tell they had had a hernia. In conclusion, he had brought forward the cases to show the safety of the operation.

THE munificent legacy of £20,000 has been bequeathed to the Salop Infirmary by the late Mr. Henry Spence, merchant, of Shrewsbury.

THE EARLY TREATMENT OF FLAT-FOOT.

Presented to the Section of Surgery at the Annual Meeting of the British Medical Association, in Worcester, August 1882.

By BERNARD ROTH, F.R.C.S. (Exam.)

FLAT-FOOT is a very general term, and includes everything, from a slight relaxation of the plantar arch to extreme cases where the internal malleolus almost or quite touches the ground, as in some cases of infantile paralysis. Sir James Paget speaks of "the constant pain and weariness of the lower limbs associated with flat-foot. The feet are elongated, flat, low without insteps; the heels are too little prominent, the plantar arches sunken, the ankles thick; the astragalus, navicular, and inner cuneiform bones are below their right level. The pains complained of are those of the muscles and tendons, which are habitually overworked in the task of keeping the body erect, when its proper bearings on its supports are disturbed." (*Medical Times and Gazette*.) A simple classification of flat-feet is to divide them into three groups.

1. Cases in which it is possible to restore the foot completely to the normal shape, by passive manipulation, without any decided force being employed.

2. Cases where the tarsal bones have become more or less fixed in their displaced positions, by fibrous ankylosis, shortened ligaments, or osseous deformity, and which require more or less severe operative interference under anaesthetics.

3. Intermediate cases, in which partial restoration of the normal plantar arch is possible by passive manipulation.

I intend, in the present paper, to deal only with groups 1 and 3. My attention is constantly being directed to the subject of flat-footedness, because the same constitutional relaxed habit of body that predisposes to lateral curvature of the spine, also tends frequently to produce flat-feet. Thus, out of seventy-seven consecutive cases of lateral spinal curvature, under my care, since January 1880, no fewer than forty-eight had flat-feet, some very severe—viz., upwards of 62 per cent. Many of these patients did not suffer any discomfort, while others experienced more or less constant pain and aching in their feet, even when but very slightly deformed.

Little has been written on the subject of the early treatment of flat-foot. Sir James Paget says: "Orthopaedic apparatus is generally sufficient for the relief of the pain, rarely so for the cure of the deformity." (*loc. cit.*) Mr. Le Gros Clark, in one case, divided the tendons of the peronei and extensor longus digitorum muscles; and then a boot, with lateral steel support, was worn for a year. (*Medical Times and Gazette*, August 10th, 1881.) The late Mr. Maunder, in "an aggravated instance of the deformity," obtained cure in two years by ordering laced boots, with a leather pad to raise the instep. He very rightly adds: "Every means of improving the general health should, of course, be employed." (*Medical Times and Gazette*, October 19th, 1871.)

The treatment I adopt has for its object, not only the replacement of the depressed plantar arch, in the most comfortable manner for the patient, but also the strengthening and approximation of the parts that support the normal instep.

The restoration and maintenance of the plantar arch is most important. It having been ascertained that the foot can be more or less completely replaced in a natural position, boots really shaped to the form of the feet should be worn. The boots exhibited in the Annual Museum, which have been made by Mr. Hall, of Edgware Road, London, according to my suggestion, are, as far as I know, the only ones which really fit the feet, and in which it is possible to walk with as much ease as if one were bare-footed. The human foot touches the ground, not only by the heel and the under surface of the metatarsophalangeal joints and the toes, but also by the whole outer border of the sole, for a width of one-half to one inch, as may be seen by the wet impression left by the foot on the ground after our morning bath. It is hence essential that this portion of the sole should also touch the ground through the boot. These boots are, therefore, made without heels, and have the "waists" stiff. In walking, the chief motion of the foot takes place at the metatarsophalangeal articulations, and not in the arch of the foot. A wedge-shaped oval pad, with the straight side forming the base, and corresponding in shape to the normal hollow of the plantar arch, is fixed inside the boot. The best materials for the pad are superimposed layers of felt (which can be added to as required), or horse-hair, firmly packed in a suitably shaped leather case. Steel springs and solid India-rubber pads cause too much pain, in my experience, if they be fairly brought against the depressed plantar arch. In no case is the pad to extend right across the "waist" of the boot, as this at once interferes with the normal transverse plantar arch. The boots being without

heels, the pad has the same effect in them as on the ground. I sometimes try loose pads at the first examination, when the patient generally at once appreciates the comfort of the support given. The boot must be made to the shape of the patient's foot—that is, with the inside margin straight, and parallel with that of its fellow. Laced boots only should be employed, because the pad, to be efficient, must be well braced up against the plantar arch. In severe cases, more or less increased stiffening of the inner side of the boot is necessary.

To strengthen and approximate the parts that support the plantar arch, I employ certain exercises, which act upon the muscles whose tendons are concerned in maintaining the normal shape of the sole. Mr. Le Gros Clark says: "In reviewing the action of the various muscles around the foot, it is obvious that their attachment is designed to preserve the plantar arch; and that such healthy condition must depend, in great measure, on the evenly balanced action of these muscles upon their several attachments. Thus, the peronei and tibial muscles antagonise each other, and the expanded insertions of two of them into the tarsal bones is very instrumental in preserving the transverse as well as the antero-posterior arch." (*loc. cit.*)

An useful exercise for flat-foot is what I have described as "ankle-circumduction down, in, up, and out, while the toes are directed inwards the whole time." (See *JOURNAL*, May 13th, 1882.) The patient should be seated with the leg supported on another chair, while the foot and ankle project free beyond. This circumduction, which should be slowly repeated about twenty or thirty times, is chiefly performed by the tibialis posterior, the flexor longus pollicis, and flexor longus digitorum muscles behind the internal malleolus, and the tibialis anticus and extensor longus pollicis in front of it.

Another exercise is a voluntary slow adduction of the foot, while the surgeon or a trained assistant is resisting, more or less strongly, with one hand against the ball of the great toe; while the other hand is fixing the leg above the ankle-joint. This is followed by abduction of the foot by the surgeon or his assistant, while the patient exerts a gradually yielding resistance. This double exercise is repeated from ten to twenty times. The muscles just mentioned are also concerned in this movement.

A third exercise is for the patient to walk bare-footed on the outside edge of his feet, with the soles looking inwards, for about forty or fifty steps forwards and backwards, several times daily. Lastly walking bare-footed on the toes with the heel, raised as high as possible, is a very efficient exercise for flat-foot. Anything causing cold feet must be removed, as tight garters worn above or below the knee. The circulation of the lower extremities, if languid, must be promoted by extra clothing, if necessary; and by warm baths, followed by cold sponging and good friction in drying. Massage or firm kneading and rubbing of the muscles of the leg, front and back, is often useful where these are flabby and weak; olive or other oil should be employed to protect the skin, while sufficient pressure is being exerted to penetrate down to the muscular substance. I never employ so-called professional rubbers, if it can be avoided—much preferring any moderately strong servant or relative of the patient, who can be easily taught to do the massage. At least half an hour daily for each leg is necessary to produce a practical result. To sum up: by wearing properly shaped laced boots, without heels and with felt pads; by persevering daily with these exercises; and by improving the general health of the patient—the pain of flat-foot, if present, is generally relieved within a few days, and an improvement in the deformity is nearly always obtained within a month.†

* I am indebted to Dr. Neale's *Medical Digest* for help in finding these references.

† Since writing this paper, Mr. Thomas S. Ellis, Surgeon to the Gloucester Eye Institution, has kindly sent me his monograph "On the Arch of the Foot," which embodies many of my ideas, and which I cannot recommend too strongly to those interested in the subject.

DEVONSHIRE HOSPITAL, BUXTON.—A meeting of the committee of management of this hospital was held on Saturday, October 7th, when Dr. Robertson, F.R.C.P., delivered an address, in which he reviewed the position and work of the institution. It appears that the work in connection with the extension of the hospital is now complete, and that there is now greatly increased accommodation for patients, the number of whom has been much augmented; there has also been a proportionate increase of curative results. It was stated that, though the large number of patients had necessarily occasioned a larger expenditure, their receipts were considerably greater than those of the preceding quarter. There still remained a debt of £4,000 upon the extension, but it was felt that any interference with the terms of the subscriptions should be avoided as long as is compatible with the solvency of the institution.

A THIRD SUCCESSFUL CASE OF CHOLECYSTOTOMY.

*Read in the Section of Surgery at the Annual Meeting of the
British Medical Association in Worcester, August 1882.*

By LAWSON TAIT, F.R.C.S., etc.

Surgeon to the Birmingham and Midland Hospital for Women.

ON December 20th, 1881, Dr. Lycett of Wolverhampton brought to me a lady, aged 28, suffering from severe paroxysmal pain in the right side, associated with a tumour, which appeared and disappeared. It was found to be movable, situated on the right hypochondrium, and was, in my opinion, distinctly cystic. In spite of the fact that it had been pronounced to be a "floating kidney" by several distinguished authorities, I gave the opinion that it was a gall-bladder, distended by an impacted gall-stone, and I advised the operation of cholecystotomy. Dr. Lycett has favoured me with the following history of the case. At the time of puberty, she began to suffer from pain in the hepatic region, varying in degree and duration, but generally sudden in its onset, apt to be induced by exercise of any kind; and in this way it prevented her from engaging in dancing, and other pastimes. She first came under Dr. Lycett's care in March 1878, at which time he came to the conclusion that she was suffering from stone in the gall-bladder. One remarkable feature of the case has always been a perfect freedom from jaundice. She had her second child in 1880; and, after that, Dr. Lycett saw reason to alter his view of her case by the discovery of a freely movable tumour in the upper and right part of the abdomen. It seemed solid, and was shaped like a kidney. It was tender on pressure, and, when the hips were raised above the shoulders, it could be made to disappear. The patient stated that sometimes it could be felt below the umbilicus; but Dr. Lycett was never able to satisfy himself of this. He came to the conclusion that it was the right kidney floating, and Dr. George Johnson expressed a belief that, in addition to this, there must be a calculus in its pelvis to account for the paroxysmal pain. No abnormal condition of the urine was ever found.

After the birth of her third child, she became much worse. Her sufferings were often intense, so that she suffered from serious symptoms of collapse, and she became very thin and anæmic. "Under such circumstances," writes Dr. Lycett, "I advised her to seek your advice, with the object of submitting to abdominal section, in the hope of that possibly affording relief. To this measure, however, she took some six months to make up her mind, but finally consented when she had become a chronic invalid and almost bedridden."

I saw her with Dr. Lycett last December, and was fortunate in discovering the tumour at once. It seemed to me to be cystic, to be attached above, and therefore I pronounced it to be the gall-bladder distended, on account of the occlusion of the duct by a calculus. I put the floating kidney theory altogether on one side, because I have never seen such a thing, either in life or in a museum, nor have I met any one who has. In fact, I have no belief in its existence as a pathological incident.

I proposed to open the abdomen and remove the calculus, but, as Dr. Lycett says, she took six months to make up her mind to the operation. She came back to me early in June, very much reduced in health, and on the 15th I opened the abdomen by a vertical incision over the tumour. I came at once upon it, and found it to be the gall-bladder distended. I emptied it by the aspirator, removing about a pint of thick glairy mucus. I then laid it open, and removed about eighty gall-stones of small size, the largest weighing fifteen grains. They were removed chiefly by the use of a *curette*.

I then stitched the aperture in the gall-bladder to the wound in the abdominal wall, carefully closing the peritoneum, and leaving a drainage-tube in the gall-bladder. The patient's recovery was uninterrupted; the highest temperature recorded was 100.4°, and the highest pulse record 84. The stitches were removed on the eighth day, the drainage-tube on the twentieth day, and in ten days more only a small sinus was left, from which some mucus still continues to be discharged. The patient has gained flesh since the operation, and has been entirely free from pain.

Neither at the operation nor in the after treatment were any of the "antiseptic" methods of Professor Lister employed, as I have entirely discarded all these for about two years, with great advantage to my patients.

The fistula in the gall-bladder continued to discharge clear mucus till on August 5th, when "something seemed to give way," as she said, and bile flowed freely. This is very satisfactory, as it shows that the occlusion of the duct has been overcome, and the complete functions

of the organ may be re-established by the closure of the fistula. This I shall take means of securing shortly.

A FOURTH CASE OF CHOLECYSTOTOMY.

A. B., aged 37, was placed under my care some weeks ago by my colleague Dr. Hickinbotham. A tumour in the position of the gall-bladder could be occasionally discovered, and she suffered intermittently from severe attacks of cholic. It was clearly a case of distended gall-bladder. On October 13th, I performed an operation precisely similar to that narrated above, and removed sixteen gall-stones, varying from seven grains to thirty-five in weight. I removed the drainage-tube on the third day. The stitches are now (October 24th) all removed, and the wound is almost healed.

THE BRINE-SPRINGS OF DROITWICH.

*Read in the Section of Medicine at the Annual Meeting of the British
Medical Association in Worcester, August 1882.*

By S. S. RODEN, M.D., Droitwich.

PERHAPS few of our members here present are conscious that they are at this moment within seven miles of the most powerful saline spring in the world. Such is, however, the fact. The brine-springs of Droitwich surpass in potency any spa in Europe or America, so far at least as is known up to the present time. The value of these waters has been known commercially, even so far back as the Roman occupation of this country. Droitwich was the *Salinæ* of the Romans: to this day remains of two Roman or British roads are to be seen, known as the Upper and Lower Saltways, the former leading through Warwickshire, over Edge Hill, into Leicestershire and Lincolnshire; and the other through Gloucestershire to the South-west of England. The Crown in the days of Anglo-Saxon kings possessed the right to levy dues at the salt-pans on the wagons as they loaded, and doubtless from this royal privilege sprang the prefix *droit* to the old Saxon vic or wych. The municipal arms still bear the title "the Borough of Wych," otherwise Droitwich.

However ancient may be the commercial value attached to these waters, their medical virtues have lain hidden until quite recent times, and attention appears to have been first called to their value in this respect by sheer accident. In the year 1832 cholera visited the town—I may say raged in it. A cholera hospital was extemporised in a disused salt work. A man and his wife were placed in charge to nurse and attend on the patients. On the man devolved the duty of moving patients from their houses to the hospital, preparing the baths, lifting them in and out, and, finally, after death, removing them to the burial ground. On one occasion, having brought a patient to the hospital and found that there was no hot water ready to prepare the bath, which was made with plain water, and was the first item in the treatment, the patient being in a state of collapse and feared to be dying, in the emergency, the attendant rushed into an adjoining salt work, and brought some bucketsful of boiling brine, adding cold water to reduce the temperature. The patient, while in the bath, rallied to some extent, the cold stage passed away; the bath was repeated once or twice, and he recovered. The result of the brine-bath in this case was so marked, and excited such astonishment in the minds of the medical attendants, that all subsequent cases were treated in the same manner and with most satisfactory results.

The late Sir Charles Hastings, the founder of our Association, whose memory our members have deemed fit to honour by holding this jubilee meeting in the city where he practised, was at that time intimately associated with Droitwich. His attention was attracted to the powerful efficacy of the brine as manifested in the treatment of these cholera cases; and he exerted himself to obtain the establishment of baths, with a view to test the power of the water in other diseases. This led to the erection, in 1836, of the first public baths in Droitwich. It was soon found that cases of chronic rheumatism, of strumous disease, and cases of simple debility, chlorosis, etc., derived great and speedy benefit from immersion in the hot brine, in a proper state of dilution; with the result that Droitwich became a popular resort for the relief of these diseases, especially to the tradespeople and working classes of the Black Country.

In the year 1856, a further effort was made to extend a knowledge of the value of these waters, and an attempt was made by the late Mr. Gabb, an energetic inhabitant of the borough, to form a company to enlarge, or rather to rebuild, the baths, and to erect an hotel and bathing-houses in a favourable site away from the town itself. Failing in this effort, he devoted his time, money, and energy to enlarging the existing baths. He designed and partially carried out the present

Comparative Analyses of European Spas.

	Chloride of Sodium.	Chloride of Potassium.	Chloride of Magnesium.	Chloride of Calcium.	Carbonate of Lime.	Carbonate of Magnesia.	Carbonate of Iron.	Carbonate of Soda.	Sulphate of Lime.	Sulphate of Alumina.	Sulphate of Soda.	Sulphate of Magnesia.	Bromide of Magnesium.	Iodide of Sodium.	Protoside of Iron.	Total Salts to an Imperial Gallon.
Droitwich (Herapath) ..	21,761.82	—	2,560	—	—	—	—	—	91.120	14.400	142.720	—	—	2.08	—	Grains. 22,212.880
Buxton (Dr. Lyon Playfair) ..	2,423	—	114	—	7.773	4.343	—	—	2.723	.240	—	—	—	—	—	20.579
Rath (Sir C. Scudamore) ..	—	—	16,000	12,000	—	—	—	5.801	95,000	9,000	—	—	—	—	1.08	140,000
Cheltenham (Dr. Faraday) ..	970,000	—	—	—	16,000	—	—	—	145,000	—	37,000	124,000	—	—	—	1,292,000
Leamington (Lord Aylesford's Springs)	407,700	—	32,660	205,610	—	—	—	—	—	—	403,980	—	—	—	—	1,059,950
Scarborough, Southwell (Dr. Thompson)	28,300	—	3,830	—	9,000	—	—	—	147,120	—	—	22,410	—	—	—	208,740
Mont D'Or (Lee) ..	25,720	—	—	—	24,150	3,220	—	35,000	—	6,820	8,500	—	—	—	1.70	114,360
Carlsbad (Berzelius) ..	79,750	—	—	—	100,000	—	.278	96,950	—	—	198,690	—	—	—	—	496,071
Marienbad (Berzelius) ..	127,100	—	—	—	36,000	25,480	1,650	96,160	—	—	350,730	—	—	—	—	649,750
Baden (Loweg) ..	130,000	—	—	—	—	—	—	100,000	—	—	25,000	25,500	—	—	—	340,000
Ischl (Lee) ..	2,223,000	—	71,100	7,800	—	—	—	—	—	—	—	66,700	—	—	—	2,368,000
Sea Water, Channel (Schweitzer) ..	1,940,029	55,000	263,651	—	2,372	165,123	—	—	191,115	—	—	—	2,085	—	—	2,536,000

swimming bath, and spared no pains to make the virtues of the Droitwich waters known to the profession and to the public throughout the kingdom, so far as his means enabled him to do.

In the year 1870 Mr. Bainbrigge took over the baths from Mr. Gabb, and succeeded in forming a company to buy them up, together with the adjoining hotel, and so formed the establishment as at present existing, to visit and inspect which an invitation has been sent, I believe, to every one of our members.

The brine is pumped up from a depth of about 140 feet to the surface. It is perfectly cold, and contains from 36 to 40 per cent. of saline matter, chiefly the chloride of sodium, with the sulphates of soda, lime, and alumina, and traces of bromine and iodine. The accompanying table gives the analysis as made by Herapath about the year 1854. Various other analyses have been made; thus Northcote and Taylor both found traces of bromide of magnesium. But the most striking point to the mind is, the enormous amount of saline or solid matter in each gallon of fluid, viz., 22,212 grains; sea water containing 2,536 grains per gallon, and the springs of Ischl, perhaps the strongest European Spa, 2,368 grains. Droitwich brine, therefore, has nearly ten times the strength of sea-water. It has necessarily to be reduced in strength for bathing purposes; the proportion for dilution is usually about two or three parts pure water to one part strong brine; this gives a specific gravity of about 12 to 18. The brine is put into the bath first in a cold state; the pure water is added, at first at boiling point and then cold, so as to obtain the proper degree of temperature. The temperature of the bath varies according to conditions, from 86° to 105° Fahrenheit. The water is so buoyant that patients frequently have great difficulty in keeping the body submerged. Immersion in pure brine at this temperature would cause intense irritation of surface, and excite considerable cardiac disturbance. I have occasionally seen severe urticaria arise where, through carelessness, too much brine had been used in making the bath.

The class of ailments that derive most benefit as a rule from the use of these baths, are undoubtedly those of either a rheumatic or gouty origin; and more especially that anomalous form known as "rheumatic gout". In all its stages, this disease appears to derive benefit from the brine; in its early and even most acute stages, it yields very speedily to the baths, and even in its most chronic forms, when all possibility of cure has passed away, great relief and comfort is experienced from the baths; this benefit continuing for months. After rheumatic gout comes rheumatism, in all its forms, except, perhaps, the most acute, or where the temperature exceeds 100° Fahr.; or where acute cardiac or pericardiac mischief is present. The different forms of rheumatic neuralgia, sciatica, lumbago, etc., and of chronic gout, gouty thickenings, and that bodily condition which we are apt to call suppressed gout, all respond readily to the influence of the hot brine. I must not omit to notice the surprising rapidity with which large dropsical swellings of joints, and thecal and bursal distensions will often diminish and disappear; and even, not unfrequently, those distressing contractions of the hands and fingers, and of the knees and larger joints, yield to its influence, and the parts resume their natural condition, or nearly so, provided the distortion has not been of too long standing.

When I first commenced practice in Droitwich, I was struck by the regularity with which various old people, in several instances octogenarians, made their appearance in the town, taking up their quarters usually for a month or six weeks, with the avowed object of being renovated. These persons declared to me, over and over again, that, after one week's use of the baths, they felt quite ten years younger. In later years, during the régime of Mr. Bainbrigge, one marked instance of this was the well known authoress, Mrs. S. C. Hall, who

regularly came to Droitwich the last few years of her life, when over ninety years of age, to enjoy the resuscitating and invigorating effects of the baths. So remarkable was their reviving influence, that her husband remarked, in a humorous manner, that Droitwich must be the place where people, if they wanted to die, had to remove into the next parish.

Amongst the various classes of disease that we might deem likely to benefit by the use of the hot brine-baths, there is one that *à priori* reasoning would lead us to exclude, viz., hæmorrhages. There is, however, one form of hæmorrhage in which I have, in several instances, seen surprising benefit arise, although the baths had been used entirely against my advice; it is chronic menorrhagia. We all know those pallid bloodless patients, panting on the least exertion, and unable to enter into any of the active duties of life; liable, as they are, to sudden gushes of hæmorrhage.

Time will not permit me to enter more fully into this subject, not even to go into the *ratio medendi* of the remedy as fully as I could wish to do. How far the powerful alkali acts chemically upon the local deposits in rheumatic and gouty affections is a question that admits of considerable discussion—that it does so to a greater or less extent, I could give strong grounds for believing. But the physiological action in one point is very marked, and will account at once for the beneficial efficacy in such various forms of ailment and disease. I allude to its remarkable action in giving tone to the capillary circulation. Whilst immersed in the bath, the patient usually perspires very freely over those parts of the surface that are not submerged, viz., the neck, face, and head. Subsequently to the bath, a pleasant feeling of languor is experienced for an hour or two, and throughout the day a glow of warmth is felt over the whole body—unaccompanied with any marked perspiration or burning heat of the skin. The appetite almost invariably is increased, and some sense of thirst is sometimes, but not always, experienced.

Dr. CLIFFORD ALLBUTT (President of the Section) said that he thought the tendency of the profession was to over-scepticism in the matter of baths. Patients were often sent to baths more in anticipation of the indirect than of the therapeutic advantages to be derived from them. Enormous benefit was often derived from the thorough change of mind and body. No doubt, many baths acted upon the capillaries and nerves. Many persons went to Ragatz, and got considerable benefit from the scenery and change, more than from the use of baths. In the case of Droitwich, the benefits derived from the baths could not be supposed to be from the scenery. As regarded the strength of the Droitwich Baths, they were not used at their full strength, and, therefore, he did not see much advantage in their being stronger than those of the Tyrol. He should make a point of trying the waters in some cases of disease referred to by Dr. Roden. He happened to hear, apart from the meeting of the Association, that a gentleman derived very remarkable benefit in a case of sciatica. He had been seen by some eminent medical men, went to Droitwich in despair, and derived very great benefit. He (Dr. Allbutt) believed that the strong liquors of the baths, applied to the surface of the body, acted like electricity and galvanism, in a stimulating manner. The profession would be under great obligation to Dr. Roden if he would carry out some experiments with regard to the temperature and the action upon the circulation, as shown by the sphygmographic tracings.

BEQUEST.—A legacy of £200, less duty, has been paid to the Lincoln Lunatic Hospital by the executors of Mr. Wm. Keep, of Carlton-le-Moorland.

although scarcely so deep in colour, whilst a few drops of her medicine gave a black colour when mixed with calomel on a plate.

The test is, further, unaltered by the addition of carbonate of ammonia; for a patient in the Infirmary with syphilitic disease of several bones, who was taking ten grains of the iodide of potassium with four grains of carbonate of ammonia thrice daily, showed the usual yellow tinge with calomel. Another patient, with strumous abscesses about the neck and ribs, who was taking syrup of the iodide of iron with cod-liver oil, was also tested, and he also gave a yellow reaction; but the depth of colour was slight.

I have ascertained, also, that iodide of potassium is as readily eliminated as it is easily absorbed; for, when the internal administration ceases, in a very few hours the test is no longer obtained; and this holds good even when so large doses as a drachm of the iodide are being taken daily. Up to the present time, I have failed to obtain the reaction from the serum of the blood of a patient taking iodide of potassium; neither have I found the test present in the secretion of the lacrimal gland.

I have succeeded in getting the reaction, although faint and evanescent only, with using, instead of calomel, a 5 per cent. solution of bichloride of mercury. The patient was taking a drachm of the solution of the perchloride of mercury with ten grains of the iodide of potassium, with tolerable regularity, three times a day for two months; and whilst, with calomel the saliva gave a bright canary yellow, the above 5 per cent. solution, when mixed with the saliva, produced a faint yellow, which was inclined to disappear; and, when I added an excess of the solution, the yellow entirely vanished.

Iodine itself is sparingly soluble in water; but, on dissolving a little in spirits of wine in a mortar, and then adding a little calomel with trituration, it will be found that a yellow-coloured powder is quickly formed, identical in appearance with the yellow test which is the subject of this paper. It is, I believe the mercurous iodide.

On adding a strong solution of iodide of potassium to calomel, a black colour is given; but, on using an excess of calomel, there is seen a yellow change amongst the black—again the mercurous iodide.

On taking the bichloride of mercury in solution of four grains to the ounce, and adding a solution of the iodide of potassium, the yellow colour is formed until an excess of the latter is added, when the well-known biniodide appears. This yellow colour is, I believe, the same as my test.

It appears that there are three iodides of mercury; viz., subiodide, protiodide, and biniodide. The green iodide is, I understand, a mixture of the first two; and my yellow test is a pure protiodide; but I cannot speak as a chemical authority. The green iodide of the *Pharmacopœia* is known to manufacturing chemists as a name only, and does not stand for a pure chemical compound; and those interested in the subject will find a paper in the ninth volume of the *Pharmaceutical Journal* (1867-68) by Mr. Wood, page 502, in which this is discussed. From the above observations, it is evident that the test is not a test for iodide of potassium, but one for iodine only; and it is somewhat remarkable how rapidly iodine is thus eliminated from the body, whilst mercury and arsenic, amongst other metals, are long retained. And I cannot help thinking that further research in this direction may throw light upon other points in connection with the chemistry of the body than the one at present under consideration.

I believe I am right in thinking that attention has not, up to the present time, been called to what I have observed and recorded in this paper.

COLOUR-BLINDNESS.—Dr. Kolbe, one of the several Russian physicians who have been engaged in a series of important researches in connection with colour-blindness, has published the results in *Wratsch* (*The Physician*). Out of 150 military recruits examined, no fewer than 251 were colour-blind, and he arrived at the conclusion that the capacity for distinguishing colours. The average percentage of colour-blindness was thus 2.6; but the five doctors who have made these examinations arrived at very different percentages, namely, from 0.5 to 5 per cent. Three other doctors have made experiments on soldiers and pupils in naval schools, and have found a much higher percentage, 6.08 per cent. of colour-blind, and 8.5 with imperfect vision. Among sailors of naval schools, the percentage of colour-blind is, however, smaller—that is, 1.6 and 1.9. When attention is directed to a far more recent colour-blindness. Thus, Dr. Kolbe, who has experimented both on men and women, discovered among the men 2.5 per cent. of colour-blind, and 7.2 with imperfect vision; while among women, he discovered only 1.0 per cent. of colour-blind, and 3 per cent. with imperfect vision.

DEATH OF A CHILD UNDER THE USE OF CHLOROFORM.

By FRANK SHEARAR, M.B.,
House-Surgeon to the Dispensary, Carlisle.

ELIZA B. C., aged seventeen months, died whilst under the influence of a limited quantity of chloroform. When little more than a fortnight old, this child had developed marked symptoms of hereditary syphilis, but improved so rapidly, and so soon attained an appearance of comparative health, that treatment was not persisted in, despite of warning to the contrary. When she was twelve months old, an evanescent swelling of the right elbow showed itself; and this had no sooner disappeared than the patellar bursa of the right knee became acutely inflamed. The tissues round the joint became enormously swollen, and a large quantity of pus collected in the bursa, and burst spontaneously at the end of a week's time. After discharging for ten days or so, the openings were allowed to close; and there remained such marked thickening round the joint that, even after the lapse of four weeks, the right knee appeared twice the size of the left. This thickening subsided very slowly; and, in spite of passive motion having been begun early, the movement in the joint was both limited and painful. The child was, therefore, brought to the dispensary on September 29th, 1882, and put under chloroform, in order to discover the real amount of movement, the cause of its limitation, and, if possible, to break up the adhesions.

Between twelve and one o'clock, the child had had a light dinner; and, owing to the number of patients to be seen, it was nearly four o'clock before chloroform was administered. The child was a little pale, but was quite lively, and had been playing with the other children. It had had no symptoms whatever of lung-disease; and the pulse, though soft, was without any peculiar character. The child's clothing having been loosened, an indefinite quantity of chloroform, certainly less than a drachm was poured upon a towel, and this was applied over the nose and mouth in the usual way. The child cried and struggled at first, and held its breath as much as it could; but, after a few deep inspirations and a slight attack of coughing, which brought some frothy mucus to its mouth, it went suddenly under the influence of the chloroform, and the towel was thrown to the other end of the couch. During the manipulation of the limb, the child slept perfectly quietly, the breathing being, to all appearances, quite natural. After the lapse of a minute or so, the child began to move a little; and it was noticed that the lips were somewhat blue, and that the respiratory effort was weak. The child was immediately slapped on the face and chest to rouse it, and the window was opened. The breathing became still weaker, and artificial respiration by Sylvester's method was begun; whilst the tongue was pulled well forward with a pair of forceps. No obstruction could be felt with the finger above the epiglottis, and it was noted that the finger did not excite the slightest tendency to reflex action. The child was slapped with a cloth, dipped first in cold and then in hot water. The mouth was swabbed out with brandy, and ammonia was held to the nose during artificial respiration. Ultimately, Sylvester's method not being very successful, direct inflation of the lungs was tried, the nostrils being closed and air being blown in by the mouth, and then expelled by pressure on the thorax. This seemed more effective; but there can be little doubt that most of the air entered the stomach instead of the lungs. All was to no purpose. The attempts at respiration only came in the shape of brief gasps, at lengthening intervals, and soon ceased. There was no dyspnoea; and the lividity was so slight that, even after the attempts at resuscitation, lasting over half an hour, were given up, it was difficult to believe that the child was dead. The sphincters relaxed soon after the beginning of the respiratory difficulty. Under chloroform, the limb could not be quite straightened, nor could it be flexed beyond a right angle, and the adhesions were too dense to be broken up.

The post mortem examination was made very carefully by Dr. Waters, twenty-four hours after death. The body was fairly nourished, 23½ inches long, and 6 inches broad across the shoulders. Rigor mortis was marked. Post mortem lividity was universal on the posterior surface of the body, and extended over both groins, labia, and the inner surface of the thighs. The pupils were equal, and moderately dilated. On opening the chest, the muscles were found pale, and the superficial veins not at all dilated. The pericardium was very prominent. Both lungs were pushed aside; the left lower lobe, especially, being pushed almost out of sight. The pericardium contained only a small amount of fluid. The right side of the heart was very prominent, both cavities being fully dilated; the right auricle and appendix overlapped not only the root of the aorta, but also part of the pulmonary artery. The left auricle was not visible at all, and the left ventricle was tilted almost out of sight. The coronary arteries were collapsed and empty; the veins

were full of black blood. The maximum circumference of the ventricular portion of the heart was $6\frac{1}{4}$ inches. The right auricle and ventricle were both full of dark fluid blood; the left auricle was collapsed and almost empty; the left ventricle was apparently contracted, and contained a small, elongated, ill-formed, black clot. The greatest breadth of the opened out cavity of the right ventricle was $3\frac{1}{4}$ inches, and of the left ventricle 3 inches. The thickness of the right ventricular wall was one-eighth of an inch, and of the left three-eighths of an inch. The septum projected markedly into the cavity of the right ventricle. The myocardium, healthy and red, contrasted forcibly with the whitened endocardium. The valves were all healthy; the tricuspid orifice admitted the thumb, and the mitral orifice admitted the finger of a medium-sized hand. The weight of the empty heart was two ounces three and a half drachms. The epiglottis was quite erect; the laryngeal cords were almost indistinguishable, being closely applied to the wall of the larynx. The mucous membrane of the larynx, trachea, and larger bronchi was slightly injected, and covered with a very distinct layer of frothy mucus. At the bifurcation of the trachea, the calibre of both bronchi was almost occluded by viscid mucus. The surface of the lungs exhibited large areas of collapse, plentifully broken by patches of inflated vesicles. The great mass of both lungs was hardly, if at all, crepitant; the exceptions being the margin of both lungs and the left base. On section, blood oozed out only in small quantity, and that only on pressure. Some sections, especially of the right lung, when squeezed, showed frothy points at the apertures of the smaller bronchi. The lower lobe of the left lung was markedly concave where it came into contact with the heart. The lung-tissue floated in water. The liver was normal; its veins were not turgid in the least. The kidneys were not enlarged; the stellate veins on the surface were well marked; the tissue was healthy. The spleen was normal in size; it showed the Malpighian corpuscles very distinctly, as large white bodies. The head was not opened. The tissues of the knee-joint were completely matted together with fibrous tissue; the cartilages were perfectly healthy. There was no smell of chloroform.

REMARKS.—The death, in this case, was probably due to partial paralysis of the respiratory centre, occurring in a case where the bronchi were accidentally obstructed; for it is evident, from the *post mortem* examination, that the heart continued to act after the pulmonary circulation was interfered with, and yet there was no distinct dyspnoea. On looking back over the recorded cases of recovery from chloroform-poisoning, I regret that Nélaton's method of inverting the child was not tried. It occurred to me at the time, but I was loth to stop artificial respiration; and as, unfortunately, I had no assistance, the chance was allowed to slip. Previously to the occurrence of this case, I shared the impression, I believe with most members of the profession, that, as Mr. Lister puts it in the *BRITISH MEDICAL JOURNAL* for July 1871, young children enjoyed an "immunity from danger". However, on looking back over the records of those deaths, carefully kept in the pages of the *BRITISH MEDICAL JOURNAL*, I find that, in the eleven years from 1852 to 1856 and from 1863 to 1868 inclusive, three deaths under five years of age, out of a total of seventy deaths from chloroform, were registered in England; and, since that, I find a case of three years of age reported in the same journal. Almost the only definite note of warning on this subject comes from Mr. Jonathan Hutchinson, who, in emphatic language, declares that he would regard himself as criminally responsible if he placed any patient's life in danger from the use of chloroform between the extremes of life—from six months to old age. The youngest child, as far as I can discover, who has hitherto died from chloroform was "about two years" of age (*BRITISH MEDICAL JOURNAL*, June 1865, page 655); but Dr. J. D. Brown reports the case of an "infant" which, under chloroform, became "alarmingly pale, and apparently died"; the tongue was drawn forward and artificial respiration tried in vain, though the child recovered, almost at once, when inverted (*BRITISH MEDICAL JOURNAL*, July 1871, page 94). No doubt, such cases are of more frequent occurrence than we are apt to suppose; and, even within the last few days, I have heard of a child, two years old, which completely stopped breathing on two occasions whilst under chloroform: artificial respiration was tried without much effect; but recovery was immediate on inversion.

I have reported this case at length, in response to the frequently expressed desire of the *BRITISH MEDICAL JOURNAL*, and because it teaches some important lessons which he who runs may read.

ST MARY'S HOSPITAL MEDICAL SCHOOL.—The scholarship in natural science, tenable for three years, £75 first year, £50 second year, and £25 third year, has been awarded to Mr. J. J. Clarke; and that of £50 the first year, £30 the second year, and £20 the third year, has been awarded to Mr. S. A. Tidey.

CASE OF INTRAMURAL PREGNANCY RESULTING IN MISSED LABOUR.*

By CHARLES E. STEELE, M.R.C.S.,

Honorary Assistant-Surgeon to the Liverpool Ladies' Charity and Lying-in Hospital.

MRS. B., aged 36, was first attended by me on October 11th, 1880. She had just arrived in Liverpool, and, by the advice of her previous medical attendant, had consulted Dr. Grimsdale, who asked me to take charge of the case, and allowed me to refer to him when I should require advice.

She was at this time confined to bed, suffering from general weakness, the result of continued pain in the right side of the abdomen; she was rather emaciated; the pulse was 118, the temperature 100°. There was slight diarrhoea, of a typhoid character, and occasional vomiting.

The previous history of the case is contained in the following description by Dr. Moon of Greenwich.

"She has had four children; the fourth child, a boy, was born in January 1877. She says that, when she was bearing down during labour, she felt something give way, and that she had no power to bear down any more; the labour was very slowly completed without assistance. She recovered very slowly, and was a long time before she regained her strength. On April 4th, 1879, I was called to see her in the night. I found her with an enlarged abdomen, and suffering pain across the lower part. On inquiry, I found that she had passed urine regularly, but in less quantity than usual. She had missed two periods. I found the uterus anteverted, the os high up behind. The catheter drew off a considerable quantity of urine, and I pushed up the fundus, and drew forward the os without difficulty. She was then just two months pregnant.

"On the 23rd, I found her bladder full again, and the pregnant uterus had rolled up, and was now retroverted. On emptying the bladder, the uterus was easily replaced. There was a little pelvic tenderness for a few days after this.

"On May 12th, my assistant visited her, and thought she was threatening abortion, as there was slight hæmorrhage.

"November 4th. This, according to reckoning, would be the full term. She complained of sharp pains in the situation of the fundus, which were greatly increased by the child's movements. I felt the child's limbs rather to the right side. Her sister, who is an experienced nurse, also felt them. She was quite large enough for the full term. I found the os uteri lying rather high up on the right side of the pelvis, rather small, and felt pretty sure that I felt the child's head in the anterior segment of the uterus in front of the os.

"The pains had no effect whatever on the os, nor did the uterus harden in the least; I therefore gave morphia to quiet the pain. This continued to recur at intervals for about four days, and then ceased. The bowels were cleared with a dose of castor-oil, and she got about again, and waited. About Christmas, she had a dark-coloured sanguineous discharge, without pain. In January, February, and March, she menstruated regularly, and gradually decreased in size. In the beginning of April, I examined her, and found the os uteri higher up under the right pubic ramus, the limbs of a child on the right side of the abdomen. I could not get a sound into the uterus. The pregnancy dates from February 1879."

The above account describes the case up to the time when she came to Liverpool, and consulted Dr. Grimsdale.

When I first saw her, the abdomen was distended to the size of one containing a full term fœtus, was somewhat pyriform in shape, and the umbilicus protruded for about an inch. There was considerable tympanites—so much so, that it was impossible to judge of the nature of the tumour by palpation. Examination by the vagina showed the womb to be fixed; in other respects, it resembled a normal unimpregnated uterus.

Quinine and opium were administered, and milk-diet ordered. The febrile symptoms abated, but the vomiting increased. The diarrhoea continued, the motions being thin and purulent. She complained of acute pain, of gnawing character, referred to a spot about five inches to the right of the umbilicus.

As she seemed to become worse, I called in Dr. Grimsdale on October 25th, a fortnight after we had first seen her. We examined her again carefully; but, finding no new feature in the case, Dr. Grimsdale confirmed the treatment, with the exception of ordering a little weak brandy and water for attacks of faintness, which occasionally occurred.

The pain and diarrhoea continued, and increased in intensity. Rigors set in, and the patient became gradually more exhausted, until November 11th, exactly a month after my first visit, when collapse

* Read before the Liverpool Medical Society.

set in suddenly, with immediate relief from pain, and she died the same night.

The friends agreeing to a *post mortem* examination, I made one the following Sunday, November 14th, in the presence of Dr. Grimsdale. I made an incision from the ensiform cartilage to the pubes (avoiding the umbilical prominence by cutting round it), and a second incision from the umbilicus laterally downward, at right angles to the first, for about six inches. On turning aside the flaps, the great omentum came into view, and was found to be matted and closely adherent to the peritoneum beneath. On removing the omentum, by separating it, was found the posterior parietal layer of the peritoneum, covering a bluish-white silvery surface composed apparently of white fibrous tissue, and resembling the outside of the gravid uterus. This membrane was distended, and, when punctured, emitted gas in large quantities. This structure was well exposed; on dissecting out the right side, a rupture was found, about one inch in diameter, which corresponded to the seat of the pain felt during life, and from which escaped a large quantity of fetid pus. On passing the finger through this opening, the limbs of a child could be felt. The sac, the surface of which was continuous with that of the uterus, was then laid open in the middle line, and the wall examined, and found to contain, apparently, no muscular coat, and only measuring a line in thickness. The sac being laid open, a large cheesy clay-like mass came into view, and, when turned out, left exposed the body of a fully formed male child, which would have been considered large at the full term of pregnancy. The child was turned out, it being unnecessary to cut the umbilical cord, which had dwindled away to a mere dry thread. A prominence, which seemed to correspond to the placenta, was situated on the posterior wall of the sac, internally; and, when cut into, was found to contain nothing but a mass of pus. I then passed my finger through the os uteri from the vagina, and, with the other hand, made an incision down the posterior wall of the sac with a probe-pointed bistoury, which at once came upon my finger, *i.e.*, it passed through the sac-wall into the true cavity of the uterus. The uterus was large, from four and a half to five inches in length; the cavity was rather larger than normal. The Fallopian tubes were normal and opened into the uterus separately from the sac. The ovaries, and the other organs in the body which were examined, were found healthy.

The child had decomposed, though the skin on the back was perfect. The cranial bones were denuded of scalp, and the thoracic cavity, with the edges of the ribs, were exposed; their cartilages had almost disappeared. Most of the viscera had decomposed into dry withered masses.

The diagnosis of this case proved to be correct, as far as a *post mortem* examination could decide. The following is the remainder of

ing to rupture, but forming a hernial sac into which the next conception fell, and shut itself up; that the fœtus is enclosed in a sac formed by the uterine wall. The patient seemed to be in good health; and, therefore, beyond the wearing of a supporting bandage, it was not thought advisable to interfere.

The appearances found at the necropsy as shewn in the accompanying diagram, entirely support this diagnosis. In the woodcut, the omentum is seen in section, covering the upper part of the front of the sac.

With regard to treatment, that is to say, operative treatment, removal of the ovisac, together with the uterus, is the only operation which could have been contemplated; and the danger attending such an operation, complicated, as it would have been, by the mesenteric adhesions which existed (and which were suspected by Dr. Braxton Hicks, owing to a history of repeated attacks of inflammation), besides the fact that the diagnosis was, to some extent at least, a matter of doubt, was sufficient to contraindicate the procedure.

Whatever opinion had been formed, however, the result of the operation must have remained a matter of speculation, inasmuch as the patient's husband expressed his objection to any operation, should it be thought desirable.

Such are the details of a case which, though not unprecedented in the history of obstetric practice, is sufficiently remarkable for its unusual features to claim some attention and interest.

CLINICAL MEMORANDA.

INCUBATION PERIOD OF SCARLET FEVER.

It is impossible to fix the short limit for the incubation of scarlet fever when there has been, quite up to the illness, a continuous exposure to infection, as in the cases reported from the Fulham Hospital in last week's JOURNAL. The first case proves that the longest limit for incubation was five days. The other three cases prove nothing; they illustrate how it comes about that susceptible persons, removed from all sources of infection, after a week or more of exposure, have a reasonable chance of escape. What is yet wanting is a clear instance of the disease appearing more than a week after such separation.

WILLIAM SQUIRE, M.D., F.R.C.P., Orchard Street,
Portman Square, W.

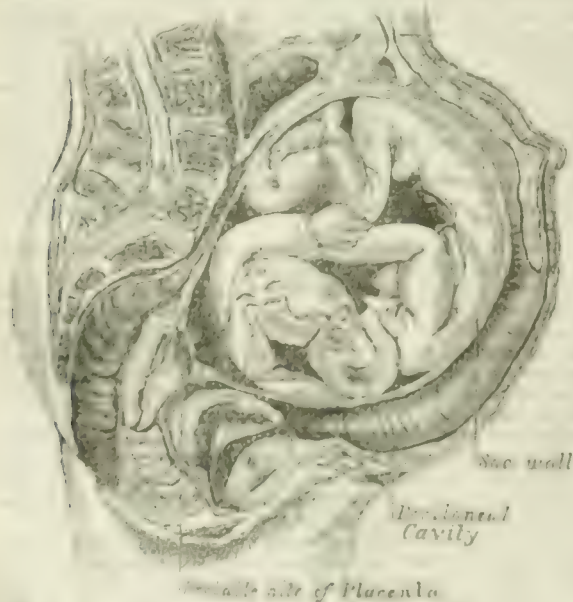
SIX years ago, when Resident Medical Officer to the Royal United Hospital, Bath, an epidemic of scarlet fever broke out in the district attached to the hospital for home-visiting. I was called to the first patient on July 14th, and fresh cases rapidly appeared in every direction. I spent a couple of hours every afternoon among these scarlet fever patients, making applications to their throats, taking temperatures, etc., until August 17th, when I fell ill with the disease myself. Would Mr. Sweeting look upon this as an instance of the incubation stage being prolonged for thirty-five days? or is it not rather explained on the simple assumption that, though exposed to the infection for that time, I did not take the disease until after some days' exposure? Similarly, I imagine, of the three cases given by him in the JOURNAL of November 11th, only one can be said positively to have taken the disease immediately she was exposed to the infection; and, in her case, what was the period of incubation? Five days.

ERNEST FIELD, M.D., Bath.

OBSTETRIC MEMORANDA.

ABORTION WITH PROFUSE HÆMORRHAGE.

On the morning of October 29th, 1882, Mrs. R., aged 41, felt slight pains, which continued till the afternoon. The patient, who had aborted twice before, and carried several children to full time; did not suspect that she was then pregnant. Profuse hæmorrhage occurred during a pain, and she was helped into bed, the bleeding continuing. When I saw her an hour later, she was lying pale and pulseless, the bed soaked in blood, cloths soaked in cold water had been applied by her friends while awaiting medical aid, and the pelvis raised above the level of the shoulders. She had fainted, and whisky and water had been freely given. I immediately put my hand over the fundus of the uterus, which caused a gush of blood. I squarred the uterus, which felt soft, and about the size of a French pear, until it contracted. Then instructing a woman how to feel and hold it, I gave a teaspoonful of liquid extract of ergot, and injected into the gluteus a solution of ergotin, equal to four grains. When this was done, with my left hand over the fundus as before, I inserted three fingers of the right into the



Dr. Moon's statement of the case, which gives the diagnosis and the opinion formed as to the advisability of operative treatment.

"I was puzzled, and got Dr. Braxton Hicks to see her with me. We decided that it was a case of 'missed labour'; that, in the previous labour, there had been a yielding of the uterine wall, not amount-

vagina. Blood was trickling from the os, and a soft mass, like the tip of the tongue, filled it. On squeezing the uterus between the fingers of each hand, this mass was soon expelled into the vagina, and thence removed along with a quantity of clots. The uterus was now held firmly between my hands, in a relaxed condition at first, but at length contracted for nearly an hour.

The patient during this time lay motionless, the extremities cold, lips pale, breathing irregular. Her own physician came three-quarters of an hour after myself, when the pulse was almost imperceptible. Hot whisky and water and Liebig's extract were given continuously, the patient rousing herself to swallow, though at times apparently unconscious. Hot water bottles were placed to the feet, and the hands wrapped in hot flannel. A teaspoonful of sal volatile was given in water. The pulse now became more perceptible. Vomiting occurred, and stringy clots were expelled from the uterus at the same time. More sal volatile with ergot and beef-tea was given; and, the uterus being fairly contracted, it was thought safe to stop compression. The woman gradually rallied. Brandy and beef-tea were ordered. She did well, and is making a good recovery.

On examination of the mass and clots, an ovum was discovered, the membranes ruptured, the placenta about the size of a penny, and the foetus an inch in length, apparently six or eight weeks old.

REMARKS.—The chief points of interest in this case are: 1. The remarkable success attending the bimanual pressure. The manner being the fingers of the left hand firmly applied over the posterior surface of the neck and body of the uterus, the palm in close contact with the fundus of the organ, while the fingers of the right hand in the vagina pressed successively from the fundus to the os uteri the anterior surface, through the vaginal wall. This movement, repeated several times, forced the contents of the womb into the vagina. The second point is, the application of the principle of pressure to arrest bleeding. It was, perhaps, continued in this case longer than necessary, in order to insure that our patient in her almost pulseless condition should not lose a drop more blood.

A. DOUGLAS WEBSTER, M.D., L.R.C.P. & S., Edinburgh.

INDUCTION OF PREMATURE LABOUR.

A MARRIED woman, aged 35, first came under my notice when near the end of the eighth month of her fifth pregnancy. Her previous labours were very protracted, and delivery was only accomplished by perforation, in the first labour after version, and in subsequent confinements after failure with the forceps. The patient assured me that there was more abdominal enlargement in the present instance than in her previous pregnancies at full term. Urged by the history, and the patient's anxiety to have a living child, I determined on inducing premature labour.

On September 30th, at 8 P.M., I passed a gum-elastic catheter (without stylet) into the uterus, intending to leave it there until uterine action was established. The catheter had barely passed three inches, when the membranes gave way, and it was thereupon at once withdrawn. On October 3rd, fifty-two hours after rupture of the membranes, I was sent for, and found that the patient was restless, and had slight pains. The os was sufficiently open to admit the tips of two fingers. An abdominal bandage was now firmly applied; and in about an hour, by the aid of Dr. Barnes's bags, the os was sufficiently dilated to admit with ease four fingers. I then decided to turn, adopting the bipolar method. Uterine action still being feeble, it was easily accomplished, and the patient was shortly delivered of a living, fair sized, male child. The third stage was quickly completed, and the uterus well contracted. The whole process occupied one hour and a half. The patient made a good and uninterrupted recovery, sitting up on the tenth day. The child also is thriving. There was contraction of the pelvic brim, the sacrum being unduly prominent. In this case, the bipolar method was chosen in preference to the long forceps, on account of the displacement caused by the dilating process. Without Dr. Barnes's dilators, I believe the prospect of a living child would have been extremely remote.

ERNEST BLACKER, M.R.C.S., Midsomer Norton, Somerset.

THERAPEUTIC MEMORANDA.

BLISTERING IN RHEUMATISM.

I THINK all who may have met with cases of acute rheumatism, and have been successful in any special treatment, should add their testimony to the experience of others in the use of a valuable remedy. It so happened that, very soon after Dr. Herbert Davies introduced (I say introduced advisedly) his treatment by blistering, I met him; and

I have since had a large number of cases of that very painful malady, treated in the manner advised by Dr. Davies; all have been considerably relieved, and some have recovered quickly. One special patient, who during his first attack submitted to seventy blisters, some large ones, and recovered well, sends me a line, whenever he has a twinge of pain, for a sheet of "blistering tissue," as he does not like to be without it. This gentleman has never had but one other seizure since the period I mention, at an interval of thirteen years. I have not thought it necessary to give details of any of my cases, because they were normal in their progress. I have observed with great pleasure indeed, that, where the blistering plan has been energetically carried out, it very rarely happens that cardiac symptoms supervene.

P. L. BURCHELL, M.B.Lond., F.R.C.S.Eng.
2, Kingsland Road, E.

PATHOLOGICAL MEMORANDA.

A NEW STAINING FLUID FOR SECTIONS OF CENTRAL NERVOUS SYSTEM.

PROFESSOR WEIGERT, assistant to Professor Cohnheim in the Pathological Institute at Leipzig, with whom I have been working at different staining fluids for the central nervous system, has found out the following method. After the preparation has been hardened in Müller's fluid or solution of bichromate of potash—not with alcohol or solution of chromic acid—sections are cut and stained for from four to twenty-four hours in a concentrated solution in water of acid fuchsin (soda-salt of rose-anilin-sulphate). After washing in water, the section is put into an alkaline solution of alcohol (viz., 100 c.c. of absolute alcohol with 10 c.c. of a solution made by dissolving 1 gramme of fused caustic potash in 100 c.c. of absolute alcohol, and filtering) for a few seconds, until the first sign of the grey nerve-tissue of the section becomes visible; it is then again washed in water which must not be acid, after which it should be dehydrated in absolute alcohol, saturated with sodic chloride, to preserve the colour of the section. After being cleared by oil of cloves, it is to be mounted in Canada balsam. Under a high power microscope, the individual medullated nerve-fibres of the spinal cord, medulla, and pons are seen as brilliant red lines or points, and in the anterior cornu of the spinal cord the finest networks of medullated fibres stand out very clearly; in freshly prepared rabbits' brains, the nerve-networks of Exner and Tuzek are very well seen. The finer fibres stain equally well in transverse and in longitudinal sections, but the larger fibres do not stain so well when cut transversely as in longitudinal direction. Professor Weigert thinks that the staining fluid colours a part of the medullary sheath of the nerve, but not the whole of it. The ganglion-cells and connective tissue (especially in sclerosis), with the pia mater, vary in tint from a pale appearance to an exquisite blue colour, which latter is increased by putting the sections into a solution of 1 part of hydrochloric acid to 5 of water, and again into water before dehydrating them with alcohol; these tissues can also be stained blue by hæmatoxylin (less well with nigrosin or anilin blue) before or after colouring with the acid fuchsin. Good specimens are obtained also with the basal ganglia of the brain and the chiasma of the optic nerves; but the acid fuchsin is of no use for peripheral nerves or for peripheral end-organs. A full account of this colouring fluid is given by Professor Weigert in the *Centralblatt für die Med. Wissenschaften* for October 21st and 28th.

CHARLES E. BEEVOR, M.D.Lond., Leipzig.

OPEN SPACES.—At a recent meeting of the Hackney District Board of Works, Mr. Runtz, the member of the Metropolitan Board of Works, reported that the plans for the laying out of Hackney Downs, as a place of recreation for the people, had been submitted to the Parks Committee of his board; and that the improvements, incorporated with suggestions from the Hackney Open Spaces Committee, would prove highly satisfactory both to the board and to the public.

IN the opium asylum connected with the Fochow Hospital, 284 patients were treated in 1880, says the *New York Medical Record*. The plan found to work best is to take away all the opium at once. From one to five days is the longest period of suffering. In a week or two the habit is broken, and the patients become anxious to leave. Dr. Whitney thinks that from three-fifths to four-fifths are cured by this two weeks' treatment. Restoratives, nerve tonics, and nerve sedatives are, of course, given. A number of statistics regarding the habit have been compiled. From three-tenths to eight-tenths of the male population are given over to it. In 125 cases reported, 70 began the habit for pleasure, 45 on account of disease, and 10 yielded to the pressure of temptation.

REPORTS

OF

HOSPITAL AND SURGICAL PRACTICE IN THE
HOSPITALS AND ASYLUMS OF GREAT
BRITAIN AND IRELAND.

STANHOPE STREET DISPENSARY.

ABSCESS IN THE RIGHT SUPRACLAVICULAR FOSSA BURSTING INTO
THE LUNG.[Reported by T. F. HUGH SMITH, Resident Medical Officer to
the Dispensary, and Surgical Registrar to King's
College Hospital.]

On October 17th, 1882, Mrs. S. was visited at her own home. She was a pale, anæmic-looking woman, lying on a couch, and complaining of a painful swelling at the root of the neck on the right side. She gave this history. Four weeks previously, she had been confined; the day after the event, she felt pain on the right side of the neck, which she believed to be due to a cold caught by wearing a damp chemise soon after delivery of the child. The swelling had become gradually more marked, and the pain more severe, from that time. On being asked, she did not recollect having had any shivering fits, but had often felt chilly and cold alternately; she had also had a troublesome hacking cough. The condition of the part affected was as follows. The head was held stiffly, and inclined towards the right shoulder; a hard resisting mass occupied nearly the whole space between the superior border of the right scapula and the clavicle. The skin over the mass was slightly congested, but neither œdema nor fluctuation could be detected. Hot fomentations were ordered to be applied, and five minims of tincture of steel in infusion of quassia to be taken three times daily.

October 24th. The patient's face wore an anxious expression; the pulse was full (140); cough was troublesome, each paroxysm augmenting the pain in the neck, and causing a darting sensation down the right arm, which in addition felt numb. On palpating the painful swelling, which had increased in size, the tenderness was greater, and the induration more marked. Congestion of the skin occupied a larger area than before; slight pitting on pressure was evident, but no fluctuation could be felt. On testing the tactile power of the right hand, it was found to be impaired, and the grasp was feeble when compared with that of the left, although the patient was not left-handed. On percussion of the chest, there was diminished resonance over the upper fourth of the right lung. Respiratory sounds over this area were hardly audible with a binaural stethoscope. Occasional fine crepitation was heard over the lower three-fourths of the same lung. On the left side, the breath-sounds were clear and exaggerated. The medicine was repeated, and the following pigment (much used by my father, Mr. Henry Smith) was applied. *R. Iodi ℥i; extracti belladonnæ ℥i; spiritus vini rect. ℥i.*

October 25th. The symptoms were the same, with the exception that the pain had been less since the application of the above liniment. The pulse was 108. To-day, the patient was advised to go to King's College Hospital to see Mr. John Wood, who is consulting-surgeon to the above-named dispensary. She consented to do so, and intended to go on the next day at two o'clock.

October 26th. A sharp attack of diarrhoea prevented the patient from going to hospital.

October 27th. A visit was paid to the patient, but she had gone to see a relative living near by, and was not seen.

October 28th. At four o'clock in the afternoon, the patient was seized with a fit of coughing, and expectorated—in the words of her nurse—"a lot of thick yellow stuff, and some of it streaked with blood."

The patient soon observed that the tumour became less painful. The next day, the cough and expectoration continued, and there was a diminution in the size of the supraclavicular swelling.

October 30th. The cough and expectoration of purulent matter, which was still thick, continued. There was no pain in the swelling, and the arm no longer existed. The pulse was 116. On examining the tumour, it was found to be much less prominent; it did not pit on pressure, nor was there any tenderness when touched; but induration still existed. The right radial pulse was smaller than the left.

November 1st. The swelling had diminished. There was no pain in the neck, but there was a dull aching and darting in the right side beneath the breast. Cough was very troublesome. Respiratory sounds were distinctly heard at the right apex, and a faint friction-sound between

the third and fifth ribs. An opiate was ordered at bedtime, and hot fomentations to the right side.

November 6th. The patient felt well, and had no pain. The resonance of the right lung was almost equal to that of the left. The breath-sounds were heard much more clearly at the right apex, but they were not so loud as on the left side. Expectoration was no longer purulent. Occasional fine crepitation was heard at the end of inspiration.

REMARKS BY MR. HUGH SMITH.—When first seen, it was not easy to diagnose the formation of abscess in this case. There was no lesion of the skin of the scalp or neck to excite inflammation of the lymphatic glands in the posterior triangle of this region. The signs of compression of the brachial plexus on the second visit pointed to a steady increase of the tumour, and the absence of breath-sounds at the right apex of the lung indicated a downward progress of the mass. Surgical interference was now clearly indicated; and, for several reasons, the patient was advised to go to hospital, instead of undergoing an operation in her cramped and dark room. The accident which prevented the surgical interference led to the case becoming remarkably interesting, although she ran the risk of a serious illness, if not of a fatal result. The absence of acute pleurisy, after the escape of matter into the bronchi, points to adhesion having previously occurred between the parietal and visceral layers of pleura at the apex of the right lung; and, granted that such was the case, it is, as a friend to whom I related the history remarked, analogous to the adhesion of the two layers of peritoneum which sometimes occurs in abscess of the liver, so that a cure comes about without the almost necessarily fatal peritonitis which would otherwise ensue. As to the first seat of the matter, had it been in the cellular tissue around the nerve-cords, one would have expected the pus to have travelled into the axilla; but there were no signs of this. Was it a case of circumscribed empyema? There was no history of previous affection of the lung; and, in addition, on escape of the matter, the right apex appeared to be acting normally. In either case, the strong fascia stretching across between the trapezius and sterno-mastoid muscles would not give way before the pressure of the pus.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE
CHEST.SOME CASES OF PNEUMOTHORAX: THEIR RESULTS AND TREATMENT:
TOGETHER WITH A DESCRIPTION OF A CANNULA,
WITH A VALVULAR ATTACHMENT.

[Reported by H. G. ORLEBAR, M.D.]

OF the cases here recorded, the fifth is of special interest, from the manner in which the air was withdrawn through a cannula to which was attached a valvular apparatus, permitting only of the expulsion of air. In the first two cases, the pneumothorax was followed shortly by serous effusion; in the others, the pure character of the disease was constant throughout.

CASE 1. (Under the care of the late Dr. WARD.)—G. L., aged 25, a fireman, said that his chest-affection commenced three months before admission. On admission, the physical signs in the chest were: on the right side, resonance was impaired at the apex; the breath-sounds were bronchial, with loose crepitation and pectoriloquy; the left side was super-resonant all over; the breath-sounds were feeble, and metallic in character—a metallic echo was elicited by coins; and the voice-sounds were distantly metallic. Slight succussion-sounds could also be elicited. The greatest cardiac impulse was felt between the right nipple and the sternum. A few days after admission, the left side of the chest was aspirated in the seventh interspace, in the anterior axillary line. A large quantity of air was withdrawn, and about thirty-five ounces of clear serum. From this time, the patient continued to improve very much; and, four weeks after the operation, the following physical signs were found on the left side; the percussion-note was slightly super-resonant from apex to nipple, and dull from there to the base, changing, however, on alteration of the position of the patient. Metallic sounds were heard over the super-resonant region. The breath-sounds were harsh from apex to nipple, and disappeared from there to the base, with absence of vocal resonance and vocal vibrations. Succussion could be plainly elicited. The heart's impulse was half way between the left nipple and the sternum. About twelve months afterwards, a further opportunity was offered for examining the patient. The physical signs then were: on the right side, at the apex, resonance was impaired, and breathing was bronchial; on the left side, resonance was also impaired at the apex, improving in tone to the nipple, from which it again diminished to the base; the breath-sounds were cavernous at the apex, with crepitation, etc.; from the nipple to the base the breath-sounds were weak, and vocal resonance and vocal vibrations were feeble, but no metallic character accompanied

any of the signs, and succussion could not be obtained. The heart's impulse was normal.

CASE II. (Under the care of Dr. BIRKETT.)—W. V., aged 32, a carman, presented the following physical signs. On admission, resonance at the right apex was impaired, and breathing was harsh; the left apex was dull, breathing was cavernous, and accompanied by crepitation. The patient was doing very well for four weeks, when he developed pneumothorax on the left side; the physical signs then became as follows. The left side was super-resonant throughout; the breathing and vocal resonance were distant and metallic. No cardiac impulse could be felt; the sounds, however, were loudly heard to the right of the sternum. A few weeks after the accident, the signs on the affected side had altered; all the former characters were noticed to the nipple; there resonance became impaired, and vocal resonance cegophonic; succussion could be elicited. Cardiac dullness extended further to the right of the sternum. The chest was aspirated a few days after this, and about fifty-three ounces of clear serum drawn off, together with a moderate amount of air. From this time, the patient began to improve, and soon afterwards left the hospital. His chest then presented these physical signs. There was cavernous breathing and crepitation at the right apex; the opposite side presented the same signs at the apex; at the base, from the nipple level downwards, resonance was impaired, breathing was then weak, and vocal vibration just to be felt. The heart's impulse was felt within two inches of the inner side of the left nipple.

CASE III. (Under the care of Dr. BIRKETT.)—H. H., aged 22, a porter, when admitted, presented the following physical signs. The chest-resonance at the right apex were slightly impaired, breathing was bronchial, there was slight crepitation, and increased vocal resonance; on the left, breathing was harsh; the heart's impulse was normal. Three weeks after admission he developed pneumothorax, with its usual physical signs, on the right side; the heart's impulse was then about one inch outside the nipple line. Aspiration was performed twice within the twenty-four hours following the accident. The first time a bottle, capable of holding forty ounces of fluid, was four times filled with air from the pleural cavity; the second time, the same bottle was filled with air three times. He sank, however, although relieved temporarily by aspiration, and died thirty-two hours after the accident.

CASE IV. (Under the care of Dr. EUSTACE SMITH.)—W. C., aged 30, when admitted, presented the following physical signs. The right apex was dull, with cavernous breathing, and crepitation to the fourth rib; resonance at the left apex was impaired; breathing was bronchial, with moist sounds scattered throughout the lung. Two weeks after admission, he developed pneumothorax on the right side; the heart's impulse was felt two inches outside the nipple-line. Two days afterwards paracentesis thoracis was performed with the aspirator. The bottle above referred to was several times filled with air. But slight relief following, a cannula was introduced by means of a trocar through an intercostal space. Little, however, was gained by this, as the air was sucked into the pleural cavity as freely as it was puffed out. A temporary valve was made by means of a finger at the orifice of the cannula. Allowing the air to escape from pleural cavity, but preventing its passing in, great relief was experienced by this, and the heart's impulse returned to within the nipple-line. The patient, however, eventually sank from the advanced condition of his disease, and died three days after the accident had occurred.

CASE V. (Under the care of Dr. THORNGOOD.)—J. B., aged 24, presented the following physical signs on admission. The resonance at the right apex was impaired, with bronchial breathing and crepitation heard throughout the upper half of the lung. At the left apex resonance was slightly impaired; the breathing was harsh, and accompanied by crepitation; rhonchi, and large and small moist sounds were heard throughout lung; the heart's impulse was normal. He progressed favourably until fifteen days after admission, when he developed pneumothorax on the left side. The heart's sounds were only audible to the right of the sternum, and no impulse could be felt. Aspiration was performed twenty-four hours afterwards, and the bottle already mentioned was filled five times. Relief followed for a time; but, ten hours afterwards, recourse had to be made again to aspiration. This time the bottle was seven times refilled. Relief again followed. After each tapping, the lung of the affected side was heard acting fairly, and the vocal resonance greatly increased in character, losing much of its metallic ring. The heart's impulse was also felt almost in its normal position. About ten hours after the second aspiration, however, all the marked signs of the pneumothorax had returned, and the patient was much cyanosed, and suffering from urgent dyspnoea. Taking advantage of the lesson learnt in the last case here recorded, a metal cannula had been ordered of the following character. The

top was winged, for allowing the instrument to be fixed in the chest after the withdrawal of the trocar. Above the lateral wings the cannula projected about a quarter of an inch, and was threaded for the screwing on of a small piece of perforated metal containing a metal valve. This valve allowed the air to pass out from the cannula, but prevented its return. This cannula then was introduced through an intercostal space, the trocar withdrawn, the valve screwed in, and the cannula fixed by strapping passing over its wings. At once the patient was much relieved, and could lie down quietly in bed, passing from a condition of imminent danger in a few seconds to one of comparative safety and comfort. The valve acted capitally. The instrument was retained *in situ* for several weeks. At length it was found that the patient could bear its removal without any increase of dyspnoea. A slight purulent discharge escaped with the air towards the last few days during which the valved cannula was retained. Subaqueous drainage by means of an India-rubber tube was resorted to. This, after a short time, was followed up by a small tube of the same material, which was kept in the aperture in the chest-wall, and the pleural cavity daily syringed out with a solution of iodine. The patient is now progressing favourably, although the lung symptoms are still a little troublesome. The heart's impulse is now felt, and seen beating two inches inside the nipple line of the affected side.

CASE VI. (Under the care of Dr. BIRKETT.)—T. J., aged 18, was admitted with all the physical signs of pneumothorax on the right side. The heart's impulse was about two inches outside the left nipple line; the liver was depressed to the line of the umbilicus. Aspiration was performed; and the same bottle, already referred to, was three times filled with air. This afforded marked relief. The patient progressed steadily; and, three weeks after operation, the following physical signs were noted on the affected side: resonance was normal; breathing was almost vesicular, and accompanied by small superficial pleuritic crepitation; vocal resonance was normal. The heart's impulse was almost in the normal position, and the liver-dullness extended to the lower margin of the ribs.

SUNDERLAND AND BISHOPWEARMOUTH INFIRMARY.

DEATH UNDER CHLOROFORM.

(COMMUNICATED BY EDMUND FLYNN, F.R.C.S.)

DONALD McD., aged 49, engine-driver, attended at the infirmary on November 6th as an out-patient. He was suffering from necrosis of the left index finger. He had been seen twice previously, and was anxious to have the diseased bone removed. He was accordingly put under chloroform, the anæsthetic being administered on a folded towel. The patient quickly passed through the stages of excitement and spasm, and was fully under the influence of the anæsthetic, when Mr. Whitehouse, senior-house-surgeon, feeling the pulse, remarked to me that it was very weak. The towel was at once removed from the face. The breathing being all right, the incision was made. It was then noticed that very little blood flowed from the wound. The patient then showing signs of returning consciousness, the towel was again applied to the face, without putting on any additional chloroform. He inhaled it a few times, and then the breathing suddenly stopped. The tongue was at once well pulled out, and, no effort at breathing taking place, artificial respiration was at once commenced. This not having any perceptible effect, and no pulse being felt at the wrist, the heart was punctured, galvanism applied to the heart and pneumogastries, ether injected over the heart; artificial respiration was continued for half an hour, without any effect.

A necropsy was made on Nov. 7th, thirty hours after death. Rigor mortis was well marked. On the right side of the thorax, there were cicatrices showing old-standing disease of the ribs. There were also the remains of several old sinuses in the right groin, and a sinus not yet healed up over the right tibia. The left lung was healthy. The heart was rather small, pale in colour, and friable; the right side contained a small quantity of dark venous blood. Under the microscope, the muscular tissue of the heart was distinctly fatty. The right lung was intimately adherent to the costal pleura, it being impossible to detach it without breaking down the lung-tissue.

At the inquest, the jury, after one adjournment, returned the following verdict:

"That the deceased died from failure of the heart's action, from the influence of chloroform acting upon a fatty heart, while undergoing a slight operation; and that, in their opinion, there had been no want of care or discretion on the part of the surgeons conducting the operation."

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 14TH, 1882.

JOHN MARSHALL, F.R.C.S., F.R.S., President, in the Chair.

On the Endemic Hamaturia of the South-East Coast of Africa.

This paper, which was written by the late Dr. VASY LYLE of Durban, Natal, was communicated by Dr. John Harley, who stated that, in his communication to the Society on the same topic some years ago, he had referred to Dr. Lyle as an authority. Dr. Lyle had, since 1864, taken much interest in the subject of hamaturia in Africa, and Dr. Harley had been in frequent communication with him. He had, unfortunately, died of hydatid disease of the liver. In his paper, Dr. Lyle discussed the physical characters of the infested country, and the extent of the country infested. He stated, as an almost completely proven fact, that the Bilharzia hæmatobia infested the whole eastern littoral of Africa, from Egypt to the Cape; and that the entozoon found amongst the people of the Nile valley was identical with that found in South Africa. It appeared to inhabit the sluggish parts of rivers and low marshy lands, and to be absent from high lands; the interior plateau of South Africa being free from the disease. The present immunity of Port Elizabeth was attributed to the substitution of rain-water stored in tanks for that of wells and pits. Opportunities were obtained of examining the bladder in a case of the disease, and both the male and the female parasite. The bladder in one case was healthy near the neck, but was crossed thence diagonally to the fundus by fungous-looking growths, and the mucous membrane over these was granular and ulcerated, and contained embedded ova. One female Bilharzia was dissected out. The author agreed generally with the description given of the parasite by Dr. Cobbold, but differs in some minor points. In reference to the symptoms and progress of the disease, the author remarked that no symptoms of the affection had been observed antecedent to the appearance of the hamaturia, the general course of the disease being that described by Dr. Harley, in his communications to the Royal Medical and Chirurgical Society. The portion of urine first passed was clear, but the last few drops contained blood, being expelled by the muscular action of the bladder. The presence of the Bilharzia usually caused little distress; only some lumbar or perineal pain in a few cases. Long after the cessation of the hamaturia, the eggs of the parasite remained. In some cases, the discharge of blood was so great as to cause the urethra to become blocked by clots; and occasionally vesical catarrh was produced. He had never met with a case in which death could be traced directly to the presence of Bilharzia; it was, however, uncertain what influence it might have in the production of inflammation of the liver. In cases of long standing, nephritic colic was liable to occur; perhaps from the impaction of a clot of blood in the ureter, but more often from renal calculus of phosphatic nature. He had not been able to arrive at any satisfactory explanation of the cause of the affection. Griesinger had attributed it to the use of fish, bread, and fruit; but was not supported by facts. Its cause probably lay in the water used for domestic purposes. He agreed with Dr. Cobbold in believing that certain molluscs acted as intermediate hosts of the parasite. With regard to the supposed relation of the endemic hamaturia to the Natal sore, he believed the latter to be an expression of general debility, but not to be connected with the hamaturia. New comers were much more liable to the Natal sore than the old residents; and he did not think that the two diseases coexisted in the same person. He had not met with hamaturia from Bilharzia among residents in Durban; but it was not rare in the rural districts of the infested regions, where impure water was used. European females above puberty were not liable to it; but it occurred among European males, especially hunters and overseers of labour, who often used impure water. The Kaffirs seemed to be not ignorant of the source of the disease; they avoided fish, gasteropods, and frogs as food; they drank water by throwing it to the mouth from the hand, in order, as they said, to avoid small floating things. Illustrative cases were given; and one of them contained the evidence of a cure. The author then discussed the prevalence of the disease among the natives. Dr. SPENCER COBBOLD said that, in the hope of being able to examine specimens of Bilharzia, he had applied to several former residents, most of whom had been resident in Egypt; and five of them had sent him specimens of urine, which, however, were comparatively uninteresting. One was from a patient who had come to him from Egypt, and who was much improved. He had also sent him specimens of ova, and also created embryos which had been hatched during the afternoon. The Bilharzia affected the ox, sheep, and other animals as well

as man; in those animals, it differed in size from that of man, and the ova were cylindroidal at both ends. In 1851, the parasite was discovered in Cairo by Bilharz, who at first called it distoma; it had, however, been thought better to give it a name derived from that of its discoverer. In 1864, Dr. John Harley made an interesting series of observations on its clinical importance. It had since been found in India; and was extending in Egypt. Some of the patients had resided near the so-called "Sweet Water Canal", and had been attacked a few days after drinking the water. The embryo had been shown by him (Dr. Cobbold) fifteen years ago; but he did not then succeed in infecting snails. Every fluke had its own intermediary host; and probably none of the British molluscs used were the hosts of Bilharzia. Investigations in Egypt, however, would probably soon discover the host of the parasite. As regarded treatment, three methods had been proposed: the heroic plan, the do-nothing plan, and the rational plan. Under the heroic system, medicated injections into the bladder had been carried out to an extreme degree. One author had recommended the injection of two drachms of a saturated solution of alcohol; this set up violent cystitis, and caused the patient great agony for twenty-four hours or even more. It had been concluded, because the patients did not return after this treatment, that it was successful; but a patient who had been subjected to it told Dr. Cobbold that he would rather endure the most severe torment than have it repeated. The do-nothing plan was based on the supposition that the patients would outgrow the disease. In 1870, he had under his care a patient aged 6 years, who was passing myriads of ova, and apparently bleeding to death. Under the use of iron, with a nourishing diet of milk, cream, eggs, etc., the fatal result was averted. He would, in cases of endemic hamaturia, recommend supporting the system by nutritious food, and by the administration of iron and quinine. Buchu was also most valuable in soothing the irritation of the bladder. In severe cases, it would be worth while to try strong parasitocides. In some recent experiments on the larvae of the Bilharzia, he had found that they were instantly destroyed on coming into contact with a very dilute solution of corrosive sublimate: one part in 10,000 had a decided effect. He did not agree with Dr. Sansino in thinking that any bad results would follow this treatment.—Dr. RADCLIFFE CROCKER referred to the case of a boy, aged 12, who, at the beginning of the year, passed much blood with his urine, but now scarcely any; a few ova, however, were still voided. The boy was born in the Orange Free State, and contracted the disease in Natal. Specimens of the ova were exhibited.—Dr. JOHN HARLEY would speak of the treatment. What one had to deal with was one or two nematode worms in the mucous membrane of the bladder, or in the prostate gland, or at the sides of the urethra. As to the mode of introduction of the Bilharzia, various suggestions had been made, but it most probably entered by the urethra during the act of bathing. It was rare among females, but was common among schoolboys. The natives of South Africa prevented its ingress by tying a piece of tape round the penis while bathing. The affection in Natal was mostly confined to the pelvic organs, while, in Egypt, the parasite was no doubt taken in with the drinking-water, and affected the blood generally. He had early advocated injection of the bladder, and had found that, when properly carried out, it not only relieved but cured the patient. In the *Medico-Chirurgical Transactions*, he had described the case of a colonist in Natal who had the disease in a severe form. Solution of iodide of potassium was injected once or twice a week, and, at intervals, oil of male fern. Both these medicines were well tolerated by the bladder. Whether iodide of potassium killed Bilharzia he did not know, but a weak solution killed a leech. The oil of male fern, injected in doses of about a drachm, in barley-water, was retained three or four hours; it was then expelled with an abundance of debris. The patient above mentioned, under this treatment, was cured of his malady; and he had remained hearty and active since 1870. Even after the disappearance of the hamaturia, the patients might still carry the parasite. Dr. Harley referred to the case of two sons of a medical man who had suffered from hamaturia. Both were apparently in good health, but in the urine of one of them he found ova. He afterwards had to attend them for symptoms of nephritic colic. He expressed his great satisfaction with the paper which had been brought before the Society. The author was apparently the only medical man who had undertaken the investigation of the disease in South Africa.

The Life-History of the Liver-Fluke in Sheep.—Mr. A. P. THOMAS, of Oxford, exhibited and explained drawings and preparations illustrating the life-history of the liver-fluke, and the mode of its introduction into the bodies of sheep. This parasite caused a great loss among flocks, amounting in 1870 and 1880, it had been calculated, to three millions. Sheep were especially liable to it, especially those reared on low-lying grounds; but, though experiments had been made, especially by Leuckart, to discover its source, none had succeeded. In

1879, the Royal Agricultural Society offered a grant of money for the prosecution of researches on the subject. It was suggested that the late Dr. Rolleston should make the investigation: he, however, could not do so; and it was therefore entrusted to Mr. Thomas. He began to work in two directions; he tried to find whether there was an intermediate host, and, if so, what it was. He had made infection experiments on all the common molluscs, and on some small crustacea. He visited every field near Oxford where the parasite had been found, and examined the fauna very carefully, but could not for some time obtain a clue to the history of the fluke. He found in a field that had been badly infested a *Limnaeus truncatulus*, which he subsequently found to harbour a peculiar cercaria, the origin of the liver-fluke. This cercaria had the habit of encysting itself on objects; the body became spheroidal and covered by a mucous exudation, presenting granules similar to those which he had observed in follicular organs at the sides of the animal. For some time afterwards, he had not been able to find the *Limnaeus*; but, on visiting the fields after the floods of last July, he had found an abundance of specimens. The floods had cast these snails over the low lying grounds, and, in receding, had left them there. One cause of the difficulty of investigation was the fact that the *Limnaeus* was amphibious. The eggs of the liver-fluke, which was very prolific, passed with the bile into the sheep's intestines, and were dropped over the field. If the ova were dropped into water or were washed into a ditch, development proceeded. He had watched the hatching of the embryos in water. The head-end was always turned in the direction of the operculum of the egg; this operculum suddenly gave way, and the embryo escaped and began to move about in the water. It moved very rapidly, and, when in contact with an object, stopped as if examining it. When it came into contact with the right snail, it began to bore into the animal, in which it soon became embedded. It was not all snails that it would enter; only the *Limnaeus truncatulus*. When it had entered the snail, the body contracted and became elliptical; an outer covering of cells with cilia was formed, and the eye-spots, which the embryo had possessed, became detached. It thus became a degenerate spore-cyst, with a number of germinal cells, which increased in number and broke up into rounded masses, the germs of the second generation. These increased in size, became oblong, and provided with a pharynx and intestine, assuming the form of a *Redia*, which forced its way through the spore-cyst. The spore-cyst was developed in the pulmonary membrane of the snail; the *redia* reached the liver and fed on the liver-cells. A further formation of spores took place in the *redia*; one end was formed into a tail, while at the other the cells arranged themselves so as to form a sucker. A *Cercaria* was thus formed, which was very active, until it came into contact with some body, when it became encysted. In this way it became encysted on grass, and was devoured by sheep; it then escaped from the cyst and wandered into the liver of the animal. It might be asked whether and how far this investigation would lead to the prevention of the disease. Mr. Thomas believed that it would. The real preventive was salt, which, in a solution of 0.75 per cent., killed the snails. It should be scattered over all spots of soil infested with the worm. It was also very advantageous to feed the sheep on salt. Mr. Heath, a veterinary surgeon, had divided a healthy flock into two parts. Both flocks were placed in an infested pasture-ground. To one he gave daily half a pint of cord with half an ounce of salt, well mixed. When they were killed, in the next summer, not one of the sheep that had been fed with salt had a single fluke; while of the others, not one was free. It was long known that salt prevented the disease; but its action was not understood, and farmers were slow to use it. When the sheep had once become infected, there appeared to be no real cure; the only thing that could be done was to keep up the strength of the animal.—Dr. COBBOLD had been interested in the subject many years. Even the elephant and giraffe were affected with flukes, and these were also found in whales, dolphins, and porpoises. He thanked and congratulated Mr. Thomas for his researches. Before Mr. Thomas announced his discovery (and it was a real discovery), it had been stated that Professor Leuckart had found that *Limnaeus truncatulus* was the intermediate host of the liver-fluke. It had, however, been ascertained that the snail on which Leuckart made his experiment was not *Limnaeus truncatulus*, but *Limnaeus fereger*. In Leuckart's experiments, the snails were infected, but the embryos did not arrive at the cercarial stage. It was reserved for Mr. Thomas to throw a flood of light on the subject, and to work out the entire process of development; and it would be an honour to him to have his name associated with that of Leuckart in the work.—Dr. GEORGE HARLEY said that in 1879 a labourer, aged 52, was admitted into the Dorset Hospital with anomalous symptoms. He had pain in the region of the liver, with sickness, but no jaundice;

there was also abscess. He died in four months. At the necropsy, twenty-six flukes were found in the hepatic duct. He had not been in the habit of eating meat; his ordinary diet consisted of bread and cheese, with which he often ate water-cresses.—Dr. T. J. MACLAGAN said that a gentleman, residing near Dorchester, had informed him that in 1879 and 1880, when many sheep were lost, the whole of a flock that had been fed with corn and salt was preserved.—The PRESIDENT, in expressing the thanks of the Society to Mr. Thomas, said that his researches clearly showed the close relation between diseases of man and those of animals; much might be expected from their combined study. They also pointed to the extreme importance of prevention in preference to attempts to cure.

Specimens.—The following microscopic specimens illustrated the discussions.

Dr. COBBOLD showed: 1. Specimens of *Bilharzia hematobia*; 2. Eggs and living embryos hatching out (the living embryos were very active in this specimen); 3. *Distoma heterophyes*, the small Egyptian fluke, from the only known case (presented by Professor Leuckart); 4. *Anthelmia* or *Homalomyia scalaris*, from the human intestine (his parasite has been figured, but not named, by Dr. Lionel Beale). Dr. COBBOLD also exhibited Lung sputum full of fluke's eggs; Human liver with flukes; *Filaria Bancroftii*, in the adult state, commonly spoken of as the *Filaria sanguinis hominis* of Lewis, removed from a tumour (helminthoma elasticum) of the axilla by Dr. Bancroft; Five samples of urine containing eggs of *Bilharzia* from patients from Egypt and Natal.

Dr. RADCLIFFE CROCKER showed: 1. Ova of *Bilharzia hematobia* from blood from bladder of a boy aged 12; 2. and 3. Ova and embryo in process of hatching.

Dr. BASTIAN showed: 1. *Trichina* from the muscles of a wild boar; 2. 3. *Sylencus* (a nematode allied to *Pelodera*, causing tubercular nodules in the roots of cucumbers; 4. Embryos of guinea-worm (*Dracunculus*), stained with Bismarck brown.

Dr. STEPHEN MACKENZIE showed: 1. *Filaria sanguinis hominis* (embryo), from stomach of Australian mosquito; 2. The same, from stomach of Chinese mosquito; 3. The same, from human blood; 4. The same, embryos stained to show sheath.

Mr. A. P. THOMAS showed specimens of the liver-fluke in sheep (*Fasciola hepatica*): 1. Eggs of *Fasciola hepatica*; 2. Free embryo; 3. The same, stained with picro-carmin, the embryo being very transparent; 4. *Redia* (one of the nurse-forms of the liver-fluke), containing *cercariae* and germs of *cercariae*; 4. *Cercariae* of the liver-fluke killed in the act of forming their cysts. Also specimens of the shell of the univalve mollusc *Limnaeus truncatulus*, the intermediate host of the fluke.

CLINICAL SOCIETY OF LONDON.

FRIDAY, NOVEMBER 10TH.

JOSEPH LISTER, F.R.S., President, in the Chair.

Specimens.—Three living specimens were shown—one by Mr. Golding-Bird, of the good result of a transpatellar excision of the knee in a boy; one by Mr. Christopher Heath, of the well known case in which the tongue and part of the lower jaw had been removed for cancerous disease many years ago; and a case in which a double Macewen's operation had been done for genu valgum.

The PRESIDENT informed the members of the receipt of a letter from Professor Pantaleoni, of Rome, thanking the Society for the honour done him by his election as an Honorary Member of the Society.

Removal of a Fibroid Tumour, with Extirpation of the Uterus, and Fatal Termination.—Mr. GOLDING-BIRD narrated this case. The patient was thirty-seven years of age, and had suffered from the tumour for three years. Its increasing size, the pain and weight accompanying it, and the repeated and prolonged attacks of nausea with which it was attended, compelled her to seek surgical relief. The tumour, of the size of the uterus at the sixth month of pregnancy, grew from the anterior wall of the cervix, and lay between this and the bladder; to which it was intimately connected. The uterus itself was all but drawn out of the pelvis, and the ovaries (both cystic) could be felt through the abdominal parietes. Prior to the operation, however, they were thought to be bases of the tumour. The operation was fully described, and special mention was made of the use of an "apron" of "green carbolic protective", well tucked in over the intestines when the abdomen had been opened, whereby they were easily kept out of the way and sheltered from the spray. The tumour had its peritoneal investment circumferentially divided, where it was reflected on to the pelvic walls or viscera, and it was there shelled out from its bed, the broad ligaments being previously divided. The union with the uterus was intimate, and had to be divided, while the fusion of the fibres of the

tumour with those of the bladder rendered the separation very difficult. All bleeding was stopped with carbolised silk ligatures, and the peritoneum, where divided between rectum and bladder, at the completion of the operation, was united with a continuous suture. The uterus and ovaries were removed after the tumour, a pedicle being formed out of the cervix uteri; it was tied in four parts, as in Erichsen's method of tying navi. Before the closure of the peritoneum, a rent in the bladder had to be carefully sewn up. A catheter was tied in. The general conduct of the case was that of an ovariectomy. For forty-eight hours all went well, and then severe vomiting set in, which eventually exhausted the patient, having continued till the fourth day, when she died. The *post mortem* examination showed repair to have been perfect as far as it had gone. There was no evidence of the urine having passed beyond the bladder. There was no suppuration, and only slight pelvic peritonitis. There did not seem to be enough to account for the vomiting; and the author explained this symptom as depending upon some idiosyncrasy of the patient, inasmuch as, when she had typhoid fever, ten years before, vomiting, severe enough to threaten life then, was the most prominent symptom. The specimens removed at the operation, and the parts reserved at the necropsy, were exhibited.—Mr. KNOWLES THORNTON asked whether a record had been kept of the pulse-rates. He thought that vomiting might well have been the actual cause of death—the sickness, however, being due to septic poisoning, which might not manifest itself in increased body-heat; hence the importance of ascertaining the frequency of the pulse. With regard to the general question of operation, he was inclined to think that interference was less hopeful than had once been supposed. The operation was too much in vogue, and ought not to be done without much graver reasons than seemed to have existed in the case narrated. The only justification for hysterectomy existed when the hæmorrhage was excessive, and threatened life; so that the number of cases requiring such treatment would probably be but few; and most likely the extraperitoneal method advocated by Hegar, Kaltenbach, and others, was the best, direct peritoneal sepsis being thereby avoided. Mr. Lawson Tait had shown that cystic ovaries rather frequently went with fibroid disease of the womb; and had, indeed, gone so far as to think that this ovarian condition might own a causal relationship to the uterine fibromata. Mr. Thornton was fully convinced of the value of the less severe operation of oophorectomy, and thought that removal of the uterine appendages would have been the proper treatment of Mr. Golding-Bird's case, because the removal of the ovaries, etc., seemed to present no difficulty in this case. Oophorectomy was, however, by no means always without its incumbrances. In the present position of our knowledge of the subject, he believed that excision of the uterus ought not to be practised until the minor operation of extirpation of the uterine appendages had been tried and failed. Removal of the ovaries probably did good by lessening the blood-supply. However that might be, Mr. Thornton had now had nine cases in which this operation had completely succeeded, the tumours having entirely disappeared in periods varying between five and ten months.—Mr. GOLDING-BIRD, in reply, said that Mr. Bryant had discussed with him the propriety of oophorectomy, but had advised hysterectomy in this case. The pulse-rates had not been (but should be) recorded in the paper, because little reliance could be placed on them, owing to the patient being so nervous and excitable.

Spina Bifida.—Mr. CLUTTON said that, when three weeks old, the infant was brought to St. Thomas's Hospital, and was found to be a well-nourished, healthy child, with the exception of the above imperfection. The spina bifida was situated in the lumbar region, sessile, and with exceedingly thin walls. The impulse when the child cried was very marked, and the aperture in the bony canal large. There was no paralysis of the lower limbs, and the cyst, examined by transmitted light, did not appear to contain the cauda equina. The skin had been so stretched that the walls were quite translucent, and would evidently have given way, and allowed the fluid to escape. A week after it was first seen, and when the child was four weeks old, the cyst was injected with a drachm and a half of Morton's fluid, as little as possible of the contents of the sac being allowed to escape. A pad with collodion, and bandage, completed the treatment. The mother was instructed to keep the baby on its back, to prevent, as far as possible, the gravitation of the fluid into the vertebral canal. The contents of the cyst were very thick, and on the third day the child was found to be much better. The cyst began to increase again, and on the eighth day it was found to be much larger. At the end of the third week, there was nothing to be felt of the spina bifida except a small puckered lining of cutaneous tissue. Mr. Clutton also related a second case, in which the injection of Morton's fluid was immediately followed by convulsions and death. In this instance, the spina bifida had an ulcerated skin, and was much distended. He had advised

treatment as giving the only chance of life. It was necessary to tell the parents plainly that there was great risk attached to the operation.—Mr. MORRANT BAKER asked whether any fluid had been allowed to escape before the injection was made, and whether this child was placed in the dorsal position after the operation. He did not think that the fatal case in any way detracted from the value of the successful one.—Mr. PEARCE GOULD inquired whether the skin in the first case was quite healthy, and whether the fluid of the spina bifida had been tested for sugar. The case was more favourable if the skin were healthy over the tumour, and it was also a matter of importance whether the dilatation was of the arachnoid or subarachnoid space. In the second case, was it true that the child would certainly die? He mentioned a case of large spina bifida which had sloughed, and which recovered, the wound soundly granulating, though the child died, some time after, from marasmus, not from the spina bifida.—Mr. BARKER had used the injection of Morton's fluid once in a case of spina bifida, without producing any effect on the tumour, or any unpleasant symptoms. The child died later from bursting of the tumour.—Mr. HOWARD MARSH said the subject was a most important one in the surgery of childhood. He narrated a case in which the injection of about a drachm of the fluid produced immediate pallor and collapse of an infant four months old; the tumour had a healthy covering of skin, was of the size of a Seville orange, and was situated in the usual place. The child died in the collapsed state, sixteen hours after the injection. He could not conceive that the treatment was not free from risk. The relation of the tumour to the spinal canal and the size of the aperture in the bone were important points; the introduction of the fluid should be made slowly, so that it might gravitate by its own weight to the bottom of the sac, and then the patient should be kept in the dorsal recumbent posture.—Mr. HEATH narrated a case of anterior meningocele, which was recorded (along with one by Mr. Prescott Hewett) by Sir James Paget in an early volume of the *Transactions of the Pathological Society*, in which iodine must have been injected into the cavity of the lateral ventricle without producing serious symptoms. He thought that talipes calcaneus was very common in cases of spina bifida.—Mr. R. W. PARKER had treated about a dozen cases in the way recommended by Dr. Morton, with one successful result, and without any bad effects in the other eleven cases. The size of the osseous aperture was of much importance, as was also the circumstance whether the membranes alone formed the tumour, or whether the central canal of the spinal cord was also dilated. He had injected about half a drachm of Morton's fluid every week for two or three weeks, without producing any apparent effect. Recently he had had a case under his care, where the child when first seen was twenty-four hours old. The tumour was very freely from the tumour for fourteen days. The sac had sloughed, and left a cleft sufficient to admit two fingers; opisthotonos had developed, and the child was now in a very bad way. In this case there was double talipes calcaneus. In the case which recovered there was talipes calcaneus on the one side only; in another instance there was equino-varus.—Mr. GODLEE had had a successful case. The spina bifida had a very thin wall of healthy skin. A drachm of fluid was slowly injected; the dorsal posture was resorted to; and the sac gradually dwindled away.—Mr. BENNETT had treated one case without any success, but there was no immediate bad effect. Another instance of spina bifida had come under his care, in which he declined to operate because the child was indisposed at the time. This child died on its way home, in convulsions. If he had used the injection, probably that would have been credited with the convulsions.—Mr. MORRANT BAKER mentioned a case in which spina bifida had been consolidated, the patient afterwards becoming hydrocephalic, and losing power in the legs. Was there any connection between the cure of the spina bifida and the subsequent course of the case?—Mr. CLUTTON, in reply, said that sugar was found in the fluid of his case, and that, although very thin, was not ulcerated. The contents of the cyst, or failure might be found in this: that the aperture in the bone did not necessarily correspond with the aperture in the theca vertebralis; one might be very different in position to the other.

A Case of Spina Bifida.—Mr. CLUTTON related a case of a Malar Action.—Mr. CHRISTOPHER HEATH related a case. A boy aged fourteen, whilst raising his arm violently to bowl at cricket, felt something give way at his collar-bone. The inner end of the clavicle was found to be broken, and the fracture was displaced. A sharp edge of the bone was found protruding from the wound, and was covered with articular cartilage. The suprasternal notch was greatly enlarged, and equally defined on both sides, and a thin lamella could be felt on the right side, intervening between it and the gap caused by the starting forwards of the inner end of the clavicle. The treatment consisted in laying the patient down, when the bone at once dipped into place, and it was retained by a plaster-of-Paris bandage. Mr. Heath

referred to the great rarity of the accident, and the diagnosis of it from dislocation of the clavicle, and insisted upon the great utility of the plaster-of-Paris bandage in fractures of the clavicle and humerus.—Mr. LISTER regarded the case as of exceeding interest. It was one of great rarity, even if such a sample had ever been recorded. There was no doubt about the diagnosis; the sharpness of the end of the bone and the fact that a lamella was felt, were pathognomonic.—Mr. COLLINGRIDGE brought a living specimen to the Society, in which partial forward dislocation of the inner end of the clavicle had taken place spontaneously in connection with lateral curvature of the spine, in a patient sixty-three years old, who, at the age of three years, had dislocated the right hip. He had not been able to find any other case in Hamilton's work, nor any reference in *Noble's Medical Digest*.

Six Cases of Diphtheria treated by the Local Application of Borax or Boracic Acid.—Dr. GOODHART narrated these cases. In four, a saturated solution of boracic acid in glycerine was used, the application being made in part by a hand-spray, in part by a laryngeal brush, and as often as every two hours in some cases. In the other two, a dilute solution of the glycerinum boracis was used. The first case was a very severe one, and it died from the renal complication on the seventh day, but the boracic acid and glycerine seemed to be so successful in relieving the throat-symptoms and in preventing the re-formation of membrane, that it was determined to try it again. Of the other five, three had "croup" as well as membrane on the fauces; one had nasal diphtheria; all had albuminuria. All recovered. Tracheotomy was necessary in one case, and the glycerinum boracis was freely applied to the interior of the trachea and larynx from the wound, and to the surface of the wound itself; and it seemed to be very beneficial in loosening, dissolving, and preventing the re-formation of membrane. In another case, it is believed that tracheotomy would have been necessary had not the rigorous application led to the expulsion of membrane by the mouth. In all cases, it seemed to give such relief, that very little difficulty was experienced in carrying out the treatment. Both borax and boracic acid have been occasionally in use as a topical application in diphtheria, doubtless for a long time past, but not, so far as is known, with any decided success; nor can it be supposed that any remedy will not often show a good proportion of failures in combating a disease such as this. It is enough to say that these agents are known to be good antiseptics, that their action is harmless when not beneficial, and that they are certainly useful in some cases.—Dr. PHILLIPS spoke of two other cases in which glycerinum boracis had been used. It was discovered that glycerine would take up three times as much boracic acid, so that the solution could be made very strong; but this must be diluted once if used in Siegel's spray. Both the cases were *in extremis*, and died, despite tracheotomy, membrane being found after death in the smaller bronchi.—Dr. O'CONNOR had notes of about forty cases of diphtheria. He had sometimes used a saturated watery solution of boracic acid, but without special success. The most favourable results were got from a solution of chlorate of potash. He had never seen a case of diphtheria in which, on removing a piece of membrane once, there was no re-formation, though this new membrane might be thinner and more delicate-looking than the first portion.—Dr. LONGHURST thought that the great point was, to be very careful not to irritate the parts affected. Diphtheria was a constitutional disease, and we could not expect much from local applications. We should rather rely on the powers of nature, and see that the patient had lots of nourishment and fresh air. He considered the boracic spray to be good because it did not irritate.—The PRESIDENT said that persons who adopted local applications generally extolled their own particular remedy. He could not agree with the last speaker that local applications were of no great moment. Diphtheria was of a decidedly infectious character, and infection must take place locally, even if the disease ultimately became constitutional. As an example of the efficacy of boracic acid, which he was the first to introduce into surgery, the power it had of removing the smell of a putrid onychia was instanced. He had found out that glycerine, by the aid of heat, could be made to dissolve almost any amount of boracic acid. He had used such applications to sores of the nasal and buccal mucous membrane with favourable results. No doubt the glycerine kept the acid longer in contact with the surface on which it was applied, and this was of great value.—Dr. GOODHART replied, that the notion that diphtheria was a constitutional disease was no argument against the use of local applications, for it was, frequently enough, this local trouble which was the cause of death.—The question having been raised by the President as to what was meant by the term "constitutional", both Drs. Goodhart and Longhurst said they meant a specific poison circulating throughout the body, and producing local effects.

Prior to the discussion on the above subject, Professor LISTER said that it had occurred to him, and the Secretaries concurred with his

views, that it would be advisable to have a committee to inquire into the subject of the treatment of spina bifida by means of Morton's fluid; and the names proposed were those of Messrs. Howard Marsh, Clutton, W. R. Parker, and Pearce Gould.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, NOVEMBER 1ST, 1882.

J. MATTHEWS DUNCAN, M.D., President, in the Chair.

Interstitial or Tubo-uterine Gestation.—Mr. ALBAN DORAN exhibited a specimen of this condition. The clinical history of the case, under Mr. C. H. Robert's care, was reported in our pages in October. The gestation-cyst was situated at the right side of the fundus uteri. At the anterior and outer aspect of the cyst, the round ligament sprang from it, and the Fallopian tube passed into it, expanding as it did so into a funnel-shaped orifice. The lower part of the cyst bulged into the uterine cavity, and a bristle could be passed from the uterus through the tube into the cyst. The tube was here also dilated into a funnel-shape at its entrance into the cyst. The tubal origin of the cyst was thus proved. It had burst at the second month. There was a corpus luteum in the right ovary. Mr. Doran had examined the five other cases of the kind that are to be seen in the London museums, and gave an account of them. He remarked on the rarity of the condition and the tendency to early rupture. Had the abdomen been opened, amputation of the uterus would have been the only practicable treatment. He thought that many cases in which development in a supposed hernial pouch of the uterus was suspected, were probably tubo-uterine.

Cephalotribe.—Mr. C. E. JENNINGS exhibited an improved cephalotribe.

Hermaphrodite.—Dr. CHALMERS exhibited the genito-urinary organs of a child in which the internal parts were female, while the external resembled those of the male. The clitoris was grooved below, but not channelled.—Mr. DORAN said that grooving and even complete channeling of the clitoris by the urethra was normal in some of the lower animals.—Dr. FANCOURT BARNES informed the Society that the child he had exhibited at the last meeting had since died, and proved to be a female.—Dr. CHAMPNEYS exhibited the genito-urinary organs of a female with extroversion of bladder, described by him in the *St. Bartholomew's Hospital Reports*. The external genitals were such as might belong to either sex.

Torsion of Cord.—Dr. CHALMERS showed an umbilical cord presenting remarkable twisting and narrowing near the umbilicus.

Tumour of Placenta.—Dr. GALABIN showed (for Dr. J. C. Roberts) a placenta in which was embedded a tumour about the size and shape of an adult human heart. It was encapsuled, and on the uterine side covered by a complete layer of placental tissue. Near it were several small similar detached masses.

Description of a Kyphotic Pelvis, with Remarks on Breisky's Description.—This paper, by Dr. CHAMPNEYS, was read. The pelvis, except for slight asymmetry, and a process which the author termed "posterior spondylolisthesis", was a typical kyphotic pelvis. The author criticised Breisky's description, laying stress on the influence of sitting, which, in the hypnotic pelvis, he believed increased the inversion of the ischial tuberosities while, in the flat pelvis, it increased their eversion; the difference depending upon whether the deformity caused the ischial tuberosities to be inside or outside the line transmitting the body-weight, i.e., the sacro-iliac synchondrosis.

Puerperal Diabetes.—A paper on this subject by Dr. MATTHEWS DUNCAN was read. The author pointed out the distinction between the slight glycosuria of pregnant and suckling women, and real diabetes, with its polyuria and large amounts of sugar. Physicians and surgeons were well aware of the dangers introduced into their cases by complication with diabetes. But the subject of diabetes complicating pregnancy and parturition had attracted almost no attention; and this probably arose from its rarity, which might be accounted for by the disease frequently destroying in women the sexual energies, as it was said to do in man. The author had collected twenty-two cases in fifteen women, and they demonstrated the great gravity of the complication, as respects both mother and child. Of the twenty-two pregnancies (including those ending prematurely), four had a fatal result soon after delivery. In seven of nineteen pregnancies in fourteen women, the child, after reaching a viable age, died during pregnancy; in two, the child was born feeble, and died in a few hours; making an unsuccessful issue in nine of nineteen pregnancies. The histories showed that diabetes might supervene on pregnancy; that it might occur only during pregnancy, being absent at other times; that it might cease with the cessation of pregnancy; that it might come on after parturition; that it might not come on in a pregnancy occurring after its cure. They showed that pregnancy might occur in a diabetic woman; that it might be not appre-

ciably affected in its natural progress and termination by the disease; that it was very liable to be interrupted by death of the fetus.—Dr. JOHN WILLIAMS thought that these cases were less unfrequent than was supposed, owing to the fact that the urine was not always examined. He had met with four. A trace of sugar in the urine was common, but this was not diabetes.—Dr. ROBERT BARNES had investigated the condition of the urine in pregnancy, as to albumen, urea, and sugar. The occurrence of sugar was physiological, though not constant. Sinéy had shown that sugar appeared in the urine when lactation was suppressed; this was of interest in connection with the normal fatty change in the liver, shown by Tarnier to occur in pregnancy. He (Dr. Barnes) drew a parallel between albuminuria and glycosuria during pregnancy. Both were physiological, but might pass the physiological boundary, and then grave accidents ensued.—Dr. CHAMPNEYS inquired as to the treatment.—Dr. CARTER said that the tendency of diabetics to collapse and coma would make us expect danger from pregnancy and labour.—The PRESIDENT said that the terribly fatal complication he had been describing had no relation to normal glycosuria. He thought, with Dr. Williams, that, attention having been drawn to the subject, more cases would be published. He could lay down no special rules as to treatment.

On the Treatment of Post Partum Hæmorrhage by Hypodermic Injections of Ergotinine.—A paper on this subject, by Dr. C. CHAHBAZIAN (Paris) was read. Ergotinine was the alkaloid of ergot of rye, insoluble in water, soluble in alcohol or chloroform. One pound of powdered ergot yielded three grains of ergotinine. It was indicated in post partum hæmorrhage due to imperfect contraction of the uterus. The dose for hypodermic injection was five to ten minims of a solution containing one-fiftieth of a grain in twenty minims. This might be repeated, if necessary; but more than twenty minims should not be given. This produced strong and permanent contraction of the uterus, acted more quickly than ergoline (which was only an extract of ergot), and did not cause local abscesses or indurations. Ergotinine was to ergoline as morphia to extract of opium. It was discovered and prepared by Tanret of Paris.—Dr. CHAMPNEYS inquired how long ergotinine would keep.—Dr. WILTSHIRE suggested that the hypodermic injection of ether might, with advantage, be combined with that of ergotinine.—Dr. BRUNTON asked how long ergotinine took to act.—Dr. CHAHBAZIAN said that uterine contraction usually came on in from two to five minutes after the injection of ergotinine. He could not say how long it would keep.

REVIEWS AND NOTICES.

THE SURGERY, SURGICAL PATHOLOGY, AND SURGICAL ANATOMY OF THE FEMALE PELVIC ORGANS. In a series of Coloured Plates taken from Nature, with Commentaries, Notes, and Cases. By HENRY SAVAGE, M.D. Lond., Fellow of the Royal College of Surgeons of England; one of the Consulting Medical Officers of the Samaritan Hospital for Women. Fifth Edition. London: J. and A. Churchill.

THIS work has already been known to a section of the medical public for nearly twenty years, and it is to be regretted that the scientific study of the female organs has not, during that period, become more diffused in British medical schools. Every hospital has its obstetric staff; nor are patients wanting for the student to observe during his third and fourth years. But too often the student finds the study of diseases of women quite a new subject when he commences his clinical studies, after passing an examination in anatomy and physiology. The third year's student, when he first attends a case of vesical calculus, or assists at an operation for the relief of strangulated hernia, possesses, as a rule, the full command of his subject excepting experience. He has, at least, "got up" the anatomy of the perineum, inguinal canal, and allied parts and structures, and their study essentially includes surgical as well as purely anatomical questions. We fear it is otherwise when he attends midwifery lectures, or uterine cases in the out-patient room. He, in all probability, has not devoted to the relations of the female organs one-tenth of the time expended in dissecting the male pelvis viscera. Often, indeed, does the demonstrator hear a student remark that he has had a female subject allotted to him for the purpose of the study of the male genital tract, as if he were not to be expected to know the anatomy of the female organs when undertaking such a study. Yet, in actual fact, the student who has not devoted to the study of the female organs one-tenth of the time expended in dissecting the male pelvis viscera, is at a disadvantage when he comes to the study of the female organs.

There is only one road to a solid and sound knowledge of the diseases of women, and that is the same road which leads to competence in any other medical or surgical subject. That road runs through the dissecting-room; and the guide-book for travellers on that path will not be any of the usual manuals, which take full note of almost every object in the way, except what appertains to the female organs, which are ever treated as secondary questions, but a work like that of Dr. SAVAGE, where the anatomy of these parts is as minutely described as the anatomy of other spaces, triangles, and regions, is discussed in works on general practical anatomy.

The new edition contains many important additions and revisions, particularly with regard to the ligaments of the bladder and uterus, the normal mobility of the uterus, and the removal of the healthy ovary for relief of certain disorders. In relation to this last subject, we call attention to a very useful wood-cut at page 16, showing the ordinary course of the spermatic and uterine arteries. It can be seen, at a glance, how ligation of one spermatic, or rather ovarian, artery alone would cut off a large supply of blood from the uterus. In Battey's operation, both these arteries are, of necessity, ligatured in securing the stump of the broad ligament after the removal of the ovaries. This would, in itself, cut off the nutrition of a fibroid mass very appreciably; and, in cases of periodical pain, the habit of a steady local afflux of blood, which is, in some cases at least, the direct but unexplained cause of suffering, would cease when no vessels are left for the extra quantity of blood to flow into.

In his observations on operations for the relief of prolapsus, Dr. Savage objects to Marion Sims's method, where the vagina is made narrow near the cervix, by uniting the edges of a raw surface made by dissecting a triangular portion of the mucous membrane. "Experiments," says our author, "has shown the futile character of these and such like plastic operations. The great sustensibility of the vagina defeats their object sooner or later."

In the preface, Dr. Savage states that the want of a good index has been felt and noticed by readers of the earlier editions. He excuses himself on the ground that the entire text is practically an index. But there is a vast amount of matter crowded into a small space; and, when this work is used as a book of reference by some one who is unacquainted with its somewhat peculiar arrangement, much time would be saved by the desired addition. For this and other reasons, we are glad to hear that the separate issue of an index is contemplated by the author.

ON INDIGESTION AND BILIOUSNESS. By J. MILNER FOTHERGILL, M.D. London: H. K. Lewis.

DR. MILNER FOTHERGILL is a man of many parts; at any rate, so far as writing is concerned. No subject seems to come amiss to him; and all that he handles he treats dogmatically, by the law of intimate acquaintance and special knowledge. His line is well marked out, and he keeps to it. Semiprofessional, or popular, perhaps it might be called. That is to say, he avoids pathology; occasionally even goes out of his way to thrust at its uselessness as compared with physiology, although the one is but the extension of the other; talks much of function, but very little of structural change; and he writes a book which the lay reader could read with not a little inward satisfaction; while at the same time he collects together a number of suggestions from all sources, which, from their great practical utility, make his work not unacceptable to the medical practitioner, to whom, of course, he alone appeals. He has nothing new to tell us; but, like the liquor pancreaticus which he recommends, he acts as a digestive ferment, and supplies us with pabulum in a very easily assimilable form. But Dr. Fothergill is more than a digestive ferment; he is also the personification of a "digestive relish", for no one can possibly avoid being instructed and amused. Herein lies the utility of such works as this. The professional mind naturally tends at first to judge of it as below the standard of the best work—as having possible background incentives, which must detract from its merits as of the first class. But such criticism is hardly just in this case; for Dr. Milner Fothergill has written a book which, from the amount of information it contains, will always be an exceedingly valuable one; and there is no doubt that a popular style of this kind is a supply to a demand which will always exist.

Biliousness is a vague term; so also are neural indigestion, reflex indigestion, etc., when we come to put what we know about any of them upon paper; but it is, at any rate, conceivable that more progress may be made towards a knowledge of functional conditions and the relations of the various organs of the digestive system, than would be by a study of the anatomy of the digestive system.

The present volume treats of neural indigestion and the various forms of indigestion, with their appropriate treatment; and the second half

is devoted to the functions of the liver and its disturbances, with their treatment. We have read the whole book through with a good deal of attention; and, although there is nothing in it which calls for special mention, we may say of it, generally, that it is agreeably written; that it abounds in practical hints, taken from all the best sources of information; and that its perusal will repay anybody.

MEDICAL AND SURGICAL ASPECTS OF IN-KNEE (GENU VALGUM): ITS RELATION TO RICKETS, ITS PREVENTION, AND ITS TREATMENT, WITH AND WITHOUT SURGICAL OPERATION. By W. J. LITTLE, M.D., F.R.C.P., late Senior Physician to the London Hospital, etc., assisted by E. MUIRHEAD LITTLE, M.R.C.S. London: Longmans, Green, and Co. 1882.

WITH regard to the operation of osteotomy for the cure of knock-knee, Dr. LITTLE remarks that the records of general hospitals show that during the last few years many hundreds of cases of in-knee had attained to so great deformity and inutilty, that surgeons have thought themselves obliged to have recourse to violent methods of cure, or to a serious operation for its relief; although others, as well as he, had never met with a case that did not recover by the help of instrumental means alone. Dr. Little considers that, in a large number of the reported cases in which osteotomy has been performed, such operation was unnecessary. Dr. Little is opposed to the views of those who attribute all cases of genu valgum to rickets. He remarks that in-knee may exist at birth, may originate in the one-year-old fast-growing infant from want of mother's milk, from improper and from too watery a diet, without rachitis; it may depend upon unequivocal rachitis, or upon infantile paralysis and spasm. It may be the result of weakness following measles, whooping-cough, or scarlet fever, or from too long standing or prolonged exertion. In older patients, rheumatism, especially in subjects who were regarded as strumous in their youth, may cause in-knee. The treatment recommended is in accordance with the foregoing views.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE
ALLIED SCIENCES

TWO NEW HÆMACHROMOMETERS.

THE properties of normal blood being dependent not only on the number of the red corpuscles it contains, but also on its richness in hæmoglobin, and, consequently, on the quantity of oxygen it absorbs, it is necessary for the physician, as well as the physiologist, to be aware of this richness; hence, of late years, several apparatus designed with the object of making this analysis, with minute quantities of blood, have been introduced. We need only mention those of Mantegazza, of Gowers, of Hayem, and of Malassez, without speaking of laboratory methods. All, however, are more or less imperfect. In the first mentioned instrument, the specimen of blood was examined by placing a series of blue glasses between it and the light until the light was no longer visible. The number of glasses necessary corresponded to a given scale, but slight differences were not appreciable. By Hayem's method, the specimen of blood was compared with a coloured scale. Here the difficulty consists in obtaining one specimen, always of the same thickness, and in the change in colour of the scale through the influence of light. The scale did not correspond to a known quantity of hæmoglobin, but to a certain number of corpuscles considered to be healthy, this expression being however very elastic in its meaning. To use this method, it is also necessary, as its author frankly owns, to have conditions of lighting and a state of the atmosphere which are rarely present. It is also necessary to use two scales of colour, according as the sky is more or less clear.

In M. Hoppe-Seyler's instrument, as modified by Dr. Gowers, the blood is diluted by adding water by degrees, until it has attained the colour of a standard; the amount of added water corresponds to a scale which indicates the richness of the blood in hæmoglobin. This method has the disadvantage of not allowing verification by a second observer, without examining a fresh specimen of blood, if the first observer have added too much water; besides which, the standard is arbitrary.

In the first apparatus constructed by M. Malassez, assistant-director of the histological laboratory of the Collège de France, there was a somewhat important defect; the standard, formed by a prism filled

with a solution of picro-carminate, only reproduced the exact colour of the sanguineous solution within a very limited area; beyond these limits, the intensity of the colouring was equal, but its quality differed more and more; the intensity only of the colour is noted, and the quality disregarded; a distinction not always easy to make. Hence uncertainty, and notable errors are the result.

M. Malassez has remedied these defects in two new instruments he has lately had constructed (*Arch. de Phys. Normale et Pathologique*, Masson, Paris)—one by Verick of Paris, and the other by Laurent. In the first, he has reversed the construction of his former apparatus. The standard formed by a solution of picro-carminate of the same colour and intensity as a known solution of hæmoglobin is fixed; while the prismatic cell which receives the blood to be examined is moved up and down by a rack screw; and its position on the scale at the point where it corresponds in intensity and tone of colour with the standard solution indicates its richness in hæmoglobin. M. Malassez has taken advantage of the changes effected by him in the construction of his instrument to improve certain points of detail, and to render it easier of manipulation, firmer, and smaller than the old model. We will only point out two important modifications. Examination of blood can now be made by reflected and diffused light, instead of by transmitted light, which was obligatory in the old instrument. The second improvement consists in the adaptation of a double prism furnished with a magnifying glass which brings into contact the coloured rays proceeding from the standard with those coming from the sanguineous solution. By this means, the comparison is considerably facilitated, the mixer (*melangeur*) is much more simple, as the solution of blood is effected in the prism, and not, as formerly, in the *melangeur*, which latter has been reduced to a simple pipette.

The second instrument constructed by M. Malassez is a modification of Duboseq and Laurent's instrument, which is used in manufactures to ascertain the richness of dye-stuffs in colouring matter. It consists of a fixed standard formed of a solution of picro-carmin in glycerine, which is the facsimile of a 1 per cent. solution of blood, containing 5 per cent. of hæmoglobin, and is five millimètres in thickness. The blood, diluted with water, is received into a glass vessel holding one cubic centimètre of the sanguineous solution; that is to say, at the utmost twenty cubic millimètres of blood. Into this glass vessel is inserted an empty glass rod-like tube, closed at both ends by flat pieces of glass; and the coloration of the blood is taken by looking down the glass tube into the solution beneath, and comparing the tint of the blood-solution with that of the standard solution; it follows that, the richer the blood is in hæmoglobin, the deeper the rod must be inserted.*

M. Malassez has employed a solution of picro-carmin as the standard, for he has satisfied himself that it is impossible to manufacture glasses having precisely the same tint as the blood. It seems to him that of these two instruments, the one is as exact and as convenient as the other; but he leaves this point to be decided by actual use. In graduating these instruments, M. Malassez has calculated that one gramme of hæmoglobin absorbs 1.67 grammes of oxygen, instead of 2.08 estimated in the old instruments; he also points out that it is the blood of the dog which has been employed for graduation, for it is impossible, owing to the minute precautions necessary to analyse the gases of the blood, to make the analysis with human blood; hence the scale of hæmoglobin-values given by these instruments refers to the hæmoglobin of the dog. Consequently, if, on examining human blood, it be found, for instance, to be of the richness of 14 per cent., it does not mean that this blood contains 14 per cent. of human hæmoglobin, but that it is the colour of the normal blood of the dog containing 14 per cent. of hæmoglobin.

TESTING FOR ALBUMEN IN URINE.

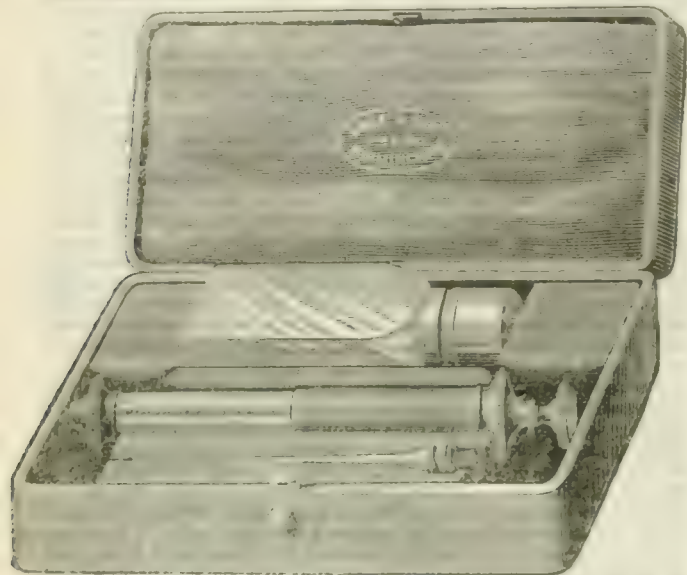
SIR,—I beg to invite your attention to an apparatus suggested by me, and arranged by Messrs. Salt and Sohn, for the utilisation, in clinical practice, of an idea, whose discovery I claim, of a new and, as I believe, more perfect mode than the ordinary one, of applying the test of nitric acid to ascertain the presence of albumen in urine. The method depends on the syringe or suction principle, which, obviously, is peculiarly appropriate where you desire to bring two fluids of unequal densities into contact with each other, without mixing them. In this case the slow process of diffusion suffices to effect that change in the layer of urine adjacent to the nitric acid, which the tester seeks; and, as the contact between the two fluids is provided for without perturbation of either, the albuminous film, when present, is rendered as dense and well-marked as it can possibly be. Again, no confusion can arise from the line of uræes which frequently presents

* This instrument is provided with an optical system similar to the preceding one.

itself, as the nitric acid (which is drawn up last), gets no chance of coming in contact with that part of the urine where this line is developed.

For use in private practice, where the medical man usually has the urine, which he wishes to test, presented to him in that most unmanageable of all vessels, the chamber-pot, the apparatus will be found specially convenient. A few drops (and sometimes this is all that is procurable) may be easily drawn up from the clearest part of the contents of the voluminous utensil, and submitted to the necessary examination.

The instrument is easily cleansed by drawing in and squirting out a little water from the ewer which stands handy in every well-regulated



bedroom. All dripping of either liquid is provided against in the length and bore of the nozzle. Various other difficulties, chemical as well as mechanical, which cropped up in working out the idea, have been successfully met.

Since writing the above, Dr. Roberts' suggestion for a substitute solution for nitric acid as a test for albumen, comes very timely to hand, as I had experienced much difficulty in the convenient storage of nitric acid for pocket carriage. Whatever superiority my method has in dealing with nitric acid, is intensified in the case of the hydrochloric solution, the reaction of which, with albuminous urine as exhibited with my syringe, is so sharply defined that it leaves nothing to be desired.—I am, Sir, yours truly,

GEORGE P. BEST, B.A., M.B. Cantab., M.R.C.S. Eng.,
Camp Hill, Birmingham.

LADY SOMERS.—The immediate effects of the accident to the Countess Somers, on Monday, November 6th, were the fracture of the seventh and eighth ribs of the left side, a slight contusion around the left orbit, and another contusion, also slight, of the left abdominal wall. There was also great shock, quite disproportionate to these injuries; and the rallying powers for some time after the accident were at their lowest ebb. On the second day (Tuesday), there was a slight elevation of temperature only, and the patient was comfortable. On Wednesday morning, the condition of the patient was unchanged; but, during the day, the following symptoms gradually manifested themselves. Pulse 112, and weak; hurried respiration; hebetude and drowsiness; increase of temperature; slight peripheral asphyxia; and vomiting of the little nourishment that could be got down. Examination of the chest during the day revealed nothing; but, in the evening, signs of pneumonia were detected over a large area of the left lung, involving the lower two-thirds of its upper lobe, and similar but less fully developed signs were noticed over the middle and upper parts of the right lung. Since Wednesday, no unfavourable symptoms have appeared. The double pneumonia is fully established, and is running a mild and, up to the present time, an uncomplicated course. The constitutional symptoms are less than is usually experienced during the progress of this disease. The case presents some points of great interest, both medical and surgical.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 18th, 1882.

THE MEDICAL ACTS AND THE ROYAL COMMISSION.—III.

THE establishment of a minimum uniform qualifying examination for medical practitioners, conducted by conjoint examining boards, one in each of the three divisions of the United Kingdom, under the supreme control of a reformed and reconstituted Medical Council, has been steadily insisted on as a cardinal point of medical reform.

The Report of the Royal Commission sets forth (sect. i, par. 2) that, in framing the Act of 1858, "the importance of obtaining the concurrence of the universities and medical corporations, made it impossible then to do more than to require that their examinations should be subject to the supervision of a central authority, appointed to the extent of more than two-thirds by themselves, and not having any direct control over them, but only a power of representing their shortcomings to the Privy Council."

During the years that have elapsed since the enactment of the Act of 1858, though (par. 6) "the imperfections and low standard of some examinations", and "the unsatisfactory manner in which the examiners themselves are, in some instances, appointed", are set forth in the Report as proved before the Royal Commissioners, no single instance of representation of an offending corporation to the Privy Council has occurred; a circumstance which may be accounted for by the present composition of the General Medical Council, with its preponderance of corporation representatives, and the fact, as graphically put forward in the evidence of one of the university representatives on the Council, that, "In my country, hawks do not pick out hawks' eyes" (Evidence, Select Committee, qq. 3635).

In the evidence before the Select Committee, it was shown by several witnesses that the General Medical Council, in the discharge of its duties in controlling medical education, had only inspected examinations twice in twenty-one years (Professor Turner, qq. 3,263); and that recommendations made by the Council in June 1860 (Minutes, vol. i, pp. 138-9) had not been acted on up to the time when the Select Committee sat in July 1879 (evidence, Hart, 3,780 *et seq.*). On that occasion, the Right. Hon. W. E. Forster, the Chairman of the Committee, stated he (qq. 3,791) "had no doubt whatever, on reading the twentieth clause of the Act (1858), that, combined with the eighteenth clause, it is the business of the General Medical Council to find out what the course of study is, and to make a representation if they think it inadequate." Mr. Miller, the Registrar, proved (3,024) that 48.7 of the persons registered in England from January 1st to July 1st, 1879, possessed only single qualifications. The nineteen bodies which grant licences entitling to registration, notwithstanding more or less disregard of the recommendations of the Medical Council, still retain all their privileges; and, unless an amendment of the Medical Act of 1858 be carried, may continue to do so. The authorities in one or more divisions of the kingdom may or may not succeed in framing a conjoint examining board; but, without an enforcing Act of Parliament, the conjunction can only be voluntary, and therefore at any time liable to be rescinded; and the General Medical Council, which exists

for the promotion and improvement of medical education, and which holds its meetings at an average cost to the profession of sixteen shillings per minute, or about £190 per day (evidence, Select Committee, Mr. Miller, Registrar, 4,214) will still remain powerless for good.

All experience proves that the establishment of a minimum licence, evidencing sufficient proficiency in medicine, surgery, and midwifery, as the indispensable qualification for admission to the *Medical Register*, can only be enforced by an amended Medical Act making such a qualification compulsory in each of the three divisions of the kingdom.

The Royal College of Physicians of London, in consequence of the Report of the Royal Commission, has inaugurated another attempt to frame "one complete Pass Examination Board which shall be satisfactory to the profession, the Medical Council, and the Government". The immediate object of the College is to secure this advantage for England. It is manifest, however, that the establishment of such a board, if voluntary, in no way meets the necessities of the case; for, unless exactly similar boards be established both in Scotland and in Ireland, it must completely fail to remedy the existing abuses of the present licensing system. We have assumed, and believe, that the College, in this movement, aims at forwarding legislation on the basis of the Report of the Royal Commission. Action with any other object would be retrogressive and prejudicial.

The Report of the Royal Commission (page iii, par. 11), in reference to the existing licensing bodies, dwells on "the difficulty and expense of adequately inspecting so many examinations, and guaranteeing their efficiency." In paragraph 13, it states: "It will be found that, for many years, a common board for licensing has been very generally advocated, even by those whose opinions on other points of medical reform differ most. A proposal to form such a board for England has been agreed to by all the English medical authorities, and, on two occasions, approved by the General Medical Council; and a similar proposal for Ireland was also agreed to by nearly all the medical authorities of that country."

The English universities and corporations succeeded then, as they would doubtless do now, in framing a common board. In Ireland, the case was different; there such a board was agreed to by nearly all the authorities of that country. The history of the attempt is given by Professor Haughton, one of the most important members of the conference to that end, in his evidence before the Select Committee (qy. 3549). In reply to the question whether "there would be any insuperable difficulty" in getting the Irish medical authorities to agree upon a common minimum of examination, Dr. Haughton replied: "We have five licensing bodies in Ireland. A voluntary conjoint scheme was suggested to us. We met together. I happened to be one of the representatives, on all occasions, of the University of Dublin. Each of the bodies appointed two representatives, and we met to confer; that was what we called our quinary scheme; and we got on very well until we came to the question of money, and then one of the bodies walked out, and refused to go on. Then the College of Physicians took up the matter, and proposed that we should form a quaternary scheme, and let the four remaining bodies form a conjoint examining board. We spent a great deal of time, and printed a great many pamphlets, and at last we fell out over the Apothecaries, and that quaternary scheme failed. Then Trinity College proposed a ternary scheme, combining the University of Dublin, the College of Physicians, and the College of Surgeons. That occupied more time, because it appeared more practicable than the others; but still the inevitable money question turned up at the end between the two corporations, and that failed. The university was out of the money question. Lastly, the College of Surgeons proposed a binary scheme between themselves and the College of Physicians; that also broke down, and we have now got the unitary system in all its perfection in Ireland. Every man for himself, and God Almighty for us all."

In Ireland, a disposition to form a conjoint board existed, though agreement was wanting; but, in Scotland, the opposition is of the most uncompromising character. Unless under compulsory legislation, no

such scheme will be accepted, and the smallest division of the kingdom will thus continue to form a barrier to the establishment of a Common Board, which, as the Royal Commission reports (page iii, par. 13) "was introduced into Lord Ripon's Bill of 1870, and has found a place in all the later Government Bills, and has also been advocated by a larger majority of the witnesses who have appeared before us."

Evidence before the Royal Commission bearing upon this point will be adduced in our next issue. No such favourable opportunity for the exertion of the influence of the profession and the Association has yet occurred as that afforded at the present time by the Report of the Royal Commission.

The principles for which the Association has long contended are there sanctioned; and it now remains for the profession, as well as the Association, to put forth all its strength to secure a settlement of this distracting and long agitated question.

MUSEUMS IN LONDON HOSPITALS.

In a medical school, the museum is the necessary companion to the dissecting room and the *post mortem* theatre, and it is a companion of far higher value than manuals and text-books. Not very long ago the museum was practically devoted to pathology, excepting a few shelves and drawers for the use of students attending lectures in materia medica, or preparing for an examination at Apothecaries' Hall. At the present time, owing to two circumstances, the museum, of the larger schools at least, is almost as essentially anatomical as pathological, an innovation that is no unmixed blessing. The circumstances that have brought this change about are, first, the great increase of students without a proportionate increase in the number of subjects for dissection, so that, without the aid of permanent dissections, many would never have a chance of studying practically all parts of the human body within two winter sessions. The second cause of the increasing proportion of purely anatomical preparations in museums, is the increase of good dissections by students at prize examinations conducted in the medical school itself, and the development, of late years, of a distinct profession of dissectors, mainly drawn from the porters and assistants on the premises of the museum, though several students, prosectors, and demonstrators have joined in the good work through pure love of practical anatomy; and, lastly, the regularly appointed curator is, in our time, generally an active gentleman, ready to undertake and encourage such work. The splendid array of specimens which the skill of Hainsbys, Pearsons, and Stirlings, have added to metropolitan and Scotch museums, are well known; and under the guidance and direction of conservators who are distinguished men of science, or energetic young physicians and surgeons, more than one such collection contains an almost complete work on anatomy, written not in printer's ink, but in flesh and methylated spirit.

Still, as far as the student is concerned, the value of ready made dissections is very questionable. As a means of keeping up knowledge, such preparations are excellent; but it is highly inadvisable that the student should begin the study of parts like the triangles of the neck, or the popliteal space, from specimens which save him the trouble of dissecting, a trouble which should, and must, be incurred, in order to make him a sound scientific and surgical anatomist. It cannot be denied that the beginner will receive actual and permanent benefit from the study of certain preparations before he dissects corresponding parts. Thus, careful examination of a permanent dissection of the orbit and cavernous sinus will save him from cutting away many important structures in dissecting those regions, and will aid him in relying on himself rather than on the demonstrator.

It is in the study of pathology that a museum can prove of the highest true value. A dissected subject will keep for weeks, a body in the *post mortem* theatre will not, even if the law were not to intervene. A student, with average powers of dexterity, can, and ought to be able to, dissect an arm or a leg; but it requires considerable training to fit a man for pathological work, else he will mutilate or cut away some of

the most essential parts of a diseased structure. Then, after all, a few fresh bodies are always at hand in the dissecting-room, but a daily necropsy on the subjects of every disease is impracticable. Unlike anatomy, pathology cannot be studied without permanent preparations.

Let it be granted that a student is ready to work; then, for satisfactory pathological study, he will first require specimens; then the specimens must be well prepared; lastly, they must be accessible and explicable by a good catalogue. These are all essentials, the first always more or less at hand, the remainder much less near to ideal perfection, at many of our metropolitan schools. It must not be forgotten that men readily make themselves students of pathology all their lives, though less eager to keep up purely anatomical knowledge. For one stranger who enters a museum to study a dissection, at least twenty repair to the same collection to look up preparations illustrating aneurysms, diseased valves, and other pathological conditions. In short, in pathological questions, the visitor must be considered as well as the student.

As for the actual number of specimens, the smallest schools in London can boast of a sufficient supply of preparations to aid the student materially in his pathological labours; and every museum bears its rarities. The fulness of a museum depends chiefly on the energy of its curator. Wherever donors learn that a curator prepares their specimens carefully, bringing them before societies, and making the most of them, more and more donations inevitably follow. Civility and promptitude in acknowledging the receipt of specimens, and accessibility of the specimen, before complete preparation, to the donor when he may call for inquiries, are essential. A good paper on a rare or interesting pathological condition will draw contributions of material from all over the country. And as curators are gentlemen who are ready to keep their appointment for the purpose of work in good earnest as long as they hold it, so a good curator can always be found if the hospital authorities make it worth a hard-working man's while to fill such an appointment. Indeed, owing to the great demand for scientific appointments, and the eagerness of many young qualified men to be connected with a hospital, it must be admitted that more than one conservatorship is held, at present, under small encouragement.

The next essential feature is good preparation and preservation of each specimen; the museum, too, must admit sufficient light for the specimens to be plainly visible, without removal from shelves. These essentials, together with the roominess of museum buildings, and reasonable breadth of galleries, depend greatly on the finances of the particular institution, and the readiness of its authorities to expend money liberally for museum purposes. In some of our medical schools, the museum is a very gloomy chamber, and it is hard for two persons to pass by each other in the galleries without imminent risk of knocking down bottles, or catching their coat-tails in portions of dry preparations on the lower shelves. A little money spent in skylights and in widening the galleries by a foot or two, would do much to remedy these evils.

Of all the essentials to a museum when once worthy of the name, a good catalogue is the greatest. The want is, fortunately, so universally recognised, that we have recently had quite an epidemic of new lists of pathological specimens in London museums. The St. George's catalogue is excellent for cross-references. At St. Bartholomew's, a new pathological catalogue has been most expeditiously brought out in one volume. The large collection of the Royal College of Surgeons possesses a catalogue in an active state of revision; indeed, the first volume of a new edition is already in print. The time which ever must elapse between the issue of the first and the last volumes of a catalogue of a very large collection is an annoying, but inevitable, disadvantage. Several good museums possess catalogues only in manuscript, a most unsatisfactory state of things, for the entries are hurried and very unsymmetrical; some consisting almost entirely of clinical histories, others without any history or reference at all; some describing what is not seen in the specimen; others, most unscientifically, giving only the name of the disease which the specimen illustrates; lastly,

many entries are simply hieroglyphic references to manuscript case-books in the wards of the hospital. It is not agreeable for the visitor to have to depend, as when visiting the fine collections of the London and Middlesex Hospitals, or King's College, entirely on the courtesy of the curator, or the good-nature of a porter or assistant, too often finding, at the last, that nothing more is known of the specimen than what is indicated by a single-lined entry in a manuscript catalogue. All printed catalogues preserved on the shelves of a museum should be interleaved, and every addition carefully entered in writing, and as fully described as the specimens in the text. The convenience of this arrangement will be self-evident to any pathologist who pays a hurried visit to the museum of Guy's or St. Thomas's Hospital, when desirous of searching any particular series of specimens. Finally, although the issue of the new catalogues of the larger museums proceeds rather too slowly, and though the preparation of lists of specimens in the collections attached to some of the smallest schools is as yet in an entirely embryonic condition, there is not a curator in London who is insensible of the advantages of a good catalogue and a good series of preparations, and who is not working, with more or less energy, towards the attainment of these advantages.

MORTALITY FROM DIFFERENT DISEASES AMONG ASSURED LIVES.

It is well known that the rates of mortality among assured lives are considerably below those shown by any life-table based upon the vital and mortal statistics of any general population. This being the case, it would be unnecessary for insurance offices; to protect themselves by the selection of proposed lives, which is effected by medical examination, were it not also a fact that there is always a natural selection in operation against insurance offices. Unsound lives more readily recognise the value of insurance; and the soundest lives are the most likely to allow their policies to lapse. Thus, selection against insurance offices operates in a two-fold manner. On the other hand, apart from the direct influence of selection by medical examination, there are other selecting causes which operate in favour of the offices, the most powerful of which is the fact, that insured lives are almost exclusively drawn from that class of society which lives under the most favourable sanitary conditions. On the whole, there is much difficulty in proportionally attributing the recorded differences between the rates of mortality in the general population, and among insured persons, to the several and opposing influences of selection. These differences are, however, sufficiently wide to invest with considerable interest any investigations intended to throw light upon them.

The extent and duration of the low rates prevailing among newly insured lives have often been thoroughly investigated; but a recent paper, read before the Institute of Actuaries, by Mr. William R. Dovey of the Standard Life Assurance Company, carries the investigation into comparatively new ground. The title of the paper is "The Influence of Selection on the Mortality of Various Classes of Diseases among Assured Lives." The calculations and deductions in this paper are based upon observation of the causes of "mortality of assured lives as experienced by the assurance companies in Scotland," compared with the rates of mortality from the same diseases, at similar ages, in the general population of Scotland, computed from the Registrar-General's mortality statistics for the ten years 1855-64. Bearing in mind that the differences about to be noted are due, in unknown proportion, to the various disturbing causes incidental to selection for and against insurance companies, it will be interesting briefly to summarise a few of the conclusions to be drawn from Mr. Dovey's calculations. With regard to zymotic diseases, the actual mortality among insured lives exceeds the expected mortality in each year of assurance, except the first, when the two rates are nearly equal. It is reasonably presumed by Mr. Dovey that assured lives include an undue proportion of town-residents; and, as it is well known that zymotic fatality is far higher in urban than in rural populations, this larger proportion of

town dwellers among assured lives may be the true cause of the excess of zymotic mortality to which they appear to be liable. A very interesting inquiry, however, now suggests itself. Is it not possible that adult mortality from zymotic diseases is higher among the middle and upper classes, who mainly supply clients to assurance offices? If this should turn out to be the case, may it not be due to the greater and more successful care among these classes to protect children from infection by diseases, attacks of which generally serve as a protection through life? At any rate, it appears proved that, "as far as the mortality from zymotic diseases is concerned, selection—using the term in a wide sense—has at any rate only a negative value." As regards "diseases of uncertain seat", the calculations have little definite value, both on account of the comparatively small number from which the figures relating to assured lives are derived, and because the diseases in the class are of an indefinite character. The great majority of deaths in this group of diseases are attributed either to cancer or to dropsy. Statistics of dropsy are valueless, because this so-called cause of death is merely a result of one or other of several distinct organic diseases. However, Mr. Dovey's statistics show that selection appears to cause a very much reduced mortality from these causes during the first four years of assurance. It is, however, in the mortality from tubercular diseases that selection, as might be expected, shows the most powerful influence in favour of the assurance company. In the first year of assurance, the actual deaths from these diseases are less than the tenth of the computed number; in the second year, the proportion increases to 27 per cent.; in the third, to 52 per cent. of the computed mortality. After the third year, the proportion, although showing fluctuations, appears to settle down to an average of 60 per cent., this ratio not showing any tendency to increase in the later years of assurance. Thus, after the "immediate effects of the medical examination have passed away, there remains a more permanent, though less strongly marked, influence in the selection of the mortality for a long series of years." This is probably mainly due to the class selection of assured lives, and to their increasing age, far more than to the lasting effect of medical examination. The mortality from diseases of the brain and nervous system is lower among assured lives during the first three years of assurance; after which, the mortality is heavier than that which prevails among the general population, and this "unfavourable difference increases, in a marked manner, with the length of time the lives have been under observation." This is probably due to causes which more largely affect the class from which assured lives are mainly drawn—a class which suffers more from mental excitement and excess of brain-work than the general population. The mortality from disease of the heart and lung is, however, generally lower among the assured than among the general population; whereas, after the first three years of assurance, diseases of the digestive organs showed a marked excess among the assured. As regards the mortality from all causes, the proportional mortality among the assured, compared with that among the general population, increases steadily from 36 per cent. in the first year of assurance, to about 50 per cent. in the fifth year, at which it appears afterwards to remain about stationary.

This brief notice of Mr. Dovey's investigations and conclusions will suffice to prove the interest of the subject, and also to suggest the value of a more extended inquiry into the mortality statistics, especially as regards the causes of death, of the now large assured population of the United Kingdom. These statistics would supply a most satisfactory basis for thoroughly trustworthy information on the subject of class mortality.

It is stated that her Majesty will visit the sick and wounded of the naval and marine forces at Haslar Naval Hospital this week.

It is reported that the local board of Sandbach have been threatened with dissolution, for neglecting to provide an efficient supply of pure water.

MR. R. CLEMENT LUCAS has been appointed Surgeon to In-patients at the Evelina Hospital for Sick Children, in the place of Mr. W. Morrant Baker, who has resigned.

THE Sanitary Commission at Alexandria received a telegram on November 14th, from the Ottoman inspector at Mecca, stating that cholera had disappeared from that place since the 4th instant.

PROFESSOR W. H. FLOWER, F.R.S., has been awarded one of the royal medals of the Royal Society, of the value of fifty guineas, for his contributions to the morphology and classification of the mammalia, and to anthropology.

THE Court of Chancery, on Saturday last, granted leave for application to be made to Parliament for a Bill, authorising the Stanford Trustees to sell sixty acres of ground to the corporation of Brighton for a public park.

THE Departmental Commission appointed by the Home Secretary, some time since, to inquire into the subject of criminal lunacy, has completed its investigations; and the report of the Commissioners, together with minutes of the evidence laid before them, is already in the press, and will shortly be published.

AN inquest has been held on the body of a woman, named Catherine Callan, who died from puerperal fever. It was stated during the course of the inquiry that, since September last, eleven deaths had occurred from this disease, of which eight were attributable to the attendance of a certain midwife, who was warned to cease her occupation for the present.

DR. GOVER, Medical Inspector of Prisons, and Dr. Nicolson, of the State Asylum, Broadmoor, who were requested by the Home Secretary to examine the man George Stratton, lately found guilty of the murder of a woman at Elstree in August last, and to report as to the state of his mind, have presented their report; and a respite has been granted.

WE are pleased to hear that Sir Joseph Fayrer, K.C.S.I., M.D., F.R.S., has been elected a Governor of Guy's Hospital. The appointment of a gentleman so well known in society, and at the same time so representative a member of the medical profession, into the ranks of a hospital managing body, where such a member was hitherto, for reasons too well known, particularly needed, will be hailed with satisfaction by all who wish well to Guy's Hospital.

IT is satisfactory to learn that the aphasic symptoms from which Mr. Anthony Trollope has been suffering during the last fortnight are gradually passing away, and there has been a marked improvement this week. The attacks of shortness of breath, which were at one time a source of considerable anxiety, are now of less frequent occurrence, and are more amenable to treatment. His medical advisers, Sir William Jenner and Dr. Murrell, consider that there is every prospect of a speedy recovery.

A NOTICE has been issued by the Registrar of the General Medical Council, calling upon every registered medical practitioner to send to the branch registrar by whom he was originally registered, immediate notice of any change in his address, and also to answer any inquiries that may be sent to him by the Registrar in regard thereto, in order that his correct address may be duly inserted in *The Medical Register*; otherwise, by Section XIV of the Medical Act 1858, such practitioner is liable to have his name erased from *The Medical Register*, and thus, by Sections XXXI to XXXVII of the said Act, to lose the right to hold certain appointments, to sign valid certificates, or to recover, in any court of law, charges for professional aid, advice and

visits, and the cost of any medicines or other medical or surgical appliances rendered or supplied by him to his patients. Alterations or corrections intended for the Registrar, should be addressed to Mr. W. J. C. Miller, Medical Council Office, 299, Oxford Street, London, W.

During the past week, Sir Thomas Watson gradually lost ground, and on Wednesday was quite helpless; he was able to take a fair amount of milk with some stimulant, but spoke with difficulty. We are glad, however, to learn (on Thursday), from Dr. Walters that Sir Thomas passed a fair night's rest, and has taken more nourishment; and that he is altogether brighter, and takes more notice of what passes around him.

We have received from the General Medical Council office a copy of the recently issued complete volume on the late visitation of examinations, containing, in addition to the visitors' reports, the explanatory statement thereon read before the General Council at its last session, the remarks by the licensing bodies visited, and the visitors' final observations. The work, which contains about 300 pages, and is of a handy octavo size, is well and completely arranged with headings, marginal and shoulder notes, contents, and indexes. This work, which has peculiar interest at the present moment, can be procured at the office of the General Medical Council, 299, Oxford Street, where copies are kept on sale.

ARABI'S CHILD.

WE understand that Arabi's child, who was recently reported to be dangerously ill, and to whom the Egyptian doctors, for political reasons, refused their assistance, was found, when brought for treatment to the British doctors, to be suffering from a severe attack of itch.

COLOUR-BLINDNESS IN SEAMEN.

A SYSTEMATIC examination is now carried on, as to the power of discerning colours, in the United States Navy; and, according to the report of the department for the last year, it appears that, during the past year, the operations of the service have been extended to a number of new ports. There were 2,090 pilots and 273 seamen examined for colour-blindness. Sixty-three of the former (about three per cent.) and four of the latter were found colour-blind.

DR. ROY'S LECTURES AT THE BROWN INSTITUTE.

THE annual course of five lectures, which are delivered as required by the will of Mr. Brown, will be given by the Professor-Superintendent of the Brown Institution, Dr. C. S. Roy, in the theatre of the University of London, Burlington Gardens, W., on the afternoons of the 20th, 22nd, 24th, 27th, and 29th of the present month, commencing each day at half-past five o'clock. The subject is: "On the Experimental Pathology of the Heart." We propose to publish these lectures at an early date in the columns of the JOURNAL.

MEDICAL HONOURS.

MR. OSCAR CLAYTON, for many years Extraordinary Surgeon in Ordinary to his Royal Highness the Prince of Wales, and Surgeon in Ordinary to his Royal Highness the Duke of Edinburgh, has received official intimation that it is Her Majesty's intention to confer on him the honour of knighthood. Mr. Oscar Clayton has passed through many years of careful and faithful service to the Prince, and was conspicuous in the public eye in the early days of His Royal Highness's illness from typhoid fever. Such distinctions have always been considered as a just recognition of faithful services to members of the royal family by their personal attendants, and Mr. Clayton may be congratulated on this mark of royal favour fairly earned by long and devoted labours.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE usual quarterly meeting of this Association was held at Bethlem Hospital on Wednesday evening, November 8th. In the absence of the president, the chair was taken by Dr. D. Hack Tuke. Dr. Mercier read a paper on the Conditions of Life Affecting Insanity, and Dr. Julius Mickle communicated some particulars on Traumatic General Paralysis. Interesting discussions followed in each case; and, owing to the lateness of the hour, a paper by Dr. Fletcher Beach, on Atrophy of the Brain, was taken as read.

NEW REGULATIONS FOR THE ARMY MEDICAL DEPARTMENT IN FRANCE.

NEW instructions on the organisation of military hospitals in time of peace and war, and on the functions of the medical officers of the French army, have just been issued by the War Ministry at Paris. The order concerning them is dated November 7th, 1882. They have been rendered necessary in order that the military medical regulations may be placed in conformity with the provisions of the law on army administration which was adopted by the French Senate and Chamber of Deputies in March last. We hope shortly to give an abstract of the new instructions.

THE ROYAL SOCIETY.

THE session of the Royal Society commenced on Thursday, the 16th instant. At the anniversary meeting of the Royal Society on St. Andrew's Day, the Fellows named in the following list will be proposed for election as Council and officers:—*President*, W. Spottiswoode; *Treasurer*, Dr. J. Evans; *Secretaries*, Professor G. G. Stokes and Dr. Michael Foster; *Foreign Secretary*, Professor A. W. Williamson; *Other Members of the Council*, Professor W. G. Adams, J. Ball, Dr. T. L. Brunton, Professor H. Debus, F. Galton, Professor O. Henrici, Professor T. H. Huxley, Professor E. Ray Lankester, Professor J. Lister, Professor J. Prestwich, Professor O. Reynolds, Professor H. E. Roscoe, the Marquis of Salisbury, O. Salvin, W. W. Smyth, and E. J. Stone.

BANQUET OF WELCOME TO THE EGYPTIAN MEDICAL OFFICERS.

WE are glad to learn that the Earl of Morley, Sir Garnet Wolseley, General Sir John Adye, General Sir John Macpherson, Sir William Mends, Sir Owen Lanyon, and other distinguished representatives of the army, will be present on Tuesday next at the banquet of welcome to the medical officers of the Egyptian Expedition, over which Sir William Jenner will preside. The company which will assemble will be perhaps the most distinguished body of medical men that has ever been gathered together at any dinner in the metropolis, all the heads of the profession in London, and a number of the most eminent provincial practitioners, having signified their intention of being present; the guests will number about eighty. The number of diners who can possibly be accommodated is, we learn, already nearly filled up, seats being reserved in order of priority of application.

INFECTED WITNESSES.

AN instructive case, relating to the custody of persons suffering from infectious disease, arose at the recent winter assizes at York. A man was to be tried on a charge of rape on a young girl; and she, her brother, and the sister, all children, were material witnesses. Before the bill of indictment came before the grand jury, it was announced in court that the three children, who were in the precincts of the court, were all suffering from measles; and evidence, on oath, was tendered by a medical man to this effect: and also that it would be dangerous to themselves and to others were the witnesses to give evidence. Accordingly, with the prisoner's consent, the trial was postponed by Sir H. Hawkins, the presiding judge, to the next gaol delivery. The removal of the children by rail to their distant home being out of the question, the judge was applied to, sitting as a magistrate, to make an order for the removal of the children into a hospital, or for their being taken care of by the

sanitary authority; but Sir H. Hawkins suggested that a city magistrate should be applied to. It then transpired that the children, who were kept in a room separate from the other witnesses, were outside the city boundary; the city sanitary officers were, however, ready to remove the children into hospital, should an order be made. Nevertheless the mother objected to their removal into hospital. Eventually, the judge not making an order for the safe custody of the children during their illness, the prison officers removed them into the city hospital without any magistrate's order, and without the sanction of the mother. The poor woman, however, after seeing the children put comfortably to bed, became reconciled to their stay, and went quietly home.

MORTALLY WOUNDED IN WAR.

It is stated that a novel question has been submitted to the coroners and the Registrar-General as to the necessity of holding inquests, under the statutes, upon persons dying within a year and a day from the infliction of violence in war. It is said that the question has now arisen, as to whether inquests are necessary, and even imperative, upon the bodies of those wounded in the late Egyptian war, and dying within a year and a day in England from their wounds. That it is eminently desirable that *post mortem* examinations should be made in such cases, no one, perhaps, will deny; but we fail to see what good result will be obtained by holding inquests. The circumstances attending the infliction of the wounds it would be difficult to ascertain; and, even if attained, must of necessity result in only one possible verdict. The expense attending the inquests would, we believe, be a useless expenditure.

EQUESTRIAN EXERCISE FOR LADIES.

At a recent discussion at one of the American medical societies, there was a statement made that, for delicate women, horseback-exercise was not a good practice as a rule. Another statement was quoted by one of the speakers to the effect that no woman ought to ride on horseback. American physicians may take heart of grace from the larger experience in this respect of English practitioners. In this country, happily, equestrian exercise is the happy privilege and daily practice of thousands of all ages, and of delicate as well as robust constitutions. It is impossible for anyone who has seen the healthy glow spread over the cheeks, pale just before, of some lady after half an hour's exercise on horseback, to agree with the above assertions. Ladies take far too little exercise in the fresh air. It is rather the duty of the medical man to seek to encourage athletic exercise of all kinds, than to deprecate it from fanciful fear. Americans will gain health, and lose nothing in grace or refinements, by emulating the accomplishments of their English sisters as horsewomen.

CONVICTION UNDER THE LUNACY ACT.

At the Greenwich Police Court, Mr. Henry Andrew Speed, Surgeon, of Amersham Road, New Cross, appeared to two summonses, at the instance of the Lunacy Commissioners; first, for that he, being the medical officer of the North Deptford District of the Greenwich Union, did neglect to visit certain pauper lunatics, in accordance with the provisions of the statute; and, secondly, for neglecting to furnish a return of such pauper lunatics within seven days after the quarter ending June 30th, giving details of the cases. Mr. Poland appeared for the prosecution; and said the Act 26 and 27 Vic., ch. 97, sec. 66, required that, once in every quarter, every pauper lunatic whose case had not been considered sufficiently serious for an asylum, should be visited by the medical officer of the parish; and the latter was called upon to send a return to the clerk of the guardians within seven days after the last day of every quarter, stating whether, in his opinion, all such lunatics were or were not properly treated, and should remain out of an asylum. The penalty of any infringement was not exceeding £20, nor under £2. Mr. Speed did not furnish his report by the proper

time for the quarter ending December 31st; and, when written to in March, replied that it was an oversight, and subsequently sent it in. Notwithstanding that, he was again in default in respect to the quarter ending June last; and, when communicated with, wrote that, through forgetfulness, he had not visited the lunatics, and that he was extremely sorry for his negligence. After the previous warning, the Commissioners decided to prosecute in this case. However, only a small penalty was applied for. Defendant again expressed his regret for the omission. Mr. Balguy said the error was a very serious one, and it was a very gross case of neglect of duty. He imposed a fine of £3 in each case.

THE HEALTH OF PARIS.

The epidemic of typhoid fever this week in Paris shows a decided diminution, the number of deaths registered in the week ending November 8th being 112, as against 125 in the preceding week, and the number of new cases admitted into hospital 341, as against 428, 87 less than in the preceding week. Dr. Bertillon publishes in his weekly Bulletin of the mortality of Paris, an instructive table showing the relative mortality of London and Paris during the month, from the 1st to the 28th of October. In London, with an estimated population of 3,893,272, the number of deaths registered from small-pox was 13; in Paris, with an estimated population of 2,239,928, the mortality from small-pox reaches the figure of 25. Typhoid killed 801 persons in Paris, and only 130 in London. The disproportion, however, between the number of deaths from scarlatina in the two cities is very striking, and some explanation would be interesting as showing the relative morbid influences in the two capitals; whilst three deaths only from this cause are registered in Paris, in London the number of deaths attributed to this disease amounts to 304.

UNQUALIFIED ASSISTANTS.

A CASE of no small importance was decided last week, in an action brought before Mr. Commissioner Kerr at the City of London Court. Mr. Moses Blok, of 19, Chiswell Street, sought to recover the sum of three guineas for medical services rendered to Mr. Richard Poetting, 6, New Basinghall Street. Mr. Emile Bransom, the plaintiff's assistant, said that the charges were fair and reasonable, and that the defendant had been attended by himself and his employer. In reply to a question from the Bench, he said he was not a qualified medical practitioner. The magistrate observed that he, therefore, had no right to attend the defendant. The plaintiff's solicitor regarded it as a similar case to that of a clerk attending for a solicitor. His Honour contended it was not so. The law said that a medical man could not recover for medical advice given by his assistant. If a medical man sent his assistant to a patient, the assistant must be qualified. Judgment was given for the defendant, with costs. The warning is serious, and the inference obvious.

THE INDIAN CONTINGENT FROM EGYPT.

THE native Indian officers and men now quartered at Sutherland House, Wimbledon, may be taken as very good average specimens of the native army, as represented by the Mahomedan and Hindoo elements; and those who see them for the first time will have no difficulty in understanding why English gentlemen are proud to command and serve with them. In Egypt, as on many other occasions, they have proved worthy companions of their English comrades. They are all men of active muscular frame, lithe, and enduring, and mostly of commanding height. They dislike the gloom of our November weather, but can bear as well as a Londoner its changes and its lowness of temperature. Late on last Saturday afternoon, when the weather was particularly damp and cold, though the sky was not altogether sunless, we observed a Belocchee private standing for more than an hour in front of Sutherland House, in undress. He stated that he was enjoying the open air, and had often been exposed to much colder and damper weather in his

mountainous native country; and several officers and men were sitting in their rooms in front of windows widely opened. A civilian native servant, of very short stature and slender frame, was at that time walking, of his own choice, about Wimbledon Common, in a thin coat and no collar or necktie, without showing any sign of being chilly; in fact, not one of the officers, men, or servants that we saw, appeared to feel the cold so much as the English that were walking about in the neighbourhood. The inhabitants of the British Isles must not forget that, changeable as is their native climate, the difference between midday and midnight temperature in a tropical country is often very great; whilst the cold and damp in mountainous parts during the rainy season exceeds, in danger to health and in discomfort, any of the worst features of the much abused climate of great Britain and Ireland. Our Indian guests, too, have, in the exercise of their duties, been exposed to all kinds of influences tending to harden them against climacteric disturbances, and do not need to be regarded with the solicitude with which we look upon delicate English ladies who may be forced to return to England in autumn, after several years' sojourn at a hot "station", or in the equable and genial climate of a hill sanatorium in Hindostan.

CAVENDISH COLLEGE, CAMBRIDGE.

THE members of the Association who were present at the hospitable reception given at this college, during the time of the Cambridge meeting, and heard the statements respecting the arrangements and objects of the college, and the advantages it affords, more particularly of an economical kind, which were made by Lord Fortescue, the warden of the college, the President of the Association, and others, will be glad to learn that it is now, by grace of the Senate, fully recognised as an university institution, and that the pupils resident in it are precisely in the same position as those resident in the other colleges. Since the occasion to which we refer, the building has been enlarged, and is now an imposing structure; the number of students has increased, and include several who are commencing the study of medicine; and we have it on good authority that some of them are among the most industrious and intelligent members in the growing medical school of the university. This has been the case, and this success has been attained although the college had no definite university position, the members of it keeping their terms and deriving their university privileges simply as what are called "non-collegiate students"; and they were, accordingly, under the direction and superintendence of the "non-collegiate board," though resident in the college, and practically under the surveillance of the warden of the college. Now, having obtained recognition as what is called a "public hostel," the college has become a university institution, and its students no longer are "non-collegiate," but are in the same position and have the same rights and privileges as those of the other colleges. This improved position, attended as it is with certain remission of fees, will enable the college to carry out the intentions of its foundation, which are to enable students to pass through the university and obtain its degrees at a younger age and at less expense than has hitherto been done. One of the conditions, that all the students shall reside within the college, will be regarded by many as an additional advantage.

ALLEGED MURDER OF A LUNATIC.

WILLIAM HAWKINS, a general attendant at the Gloucester County Asylum, has been brought before the Gloucester magistrates charged with the wilful murder, on the 12th of June last, of Walter Partridge, a lunatic who had been committed to his charge. Partridge, who was fifty-three years of age, and apparently, and it was found that seven of his ribs had been fractured. At the coroner's inquest, there was no direct evidence of any active violence having been offered to the patient, and the suggestion was that deceased had accidentally injured himself by a fall, or had got hurt by a quarrel with other patients. It appeared, however, that some of the patients who were near the bath-room at the

time when Hawkins and the deceased were together, stated that they saw Hawkins kneeling on the chest of his patient, and apparently using violence. The coroner did not consider that the patients were proper witnesses, and accordingly did not receive their evidence. The medical evidence seemed to show that the injuries received by the deceased were consistent with the theory of a person having knelt on him to keep him down, but the testimony of the patients being excluded, the completing link in the chain of evidence against any person was wanting. The jury came to the conclusion that the injuries were wilfully and maliciously inflicted, and that death was hastened by them, but that there was no evidence to show by whom they were inflicted. This amounted to a verdict of wilful murder against some person or persons unknown. The Lunacy Commissioners afterwards held an inquiry; and acting upon their report, and the evidence given before the coroner, the Home Secretary has ordered the prosecution of Hawkins on a charge of murder. It was stated during the evidence that the deceased had been a troublesome patient. About two hours before his death, the prisoner bathed deceased and another patient, and it is stated he, along with two keepers, got the deceased down, jumped on his stomach, and made him cry "murder." The medical evidence was to the effect that the fractures were caused only an hour or two before death. The prisoner, who denied the charge, was committed to take his trial for manslaughter.

RECENT ACCIDENTS WITH EXPLOSIVES.

WE referred last week, at some length, to the case of the man who was severely injured by the explosion of Lord Charles Beresford's 64-pounder shell, brought from Egypt, and stated that his progress had been satisfactory. We are happy to learn, by inquiry at St. Bartholomew's Hospital, that the patient has done well during the past week; the stump of the amputation has healed, and both compound fractures are in a satisfactory condition; there is little or no pyrexia, and the appetite is good. Another man, suffering from injuries also produced by the explosion of an iron vessel, was admitted into the same hospital shortly after the case above referred to. In the second case, the man was employed to clean some iron bottles, which were used for holding nitrous oxide. In order to remove the paint from the exterior, he put the bottle on to a fire without first ascertaining whether it was quite empty; this action was quickly followed by a violent explosion, produced by the expansion by the heat of some gas still remaining within the bottle. The iron fragments were driven with tremendous force across the room, and inflicted terrible injuries on the man: the abdominal wall, together with a part of the colon, was blown away on the right side, the intestine was contused in many places, and the stomach was lacerated; there was, in addition, a severe compound fracture of the arm, which would have necessitated amputation had the patient been in a condition to undergo such an operation; as it was, however, he did not long survive his admission to the hospital. Curiously enough, another accident had, on the preceding day, been caused by a precisely similar piece of folly. The patient, in this case, was employed by Messrs. Coxeter, and, being required to clean an iron bottle, he, also, put it in the fire; after doing this he turned away, and almost immediately was hit in the back by a fragment of the exploded bottle. The patient, who was a middle-aged man, was at once removed to University College Hospital, and admitted under the care of Mr. Marcus Beck. He was found to be almost entirely paralysed in the lower limbs; slight power of flexion of the knees remained, and sensation was not entirely abolished. In the middle of the back, a little to the left of the middle line, just inside the angle of the scapula, and at about the level of the seventh dorsal vertebra, was a deep wound, apparently punctured. A probe cautiously introduced into the wound encountered neither bone nor foreign body. Retention of urine was only present for a short time, requiring the use of the catheter but once. Antiseptic dressings were applied, and the man has done uninterruptedly well. The paralysis of the lower limbs is now passing off; there is no fever, and his appetite is good.

SCOTLAND.

UNIVERSITY OF ABERDEEN.

THE newly elected Professor of Surgery, Dr. Alexander Ogston, began his lectures on Thursday, November 9th. Instead of giving a formal introductory lecture, the professor went on with the work of the class. In speaking of the blood, he referred more especially to the recent and important observations of Mrs. Ernest Hart on the formation of fibrin.

RECENT GIFT OF MEDICAL BURSARIES TO ABERDEEN UNIVERSITY. MR. GEORGE THOMPSON, Jun., who recently gave the munificent gift of £6,000 to found medical bursaries, has intimated to the Senatus that he desires, 1, that the bursaries be exclusively for behoof of medical students; 2, that they be awarded only after public examination; and 3, that the examination should be confined to the subjects of the medical curriculum.

HEALTH OF EDINBURGH.

LAST week the mortality in Edinburgh was only 15 per 1,000, the total number of deaths having fallen from 96 the previous week to 65 last week. Of these, no fewer than 26 were due to pulmonary diseases. There were four deaths from zymotic diseases, three of them being from diphtheria and one from whooping-cough; all occurred in the Old Town. There were 113 new cases intimated, of which 84 were of scarlatina, 17 of fever, eight of diphtheria, and four of measles.

GLASGOW ROYAL INFIRMARY.

WE observe that at the close of the last weekly meeting of the managers of this institution, a pleasing ceremony took place, in the shape of a presentation to Dr. Thomas, who has for fifteen years filled the office of superintendent of the hospital. The presentation was from the nursing staff of the infirmary, and the inscription stated that it was given by them in proof of their great regard for him, their high sense of the efficient manner in which his numerous duties were performed, and as a token of their appreciation of the kindness with which he always regarded their interests and comfort.

ST. ANDREW'S UNIVERSITY.

ON Monday, Dr. Macintosh, as Professor of Natural History, delivered his inaugural address or opening lecture in the University of St. Andrew's. He had a large audience, and met with a favourable reception. The subject was "The Progress of Zoological Science." He paid a just tribute to the benefits that have been conferred on zoological science by the different expeditions provided by various governments for the purposes of survey, dredging, and investigation. He also spoke of the value of zoological investigation stations, and claimed for St. Andrew's special advantages as the position for such a station.

FEVER AT JOHNSTONE.

THE epidemic of fever at Johnstone shows no indication of abating. On Monday the Town Council at a meeting resolved, in view of the serious outbreak and prevalence of scarlet fever, to request the local authorities of Kilbarchan, Houston, and Lochwinnoch, to unite with them in the erection of a fever hospital for Johnstone and those places. It was also agreed that a somewhat novel means of assisting in stamping out the disease should be adopted, viz., that the representatives of each ward should accompany the sanitary inspector on his rounds, and assist him in seeing that clothing and houses were thoroughly disinfected.

A HOSPITAL AT DALKEITH.

A COMMODIOUS and well arranged hospital has been erected by the Duke of Buccleuch at Newmills, near Dalkeith, for the benefit of the inhabitants of Dalkeith. The hospital, which has a southern exposure,

and has attached to it a considerable grass plot, is well situated and commands interesting views. It consists of a building two storeys in height, of which the lower one is devoted to administrative purposes, having in it the nurses' accommodation, laundry, baths, etc., while the upper one is arranged in airy pleasant wards, and in these there will be accommodation for about fifty patients. These wards have also been so arranged that infectious cases can be isolated, provision having even been made for separate entrance and exit to such isolated portions. This hospital has been erected at the cost of the Duke of Buccleuch, and has by him been placed in charge of the local authority by whom the hospital fittings have been provided.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending November 4th, it appears that the death-rate in the eight principal towns was 24.3 per 1000 of estimated population. This rate is 3.2 above that for the corresponding week of last year, and 2.9 above that for the previous week of the present year. The lowest mortality was recorded in Aberdeen, viz., 21.3 per 1000; and the highest in Greenock, viz., 26.7 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 3.6 per 1000, or 0.2 below the rate for last week. Diphtheria, under which croup and laryngitis are included, caused 24 deaths. From acute diseases of the chest 135 deaths were registered, or 22 more than in the previous week. The mean temperature was 44.5°, being 1.5° above that of the week immediately preceding, and 4.3° above that of the corresponding week of last year.

IRELAND.

THE first of a series of lectures on health, which are to be delivered during the winter in connection with the Ladies' Collegiate School, Belfast, was given last week by Professor Redfern, of the Queen's College, Belfast.

A DISINFECTING CHAMBER FOR LIMERICK.

LAST March, it was resolved to provide a disinfecting chamber, but up to the present nothing has been done; and last week the Local Government Board wrote to the Public Health Committee, requesting that the question of providing a chamber should be taken into consideration without delay. The communication was marked "read", and it is very evident the committee have no intention to hurry themselves in the matter.

HEALTH OF PROVINCIAL TOWN DISTRICTS.

DURING the September quarter, three deaths from small-pox were registered in Belfast, against fifty-three in the first quarter, and twenty-one in the second, and one death from this cause was registered in Clonmel. Measles caused seventy-two deaths, of which thirty-six occurred in Belfast and twenty-two in Londonderry. To scarlet fever, forty-four deaths were ascribed; thirty-seven in Belfast, four in Limerick, two in Cork, and one in Londonderry. Sixty-five deaths were registered from fever (thirty-two typhus, twenty enteric fever, and thirteen simple continued fever), and twenty-nine from whooping-cough; while one hundred and ninety-three deaths were due to diarrhoea and dysentery, of which one hundred and four took place in Belfast.

OUTBREAK OF FEVER IN DROGHEDA.

AT a meeting of the Drogheda Poor-law Board last week, Dr. Adrein, medical officer of the workhouse, reported that, the previous day, four cases of typhus fever of a serious type had been admitted, all from one locality in the town. It was mentioned at the meeting, that a "wake" was held upon the remains of one of the parties who died of the disease, thus helping to spread the contagion. A letter, advising the guardians of all the facts, was subsequently read from Dr. J. B. Kelly, who stated

that he had any cases he was called on to attend removed to hospital; but in others he could not interfere, as they were being attended by the medical officer of the Tontine Society, of which the head of the family was a member.

ENNISCORTHY LUNATIC ASYLUM.

ON January 1st, 1881, there remained in the asylum 300 patients, which, with 62 admitted during the year, formed a total of 362. Of these, 35 were discharged cured, 2 improved, and 18 were removed by death. Although the number admitted was about the average of the past five years, yet there has been a steady progressive increase in the number remaining in the asylum at the termination of each year; the numbers increasing from 239 in 1876 to 300, being an average yearly increase of 12. Consequently, as Dr. Edmundson, resident medical superintendent, points out in his report, a steady increase may be expected as years roll by; but this is not a proof of an increase in insanity. The truth is, the admissions include a large number of incurables of all ages, adding considerably to the permanent population of the asylum. Drs. Nugent and Hatchell, Inspectors of Lunatic Asylums in Ireland, speak in the highest terms of the management of the institution, both in reference to the personal treatment of the patients and its interior organisation.

DUBLIN HOSPITAL SUNDAY FUND.

THE ninth annual collection in aid of this fund was made last Sunday. As far as at present can be ascertained, the sums collected in the various churches in which appeals were made, were equal to those taken up in former years. Unfortunately, St. Patrick's Cathedral, the collection in which averaged about £100 *per annum*, is at present closed for repairs, and it is feared that the failure of this collection may entail a loss to the fund. As has been the annual custom for the past five years, a football match in aid of the fund was played last Saturday. This attracted a large number of spectators, and will be the means of making a considerable addition to the fund, a sum of about £53 having been paid for entrance to the ground. The teams were chosen from the members of the different Hospital Football Clubs and from the Leinster players. The game was very closely contested, and resulted in it being a "drawn" one. The sums paid over in former years from these annual matches are as follows:—1878, £20 3s. 9d.; 1879, £34 14s.; 1880, £38 18s.; 1881, £47 19s. 6d.; total, £141 15s. 3d.

THE ACADEMY OF MEDICINE.

THE first meeting for the election of officers of the Academy will be held this day (November 18th), at the College of Surgeons, at four o'clock in the afternoon. The ballot will close at 5 P.M. Only Fellows of the Academy who have paid their subscriptions are qualified to vote. In pursuance of a requisition received by the President of the College of Surgeons, as chairman of the provisional committee, a meeting was summoned by him on Monday last. The avowed object of the requisitionists was to endeavour to make alterations in the rules of the Academy, which had, after several meetings, been finally approved. After the discussion of a point of order which was raised, as to the power the chairman had in summoning the meeting, and which he ruled he had, a resolution was proposed and carried by an overwhelming majority, to the effect that it was inexpedient at present to make any change in the rules of the Academy.

THE KILMAINHAM FEVER HOSPITAL.

IN consequence of the pressure for accommodation in the South Dublin Union Workhouse, its guardians have decided, subject to the approval of the Local Government Board, to close their fever hospital at Kilmainham, and to send any of their dispensary and workhouse patients suffering from fever to Cork Street Fever Hospital, where they have made an arrangement for their treatment and maintenance at

a sum of two shillings per head *per diem*. The adoption of this suggestion would, it is calculated, give accommodation for one hundred inmates, and it is proposed to utilise the Kilmainham Hospital, after its disinfection, for weak and infirm aged women. We have not yet heard whether the medical officers of the Cork Street Fever Hospital are to receive any additional remuneration for the increased work that will doubtless be thrown upon them by the admission of pauper fever patients into their hospital. There can be no doubt but that they would be entitled to it.

THE ROYAL UNIVERSITY.

THE first annual meeting of this university, for the conferring of its degrees, was held in the Exhibition Palace, Dublin (which has now become the property of the university), on the 5th instant. His Grace the Duke of Abercorn, K.G., Chancellor of the University, presided, and his Excellency the Lord-Lieutenant and the Countess Spencer, as well as a large number of visitors, were present on the occasion. Several graduates in medicine and in surgery, whose names we have already published, received their degrees, and speeches were made by his Grace the Chancellor, the Vice-Chancellor (Lord O'Hagan, K.P.), and his Excellency the Lord-Lieutenant. The Senate of the University have enacted the following alterations as to the courses for medical examinations. 1. As to certificates of acquaintance with mental diseases, candidates will not be required to produce certificates of having attended courses of lectures on those diseases; but every candidate for the M.B. degree will be required henceforth to produce a certificate of attendance for three months in a recognised lunatic asylum where clinical instruction is given. 2. After the year 1883 all candidates for the degree of M.B. shall be required to exhibit proficiency in the use of the ophthalmoscope and laryngoscope. 3. After the year 1883 all candidates for the degree of M.Ch. shall be required to present a certificate of having attended a three months' course of lectures on operative surgery. 4. After the year 1883, all candidates for the degree of M.Ch. shall be required to pass a special written examination. The Senate have also adopted regulations with respect to the valuable studentships to be awarded by the university. Two studentships, in different subjects, are to be awarded each year. The first examination is to be held in the autumn of 1883, and the studentships shall be awarded as follows: one for proficiency in the Latin and Greek languages and literature, and the other for proficiency in mathematics and mathematical physics; and the courses for the examinations shall be those prescribed for the examinations for the M.A. degree in those subjects respectively. In 1884, the studentships shall be awarded as follows: one for proficiency in modern literature—viz., English, French, and German; and the other for proficiency in experimental physics and chemistry; and the courses for the examinations shall be those which shall be prescribed for the examinations for the M.A. degree in that year in those subjects respectively. In 1885, the studentships shall be awarded as follows: one for proficiency in logic, metaphysics, ethics, political economy, and history of philosophy, and the other for proficiency in biology (including physiology, zoology, and botany), and in geology (including mineralogy and physical geography); and the courses for the examinations shall be those prescribed for the examinations for the M.A. degree in that year in those subjects respectively. These studentships are each worth £100 *per annum*, and are tenable for seven years.

BEQUESTS AND DONATIONS.—Mr. Francis Maitland Balfour, of Trinity College, Cambridge, has bequeathed £1,000 to Dr. Michael Foster, Professor in Physiology there, to be applied by him in the promotion and study of physiology.—A banknote for £500 has been sent to the Board of Management of the Asylum for Idiots, under "Anonymous" for furnishing infirmaries.—Sir George Howard Beaumont, Bart., of Coleorton Hall, Leicestershire, directed his trustees to be consulted with privacy and simplicity, and, in lieu of the cost that would otherwise be incurred, he has bequeathed £100 to the Leicester Infirmary.—Mr. John Morrell of Liverpool, formerly of Bradford, has bequeathed £100 to the Bradford Infirmary.—Mr. Gerald Gould has given £25 to the Charing Cross Hospital.

REPORT OF THE WORKING OF THE NEW ANIMAL VACCINE ESTABLISHMENT OF THE LOCAL GOVERNMENT BOARD.

JUST three years have elapsed since a conference on animal vaccination was held, in the rooms of the Medical Society of London, at the instigation of the British Medical Association. At that meeting, which was called to consider a report presented by Mr. Ernest Hart to the Parliamentary Bills Committee of the Association in favour of the establishment of a Government Central Animal Vaccine Station, as part of our national system of vaccination, although some difference of opinion was expressed as to the necessity which existed for the introduction of animal vaccination into this country, the general feeling of the meeting was distinctly in favour of such a course. It was urged, on the one hand, that there was evidence of the deterioration of the humanised lymph, which was being transmitted from child to child in this country; and that, by the introduction of animal lymph, a new and more reliable stock would be obtained; while the objections of many to the use of lymph, which had already passed through the human subject, would be met by the opportunity for receiving this matter direct from the calf. On the other hand, it was argued, that no evidence of a diminished protective power in the humanised lymph existed; and that inasmuch as, by the proper performance of arm-to-arm vaccination, sufficient protection against small-pox could be afforded, without the risk of inoculation of syphilis or other diseases, a resort to the use of animal lymph would tend to discredit that of humanised lymph, and might unhinge the whole vaccination arrangements of the country.

It was this fear which naturally led the Government to look, with some hesitation, upon any method which might be calculated to disturb the existing arrangements for vaccination; but it was eventually conceded that some step would be taken, with a view to enabling vaccinators to renew their stock; and, in the end, the propositions of Mr. Ernest Hart were textually adopted and acted on by the Government, and the Animal Vaccine Establishment of the Local Government Board came into existence.

Some difficulty was at first encountered in finding suitable premises for the purpose; but eventually, in the middle of last year, accommodation was procured for the stabling of calves, and for their vaccination, at the Kensington Workhouse, at Notting Hill. Here the first calf was vaccinated, from some animal lymph which had been obtained from Dr. Carsten of the Hague, all efforts to find a case of spontaneous cow-pox in this country having failed.

At Notting Hill, opportunity was given for experience to be gained in the cultivation of animal lymph; and, under Dr. Robert Cory, the director, a succession of calves were vaccinated, the one from the other, and lymph supplied to the Local Government Board for the purposes of distribution. But, in April of the present year, ample premises, which had been secured at 95, Lamb's Conduit Street, were ready for occupation; and the institution, which at Notting Hill was prepared only for the cultivation of lymph, was now in a position to vaccinate all persons who came to it for this purpose.

The accommodation provided consists of a large waiting-room opening into the operating-room, where the calves and patients are vaccinated. This room is divided into two parts by a screen, which separates that portion devoted to the vaccination of children from that reserved for operations on the calf, but permits the calf to be readily seen by those who may desire to do so. On the further side of the operating-room is a passage leading to the stables for the calves; of these there are three, and each is provided with four stalls. This arrangement permits sufficient classification of the calves, a point which experience may show to be of importance. In addition to these stables is another, situated in an entirely separate building, in which the calves are placed on their first reception, and which can be used if it be thought necessary to isolate any calf already in the other building. Adjoining are lavatory arrangements for the convenience of the public.

Over the operating and waiting-rooms is the residence of the caretaker and his wife, together with a well-lighted room for microscopic and other scientific purposes. The whole of the premises are planned with a view to cleanliness; the floors are of concrete, the walls are cemented for some distance above the floor level, and the fittings of the stalls are of iron. All portions of the building are well ventilated, and the temperature is maintained by hot-water pipes in connection with a boiler, and so arranged that any one part can be heated independently of the rest of the building. Two entrances give access to the premises; the one leading into the waiting-room is used only by patients and other visitors to the institution, the other opening into a mews for the entrance and egress of calves.

We have spoken of the stable in which calves are first placed on their reception at the institution. They remain in this place until they have been examined and certified to as to their condition of health by a veterinary inspector of the Privy Council; and, if found to meet the requirements of health and age, they are then transferred to the other building, where they remain for some days under further observation before they are vaccinated. The age of the calf is a matter of considerable importance as affecting the success of the inoculation. If calves be taken at too early an age from their mother, they are prone to diarrhoea, and the least disturbance of their health interferes with the proper development of the vesicle; hence the calves which are supplied at Lamb's Conduit Street are not less than three months of age, nor are they permitted to be above seven months, for above this age they become too strong and unruly, and are, therefore, unfitted for the purpose for which they are intended. As Mr. Greene of Birmingham pointed out at the Conference on Animal Vaccination, "there are evil-spirited calves and pugnacious calves; calves full of rowdiness and violence," interfering very seriously with the removal of lymph from their pocks.

No special breed of calves has been insisted on, although this has been thought, in some continental stations, to influence the development of the vesicle. Speaking generally, calves with the finest skins give the best results; but observations on these points must be carried further before any very definite opinion is expressed.

The question of sex is unimportant, except so far as that, in the male, the scrotum affords a good surface for inoculation.

Each calf is supplied with one gallon of milk per day, with hay and with cake; and, since the opening of the Lamb's Conduit Street institution, very little difficulty has been experienced on the score of diarrhoea.

When the time has arrived for the animal to be inoculated, it is brought into the operating room, and placed against a table, the top of which turns upon hinges, so that it can be placed perpendicularly; a strap is then passed round the animal's body and the top of the table, which is then replaced in a horizontal position, the calf being supported, and thus placed on its side on the table. The right hind leg is then made fast to an iron bar, which stands at right angles to the table, while the left leg is secured in a horizontal position. The fore legs are strapped together, and, with the head, are fixed to the table, and, in this spread-eagle position, the animal is ready to be shaved. The shaving is, of course, limited to that part of the body which it is intended to vaccinate, viz., the lower part of the abdomen, extending from just below the umbilicus to within a few inches of the anus, and including a few inches of both flanks. The shaving must be done very thoroughly, so that no fine hairs may remain to interfere with the introduction of lymph. The scrotum especially requires attention, on account of the furrows in the skin at this part. When this process has been completed, the surface is well washed.

The lymph may be inserted by punctures or by incisions, but the latter produce a larger surface of vesicle, and therefore more lymph. From fifty to seventy superficial incisions are made in the skin, the direction of the incision being decided by the readiness with which the skin can be pinched up in one direction or another. The instrument used for inoculation is a small tenotomy-knife, and the lymph which is first

collected on the upper surface of the blade readily falls into the line of incision as it is made. The only other point to be observed is that enough room should be allowed between the different lines of incision to permit of the vesicles being pinched up when they are sufficiently developed to supply lymph in their turn.

This must next be considered. The vesicle in the calf, unlike that in the human subject, will not, when only punctured, cause the lymph to exude; it is necessary that the vesicle should be pinched to produce this result; sliding forceps with curved ends are best adapted for this purpose. The vesicle is pinched up, and by the strain thus put upon it, is ruptured, and the lymph at once oozes from the open surface. It is possible to collect a considerable amount of fluid from one vesicle thus treated, but after the first rush of lymph an amount of serum will continue to be poured out, which has far less infective power than that which is first procured. It is convenient at the moment after the application of the forceps to wipe off with a towel the upper surface of the vesicle, and at the same time remove any blood which may have appeared; by this means the lymph is obtained, which is more free from blood-corpuscles.

The lymph is then collected in tubes, or on ivory points, the end of which is polished to enable the lymph to be more readily removed when the points are used.

It is the fashion to use tubes which are in the centre expanded into bulbs, and these have the advantage of containing a larger amount of lymph without any more exposure to air than in the ordinary straight tube. The tubes are of course sealed with care, and the points dried.

In the selection of the vesicles, the greatest care has to be exercised, for in the same calf will sometimes be found vesicles which are more advanced than others. The use of vesicles which are either immature or are too advanced will, in the next calf vaccinated from them, produce other vesicles which experience has taught must be rejected, either for the vaccination of children or of other calves, for the maintenance of a lymph-supply. As a rule, five times twenty-four hours after the inoculation of a calf, the greater number of the vesicles will be in condition to yield lymph suitable for either of these purposes.

The fact that the calf-vesicle takes five days for its development, while the vaccine vesicle in the human subject requires forty-eight hours longer, creates a difficulty for which special arrangement has to be made in the management of the institution.

On every Thursday, a calf which is ready to yield lymph is placed upon the operating-table, and on this day, at half-past ten, are vaccinated patients who come for this purpose, and another calf for the supply of lymph on the following Tuesday; on the latter day, lymph is thus procured for the vaccination of other patients, but no calf is vaccinated. These two days are therefore those on which patients attend; the calf which is used to supply lymph on Thursday is vaccinated on the previous Saturday by stored lymph which has been procured from the calf of two days before. Thus a constant supply is maintained, and lymph produced both for the vaccination of patients at Lamb's Conduit Street and for transmission to the National Vaccine Establishment at Whitehall.

The results of the vaccination of children with lymph thus produced has certainly been satisfactory, so far as evidence on this point has been accumulated. The vesicles have been well developed, and the insertion success altogether good; indeed, for direct vaccination from calf to arm, animal lymph appears at the present time to answer all reasonable expectations, but a caution is required with regard to the use of stored animal lymph. Experience seems to show that lymph from the calf is less capable of preservation than that which has passed through the human subject. This is a point upon which too great stress cannot be laid. If stored animal lymph should come to be sought after by the general public, to the exclusion of arm-to-arm vaccination, far more harm than good is likely to result from the introduction of animal vaccine into this country. Stored animal lymph may be trusted for the vaccination of other calves, even after it has been kept for a number of weeks, but if the vac-

cination of human beings is to depend upon the use of animal lymph, it is necessary that this should be done directly from the calf. If this be forgotten, there appears a probability that a larger number of whole or partial failures in vaccination will add to the already large proportion of the population which is susceptible to attack from small-pox. It becomes therefore necessary, if practitioners are to resort to animal lymph for the vaccination of their patients, that opportunity should be given for the acquisition of a full knowledge of its method of cultivation.

The difficulties of keeping up a succession of successful vaccinations of calves are infinitely greater than in the case of infants. As Mr. Greene pointed out at the conference to which we have already referred, "the cultivation of the lymph requires a special skill and more unceasing care than in arm-to-arm vaccination—a powerful argument for its restricted application, but not for its suppression."

There is as yet no evidence in this country to show the relative amount of protection against small-pox afforded by the direct use of animal and humanised lymph. This to a great extent must be a matter of experience, which time alone can give; but, if we may judge from the character of the vesicle produced, and from the longer period during which the scab is persistent in the former, there is, at any rate, every reason to regard calf-lymph as protective in a high degree.

We have referred to some of the difficulties attendant upon the cultivation and storing of animal lymph—difficulties which we cannot but hope will be reduced as the result of knowledge acquired in the Animal Vaccine Establishment; and to this end we trust will be directed the efforts of those connected with this institution; and we would desire to urge on those who are interested in, or may in the future be concerned in, the vaccination of others, the value of the opportunity which the Animal Vaccine Establishment gives for the study of that branch of the subject. This should be one of its chief uses; but it already serves, and will, as it becomes better known to the public, continue to serve, to overcome some of the prejudice which now prevents resort being had to vaccination; and, in view of the compulsory nature of the Vaccination Act, this is a point which should be kept strongly in view. Without compulsion, a much larger proportion of the population would escape vaccination than is at present the case, and it is but fair, if it can be done without lessening the amount of protection afforded against small-pox, to meet in every way the prejudices of those who have antipathy to vaccination.

AN ACCOUNT OF LADY STRANGFORD'S HOSPITAL AT CAIRO, FOR EGYPTIANS AND ENGLISH.

WE are indebted to Mr. Herbert Sieveking, M.R.C.S. Eng., for the following report.

As a large number of your readers are interested in the St. John's Ambulance Association, I think some account of the work being done here, under the admirable guidance of Lady Strangford, by the surgical and nursing staff sent out by that society, may be not unwelcome.

It was originally intended that a hospital should be established at Alexandria; but on arrival there, on September 20th, it was found that the few wounded who had arrived (the majority having vanished no one knew whither) were being well tended at the Deaconesses and Greek Hospitals, and that there would be little work for us in that quarter. It was therefore decided to move to Cairo, where there was no European hospital, especially as the battle of Tel-el-Kebir had taken place seven days previously, and the wounded were arriving daily. Whilst at Alexandria, the Khedive gave Lady Strangford permission to use Amri's late residence at Cairo—His Highness kindly undertaking to pay for all necessary repairs; it has luckily proved suitable in every way for hospital purposes.

We found the house entirely empty, except for the presence of Arabi's supporters who sat, and in a most dirty condition. Workmen were immediately set to work, the place had to be as clean as possible, the whole being being whitewashed inside and out, laundry built, cesspools cleared, yards paved, &c.; and on October 15th, we had four sick officers, one company agent, and twenty wounded Arabs, most of the latter very severe cases.

Whilst the hospital was being got ready, our nurses were not idle, three of them being engaged with sick officers at the different hotels—

two of the cases being most serious (acute dysentery and typhoid), and rapidly going down hill for want of the constant attention which a skilled nurse alone can give. I am glad to say, however, that they improved from the moment the nurses went to them. The value of good nursing could not have been more strikingly demonstrated. The applications for nurses, which Lady Strangford has received, have been numerous; and the Army Medical Department cannot possibly realise the valuable aid it loses in not employing a large staff to attend its sick and wounded. Sir A. Alison, the present Commander-in-Chief, fully recognises the importance of such assistance, as he gave orders for the sick officers' wards in the new hospital at Abassieh to be reduced to a smaller number than had been arranged, as Lady Strangford's hospital was also open for their reception—an official recognition of our hospital which we highly appreciate.

Arabi's house stands quite alone in a well-to-do and open part of the town, having a broad road on each side. The building consists of two blocks, joined by a narrow wing and balcony on the south side. Between the two is a garden, fifty feet by forty, and at the north-east corner is a yard, about half as large, at one end of which the laundry is situated, all washing being done on the premises by native women. In the west wing, on the ground floor, there are three wards, large entrance hall, kitchen, etc. Above, on the first floor, are rooms for most of the staff. The officers' rooms are on the first floor in the east block (which is much larger than the other), occupying the whole of the north side. On the same floor are Arabs, who, however, are quite separate from the English. On the ground floor of the same block are six rooms (three being used for wards), large entrance hall, bath room, kitchen for Arabs, etc. On each floor there are, besides several smaller rooms used for stores, pharmacy, ophthalmic cases, etc. All the closets in the centre of the building have been nailed up, those on the south side, close to the street, alone being used, a window opening directly on to the street from each. Large ventilating pipes, ten inches in diameter, have been run up outside each block from the cesspool beneath to several feet above the roof, to carry off as much foul air as possible. Such is the salubrity of the climate that, in spite of the absence of artificial drainage, the place remains remarkably free from smells, and the sick and wounded do well under circumstances which in England would be deemed fatal to success. All doors and windows remain open day and night. The drinking-water is filtered in the native "zeers," large oval jars, made of Nile mud—the spongy-iron filters which we brought out being entirely useless for cleansing muddy Nile water. The native cane bedsteads, "sirirs," costing about two francs apiece, are most useful for fractured thighs. They stand about eighteen inches high, and are formed of vertical and horizontal canes, the former passing through the latter; and making a rectangular lattice-work, with apertures about five inches by three. They are most light, airy, and strong. The floor of the bed is made of the same material, and can stand any weight. The surgeon-general, seeing them in use here, at once ordered four hundred for the military hospital, as the sick English soldiers, one month after the cessation of hostilities, were lying on the floors, in which unenviable position many of them are still to be seen.

The Egyptian Government is most particular in assuring itself that those wishing to practise here are duly qualified; the council would not even accept my English registration certificate as a guarantee, but requested me to send for my diploma as soon as possible. Would that the home Government were equally anxious in the same direction. His Highness the Khedive has been taking the greatest interest in the hospital, sending H. E. Salem Pasha, his chief physician, three or four times a week to keep him informed of all that takes place. To-day, November 1st, he came himself, having previously requested that no special preparations should be made, as he wished to see the hospital in its every day dress. He went most minutely into everything, and expressed himself delighted with all he saw. He is going to send his children in a few days. Salem Pasha, whose large-minded desire for improvement is worthy of all praise, has done all in his power to make the way smooth for us, and is most anxious that the hospital should succeed, and become a permanent institution. He would gladly do much to reform the existing Arab hospitals here and at Alexandria, but circumstances are, at present, too powerful for him. He expressed himself as truly heart-broken at the way the new building at the latter place is being conducted. It is supported by Government at a cost of £700 a year, most of which goes into the pockets of a lot of useless officials; but he is quite powerless to remove them, as each is supported by some one of influence. The comparatively small number of wounded who have arrived here, is due entirely to the fear the natives naturally entertain of the treatment, medical and general, at the native establishments. An Arab's dread of such places was most strikingly shown here the other day. One man of the first twenty we received

from the Arab hospital had a compound fracture of both bones of the left leg in upper third, with a large gangrenous wound, and was altogether in a hopeless condition, refusing to have the limbs removed, and being, from his condition, injurious to the other patients. We sent for the vehicle to have him conveyed back to the Arab's hospital. After he had been put in, and found he was really to go, his cries became piteous, and he besought me to take off both his legs rather than send him back. Under the circumstances, the vehicle had to return empty.

All our native patients are fairly astonished at the manner they have been received, and thoroughly appreciate it. There could be no greater boon conferred on the Egyptians than that a few good English hospitals should arise in different parts of the country. Happily there is every prospect of this one being established on a firm footing, and being carried on by most able English medical men. The names of Dr. Grant Bey and Dr. A. Murison of Alexandria (who is coming to settle here), are a sufficient guarantee for the future good management of the hospital. They have both worked with and for us in the heartiest manner. To Surgeon Harrison of the Grenadier Guards, we are also much indebted. Funds are still needed for carrying on the present work, but before Lady Strangford leaves, she hopes to have made such arrangements as to insure the hospital in a great measure being supported by native subscriptions. His Royal Highness the Duke of Connaught, who went over the hospital the other day, expressed a spontaneous desire to be its English patron. There is every prospect of the influence of the work done here extending far beyond the hospital walls. Already in the Arabic journal, *El Wattan*, (which has a very large circulation amongst all classes of natives) articles have appeared eulogising the nursing system, and calling on the Egyptian ladies to follow such an excellent example. Dr. Grant Bey, at a large meeting of the Arab hospital staff, in a stirring address (which will be translated and published in the native Arabic journal, by H. E. Salem Pasha) brought the matter prominently before the Egyptian medical men. There is every reason for believing that the present time is fully ripe for such a movement receiving serious consideration from, and being supported by the Egyptian public.

Social and domestic conditions have much changed of late years. As an example, I may say that Salem Pasha is frequently called to professionally visit the harems, a thing unheard of a very few years since. The women of Egypt are daily becoming less hampered by burdensome restrictions. Old eastern customs are slowly but surely giving way before western influences; and English nurses continuing their work amongst the natives would have an incalculable power for good, such as could be obtained in no other way.

Three officers and two correspondents have already left the hospital convalescent. At present, it contains 4 officers (2 down with typhoid and 2 convalescent from same), 1 soldier-servant (typhoid), 2 Cyprus muleteers (purulent ophthalmia), 28 Arabs (all wounded soldiers).

The Arabs came to us in a most pitiable condition from the Arab Hospital; broken legs and shattered joints were without splints, amputations looking like the cut ends of a German sausage; one patient was half-starved, and another eaten up with pediculi. More wounded will shortly be taken in.

As soon as Dr. Murison arrives, an out-patient department will be formed, and an endeavour made to stimulate the authorities to organise a search expedition for all those who yet remain wounded in the surrounding villages, there being large numbers unaccounted for. There is every prospect of a search even now saving many lives, and relieving much misery, as the Arabs are wonderfully hardy, and bear privations in a truly marvellous manner.

Later, I purpose sending an account of some of the very interesting cases in the hospital, as perhaps you may care to give them a place in the JOURNAL.

SMOKE ABATEMENT.—We are informed that Messrs. Smith, Elder and Co. have undertaken the publication of the reports of the Smoke Abatement Committees of London and Manchester for the year 1882, which includes the whole of the tests of heating and cooking apparatus, fuels and furnace appliances. Numerous illustrations of apparatus, tables of results, and chemical report on composition of gases given off from domestic grates and stoves, by Professor W. Chandler Roberts, F.R.S., are added; also reports of the testing engineer, Mr. D. K. Clark, M.Inst.C.E. explaining the relative efficiency and economy of kitcheners, stoves, and open grates. The committee have admitted reports on the methods of avoiding smoke, and on the distribution of heat in rooms from different descriptions of grates, that the volume may be useful to the general public as well as to manufacturers and inventors of heating appliances, and we have no doubt it will prove an unique and valuable work.

THE EGYPTIAN EXPEDITION.

[FROM OUR SPECIAL CORRESPONDENT.]

Cairo, November 1st, 1882.

It will be admitted by all, I think, that the Army Medical Department has, of late, been dragged through the mire pretty freely; indeed, there is little left unsaid that its enemies—and they are legion—could wish. Now that the war is over, and we have had time to calmly think over the good and bad work done by the Medical Department, it is desirable to record its experiences, to ventilate its failings, and to show up its virtues.

It is easy enough to criticise, and the greatest fools are generally the loudest to proclaim; but, unless criticism be followed by practical suggestions, the result of experience, criticisms become worse than useless, and do more harm than good.

The whole of the outcry against the department, so far as I can make out, resolves itself into a bit of a scramble for the first few days at Ismailia; and the worst charge that can be brought against the medical officers that were in power is, that they were not ready to receive the patients. Let us grant that the hospital was not ready; is it to be wondered at, when such a sudden change of front was secretly carried out by the General Commanding-in-Chief? That it was known in England beforehand that Ismailia would be the base of operations, is now, I think, freely acknowledged. I, for one, can testify to having been informed of this in London before my departure. Nevertheless, it was a secret to those on the spot. The change of base must of necessity upset the calculations in detail of those whose duty it was to prepare for the campaign, and certain allowance should, therefore, be made for them. An old proverb says, "There is never any smoke without some fire"; so I suppose there must have been some cause for the pretty general outcry that has been raised about this part of the campaign. It is useless crying over spilt milk, but probably it would have been wiser if the principal medical officer at the base had refused to admit a single patient till he was fully prepared to receive them. The answer to this would be, that he was bound to take them in, and treat them somehow. Granted; but, rather than take them into an empty building without stores, I would have applied to the general officer commanding to have two or more transports (and there were scores of empty ones in the harbour), each well provisioned, and capable of condensing five thousand gallons of pure water daily, placed at my disposal; and when the hospital was ready to receive the patients, they could have been, if desired, disembarked; or, better still, the ships could have put to sea at once with their cargo, well cared for, well provisioned, each ship with a professional chief; and I venture to say we should never have heard of the stories that are now circulated so freely, to the disadvantage of the Army Medical Department. Had the request to have transports thus utilised been refused, the responsibility would have been removed from the departmental shoulders to those better able to bear them; but the suggestion should have been made.

It has been said that the unification system has been on trial in this campaign, and, to a certain extent, it is true. Whether it has failed or not may be safely left to the committee appointed by Mr. Childers to decide; and, doubtless, the truth will be elucidated if individual members or witnesses are bold enough to speak the truth. After all, the system is "unification" only in name, for the moment hostilities commence it ceases, every regiment, every battery, and every corps having its medical officer permanently attached; and the officer commanding speaks of "my doctor" as he does of "my quartermaster" as he ever did in the old regimental days. That the regimental system is again popular, in fact has never died out, cannot be denied. The unification, who had been converted years ago to the new system, and had become its advocates, only wanted a slight taste—such as this campaign produced—of the old times to revive all their distrust of the new system, and long for the old "home" days to return: by "home," I mean the days when a surgeon entered a regiment and remained with it for years, looking upon it, in fact, as his home. The dislike, the distrust, the hatred of the unification system can be explained when we consider the two antagonistic elements at work in the department, which breed as bitter a jealousy as ever existed between combatant and non-combatant. I refer to the military as distinguished from the professional partisans—the military as the military school. I do not intend to enter into this controversy, and only refer to it *en passant*, to show that there never can be real unification, real *esprit de corps*, so long as the department is divided against itself in this way.

Now let us take the working of the present system on active service. The latest development, and the most useful, of the present system is the Bearer-Company. No great battle will ever be fought in future

without such companies, and without double and triple the number that were employed in this campaign. Let us see, for a moment, how this bearer-company is formed, and how it works. A bearer-company consists of one surgeon-major (in command), three surgeons-major, and four surgeons, together with 199 men of the Army Hospital Corps. And what are their duties? To remove the wounded from the field of battle. In this campaign we had about three engagements, in two only of which were the bearer-companies employed; that means, in a campaign of over a month, two days only were these companies employed, and for twenty-eight days eight officers, professional men, and 190 trained Army Hospital Corps men, were doing nothing but mount sentries, doing orderly officer and such like duties extraneous to their real work, and which could have been done equally well by a captain and two lieutenants of any line regiment. It means that, while the surgeons attached to the field-hospitals next door were worked off their legs night and day, and the men hardly able to keep awake from the arduous duties they were called upon to perform, eight medical officers (in fact sixteen, for there were two bearer-companies) and all those trained men were doing nothing except seeing that their company paraded at certain hours; seeing that their sentries were properly mounted, and that the men held their swords upright when on sentry, and saluted a passing officer.

Now let us look at another side of the question, and the answer will follow. At Tel-el-Kebir, each regiment, battery, and corps, went into action with its medical officer; and what were his duties? Surely not to look after the wounded and see them removed, for that was the work of the bearer-companies. Nor could the authorities have contemplated such a duty for him, for he was only supplied with a field-companion and water-bottle; the former containing a few pills and powder, a tourniquet, and probably half a dozen bandages; and this would not have gone far had his wounded been numerous, even if he had had any transport, which he had not. Again, if he had had much work to do, he must of necessity have been separated from his regiment; and, in the case of the cavalry and artillery, he would have stood little chance of again catching them up in the late fight: for, the same evening, they were at Zagazig, many miles away. It follows, therefore, that either the regiment in pursuit must have been deprived of the presence of its medical officer, or the wounded of the regiment must have been left on the battlefield unattended by the medical officer detailed to accompany the regiment. If his duties be to remain with his regiment, and leave his wounded, I think it would be rather difficult to define his real work, and account for his time profitably expended. Under the present system, therefore, it comes to this: a bearer-company has eight medical officers, whose professional services are required on exceptional circumstances, which occur only a few times on a campaign; and the regiments have each a doctor, whose services are required daily, except on special occasions, when his brethren of the bearer-company have inevitably to do the work for him. The remedy suggests itself. Let the medical officer of each regiment engaged report himself on the eve of battle to the bearer-company accompanying the division to which his regiment belongs; and let him remain with it, and work with it, as long as the action lasts, following up in pursuit as the exigencies of warfare may require; and, when the day is over, let him repair to his regiment, and take up his usual work (and it really is not heavy), doing, of course, his regular turn of orderly duty at the field-hospital, to which, in the meantime, all his sick will have been moved. But now comes the question, Who is to officer the bearer-company? and I unhesitatingly say it should be done by regimental or staff officers accustomed to command men, and detailed for that purpose during peace, or on the preparation for war, when they should repair to Aldershot, and attend a course of special instruction in duties, such as "stretcher drill", which would be new to them. One senior medical officer should be in command, to direct the movements of the corps, so as to utilise their professional services to the utmost. I would not recommend the officers of the present Army Hospital Corps for this duty; that would never work well; it would rouse the old jealousy, and be the means of breeding a great deal of discontent. Good combatant officers of a certain amount of service would, with tact, soon work with the medical officers, and gain as much *amour propre* as they would be likely to do in the ranks of their own regiments; and the present quartermasters of the Army Hospital Corps could still retain their positions, and work as usefully as they ever would in the branch they so much envy. Perhaps you may recollect a great row that took place some years ago, when the late warrant came out, instituting the title of "quartermaster"; that it had many enemies, may be seen by the numbers who refused to take up the new warrant, with its increased rate of pay; preferring to sacrifice pay at the rate of two shillings a day, rather than lose the dearly loved but empty title of "Captain" or "Lieutenant of Orderlies". It must have been with

feelings, perhaps, akin to delight that they saw the apparent so-called break-down of the department, and they may be excused if they gave a silent push to a tottering rock. Does it not seem strange that the two principal movers in the late opposition should be in responsible positions in Egypt—in fact, right-hand men?

BANQUET TO THE MEDICAL OFFICERS: SECOND LIST OF SUBSCRIPTIONS TO THE INVITATION FUND.

	£	s.	d.		£	s.	d.
Dr. W. Aitken	1	1	0	Dr. T. Ligertwood	1	1	0
Dr. M. M. de Bartolomé	1	1	0	Surgeon-General T. Longmore, C.B.	1	1	0
Dr. J. Crichton Browne	1	1	0	Surgeon-General W. C. Maclean, C.B.	1	1	0
Mr. W. Cadge	1	1	0	Surgeon-General M. F. Manifold	1	1	0
Dr. Alfred Carpenter	1	1	0	Dr. W. Marcet	2	2	0
Dr. C. Chadwick	2	2	0	Surgeon A. B. R. Myers	1	1	0
Surgeon-Major T. B. Christie	1	1	0	Mr. O. Pemberton	2	2	0
Surgeon-Major F. S. B. De Chaumont	1	1	0	Mr. Thomas Smith	2	2	0
Dr. J. Langdon Down	2	2	0	Mr. E. Tegar	1	1	0
Dr. R. Farquharson, M.P.	1	1	0	Mr. W. Pugin Thornton	1	1	0
Mr. W. H. Flower	1	1	0	Mr. Edcombe Venning	2	2	0
Dr. E. Long Fox	1	1	0	Dr. Edward Waters	1	1	0
Mr. F. J. Gant	1	1	0	Mr. W. Spencer Watson	1	1	0
Mr. Reginald Harrison	2	2	0	Mr. C. G. Wheelhouse	2	2	0
Dr. Edwin Humby	1	1	0	Dr. W. Wood	1	1	0

The list of acceptances includes: The Earl of Morley; Sir Garnet Wolseley; Sir H. Macpherson; Sir John Adey; Sir W. R. Mends; Sir Owen Lanyon; Dr. Crawford, Director-General, Army Medical Department; Dr. Reid, Director-General, Medical Department of the Navy; Mr. T. H. Huxley; Dr. C. Cameron, M.P.; Dr. R. Farquharson, M.P.; Sir Trevor Lawrence, Bart., M.P.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL. NOTICE OF QUARTERLY MEETINGS FOR 1883: ELECTION OF MEMBERS.

MEETINGS of the Committee of Council will be held on Wednesday, January 17th, April 11th, July 11th, and October 17th. Gentlemen desirous of becoming members must send in their forms of application for election to the General Secretary not later than 21 days before each meeting, viz., December 6th, March 21st, May 21st, September 26th, in accordance with the regulation for the election of members passed at the meeting of the Committee of Council of October 12th, 1881.

November 9th, 1882. FRANCIS FOWKE, General Secretary.

BRANCH MEETINGS TO BE HELD.

STAFFORDSHIRE BRANCH.—The first general meeting of the present session will be held at the Railway Hotel, Stoke-upon-Trent, on Thursday, November 30th, at 4 P.M.—VINCENT JACKSON, Honorary Secretary, Wolverhampton.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of the above District will take place at the Queen's Hotel, Eastbourne, on Tuesday, November 28th, at 3.45 P.M. Dr. Hayman of Eastbourne will preside. The following papers have been promised. 1. Dr. Habgood: On a Case of Tubal Gestation, with specimen. 2. Dr. Ewart: Two Cases of Acute Dysentery in returned Anglo-Indian, with remarks on the best methods of giving Ipecacuanha. Dinner at 6 P.M.; charge, 6s., exclusive of wine. Notice of intended communications should be sent at once to the Honorary Secretary, T. JENNER VERRALL, 95, Western Road, Brighton.

NORTH OF IRELAND BRANCH.—A meeting of this Branch will be held in the Belfast Royal Hospital, on Thursday, December 7th, at 12 o'clock noon. Members intending to read papers are requested to communicate immediately with ALEX. DEMPSEY, M.D., Honorary Secretary, 26, Clifton Street, Belfast.—October 25th, 1882.

MIDLAND BRANCH.—A meeting of this Branch will be held at the Guildhall, Boston, on Thursday, November 23rd, at one o'clock. The Committee for the Collective Investigation of Disease, for the county of Lincoln, will be appointed, under the presidency of C. Hartison, M.D., and the following papers will be read and discussed. Notes on the Antiseptic Treatment of Phthisis, by A. Mercer Adam, M.D. (Mr. Wallace will show the Bacilli of Tubercle under the Microscope). On Two Cases of Stone, by T. M. Wilkinson, F.R.C.S. Edin. Typhoid Fever in its Modern Aspect, by W. J. Pilcher, F.R.C.S. Notes on a Case of Traumatic Aneurysm of the Facial Artery, by T. Sympton, F.R.C.S. Mr. Wilkinson will open a discus-

sion on the Notification of Infectious Diseases. 1. A Piece of Brass removed from the Eye after remaining in for Sixteen Years; 2. Symblepharon, by W. J. Cant, M.R.C.S. Mr. Pilcher will show a Case of Amputation at the Hip-Joint after Jordan's method. Mr. J. E. Tuxford, jun., will show Two Cases of Subperiosteal Excision of the Tibia. Mr. Wallace will show some Microscopic Specimens. Luncheon at the Guildhall, at three o'clock.—W. A. CARLINE, M.D., Honorary Secretary, Lincolnshire.

BATH AND BRISTOL BRANCH.—The second ordinary meeting of the session will be held at the Grand Pump Room Hotel, Bath, on Thursday evening, December 7th, at half-past seven o'clock; J. K. Spender, M.D., President. The following communications are expected. 1. Dr. Aust Lawrence: Notes on Cases of Placenta Prævia. 2. Dr. Cole: Notes on a Case of Diabetes Insipidus; a Case illustrating the effect of Salicylate of Quinine. 3. Dr. Fox: A Case of Pernicious Anæmia. 4. Mr. Green: A Case of Gastrostomy.—E. MARKHAM SKERRIT, R. J. H. SCOTT, Honorary Secretaries.

SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT.

A QUARTERLY meeting of this District was held at the Royal Isle of Wight Infirmary, Ryde, on October 26th, 1882; Dr. DAVEY, President, in the Chair.

The Vice-President-elect.—A letter from Mr. Green was read, thanking the members for the honour conferred upon him by his election to the post of Vice-President-elect, but declining the same for the reason that he already held other offices, and thought the interests of the District would be better served by the appointment of some other member. It was proposed by Dr. COGHILL, seconded by Dr. C. NEILL, and carried, that Mr. Green's letter be entered upon the minutes; at the same time expressing the concurrence of the members in the reasons expressed in the letter which led him, for the present, to such a decision.

New Member.—It was proposed by Dr. COGHILL, seconded by Mr. WOODWARD, "That Dr. Robert Robertson of Ventnor be elected a member of the District." A ballot took place, whereupon Dr. Robertson was declared duly elected.

Place of Next Meeting.—It was proposed by Dr. J. NEAL, seconded by Dr. COGHILL, and carried, "That Shanklin be the next place of meeting."

Collective Investigation Committee.—Dr. WARD COUSINS stated that it was decided, at a meeting of the Branch, that the Honorary Local Secretary of each District should act as the Local Committee for the present; and that Mr. Green had consented so to act.—Mr. GREEN read three letters from Dr. Mahomed, the Secretary of the Collective Investigation Committee, on the subject. Mr. Green also read the particulars of the functions of the Local Committees.—Dr. BEATON proposed, and Dr. COGHILL seconded, "That the whole District be resolved into a Local Collective Investigation Committee."—Dr. BUCK proposed, and Dr. C. NEILL seconded, an amendment, "That the cards be collected by the Local Secretary, and sent direct to the Central Committee."—The amendment was put and lost; the original resolution was carried.—Dr. COGHILL and other members pointed out that any member who chose could forward his cards direct to head-quarters.

Pulse-tracings.—Dr. ROBERTSON read an interesting paper on pulse-tracings and their significance, in which he gave his experience in the use of the sphygmograph, exhibiting Dudgeon's instrument (which he had used) together with tracings, and the preparation of different kinds of paper used. Dr. Robertson pointed out the various influences affecting the pulse-tracing in health, such as position, exertion, food, cold bath, the application of heat, etc. He then considered all the characters of a pulse-tracing, and their causation.—The PRESIDENT, on behalf of the members, thanked Dr. Robertson for his valuable and exhaustive paper.—As the time allotted to the meeting had expired, Dr. COGHILL proposed that any discussion on the paper read, and the other business of the agenda, be postponed to the next meeting. Mr. GREEN seconded this proposition, which was carried.

Dr. WARD COUSINS exhibited a new and ingenious self-retaining empyema drainage-tube.

Dr. C. NEILL exhibited a microscope of new construction, with a revolving stage.

Dinner.—Twelve members afterwards sat down to an excellent dinner which had been provided at Yelf's Hotel. The usual toasts were drunk, and the members separated after a most pleasant evening. November 14th, 1882.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: ORDINARY MEETING.

THE second meeting of this session was held on November 9th; Dr. BALTHAZAR FOSTER, in the chair. Twenty-seven members were present.

New Members.—Dr. J. W. Bond, Dr. W. E. Buck, Mr. W. Oliver, and Mr. E. M. Owens, were elected members.

Communications.—The following communications were read.

Constitutional Malformation of Palate.—Mr. SPOFFORTH (Kidder-

minster) showed an infant, five days old, with a congenital malformation. A large pedunculated pear-shaped mass, which was attached to the anterior part of the hard palate, projected from the mouth. The growth was dense and elastic. In the centre could be felt a hard substance, probably bone or cartilage. The premaxillary bone was intact. In addition, there was a cleft of the soft palate, and another cleft in the posterior part of the hard palate. The uvula was attached to the upper surface of the tongue, with no attachment to the soft palate. Mr. Spofforth purposed to remove the growth.

Hydatid Cysts.—Dr. RICKARDS brought forward a man with hydatid cysts in the abdomen and chest.

Enlargement of Shoulder.—Dr. CARTER introduced a man, about fifty years of age, who complained of gradual enlargement of the left shoulder, with some pain on movement. It was much increased in size, chiefly owing to oedema from pressure on the veins of the part. The case was regarded as one of localised rheumatoid arthritis.

Excision of Superior Maxillary Nerve for Neuralgia.—Mr. CHAVASSE exhibited a patient, fifty years of age, who had suffered from intractable neuralgia of fourteen years' duration. Medicinal remedies, blistering, cauterisation, and a prolonged course of galvanism having failed to relieve the pain, on October 3rd, the superior maxillary nerve was excised from its facial distribution to the foramen rotundum. In the course of the operation, Meckel's ganglion was exposed and taken away attached to the nerve. The wound healed in three weeks; and, up to the present time, there had been no recurrence of neuralgic pain.

Recurring Dislocation of the Lower End of the Radius from the Ulna.—Mr. JORDAN LLOYD showed a case. The displacement occurred each time the patient supinated the forearm. It had existed for ten years, having been overlooked at the time of its first occurrence, it being complicated with fracture of both bones of the forearm in the upper third. The patient's life was rendered burdensome by the constant presence of pain in the articulation, and by the neuralgic shootings in the course of the ulnar nerve, occurring during rotatory movements of the hand. A week since, Mr. Lloyd stretched the ulnar nerve behind the internal condyle of the humerus, but without relieving the pain. He proposed to fasten the ulna to the radius at their lower ends, and so check all movements of pronation and supination.

Binaural Stethoscope.—Dr. MALET (Wolverhampton) showed his modification of the binaural stethoscope. The chest-piece, made with the bell at right angles to the shaft, was attached by a plug instead of the usual screw, and could be applied more readily than the usual chest-piece to many cases.

Ventral Hernia.—Mr. FURNEAUX JORDAN read a paper on this subject.—Mr. Bartleet, Mr. May, Mr. Lloyd, and Mr. Chavasse, took part in the discussion which followed.

Rapid Lithotomy.—Mr. WEST read a paper on this subject, with remarks on Bigelow's operation, of which he spoke in terms of high commendation. He objected, however, to the name litholapaxy, which had been given to it, on the ground that, by adopting it, we should assent to this principle, that to Professor Bigelow belonged the credit of the idea of washing out the bladder, whereas this had been previously done, though less perfectly, by Clover's apparatus. To Bigelow belonged the enunciation of the principle that it was better to crush the stone completely at one sitting than at four or five, and to remove all fragments, so that nothing should be left to irritate the bladder. Though this principle was excellent in theory, it was not always possible to carry it out in practice. Mr. West gave the history of a case in which he had removed an uric acid calculus, over two ounces in weight, successfully, at four sittings, each occupying over an hour, and in the aggregate a period of six hours and twenty-five minutes. Mr. West thought that with small stones, like the one in question, it was better to deal with them by lithotomy, or if lithotripsy be practised, employ several sittings, each not exceeding two hours, as it was dangerous to keep a patient longer under the influence of an anæsthetic. Mr. West advised the use of Sir Henry Thompson's or Mr. Berkeley Hall's fenestrated lithotrites in preference to Bigelow's.—Mr. Bartleet, Mr. Chavasse, and Mr. Furneaux Jordan joined in the discussion which followed.—Dr. SAWYER thought that in cases of stone, after the calculus had been removed from the bladder, measures should be taken to prevent recurrence: the primary concretions which were formed in the pelvis of the kidney might be checked by alkalies.—Nov. 14th, 1882.

YORKSHIRE BRANCH: AUTUMNAL MEETING.

The autumnal meeting of this Branch was held at the Royal Hotel, Scarborough, on Wednesday, November 15th, 1882; the President, T. R. FRASER, Esq., in the chair.

Communications.—The following communications were read.

1. The President: On Non-suicidal Self-injury. 2. Dr. J. W. Taylor: Remarks on the Sanitary Condition of Scarborough. 3. Mr. H. E. Spencer: Case of Cystocele; Induction of Premature Labour; Operation; Cure. 4. Dr. Goyder: Note on Albuminuria. 5. Mr. E. Atkinson: Pulsatile Tumour of Tibia. 6. Dr. Charles Hutchinson: Cases of Erysipelas.

Dinner.—After the meeting, the members dined together at the Royal Hotel; the President in the chair.—Nov. 16th, 1882.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

A PRINTED document has been issued, and is being put into circulation, entitled, "Remarks on a Report of the Medical Officer of Health to the Health Committee of the Birkenhead Town Council on the working of the provisions for the Compulsory Notification of Cases of Infectious Diseases; being in reply to a letter from the Chairman of the Liverpool Health Committee to the Mayor of Birkenhead." Previously to the recent discussion in the Liverpool City Council on the compulsory notification of infectious diseases by medical men, the Chairman of its Health Committee, with the view of guiding the judgments of the members of the Council, sought for and obtained official expressions of opinion from twenty-two of the towns where compulsory powers of one kind or another exist. The replies were printed, and put into local circulation. The author of one of these, however—and he, curiously, a gentleman whose experience of compulsion has been nearly the shortest of any medical officer of health in the United Kingdom, has thought his reply of sufficient importance to justify him in publishing it separately, and giving it a wider circulation than it would otherwise have had.

On the statistical statement contained in the paragraph, made in supposed refutation of an allegation that we have never seen advanced, and that we conceive to be imaginary, to the effect that, "in places where it," i.e., compulsory notification by medical men, "exists, it has increased the mortality from diseases required to be notified," it is not our purpose to offer any comment, as such a statement, founded on the experience of only a few months, even if put seriously forward, can scarcely deserve serious consideration. We cannot help thinking that Mr. Vacher, in drawing up his report, would have done well to imitate the caution of the committee under whom he serves, and that he would have been only placing that committee in a fair position by prefacing his published statement with the following extract, which was forwarded with it to Liverpool.

"Extract from the Minutes of the Proceedings of the Health, Bath, and Parks Committee of September 19th, 1882.

"The medical officer of health, as instructed by the committee at the last meeting, submitted a report as to the working of the provisions now in force in the borough in regard to the notification of infectious diseases.

"Resolved: 'That, although this committee have not yet come to any conclusion with respect to the working of the compulsory notification clauses of the Birkenhead Corporation Act, 1881, they beg to forward to Mr. Forwood the report of their medical officer of health thereon.'

ALFRED GILL, Town Clerk."

Mr. Vacher, on the contrary, comes to seven conclusions, which he embodies in as many propositions to the following effect.

"1. That, notwithstanding the opposition of many local medical practitioners, in the first instance, to clause 75, they have, as a rule, complied with the terms of the Act, and that cases of neglecting to comply are diminishing.

"2. That the cases of dangerous infectious disease which now come to the knowledge of the Health Committee are no inconsiderable proportion of the actual number occurring, and at least twice as many as in past years used to come to the knowledge of the committee soon or late.

"3. That notification is now, as a rule, sent in as soon as the nature of the infectious disease is recognised, and consequently sufficiently early to be of use.

"4. That the mortality from diseases required to be notified has considerably diminished since compulsory notification came in force.

"5. That compulsory notification has assisted in enabling the officers of the Health Committee to cut short a recent outbreak of fever, and that it is reasonable to conclude it will afford similar assistance in the future.

"6. That it is better to require notification from the medical attendant than from the householder, the former alone having the necessary

knowledge; and notification from the medical attendant to the householder, and through him to the health-officer, being objectionable, as affording no relief to the medical attendant, and always involving unnecessary delay.

"7. That the objection of the medical profession to compulsory notification is not so general or so deeply rooted as seriously to obstruct the working of a measure; but that, in presence of the operation of a compulsory notification clause, its beneficial effect becomes manifest, and will not fail to be appreciated by all intelligent citizens."

With reference to the first five of these conclusions, whatever we may think of the discretion of a gentleman who would venture to put them forward as his deliberate judgment on the working of an Act of which he had had only a few months' experience, and however much we may be disposed to think that some of them are not borne out by the facts on which they are said to be based, we are not inclined to offer any remarks on them, any more than we were on the statistics derived from a similarly limited experience. And if also, as in his sixth proposition, Mr. Vacher thinks that it is better to require notification from the medical attendant, and that notification from the medical attendant to the householder, and through him to the health-officer, is objectionable, he is fully entitled to his opinion, just as Dr. Seaton and the Nottingham authorities, who think that the plan, which he condemns so strongly, is the only really good one, are to theirs, and as many hundreds certainly, and probably many thousands, of medical men, who object equally to both, are to theirs also. But he is not entitled, from anything that has yet been published, to conclude that the objection of the medical profession is not so general or so deeply rooted as seriously to obstruct the working of a measure which has compulsory notification by its members as a central principle; and we must question the soundness of Mr. Vacher's conclusions, when, in full view of the following facts, he could publish his seventh proposition. The facts to which we refer are, firstly, that the principle of compulsory notification by medical men was condemned by an enormous majority at the annual meeting of the British Medical Association at Worcester; secondly, that it was condemned by the Royal Commission on infectious hospitals; thirdly, that many hundreds of practitioners throughout the country have banded themselves together for the single purpose of resisting any attempt to compel them to notify; fourthly, that, in the course of five days, 282 medical men, in Liverpool and its neighbourhood only, signed a memorial protesting against it; and, lastly (as was clearly established by the evidence collected by the Liverpool deputations), that the law is openly defied by medical men, one of them declaring, in the presence of the medical officer of health and town clerk of his town, "I decline absolutely to report any cases at all. I don't report any cases"; that in another town (Bolton), Dr. Ferguson, speaking for his brethren, told the deputation that "the members of the medical profession here are pretty unanimous in being opposed to being compelled, under a penalty, to make the notification"; that in a third (Warrington), a member of the Town Council, admittedly favourable to the principle of notification by some one, spoke of there being "a general consensus of opinion as to the necessity of a modification of the action", and that if it "had continued, the opposition would have utterly destroyed the operation of the Act"; that in another town (Leicester), the medical officer said that he would "certainly not counsel proceedings against any medical man who did not notify in a case of where, say, a daughter of a rich man, who had ample accommodation in his house to isolate. I should certainly wink at that as a sanitary authority"; and much more to the same effect; that, although the medical officer of health of every town visited by the deputations was requested to invite medical men to attend, even though they might be opposed to the Act, in not a single instance was that request attended to; that, in one case, a medical man opposed to the Act was, notwithstanding that request, refused admission when he presented himself for the purpose of giving evidence; and that in another (Greenock), the medical men of the town summoned a meeting so soon as they became aware that the medical officer of health had stated "that some originally hostile to compulsion on the part of the doctor are favourable to it now", and, with only one dissident, asserted that their objection was as strong as it had ever been, and would continue so. If these facts, and they could, we believe, be largely increased, do not show that the objection of the medical profession is so general and so deeply rooted as so seriously to obstruct the working of the measure, we are much mistaken.

FOUR deaths under chloroform, says the *San Francisco Western Lancet*, have been reported recently as occurring in various parts of England. Ether may be slow, but it seems to our contemporary that chloroform, as the man said of croton-oil pills, "is sometimes unnecessarily hasty".

CORRESPONDENCE.

THE GOVERNMENT OF GUY'S HOSPITAL.

SIR,—In alluding last week to the functions of the committee at Guy's Hospital at which the medical staff have a seat, you say: "The grave scandal gradually subsided when two members of the staff were elected to a house-committee, in order to revise and control the code of nursing regulations." This description of the committee hardly sets forth its true nature. As the actual position of the staff has never been quite understood, I will, not only in their interest, but for the information of those who are yet seeking the best arrangement possible amongst those concerned in hospital management, explain our arrangement. Two of us, as representatives of the whole staff, have seats on a monthly committee. This committee is presided over by the treasurer or president (if present, which is frequently the case), the medical superintendent acting as honorary secretary. The number of governors attending is variable; seldom less than five, and often ten. These governors are also members of the court of committees, or grand committee, and are the more active ones of that court. There is no subject connected with the welfare of the hospital which cannot be brought before it, whether it be the appointments on the staff, the relationship with the school, regulations for every officer, student, nursing, and the management of the various departments. Free discussion takes place, but the committee have no power to issue orders, unless confirmed by the grand committee. But in all cases where opinion is unanimous, it has been so confirmed. In cases of difference, recording of names for and against is adopted, and this is sent to the upper court, but it would often occur that the matter would be referred back again. The committee can be summoned at any time, and in cases of emergency they can instruct the treasurer to take action, looking for confirmation from the upper court at its next meeting. Should the treasurer find it necessary to act, as by dismissing or suspending a sister or officer, the matter must be referred to the next meeting for confirmation or otherwise. The action of the treasurer himself can even be, and has been, brought up for discussion, as well as that of everyone connected with the hospital. The only subject which does not belong to this monthly committee is the financial one.

Thus it will be seen that at all times a close relationship exists between the staff and the executive committee, in, perhaps, the most effective and practical way, and my experience in its working leads me to think that, as long as the governors engage in the work of the committees with heartiness, it is probably as good an arrangement as any for the practical working of a hospital.

But it is very different from our former method; it is very far from autocracy; it prevents its faults: but in a complicated machine, as a London hospital, I am not sure that a benign autocracy is not the best, if it can be obtained—I mean where the acting and resident governor makes it his principle of governance to weld all the departments together, and stimulates by sympathy and encouragement everyone within its walls. Hospital work, from the highest to the lowest worker, is a labour of love, or it fails of its full intent. But I am not quite so certain that the presence in the upper committee of a few of the staff which have resigned, would make the wheels work more smoothly. In Guy's Hospital, this committee would be concerned principally with the financial questions; and, although they could present their views more clearly to the body of governors, I am not sure that theirs would always be those of the acting staff.

When the staff of Guy's Hospital decided, after reconsideration, to make trial of the proposal of the monthly committee as above described, hard words were spoken against, what appeared to many, their subservience. They declined to answer these accusations, because any answer at that time would have seriously impeded the success of the trial. Having stood the test of very critical times, we think the scheme likely to do so with less strain on it, at any rate so long as the governors take an active part in it. Hitherto, we have found them always to take a liberal view of all the measures brought before them.—I am, etc.

J. BRANTON HICKS.

THE OXFORD PROFESSORSHIP OF PHYSIOLOGY.

SIR,—In a paragraph which appeared in your JOURNAL last Saturday, I am represented as being an "induced" candidate for the Waynflete Professorship of Physiology at Oxford. By the word "induced", I presume to be meant that I have become a candidate by request. Allow me to state that I have not been asked to become a candidate, and that I have not made any application to the electors.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

MEDICAL OFFICERS AND THE COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES.

The monthly meeting of the North-Western Association of Medical Officers of Health was held yesterday, at the offices in King Street. Mr. W. H. Hughes, medical officer, of Ashton-under-Lyne, occupied the chair. Mr. F. Vacher of Birkenhead moved:

"That this association is in favour of the compulsory notification of cases of dangerous infectious diseases; and is of opinion that it can be best secured by laying the obligation upon the householder and the medical attendant."

Mr. F. J. Roberts-Dudley (Stalybridge) seconded the motion. A discussion ensued. Mr. J. M. Fox (Mid-Cheshire) said he thought some opposition to the proposition to make the notification of infectious cases compulsory had been created by the fact that an attempt was made to smuggle the clauses through in an omnibus bill, in which were included clauses dealing with gas, water, and other matters. This had given great offence to many medical men, and to many of the public, who, but for this would have admitted the justice of the principle. He thought, too, that compulsory notification had been identified too much with compulsory admission to infectious diseases hospitals. The two things might be connected, but they could not be considered as being identical. In advocating compulsory notification, he was not advocating compulsory removal in every case of infectious diseases; and, indeed, the way in which this latter had been carried out in some places had done great damage to sanitary work. It was a monstrous thing for a sanitary authority to insist upon the removal of a person suffering from an infectious disease from a house in which there was plenty of room for isolation; but he was sorry to say that this had been done in places adjacent to Manchester, the medical officers of which were members of that association. He objected, too, to the proposition that was made in the Liverpool Bill, that two medical attendants would be required to certify that there was provision for isolation before the medical officer of health could accept it as a fact.—Mr. T. W. Hime (Sheffield) opposed the resolution. He said he thought it was a most unwarrantable and unreasonable thing to insist upon medical men being informants, and the proposal was entirely contrary to the whole spirit of the Public Health Act. This Act rendered persons suffering from infectious diseases liable to a penalty if they exposed themselves in public, and so endangered the life of others; but the Act never contemplated that a person who was not suffering from such disease should be put under a penalty. He was informed, too, that the medical officer of the Local Government Board was not prepared to advise that body to forward a Bill on the matter. Mr. Hime proceeded to give statistics showing that there had been no decrease in the number of deaths from infectious diseases in those towns where notification was rendered compulsory, but that just the reverse was the case; and he quoted the cases of Warrington, Leicester, Nottingham, and other places. In conclusion, he thought the association ought not to be satisfied with the evidence they had had on this matter; and said he hoped that the association would not pledge themselves to the resolution, and make the public believe that they were in favour of compulsory notification.—Mr. J. Tatham (Salford) said he was of opinion that the association had not had sufficient reliable statistics before them to warrant them in delivering any opinion on the matter. It appeared to him that the death-rate of a town bore no relation whatever to the prevalence of disease; and, therefore, the statistics that had been given by Mr. Hime were useless.—Mr. W. H. Barr (Bury) supported the motion. He said the whole thing could be put in a few words. Isolation prevented infection, and notification enabled the medical officers to secure isolation.—The discussion was further continued, and ultimately the motion was carried.

SCHOOL CERTIFICATES.

SIR,—I will be glad if you, or any brother practitioner similarly situated as myself, can advise me in the following matter. I am Poor-law medical officer for a district in a certain union. The school-attendance committee (selected from the guardians), who take the place of a school-board (in the absence of such), demand, from the parent of any child unable to attend school through sickness, a medical certificate. I am continually being pestered for these certificates; and I wish to know whether the guardians are legally entitled to pay for these certificates; and, if so, how I should proceed to obtain payment.—Yours truly,

P.S.—I enclose my card.

DISTRICT MEDICAL OFFICER.

* * In reply to our correspondent, we have to state that the right to charge a fee depends on the contract he has made with his board of guardians. If it were arranged, on his appointment, that he was to receive all fees appertaining to his office, the guardians have no power to impose additional obligations on him without extra pay; and writing certificates such as he describes is clearly such. A somewhat similar question arose at the St. George's, Mount Street, Workhouse, Westminster, where the medical officer resisted, and with success, an attempt to make him fill up School-Board certificates. We would advise that our correspondent should write to his board, and claim a fee of 2s. 6d. for every future certificate. He can quote Mr. Benton's case as a precedent.

PRESENTATION TO A WORKHOUSE MEDICAL OFFICER.

WE learn from our contemporary the *Brighton and Sussex Daily Post*, of October 7th, that a day or so previously an incident, of the most pleasing character, to all parties concerned, took place on the occasion of the last visit of Mr. David Richards in his capacity as medical officer of the Brighton Workhouse and Industrial Schools, which position he has held for nearly twenty-five years. It was that of the presentation by the officers of the workhouse, of a dozen silver bladed ivory handled dessert knives and forks, and half a dozen fish knives and forks to match, in satin and velvet casings. On presenting this testimonial, the chairman, who is the master of the house, and who

was supported by all the subordinate officials, commented in very appropriate language, and with much warmth of feeling on the regret all entertained at Mr. Richards's resignation of his office. He felt that they had all lost a kind and considerate friend, and one who, without fee or reward, had attended so ably and so long the offices of the establishment. We farther learn that much regret was expressed by the sick, infirm, and other inmates when Mr. Richards took his final adieu. This little, but pleasing episode in the life of Mr. Richards will, we trust, be remembered by him as a proof that if a medical officer of a workhouse carries out his duties in a kindly and genial spirit, he will evoke a similar return from those he works with.

GRUBB V. THE CHESTERTON GUARDIANS.

SIR,—Allow me, in the columns of the *JOURNAL*, to express my sincere thanks to Dr. Joseph Rogers, chairman of the Council of the Poor-Law Medical Officers' Association, for the very valuable assistance he so willingly rendered me in the above case; also for coming here, at much personal inconvenience, to give evidence and advice to my solicitor, gained from an experience of over forty years in the Poor-law Medical Service. Also, I wish to thank the Council of the Association for their great liberality in recouping me my solicitor's expenses, which leaves me the amount of my claim free of all deductions; and to Mr. J. Wickham Barnes, the honorary secretary, I also tender my sincere thanks.—I am, sir, yours faithfully,

Denny House, Waterbeach, Cambs., J. STRANGMAN GRUBB.
November 14th, 1882.

REMOVAL OF RESIDENCE OF MEDICAL OFFICERS.

SIR,—Please have the kindness to tell me if a medical officer removes out of his district, does that invalidate his appointment; if so, being the only resident medical man, am I not entitled to it?—Yours truly,

H. A. H.

* * It by no means follows that, because a medical officer has ceased to reside in the district in which he holds office, his appointment as such is invalidated thereby. He may have obtained leave from his board so to do. The most that could accrue is, that he would lose his permanence of holding, and would be subject to annual, or triennial, re-election. Our correspondent cannot claim the office *de jure*. He would, before entering on such position, have to be formally appointed.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

CAVENDISH COLLEGE.—The senate of the University of Cambridge, on November 9th, passed a grace for the recognition of Cavendish College as a public hostel of the university. The institution, which has thus been received into the university as an independent factor, was originally begun in 1873 with three students, under the title of the County College. His Grace the Duke of Devonshire, who is Chancellor of the University, subsequently permitted the college to assume its present name. The college was designed to enable students somewhat younger than ordinary undergraduates, to pass through an university course and obtain an university degree to train in the art of teaching those students who desire to become schoolmasters; and to secure the greatest possible economy in cost as well as time. Its students obtain their degrees at the age of nineteen, and it is found that the annual charge of £84 is sufficient to cover all expenses of college and university life. It was desired that the college should comprise students of all denominations; and it has been found that, by adopting the same religious attitude as that of Trinity and others of the older colleges, this desire is most satisfactorily fulfilled, without in any way lessening the influence of religion, or interfering with the convictions of individuals. The educational success of the college is proved by the facts that twenty-six of its members have reached the B.A. degree (twelve of them in honours) and three the M.A. degree, and that there are now eighty-four students in residence. The low charge of £84 *per annum* was, of course, calculated to pay only with a considerable number of students. Hence, in the early years of the institution, there was an annual deficit; but in 1880 there was a surplus, after meeting all working expenses, of £230, and this year it is anticipated that the balance on revenue account will reach £1,000. The college boat has won for itself a high place upon the river, and the cricket and football teams are by no means behind those of other colleges. The effect of the step taken to-day by the university is to admit the college to an independent position within the university. The phrases employed in the Acts of Parliament and statutes of the university, rendered it advisable that the technical title of college should not formally be conferred upon this and other candidates for

admission to the university. Had that title been bestowed, certain ornamental privileges would have been conferred upon the head of Cavendish, and the college would have been subject to certain duties and liabilities, too onerous to be desirable. To avoid these difficulties the technical title of Public Hostel was adopted; but the grace of recognition is so framed, that the full title of the institution is now Cavendish College Public Hostel, and the name Cavendish will in future appear in the class lists after the names of those of the students of the college who are successful in passing the examinations of the university. The college thus passes from the charge of the Non Collegiate Board, to whose fostering care it has owed much in the past, to the enjoyment of the freedom of a full-grown child of the university. The credit of the work thus so successfully completed rests mainly with the Rev. Prebendary Brereton, its originator, and with such men as the Duke of Devonshire, Mr. Samuel Morley, M.P., the Bishop of Durham, Lord Fortescue, Mr. G. E. Foster, and Mr. E. B. Foster of Cambridge, Professor Humphry, Professor Liveing, the Rev. R. B. Somerset, and Mr. W. Aldis Wright, whose names are upon the Share Register of the County College Association, by which the college has been built.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Board of Examiners, on the 9th instant, and when eligible will be admitted to the pass examination.

Messrs. Hugh B. Mathias, William H. Pinches, Harry C. Parsons, Maurice G. ... John C. Barker, students of St. Bartholomew's Hospital; James Frederick Todd, and Frederick J. Davies, of St. Thomas's Hospital; ... and Arthur M. Whitehead, of the London Hospital; ... Arnold E. Read, of the General Hospital, St. Thomas; ... of London Hospital; ... of the Manchester School; and Percy E. Maitland, of the Madras School.

Three candidates, having failed to acquit themselves to the satisfaction of the Board of Examiners, were referred to their anatomical and physiological studies for three months.

With this meeting, the primary examinations for the present year were brought to a close.

The following gentlemen, having undergone the necessary examination for the diploma, were admitted members of the College at a meeting of the Court of Examiners on the 13th instant.

Messrs. J. Oseroff Littlewood, L.S.A., Sutton-in-Ashfield, and J. Herbert Lister, ... Baker, ... A. Vinton, ... Fur- ... of ... Ed., ... and ... St. ... of the ... and H.

Two gentlemen passed in surgery, and when qualified in medicine will be admitted members of the College; and ten candidates, having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their studies, two for three months, seven for six months, and one for nine months.

The following gentlemen passed on the 14th instant.

Messrs. ... and J. Percival Myles, ...

Three candidates were referred in surgery, and when qualified in medicine will be admitted members of the College; and ten candidates were referred, viz. ... for three months, and four for six months.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 9th, 1882.

Aslanian, Bedros, 37, Dixon Street, Lower Marsh.
Holdsworth, William, Freeman Street, Grimsby.
Jacob, Arthur Howard, Bernard Street, Russell Square.
Llewellyn, James Davies, Glyn-neath, Glamorganshire.
Mosse, Herbert Henry, Sutton, Surrey.
Peskett, Arthur W. Chalmers, Burgoyne House, Southsea.
Robinson, William, 110, Great College Street, N.W.
Sturges, Frank, Beckenham, Kent.
Wheatly, Arthur W., Brilles, W.
Young, Wm. H. Frome, Pastonplace, Brighton.

The following gentlemen also on the same day passed their Primary Professional Examination.

Gilkes, Norton Gilbert, London Hospital.
Stevenson, William Dymes, Middlesex Hospital.

MEDICAL VACANCIES.

The following vacancies are announced:—

AYRSHIRE DISTRICT ASYLUM, near Ayr, N.B.—Medical Superintendent. Salary, £80 per annum. Applications by Mr. C. G. Shaw, Clerk to the Board, County Buildings, Ayr, by November 22nd.

BRADFORD FEVER HOSPITAL, Bradford, N.—Medical Superintendent. Salary, £150 per annum. Applications by November 22nd.

CALLAN UNION, Balcanal, N.—Medical Officer. Salary, £100 per annum, and £20 as Medical Officer of Health. Applications by November 22nd.

CANE HILL ASYLUM, Surrey.—Medical Superintendent. Salary, £700 per annum. Applications by November 22nd.

CHELSEA.—Medical Officer and Vaccinator for the District of Kensal Green. Salary, £50 per annum. Applications by November 22nd.

CHELSEA WORKHOUSE AND DISTRICT.—Medical Officer. Salary, £100 per annum. Applications by November 22nd.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Resident Medical Officer. Salary, £100 per annum. Applications by November 13th.

CORK SOUTH CHARITABLE INFIRMARY AND COUNTY HOSPITAL.—Physician and Apothecary. Salary, £100 per annum. Applications by October 22nd.

DENBIGHSHIRE GENERAL INFIRMARY, Denbigh.—Honorary Dental Surgeon. Applications by December.

DEWSBURY AND DISTRICT INFIRMARY.—House-Surgeon. Salary, £80 per annum. Applications by November 20th.

DUNDALE UNION, Carlisleford Dispensary.—Medical Officer. Salary, £100 per annum, and £25 as Medical Officer of Health. Applications by November 25th.

ENNISCORTHY UNION, Killan Dispensary.—Medical Officer. Salary, £100 per annum, and £15 as Medical Officer of Health.

GALWAY UNION, Arran Island Dispensary.—Medical Officer. Salary, £100 per annum, and £15 as Medical Officer of Health. Applications by December.

HALSTEAD LOCAL BOARD OF HEALTH.—Medical Officer. Salary, £30 per annum. Applications by December 2nd.

HOSPITAL FOR WOMEN, Soho Square, W.—Assistant-Physician. Applications by November 22nd.

KIDDERMINSTER FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Salary, £240 per annum. Applications by November 22nd.

KINGSTON UNION.—Medical Officer. Salary, £30 per annum. Applications by December 2nd.

LONDON GENERAL DISPENSARY.—Resident Medical Officer. Salary, £100 per annum. Applications by November 22nd.

PARTHOLLOUGH DISPENSARY.—Medical Officer and Dispenser for the Infirmary, 11, St. James's Street, Kennington. Salary, £125 per annum. Applications by November 22nd.

POPLAR HOSPITAL FOR ACCIDENTS, Blackwall, E.—House-Surgeon. Salary, £100 per annum. Applications by November 22nd.

ROYAL DISPENSARY.—Medical Officer. Salary, £100 per annum. Applications by November 22nd.

ST. GEORGES AND ST. JAMES'S DISPENSARY.—Physician, and Physician to the Committee of Management, No. 60, King Street, Golden Square, W., by November 20th.

WEST LONDON HOSPITAL, Hammersmith, W.—Surgeon-Dentist. Applications by November 22nd.

WESTMINSTER DISPENSARY, S.W.—Junior House-Physician. Applications by November 22nd.

WESTMINSTER DISPENSARY, S.W.—Resident Obstetrician. Applications by November 22nd.

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MEDICAL APPOINTMENTS.

ALPIN, W., M.R.C.S.Eng., L.R.C.P.Lond., appointed Senior House-Surgeon to the Metropolitan Free Hospital, *vice* A. Cohen, M.D., B.Ch., resigned.

ANNES, F. R., M.R.C.S.Eng., appointed Junior House-Surgeon to the Metropolitan Free Hospital, *vice* W. Alpin, M.R.C.S.Eng., L.R.C.P.Lond.

BARLOW, T. C., L.R.C.P., appointed Medical Officer for the Third District of the Hackney Union, *vice* J. B. White, M.D., resigned.

BARR, John, M.B., appointed Medical Officer of Health to the Rishton Local Board, Lancashire.

BRAITHWAITE, R. W., M.R.C.S., appointed Junior House-Surgeon to the Macclesfield General Infirmary, *vice* G. L. Galpin, resigned.

CARDEN, J. C., M.R.C.S., appointed Medical Officer and Public Vaccinator to the Kendal Union, *vice* O. N. Royle, M.D., resigned.

CHAFFEY, W. C., L.R.C.P., appointed Resident Medical Officer to the Hospital for Sick Children, Manchester.

CHRISTIE, J., M.D., appointed Dispensary Physician to the Western Infirmary of Glasgow, *vice* J. Coats, M.D.

CLARKE, V. C., M.D., appointed Governor and Medical Superintendent to the Female Prison, Woking.

COATS, J., M.D., appointed Assistant Dispensary Physician to the Western Infirmary of Glasgow.

COGAN, F. P., L.R.C.S.I., appointed Medical Officer for Bagenalstown Fever Hospital to the Carlow Union, *vice* C. D. Allen, M.B., resigned.

DUNBAR, J. J. M., M.D., appointed Medical Officer to the Clapham General Dispensary, *vice* E. Taylor, M.R.C.S.

FIRTH, E., M.B., appointed Medical Officer to the Norwich Dispensary, *vice* C. Firth, M.B., resigned.

FRANKISH, W. J., M.R.C.S., appointed Surgeon to the Chelsea, Brompton, and Belgrave Dispensary, *vice* J. M. W. Bourke, M.B., resigned.

GOULD, A. P., F.R.C.S., appointed Assistant-Surgeon to the Middlesex Hospital, *vice* R. W. Lyell, M.D., deceased.

HORWOOD, E. O., M.B., appointed Resident Medical Officer to the London Fever Hospital.

HUDSON, E., M.R.C.S., appointed Junior Assistant House-Surgeon to the Public Hospital and Dispensary, Sheffield, *vice* H. B. Fletcher, L.S.A., resigned.

JACKSON, J. H., M.B., appointed Junior House-Surgeon to the Royal Albert Edward Infirmary and Dispensary, *vice* A. W. Stone, L.R.C.P., resigned.

JONES, A. H., M.D., appointed Physician to the Northampton General Infirmary.

LINDSAY, R. W., L.R.C.P., appointed House-Surgeon to the Burton-on-Trent Infirmary, *vice* G. N. Stathers, M.R.C.S., resigned.

MILLES, W. J., L.R.C.P., appointed Clinical Assistant to the Royal London Ophthalmic Hospital.

MILLIGAN, W., M.R.C.S., appointed Medical Officer and Public Vaccinator for No. 9 District to the Croydon Union.

MINNIEGE, J., M.D., appointed Medical Officer for Ardara Dispensary District to the Glenties Union.

NEWMAN, D., M.B., appointed Dispensary Surgeon to the Western Infirmary of Glasgow.

O'CALLAGHAN, R. T. A., L.R.C.S.I., appointed Medical Officer for Bagenalstown Dispensary District to the Carlow Union, *vice* C. D. Allen, M.D., resigned.

PEARCE, W. H., M.R.C.S., appointed Assistant Medical Officer to the Poplar and Stepney Sick Asylum District, *vice* P. Thornton, M.R.C.S., resigned.

PUNTAN, H., M.P.S., appointed Dispenser to the Seamen's Hospital, Greenwich.

RICH, A. Creswell, M.B.Lond., appointed Pathologist to the Liverpool Royal Infirmary, *vice* F. T. Paul, L.R.C.P., resigned.

RUSSELL, A. W., M.B., appointed Senior House-Surgeon to the Macclesfield General Infirmary.

SMITH, W. B., F.R.C.S.E., appointed Deputy Medical Superintendent to the Metropolitan Asylum, Varra Bend, Melbourne.

STURGES, F., L.S.A., appointed Assistant to the House-Surgeon to the Staffordshire General Infirmary.

WATKIN, W. H. S., L.K.Q.C.P.I., appointed Resident Medical Officer to the Glasgow Hospital for Sick Children.

WILSON, H. M., M.B., appointed House-Surgeon to Perth Infirmary, *vice* J. Ferguson, M.B., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

ROSSITER.—On the 10th instant, at Cairo Lodge, Weston-super-Mare, the wife of George F. Rossiter, M.B.Lond., of a son.

MARRIAGES.

BAILEY—HIRST.—On the 15th instant, at the Parish Church, Saddleworth, Yorks, by the Rev. Canon Brown, M.A., Rural Dean, James Johnson Bailey, M.D., F.R.C.S.E., of Marple, Cheshire, to Lucy, younger daughter of the late Mr. Arthur Hirst, of Fulford, Yorks.

BENTHAM—SHARP.—On 2nd November, at St. John's Cathedral, Hong Kong, by the Rev. W. Jennings, M.A., Colonial Chaplain, Robert Bentham, Surgeon, Royal Navy, son of Robert Bentham, M.D., of London, to Ellen Lydia, daughter of the late Frederick Sharp of Norwich, and niece of Granville Sharp, of Hong Kong, China. (By telegram.)

WARD—TUKER.—On the 13th instant, at St. Mary's Cathedral, Edinburgh, by the Right Reverend the Lord Bishop of Peterborough, D.D., D.C.L., assisted by the Reverend W. M. Meredith, Alfred Ward, M.B., of Anston, in the county of York, youngest son of William Sykes Ward, Denison Hall, Leeds, to Emily Elizabeth, only daughter of John Barry Tuke, M.D., F.R.C.P.E., Charlotte Square, Edinburgh.

DEATH.

LATHAM, William, F.R.C.S.Ireland, at Ballymoney, on the 7th instant.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopaedic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY...St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopaedic, 10 A.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.

FRIDAY.....King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu, F., 1.30; Skin, M, Th.; Dental, M, W, F, 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu, 1.30; Obstetric, M, W, F., 1.30; Eye, M, W., 1.30; Tu, F., 12.30; Ear, Tu, F., 12.30; Skin, Tu, F., 12.30; Dental, Tu, Th, F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu, Th, S., 2; o.p., M, W, F., 12.30; Eye, M, Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th., 2; Throat, Th., 3; Dental, Tu, F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M, Th., 1.30; o.p., W, S., 1.30; Eye, W, S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu, F., 1.30; o.p., W, S., 1.30; Eye, W, S., 8.30; Ear and Throat, Tu, 9; Skin, F., 4; Dental, daily, 11.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu, Th, S., 2; o.p., W, S., 9; Eye, Tu, W, Th, S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopaedic, F., 12.30; Dental, Tu, F., 9.

ST. GEORGE'S.—Medical and Surgical, M, Tu, F, S., 1; Obstetric, Tu, S., 1; o.p., Th., 2; Eye, W, S., 2; Ear, Tu, 2; Skin, Th., 1; Throat, M., 2; Orthopaedic, W., 2; Dental, Tu, S., 9; Th, 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu, F., 9.30; o.p., Tu, F., 2; Eye, Tu, F., 9.15; Ear, M, Th., 2; Skin, Tu, Th., 1.30; Throat, M, Th., 1.45; Dental, W, S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M, Th., 2; o.p., W, F., 12.30; Eye, M, Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu, 12.30; Skin, Th., 12.30; Throat, Tu, 12.30; Children, S., 12.30; Dental, Tu, F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M, Tu, Th, F., 1.30; Eye, M, Tu, Th, F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu, F., 3; Eye, M, Th., 2.30; Ear, Tu, F., 9; Skin, Th., 1; Dental, W, S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Dr. Howard will show a man with Intrathoracic Aneurysm. Dr. Frederick Hicks will show Instruments for the Treatment of Intrathoracic Abscess. Dr. Thorowgood will make some remarks on the Treatment of Intrapleural Effusions.

TUESDAY.—Pathological Society of London, 8.30 P.M. Specimens: Dr. Bedford Fenwick: Fatty Degeneration of Walls of Heart. Dr. Hoggan: Microscopic Specimens of a New Disease of the Lymphatics. Dr. G. C. Henderson: 1. Embolus from Left Auricle of Heart; 2. Syphilitic Gumma in Wall of Left Ventricle. Mr. Roger Williams: 1. Testis in Perineum with Congenital Hernia; 2. Unusual Form of Growth in the Bladder. Mr. J. B. Sutton: Rickets in a Baboon.

WEDNESDAY.—Hunterian Society, 8 P.M. Mr. Jonathan Hutchinson: Certain Diseases allied to Erysipelas.

FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. Cavafy: On Two Cases of Symmetrical Congestive Mottling of the Skin (Patients will be shown). Mr. J. E. Adams: On a Case of Lumbar Nephrectomy for Carcinoma. Mr. R. J. Godlee: On Two Cases of Intussusception in Infants, treated by Abdominal Section. Dr. Dyce Duckworth: On Two Cases of Subcutaneous Rheumatismal Nodes (one of the cases will be exhibited).—Quekett Microscopical Club, 8 P.M. Mr. B. W. Priest: On the Statoblasts of the Fresh-Water Sponges.

INFANTICIDE.

SIR.—With reference to the case published under the above heading in your issue of November 4th, may I be allowed to say I believe it is quite possible that death may have occurred from strangulation by the umbilical cord after the birth of the child, without blame attaching to the mother. Suppose the child born suddenly, the mother sitting on a chair or on the edge of a bed, half paralysed with pain, fright, and shame at her situation; the child cries vigorously, she rouses from her stupor, and, by a sudden involuntary movement, dislodges the infant from the chair or bed; it is suspended, and the cord tightening around its neck, yet not allowing it to reach the ground, it dies, by strangulation, before the girl has time to realise the situation. This might never have occurred to me as a possible solution of the case but for an accidental occurrence on November 7th, which might have been similar. A young married woman, on her way to the City of London Lying-in Hospital in a cab, was suddenly delivered as she arrived at the door. As I reached the cab, her friend jumped out, and the mother exclaimed "It's tumbling down; something is dragging me." Springing into the cab, and propping up the child with my knee to prevent the "dragging", I rapidly tied and divided the cord, which was around the neck. But, sir, suppose it had been, and no help at hand; I humbly submit that that child might have been strangled after birth without any fault attaching to the mother. May we not give the unfortunate prisoner the benefit of the doubt?

With an apology for trespassing on your valuable space, I am, sir, yours obediently,
E. H. EVANS.

City of London Lying-in Hospital, City Road, E.C., November 9th, 1882.

* Our correspondent has failed to grasp the significance of the case at Martock, referred to in his letter; and we fail to see the bearing of the case adduced upon the above case of infanticide. According to the evidence, the child had been alive for five or ten minutes, and the lungs were fully inflated—a condition incompatible with the supposition of strangulation by the cord during birth. Since we gave a notice of the case, the woman has been convicted of concealment of birth, and she was liberated on her recognisances to come up for judgment if called upon.

In reply to an inquiry as to the course to be pursued in reference to the disclosures at a recent inquest at Tudhoe Grange, there can be no doubt that the writer of the letter to a local newspaper, and the person who gave the certificate (both of which are sent to us), have rendered themselves liable to prosecution, the one under the Apothecaries' Act, and the other under the Medical Act of 1858. The local secretary of the Medical Defence Association at Newcastle-on-Tyne should be communicated with on the subject. In reference to the illegal part taken by a member of the Association in the matter, we shall be glad to hear what that gentleman, who is, we observe, a member of the North of England Branch, has to say in reply. Doubtless, the Council of the Branch, when its attention is drawn to the matter, will take some action.

STONE TESTIMONIAL.

We have already stated in our pages that, on July 27th, there was a meeting of Mr. Stone's friends at Mr. Critchett's house, when Mr. Luther Holden proposed the following resolution, which was seconded by Mr. C. Macnamara, and carried unanimously: "That, in consideration of the genial manner in which Mr. Thomas Madden Stone has discharged his duties during the past fifty years' service at the Royal College of Surgeons of England, his numerous friends in all parts of the globe feel that the occasion of his resignation is an opportunity which they should seize to present him with a testimonial, expressive of their warm friendship and deep respect."

Sir Erasmus Wilson has become the Honorary Treasurer, and Mr. Holden Honorary Secretary to the Testimonial Fund. The Committee numbers, at present, 114 members, including the names of Sir James Paget, and other leading members of the profession. We heartily wish success to the testimonial, and remind our readers that all communications should be addressed to James Shuter, Esq., M.A., F.R.C.S., 58, New Broad Street, E.C. Cheques should be crossed, and made payable to Sir Erasmus Wilson, LL.D., F.R.S., Treasurer.

MIDWIFERY FEES.

SIR.—I last year attended, in her first confinement, the wife of the clergyman of a village three miles from my residence here. For that attendance I charged a fee of three guineas, and five shillings each for the after-visits. I, last July, received a letter from the clergyman, informing me that his wife expected to be again confined towards the end of the year; but having talked the matter over with his own and his wife's relatives, he had come to the conclusion that my charges were too high, and after-visits ought to be included in the fee, also pleading smallness of income as a reason for objecting to my charges. To this I replied, saying the fee I had charged was the usual one, and except in club cases I always charged for after-visits; but that, as he had pleaded impecuniosity, I was willing to attend his wife for three guineas, to include attendance at the time and four visits afterwards. He had not the courtesy to acknowledge the receipt of this letter, and I have just heard that another medical man, living over five miles from him, is now attending his wife, without having in any way communicated with me prior to accepting the lady as a patient. The medical man in question has no other patient in the village.

I shall feel greatly obliged if you will give me your opinion upon this case. I do not think my charges were excessive; as a fact, they are less than my usual ones in similar cases.—Faithfully yours,
A MEMBER.

* "A Member" will do well to refer to the *Medico-Chirurgical Tariffs*, published by W. Wardle, Shrewsbury, for the late Shropshire Ethical Branch, in which, under the heading of "Midwifery," page 8, he will find it stated that "The obstetric tariff admits of considerable latitude in regard to the fee, consequent upon the oft prolonged and harassing attendance in cases of difficult labour, and the varying pecuniary position of the several classes of society. The fee, moreover, from long established custom, is generally understood to include a visit or two during the week after delivery, if within the prescribed distance of an ordinary visit." Under the circumstances pleaded by the clergyman of "smallness of income," we consider that a fee of £3 3s.—being at the rate of £2 2s. for the journey and accouchement, and 5s. each for the four subsequent or "after-visits," proffered in the note of July—a moderate and very reasonable charge. The clergyman's neglect to acknowledge the note speaks for itself. In regard to the action of the attending accoucheur in accepting the duty, we cannot, without a knowledge of all the circumstances, justly express an opinion.

INQUIRER.—According to the regulations referred to in our correspondent's query, the taxing master was right in allowing him £4 4s. and first class railway fare for attending to give evidence at the Leicester Assizes, but he was wrong in disallowing 2s. 6d. for each night the former stayed in the town during the time he was required to give his testimony. A medical man can legally decline to give evidence at the request of the police, unless properly summoned to do so.

DR. D. MITCHELL.—Since Dr. Johnson's time, the law has been altogether altered, and all that is stated in his opinion is inapplicable to existing circumstances.

COTTAGE HOSPITALS.

SIR.—Dr. Whittaker is a little indefinite in his queries; and, as plans are doubtless rather beyond your province as illustrations, I have sent some suggestions of arrangement direct to him. What else I have to say in reply may possibly interest others also; I therefore send it to you. A cottage hospital may vary from, say, three to twenty-five beds, and the ward from two to ten beds, small rooms of one bed being provided for the isolation of doubtful cases. The leading idea with regard to the size of such an hospital is that it shall not serve too extended a district. The district served, therefore, should be about the same, whether the hospital is large or small, the size varying with the density of the population; one of, say, eight beds in a rural district sufficing for an area which, with a manufacturing or mining population, would require the maximum size of twenty-five; beyond this, they can scarcely be termed cottage hospitals. A rough rule for size may be taken as one bed per 1,000 of population in the former case, and from three to five beds per 1,000 in the latter.

An estimate of cost based upon vague data cannot but be misleading. Position, material, and a dozen other causes render the cost of a building but little criterion for the cost of a similar one in another place. As a rough general guide, sixpence per cubic foot may be taken, but so much depends upon extraneous circumstances. A ward cannot well be taken as a standard, as the necessary adjuncts would vary in proportion to its size and arrangement.

With regard to comparative cost of material, the one in general use in the locality may fairly be taken as the cheaper. Concrete is to a degree universal, as its constituents may vary to suit the place. In granite districts, for instance, the chippings of the quarry answer admirably; in a brick district, clay burnt into rough ballast does equally well; in others, gravel is ready to hand; while even beach shingle can be used if properly treated. Concrete may be taken at about three-fourths the cost of brick or stone in their localities if used in a simple building, but increasing with any intricacies of plan.

If Dr. Whittaker will furnish more precise data of the want he wishes to meet, I shall be pleased to give what information is in my power, either direct to him or through your columns.—Your obedient servant,
ROBERT E. POWNALL.

52, Regent Street, W., November 7th, 1882.

MR. JOHN JACKSON (Usworth).—Under the circumstances, our correspondent would do well to communicate with Mr. R. S. Carpenter, 130, Stockwell Road.

INQUIRER must, we apprehend, be entirely mistaken. We have before us the evidence that the report was published, not only with Captain Hanham's consent, but by his desire.

L. A. W.—The case has already been commented on by us; and, as our correspondent desires his letter to be considered as private, we do not see that the matter can with advantage be further noticed at present.

BRANCH.—The question is a legal one, and depends upon the nature of the agreement.

A MEDICAL BENEFIT SOCIETY.

SIR.—The formation of a medical benefit society is becoming every day more imperative; the present condition of affairs is a disgrace to the profession. As matters now stand, an illness of six or eight weeks' duration is often certain ruin to a medical man in small practice; whereas, if a proper organisation existed, an annual subscription of at most three guineas would ensure an allowance sufficient to defray, not only the expenses of sickness, but also those connected with the employment of a substitute. The organisation of such a society ought not to be a difficult task; there is no profession whose members have so many opportunities of meeting or communicating with one another—witness the almost countless associations, societies, etc. County meetings might be held to collect preliminary subscriptions and send delegates to a central provisional committee, which would draw up rough drafts of regulations, etc., and submit them to the members for approval. The movement once fairly started, there would be no difficulty about details, which might be copied with advantage from similar societies among the working-men.

A word or two on Dr. Boys' letter. Surely, to suppose that only twenty men out of one thousand disabled for six weeks annually is much too low an estimate, when we take into account, on the one hand, the short illnesses of a week or two from which few are exempt for an entire year, and, on the other, chronic ailments, such as paralysis, general debility in the aged, etc. Again, an allowance of £10 a week seems utterly extravagant; the Odd Fellows Society, whose members pay 24s. a year, only allow 10s. weekly, and that for a limited period. I am afraid, too, that an annual subscription of two guineas would be too small if adequate provision be made for widows' and orphans' and burial funds.

Hoping the matter will soon assume a prominent place in your columns, I am, sir, your obedient servant,
M. T. YARR, L.R.C.S.I., L.K.Q.C.P.I., L.M.
Langley Park, Durham, November 13th, 1882.

AN UNFORTUNATE.—Perhaps the following anecdote, recorded in a provincial temporary, will answer your query. A medical student at Bowdoin College once asked the late Professor Parker Cleveland if there were not some more recent works on Anatomy than those in the College Library. "Young man," said the Professor, "there have been very few new bones added to the human body during the last ten years."

MR. JOHNSON; and "A PROVINCIAL TEACHER."—The report is perfectly correct; and it is now one of the "Standing Rules", and comes at once into operation, that, if a candidate for the diploma of membership of the London College of Surgeons "exhibits such extreme ignorance in the examination", instead of being rejected for six months, as heretofore, it may be for nine months, or even a year, requiring the candidate at the same time to produce, when again "going up", a certificate of having attended the surgical practice and clinical lectures on surgery at a recognised hospital for those respective periods.

MR. WILLIAMS.—You will find the desired information in our advertising columns last week. In November 1881, there were ninety-one candidates for the primary examination for the diploma of membership of the College, of which number sixty passed, twenty-eight were referred for three months, and three for six months.

CLINICAL LECTURE

ON
A CASE OF HEMIPLEGIA OF THE RIGHT SIDE.
ANÆSTHESIA OF THE LEFT, AND UNILATERAL
SWEATING OF THAT SIDE OF THE FACE.*Delivered in the Western Infirmary of Glasgow.*

By T. MCCALL ANDERSON, M.D.,

Professor of Clinical Medicine in the University of Glasgow.

GENTLEMEN,—The case of James K. (from bed 14, of ward 11), who lies before you, is one of great interest, whether regard be had to the unusual combination of symptoms which he presents, or to the question of diagnosis and treatment. He is forty-nine years of age, and was admitted on January 11th, 1882, suffering from paralysis and from pains in the joints.

He seems to have enjoyed good health until December 1867, when he had a severe attack of rheumatic fever, which lasted for seven weeks, but from which he made a good recovery.

He remained well for about eight years, and then (1875) he began to suffer from giddiness, with a sense of fulness in the neck, which was accompanied by "twitching and a clicking sound" at the nape—especially on stooping, raising heavy weights, or otherwise exerting himself. This continued until the middle of the following year (1876), when one evening, when returning from work, and ascending a stair, he suddenly experienced a "feeling of weakness"; and, supposing that it would soon pass off, he sat down, but, upon attempting to rise again, he was unable to do so. He thinks he was unconscious for a little, or nearly so; he was carried into his house, and then it was found that he had paralysis of both arms and legs, more particularly of the right arm and leg. The right side of the face, too, was paralysed, though not completely. For a very short time after this, he sometimes saw things double. He soon (in some weeks) recovered the loss of power of the left arm and leg, while the paralysis on the right side of the body became gradually less and less pronounced, but never disappeared.

In the winter of 1880, he had a suppurative inflammation, with ulceration of the skin on the inner side of the left knee, the scars of which still remain.

About the beginning of last December (1881), after a wetting, and while straining at stool, he experienced a chilly feeling all over the body, which was immediately followed by an increase of the paralysis of the right arm and leg, and by a recurrence of the rheumatic pains in the shoulder and knee-joints.

For a long time, and gradually supervening upon the first attack of paralysis, he has had well-marked rigidity in the right arm and leg, and, to a slight extent, in the left knee, which was slowly improving until the second attack of paralysis, since which time it has been more marked; and ever since the first attack, he has experienced some numbness and defect of sensation on the left side of the body, which also was improving slowly until the second attack, when it became more pronounced. For a considerable time, too (he cannot say how long, but three years at all events), he has had a tendency to sweating on the left side of the face, which is sometimes very marked, and accompanied by flushing and venous distension. The family history is in every way satisfactory.

On examining this patient, we find that the right side is partially paralysed; the paralysis of the face is very partial, as is shown by the fact that, although he cannot close the eye firmly when the left is kept open, he can do so quite well when they are closed simultaneously. The weakness in the arm and leg is more pronounced, as you see; and the dynamometer with the right hand only registers 35 kilogrammes, while the left indicates 140. In addition to the paralysis, it is to be remarked that there is well-marked rigidity both of the arm and of the leg; and, as you see, when we make him cross his legs and strike the patellar tendon, the leg is jerked up in an exaggerated way, while there is a total absence of the rhythmical pendulum-movement observed in health. On suddenly flexing the foot, however, or on striking the tendo Achillis, we fail to elicit the ankle-clonus. On the left side, there is slight rigidity of the knee, and also exaggeration of the patellar tendon-reflex, though to a less degree; but here is hardly any trace of paralysis left. On testing the sensation on this side, you see that it is very defective as regards touch, pain, and temperature; and that the anæsthesia diminishes from below upwards, although it is quite distinct on the face. The anæsthesia does

not involve the side of the tongue; nor is the eye, as we sometimes find, especially in hysterical cases, affected with colour-blindness.

The only other feature worthy of note is the unilateral sweating of the left side of the face. This is not constant, but is only observed when he exerts himself much, or when, as at present, he is excited; and at these times the face is a good deal congested, and the veins are prominent.

Such being the result of our examination, we have now to endeavour to make out the seat and nature of the lesion.

1. *The Seat of the Lesion.*—When we find defective power on one side of the body and defective sensation upon the other, we generally conclude that the lesion is seated in the spinal cord; but in this case it is evident that we have to deal with a cerebral affection, as the paralysis and anæsthesia affect the face as well as the extremities, and as the first symptoms noted in the report are distinctly head-symptoms. A careful consideration of the case in all its surroundings has led me to suspect that there is double cerebral lesion; that on the right side especially involving the sensory tract (thalamus opticus, peduncular tract in its ascent through the internal capsule, and the optic radiations of Gratiolet); that on the left specially implicating the motor tract (corpus striatum, etc.).

The rigidity and exaggeration of the patellar tendon-reflexes are doubtless due to secondary degeneration, starting from the seat of the lesions and descending into the lateral columns of the spinal cord: a feature which I need not dwell upon this morning, having recently discussed it fully with you; while the sweating of the left side of the face must be dependent upon a lesion of the cervical sympathetic itself, or, what is more probable, upon the lesions in the brain with which the former is connected.

2. *The Nature of the Lesion.*—Here we enter upon a point of much greater practical importance for the patient, and one with regard to which I am able to speak with greater confidence.

a. The most common cause of cerebral paralysis is, as you know, hæmorrhage—an accident which is most apt to occur in persons who are well advanced in years, and whose vessels are atheromatous and brittle. We cannot, of course, say with certainty that the cerebral vessels are in such a condition; but we have good ground for suspecting it if the superficial vessels which we can examine be diseased. They are, then, tortuous, pulsate visibly, and feel like firm, sometimes beaded cords; but, as you see, our patient's blood-vessels are in a perfectly healthy state, and he has not arrived at that time of life when cerebral hæmorrhage is most common. It is quite true that it is a common lesion at his age (49), as the indirect result of chronic disease of the kidneys; but in his case there is not the slightest suspicion of kidney-disease; and I think, therefore, that we may reasonably exclude cerebral hæmorrhage as the cause of his symptoms, especially if we can find something to account for them more satisfactorily.

b. The attack of rheumatic fever many years ago, of which we have an account in the history, naturally leads us to suspect that embolism of the brain might have occurred, the result of rheumatic endocarditis; but an examination of the heart shows that it is perfectly healthy, and there is no evidence of embolism of the spleen, kidneys, or other organs; so that the embolic theory must be abandoned.

c. A careful examination of the patient has led to the discovery of certain very suspicious symptoms. As you see, the inguinal glands, as well as one of those on the inner side of the upper arm just above the elbow, are enlarged; the skin has a dirty, earthy, muddy tint; a good many scars are very visible on various parts of the trunk, and more particularly on the inner side of the left knee, which are more or less rounded, and in the latter situation their edges are dark in tint; and recently he has complained of pains in the joints, although it must be admitted that these have not been nocturnal in character. On inquiring further into the history of the case, I am informed that four-and-twenty years ago he had a single hard sore on the penis close to the frænum, the cicatrix of which, you observe, is still quite distinct, and which, he tells us, was followed by well-marked constitutional symptoms.

These facts give rise to a strong suspicion that his present symptoms

* This patient was shown at the Glasgow Pathological and Clinical Society, February 14th, 1882; and, in the discussion which followed, Dr. Alexander Robertson said that, with regard to the nature of the disease, the doubt had been removed by the results of the treatment; but, with regard to the situation of the lesion, he thought there was reason for difference of opinion. It was always undesirable to assume the existence of two lesions, if one would account for the symptoms, and he thought it remarkable that two cerebral lesions should occur simultaneously. If we passed to the base of the brain, we might find a part where a single lesion might account for the symptoms, and he thought it not unlikely that a lesion in the pons might cause them. With regard to the sweating, the pons Varolii, too, had a good deal to do in presiding over vaso-motor action, although, from the history of pain at the nape of the neck, there might quite well be some implication of the cervical sympathetic.

have a syphilitic basis; and, if I am correct in the view that the cerebral lesion is multiple, it is a further corroboration of the syphilitic theory, as we know that syphilitic lesions of the nervous system are often multiple. At all events, we shall put him fully under the influence of mercury by rubbing a drachm of strong mercurial ointment into some soft part of the skin daily; and we shall watch the effects with much interest. But, even should the result be negative, it will by no means prove that the lesion is not primarily syphilitic; for while, by means of mercury, we can dissipate existing syphilitic manifestations, we cannot expect to influence the secondary non-syphilitic changes which are apt to ensue in the surrounding tissues.

[SEQUEL OF THE CASE.—The treatment was commenced upon January 29th, 1882, and was continued for ten days (one ounce and two drachms of mercurial ointment having been used in that time), when it was suspended, owing to the gums being slightly affected. On February 10th, three days after the mercurial treatment was stopped, an examination of the patient was made. He told us that the fulness and discomfort in the head, of which he complained, had entirely disappeared, and altogether he felt quite a different man. The unilateral sweating, though still present on excitement, was a good deal less pronounced; the anæsthesia, tested as before, was found to be entirely gone; and the paralysis was very greatly improved, as he had much more power in the leg, and could walk a great deal better; and the dynamometer with the right hand now registered seventy kilogrammes (instead of thirty-five before the treatment was commenced). And what is very remarkable—and the explanation of which is very difficult to understand—is, that there is a very considerable improvement in the rigidity, although the patellar tendon-reflexes are still exaggerated.] The treatment above mentioned was to be continued, but as the patient left the hospital the further progress of the case is unknown.

THERAPEUTIC EFFECTS OF HYOSCYAMINE.

By THOMAS BROWNE, M.D., Staff-Surgeon R.N.,
Royal Naval Hospital, Great Yarmouth.

[Communicated by the Director-General of the Medical Department of the Navy.]

HYOSCYAMINE has been in use in this hospital for more than two years, and its effects have been the subject of careful observation on the part of Dr. Duncan Hilston, the principal medical officer, and myself, during that time. At his suggestion, I have drawn up the following account of its use, dose, and mode of administration. The views set forth, therefore, the outcome of our combined observation, and of notes made from day to day in the hospital records. The report will summarise, as shortly as possible, the therapeutic experience of this alkaloid which has been gained, pointing out the dangers and difficulties met with in its use, as well as the good effects which have seemed to follow from its administration. A few typical cases will be selected to illustrate its suitability and action in certain excited conditions of insane patients.

The dose and mode of administration of such a powerful alkaloid first demanded most careful consideration. Numerous notices of the use of hyoscyamine have appeared, from time to time, in the current medical literature; but the dose given or suggested has varied in the most startling way, from one-hundredth to three-fourths of a grain, or even a grain; while important and equal results have been supposed to follow each of these extreme doses in the hands of different prescribers. Then, again, no solution of a recognised and accepted standard strength had been decided on. Every writer tried to find for himself what was most convenient.

The form of the alkaloid used here has been, invariably, Merck's crystalline hyoscyamine. In the earlier instances, it was used in a solution of one grain in two hundred, administered by the mouth, in gradually increasing doses, beginning with one-hundredth of a grain. No observable effect was produced until one-twentieth of a grain was given at a time, and no very marked effect followed such a dose. It was, therefore, determined to adopt a solution of more convenient strength, and one more in harmony with the common pharmacopœial alkaloids—namely, four grains to the ounce. The following formula for its preparation was brought into use, and has been found to meet every requirement as to strength, but lacks stability: Hyoscyamine (Merck's crystalline), four grains; glycerine, distilled water, of each half an ounce; carbolic acid, two minims; dissolve without heat. Dose, four to eight minims, given hypodermically.

It is very important to make the solution without heat, as heat renders the alkaloid nearly inert. Hyoscyamine is a most unstable alkaloid, and soon decomposes; so that the strength of any solution yet devised cannot be depended on for more than a month after its preparation. With this solution, some satisfactory results were obtained;

but, before giving one or two instances of this, it may be well to place on record the dangerous experience gained in cases where large doses were given by the mouth. The effects of the hyoscyamine, when so administered, varied much, both as to the time before it appeared, and also as to its intensity and duration. This uncertainty of action was found to depend on the state of the digestion. If the alkaloid were given shortly after a meal, the effect was slight and transitory. Not recognising this, at first, the dose had been gradually increased till half-a-grain was reached. As patients seemed to bear large doses well, an attempt was now made to prepare a special solution, for hypodermic use, of equal strength with the pharmacopœial hypodermic solution of morphia—namely, five grains to the drachm. A solution of this strength could only be made by the aid of heat; and, as this rendered the alkaloid nearly inert, the attempt was not repeated, especially as further experience showed such a solution to be unnecessary.

CASE I.—An useful lesson was taught by the case of William S., aged 36, a bandsman, who had been an inmate of the asylum for the last eight years, suffering from chronic mania, with occasional outbursts of violence. On March 9th, 1881, he was very violent and destructive, and refused his breakfast. At 8 A.M., he was given one-fourth of a grain of hyoscyamine by the mouth. By midday, his pupils were widely dilated, and he had become quiet. This quiet gradually deepened, though he did not sleep; and by 6 P.M. he was almost powerless, unable to stand without assistance, hardly able to move his hands or to speak. His breathing was unaffected; but his pulse had fallen from its usual frequency of 75 to 50, and was, in addition, very weak; while the temperature in the axilla was only 96.2°, his ordinary range being 97.6° to 98.4°. His extremities were cold and clammy. His throat, so far as could be made out, was moist; at least, he could swallow with ease. This state of affairs was serious, and the cause of grave anxiety for a time. He was placed in bed, and hot-water bags applied to his feet, and an ounce of brandy with hot water and sugar was given. The extreme effects of the hyoscyamine gradually passed off, and by 10 P.M. his pulse and temperature had again become natural. He slept all night, and awoke in his usual state, except that his pupils remained dilated for forty-eight hours, and during that time he was disinclined for exertion. He has not been violent since, though his chronic mania continues.

In this case, the dose of hyoscyamine was, beyond doubt, too powerful, and was followed by dangerous symptoms of collapse, from which, fortunately, the patient recovered; but the experience gained acted as a grave warning, and called attention sharply to the risk incurred in using such large doses of this powerful alkaloid. As larger doses had been given with impunity, it was assumed that the unusually energetic action of the drug in this case depended on the state of the stomach, as regards digestion, when the medicine entered it. The stomach was empty, as the man had refused his breakfast. This experience, and another similar one, where the symptoms were nearly as alarming, decided the point in favour of smaller doses, given by the hypodermic method.

CASE II serves to illustrate some points in the use of this drug, and may be taken as a type of patient in whom the gain was marked and immediate. C. C., aged 40, stoker, was admitted on November 4th, 1881, for melancholia. From gloomy and silent depression, he gradually passed into a state of noisy and destructive mania, shouting incoherently, throwing himself off his bed, and dashing himself about, till he was much bruised, in spite of constant care on the part of the attendants. His restlessness was incessant, and he passed several days in succession without sleep. The use of hyoscyamine was begun in this case by the hypodermic injection of four minims (one-thirtieth of a grain) of the solution mentioned above. This was continued twice daily for several days, without any marked effect except that of moderately dilating the pupils. The drug was then omitted for twenty-four hours, at the end of which time his pupils had contracted to their usual size. As such a dose was not sufficient to control or moderate the restless violence of this patient, it was increased to eight minims (one-fifteenth of a grain), given hypodermically at 6 P.M. In fifteen minutes, his pupils began to dilate, and, becoming quieter, he lay down in bed. Just before this, he had been jumping about the ward, resenting and resisting all persuasion to remain quiet or lie down. At 10 P.M. he was sound asleep, his pupils widely dilated. He could, however, be easily roused, but went to sleep again on being let alone, and slept for seven hours, and when he awoke his pupils had begun to contract again. He remained during that day quieter and more easily managed than he had been for a long time. The effect of the drug passed off in about twenty-four hours. We had now got the measure of this patient's power of resistance to the drug, and were thus able to regulate the dose in accordance with his seeming requirements. Often, from a restless, noisy, and destructive condition, he passed, while under

the influence of the alkaloid, to a quiet and tractable state, easily managed by day, and obtaining several hours' sleep by night. Indeed, [the soothing influence of the drug sometimes lasted for days; but at other times the nervous commotion seemed to get the better of the drug in about twelve hours, in which case an injection of eight minims (one-fifteenth of a grain) was given, night and morning, with the effect of procuring quiet and comfort both to himself and those about him. His excitement came on in periods, and during their continuance quiet and rest were secured by the use of hyoscyamine, without apparent injury to the patient. The drug was omitted whenever the excitement was only moderate; sometimes he would go for days without it, and the dose was occasionally reduced to four minims, when that dose seemed sufficient to mitigate his violence. In this case, the effect of the alkaloid could be depended on and foretold almost with precision, if the drug were given by the skin; while, if administered by the mouth, there was an uncertainty both as to period of onset, duration, and degree of effect. It had, however, no curative power beyond the calming and soothing influence, which no doubt exerted a conservative effect on the patient's strength. As the excitement passed off, calmed and soothed by the drug, sleep seemed naturally to follow; he was disinclined for further effort, and, as in a child tired out with its own boisterous play, mind and body sank to rest.

CASE III.—C. S., aged 48, pensioner, suffering from general paralysis of the insane, was in that troublesome condition of unceasing motor activity often seen in these distressing cases, where they cannot keep still. He was most difficult to manage, full of delusions, yelling to have his head cut off, attacking or making darts at the other patients, pushing about and upsetting the furniture, tearing his clothes to shreds, jumping up the walls to reach the pictures, destroying everything on which he could lay hands, feet, or teeth; a perfect demon of destruction and unrest. Yet, on standing beside him, gently and firmly pressing him into a seat and remonstrating with him on his conduct, he would be recalled to his saner self for a moment, and, looking up, would seem to recognise for an instant the realities around him, and bursting into tears, describe only too well his own helpless condition in the piteous cry, "I cannot, cannot help it." In a second, he would be off again, and so from day to day. He was calmed and controlled by hyoscyamine; and it is noted that, in twenty minutes after the injection of eight minims (one-fifteenth of a grain), from the state above described, his pupils had become dilated, and he allowed himself to be dressed and remained quiet, not asleep, able to take his own food, and, on being placed on the closet-chair, passed urine. It will thus be seen that he was not rendered helpless by the drug, since he was able to feed himself and passed urine on invitation to do so. The effect of the hyoscyamine on the pupils had nearly passed off in twenty-four hours, but he remained quieter and more easily manageable for two days. So far as could be made out, no dryness of the tongue or throat followed such a dose. Often, one-thirtieth or one-fifteenth of a grain was sufficient to calm, control, and soothe this patient when he was otherwise nearly beyond the control either of himself or others. In this case, and in some similar cases, such a dose has been repeated every day, or every second day, for a fortnight, without any observable ill effects, but with great apparent gain to the patients who were, previously to its use, being rapidly exhausted by their restlessness and unceasing exertions.

CASE IV.—J. G., aged 34, is an example of its administration in acute mania. This patient was admitted from the Royal Naval Hospital at Plymouth, on May 4th, 1882. Eight men were required to remove him from Plymouth Hospital to the railway station. On admission at Yarmouth, he talked incessantly, raved and stormed in the foulest language. He was full of delusions without system or coherence. "He was a king, a duke, etc. God directed him to fight with people, with every one." And he instantly proceeded to obey the order, attacking every one about him. He was at once given eight minims (one-fifteenth of a grain) of the hyoscyamine solution by the skin at 9 P.M., and in twenty minutes he was quiet, and, with a little pressure, undressed, went to bed, and slept soundly all night. Next morning, May 5th, he was much quieter, and was able to walk in the square with an attendant, but he again became violent, and had eight minims at 11 A.M.; after which he remained quiet till 8 P.M., walking in the square, and quietly talking of his delusions. As he now became violent again the dose of eight minims was repeated, and he fell asleep in half an hour, sleeping till 2.30 A.M., May 6th, when he started up in terror of being murdered, and attacked those about him. He was partially quieted, and reassured by the presence of the medical officer, who repeated the dose of hyoscyamine at 3 A.M.; this was followed by sleep till 7 A.M. At 11 A.M. the alkaloid was given in a like dose, as he had again become violent. He was then taken into the open air, where he gradually became quiet, and walked up and down with an attendant. He had thus thirty-two minims, or a little over a quarter of a grain of

hyoscyamine in twenty-four hours, viz., from 11 A.M. on 5th May till 11 A.M. on May 6th, with the result of calming and controlling his actions and ideas, for the latter even seemed to be moderated by the drug. He took his food well during this time, and did not appear to suffer from dryness of the throat. It was now determined to omit all medicine and try to manage him without drugs, and carefully note the result. No medicine was therefore given during the remainder of the 6th, 7th, 8th, and part of May 9th, and he was allowed to wander about the exercise-ground with every appearance of restraint removed. His violence was, however, often extreme and his language foul, abominable, and blasphemous beyond description; he only slept for a few minutes at a time, while a look of terror and haggard anxiety deepened on his face. On May 9th, at 10 P.M., a hypodermic injection of ten minims of the hyoscyamine solution was given. In half an hour he was asleep; he slept well all night, and awoke with a refreshed look he had not shown for days. As the hyoscyamine appeared to act so beneficially, it was continued from time to time, as his sleeplessness or violence required to be overcome. The dose was increased to fourteen minims on one occasion, when his violence was greater than usual. He had been dashing himself about and screaming for hours, but on this occasion the drug failed of its usual effect, for he still made feeble efforts to shout at or strike those about him though fully under the influence of the drug, as shown by his widely dilated pupils and staggering gait. On this occasion, too, his tongue and throat were dry; but whether this was caused by the hyoscyamine or by his continuous screaming, it is not possible to decide. Each probably had its share. He was still under his delusions, but in a dull, sleepy kind of way. He would start up occasionally as if irresistibly impelled by his mania, yet sinking down instantly, incapable of carrying out the intended action, or, it may be, the idea had vanished ere grasped. Hyoscyamine was finally omitted on May 18th, as he gradually became more manageable, his mania assumed a less pugnacious type, and he slept better at night.

Since hyoscyamine has been brought into use in this hospital, frequent efforts have been made to note accurately the effects of the alkaloid on the pulse and temperature. No trustworthy observations could, however, be made on patients in the state of those just related. But, from clinical observations here, some other practical lessons may be drawn.

1. The observations show the uncertainty of the action of hyoscyamine when given by the mouth, and the danger of large doses.
2. They also show the marked superiority of the hypodermic method, and the confidence with which, in some cases, its effects could be calculated on, and the dose increased or diminished in accordance with the violence of the patient.
3. In hyoscyamine, we have a drug which is often capable of controlling the violence of a furious maniac, and, it may be, checking the torrent of rushing ideas on which he is borne along, soothing without putting him to sleep, and, in these respects, differing from morphia or chloral. In noisy and destructive general paralytics, such as indicated in Case III, the quiet air of comfort and repose following a moderate dose was such a contrast with the previous condition, as to strongly impress every one with the feeling that, by the introduction of hyoscyamine, another valuable aid had been secured in the care and treatment of such cases.
4. No curative action can be claimed for the drug. Even in acute mania it did nothing more than moderate or check, for a time, the violence of action, and, perhaps, render less vivid and overwhelming the terrifying whirlwind of delusion of the frantic patient.

Previously to procuring a supply of hyoscyamine, the ordinary tincture of hyoscyamus was given in large doses, sometimes as much as one ounce at a time, without much effect, except that of dilating the pupils; but it had no controlling power in cases which afterwards yielded to the more powerful alkaloid.

THE HOMOLOGUES OF THE LONG FLEXOR MUSCLES OF THE FEET.—In a paper read at the recent meeting of the British Association, Dr. Dobson dealt with the homologues of the following muscles of mammalia:—Flexor Digitorum fibularis=Flexor hallucis longus; 2. Flexor Digitorum tibialis=Flexor Digitorum longus; 3. Tibialis posticus. He explained by means of drawings how these muscles partially or totally supplanted one another in different animals. From the examination of a large number of animals, he found the flexor fibularis existing in all, and exhibiting but few modifications, while the other two were subject to much variation, or might be absent. He deduced from his dissections that the variation of the flexor tibialis had not been properly understood, its real homologues having been named tibialis posticus accessorius secundus, or internus, while it was supposed the muscle had undergone fusion with the flexor fibularis.

ON THE ABUSE OF NARCOTICS.*

By HENRY BARNES M.D., F.R.S.E.,

Physician to the Cumberland Infirmary.

THE great abuse of narcotics in all classes of society is an evil which must have forced itself upon the attention of the majority of those who see any great amount of practice; but, in spite of the strong protests which continue to be made, both in the medical and lay journals, little progress is effected in the way of obtaining more stringent legislative measures to check the growing evil. There seems to be a kind of fashion which regulates the particular kind of narcotic which has a run. I do not see so many cases of opium-eating and laudanum-drinking as I did in the earlier years of my practice, but it is within my knowledge that, in recent years, a considerable increase has taken place in the number of victims to the inordinate use of chloral, morphia, and chloroform. The Pharmacy Act of 1868 was intended to prevent the public from obtaining unlimited supplies of poisonous drugs which might be used for unlawful purposes; and the misery, ruin, and crime which track the luckless victim of the narcotic habit, make it incumbent upon us to discuss what efforts should be made to wean him from his besetting vice. According to the provisions of the Act, there are two classes into which poisons may be divided. In the first class are included all those poisons which are not to be sold unless the purchaser be known, or be introduced by some person known to the seller, and an entry be made in the poison-book, indicating: (1) date of sale; (2) name of purchaser; (3) name and quantity of article; (4) purpose for which it is wanted, attested by signature. And the packet or bottle must be labelled with (1) name of article; (2) word "poison"; (3) name and address of seller. This list includes all vegetable alkaloids, arsenic and its preparations, aconite, atropine, cantharides, cyanide of potassium, corrosive sublimate, tartar-emetic, ergot of rye, hydrocyanic acid, savin, strychnia, and vermin-killers, if containing any of the above.

Class II includes poisons which must be labelled with the name of the article, the word "poison", and the name and address of the seller. This class includes essential oil of almonds, belladonna, tincture and all vesicating preparations of cantharides, chloroform, chloral-hydrate and its preparations, preparations of corrosive sublimate, preparations of morphia, opium and its preparations, oxalic acid, red precipitate, white precipitate, nuxvomica and its preparations, and vermin-killers containing any of the above. There are special and more stringent regulations relating only to arsenic and its preparations.

Our daily experience in newspaper reading shows that these restrictions on the sale of poisons are quite inoperative in regard to the main object for which they were obtained; and they are still more useless in preventing anyone who has developed the narcotic habit from obtaining unlimited quantities of his favourite drug. All the articles in common use by such unfortunates are included in the second class: and anyone with money may obtain as much as he pleases without being known to the seller, provided only that the name of the article, the word "poison", and the address of the seller are given along with the drug. It is only about five years ago that the drug chloral-hydrate was included in this schedule; and this has been done owing to the oft-repeated protests of a former President of this Branch, the respected coroner for the city of Carlisle, Dr. Elliot, who had occasion to hold five inquests, owing to the facilities which existed for the sale of this powerful poison.

I am not aware what the necessity is for having two schedules of poisons under the Act. If certain precautions are needed for the sale of aconite, tartar emetic, and strychnia, surely similar precautions are needed when the sale of chloroform, chloral-hydrate, and morphia, is in question; and the provisions of the Act might be made more stringent with great advantage to the public.

This would act to a certain extent in a beneficial way; but it is not all that is needed. The habit of misusing narcotics is very speedily engendered, and physicians should be very watchful of the purposes to which their prescriptions may be put. It has happened to me more than once, to have my attention called to the frequency with which sleeping draughts containing chloral were being made up for a patient, long after the illness for which the original prescription was given had ended. On one occasion, when calling at the shop of a druggist, I was startled to find that a patient of mine had got a prescription made up much more frequently than was intended. The prescription consisted of equal parts of spirits of chloroform and compound tincture of cardamoms, and was ordered on February 17th. In February, two ounces of this mixture were ordered, and which the doctor had to be a test of the patient's condition. A few days later, on February 21st, between the 2nd and 17th, the patient being in bed, and my

attention was called to the matter—the quantity obtained was fifty ounces. I am disposed to urge that prescriptions containing narcotics should not be repeated more than a certain limited number of times without being revised by the physician in attendance on the case.

There is also a danger in allowing patients to have the use of hypodermic syringes, or in recommending them to purchase the same, except, perhaps, in cases of organic disease where the patient lives at an inconvenient distance. I have seen the morphia habit, or morphinism, developed in this way; and an exceedingly dangerous and troublesome vice it is to eradicate. This form of vice seems to prevail very extensively in America, and also on the Continent. In Austria, its most numerous victims are said to belong to the medical profession. Among the most prominent of its symptoms which have attracted attention, I find the following: a disinclination to exertion, loss of appetite, hyperæsthesia, general emaciation, loss of memory, suicidal tendencies, and a general moral deterioration, similar to what is seen in cases of chronic alcoholism. Lying, which is first had recourse to in order to conceal the habit, soon pervades the whole mind; and the morphinist becomes the prolific father of lies upon all subjects, even when the truth would serve as well. The remarkable rapidity with which the habit is sometimes developed is very striking, and the enormous doses of the drug which may be tolerated are also a point of interest. In a case which has recently been under my observation, these points were very well illustrated; but the preparation used was not any of the ordinary preparations of morphia, but a patent preparation known as Dr. J. Collis Browne's chlorodyne. This drug is very extensively advertised, and has a large sale. It is said to consist of morphia, hydrocyanic acid, chloroform, and probably also Indian hemp and belladonna, or its alkaloid, atropia, with some other ingredients of a less active character, used to disguise its real nature and make it palatable. Now this drug, containing these five poisons, is not even labelled as being poisonous in its nature, is sold by all druggists, and even by grocers and patent medicine vendors. From one of the latter class I recently obtained a specimen; and I find in his list, as an additional recommendation, that he sells it at lower prices than is done by his neighbours, the duly qualified pharmacists.

To show you the large quantities of it which may be obtained and tolerated, I quote the case briefly.

Miss L., aged 24, came to Carlisle on August 15th to act as a nurse to some chronic invalids who were under my care. She had been trained in a large public hospital, was well recommended, and was in reality an efficient and capable nurse. She was always fit for her work on the occasion of my visits, which were usually at intervals of a week; but it was not long before I heard of her being peculiar in her manner, of her dropping asleep at her work, or even at her food, and suspicions became aroused as to her indulging in some narcotic. On September 30th, she was asked whether she was in the habit of taking any narcotic; and she confessed that, during her brief residence in Carlisle, she had given herself up to the unlimited enjoyment of a habit which she had contracted during her training. She is of a nervous hysterical temperament, but had enjoyed fairly good health. She tells me her mother is addicted to the use of chloroform, which she uses in large quantities, and frequently gets through a large pint bottle in twenty-four hours. During her childhood, her mother often gave her soothing drugs to make her sleep at night; but she never practised the habit of regularly taking anything until, during her training, some nurse recommended her to take chlorodyne for some trifling ailment. She rapidly yielded herself to the seductive influence of the drug, and facilities for obtaining it in the hospital being good, she soon attracted attention. On being found out, she lost her situation. For seven months she had restrained herself absolutely, chiefly, I believe, for want of means or want of opportunity of gratifying her depraved appetite. But, on her coming to Carlisle, she had obtained possession of £20, and of this sum only a few shillings remained at the time of her confession to me, the greater part of it having been spent in the purchase of her favourite drug. An examination of her box showed fifty-four empty chlorodyne bottles, which had been recently purchased. There was one at 11s., which had contained 7 oz.; there were thirty which had cost 4s. 6d. each, and had contained altogether 67½ oz.; there were fifteen at 2s. 9d., which contained 15 oz.; and eight at 1s. 1½d., which represented 2 oz.; so that altogether we know that she had got through 91¼ oz. She informs me that she had had about half as many bottles more, but had thrown them away; and I am inclined to think that this is true, as I know that during this period she had spent £20, and the price of the bottles found would only amount to £10 10s. 3d. She informs me that her usual dose was a four-and-sixpenny bottle, which contains two ounces and two drachms, and that the eleven-shilling bottle only lasted little more than twenty-four hours. She had never experienced any difficulty in obtaining as

much of the drug as she required; but one druggist had recommended her laudanum, as being much cheaper, and as being likely to answer the same purpose. She had reduced herself by the habit into a very helpless condition—a state of almost absolute physical and mental prostration, and had even harboured thoughts of suicide. She had heard of some retreat for habitual drunkards, where such cases as her own had been received; and, on my recommendation, her friends decided upon placing her in one of those institutions, where she is now slowly recovering from the effects of her six weeks' dissipation.

This case seems to me to point to a fact which is new to me. We know that the system may become habituated to large doses of morphia and chloroform; but here, in addition, we have a patient taking, along with these drugs, large quantities of hydrocyanic acid. May the explanation of this not be that the latter does not occur in the free form, but has combined with the morphia in the form of cyanate of morphia? or the action may be modified by some of the other ingredients contained in this composite drug.

I have looked up the controversy which took place some years ago as to the composition of chlorodyne, and from a perusal of this I find that morphia, chloroform, and hydrocyanic acid have been detected by chemical analysis; and the presence of Indian hemp and belladonna has been inferred from the physiological symptoms occurring in those who have taken considerable doses of the drug. With regard to the presence of the last named drug, I have observed strong confirmation in the present case, as on all occasions when I saw the patient the pupils were widely dilated. Now, looking to the fact that this patent preparation certainly contains three poisonous ingredients, and probably five, four of which are included in the schedule of the Pharmacy Act; looking to the fact that its medicinal dose is stated to be from ten to thirty drops, and that very alarming symptoms have occurred from a dose of forty minims, it is surely an anomaly in the law that the sale of such a powerful poison should be quite unrestricted, and that patients should be able to obtain such enormous quantities as was obtained by the patient whose case I have just narrated. From the facilities which exist for obtaining such-like drugs, there can be little wonder that death from poison is of such common occurrence, as will be fully seen by a reference to the records of the coroner's court.

There are many other patent medicines which are known to contain similar poisons. I allude to the class of soothing syrups, cordials, carminatives, and cough-tinctures and essences so extensively advertised; and it is fully time that the Legislature should be asked to interfere for the protection of the public. I am glad to find that the Chairman of the Parliamentary Bills Committee of our Association has frequently brought this matter before the attention of his colleagues, and I trust that this Branch will be induced by what I have said to take such action as will strengthen their hands in the efforts they are about to make during the coming session of Parliament.

TRACHELORAPHY.

By EDWARD JOHN TILT, M.D.,

Past President of the Obstetrical Society of London.

IN a preceding paper, I discussed some startling assertions, that came from the other side of the Atlantic. Dr. Emmet wants us to believe that, however liable peritoneal cellular tissue is to inflammation, the womb itself is only liable to inflammation during puerperality. We are also asked to believe that what has been previously called ulceration of the os uteri was nothing but the everted edge of a more or less lacerated cervical mouth, and that the way to cure it was to divide the cervix up to the os internum, and then to stitch it up. We are asked by some American surgeons to perform the same operation, even if the rent have been long and well healed, for uterine cicatricial tissue is reported to be the seed-plot of epithelioma. I congratulate Dr. Emmet on not having seen acute inflammation of the womb and acute internal metritis in young unmarried women, and I stated his theory of the common run of uterine disease to be inadmissible, because it does not explain the frequent cases that arise in virgins, and in married women who have never conceived. It is admitted that uterine disease is the same in all women; and, as it arises in virgins and childless women, independently of laceration, it may do the same in women who have borne children. In stating this logical conclusion, I do not deny the influence of laceration in the production of uterine disease, for I have been teaching its importance for the last twenty years in every succeeding edition of my works. The proposal to treat uterine ulceration, due to a slight cervical fissure, by slitting up the cervix up to the os internum, should be scouted; for such cases can be easily cured by nitric acid and nitrate of silver, along with judicious medical treatment, that American gynecologists seem to despise. To propose a

serious and expensive operation for these cases, even when the slight laceration has been thoroughly well healed, because epithelioma has sometimes sprung from cicatricial tissue, seems to me very bad practice.

Tracheloraphy is a valuable operation; it is therefore desirable to settle the cases to which it would best apply. Dr. Emmet does not attempt to define the limit of his operation, otherwise than by recommending it "when the womb is larger and complicated by neuralgia;" by which, I suppose, he means a voluminous cervix leading to distressing uterine symptoms. Dr. Playfair, who considers tracheloraphy "the greatest improvement ever introduced into practice," reserves it for bad cases that he cannot otherwise cure; which raises the question what other treatment Dr. Playfair had previously tried in such cases. For, in 1869, he wrote some elaborate papers to extol the virtues of carbolic acid as an application to the womb for the cure of endocervicitis, or uterine catarrh; and he was then so satisfied with his result, that he concluded by stating that "he had practically come to limit himself to the use of that alone." It was to be expected that a more extensive practice would convince him of the futility of attempting to cure chronic uterine disease by a solution of carbolic acid in glycerine and water; but to rightly estimate the value of his recommendation of tracheloraphy in uterine disease, it is necessary to know what other treatment he tried besides carbolic acid, before resorting to a serious operation. This question is most apposite, for, in the only case related in his paper, read before the Obstetrical Society of London, the only topical agent said to have been employed was carbolic acid, with the exception of nitric acid to check metrorrhagia. Until Dr. Playfair answers this question, I shall remain under the impression that some of the twenty cases in which he operated might have been cured by the plan sketched in my first paper, and given in full in my *Handbook of Uterine Therapeutics*. Having thus given it as the result of long experience that, when in cases of endocervicitis the mucous membrane alone is affected, it can be cured by nitrate of silver, carbolic acid, or the stronger mineral acids, whereas potassa fusa or potassæ fusæ cum calce were required when the submucous tissues are diseased, I will proceed to state the kind of cases to which I think tracheloraphy should be restricted.

1. The use of the forceps by unskilled hands occasionally leads to five or six extensive lacerations, which, on healing, give the cervix a stellate appearance, well shown in Dr. Emmet's work. Sometimes, the converging fissures separate ridges of uterine tissue that hide the os uteri. I have seen three cases of this description in the last thirty years. There were no uterine symptoms in one case, but they were distressing in the other two; and I advised the application of potassa fusa cum cretâ. I heard from the medical adviser that the remedy had greatly relieved one patient. The state of the other lady was also greatly improved, but I had to advise a second application of the caustic ten years after the first. In such cases, the shape of the cervix is so damaged, and there is so much superfluous tissue, that I should now certainly recommend the reconstruction of the cervix upon its original plan.

2. The application of the forceps is sometimes followed by extensive bilateral laceration of the cervix up to the os internum; and, whenever this is as extensive as represented in one of Dr. Emmet's woodcuts, I think it should be treated by his operation; but I have seldom seen such cases, and not once since attention has been directed to laceration of the cervix.

3. In alluding to the noxious properties ascribed to extensive cicatricial tissue by American gynecologists, I mentioned the case of a young married lady who had never conceived, and in whom it was necessary to tunnel through a very dense cervix to make way for the menstrual flow. I have met with several such cases; and, whether the cervix be of normal size or voluminous, I think it would be better to divide the cervix up to the os internum. This thorough draining of blood and serum from long diseased uterine tissues is a great element of success, even when there is no cicatricial tissue to remove.

4. To make a good cure of a large cacoplastic cervix with endocervicitis, extensive ulceration, and complicated uterine symptoms, a year is not too much for the plan I have recommended as the best and safest for the cure of the worst cases of non-malignant uterine disease; I mean a year of medical supervision, with occasional active surgical measures. Now, it sometimes occurs, when bad uterine cases are sent home from India, that their worst symptoms vanish, if the constitution rally on returning to a temperate climate. These patients enjoy themselves, and only consult us when about to return to India, sometimes even after having taken their passage. In such cases, a large cacoplastic cervix will most likely be found, and tropical influences will soon bring back a return of endocervicitis, with aggravated uterine symptoms; therefore, rather than let a patient return to India in that state,

I would sanction tracheloraphy, if the patient cannot give time for a better plan of treatment.

It will thus be seen that I consider the cases requiring tracheloraphy to be rare, and that I do not think it justifiable for the repair of a slight cervical fissure of recent occurrence or of old standing. When tracheloraphy has been advised by one practitioner, it will be wise to take the opinion of another, for I have already heard of a lady, who was told by a distinguished gynaecologist that her case was serious, and required an operation, for performing which his fee would be sixty guineas. On going the next day to another distinguished practitioner, she was told that there was only a small fissure at the mouth of the womb, and that she could be easily cured by simpler treatment.

FUNGOID POISONING.

By T. JACKSON, M.R.C.S., Welton.

THE dead body of a child, about two years of age, was found on a bed of nettles by the side of a drain, where it had lain perhaps from five to seven days. The eyeballs and mouth were filled with innumerable small maggots; otherwise, it was in good preservation, and had been well nourished. There were no marks of injury externally, excepting a slight excoriation of the left hip, and a mark around the neck, as if a handkerchief had been applied.

The body when opened presented a most healthy appearance, with certain exceptions; the most important one being the hue of the stomach *in situ*. This viscus as seen through its peritoneal covering was discoloured by mottled purple patches, especially at the larger curvature at the cardiac end, fading in intensity of colour gradually to the pyloric end, and it was distended with its contents. On removing it from the body, and opening it with scissors through its lesser curvature, these contents proved to be nearly half a pint of mushrooms—the *agaricus campestris*; apparently in the form of an old black-gilled mushroom. Yellowish white pieces of the outer skin of the fungus, with flesh of the same attached, were numerous dispersed amongst the dark grumous mass. Two of the pieces of the outer skin were of the size of a two-shilling coin, and appeared to have been torn from the fungus, and swallowed without mastication. The remainder of the mass was composed of the dark gills of mushroom with here and there small pieces of meat like pork.

On removing these contents, the mucous lining of the stomach appeared in an intensely inflamed congested state, in hue approaching to purple, with scarlet patches, gradually diminishing in intensity of colour towards the pyloric end. The mucous membrane was easily detached from its other coats, the muscular one was not greatly injected, that is, not nearly so much as the mucous lining, although, as before mentioned, the great discoloration was visible prior to the removal of the stomach from the body. The duodenum was but slightly injected, being free from inflammation. The smaller intestines were healthy and slightly distended with gas. The colon was without inflammation. The bladder contained urine. The lungs were sound, contracted rather than otherwise, not filling the thoracic cavity. The heart was sound. Life had evidently been speedily ended; cut short by the intensity of the inflammation (which did not extend beyond the pylorus). The power of the stomach to expel was destroyed, or it could not have retained the quantity it held.

The conclusion has been had to show how the child obtained the fungus. It seems to have been hastily swallowed by the two longer pieces found bearing no marks of teeth, though the smaller numerous pieces had been masticated.

The purplish red colour of poisoning by fungi is conspicuously widely different from the vermilion red of destruction by arsenic. In a case of fungoid poisoning, the stomach is found distended with its contents, the mucous membrane is inflamed, and the muscular coat is not greatly injected, that is, not nearly so much as the mucous lining, although, as before mentioned, the great discoloration was visible prior to the removal of the stomach from the body. The duodenum was but slightly injected, being free from inflammation. The smaller intestines were healthy and slightly distended with gas. The colon was without inflammation. The bladder contained urine. The lungs were sound, contracted rather than otherwise, not filling the thoracic cavity. The heart was sound. Life had evidently been speedily ended; cut short by the intensity of the inflammation (which did not extend beyond the pylorus). The power of the stomach to expel was destroyed, or it could not have retained the quantity it held.

We might, it is fair to presume from this latter case, and from the dark discoloration displayed in the stomach of the unfortunate child first mentioned, have also expected gangrene, had she lived longer.

Death from eating mushrooms may not be frequent: but I fancy that, if related, we should hear of many cases of their disturbing effects. One case I remember, occurring years ago, which I was called to visit at a

hamlet, a mile and a half from my residence, where I found a man lying on the mat before the fire, in the opinion of the bystanders, dead. "You are too late, doctor, he is gone," they said. He had just breakfasted, and had fallen down in a fit. "What had he for breakfast?" I asked. "Oh, nothing, sir, out of the usual way." On examining him, I found he was not dead; but his pulse was scarcely distinguishable, and he was in a deep lethargy. I had luckily by me a drachm of sulphate of zinc, which I at once dissolved and forced down his throat, calling at the same time for a feather. They brought me a wing, which I at once began to work up and down his gullet, and with good effect; for he speedily vomited, and filled a large wash-hand basin with mushrooms. "Oh, yes, sir, he had mushrooms to his breakfast." "Yes," I said, "I see that he had; but you informed me that he had had nothing unusual."

The man was quickly well; but, if he had not been speedily relieved, he would have died comatose, and his stomach would probably have displayed the destructive inflammation as related in the aforementioned cases. In this case, the fungi were fine young healthy mushrooms, pink-gilled. Still the stomach was paralysed, by either their quality or quantity; and it may be that fungin may be taken, in poisonous quantity, by partaking too largely of this agreeable esculent.

LEAD-POISONING.

By HORACE SWETE, M.D.,

Physician to the Worcester Infirmary, and County Analyst.

ON reading the account of the lead-poisoning case at Keighley, in the JOURNAL of November 4th, I think a few notes of a case that was under my care at the Worcester General Infirmary may throw some light on the matter.

Whilst the medical men seemed to think that the treatment with potassic iodide had eliminated much of the lead, and so accounted for the very small quantity found in the viscera, Dr. Tidy, viewing the case through chemical spectacles, stated that potassic iodide will make an insoluble salt of lead, and so fix it in the tissues and prevent its elimination. He was also of opinion that wrist-drop or semi-form of paralysis from muscular atrophy should have been present, which was not noticed by the medical attendants.

A painter was admitted on February 9th, 1880, as a patient under my care, in the wards of the Worcester General Infirmary. He had been suffering for some time from constant attacks of colic. The usual blue line in the gums from lead-poisoning was well marked. There was some weakness of the hands, but nothing that could be called wrist-drop, or wasting of the muscles.

On admission, I placed him under the action of potassic iodide in five-grain doses every four hours, gradually increasing the quantity to ten grains during the succeeding ten days.

In most cases of my hospital practice, where the urine gives indication of disease or alteration by treatment, I have collected the quantity passed in twenty-four hours, and submitted it to a thorough quantitative analysis.

On the 9th, before treatment, the urine contained no lead.

On the 10th, the whole amount of urine passed, being 1011 cubic centimetres, contained 5 milligrammes of lead.

On the 13th, 1022 cubic centimetres of urine were passed, and 12 milligrammes of lead were found. This gradually increased in quantity to the 25th, when 22 milligrammes were passed. It then declined until, in about a fortnight, there was only a bare trace of lead, and the patient was entirely relieved from the colic.

The effect of the first few doses was greatly to increase the colic, and call for the assistance of opiates. This re-poisoning I have invariably found to be the case in treating lead-poisoning with potassic iodide.

Now here we had a genuine case of lead-poisoning without wrist-drop, and the diagnosis confirmed by analytical chemistry. It is quite true that potassic iodide, acting on a solution of lead, will throw down a precipitate of lead iodide, which is insoluble in cold and slightly soluble in hot water; but the physician is acting not at the laboratory bench, but on the tissues of the body imbued with vital processes, and the fact remains that lead was eliminated. Lead appears to combine with the albuminoids of the tissues during life as an albuminate, giving rise to the severe colicky pains and the wasting of the muscular tissue; the blue line being formed as a result of lead being formed from decomposing food about the teeth, and the depth of tint often indicating the amount of want of cleanliness in the patient.

Might not the potassic iodide in the living laboratory act by forming a double salt of iodide of lead and potassium, which is soluble in water or in iodide of potassium to a considerable extent, compared with the iodide of lead?

I propose to treat any future well-marked case with sulphate of ammonia, which I have found to be quickly eliminated, without change, by the kidneys. I believe the first action of this will be to form a sulphate of lead, which will then be dissolved by the remaining sulphate of ammonia, and be speedily eliminated. I have, as yet, had no experience of this proposed treatment in any patient, and it is difficult to predicate whether the changes we find in the chemist's laboratory will be the same in the vital laboratory; and I also think any eliminating process should be used at first with caution, quantitatively analysing the urine day by day, as the patient may be re-poisoned by too large a quantity of lead being set free at once in the system.

From this experience it would seem that the conclusions at which Dr. Dobie and Mr. Allen arrived were correct as to the elimination of a considerable quantity of lead during a fortnight's treatment by potassic iodide.

PROLONGED INCUBATION OF SCARLET FEVER.

By R. J. BRYDEN, M.R.C.S.Eng.,
House-Surgeon to the Gravesend Infirmary.

HAVING read, in the last few numbers of the *BRITISH MEDICAL JOURNAL*, some correspondence concerning the length of the incubation stage of scarlet fever, and it being a subject about which I am much interested, and which, I think, is of some importance to medical men and to the outside public, I have thought I would give some particulars in favour of the short incubation period of scarlet fever.

I was acting as house-surgeon to one of the children's hospitals in London about three years ago, and was myself a victim to this dire complaint. Since that, I have contracted rather an interested affection for the disease, and have endeavoured to collect some authentic notes concerning it. Of course my experience is very limited; but, in nearly forty cases, I have ascertained that the incubation stage did not extend beyond six days in the longest period. Perhaps I might relate my own personal experience of scarlatina.

On the Sunday before I was taken ill, I felt quite well, and spent the day agreeably with some friends. On the Monday morning, I saw the out-patients, and amongst the new cases was a little girl aged three years, who was suffering from a very bad throat. The child seemed very ill; and the throat, on careful examination, looked very suspicious, the mucous membrane being of a dusky red hue, whilst the tonsils were coated with small exudations of lymph. On questioning the mother, she told me she had heard that there were three cases of scarlatina in the building where she lived; it was a block of Peabody Buildings in the neighbourhood. I told the mother that I thought it was a case of scarlet fever; and afterwards I ascertained that the little patient died very soon in a highly delirious state, and with a well-marked rash on the skin. I thought no more of the case, but did my work as usual during the day. I had been reading hard of late, and did not go out that day. I went to bed feeling quite well, but woke up in the morning about six o'clock, feeling my throat sore. I ascertained, with the aid of a mirror, that my tonsils were much swollen and inflamed. I just managed to wade through breakfast; but, when visiting the wards, I began to experience a feeling of languor and weakness, and one of the nurses remarked how ill I looked. I had lost all appetite for luncheon, and therefore I thought I would try to do some reading; but I found this impossible; so I took my hat and went for a walk, thinking the air might do me good. After I had gone some little distance, I shall never forget the dreadful sensations I felt. My body seemed too heavy for my legs; a horrid sensation of nausea and faintness came over me; and I felt almost inclined to commit suicide. I got some brandy; but, soon after swallowing it with pain, I vomited two or three times, and felt so ill that I took a cab and returned to the hospital. On my way back, I was sick again, and felt very chilly. My bed was soon ready for me; and, being in a shivering state, piles of blankets were placed over me. About an hour afterwards, I was taken with fearful gripping pains in the abdomen, followed, in about another hour, by profuse diarrhoea and attacks of vomiting. A medical man saw me, who examined my throat and gums. He would not say what was the matter with me, but suggested that I was suffering from the effects of lead-poisoning. The succeeding night was spent in alternate attacks of diarrhoea and vomiting; in fact, the nurse who was with me was quite frightened at my condition. When daylight appeared on the Wednesday morning, I observed that my chest and arms were covered with a well-marked scarlatinal rash; and then immediately it flashed through my mind that I had contracted the poison from the throat of the child I had examined on the Monday morning. Although my throat was very bad, I succeeded in weathering the storm, and recovered perfectly, without any complications whatsoever. No

albumen was ever found in my urine. The whole of my epidermis peeled, and continued to do so for six or seven months after the rash had gone, my feet being the last to lose their diseased covering. Strange to say, eight months after the scarlatina left me, my toe and finger nails began to desquamate, and were marked with the furrows caused by the slow dropping off of the epidermic cells for two or three months afterwards.

I cannot discover, in any book, mention made of an incubation stage in scarlet fever lasting fourteen days; and I think that these rare cases—for rare they are—should be carefully chronicled.

CURIOUS SYMPTOMS IN A DOG AFTER A DOSE OF MALE FERN.

By FREDERICK MASON, L.R.C.P.Ed.,
Surgeon to the Eye Infirmary, Bath.

UNTIL the news came from India (*BRITISH MEDICAL JOURNAL*, October, 14th, page 748) that a gentleman had been poisoned by an overdose of male fern, taken for the destruction of tapeworm, it was generally supposed that this drug was innocuous to the individual, and acted specifically upon the parasite only.

The following notes of some curious symptoms in a dog may be of interest.

In February 1881, a gentleman complained of the annoyance he suffered from portions of tapeworm constantly escaping from him. I prescribed the ordinary dose, half a drachm of the liquid extract of male fern, with the usual result.

At the same time, his son had a dog, a cross between a bull and fox terrier, suffering badly from tapeworm; and, seeing the good effects upon his father, thought he could do no harm by giving some to his dog. He procured one drachm from a druggist; and, after keeping the dog without food for a day, gave the dose about half-past six in the morning. Shortly after taking it, the dog began to stagger in its attempts at walking, and, at half-past nine, when placed upon the ground, fell over on his back, and was unable to get up. He now became completely helpless, having lost all muscular power. The ears, which were pricked (so-called) or upright, became flaccid, and dropped, and, from having the transparent pink or red hue, became quite white. I chanced to see him the day following. He appeared to be dying, unable to move; and, when lifted by the skin of the back, the legs and head hung down as they would do in a dead dog. There was no voluntary movement whatever. He continued in this state for three days, during which time he took no food or drink, with the exception of a little milk forced into the mouth. He did not pass any urine, and the bowels were obstinately constipated, notwithstanding castor-oil, in repeated doses, was administered to the extent altogether of between three and four ounces. After some of the doses of oil, he vomited a frothy white fluid. On the morning of the fourth day, he had a very costive and black motion, and after this he began to recover; but it was not until the sixth day that he was able to walk without staggering. There was no appearance of the worm in the motion; but, as so long a time elapsed before the bowels acted, and as he has not since shown any symptoms, it may be supposed it was digested in the bowels.

The dog has recently met with an accident, and it will be necessary to have him killed; but, previously to this, the owner has proposed to try the effect of another dose of the extract of male fern.

WEST HERTS MEDICAL ASSOCIATION.—The sixty-ninth meeting of this Society was lately held at Watford, Dr. P. Hood, president, in the chair. Dr. Iles read a paper on the period of incubation in diphtheria and in German measles occurring in the same patient. In the discussion which followed, Drs. Hood, Brett, Saunders, Fisher, Batterbury, Hobson, Lemon, and others, took part.

ESTIMATION OF THE QUANTITY OF BLOOD.—Messieurs Ghréant and Quinquaud are reported to have ascertained by measurement the volume of blood contained in the system of a live mammal. The method used depends on the carbonic oxide giving an oxy-carbonised hæmoglobin, a more fixed combination than oxygenated hæmoglobin (the carbonic oxide being substituted for oxygen, volume for volume). An animal is made to breathe gas containing a known amount of carbonic oxide. The volume of carbonic oxide remaining is noted, say, in a quarter of an hour, and this gives the amount fixed. On the other hand, the blood is analysed to find the carbonic oxide fixed in a given volume. In this way it was found that the total weight of blood is between one-twelfth and one-thirteenth of the body-weight. In the normal state, there are no great variations.

BRITISH MEDICAL ASSOCIATION.

FIFTIETH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

THE LIGAMENTUM TERES, AND ITS USES IN MAN AND ANIMALS.

Read in the Section of Anatomy and Physiology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By HENRY MORRIS, M.A., F.R.C.S.,

Surgeon to, and Lecturer on Surgery at, the Middlesex Hospital.

THE ligamentum teres is still an imperfectly understood structure, and anatomists are not agreed as to its uses. I propose to say a few words on what appears to me to be its purpose in man and other animals. To ascertain the tension of the ligament in different positions of the limb, I have employed a mode of examination of which no mention is made, so far as I am aware, except in my work on the *Anatomy of the Joints*; and which does not seem to have been resorted to by other anatomists. It consists in opening the joint by chiselling away that portion of the pubic rim of the acetabulum over which the psoas and iliacus pass. Thus, the structures in the floor of the acetabulum, to which the synovial covering of the round ligament is attached, are not disturbed, as they necessarily are by the method of trephining the floor of the acetabulum; moreover, the capsular ligament is interfered with only where it is so thin as to be little more than synovial membrane, and therefore at a part which can have no restraining influence over the movements of the joint. In this way, the round ligament is sufficiently exposed to see what degree of tension it assumes during the extended position of the limb, as well as in many others; whilst, in the positions in which the ligament is not altogether visible, its condition can be easily ascertained by traction upon a string looped beneath it. In this manner, then, positive proof is obtained that (1) the ligamentum teres is quite relaxed during extension of the thigh, and that, too, whether the body lies on its back or is raised into the standing posture; (2) when adduction is combined with extension of the thigh there is no tension on the round ligament; (3) the ligament is at its tightest when the limb is simultaneously flexed, adducted, and rotated outwards, very nearly as tight when the limb is fully flexed and rotated outwards without being adducted, or fully flexed and adducted without being rotated outwards.*

Much the same results have been repeatedly ascertained by trephining the floor of the acetabulum, without in the least interfering with the capsule of the joint; so that these two methods of examination correct and corroborate one another.

It is clear, therefore, (1) that it is not the prime function of the round ligament to assist in supporting the weight of the body in the erect position, either when we stand on one leg or on both; in other words, that the pelvis is not slung upon the heads of the femora by means of the round ligaments in the standing attitude; (2) that the round ligament does not check adduction in the extended or nearly extended position, as when standing at ease.†

Nor can I suppose that the primary function of the ligamentum teres is to convey blood to the head of the femur; and that the cotyloid notch is to provide a transit free from pressure to the nutrient artery. If it were so, a small bony foramen would serve the purpose better than a notch large enough in man for the iliac artery, and in the horse for the aorta itself. Besides, a process of synovial membrane, instead of a bundle of strong ligamentous fibres, would conduct a little vessel to the head of the femur; and there is no need of the large and peculiarly shaped duct in the head of the femur. Again, in many quadrupeds, before the symphysis are ossified, the head of the femur is so situated that the circumstances of

other long bones receive their blood-supply without any such arrangement as a round ligament. Why, then, is this specially required for the nutrition of the head of the femur? In the adult certainly, the size and number of vessels entering the neck of the femur are quite competent to nourish the head of the bone also.

It is in limiting and checking combined flexion, adduction, and outward rotation, that the ligamentum teres has its use: and, in so doing, it assists the outer half of the ilio-femoral band of the capsule. This combined movement is a frequent one in man, and occurs during walking, running, climbing, and under many other conditions; it often occurs rapidly, and with great force, and is repeated in quick succession. It therefore stands in need of some controlling agency. In man, under ordinary circumstances, the restraint exercised by the ilio-femoral band is sufficient; but, in some of the lower animals, in which this combination of movement at the hip is even more rapid, or more powerful, extra provision is made against its being carried to excess, by increased strength of the ligamentum teres, or by the direct continuation of a part of the ligament with one of that group of muscles which at the same time flex, adduct, and rotate outwards. Thus, in the horse the round ligament passes out of the acetabulum, at the cotyloid notch, and, under the name of the "pubo-femoral ligament," is attached to the body and symphysis of the os pubis.* From this ligament, the pectineus muscle (as well as some of the muscles of the abdomen) arises. The fossa in the head of the femur of the horse is very deep and long—so that the ligament can as securely lock the bone as the biceps humeri of man can the arm at the shoulder.

Again, in the ostrich, whose rapidity of movement is faster even than the horse's, the ligamentum teres is actually continuous with the tendon of a muscle arising from that portion of the bird's pelvis which corresponds to the site of origin of the pectineus in man; and this muscle Professor Owen has named pectineus.

By the action of the pectineus, the ligamentum teres in these animals is, therefore, made tense—just as the great sacro-sciatic ligament and the vertebral aponeurosis in man are, as I have shown elsewhere, made tense by the action of the hamstring muscles.

In the great ruminants, in which more considerable outward rotation during flexion is possible than in the Solidipedes (e.g., the horse), the ligamentum teres has no pubic fasciculus, and the fossa in the head of the femur is not nearly so deep; but, though these animals occasionally exhibit a great range of this combined movement, as shown in what is commonly called the "cow kick," it is only exceptional, and then always deliberate and intentional, and not a part of any ordinary act, such as walking, running, or roosting.

In the elephant, in whom outward rotation, with flexion and adduction, is but slightly, if at all, effected, and in the seal, in which the conformation of the hind legs renders such movement impossible, there is, as anatomists well know, no ligamentum teres.

Mr. Sutton, who has lately devoted a good deal of attention to the comparative anatomy of this ligament, has come to the conclusion that, in birds, it is really the tendon of the ambiens muscle. If so, we have, I think, another proof that the primary object of the ligamentum teres is to retain in place, steady, and control, the head of the femur during the action of those muscles which flex, adduct, and at the same time rotate outwards, the lower limb.

That, in man, the ligamentum teres is not necessary to the perfection of the hip-joint, is proved, not only by its perfect mobility and security in persons who have been congenitally devoid of the ligament, but also after reduction in those who have dislocated their hip, whereby the ligament is always either torn asunder, or torn away from the dimple in the head of the femur. The fact that the round ligament, when quite tense, can be divided without causing the slightest jerk or change of position of the limb, so long as the ilio-femoral band is intact, points also to the secondary importance of the ligament as a controlling structure over the movements of the joint in man. The ligament, however, is of much interest in him, from being the representative of a structure which, in other animals, sets a definite limit to the action of a muscle, with which it is anatomically continuous, and of which it may fairly be considered the tendon.

Professor HUMPHRY thanked Mr. Morris for his paper, and said he would like to hear whether Mr. Morris had ever read his work on the *Skeleton*, as he had there expressed opinions on the ligamentum teres almost, if not quite, identical with those just put forth by Mr. Morris, and he had employed the same methods for examining its state of tension. The fact that the posterior angle was larger and more prominent than the anterior angle in the femur must indicate the position of the ligament in the joint; and, therefore, the fact that the point of its attachment to the femur is at the anterior angle of the acetabulum

result probably

adducted, flexed, and slightly rotated outwards. Weber's observations on this subject were certainly wrong. In the horse and cow, where the thigh was slightly adducted, the ligamentum teres was present, but in the elephant and seal it was absent. It was present in the chimpanzee but absent in the orang, which was very difficult to explain, for the animals were much alike in configuration. He thought it helped to prevent the joint from becoming dislocated, because dislocation never occurred without breaking the ligament. On the whole, it appeared rather a homologue than an useful structure, and thus much resembled the plantaris muscle.

Mr. SHUTER (London) considered that one great function of the ligamentum teres was, that it conveyed blood-vessels to the head of the femur, while it remained separate from the shaft, as it was the only portion of separate bone in the body which was so far removed from the ordinary opportunities of receiving blood.

Mr. J. F. KNOTT (Dublin) remarked that it did not seem to have been noticed that the vessels which passed into the ligamentum teres from without, viz., one from the obturator artery, and the other from the internal circumflex, had been shown by Professor Hyrtl to turn back in loops, and not enter the substance of the head of the femur at all. The results of his (Mr. Knott's) observations gave him the idea that the combined positions of flexion, adduction, and rotation inwards made the ligament most uniformly tense.

Mr. HENRY MORRIS, in reply, said that he was very well acquainted with Professor Humphry's work, and that, had the results of his own experiments sufficiently agreed with those of Professor Humphry, he would have alluded to them as simply corroborating Professor Humphry's. But, as a matter of fact, Mr. Morris's views though they were like in some respects to, did not entirely accord with those of either Meyer, Struthers, or Humphry; his conclusion being that it was during combined flexion, adduction, and outward rotation (not flexion combined with adduction, nor flexion and rotation outwards without adduction), the ligamentum teres was tightest. The association of the ligamentum teres and the muscles which flex, adduct, and rotate outwards, as well as the mode of examining the ligament described above had not been pointed out previously by any writer. As to the varying strength of the ligamentum teres, there could be no dispute; but, however strong, it was always possible, without much difficulty, to rupture it during abduction by a sudden jerk. By means of injections, other anatomists than Hyrtl had found that the vessels of the ligamentum teres were prolonged a short way into the substance of the head of the femur. The relations between the ligamentum teres and the pectineus muscle in the horse, and the tendon of the ambiens in the ostrich, were very important in considering the functions of the ligament. The continuation of the fibres of the ligamentum teres with the fibres of the ambiens tendon of the ostrich, had been well seen, in a dissection by Mr. Sutton, on making a vertical section through the acetabulum.

NEW CONTRIBUTION TO THE STUDY OF THE GASTRIC JUICE.

Read in the Section of Anatomy and Physiology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By PROSPER DE PIETRA SANTA, M.D., Paris.

M. CHAPOTEAUX, who invented several preparations of peptone, which are obtained by the exclusive reaction of pepsine on fresh beef, had occasion to observe several interesting facts concerning the scientific history of pepsine, in the course of the researches he made in the laboratory of MM. Rigaud and Dusart of Paris. These researches were communicated to the Academy of Science by the Secretary, M. J. B. Dumas, and published in the reports of the sittings of June 26th and July 17th.

The gastric mucous membrane of recently killed sheep is dried on glass plates, at a temperature of 50° Cent. (122° Fahr.); the residuum thus obtained has a positively acid character; it is washed in ether, which deprives it of some fatty materials. When dried after this washing, it has an alkaline character; dissolved in water (300 grammes per litre), it constitutes a liquid of a very powerful digesting power. By means of sulphuric acid, a white powder is precipitated; and it has been ascertained that this white powder is, indeed, the active part of gastric juice; in fact, mixed with a solution of lactic acid (10 or 12 drops in 50 c. c. of water), it will, at the usual temperature, transform fibrine and meat into syntonine. If the mixture be heated to 60° C., it is transformed into peptone. A litre (quart) will dissolve two grammes of it at the usual temperature; it may be dissolved in alkalies, and then precipitated by acids; but, under these circumstances, it gradually loses its qualities. The watery solution, heated to 100° C., can-

not be coagulated; but, at this temperature, it loses its dissolving properties. It is precipitated by the solution of lime, barium, lead-acetate, and has no influence on polarised light. Its composition in carbon, hydrogen, and nitrogen is: C 51, H 7.2, N 15.4—a composition very near to that of albumen, as will be observed.

This body, the composition and origin of which the author hopes to publish within a short time, and which, he thinks, should be called pepsine, is found in gastric juice, combined as a salt of natron together with another albumen, which has no dissolving properties towards the fibrine of blood, and a fat-acid, to which gastric juice owes its acid properties. This acid has no dissolving properties by itself; it cannot destroy the combination between pepsine and natron at the usual temperature; and, even at 50° cent., it has but a weak action.

It appears thus that gastric juice is composed of an organic acid—an albuminoid body which dissolves the fibrine of blood—and of another albumen, which does not possess this property.

Professor HAYCRAFT (Birmingham) suggested that it was essential, in advocating a new process for the separation of a ferment, to estimate its strength. There were already several methods for the separation of pepsine; the author of the paper did not compare his new method with them. As a general rule, the use of acids, alkalies, and metallic salts was to be avoided, if possible, in dealing with an albuminous substance.

Dr. HAY (Edinburgh) remarked that it was but natural that lime and baryta water should produce a precipitate, as they were the ready precipitants of a sulph-albumen which must have been present.

ON THE VALVULAR ARRANGEMENTS IN CONNECTION WITH THE CRANIAL VENOUS CIRCULATION.

Read in the Section of Anatomy and Physiology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By JOHNSON SYMINGTON, M.B., F.R.C.S.E.,
Lecturer on Anatomy, School of Medicine, Edinburgh.

BETWEEN the brain-capillaries and the right auricle of the heart, two valvular arrangements have been supposed to exist; viz., 1, the direction and mode of termination of the superior cerebral veins; 2, the valve or valves in the internal jugular vein.

With regard to the first of these, Todd (*Cyclopædia of Anatomy*) and Holden (*Manual of Anatomy*) think it probable that the oblique course of the superior cerebral veins through the walls of the superior longitudinal sinus in a direction from behind forwards prevents the passage of the blood from the sinus back into the cerebral veins. I find, however, on injecting the superior longitudinal sinus from behind forwards, that fluid passes with the greatest facility from the sinus into all the superior cerebral veins. Further, on account of the free anastomoses of the cerebral veins and the absence of valves, all the veins of the brain can be injected from the sinus in the way I have indicated. The obliquity of the veins appears to be secondary to the backward growth of the cerebral hemispheres, and does not appear to possess any functional importance. The veins have a similar direction in many of the domestic animals.

With regard to the internal jugular vein, the valve situated near its lower extremity is well developed; but it is doubtful if it is competent to resist any considerable obstruction on the right side of the heart or in the lungs. In the domestic animals, the valves in the jugulars are much better developed.

Pathological records show that the brain frequently suffers from venous obstruction, and an anatomical examination explains the facility with which this occurs in consequence of the defective valvular protection.

THE Queen has signified her intention to become a patron of Lady Jane Taylor's Fund for the Relief of the Families of the Killed and the Wounded and Disabled in the Egyptian War. Her Majesty also is pleased to give £150 to the fund, which includes sailors and marines, as well as soldiers, in its operations. The Princess Beatrice has also sent a donation, and the Princess Mary Adelaide, Duchess of Teck, has become a patron of the fund. The offices are at New Buildings, Little Park Street, Queen Anne's Gate, S.W., where properly certified claims, addressed to the Honorary Secretary, Egyptian War Fund, will receive immediate attention.

THE jury of the International Food Exhibition have awarded Messrs. E. Kemmerich and Co. the gold medal for their extract of meat.

CLINICAL MEMORANDA.

TAPPING IN HYDROCEPHALUS.

ON January 23rd, 1881, I was sent for to see Mrs. McK., in her second confinement. She had been in labour about thirty-six hours. On making an examination, the head could be easily reached. The presentation was normal, second position (?). After waiting an hour, and the pains making no progress, in consequence of the largeness of the head, I turned it into a footling. This was easily accomplished, and labour was terminated with considerable difficulty in about half an hour. The head was very large compared with the body. On April 13th, the mother consulted me about the largeness of the head and other symptoms of hydrocephalus. I applied flying blisters about the head, and gave hydrargyrum cum creta, with iodide of potassium. Iodism became fully developed on the fourth day, as a beautiful scarlatinal rash covering the whole body. A week later, syrup of iodide of iron with quinine was substituted for the iodide of potassium. No improvement followed. I then purposed tapping as a last resource. On June 5th, I pierced with a trocar and cannula at the right fronto-parietal angle (avoiding the sinuses), and drew off about three ounces and a half of straw-coloured fluid. I then strapped the head in all directions—longitudinally, circularly, and obliquely—with soap-plaster. I had to remove the plaster on the fifth day, on account of symptoms of pressure. The measurements of the head were: circumference, 22.4 inches; transverse (ear to ear), 14.2 inches; longitudinal, 13.6 inches. The fluid was quickly reproduced; and, after the usual precautions, I again tapped on June 30th, and drew off about five ounces of a similar fluid. With the exception of a little pallor and faintness, no bad symptoms followed. A little brandy and spirit of ammonia was given previously to the operation, instead of waiting for urgent symptoms. On March 26th, the head was very large, the eyes sunk under the lower lids, and the body much emaciated. The head now measured: transverse (ear to ear), 17.2 inches; circumference, 22.6 inches; longitudinal, 14.2 inches. Three fingers could be laid between the edges of the parietal bones, and this space seemed studded with Wormian bone-patches.

RICHARD McDOUGALL, M.B., Murrumburrah, New South Wales.

DIABETIC COMA (ACETONÆMIA).

I WAS called at noon on Tuesday, November 14th, to see a gentleman in a comatose condition. Before making any examination, I was informed that he had been suffering from diabetes for the last eighteen months, during which time he had been under the treatment of an eminent London physician; that he had suffered during the past week from indigestion, a very unusual occurrence with him. He had been to his office as usual on the previous day, but had returned early, feeling unwell, with pains in his stomach and chest, which prevented him from lying comfortably in any position; he had vomited twice during the evening; and the thirst, which had been moderate of late, had become intensified. He had a restless night; in the morning, the bowels were opened, and the urine passed freely; he became insensible about 10 A.M. I found him in the dorsal decubitus, and was unable to rouse him. The pupils were moderately dilated, the conjunctivæ insensible to touch; his extremities were cold; pulse 88, scarcely perceptible; temperature 98°; respirations 26, with loud moist râles. After remaining in this state for two hours, he rallied, replied to questions, said he felt very drowsy, and asked for drink. During the subsequent ten hours, he drank a fair quantity of milk and soda-water, tea, and some stimulants; he replied to all questions put, though not volunteering any remarks. At 7, he passed about ten ounces of amber-coloured urine, containing a considerable quantity both of albumen and sugar. He died suddenly at 1 A.M.

The treatment consisted of warmth to the body; the vapour-bath applied by Simpson's method; diffusible stimulants; and salicylic acid.

H. PRESCOTT ROBERTS, M.D., Ealing.

SURGICAL MEMORANDA.

ANÆSTHESIA BY RAPID BREATHING.

SOME time since I read in the JOURNAL a memorandum on "Anæsthesia by rapid breathing". The following cases will illustrate its great value, and will again call attention to its advantage to the country practitioner.

A young man from London, who had been forwarded, I think several times, to the hospital, both by operation and by the heel of the trolley, but could not be cured. Just as I was about to send

about two miles to my surgery for an anæsthetic, I remembered the article in the JOURNAL. I made the patient breathe hard and rapidly; then, seizing the proper moment, I easily reduced his dislocation by manipulation.

11. A youth at the reformatory school had a strangulated inguinal hernia. He had been sick, and was in great pain. At first, I could not reduce it, but after rapid breathing easily did so.

111. On November 10th, a youth, aged 18, fell from a ladder on to his shoulder, dislocating his humerus. I saw him soon afterwards. He was very muscular; his muscles were rigid, and their outline very marked. I could do nothing with him until I tried the rapid breathing.

It is not easy to get a patient to do this effectually. One has to urge the patient: "Breathe hard, deeper, faster, like this" (here you gasp yourself until you feel very uncomfortable), "still keep on, do not stop" (the patient is now nearly black in the face), "just a little more", etc. In the present instance, the effect was most marked. The contracted muscles relaxed, and the chaplain of the Philanthropic Reformatory School, who was standing by, was much struck by the altered and "limp" appearance of the muscles. At this moment, I easily reduced the dislocation.

These cases are but a few examples of the many uses of this valuable method of treatment. I have failed occasionally with it; but when I have done so, it was because I could not get the patient up to "concert pitch". As I have said before, to do so requires almost as much exertion on the part of the surgeon as of the patient.

W. A. BERRIDGE, M.R.C.S., L.S.A., Red Hill.

THERAPEUTIC MEMORANDA.

TINCTURE OF IODINE IN ERYSIPELAS.

MR. TINKER, in the JOURNAL of November 11th, inquires whether any member has seen cerebral symptoms following the use of iodine externally in facial erysipelas. A case which came under my notice, about eleven years ago, when acting as house-surgeon to the Seamen's Hospital, Greenwich, made a considerable impression on my mind. A middle-aged man was admitted with facial erysipelas. Iodine paint was applied, and the face became less swollen; the disease meanwhile extending to the scalp, this was likewise painted. Delirium came on, with paralysis, and the patient died in about two days. A post mortem examination revealed suppurative meningitis.

Iodine was much used in the Seamen's Hospital at the time of which I speak, and doubtless Mr. Johnson Smith could give much information as to its use in erysipelas.

Since the case referred to, I have not used iodine in facial erysipelas; but when the affection occurs in other parts, I find the treatment very satisfactory. It is advisable to commence with a full dose of compound jalap powder.

In the kindred affection, inflammation of the absorbents, I find it most useful to paint the inflamed absorbents with iodine, and also to paint a broad ring round the limb, some distance above the spot to which the inflammation visibly extends. The solution used is six grains of iodine and twelve grains of iodide of potassium to one drachm of water.

H. CAMPBELL POPE, M.D. Lond., F.R.C.S.

TREATMENT OF RHEUMATISM BY BLISTERS.

SEEING the therapeutic memorandum of Dr. Burchell on blistering in rheumatism, I beg to offer some personal experience on the question.

In November 1878, I was suffering from a swollen knee-joint, with a temperature of 101°. After that, the rheumatism spread to other parts; but the temperature never rose above 102°. I was attended by my friend Mr. Chaffers; and nothing appeared to give any relief to the left knee-joint and the left wrist and hand. The swelling and pain in these joints were very great. Mr. Chaffers strongly recommended me to have a blister below the knee and one above the wrist. After the blisters were taken, I had a vapour-bath, which caused them both to rise; and they healed well with it. From that time, I had not any pain in either joint, and the swelling disappeared. As to the blisters, I had them carefully guarded, so that the skin would act as a covering to keep out the air, and prevent them from becoming sore. I never experienced any inconvenience from either blister; and, if I were laid up with the same kind of rheumatism, I should put on at once a garter-blisters. I trust that my experience may be of benefit to others.

ARTHUR ROBERTS, M.R.C.S. Eng., L.S.A. Lond.,
Medical Officer of Health, Certifying Surgeon, etc., Keighley.

REPORTS

OF

HOSPITAL AND SURGICAL PRACTICE IN THE
HOSPITALS AND ASYLUMS OF GREAT
BRITAIN AND IRELAND.

POPLAR HOSPITAL FOR ACCIDENTS.

POISONING BY ACONITE.

(Under the care of Mr. MATTHEW BROWNFIELD.)

[Reported by Mr. F. GRENFELL BAKER, Resident-Surgeon.]

VERY few cases of poisoning by aconite are on record, either in the medical journals, or in the pages of works specially devoted to the description of poisons. The narrative, therefore, of the chief phenomena exhibited by five persons who were simultaneously treated for aconite poisoning at the Poplar Hospital for Accidents, will be of interest and importance. The following notes were taken at the time, and appear to embrace the most salient facts in each case.

At 10 o'clock on the night of August 28th, four boys, whose ages varied from fourteen to eighteen, were brought to the hospital, exhibiting, with varying intensity, symptoms of acute poisoning by aconite. It appeared that at about 8 o'clock on the same evening three of the patients met the fourth, who informed them that he had been given a piece of a root by another boy, who had picked it up in the street, and had been told "it was a capital thing to give him an appetite" if he were to chew it up, and swallow the saliva. He had already taken a small portion when he met his three friends, and had found it caused his mouth to tingle. Notwithstanding this, all four at once began to chew pieces of the root and swallow the saliva, as well as small fragments of the substance itself. Shortly after so doing, from a few minutes to a quarter of an hour, all were seized with great tingling and numbness of the mouth, tongue, and throat, abdominal pain and nausea. The pain became very severe, and was succeeded by slight vomiting in two of the boys, and all four began to feel heavy, and giddy, and sleepy. At 5 o'clock previously all had partaken of tea, with meat, bread, etc. At about half past eight, it occurred to the boys that they had taken poison, and they all began running about violently, in order to shake off the increasing feeling of sleepiness. They, however, soon gave up so doing, as they found that their limbs became tired and weak. They then went home, a distance of only about twenty yards. On reaching home, one of the boys, T. C., aged 15, complained, in addition to the above symptoms, of numbness in his feet as well as of darting pains, extending from his soles up the legs as high as the knees. He vomited slightly, and said his head was giddy. Shortly after he became very sleepy, and was with great difficulty kept awake by his mother, who made him walk about, and gave him a dose of castor-oil. The latter he at once vomited.

One of the others, G. C., aged 13, shortly after arriving at home, began to experience darting pains in his feet, gradually extending up to the middle of the thighs, together with a feeling of weakness in his right forearm, and a sensation as if "his right ear were drawn up." This patient was no relation of T. C.'s, and lived in a different house.

A third boy told his parents that he could not move his left arm from weakness of the shoulder, and said his feet felt like ice.

All four were made to walk to the hospital, a distance of about a mile, starting at 9.30 P.M. When first seen all the boys were very pale, and appeared somewhat confused and indistinct in their speech. The most striking condition at first observed, was the great dilatation of the pupils, which was well marked in all.

The boy T. C., whose general condition appeared considerably worse than that of the others, immediately after entering the surgery sat down, and expressed himself as being too weak to stand. His face was cold and blanched, the pupils widely dilated, the pulse quiet, small, and regular, and the breathing spasmodic. He spoke slowly and with apparent difficulty; he complained of intense numbness and pricking in the mouth, tongue, lips, and throat, singing in both ears, great gastric pain, nausea, and a feeling as if he would choke; also of tingling and darting pains from the soles of his feet up to his knees. These latter pains became worse at frequent intervals, and there was great muscular weakness of both legs. Both feet felt very cold and were blanched; pressure over the pharynx, oesophagus, and stomach aggravated the pain.

All the other three patients complained more or less of similar symptoms, but in a less severe form; besides which, one had great difficulty in raising his left shoulder, and said his left forearm felt as if "dead." Another had darting and pricking pains from his feet up to the middle

of the thighs. The pulse was weak and quickened, but regular in all. The two boys who were unaffected by pains in the feet and legs complained of great coldness of their feet; very little, if any dyspnoea, dimness of vision, or delirium existed. A small portion of the substance that had been eaten was brought to the hospital; it was evidently a piece of dried aconite root.

The patients were at once taken into the hospital, and placed in warm beds, with hot bottles to their feet and legs. An emetic (two drachms of sulphate of zinc to one ounce of ipecacuanha wine in half a pint of warm water) was immediately given. This was soon followed by copious vomiting, the ejected matters consisting, besides the emetic, of partially digested food, without any trace of blood. Emesis was kept up by frequent draughts of warm water for half an hour, and then, when vomiting had quite ceased, a cup of hot strong coffee with half an ounce of brandy in it was taken by each. As much light as possible was introduced into the ward, and the boys were kept constantly employed either by talking or amusements. At 11 P.M., the drowsiness that was at first exhibited, had to a great extent disappeared in all the cases, except that of T. C., who was still blanched, in great pain, and sleepy. The others expressed themselves as much better. The coffee was repeated without the brandy; and at 2 A.M. the abdominal pains, as well as the other symptoms, were much less marked in all, as well in T. C.'s case as in the others. The drowsiness and pallor had also, in the latter instance, nearly disappeared. At this time, the lights were lowered, and the boys allowed to try to sleep. This, however, they appeared little inclined to do; and, with the exception of short intervals, remained awake all night. Slight vomiting occurred at about 4 A.M. in two of the cases. At about 6 A.M., three of the boys had their bowels freely moved, and the fourth (T. C.) was given a dose of castor-oil, which shortly afterwards acted. The fæces were semisolid and normal in appearance, and did not contain any trace of blood, and the act of defecation was unattended by any discomfort.

On August 29th, at 10 A.M., T. C. complained of great frontal headache, and all his former troubles, but in a much less severe form than when first seen. His breathing was somewhat hurried; the pulse 100 and regular; the temperature was 97.11; the pupils were normal, but his face was still blanched. There was no difficulty in swallowing liquids, nor pain afterwards, and no abnormal appearance could be detected in the mouth or throat. All the symptoms in the other cases had almost entirely disappeared. There was still some tingling in the mouth, and slight epigastric pain, but no difficulty in taking liquid food. The two who were previously affected in their extremities now appeared quite well. The condition of the pupils, the breathing and pulse were natural; the temperature was normal. No return of any untoward symptoms took place during the day; and, on the following afternoon (August 30th), the three left the hospital, apparently in their usual condition of health. The boy T. C. remained till September 4th, when he also left. All his symptoms gradually disappeared by September 2nd, except the frontal headache, which was very severe up to the 3rd, and then ceased.

About three hours after the above four patients were first seen at the hospital, the sister of one of the boys was brought up, exhibiting much the same symptoms as the others. She had found a piece of the aconite root, brought home by her brother, and swallowed a small fragment. When first seen, she was very pale and faint; she complained of great numbness, pricking in the mouth and throat, gastric pain and nausea, as well as difficulty in walking. The pupils were normal, breathing was hurried, and the pulse quick, regular, and very small. She was given an emetic, followed by brandy and coffee, and, in about two hours, was sufficiently well to be taken home. She passed a quiet night, and next day had no return of the symptoms. In this case, hysteria appeared to play a prominent part in the causation of the symptoms exhibited.

REMARKS BY MR. F. G. BAKER.—In all the above cases, the symptoms referred to the mouth and stomach seem to have developed almost immediately after taking the root of aconite, the greatest delay appearing to have been about a quarter of an hour. In all, the pupils were widely dilated, and the extremities were affected, in three partially; the other two complained of unusual coldness of the feet. What, however, appears to be most marked and important is the fact that, although only a very minute portion of the root was actually swallowed in any case, and that vomiting occurred shortly afterwards, and that all had partaken of a substantial meal three hours before, yet the constitutional symptoms, as muscular weakness, pains in the legs, etc., were developed within a very short time. It would, therefore, appear that saliva is a very powerful solvent of the toxic principle of aconite. In most of the cases already published, there appear to have been present marked dyspnoea, and often contracted pupils. The former certainly did not exist in any of the above cases, except perhaps in that of the boy T. C.; and

in his case the difficulty in breathing seemed to be simply due to the local condition of the throat. Contraction of the pupil was not only not present, but dilatation existed in all the cases.

MARYLEDONE INFIRMARY, NOTTING HILL.

A CASE OF EMBOLISM OF THE RIGHT PULMONARY ARTERY: SUDDEN DEATH.

[Reported by Mr. JOHN R. LUNN, Medical Superintendent.]

B. R., aged 38, a labourer, was admitted on June 27th, 1881, with severe ulceration of the tongue; he had also left congenital coloboma of the iris.

The family history was good. He had had syphilis six years earlier, followed by a rash and sore-throat. He had always been a healthy man until nine months before admission, when he began to have a sore tongue. He had been a hard smoker, and always lived well. On admission, an ugly offensive sore was noticed on the left side of the tongue, deep in the middle and about one inch and three-fourths in length, reaching nearly to the tip. Several notches were visible along the edge of the tongue in front, beginning to crack; the edges were very hard and irregular, though not painful, except when touched, or whilst eating. The tongue had a tendency to bleed. The cervical glands on the left side of the neck were hard and nodular. The discharge from his mouth was offensive at times. He preferred liquid food to solids. The other organs were apparently healthy. He was ordered liquid food, and a mixture containing iodide of potash and citrate of iron and ammonia, three times a day, and a gargle of chlorate of potash, and Condy's fluid for cleansing his mouth. He was forbidden to smoke.

The patient remained in the same condition until six weeks before his death, when he began to grow much worse; the cervical glands enlarged, and became painful; his appetite at the same time began to fail, and he found difficulty in swallowing even liquid food.

On August 14th, about 11.15 P.M., he got out of his bed to go to the water-closet; and, on getting into bed again, called to the nurse that he was choking; immediately his face became very blue, and he fell back and died.

The necropsy was made thirty-seven hours after death. The body was well nourished; rigor mortis was fairly well marked. Frothy fluid oozed from the nose. The face was livid. On removing the sternum, the lungs appeared to be normal. On the right side were adhesions, easily broken down, extending to the base; and slight effusion in the left pleural cavity. The pericardium contained no fluid. On removal of the windpipe with the tongue, the latter was found to be large, and indurated at the back. The large ulcerated surface, which occupied nearly all the left half of the tongue, was narrow and shallow in front, broader and deeper behind. Just above and to the left of the upper opening of the larynx, there was a deep excavation, lined with rough granular membrane; this may have been an abscess in the root of the tongue, which had opened into the surface of the ulcer. Beneath this ulceration, there was an irregular mass of hard fibrous tissue, including the enlarged submaxillary gland. The glottis was perfectly free; the epiglottis and aryepiglottic folds were separate from the neighbouring disease, though the mucous membrane on the left side, a little above the cords, was rather oedematous. The trachea contained no foreign body, the only contents of the air-passages being frothy and blood-stained mucous fluid in the bronchi and their branches.

The heart was relaxed, and of average size; its walls were soft, dark, and very flabby. The valves were competent and healthy. The cavities were empty, except for a little fluid blood in each, chiefly in the left ventricle. On cutting into the pulmonary artery, and following up its course, no clot was found in any branch of the left side; but, in the right pulmonary artery, a large clot was found, about the size of a cherry, red, and granular in appearance, non-adherent, and with no dark coagulum attached. No other clots were found.

The lungs were free from disease. The aorta was somewhat atheromatous just beyond the semilunar valves, but otherwise healthy. The liver and gall bladder and kidneys were normal. The stomach was normal, and its contents were dark and conical. The mucous membrane of the stomach was a little inflamed, and the greater part of the greater curvature was covered by a thick, white, granular mass, and filled the organ. The spleen was large and soft; the bladder was normal, and the stomach, intestines, and peritoneum appeared normal.

The patient was treated with iodine, and a mixture containing iodine and citrate of iron and ammonia, three times a day, and a gargle of chlorate of potash, and Condy's fluid for cleansing his mouth. He was forbidden to smoke. The patient remained in the same condition until six weeks before his death, when he began to grow much worse; the cervical glands enlarged, and became painful; his appetite at the same time began to fail, and he found difficulty in swallowing even liquid food.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, NOVEMBER 21ST, 1882.

GEORGE BUCHANAN, M.D., F.R.S., Vice-President, in the Chair.

A New Disease of the Lymphatics.—Dr. GEORGE HOGGAN exhibited a number of microscopical specimens of a condition of the lymphatics of the skin, which he had not seen described, and which, he believed, was related to elephantiasis and angioma; it most nearly resembled a disease described by Kaposi as *lymphangiomatuberosum multiplex*; but he was doubtful whether that was a disease of the lymphatic system at all. The specimens were made from a portion of skin excised from a young boy, who had been a patient of Dr. T. Colcott Fox; they showed a very great increase in the number of the lymphatics, without any other abnormality. To the naked eye, the skin showed a number of small vesicular bodies, about the size of a split pea, which could be distended by passing the hand over the leg against the current of the lymph. The boy had suffered from severe attacks of pain in the legs; and, after each attack, the skin of the leg became more and more thickened and enlarged. The whole of the dermic tissue was penetrated in every direction by the enlarged lymphatics. Dr. Hoggan thought the case probably showed an early stage of a condition which would ultimately result in elephantiasis.—Dr. PYE-SMITH inquired whether the condition was congenital.—Dr. THIN complimented Dr. Hoggan on the excellence of his preparations. He was not prepared to accept the suggestion that this case represented an early stage of elephantiasis, which he believed was due to organisation of imperfect fibrous tissue about the lymphatic vessels, and not, as here, to an increase in the number of the vessels.—Dr. HOGGAN could not say whether the condition was congenital or no. In the main, he agreed with what Dr. Thin had said.

A Peculiar Form of Bromide Eruption.—The eruption, which was unusual in character and in site, occurred in a little girl aged three years, who was shown to the Society by Dr. HORROCKS. She had been taking fifty grains of bromide of potassium, daily, for about four months. About a month before she was shown, she developed a cutaneous eruption, much resembling erythema nodosum, on the legs; four days before she was shown, an ordinary bromide rash appeared on the arms and forearms, but there was no acneiform rash between the shoulders. The patches on the legs were red, raised, and bore on their surface indistinct vesicles.—Dr. THIN said that, with Dr. Boulton, he had described a very similar case in a woman, who had been taking bromide of iron. Dr. Thin had been able, by the appearance of the legs of the patient in the room, to say that the rash was due to bromide, owing to its resemblance to the earlier case. It was very like the rash caused by iodide, when it causes anthracoid inflammations. The pathology of the condition was, he believed, that a stasis occurred in the blood-current, which led to breaking down of the tissue and to abscess. In the case of the woman he had mentioned, there was no rash in other situations.—Dr. RADCLIFFE CROCKER said that the position of the rash on the legs was not very rare, and he had seen various cases presenting the same appearances as this one. At the present time, there was a case of the kind in the East London Hospital for Children, in which the inflammation had gone on to suppuration, and resulted in abscesses, which required to be opened.

Sarcoma of Bladder and Prostate.—Dr. SAMUEL WEST showed the bladder and prostate from a remarkable instance of new growth, probably originating in the bladder. The case was especially interesting from the rapidity of its course. The patient, who was aged 21, was admitted for sudden retention of urine; his strength was quickly reduced by severe hæmorrhage from the bladder, and he died in one month after the first onset of symptoms. At the necropsy, it was found that the bladder contained a large oval tumour, which appeared to occupy nearly the whole of its cavity; it was about three inches long, and, though subdivided, not of a cauliflower appearance; there were numerous other vesical polypi, and one large polypus of about one inch in diameter in the urethra. The prostate was enormously enlarged, and on section appeared to be almost diffused. The rectum was not at all involved. The ureters were greatly dilated, and the kidneys showed a number of minute abscesses: the walls of the bladder were much hypertrophied, and this rendered it probable that the disease about the bladder, or in the prostate, had existed for some time.—Mr. ROGER WILLIAMS inquired whether there were any secondary growths; the tumour seemed to be encapsuled. He exhibited to the Society a small tongue-like growth on the neck of the bladder from a boy. No other details of the case could be obtained.—Mr. A. E. BARKER said that the case reminded him of one he had

recently seen under the care of Mr. Berkeley Hill. All tumours of this kind, so far as he had observed, presented pendulous growths; he believed the disease in the case to which he referred was proved, on microscopical examination, to be carcinomatous, and there were secondary deposits in the liver and in the lungs. In another case of small round celled sarcoma, the growth invaded the sacro-iliac joint, and destroyed much of the sacrum.

Syphilitic Gumma in the Heart.—Dr. G. C. HENDERSON showed a well-marked specimen of this disease, as well as microscopical sections. He stated that the patient, who was a man, aged 30, was admitted into St. Mary's Hospital in a moribund condition; for a fortnight he had felt pains in the region of the heart, and had occasionally complained of faintness. He was suddenly taken ill while at work, and died almost as soon as he arrived at the hospital. At the necropsy, the brain, kidneys, and lungs were found to be healthy; the spleen was enlarged and congested; the liver showed a depressed fibroid scar, but there were no gummata elsewhere. The heart weighed thirteen ounces; the valves were normal; the endocardium of the left ventricle was studded by straw-coloured nodules; in the anterior wall of the left ventricle was a pinkish grey mass, which occupied the whole of the muscular structure of the ventricular wall. The muscular bundles could be distinguished, and were separated by bundles of fibrous tissue, which contained a few round cells towards the pericardial surface. There was no fatty degeneration of the muscles. The lumen of the smaller arterioles was much thickened. Dr. Henderson considered that the case formed a link between cases of fibroid degeneration of the heart, of which Dr. Fagge had brought a series before the Society, and such cases as that shown to the Society by Dr. Burney Yeo. One of the cases alluded to by Dr. Fagge had suffered from syphilis. The endarteritis deformans, the scar in the liver, and the other like conditions, led Dr. Henderson to regard the condition as syphilitic. The disease of the arteries might have been the determining cause of death. He referred to experiments which showed that, in animals, ligation of a coronary artery was followed in about two minutes by arrest of the heart in diastole, and it was reasonable to suppose that in this case the sudden death was due to thrombosis of the coronary artery.

Testis in the Perinæum, with Congenital Hernia.—Mr. ROGER WILLIAMS showed a wax model which had been sent him by Dr. A. Williams. The patient was a child two years old; the right testicle had been absent from the natural situation from birth, but a movable lump had been noticed in the groin: a hernia was also present, which, on one occasion, could not be returned, and for this reason the child was brought to a hospital. The testicle was then found to lie in the perinæum, and was painful and apparently inflamed; the application of cold was followed by recovery. The tunica vaginalis appeared to be properly developed. Mr. Williams, in conclusion, referred to the statistics of congenital displacement of the testes to the perinæum.

Rickets in a Baboon.—Mr. SUTTON said that the animal, which was about two months old when brought to the Zoological Gardens, was fed on bread and nuts, and not on milk. He exhibited the whole skeleton. The intervertebral discs were large; the costal arches presented beads, due to curving of the ribs; the epiphyseal cartilages were much enlarged, and in the femur consisted of three distinct layers. The tibial tuberosities showed that genu valgum would have occurred; the lower maxilla was thickened, and larger than natural. The skull was very thick, measuring six millimetres; the bone was spongy; the outer plate was rough, and presented lacunar spaces; the inner plate was firm, but the diploë was very thick, vascular, and soft. He also exhibited the skull of another young baboon (African), which had been preserved at the Gardens owing to its enormous thickness.—In reply to the CHAIRMAN, Mr. Sutton said that dentition did not appear to have been interfered with.

Canine Chorea.—A series of microscopical specimens of the spinal cord of a dog, the subject of so-called canine chorea, was shown by Dr. HADDEN. The disease differed from human chorea, in that the spasmodic movements were quite regular; it was generally a sequela of distemper. The microscopical specimens shown consisted chiefly of groups of leucocytes in the grey matter of the cord, especially in the dorsal and lumbar regions. The different stages of capillary distension and the gradual distension of the perivascular sheaths could be traced; the groups appeared to be distributed at random. The motor cells of the anterior cornua seemed here and there to be enlarged, and granular. He was inclined to agree with Drs. Gowers and Sankey, that the lesions were secondary, inasmuch as they were not constantly found.

Colloid Cancer.—Dr. PYE-SMITH showed a recent specimen of colloid cancer of the abdomen. No symptoms appeared in the patient, who was a man, until July 1882; he then began to suffer from cough and swelling of one leg. In October 1882 a small tumour of the

omentum was detected, and this gradually enlarged; and there were other signs and symptoms which led to the diagnosis of retroperitoneal cancer. This diagnosis was verified at the necropsy; but, in addition, there was a large growth in the posterior wall of the stomach; there were secondary nodules in the liver and the lungs. The microscopical examination showed the characteristic alveolar structure, with colloid degeneration of the cells. It was a remarkable fact, and one that brought out well the peculiarly slight degree of vascularity in these tumours, that, although so large a fungous mass projected into the stomach, there had been no hæmorrhage and no vomiting.

Ulcerative Endocarditis.—A heart exhibiting this condition was shown by Dr. FREDERICK TAYLOR. The specimen, which was recent, was obtained from a young man aged 26. He had had rheumatic fever when 15, but recovered, and was able to continue his work as a plumber until about five months before death, when he began to lose flesh. One month before death he was admitted into Guy's Hospital; he was then pale, with puffy features, and œdema of the ankles. He suffered from continuous fever, and had a double murmur over the sternum. The specimen showed extensive ulceration of the aortic valves, and of one curtain of the mitral valve. The spleen showed several embolic infarcts; the kidneys were inflamed, and showed one small infarct. The urine during life had been abundant, of specific gravity 1010 to 1014, and contained albumen in varying quantities. Such a condition of the urine was not that usually found in kidney disease secondary to heart-disease, nor was the condition of the kidneys one that was commonly seen in chronic diseases of the heart; on the contrary, it seemed more probable that there was some definite inflammation of the kidneys, related to the heart-disease in, perhaps, only a distant manner.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

MONDAY, NOVEMBER 6TH.

S. LEE RYMER, L.D.S., President, in the Chair.

Dental Alveolar Abscess.—Mr. CHARLES TOMES brought forward some cases, bearing upon the question whether dental alveolar abscess was always of septic origin. It certainly was so in that large class of cases in which the abscess was secondary to caries; but, in cases where the pulp of a sound tooth had been killed by a blow, it was also found that, after a variable interval, alveolar abscess would generally ensue, although the pulp was still inclosed in its chamber, apparently quite inaccessible to external agencies. In the case of two such teeth which he had recently examined, killed by an accident four years before, he found clear evidences of inflammation about the apices of the roots; but, on opening the pulp-cavity, the remains of the pulp were found in the form of a moist, bulky, whitish mass, not in the least offensive; and, on examination, no bacteria or micrococci could be found in it. This seemed to indicate the possibility of the existence of inflammation about the roots of dead teeth which was not of septic origin; but he should be glad if others would carefully investigate this point.

Secondary Dentine in Pulp-Cavity.—Mr. REDMAN showed an upper molar, the pulp cavity of which was almost completely filled by a mass of secondary dentine. The patient, a lady, had suffered for several years from severe attacks of pain, which she referred to this tooth; but it appeared so perfectly sound, that none of the dentists whom she had consulted would consent to extract it. Mr. Redman also could find no evidence of anything wrong about it, until he directed a very strong light upon it. He then noticed that, whilst the neighbouring teeth appeared slightly translucent, this one was opaque. He, therefore, diagnosed calcification of the pulp, and this proved to be correct.

Some interesting cases having been brought forward by Mr. A. Coleman, Dr. Carpenter of Croydon read the paper of the evening, entitled *A Consideration of some of the Causes which Lead to Dental Decay*, which appeared in full in our issue of November 18th. The discussion was, on the motion of Mr. Oakley Coles, adjourned until the next meeting.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.

THURSDAY, OCTOBER 19TH, 1882.

THOMAS BRIDGWATER, M.B., President of the Branch, in the Chair.

Some Clinical Aspects of Glycosuria.—Dr. ORD read a paper on this subject. He commenced by recounting the history of the case of a gentleman who came to him in 1865, complaining of preputial irritation. On being questioned, the patient stated that he thought he had been passing an increased quantity of urine for some months, and, on examination, the urine was found to contain much sugar. The patient was then sixty-seven years of age, hale, and of powerful frame. His

father had been a vigorous man until nearly seventy years of age, when he died, after an operation for strangulated hernia. His mother had lived to the age of ninety. The collateral branches all showed toughness and vigour. The patient himself, however, had been subject to excessive mental strain by the mental illness of his wife, who had been for some years on the border of insanity. Under the influence of treatment, the quantity of sugar and urine decreased. He was next seen in 1873, eight years after the first examination, suffering from the symptoms of Bright's disease, and in the last stages of emaciation and exhaustion, with anasarca, sloughing tonsils, rigid arteries, and albuminuria. The urine, of specific gravity 1037, gave strong sugar reaction, and contained, besides albumen, an abundance of long straight rigid casts of renal tubules, and also free uric acid. The patient died three weeks later. Dr. Ord pointed out that the above case might be taken as a specimen of a form of diabetes distinctly recognised by all the authors of treatises on the subject. Dr. Ord then proceeded to analyse twenty-two cases of glycosuria which had come under his observation, occurring in persons aged 50 years and upwards. These were cases of glycosuria not accompanied by any marked diuresis, but nevertheless persistent in some degree under all forms of treatment; and it was shown that, on review of these cases, it was impossible in any one of them to see glycosuria assuming the individual importance which it claimed in typical diabetes mellitus; that, on the contrary, it was reduced to the rank of a symptom of other troubles. Glycosuria was here indicated as associated with four conditions of importance: 1. Preponderantly, conditions of nerve-disease or disorder, appearing either as probable causes or as associated troubles; 2. Gout; 3. Errors of diet, consisting in over-eating and over-drinking; 4. Albuminuria. In twenty cases, there were marked indications of nerve-disease or disorder. Of these, seven patients told a story of excessive and prolonged mental work or anxiety. In one, after much emotional excitement, insanity was at length fully declared. In one, after a long course of strenuous mental labour, hemiplegia occurred. Apoplexy occurred suddenly in another case. In two, distinct locomotor ataxy occurred, and in a third the ataxy was present, with signs of affection of the whole breadth of the spinal cord. Decided hypochondriasis was noted in two; and there might be added as other nerve-symptoms, tinnitus, vertigo, sleeplessness in an extreme degree, headache, loss of power of thought and memory, numbness in the limbs, sciatica, shingles, hysterical sensations, prurigo, and marked loss of muscular energy. Angina pectoris occurred in three cases. Gout existed in eight; rheumatoid arthritis (of twelve years' duration) in one. In two of these, which were frequently seen, the sugar of the urine underwent a sudden diminution on the occurrence of attacks of gouty inflammation. In eight cases, there was an acknowledgment of over-indulgence in the pleasures of the table; and of these, seven admitted marked alcoholic excess. Albuminuria existed in ten cases; in four, associated with gout; in one with manifest contracted kidney; in the rest, only during a period less than that of the glycosuria, or intermitting. In the majority of these cases but little loss of flesh occurred until the addition of conditions which would tend, irrespective of diabetes, to such a result. In fact, only one patient presented marked emaciation. Dr. Ord next spoke more fully on some of the cases, and, remarking that the concurrence of glycosuria with angina pectoris was novel to him, gave the following interesting histories. The first was the case of a gentleman aged 53, who sought advice in 1877, for angina pectoris. On careful examination, it was concluded that the angina was of gouty origin. Living a careful life, he gradually lost the angina; but, when he appeared, at the end of six months, to report great general improvement, it was found that his urine was of specific gravity 1032, and contained much sugar; no albumen. In September last, he appeared rosy and cheerful, having had no angina since the spring, but with urine of specific gravity 1042, with plenty of sugar, and a quantity of three pints in twenty-four hours. Here it seemed as though there were some inverse relation between the glycosuria and the angina. In the next case, a country gentleman, aged 60, of robust build and active mind, came on account of angina. His urine contained sugar, but the quantity of urine passed was not above the normal. Under treatment, the sugar disappeared, but shortly afterwards the angina was severe, and was associated with a quantity of three pints in twenty-four hours. The third case was that of a man, aged 55, who had been suffering from angina for many years, and who had been treated by various means, but without success. He had been suffering from the disease for many years, and the symptoms appeared to resemble angina, but were rather than related to excitement or exertion. Dr. Ord then pointed out that the above cases were all cases of glycosuria which had been associated with some other disease, and that the glycosuria was in each case a symptom of the other disease, and not a primary disease itself.

gastric nerve in the former disease. After speaking more fully upon two of the cases in which glycosuria was connected with gout, and discussing the conditions under which excess of sugar appeared in the blood, Dr. Ord proceeded to draw inferences from the cases he had mentioned, both as to their own nature, and also their relation with typical diabetes. It must be remembered, he said, that all authors had agreed in speaking of diabetes as much more fatal in the young than the old. It followed that the question might be asked whether the diabetes of the old was of the same essential nature as the diabetes of the young. In the typical diabetes of the young, the chief clinical points were the polyuria, the glycosuria, the wasting thirst, and other accompaniments referable to the influence of the first two. In the cases mentioned, glycosuria was accompanied by slight polyuria, but also by a number of diverse symptoms not obviously referable to the urinary disorder. In fact, the urinary disorder often fell into the second or third rank of symptoms, and it was as a symptom that it would be most usefully studied. Dr. Ord considered that the causation of the disease was to be found in the nervous system—either in diseases of the nervous centres only, or in a process of reflex causation. His indisposition to accept the unity of diabetes was increased when he came to examine that group of cases associated with gout. In some of the cases noted, the glycosuria was found to diminish, almost to disappear. This was comparable to what occurred in diabetes during intercurrent inflammations. This occurrence had been explained on the assumption that, during febrility, there was a greater combustion of sugar than at other times. Dr. Ord suggested another explanation, viz., that the glycosuria might be a phenomenon of the same class as the gouty inflammation of joints: that it might be an active hyperæmia set going in part of the gouty process: set going in relation to irritation excited in the liver by dietary errors or other causes, just as inflammation of a joint was set up by a wrench, or by over-exertion; that it might, in fact, be taken as meaning "gout of the liver." With regard to the frequent association of glycosuria with errors of diet, Dr. Ord considered that here the influence of reflex action seemed most strongly suggested; and he referred to a case which he had mentioned in which alcoholic irritation, sufficient to bring about enlargement of the liver, was associated with glycosuria. He thought it was fair to argue that, as mechanical irritation of the liver by needles, etc., could bring on glycosuria independently of other nerve lesions, and almost certainly by reflex vaso-motor relaxation; so irritation set up by alcohol, or by the products of a disordered gastric digestion might set up glycosuria by the same channels. Dr. Ord ended his paper by noting the application of these views to the treatment of such glycosuria, pointing out that, in addition to the patient being carefully dieted, all co-existing morbid conditions should be corrected.

MANCHESTER MEDICAL SOCIETY.

WEDNESDAY, NOVEMBER 1ST, 1882.

JAMES HARDIE, M.D., Vice-President, in the Chair.

Traumatic Aneurysm of the Orbit.—Dr. GLASCOTT showed a case of traumatic aneurysm of the orbit, which was under his care at the Royal Eye Hospital, in which intermittent compression of the left carotid artery had greatly benefited the patient, causing a cessation of whizzing in the head and reduction of the exophthalmus. The supraorbital *bruit de souffle* had also disappeared.

Spontaneous Cure of Arterio-venous Aneurysm of the Orbit.—Dr. GLASCOTT also showed a woman whom he had exhibited to the Society two years before. She then suffered from arterio-venous aneurysm of the orbit; and the symptoms were so acute and alarming, that ligation of the carotid was proposed to the patient, who left the town, and did not present herself until a few days ago. All the pulsation had ceased in the orbit; the exophthalmos was slight; and the vision of the eye had improved from no perception of light to seeing fingers at two feet. The patient was a woman, of middle age, of a robust build, but extremely nervous and nervous. The aneurysm was of the face and head, which only lasted three days.

Scarlet Fever, Otitis, and Facial Paralysis.—Dr. ASHBY showed a girl, aged seven years, suffering from left facial paralysis, which had supervened on the eighth day of an attack of scarlet fever. The fever was high, and the patient was very nervous. On the day the paralysis was noticed, a redness appeared in the left ear. At first, the paralysis was almost complete, involving the left side of the face; the uvula pointed away from the tongue, slightly towards the paralysed side. A few days later, the redness in the ear subsided, and the attack of the paralysis had improved in the sense that the current; but there was perforation through the membrana tympani, and a

slight discharge. Dr. Ashby also showed the petrous portion of the temporal of a child, aged two years, who had died with pyæmic abscesses in the lungs on the twenty-eighth day of scarlet fever, the result of suppurative in the tympanum and phlebitis of the lateral sinus.

Pyo-Pneumothorax, successfully treated by Resection of a Rib and Drainage.—Dr. DRESCHFELD exhibited a patient, who was admitted into the Manchester Infirmary on August 15th of this year, suffering from all the symptoms of pyo-pneumothorax. The patient, a man aged 49, had always enjoyed good health, with the exception of a cough, which had troubled him much for the last twelve months. Five weeks before admission, he was suddenly taken ill with fever, shivering, and pain in his left side. A few days before admission, he was suddenly seized with intense dyspnoea, and at the same time expectorated large masses of pus. On admission, examination of the chest showed bulging of the left side, diminished movement, and displacement of the heart towards the right; tympanitic percussion-sound in the upper left side in front, dullness below, and dullness behind on the left side; diminution of fremitus and succussion, and metallic tingling in front, behind, and left side; increased fremitus, bronchial breathing, and moist râles above; diminished fremitus and absence of breathing below. The right side of the chest showed symptoms of extensive bronchitis. The pulse showed marked arterial tension. The urine, profuse, of low specific gravity, contained albumen and granular casts. There was no oedema nor ascites. Temperature 101.5°; with anorexia. The dyspnoea was so intense that the patient could not assume the recumbent posture; large masses of foetid pus were continually being expectorated. From these symptoms, it was evident that the patient had suffered from empyema, which, bursting into the lung, already affected with chronic broncho-pneumonia, and communicating with a bronchus, caused the establishment of a pyo-pneumothorax. The patient also suffered evidently from commencing granular kidney. On August 18th, a portion of the seventh rib was resected, and the pus evacuated, and a drainage-tube inserted. After this, the patient made a very rapid recovery; the fever subsided; the cavity completely closed, and the wound is now quite healed; the left lung expanded again fully, and all the symptoms of disease in the left lung disappeared. In less than two months, the patient had gained twenty-two pounds in weight. The kidney-disease, as far as pulse and condition of urine showed, remained the same.

Gunshot-Wound of Chest.—Mr. JONES mentioned a case of gunshot-wound of the chest, terminating in recovery. The bullet entered the left fifth intercostal space, and in its course backwards injured the left lung. This was made evident by the hæmoptysis and pneumothorax which followed. The patient was admitted in a state of collapse with excitement. Reaction was rather severe, and accompanied with hæmorrhage into the left pleural cavity. Dullness on percussion, with absence of breath-sounds and of vocal fremitus, gradually extended from below upwards, eventually reaching as high as the spine of the scapula. The heart became displaced to the right, and occupied a position behind the sternum. To relieve the dyspnoea, which at one time was very distressing, the chest was aspirated on two occasions with an interval of a week, and forty-two ounces of frothy sanguineous serum withdrawn. After this, the physical signs denoting fluid daily became less evident, and, when the patient was discharged from hospital, breath-sounds could be distinctly, although distantly, heard over the base of the left lung, and the heart had almost recovered its normal position.

Elephantiasis of Leg.—Mr. WHITEHEAD showed a patient recovered, to all appearances, from lymphatic enlargement of unusual dimensions of the right leg. The condition had existed seventeen years, and was supposed to have originated through a sprain of the ankle. The swelling had increased by irregular stages, each augmentation being preceded by an attack of erysipelatous character. A cast of the leg taken before the commencement of treatment was exhibited. It showed the right to be four times the size of the left leg, and the skin to be enormously thick, warty, and discoloured. The treatment had consisted in rest, massage, elastic pressure, compression of the femoral artery, and rubbing down the tubercles with pumice-stone. The knee, which had become flexed and ankylosed by bony union, was straightened by sawing through the site of the original joint.

Spontaneous Diuresis.—Dr. LEECH read a paper on spontaneous diuresis. He brought forward many cases illustrating the occurrence of sudden and copious diuresis in renal and cardiac disease apart from drug treatment, and showed that, in ascites depending on cirrhosis and in some dropsies of obscure origin, spontaneous diuresis does at times take place.

MR. WILLIAM BARR BROWN, late Medical Officer for the Sunninghill District of the Windsor Union, has obtained a superannuation allowance of £30 per annum.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, NOVEMBER 3RD, 1882.

J. E. EDDISON, M.D., President, in the Chair.

New Forceps.—Mr. H. B. HEWETSON showed a pair of forceps designed to imitate the method of seizure effected by the claws of birds of prey, the "hawk's-foot forceps". With this instrument, it was easy to fix loose glands which it was proposed to remove by enucleation.

Nasal Douche.—Mr. HEWETSON also exhibited a douche invented by himself for the treatment of Eustachian deafness. The syringe, made of celluloid, will hold an ounce of fluid; the nozzle, an inch and a half in length, is slightly curved, so as to enable the point to be directed towards the orifices of the Eustachian tubes when applying solutions to the mucous membrane of the lower nasal tracts and posterior nares. The nozzle is perforated along its sides, but has no terminal orifice, and is thickened at the base, so as to occlude the anterior nares, and thus prevent the return of fluids injected. These instruments are made by Meyer, Meltzer, and Co.

Sarcina in Urine.—Dr. OLIVER sent a specimen, and communicated notes of the case. A gentleman, aged 58, had suffered from slight hæmaturia six years ago, and again three years ago. He had all his life had some difficulty in micturition, but neither stricture nor stone could be found. On September 27th last, the hæmaturia recurred, and was much increased; the bleeding was rather free for four days, and then gradually subsided. There was no obvious cause. Dr. Oliver then discovered sarcinae, pus-cells, and larger cells in the urine, but no casts. Later, he also found many torulae, but no sarcinae, in the feces. On October 11th, the patient had another attack of hæmaturia, apparently due to over-exertion, in Edinburgh. Sarcinae were then found in the urine by Dr. Grainger Stewart. The urinary deposit was examined within a few hours after the urine had been passed.

Pathological Specimens.—Dr. CROOKE showed tubercle-bacilli, which had been stained by Dr. Heneage Gibbes.—Dr. CHURTON showed sections from a large thyroid gland; and from a "large white" kidney, weighing fourteen ounces.

Osteotomy.—Mr. MCGILL exhibited a girl, aged 14, for whom he had performed Macewen's operation for in-knee. On the whole, he preferred this method to Ogston's; firstly, because, the joint being unopened, there was less danger to life, and less tendency to subsequent stiffness of the joint; and, secondly, because the patients could be treated without expensive instruments. In this case, a long splint was applied for a week after the operation; plaster-of-Paris was then applied; and in a short time the girl was allowed to move about. She now walked with perfect ease and freedom.

Chronic Bronchitis with Asthma.—Dr. J. GORDON BLACK read notes of a case of chronic bronchitis of some years' standing in a young woman aged 27. During the last month of the patient's life, asthmatic attacks, of a quasi-epileptiform character, suddenly supervened. Marked inhibition of the heart-beat always preceded the seizure by some minutes, the pulse falling gradually from 130 to about 100, and then becoming irregular and intermittent. Headache, sickness, and deafness, were observed about the same period, together with increasing dullness of the upper and left half of the sternum, which had previously been over-resonant. Among other remedies found successful in relieving these asthmatic attacks, constriction of the upper part of each of the patient's arms was used, so as to retard the venous circulation, and ease the engorgement in the chest. A tightly tied handkerchief, or the grasp of the medical attendant's hands, was found a ready means of applying the pressure.

Tumour of the Falx Cerebelli.—Mr. E. ATKINSON read notes of a case. The patient first came under the observation of Mr. C. Richardson in March of the present year, and then complained chiefly of uterine symptoms, which were referred to a hard swelling felt behind the uterus. On April 24th, she was admitted into the infirmary under Mr. Atkinson; and then, besides the pelvic trouble, she complained of intense pain at the back of the head and in the neck; but, as there were other anomalous pains, she was thought to be hysterical, and was treated with antispasmodics, tonics, etc., without any relief. On June 26th, after she had left the hospital, Mr. Atkinson and Mr. Richardson again saw the patient, when the agonising pain in the head and neck led to a diagnosis of intracranial mischief. Although sedatives gave little or no relief, iodide of potassium in doses of ten to twenty grains proved beneficial for one or two weeks; there being, nevertheless, no history of syphilis. On August 9th, she was readmitted to the infirmary. She had severe pain in the head and neck, with occasional vomiting; she was haggard in aspect, her eyes wild and staring, she had dishevelled hair, and generally a hysterical appearance. The

pupils were equal. There was no diplopia; and the discs were normal. There was no paralysis, no dizziness nor staggering. She died suddenly on August 10th. At the necropsy, there was found dropsy of the Fallopian tubes, one of which, being packed in behind the uterus, filled Douglas's pouch, and gave the feeling of a solid tumour from the vagina. A tumour of the size of a filbert was found attached by a pedicle to the falc cerebelli, and projecting into the right lobe of the cerebellum; in which lobe was also found a detached tumour of the size of a Barcelona nut. Under the microscope, the tumours appeared to be gliomata. The concurrence of the uterine and cephalic symptoms had been misleading; but Mr. Atkinson had seen the same difficulty before; symptoms having been referred to hysteria, when they were really due to organic disease. He quoted Dr. Gowers to the same effect. Mr. Atkinson thought the benefit derived from iodide of potassium might be explained by the fact that the tumour originated in its fibrous tissue.—Mr. C. RICHARDSON described the pain from which the patient suffered as extreme. Morphia, chloroform, and other sedatives gave merely transient relief.—Other points in the history were discussed by various speakers.

Treatment of Increased Arterial Tension.—Dr. S. C. SMITH read a paper on the treatment of increased arterial tension.

YORK MEDICAL SOCIETY.

W. H. JALLAND, F.R.C.S., President, in the Chair.

President's Address.—Mr. JALLAND began by speaking of the age of the Society, which, he said, was one of the oldest in the provinces. He insisted on the advantages of discussing at the Society's meetings the failures as well as the successes met with in practice: taking as the subject of his address the advances in medicine and surgery in modern times. He dwelt on the progress which had been made in the study of pathology and its influence on modern practice. He alluded to some of the latest additions to our knowledge, and especially commented on the brilliant results of M. Pasteur's researches. Referring to the subject of modern aids to diagnosis, he directed attention to the value of the microscope in this respect. The microscope had cleared up the whole subject of renal diseases and calculi, and had enabled us to classify tumours, and to discriminate between cancerous and benign growths. The stethoscope, the clinical thermometer, the ophthalmoscope, and the sphygmograph had each contributed much to a clearer understanding of morbid processes. Rapid progress had of late years been made in the department of operative surgery; and this was in a great measure due to the introduction of anesthetics. The part taken by British surgeons in advancing surgical science was referred to; and, with regard to the Listerian method of treating wounds, which was discussed at some length. Mr. Jalland considered that the balance of evidence was greatly in its favour. In speaking of the improvements in the operation of lithotomy, the excellent work of Professor Bigelow was noticed. In conclusion, Mr. Jalland briefly considered excision of joints; and, with reference to excision of the knee, said that his own experience of the operation led him strongly to advocate early excision in appropriate cases.

DIET OF THE JAPANESE.—Few natives, except officers in the capital, sailors and soldiers, eat beef. Mutton and pork beyond the treaty ports are, according to the *New York Journal*, hardly yet known. About two hundred varieties of fish are eaten, one-half of the people eating fish every day. The food of the masses is "ninety per cent. vegetable." A list of food plants in use, not including sea-plants, has been prepared, with their analyses, by Professor Edward Kinch, of the Tokio University. A large number of these substances are unknown, or at least unused, in the United States. Of rice, which occupies in its culture one-half of the cultivated land, there are 250 varieties of seed in the country. Millet is extensively used, but bread raised from a "monge" of yeast is hardly yet known in the popular diet, the old Latin name for it being *panis monge*, however, in use. The soybean, which in chemical composition closely approaches animal fibre, is extensively cultivated. Probably no country excels Japan in the variety of leguminous plants raised for food. Of tubers and roots, the sweet potato is the most popular, though, of course, 25 much valued in the aristocratic class, as onions are supposed to be among us. Sixteen million bushels of these "Satsuna potatoes" were produced last year, while the "Java" or "Dutch" common white potato is left to foreigners, the native taste not liking it. Lily bulbs—sixteen varieties—serve as food, boiled and served with "drawn butter." The lotus root is eagerly eaten without oblivion of country or decay of patriotism. Poppy seeds powdered as condiment, infusions of salted cherry blossoms for drink, honey, figs, and acorns are among the articles of diet.

REVIEWS AND NOTICES.

THE INTERNATIONAL ENCYCLOPEDIA OF SURGERY. A Systematic Treatise on the Theory and Practice of Surgery by Authors of Various Nations. Edited by JOHN ASHBURST, Jun., M.D., Professor of Clinical Surgery in the University of Pennsylvania. Illustrated by chromolithographs and woodcuts. Vol. ii. London: Macmillan. 1882.

DR. ASHBURST's valuable second volume is an Anglo-Saxon, rather than an international, encyclopædia, for it contains not one single article from French, German, or other continental authorities. True, however, to the principles of the first volume, it is monopolised to the extent of about three-quarters by the contributions of surgeons whose ancestors, recent or remote, have crossed the Atlantic. Whilst out of seventeen papers in the first volume, thirteen were written by citizens of the United States, in this second volume, we find eighteen articles, fifteen being American; one of these is by a Canadian, and the three remaining monographs are British. We cannot but hope to see the adjective of the title of this important encyclopædia more thoroughly justified in the four remaining volumes than it is in the first and second.

The woodcuts are not more delicately finished in the second volume than in the first; as anybody will admit on inspecting Fig. 315, representing "dressing of absorbent cotton applied to glans penis" (in gonorrhoea). The "dressing" looks like some morbid growth springing from half the periphery of the orifice of the prepuce. These woodcuts largely consist of representations of new instruments, methods of dressing wounds and ulcers, and useful contrivances. The chromo-lithographs are decidedly improved, both in quality and quantity. Plate iv, "Senile, Dry, and Moist Gangrene," is really a work of art; Plate v is of high merit, and the ten remaining coloured drawings are unobjectionable only through the fault of their subject, and not through the want of skill of the artist, being devoted to representations of venereal disease; they all, however, fall far short of Plates iv and v in colouring, being too hard in tone. The different forms of chancre are mostly well drawn and well coloured.

The text is decidedly superior, in nearly every respect, to that of the first volume. The first article is a short but well written essay on "Contusions," by a Virginian, Dr. Hunter McGuire. Mr. Bryant supplies a valuable monograph on wounds; the author's views are so well known to our readers, that we need not enter into the details of his contributions. Dr. Ashurst has wisely secured as author of "The Antiseptic Method of Treating Wounds," the chief assistant of the founder of the system, Mr. Watson Cheyne, whose competency to summarise Mr. Lister's method, with all its networks of theory, fact, science, art, and detail, in the form of a treatise, has already been shown in his Jacksonian Essay on that subject. We congratulate Mr. Cheyne on the conciseness and brevity of his contribution, and the entire absence of needless and tedious repetitions about tissue and inflammation and other questions relating to wounds, and to subjects fully discussed in other papers. Dr. Packard's article on "Poisoned Wounds" is exceedingly useful for reference. Besides dissection-wounds, snake-wounds, and stings of insects, we find mention of such conditions as "wool-sorters' disease," with a condensation of Mr. Spear's Report to the Local Government Board, on the last named affection. Dr. Bill, United States Army, contributes a remarkable paper on "Sabre and Bayonet Wounds; Arrow Wounds." We learn from the author, experienced in Red Indian warfare, that "the arrow can be aimed at fifty yards as correctly as the revolver, and can be shot nearly as fast. The arrow cuts very clean; and the wounds which it causes are less liable to suppurate than other punctured wounds. The "bird arrow," a simple shaft, with its end pointed, and hardened by fire, is sometimes used by the Indians; an American, wounded in the top of his left arm by a bird arrow, plucked it out at once, but died two weeks afterwards. The unpublished notes on arrow-wounds, in the office of the Surgeon-General, United States Army, must be of high value, judging from Dr. Bill's samples. The article includes some very useful woodcuts of contrivances for the removal of arrows; and the author, in concluding the subject, recapitulates as follows: "1. An arrow head must be removed as soon as found. 2. In the search for the arrow, extensive dissection is not liable. 3. An arrow may be pushed out as well as plucked out. 4. The finger should be used in exploration in reference to a probe. 5. Great care must be taken to avoid detachment of the shaft. 6. Healing by first intention should be encouraged. 7. The surgeon should strive to comfort the patient. Although arrow-wounds are not attended with much shock, they are usually the cause of great depression of spirits." We call attention to Dr. Bill's observations on arrow-wounds of the abdomen, and their mortality of

ninety per cent. The author has succeeded in producing a contribution of high value, both as a record of the work of others, and as a concise thesis on the entire subject of bayonet and arrow-wounds. We leave the passages treating of injuries caused by the bayonet, as well as the article on "Gunshot-Wounds", by Dr. P. S. Connor of Cincinnati, to the criticism of those who are well versed in military and naval surgery. Dr. Connor's paper appears to be very complete, and full use has been made of the abundant material collected by the army medical authorities in the United States. Dr. P. G. Morton of Philadelphia contributes an article on "The Effects of Heat"; this contains some good temperature-charts from cases of burns, full observations on duodenal ulcer, and a valuable section devoted to "Lightning-Stroke", including notices of some of the latest cases, well known to English readers of transactions of London societies; nor are cases of death and injury from the electric light and its apparatus omitted. We learn that, "for many years past, in the Pennsylvania Hospital, all cases of burns and scalds have been treated with carbolic acid, in some form or other; the preparations most commonly used are carbolised cosmoline, carbolised olive-oil, and occasionally the oxide of zinc ointment, combined with phenol. The carbolised cosmoline consists of the ordinary ointment of petroleum, with five per cent. of crystallised carbolic acid. The carbolised olive-oil consists of eleven parts of pure olive-oil to one part of Calvert's liquid carbolic acid, No. 4..... These preparations fulfil all the indications required." Dr. Grant of Ottawa is the author of a short well written paper on "The Effects of Cold", treating of chilblains and frost-bite. Mr. Howard Marsh has supplied the *Encyclopædia* with a good general essay on "Abscesses", including sinus and fistula, and diffuse suppuration. "Ulcers", with a good section on Skin-grafting, form the subject of a paper by Dr. J. T. Hogden of St. Louis. Dr. Moore of Buffalo supplies an article on "Gangrene and Gangrenous Diseases", very complete, and adorned with two excellent chromo-lithographs, to which we have already referred. If the *International Encyclopedia of Surgery* be mainly American, it is but fair to remember that, in the two first volumes, the Transatlantic contributors have been decidedly the most successful in collecting new or forgotten material, which, in fact, is precisely what is most needed in large books of reference.

Dr. J. C. White, Professor of Dermatology in Harvard University, has undertaken a good special article on "Surgical Diseases of the Skin and its Appendages", including vegetable and animal "Parasitic Affections"; here, tinea decalvans is, rightly, not included; but why it is omitted from "Diseases of the Hair", whilst "hirsuties" is awarded two pages and a half, we cannot say. Dr. J. W. Howe writes on "Diseases of the Cellular Tissue", chiefly on cellulitis, with observations on myxœdema and certain parasites. Dr. C. Nancrede of Philadelphia supplies a monograph on "Injuries and Diseases of Bursæ", heralding the future series of papers on the surgery of the organs of locomotion.

The most complete group of articles in the second volume of the *Encyclopædia* are the three devoted to venereal diseases. Dr. J. W. White of the University of Philadelphia writes on "Gonorrhœa", Dr. F. R. Sturgis of New York on "The Simple Venereal Ulcer or Chancroid", and Dr. Van Harlingen of the University of Pennsylvania on "Syphilis". The three contributions together fill over two hundred and seventy pages, forming a very complete treatise, loaded with most valuable information; but want of space prevents us from giving more than a passing notice of this portion of Dr. Ashhurst's *Encyclopædia*. In conclusion, one thing is certain with regard to his second volume. It far eclipses the first in value as a work of reference, and is a very cheap investment, that will prove a valuable addition to any private or public medical library.

EXAMINATION QUESTIONS ON THE MEDICAL SCIENCES. Selected and arranged by JAMES GREIG LEASK, M.B.Aberd. London: Baillière, Tindall, and Cox.

DR. LEASK informs us, in his preface, that in the preparation of this work he has aimed at providing, in a convenient form, such a concise collection of questions as will prove useful to the medical student. To attain this end, University calendars, Army Medical Reports, and medical periodicals, have been consulted. The subjects are arranged alphabetically, to facilitate reference, under ten sections representing different sciences or subdivisions of sciences necessary for candidates for medical degrees and diplomas. Certain people, said a French philosopher, study all their lives, and, when they die, they have learnt everything except the art of thinking. This remark might be modified for our purpose as follows. Most candidates are expected to learn everything; when they are passed, they have been guaranteed to know everything (in which they happen to have been examined) excepting how to think.

Still, with all its faults, the examination system does enforce a certain amount of thought on a student of average or inferior intelligence, although the diligent young worker is not improved by compulsory force being brought to bear on his memory, at the expense of his enthusiasm for his subject of study.

Under "Cuboid Bone" Dr. Leask places one "question"; that is, the command to describe it. The compiler is right to insert a "question" (speaking conventionally) of a type very common in the examination papers of the best known English qualifying body. Still, the student who cannot guess that he may be required to describe a structure, without seeking for proof by analogy in old examination papers, is not worthy of being a candidate for the lowest type of qualification. The same remark applies to questions on the divisions of nerves and arteries. We all know the opinion of the demonstrator on a young gentleman who says to him: "Please, sir, are we expected to know all the branches of the facial?" On the other hand, such questions as "How is the crystalline lens nourished?" promote a certain amount of thought. Some of the sciences introduced by Dr. Leask are particularly suitable for pure examination study. Thus, what is termed "Materia Medica" imperatively demands cramming, even if a Ruskin or a Carlyle had to learn it, and to be allowed four years' study, by their examiners, in the bargain. Still more useful are the questions on Hygiene; they are of a kind that may often puzzle a very diligent student, for the subject is so wide in its scope. We regret that a knowledge of this science is not compulsory for every qualification. "No young married couple should be without it" was once the stereotyped form of praise in criticisms on "domestic" manuals. We will go as far as to say that no young general practitioner and no young medical householder—and most young practitioners are householders—should be without a fair knowledge of hygiene; and, if he has not studied that science and passed an examination in it, let him turn to some of Dr. Leask's questions, such as—"In house-fittings, enumerate the several places where ventilating-pipes are required." If he cannot answer this problem,—which is highly probable—let him study an elementary work on hygiene at once, and then test himself from Dr. Leask's work once more, otherwise he is unfit to be a family doctor, and equally unfit to be trusted with an operation in a strange house. For its professed purpose, Dr. Leask's *Examination Questions* fulfils its object; the author cannot object to our indicating how it may be used for higher aims than mere cramming for a qualification.

ON THE CLIMATE AND FEVERS OF INDIA: being the Croonian Lectures delivered at the Royal College of Physicians in March 1882. By Sir JOSEPH FAYRER, K.C.S.I., M.D., F.R.S. London: 1882.

THESE lectures are not new to our readers, for they appeared in this JOURNAL as they were delivered. They now form a goodly volume, with several additions and a series of cases illustrating the most important of the fevers described. The *questio vexata* of malaria is discussed at some length, and a summary of the various theories which from time to time have been put forth is given. The discovery of the so-called bacillus-malaria by Klebs and Tommasi-Crudeli is of course noticed, although it is not easy to see how far the author accepts the discovery as the *vera causa* of paroxysmal fevers. We, however, gather that his verdict is one not uncommonly found in Scottish criminal courts—viz., "Not proven"—which is certainly our own. It is a significant fact, not noticed by the author, that the most careful researches have not led to the discovery of this bacillus in the malarial soil of Bengal, and in many arid places in India and elsewhere, where remittent fevers of types quite as severe as those seen in the Agro Romano are rife. Of course we have the "chill" theory of Oldham and others, but without any notice of what we consider the fatal objection to the hypothesis—viz., that "chills" are not followed by agues unless they occur in so-called malarial climates, or in the persons of those who have lived in such countries. "Chills" in this country are common enough, and they are fruitful in mischief; but they do not, except under the conditions noted above, produce agues.

The fevers of India are very well described; and, if there is nothing novel in the modes of treatment advised, that recommended is decidedly conservative, and the spoliative methods of a generation which has passed away receive no countenance from the author. We could have wished that Sir JOSEPH FAYRER had been able to speak more decidedly on the subject of the remedy known as Warburg's tincture. He merely says of it, that Maclean speaks highly of it, but that he does not think it superior to quinine alone. Now, good remedies are not so plentiful that we can afford to deal with them in this offhand manner. It is not Maclean alone who has placed on record the great power of this remedy in the worst forms of malarial remittent fevers; a great many medical officers of experience, particularly in Southern

India, have recorded the high opinion they entertain of this curious combination of drugs. The active agent is unquestionably quinine; but the question is, is it more efficacious than quinine *per se*? Our experience is all in favour of this famous combination, no longer a secret or patent medicine; and we unhesitatingly say that we have succeeded with this remedy in arresting the terrible exacerbations of the remittent fevers of the Gold Coast, when quinine alone, in full doses, disappointed our expectations.

A long chapter is given to Enteric Fever in India, with a summary of the opinions of nearly everyone who has taken part in the controversy that has arisen on this subject. We fear that a young student of tropical medicine would rise from the perusal of this chapter in a state of considerable mental confusion, so contrary are the opinions expressed in regard to its causation. To us, it appears that knowledge is not much advanced by the apparent disposition of many of the writers, whose opinions are quoted, to shut their eyes to the existence in India of the causes known to operate in Europe in the genesis of this fever, which, making allowance for the disturbing element of a malarial complication, is in all its salient features, its symptoms, duration, and morbid anatomy, essentially the same disease as that known to us in this country under the same name. The writers quoted by the author, following Bryden, dwell much on the proneness of young soldiers to suffer from it, as if that were peculiar to India, the same being as true of young people at home as there. Our soldiers at Ismailia were obliged to draw their water-supply from one source—viz., the so-called Sweet Water Canal, abounding in animal matter in every stage of putridity. What was the outcome? The answer is not far to seek—bowel-complaints and enteric fever. We are informed that in the Royal Victoria Hospital, Netley, there are at this time upwards of fifty cases of enteric fever, admitted from the seat of war; and, by last accounts from Egypt, one of the military hospitals there had eighty cases of the same disease. It is impossible to shut our eyes to the importance of such facts, which are worth any amount of vague speculations about "climatic" causes, which abound in the quotations given by our author. At page 200, Sir Joseph Fayrer quotes from a paper in the *Contributions to Military and State Medicine* a paper on the Causation of Enteric Fever in Tropical Countries, to the effect that "specificity of a disease does not necessarily imply specificity of its cause"—a statement that, in our humble judgment, is hard to understand. Although constrained thus to differ from much in the lecture on enteric fever, we freely confess the difficulty of arriving at a clear judgment in the face of so much contradictory evidence, which our author has, with perfect fairness, placed before his readers.

In conclusion, the lectures, taken as a whole, must be regarded as a valuable contribution to tropical medicine, creditable to the author, and worthy of his high reputation.

A PRACTICAL TREATISE ON ELECTRO-DIAGNOSIS IN DISEASES OF THE NERVOUS SYSTEM. By A. HUGHES BENNETT, M.D., M.R.C.P., Assistant-Physician to the Westminster Hospital. 8vo., pp. 176. London: Lewis. 1882.

WE welcome the appearance of Dr. BENNETT'S work as a proof of the awakening sense among the profession, of the important position occupied by electricity in the elucidation of many neuro-pathological problems. Since the days of Marshall Hall and Todd, who insisted upon the value of the faradic current as a means of distinguishing between "cerebral" and "spinal" paralyses, no contributions of any value had been made by British physicians to the subject of electro-diagnosis. In the meanwhile, in Germany, the subject has for some years past been followed up with energy, and an ample harvest of clinical and pathological facts reaped. The reintroduction of the galvanic current into medical practice by Remak (1856) led to the important rediscovery, by Baierlacher (1859) of the fact that muscles which had ceased to react to faradism often showed an excessive excitability to weak galvanic currents. We say *re-discovery*, for a similar observation had been made at the end of last century by the "Citoyen Halle", a physician practising in Paris; but, like all other premature discoveries, this important fact had not been understood, but simply registered as a curiosity.

Between the years 1840 and 1867, a large mass of confirmatory evidence was accumulated, which was summarised in the third edition of Ziemssen's classical treatise on electricity. Erb, with whose name the electro-diagnosis of the palsy known as "Erb's palsy" is inseparably connected, was the next to demonstrate the electrical difference between the motor and nerve upon certain diseases, histological changes. These findings, with German neuro-pathologists, can readily be placed side by side with the observations of the French in neurophysiology, and the German, French, and Italian, which have

rendered from both a physiological and a pathological point of view. Clinical observation and experimental investigation have progressed hand in hand; and now, after fourteen years, during which the new doctrine has grown in extension and strength, is at last presented to the English reader in a manner worthy of its importance. It is true that a few years ago an author described Erb's discoveries (without once mentioning his name), and tried to introduce them to the notice of the profession under the name of "wasting-test"; but his success does not appear to have been great, and the misnomer has fortunately failed to become popular.

Dr. Bennett very properly insists on the great technical difficulties attending a thorough examination of the electrical excitability of the human nerves and muscles. There seems to prevail a notion, that any one with a battery and an elementary knowledge of anatomy and of the medical applications of electricity is fit to perform such an examination. This is so far from being the case that, even in the most obvious instances of altered excitability, the most extraordinary mistakes are constantly being made by men who, though eminent neurologists, have not submitted themselves to the necessary schooling in the matter. Electro-diagnosis is infinitely more complex than any other method of physical examination—at least when applied to many of the cases where it is really useful; in cases, that is to say, where the abnormalities of reaction are but faintly marked, as, for instance, during the incipient stages of various diseases.

The problem of electro-diagnosis is this: Given a certain electrical variation in two similar portions of irritable tissues, one of the portions being known as healthy, to compare the results obtained. In order to understand what the solution of the problem involves, we have to consider the conditions to be fulfilled in producing a definite electrical variation in, say, a superficial nerve. We must so arrange our absolute current-strength, and choose the size and position of our electrodes, that the current, in diffusing itself among the parts immediately underlying the electrode, should penetrate the nerve at a definite point and with a definite density. Now, unless the observer be perfectly familiar with all the conditions to be fulfilled in carrying this out, he will be exposed to perpetual errors, and fail to convince anyone alive to the fallacies surrounding such experiments. It is because the ignorance of electro-physics is general and dense, that medical literature swarms with worthless accounts of electro-diagnostic examinations, and that in our courts of law the unedifying spectacle is too often presented of medical experts swearing to diametrically opposite statements concerning matters not only of opinion, but of fact. It cannot be too much insisted upon that the thorough electrical exploration of a living man's muscles and nerves is a physiological experiment, in which the manipulations must be as accurate, and the conditions as completely under control, as in any other scientific mode of proof. But we are afraid that this view will not be readily shared by those who are satisfied with dabbling paralysed limbs with sponges connected with an electric machine, and calling that electro-diagnosis.

Dr. Bennett gives a *résumé* of our present knowledge of the histological changes in nerves and muscles which are at the root of the alterations of their reactions. The parallelism has been presented in a very pregnant manner by Erb in his ingenious diagrams. Our author presents it under the form of synoptical columns, which, if more explicit, are perhaps not so readily grasped at a single glance. Practical directions as to the carrying out of electro-diagnosis, and a description of the apparatus to be used in the process, are also contained in the first portion of the book. It would be as easy as invidious to criticise in detail some of the author's statements. The subject is an extremely difficult one to present in a concise form, as everyone who has thought on the matter will know by experience. There is one assertion, however, with which we cannot agree, and which deserves a word. The galvanometer, we are told, is not indispensable in electro-diagnosis. Dr. Bennett very properly remarks that it is difficult in practice to measure the strength of the currents used. But the galvanometer does far more than that; it assures us that the resistance of the corresponding portions of the body is equal, and thereby that the currents used are strictly comparable. For what we must be assured of is, not so much the actual strength of the currents applied, as the similarity between those used to test symmetrical nerves and muscles. This point has been well illustrated in Erb's great memoir (*Arch. Psych.*, 1873), where the principles of electro-diagnosis are laid down in a masterly fashion. Thus, wherever Dr. Bennett speaks of diminished or increased excitability, the sceptical reader may fairly ask for a proof that it was not really changes in the resistance of the tissues which was the cause of the quantitative alteration. When qualitative alterations are affirmed, no such objection can be raised, of course.

The second part of the volume before us is occupied by the narrative

of a series of cases illustrative of the principles and value of electro-diagnosis. These cases are very instructive, being fairly typical, and extending over a wide range of neuropathic disturbances. In many of them mistakes had actually been made, or were likely to be made, by physician trusting to the other symptoms present, and neglecting to investigate the electrical reactions; in none did the examination necessary to demonstrate the abnormal reactions require more care or skilful manipulation than should be possessed by anyone in the habit of seeing cases of nervous disorder. We cannot follow the author in the details, but content ourselves with saying that the body of proof he has brought together is not likely to miss its effect upon the candid and thoughtful reader, who, by the way, will find, in a chapter of Dr. Buzzard's recently published work, a weighty confirmation of some of our author's facts concerning the simulation of myelitis by hysteria.

The book contains new plates of the motor points, and some illustrations of instruments, among which we note an ingenious handle which contains a rheostat, a commutator, and an interrupter. The text, however, shows the want of a careful revision. This applies chiefly to the notes concerning the reactions observed in the cases recorded, and which positively swarm with curious constructions and clerical errors. For instance: "A current with both faradism and galvanism.....have no effect;" "The nerve-trunks are followed by normal responses;" "His limbs and body are accompanied with a tremor;" etc. But these are mere specks upon a fair enough picture. We hope Dr. Bennett will soon be able to remove them in a second edition of his most deserving volume.

DIE ELECTRICITÄT IN IHRE ANWENDUNG AUF PRACTISCHE MEDICIN. By Dr. MORITZ MEYER. Fourth edition, 8vo, pp. 632. Berlin: 1882.

DR. MEYER'S work is a mine of instruction as regards clinical fact and experience. It is nearly thirty years since the first edition of his book appeared; at that time faradisation, in the hands of Duchenne, was the only mode of treatment employed. Soon after, came Remak, who restored galvanism into medical practice, and with him the bitter controversy between the partisans of the two currents. Remak died prematurely in 1865; Duchenne followed him a few years later. Since then, prejudices have been swept away by the great advances made in the theoretical knowledge concerning electro-therapeutics, and in the practical applications of both currents. The polar method, electrotonus of human nerve, the relation between pathological changes in nerve and muscle and their reactions to electricity, have all been established in turn. Last, not least, the supreme importance of a sound knowledge of electro-physics by the electro-therapist, and the relegation of the usual electro-physiological facts to the background, is bearing manifold fruits. Electro-diagnosis is becoming more accurate and scientific; therapeutics proper, more empirical. Dr. Meyer was formerly a believer in the "directional" influence of currents upon the organism. He now proclaims the therapeutic supremacy of poles. Where he now succeeds with the latter method, he does not seem to have failed with the former. The results are much the same, whichever method is employed. What stronger proof need we to show that our poor theories are as yet far from penetrating the mysteries of disease, and of the influence of electricity upon the function of organs or nutrition of tissues? Experience alone, guarded by the true spirit of scientific scepticism, can furnish us the data whereupon to build our generalisations.

Dr. Meyer has kept abreast with every progress, theoretical and practical, and the several editions of his book reflect faithfully the advances made around him. He has no original views to promulgate, but is ever ready to accept new truths and with much practical skill to apply them to practice. It is unfortunate for this edition, that it should have coincided with the publication of Professor Erb's new volume; but even against such a considerable competitor, his work will stand as an honourable and useful contribution to the cause of electro-therapeutics.

A PRACTICAL TREATISE ON THE MEDICAL AND SURGICAL USES OF ELECTRICITY. By Drs. BEARD and ROCKWELL. Third edition, 8vo, pp. 758. New York: 1881.

THE ponderous volume before us has long been familiar to the English as well as to the American student of electro-therapeutics. This third edition does not materially differ from the preceding. There is something disappointing in the effect produced by the copious flow of words which characterises the chapters dealing with the general principles. After perusing them, does one feel much the wiser for it? German science is practically a closed book for the authors. The polar method and reaction of degeneration are but cursorily adverted to. The plan

of general faradisation, which is the only important original feature in the book, is very clearly and fully described. Several continental observers have lately reported favourably in its favour. Dr. Playfair has introduced it in this country as a factor of the Weir Mitchell method of treating hysteria, and the general malnutrition which it frequently involves. We need not say how successfully.

MEDICAL ELECTRICITY. By R. BARTHOLOW, Professor of Therapeutics, Jefferson College, Philadelphia. 8vo, pp. 262. London: Kimpton. 1881.

WHILST Professor BARTHOLOW's object to supply a suitable text-book to students was well founded, we doubt whether he has succeeded to do so better than his predecessors. He follows very much the old routine plan of describing batteries, giving a superficial account of Ohm's law, describing electro-physiological facts which have absolutely no bearing upon medical electrification, and some general directions as to the treatment of complaints where electricity has been found useful. What is wanted in the English language is a work on the plan of Erb's new "Elektrotherapie," where the physical principles are laid down clearly with reference to the phenomena of current distribution in the body. Upon such a basis alone can a satisfactory electro-physiology (of man), diagnosis and therapeutics be raised. The author's account of the reaction of degeneration is very incomplete. His clinical and therapeutical experience is of weight, however, in the judgment he passes over the value of electricity as a curative agent in nervous and other diseases.

DISEASES OF THE EAR. By GEORGE P. FIELD, M.R.C.S., Aural Surgeon to St. Mary's Hospital, and Lecturer on Aural Surgery in the Medical School. Third Edition. London: Renshaw. 1882.

IT is not a great while since we had the pleasure of reviewing the second edition of Mr. FIELD'S work, when we referred to the practical and common-sense manner in which the author had dealt with his subject. In the present edition, the more important advances in otology which have been made since the second edition was written, are discussed. Five additional chapters have been added, and the work has been thoroughly revised, and, for the most part, rewritten. The illustrations, which have in former editions contributed very largely to the value of the book, are increased in number. The coloured plates are remarkably effective, and we note some new ones, representing the microscopic structure of exostoses and aural polypi. The part of the work which, perhaps, chiefly calls for remark, is the chapter upon osseous tumours. The success which the author has met with in the treatment of these cases is now well known, and entitles him to write with authority upon the subject. The chapter upon aural polypi is an important one, the nature, diagnosis, and treatment of this affection being most systematically and ably discussed. Diseases of the auricle are dealt with in the present edition, and the author discusses the subject of deaf-mutism in a very interesting chapter. The book is full of useful information without being profuse, and forms an excellent guide and reference for the practitioner or the student.

A TREATISE ON AURAL SURGERY. By H. MACNAUGHTON JONES, M.D., Professor of Obstetrics and Gynecology in the Queen's College, Cork; Surgeon to the Cork Ophthalmic and Aural Hospital. Second Edition. London: Churchill. 1882.

DR. MACNAUGHTON JONES'S work is also very reliable, although smaller than Mr. Field's. It is revised and enlarged from the first edition.

The points which have chiefly attracted our attention, and which are dealt with in an interesting and comprehensive manner, are the following; the development of fungi, both in the external ear and in the tympanum, a subject which has been investigated by many observers, both in this country and upon the Continent; the treatment of aural polypi, which is discussed very practically; the facts regarding tenotomy of the tensor tympani muscle, which are well summarised; and an excellent chapter on deaf-mutism, and artificial aids to hearing. The book is written in a clear and concise style, printed in agreeable, large type upon good paper, and the illustrations are well executed. We congratulate the author upon his second edition of a very useful little work.

LOCK HOSPITALS AND LOCK WARDS IN GENERAL HOSPITALS. By FREDERICK W. LOWNDES, M.R.C.S., Surgeon to the Liverpool Lock Hospital. 1882.

THIS pamphlet has been written with the object of affording information to the general public, as well as to those connected with hospitals

regarding the accommodation at present existing in the United Kingdom for the treatment of venereal diseases. It will probably surprise many persons, both in and out of the profession, to learn that in the whole of England, Scotland, and Ireland, there are but six towns which contain voluntary lock hospitals, and that in only two of these (London and Liverpool) are there beds (forty-five in all) for male patients; while for women, though four hundred beds could be made up, only 232 are available, owing to want of funds. Further, the beds set apart for females with venereal disease in all the general hospitals of London only number fifty-seven. Mr. Lowndes also shows the utter inadequacy of lock wards in the general hospitals of most large towns. As regards the best method of providing for the treatment of the civil population, the author strongly advocates the system in force at Liverpool—namely, a separate lock hospital forming part of a general hospital, and under the management of its committee, but with a separate surgical and administrative staff.

Besides much valuable information respecting the work of the various voluntary lock hospitals and wards throughout the country, the pamphlet contains also a short account of the Government hospitals which have been established in connection with the working of the Contagious Diseases Acts. Mr. Lowndes's remarks, as well as his statistics, are deserving of careful study, and they ought certainly to do something towards removing the unreasonable prejudice entertained by many otherwise well meaning persons on this subject.

NOTES ON BOOKS.

The Contagiousness of Pulmonary Consumption and its Antiseptic Treatment. Two Lectures delivered at King's College Hospital in the Summer Session of 1882; with Appendices and Notes. By J. BURNEY YEO, M.D. (Churchill: 1882).—The two lectures, which make up the chief bulk of this volume, have so recently appeared in the pages of the BRITISH MEDICAL JOURNAL, that it will be unnecessary for us here to enter into the details of the arguments by which the author attempts to give an answer to the question which he proposes: "Under what conditions," if any, "is consumption contagious?" Dr. Yeo, though he suspends his judgment, and does not give unquestioning adherence to the theories based on the discovery of a *Monas tuberculosis*, or a *Bacillus tuberculosis*, has yet great faith in the use of antiseptic remedies in phthisis pulmonalis; and the most valuable parts of the volume before us are those in which he relates his own large clinical experience of the treatment of phthisis by inhalation of antiseptic substances. An appendix, dealing with the materials suitable for this purpose, and discussing their relative merits, concludes the volume, and will be found a valuable guide to practice. In an appendix to the first lecture, Dr. Yeo has printed Dr. William Budd's famous *Memorandum on the Nature and the Mode of Propagation of Phthisis*, which was published in 1867. To the arguments then brought forward on the clinical side of the question little has since been added, though greater precision and a larger mass of details now increase materially the force of the contentions. An appendix on *Opinions and Experience of the Antiseptic Treatment of Phthisis*, consists of abstracts from the papers of various writers on the subject. Every physician ought to make himself fully acquainted with the best means of carrying out the antiseptic treatment; and in this handy volume will be found information on every necessary detail of manipulation, with prescriptions and full instructions.

REPORTS AND ANALYSES

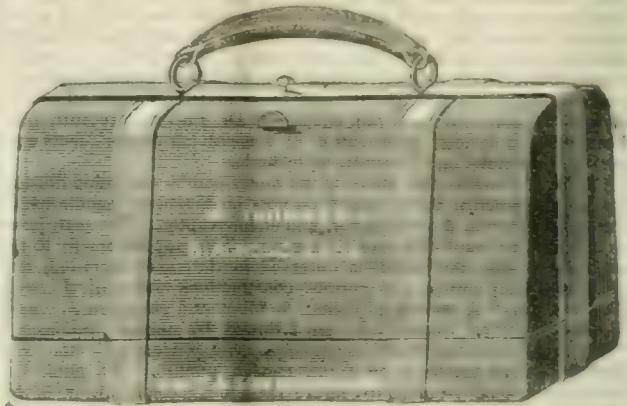
AND

DESCRIPTIONS OF NEW INVENTIONS

DIAGNOSIS-CASE.

HAVING, for some time, wished to have various mechanical aids to diagnosis in a portable form, I instructed Messrs. Salt and Son, surgical instrument makers, of Birmingham, to make a diagnosis-case. I am glad to say they have completed their task most ably and satisfactorily, and have provided an useful light case, containing nearly everything required for diagnosis purposes. The following is a list of the instruments, etc., included: Sims's uterine speculum, Ferguson's metal specula, bivalve rectum speculum, metal ear-specula, nasal-speculum, bivalve patella, ear-syringe, urinometer, and trial-glass; three vulvar specula, containing ospic test, nitric acid, caustic potash, hermetically sealed; cystometer, spring measuring-tape, stethoscope,

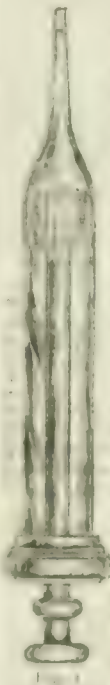
ophthalmoscope, exploring trocar, Simpson's sound, male and female catheter combined, exploring sound, Thompson's sound and searcher, and clinical thermometer. The case consists of two halves, and, when closed, forms a kind of portable reticule-case, as shown in the engraving; a reserve space is also made as a receptacle for the storage



of any addition the fancy of the individual practitioner may think desirable. The various instruments are securely fixed, each in position, and the engraving gives a fair illustration of the case when closed. I consider the case worthy of the reputation of the firm by whom it has been manufactured, and believe that my professional brethren would be glad to know of such an useful adjunct. WM. THOMAS.

NEW INVENTIONS IN SURGICAL INSTRUMENTS.

By RICHARD DAVY, M.B., F.R.C.S.,
Surgeon to the Westminster Hospital.



Hydrocele Syringe.—Messrs. Wright and Co. have recently carried out my instructions for simplifying the ordinary hydrocele syringe for iodine. The old syringe consists of eight or nine different pieces, which are liable to get out of order; and the nozzle only fits one cannula. The new syringe consists of three pieces only; the nozzle is made tapering, and is of glass, so as to fit any ordinarily sized cannula. The engraving shows well the piston, the glass cylinder (Fig. 1), and the metal cap. The new syringe can be cleaned with far greater ease than one of the old pattern. The price is also much less.

Starch or Gum and Chalk Bandage Forceps.—In orthopædic practice, my dressers have constantly to remove bandages which have been temporarily stiffened with starch, or gum and chalk, or plaster. I have been dissatisfied with all scissors made for this purpose; and now I use the forceps shown here (Fig. 2), and a small saw—they are the most practically useful tools for the purpose. The forceps act either as cutting or holding agents, and cannot get out of order by fair usage. To cut, with these forceps, the bandage must be firmly grasped by the blades, and then a rotatory movement given to the wrist; the edge of the blades (right or left) crushes open the bandage.



BEQUESTS.—The late Miss Anna Maria Traydon, of Leeson Park, Dublin, has bequeathed the following, among other charitable legacies, viz., to the Adelaide Hospital, £1,000; to the Molynux Blind Asylum, Leeson Park, £1,000; to the Hospital for Incurables, £500; and to St. Mark's Ophthalmic Hospital, £500.

BRITISH MEDICAL ASSOCIATION. SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 25th, 1882.

THE NORWICH VACCINATION INQUIRY.

WE have never risen from the perusal of an official report emanating from what constitutes the health-department of the State, with a keener sense of disappointment than that which we experience after reading the report presented to the Local Government Board as the result of the inquiry into the circumstances of the outbreak of erysipelas after vaccination at Norwich. It is not that we had hoped to find the complaints as to the erysipelas being associated with the operation of vaccination characterised as unfounded; neither had we any idea that conclusions, however distasteful, would be lightly set aside by the inspectors. On the contrary, we have, in connection with the Fulham inquiry, recently been afforded abundant proof that, so far as medical investigations are concerned, conclusions, however opposed to the former views of the Medical Department, are not only accepted, but at once made public, when they appear to those concerned to be based on the facts elicited; and this even when, as in the instance in question, other competent observers are inclined to think the conclusions premature. In the Norwich case, however, skilled inquiry as to the cause of erysipelas hardly appears to have been attempted; and hence an opportunity, which we have no hesitation in describing as almost unique in point of importance, has been practically thrown away.

In the months of June and July last, eight children who had been vaccinated at the Norwich vaccination-station, were alleged to have suffered from erysipelas in consequence, four of the cases ending fatally. The occurrence excited considerable interest; and Mr. Henley and Dr. Airy were appointed to hold an inquiry into the circumstances. Six of the children were vaccinated from five separate sources of lymph; and, since twenty other children were vaccinated from the same five sources without any harm resulting, it is obvious that, in these cases, no suspicion attaches to the quality of the lymph. And not only so, but the date at which three of these six children exhibited symptoms of erysipelas, admitted of their having received the poison, as the result of their coming into contact either with the public vaccinator or other persons who were at the time in attendance on cases of that disease. Another child is believed to have suffered from simple erythema; and the question thus comes to be limited to the consideration of the cases of four children, named Lambert, Girling, Threadkill, and Tyler, of whom Girling alone recovered. Lambert and Girling are amongst those who were vaccinated from vaccinifers whose lymph produced no ill results in others; Threadkill and Tyler were vaccinated from a child named Armes. Lambert and Girling suffered from erysipelas within from two to four days of attendance at the station; Lambert's erysipelas, however, followed on attendance for inspection, whereas Girling's followed on vaccination itself. Threadkill's and Tyler's symptoms supervened within a few hours only of the operation of vaccination. We thus have four cases of erysipelas all supervening, at somewhat varying intervals, after attendance at the Norwich station on a certain day, namely, June 13th. But, in several important respects, no condition in common to all the cases was ascertained; thus, three of the attacks followed on vaccination, one followed on inspection; and,

further, the lymph of three separate vaccinifers was used. With regard to Lambert and Girling, the inspectors state, in one portion of their report, that, although they believe the disease to have been contracted at the station, "no evidence was adduced that served to indicate the probable source of infection"; but, in another part of the same report is the important statement, as regards these two children, that they attended at the station at a later period of the day than Threadkill and Tyler, and that their "illness was probably due.....to the same causes that had operated in the earlier cases on this day." We are thus thrown back, so far as causation is concerned, upon the cases of Threadkill and Tyler. These two latter children, as already explained, were vaccinated from an infant named Armes, who also acted as vaccinifer for two unsuccessful cases; and this coincidence of the use of a special lymph being followed either by erysipelas or by complete failure, was evidently the turning point, so far as the opinion of the inspectors is concerned. But we learn that Armes, the vaccinifer in question, was a healthy child prior to its vaccination, that its vaccination ran the usual course, that the results on the day of inspection were so exceptionally good as to call forth an expression of satisfaction on the part of the public vaccinator, and that the child has remained quite well ever since. And, further, the inspectors decline to entertain the opinion that "pure lymph taken from a healthy child and inserted in the arm of another healthy child, might of itself cause erysipelas," an opinion which was put forward at the inquiry, but which is opposed to every day experience. And yet, in view of these considerations, the inspectors end by arriving at the conclusion that "the evidence raises a strong case of suspicion against the freedom from contamination of the lymph." How such a conclusion can be based on the evidence which is referred to, we fail to see; but it is evident, that in thus deciding as to the cause of erysipelas, the inspectors were in the main influenced by the fact that, in the two children who escaped vaccination, there was a "failure of vaccination." But if this conclusion be the correct one, what becomes of the cases of Lambert and Girling? We are told that they were vaccinated with lymph not only altogether different from that used in the cases of Threadkill and Tyler, but also with lymph which had been used with the best results on several other children; and, further, one was vaccinated eight days before the other. What, then, becomes of the statement that Lambert's and Girling's erysipelas "was probably due to the same cause that had operated in the earlier cases", who had been vaccinated from Armes? It is obvious that there is here no explanation at all of what "the same cause" really was as regards the four cases under consideration, and that, for some reason or other, the actual cause of the erysipelas in any single case has never been ascertained.

At this stage, we note that the President of the Local Government Board has, together with the inspector's report, submitted to Parliament a memorandum by Dr. Buchanan, the Board's medical officer; the necessity for this course having evidently arisen from the incomplete manner in which the subject had been dealt with in the original report. Dr. Buchanan's memorandum mainly deals with an important consideration which had been almost ignored by the inspectors, namely, the possibility of septic contamination having been conveyed to the arms of the several children by means of decomposing animal matter on dirty points. The subject, it is true, is referred to in the inspector's report, but only to be at once set aside with what practically amounts to a commendation of the public vaccinator, against whose method of vaccination, it is said, "no charge was brought." Unfortunately, however, we learn, through Dr. Buchanan, that there were the strongest reasons for suspecting the public vaccinator. He had already been reported to the Local Government for "his use of dirty instruments" in the process of vaccination; a great majority of the tubes he had sent to the National Vaccine Establishment were found either "to contain blood, or not to be sealed;" and he had been distinctly reprimanded for his use of old points in transferring lymph from one arm to another. The points, it is admitted, had undergone some process of cleansing, but any one acquainted with the porous nature of the bone of which points are made, must know how impos-

sible it is to remove all the animal matter attaching to them; and Dr. Buchanan shows by an argument—which, in our opinion, is convincing—how septic matter attaching to points could easily have been conveyed during the transfer of lymph, either to the vacciner or the vaccinee, and that the very fact of the one being thus infected whilst the other escaped, a circumstance which in itself led the inspectors to leave this matter of points practically uninvestigated, affords at least an indication that in this “faulty practice” may lie the secret of the erysipelas.

There is, however, another consideration which we cannot but regard as of at least equal importance, and this, too, the inspectors allowed to slip away from their notice. The fact of the presence at the vaccination station of persons either suffering from, or in attendance on cases of, erysipelas, is admitted to be the probable cause of infection as regards some of those attacked. It is also admitted that erysipelas was, to a certain extent, prevalent in Norwich at the date in question; and further, it is stated that one of the children infected on June 13th had an elder sister with “sores on her face”. If this were a case of erysipelas, the whole sequence of events is readily explained; and, on turning to the public vaccinator's evidence, we find him saying, “a sister of the child Threadkill, I am informed, had erysipelas about the same time as the child I vaccinated.” Here we have a clue demanding the closest investigation, and yet it is set aside by the inspectors in a few lines, and this because they “found no reason to think that the sores on this girl's face were of an erysipelatous nature previous to the appearance of erysipelas in the infant.” The words we have italicised imply that the case did ultimately turn out to be one of erysipelas; and yet, in face of the possible, if not probable, existence of one of the most commonly recognised causes of the spread of erysipelas, both to vacciner and to vaccinee, at the station on the day in question, the matter is hardly deemed worthy even of a passing notice.

We fail to find any real explanation of the unfortunate failure to apprehend the essential points elicited in the evidence tendered at this investigation, but we clearly see that the method of conducting the inquiry was precisely the one calculated to lead to failure in other respects. Dr. Buchanan very properly points out that, at the inquiry, counsel were engaged to accuse vaccination as such, and also to defend the public vaccinator. No one troubled himself to bring forward evidence which would explain the cause of the erysipelas, and the principal object of the inquiry has hence never been attained. A public inquiry may have been expedient at Norwich, but it is quite evident that it should have been incidental to, and not in supersession of, the ordinary medical investigation which such occurrences have heretofore received. As it is, much harm has been done, and, so far as we can judge, no useful end has been attained.

SPURIOUS AND WORTHLESS DRUGS.

A VALUABLE discussion was raised by Mr. Williams at the meeting of the Pharmaceutical Society, held on the 1st of the present month, with reference to the public sale in London of spurious and worthless drugs, which the *Chemists' Journal* discusses with spirit. The particular instance which he brought forward was the case of upwards of a ton and a half of obviously rotten ipecacuanha, which, although plainly worthless for pharmaceutical purposes, nevertheless found a buyer at a comparatively high price. That such a state of things exists, is clearly a crying scandal; for, as is pointed out, both the vendor and the purchaser must have known the quality, or rather the lack of quality, of the stuff sold and bought. Further, the buyer must have known that he could place his purchase somewhere or other; so that, for all concerned, the whole affair was a deliberate fraud. Mr. Williams emphasised his statement by passing round a specimen of jalap, or, to speak more correctly, of something that once was jalap, of which he had endeavoured to ascertain the history. This worthless stuff had, it was stated, been imported from Paris, where all the jalapin that it had once contained had remained. The stuff had been dried and sent to London,

where it met with several purchasers, whether knowingly or not does not appear. Mr. Williams also instanced a case of a parcel of balsam of tolu, containing 40 per cent. of common resin, which had also found ready purchasers.

It is surprising that such a state of things should exist here. In the United States, there is, it is stated, a Government inspector of drugs, who has power to confiscate and destroy all adulterated or injurious drugs, just as our Custom House officers would confiscate and destroy spurious tobacco or tea. Mr. Williams, in speaking of the institution of such an officer, feared that such a measure would be injurious to the London drug market, which, to a great extent, may be called the centre of the European drug trade; but it is certainly not clear why, as our contemporary points out, such a step would be undesirable; for, although it is undoubtedly true that certain quantities of drugs, which could not or ought not to be used in pharmacy, are useful for other purposes, an inspector, such as they have on the other side of the Atlantic, would be competent to discriminate between the two. It has not been shown that the enactments relating to the confiscation and destruction of spurious tea and tobacco, and of meat and fish unfit for human food, has had any injurious effect on the traders who deal in these commodities in their wholesome form; and it remains to be explained why the public should not be protected against impure or exhausted drugs.

The existing Adulteration Act applies to the retail trader in drugs, and no one, who has any claim to be heard, complains. If a purchaser buys a bottle of so-called quinine wine, which does not contain a particle of any cinchona alkaloid, he has his remedy; and yet, as the *Chemists' Journal* alleges, that same retail trader, who is liable to be brought before the nearest magistrate for selling an adulterated article unwittingly, has no ready remedy against the wholesale druggist who sells him exhausted jalap, or rotten ipecacuanha, such as Mr. Williams described.

Mr. Williams alleges that the wholesale druggists look upon the evil as intolerable; and the Pharmaceutical Council has appointed a strong and influential committee to take the matter up, and co-operate with those wholesale druggists who do not belong to the Society, in endeavouring, either by moving Parliament, or in some other way, to check this rapidly increasing evil.

The proper remedy is obviously suggested: a short Act of Parliament, conceived in the same spirit as similar existing enactments applicable to ordinary traders.

The President, Mr. Greenish, and several other speakers, thought that exposure would be a sufficient remedy; but, the fact that the magenta-dyed rose-leaves, that were so ably brought before the Society by Mr. Greenish, junior, commanded a ready sale, even after the exposure of the fraud, is a sufficient proof that such a course of procedure is powerless to check the evil. The sellers and purchasers of these spurious and worthless commodities no doubt make, the *Chemists' Journal* alleges, too comfortable a profit out of these nefarious transactions to be deterred by the exhibition of their trash at the evening meetings of the Pharmaceutical Society. The subject is one deserving of the most earnest attention of the Pharmaceutical Society; and it will earn public thanks for taking prompt and effectual measures to obtain legislation, if legislation be necessary.

HONORARY QUEEN'S CADETS AND NON-COMBATANTS.

SINCE the days of the Crimea we have struggled, in season and out of season, with all the means at our disposal, to secure the abolition of the grievances of the medical officers of the army. Many of these have since been redressed, to the advantage of the gentlemen aggrieved, of the soldiers under their care, and of the public weal. And as the progress of improvement and correction advances, the remaining complaints become more acutely developed and brought into more unmistakable relief. The particular grievance to which we are about to direct attention, is one which has been transmitted from previous long-

standing and unsatisfactory traditions, and strikes at the *amour propre* and *esprit de corps* of every army medical officer. In principle, it is of essential importance. We allude to the needless distinction of the word "non-combatant", as applied to this great and numerous body of highly trained and thoroughly educated officers, and to the invidious and injurious consequences which flow from it.

Since the recent reorganisation of the service, involving the presence of a considerable proportion of surgeons with the front line on the battle-field, as freely exposed to the bullets, shells, swords, and sabres of the enemy as their scientific congeners of the Engineers and other officers, the old fashion of regarding the doctors as non-combatants is no longer applicable, and deserves to be relegated to the past. Thus, in Afghanistan, the Transvaal, Zululand, and Egypt, a goodly number of doctors were included among the killed and wounded. In all these campaigns, they were conspicuous for their gallantry and bravery in actual strife with the enemy; and for these alone they merit the early extinction of this stigma. But, in addition to their claims for just consideration on account of their gallant bearing and prowess on the field of battle, they establish further rights in respect of the consequent strain and overwork they are called upon to undertake after the deadly conflict has been surmounted, in the mitigation, alleviation, and cure of the sufferings of the sick and wounded. Hence, it may be formulated, without risk of successful contradiction, that, from these two causes combined, the proportion of medical officers who succumb to wounds and disease during any campaign is much greater than those of other officers with an army on active service.

Why, then, should the unjust and invidious distinction of "non-combatant" be longer continued and applied to the army medical officers? On what logical standpoint can such a stigma be based? It casts an unfair slur on a corps of scientific and courageous officers who constitute, by virtue of the duties they have to perform in action and in the field, an indispensable and integral part of every modern army. It is, we are assured on the best authority, owing to such an unwarrantable provision as this that the medical officers, no matter how long or distinguished their services, are, as non-combatants, denied the privilege of obtaining honorary Queen's cadetships for their sons. Thus we learn that "a limited number, not exceeding ten in any one year, of the sons of combatant officers of the army, and five of the sons of the officers of the Indian Army, who shall have attained the substantive rank of major or lieutenant-colonel, and shall have performed long or distinguished service, provided that their sons are, on account of such service, recommended by the Commander-in-Chief, with the approval of the Secretary of State, and that the special grounds for the recommendation be set forth in each case," are eligible. Though these nominations confer no direct pecuniary advantage, inasmuch as the recipients have to pay the full charge at the Royal Military College, still, as they have only to score a limited number of marks to qualify for entrance, less outlay for military tutors is necessary, and, therefore, a material saving to the parents results.

In reply to a question put in the House of Commons by Mr. Lyons, Mr. Childers, the Minister of War, is reported to have said that, "as to honorary Queen's cadetships, the arrangements were under consideration; but that he could give no assurance that he could extend the system, which was a delicate one to alter." We think, however, that, so long as it is the custom to set apart a certain number of honorary Queen's cadetships for the meritorious officers of the British and Indian armies of a certain rank, there would, instead of delicacy, be only pure fair play in awarding a proportionate number of cadetships, over and above those already allowed to the sons of combatants, for the sons of highly deserving medical officers. As regards the British services in question, the existing hardship of altogether excluding the sons of medical officers, on the ground that they are non-combatant, might be easily remedied, by setting apart a fair proportion for the sons of the military doctors, leaving the allowance to the combatants as at present. As such recipients would have to pay the full cost of Sandhurst, the concession of this boon would not entail one

farthing of additional expense on the resources of the exchequer. On these grounds, and on those of justice and fair play, we strongly recommend that an equitable proportion of honorary Queen's cadetships be annually assigned to the sons of highly distinguished and meritorious medical officers, without in any way curtailing the privileges already enjoyed by the sons of the military officers of the British Army.

ON THE USE OF NAPHTHALIN DRESSINGS.

THE numerous cases of poisoning that have followed the use of iodoform dressings in the treatment of wounds in continental hospitals, have induced several German and Russian surgeons to seek for a less dangerous chemical substance, equally efficacious in the dressing of injuries and operation wounds. Fischer and Djankonow advocate naphthalin as the best substitute for iodoform. These surgeons indicate that not only does it require far less complicated apparatus and manipulation than other substances used in dressing, but it is also much cheaper, a great consideration in general hospitals and in military surgery. Naphthalin is a hydrocarbon, with the formula $C_{10}H_8$, formed in large quantities in the process of the distillation of coal, and found, according to Roscoe, in the heavy oils of coal-tar. In decomposing, it falls into several organic compounds, and is widely distributed in nature; thus it is found in petroleum, in chimney-smoke, and in tobacco-smoke. It forms shiny, white, rhomboid, crystalline plates, with a rather strong odour, resembling that of tar; it melts at 174.5° Fahr., and boils at 424.5° Fahr. It is not soluble in acid or in alkaline water, nor in secretions from wounds. On the other hand, it freely dissolves in cold ether, in warm alcohol, in strong sulphuric acid, and in different fixed and volatile oils. It can readily be separated from water by distillation; and, if mixed with drinking-water, it appears in the secretions, especially in the urine, where it can be easily recognised. If such urine be distilled, the water that distils over precipitates the naphthalin in crystals, on cooling. Commercial naphthalin is seldom pure, being generally mixed with phenol. Pure naphthalin should be of a slightly pink hue, according to Fischer, but Djankonow finds that the white crystals are the purest.

Fischer first employed naphthalin dressings at Strasburg. From experiments and observation, he came to the conclusion that it is an admirable substitute for iodoform. It is quite harmless when used on man, or on the higher mammalia, and possesses a high antiseptic value. In an atmosphere of naphthalin, all animal or vegetable micro-organisms are destroyed, whilst neither wounded surfaces nor the healthy structures around them are in the least irritated. Recently, naphthalin has been used at Strasburg for other purposes besides the dressing of wounds; such as the disinfection of sick rooms and closets, as a parasiticide in certain skin-diseases, and as an inhalation in infectious diseases involving the respiratory organs, such as diphtheria. Dr. Anschütz of Königsberg has also published his results, agreeing entirely with Fischer. Whilst he recognises its excellent antiseptic influence on granulating surfaces, he also says he has discovered disadvantages. He has found blood mixed with the pus from granulations, probably through their being wounded by the sharp edges of the naphthalin crystals. According to Dr. Anschütz, these crystals may also form a crust over the wound, impeding the escape of pus, although Fischer has never found this to occur. Both these surgeons have very seldom seen the slightest symptoms of poisoning from its use. Djankonow's observations are based on thirty cases of wounds and abscess-cavities dressed with naphthalin, and described in the *St. Petersburger Medicinischer Wochenschrift*. His method is thus carried out in operation cases. A carbolic acid spray is turned on to the seat of operation; operator and his assistants wash their hands first with soap, then with a five per cent. solution of carbolic acid, into which also the instruments are submerged. Catgut ligatures and silk, as prepared by Czerny, are employed. The wounds or incisions are first saturated with a three per cent. solution of chloride of zinc, and then wool, dipped in naphthalin, is laid in the wound, and a bandage applied over it; a

further layer of wool is covered by oiled silk; and, lastly, a second bandage covers in the whole.

The preparation of naphthalin wool is perfectly simple. The wool is first boiled in soap-ley, and then steeped in an ethereal solution of naphthalin. Anschütz and Djankonow prefer one part of naphthalin to four of alcohol, and four of sulphuric ether. The Russian surgeon employed this dressing for granulating surfaces in ten cases; five had various forms of chronic ulcer of the leg, one had a foul strumous ulcer on the chin; the four remainder had old lacerated wounds, one on the wrist, one on the thigh, one on the leg, and the fourth on the foot. All these cases looked very unfavourable when the treatment was commenced, and all the wounds rapidly became clean when dressed by this process, showing healthy granulations, and cicatrising at once. According to necessity, the dressings were changed daily, or left on as long as for five days; in twenty recent cases of lacerated wounds, removal of tumours, excisions and amputations, the results were admirable. In none of the above cases were there any signs of either absorption of naphthalin or irritation. In not one of the operation cases was there any appreciable rise of temperature. The secretions were never pent up by a layer of solidified naphthalin as in Anschütz's cases. Dr. Djankonow particularly recommends naphthalin dressings for surgeons who, like himself, have to treat patients in hospitals deficient in funds, and an insufficient supply of nurses. We must observe that, in this country, many surgeons will attribute more than half the merit of Dr. Djankonow's treatment in operation cases to the use of the carbolised spray.

BANQUET TO THE MEDICAL OFFICERS OF THE EGYPTIAN EXPEDITION.

THE banquet to the medical officers of the Egyptian Expedition, an account of which we report elsewhere, was in every way a successful, as well as an interesting event. So distinguished an assembly of metropolitan medical men has never, within the recollection of any present, been gathered together. All the heads of the profession were present, and a great array of the most notable representatives of every department of the profession. From the provinces, also, there were such men as Acland of Oxford, Humphry of Cambridge, Wheelhouse of Leeds, Bartolomé of Sheffield, Wade of Birmingham, Waters of Chester, Teale and Taylor of Scarborough, together with many others of not less note, who came from great distances to testify their hearty concurrence in this demonstration of the sympathy of the medical profession with their brethren in the Army and Navy Medical Services, and to take part in what was regarded by all as a testimony of unity, good feeling, and common brotherhood, in all departments of the profession.

It was an unfortunate accident that Royal commands, at the last moment, carried some of the principal military guests, including His Royal Highness the Duke of Cambridge, Sir Garnet Wolseley, and Sir John Adye, to Windsor. The day had been arranged with their concurrence, at a date convenient to themselves, and their regret at being unable to be present was sincere and warmly expressed. Letters from them read at the dinner bore, however, the most cordial testimony to their high appreciation of the admirable conduct of the medical officers who had taken part in the Egyptian Expedition; and the speeches of Lord Morley and Mr. Campbell-Bannerman completely set at rest some of the very unfounded allegations which have most unjustly, during the last two months, found currency in the press. By common consent, controversial subjects were carefully avoided; nevertheless, some of the facts referred to by Surgeon-General Marston and other guests, who could hardly, perhaps, be expected to suppress some such reference to passing events and current statements, will be of value as documents in medical and public history in this connection.

It would not be right, in reference to this banquet, to omit to say how greatly the profession and public service are indebted to Sir William Jenner, Sir James Paget, and other distinguished members of the

civil profession, who, from the very first, heartily adopted the proposal for this banquet, and, by their great public and professional influence, contributed to make it the great success it was; to bring together, by the influence of their kindness and their names, as well as by their active personal exertions, this distinguished gathering.

Nor would it be right to fail to pay a tribute to the generous sacrifice of time, and to the intelligent and most laborious exertions, of Mr. George Eastes, in rapidly arranging the details of a banquet which was carried out in a manner which gave the greatest satisfaction to all who were present. Willis's Rooms were filled to overflowing; and, had it been possible to accommodate all who applied, the numbers would have been still larger; as it was, the largest room in London available for the purpose was filled to its utmost limit.

DR. OLIVER WENDELL HOLMES, who is now in his seventy-fourth year, has resigned the chair of anatomy in Harvard University.

PRINCE LEOPOLD (Duke of Albany) has consented to preside at a public dinner in aid of the funds of the Ventnor Consumption Hospital.

DR. MANSON FRASER, one of the resident medical officers at the Metropolitan District Fever Hospital, is, we learn, the Howard Medalist of the Statistical Society for the present year.

OFFICIAL information received states that cholera of an epidemic character had ceased to exist at Mecca, although it is thought that sporadic cases may still crop out.

THE Khedive has nominated Dr. Grant Bey of Cairo, principal physician to the Egyptian railways, a Member of Council of Public Health and Hygiene.

ACCORDING to a telegram, received by the Sanitary Council from Dr. Chaffey, sanitary inspector at Djeddah, the cholera epidemic continues. Two steamers have sailed for Elwedj, with a thousand pilgrims on board.

THE Local Government Board have informed the Derby Board of Guardians that Dr. Barry, Medical Inspector of the Board, has been appointed to hold an inquiry into a case of alleged death from vaccination at Darley.

DR. GRANT BEY, who, on leaving Alexandria, ceased to be any longer a member of the Sanitary Board, has now been appointed a member of the Central Sanitary Board at Cairo. Dr. Grant Bey has also, we learn, been constituted Consulting Physician to Lady Strangford's Hospital in Cairo.

SIR STAFFORD NORTHCOTE is suffering from some debility of the heart's action, brought on by overwork. He started on Friday for the Mediterranean, for three months' holiday, in order to have the benefit of rest. Sir William Jenner is of opinion that he will completely recover with rest and quiet; and Sir Stafford is, we are glad to hear, already much improved in health since he has had respite from the fatigue involved in the laborious work and long sittings of the House of Commons.

MR. GEORGE GULLIVER, long known as a physiologist and surgeon of considerable eminence, died last week at his residence in Canterbury, at the age of seventy-eight. His most able and original researches on the blood constitute a landmark in the progress of human histology, and have become classical in medical literature throughout the world. We shall, next week, publish an obituary notice.

A REUTER'S telegram from Cairo, under date of November 21st, states that, from the 10th to the 20th, nine deaths occurred among the

troops at Alexandria, and thirty at Cairo. There was no mortality during the same period among the men quartered at the Heluan Sulphur Baths. The causes of death were enteric fever, diarrhoea, and dysentery. The sickness among the British troops in Egypt is now at the rate of twelve per cent. of the total force.

SIR THOMAS WATSON.

THE latest bulletin is not, we regret to say, of a promising character. Sir Thomas Watson is in a state of increasing debility, not able to take much nourishment, and the temperature is low. No marked change, however, has occurred during the week.

HARVEIAN SOCIETY OF LONDON.

THE annual course of Harveian Lectures at this Society is being delivered by Mr. Henry Power, who has chosen as his subject, "Ophthalmic Medicine and Surgery in Relation to General Practice." The first lecture of the course was delivered on Thursday, November 23rd; the others will be given on November 30th and December 7th.

THE HEALTH OF PARIS.

THE epidemic of typhoid seems to be rapidly decreasing. The number of cases admitted to hospital has fallen to 294 during the week ending November 12th. The deaths show a slight increase, 120, as against 112 in the previous weeks. Dr. Bertillon, however, points out that no just cause for alarm is given by this fact, as the large number of cases still under treatment, both in private practice and in the hospitals, is likely to yield slight increases of mortality from week to week.

THE ROMAN CAMPAGNA.

WE learn from Rome that the project of law for the improvement of the Agro Romano, which was presented four years ago to the Chamber of Deputies by Dr. Baccelli, now Minister of Public Instruction, has received the royal signature authorising its renewed presentation to the Chamber just elected. This is a step in the right direction, as the law has been before a committee of the Chamber, and has undergone many modifications since its original presentation by Baccelli. As the alterations are mainly the work of practical men, it is expected that the project will now be approved and soon put in force.

DR. ROY'S BROWN LECTURES.

AT the last lecture of this course, which will be delivered on November 29th, Dr. Roy will demonstrate the instruments and methods which he has employed in his investigations into the pathology of the heart, which have occupied his second, and will occupy his third lecture. One important point which has been brought out by these researches is, that the force which brings about the closure of the aortic valves, and hence the second sound of the heart, has been somewhat misunderstood; it is not a rise of pressure in the aorta leading to a kind of reflex, and so to a forcing back of the valves, but the great fall in pressure produced within the cavity of the ventricle by its commencing dilatation.

ARABS IN THE BRITISH HOSPITAL AT CAIRO.

WE are informed that the cases of the first twenty Arabs that were brought into Lady Strangford's Hospital, a month ago, were very severe, and that the patients were much depressed, but, receiving coffee and cigarettes on admission, became reassured. When Mr. Herbert Sieveking took down their names for registration, their confidence was shaken, as they thought they were going to be slaughtered. The later reports state that the patients were all doing well. Several English officers and Mr. Melton Prior, correspondent of the *Illustrated London News*, have also been under treatment at Lady Strangford's Hospital. We are informed that the committee, of which Colonel Duncan, of ambulance fame, is the presiding genius, is much in want of funds for the Cairo Hospital.

A SIGNIFICANT CASE.

THE annual report of the Bolingbroke House Pay Hospital, which has just been issued, mentioned the following case. A young man of the artisan class was brought in with a broken leg. The limb was set, and his friends, who were with him, agreed to pay 10s. 6d. weekly; but his father called the next day, and preferred taking him to a general hospital, because "he could get the same thing for nothing," although there was little doubt about the ability to pay the weekly charge agreed upon. This case, which is only one of a thousand, shows how difficult it is to promote self-help under present arrangements. We have always been of opinion that *pari passu* with the establishment of provident dispensaries and pay hospitals, some inquiry should be made respecting the applicants at our medical charities, and some check put upon the admission of unsuitable persons to general hospitals and similar institutions.

MEDICAL REFORM: DEPUTATION TO THE LORD PRESIDENT OF THE PRIVY COUNCIL.

ON Wednesday last, a deputation from the British Medical Association had an interview with Lord Carlingford, President of Council, with whom was Mr. Mundella, the Vice-President, with reference to the amendment of the law relating to medical education and practice. The deputation, which was introduced by the Duke of Westminster, consisted of Dr. Strange, President of the Association; Mr. Wheelhouse, President of Council; Dr. Wade, Treasurer; Dr. E. Waters, Chairman of the Medical Reform Committee; Dr. Chadwick; Dr. De Bartolomé; Mr. R. Macnamara; Dr. A. P. Stewart; Mr. Ernest Hart; Dr. Glover; and Mr. A. T. Norton. Dr. Waters made a statement on the subject of medical reform; after which remarks were made by Dr. Glover, Mr. Ernest Hart, and Mr. Wheelhouse. A full report of the proceedings will be given in next week's JOURNAL.

SANITARY LAW.

AN important decision has been recently pronounced relative to the removal of a child having an infectious disease to a hospital. Section 124 of the Public Health Act provides that, if it shall appear on a certificate of a medical man that a person is labouring under such a disease, and that the patient is in want of proper accommodation, a magistrate may make an order for the removal of such a person into a hospital. In the recent case of *Booker v. Taylor*, which arose at Coventry, there was such a certificate and such an order; but the mother of the child obstructed the removal, and was summoned for the offence. At the hearing, the magistrates entered into the question of the validity of the order, and declined to convict; and the question being carried before the Court of Queen's Bench, as to whether the magistrates were justified in taking the course they had done, or ought to have convicted, Mr. Justice Field and Mr. Justice Stephen were clearly of opinion that the magistrates had no right to go behind the order, and enter into its validity, and were bound upon the evidence to convict if there had been an obstruction. The court therefore sent the case back to the magistrates with that direction.

VOLUNTEER AMBULANCE DEPARTMENT: ROYAL REVIEW.

WITH the approval of the General Officer Commanding the Home District and the Director-General of the Army Medical Department, a circular was issued on Thursday of last week by Lieutenant Maclure, honorary secretary of the Volunteer Ambulance Department, to the medical officers of various volunteer corps, requesting them, together with trained bearers of their regiments, to muster at Whitehall Yard on Saturday morning at eleven o'clock, equipped with stretchers, field-companions, and haversacks. Owing to the shortness of the notice it was impossible to secure a large muster; nevertheless, at the hour appointed, Surgeon-Major Harvey Hill, 18th Middlesex R.V., and Surgeon Platt, Tower Hamlets Rifle Brigade, together with forty bearers, were present. Stretchers, water-bottles, field-companions, and splints being served out by Lieutenant Maclure to each of the ten

detachments, they were marched off, and a detachment placed at each of the following stations along the route to be taken by the troops, viz.: 1, centre of Piccadilly; 2, top of St. James's Street; 3, opposite St. James's Palace; 4, Waterloo Place; 5, Trafalgar Square; 6, Horse Guards; 7, corner of Parliament Street; 8 and 9, Birdcage Walk; 10, corner of Buckingham Palace Road. Where available, the shelters in the middle of the roads were utilised as ambulance stations, and their position was notified by means of a white flag with a red cross (Geneva flag). The object of these arrangements was the rendering of assistance to any sick or injured members of the troops, volunteers, or general public. Happily, no serious accident occurred; but in eight or nine cases the detachments were enabled to render immediate aid to civilians who were suffering from epilepsy and faintness. In some instances, temporary help was sufficient; in others, the patients were conveyed home by the bearers. A cleverly prepared map, giving the line of the route, position of the different ambulance stations, and nearest hospitals, was provided by Lieutenant Maclure and supplied to each detachment. The experiment, hastily yet efficiently carried out, was eminently satisfactory, and on this occasion proved a greater boon to the public than to the troops and volunteers. Such an organisation is at all times necessary when immense bodies of people are collected in the streets; and the presence and ready assistance of these trained bearers on Saturday last was a great comfort to the few who did suffer, whilst, in the event of alarming accidents, only too likely to happen on any similar occasion, their aid would be invaluable. The medical arrangements and command of the entire ambulance force engaged throughout the day were divided between Surgeon-Major Harvey Hill and Surgeon Platt, whilst the bearers were composed of men from the Tower Hamlets Rifle Brigade, 18th Middlesex R.V., London Scottish, and other metropolitan corps. The whole of the executive details were ably carried out by Lieutenant Maclure, the honorary secretary.

THE PATHOLOGICAL SOCIETY.

At the meeting of the Pathological Society on Tuesday last (November 22nd), Dr. Geo. Buchanan, the chairman, announced that the Council had arranged to hold a discussion at one or more meetings next April, and that the subject chosen was "The Pathological Condition of the Organs in Diabetes." We may congratulate the Council on having chosen a subject at the same time so novel and so important, and we anticipate a considerable contribution to our knowledge of the subject. The chairman also announced that the thirty-third volume of the *Transactions* was ready for delivery; its publication had been somewhat delayed by the "Supplementary Reports" in continuation of the history of cases which had been exhibited to the Society at various times since its foundation. The idea of obtaining these reports originated, some years ago, with Mr. Jonathan Hutchinson, and has rendered the present volume of the *Transactions* peculiarly interesting, while at the same time it had increased to no small extent the labour of the secretaries.

BITTER BEER.

CONSIDERABLE commotion has been raised in the beer-brewing and beer-drinking world by a letter published in a contemporary, written by a firm of drug-brokers in Mincing Lane, with reference to the substitution of drugs possessing bitter flavour and tonic qualities for hops. They state that, in consequence of the failure of this season's crop of English hops, calumba-root, camomiles, quassia, and chiretta have greatly advanced in price, thereby implying that these substances are likely to be largely employed in producing the flavour dear to the palate of the consumer of "bitter". The great firms of brewers have, in consequence, unanimously protested that they never use anything but hops to produce the bitter constituent of their beers, and therefore practically deny the inference to be drawn from Messrs. Joseph's statistics. This, doubtless, is the fact; but, if the case were otherwise, and the drugs named were used in the brewing of bitter beer, no possible injury, but

rather benefit, would result to the beer-drinking public. Few old Indians, or any persons suffering from the possession of a "liver", but know the good effects of calumba; quassia is also one of the most efficient vegetable bitters known to pharmacists. The same may be said of chiretta and camomile; so that, even if the hop-crop were deficient, it is certain that the public health would not suffer, and drinkers of bitter beer would not detect any difference of flavour in their beloved beverage.

THE EGYPTIAN ARMY OF OCCUPATION.

THE mortality among the troops in Cairo and Alexandria is still excessive, and is attracting general attention. The Vice-Consul has taken up the matter, and is collecting information for making a report on the subject, which is to be submitted to the Home Government. This large mortality is thought to be due, not so much to bad water as to the bad liquors drunk at low Greek cafés. Miss Whately of the British Mission School has come to the rescue, and is about to open a café near the Abasal camp, where tea, coffee, milk, non-intoxicating liquors, and wholesome refreshment may be obtained; but more philanthropic help is needed, and similar cafés, in the vicinity of the other camps, are much desired. Nine-tenths of the cases, we are informed, arise from a derangement of the liver, and the greatest aid in the treatment of these cases is a suitable dietary.

MEDICAL WORK IN EGYPT.

A STATEMENT has appeared in the *Standard*, and been extensively quoted, to the effect that the general officers lately holding commands in Egypt have all reported most unfavourably on the work done by the Army Medical Department in Egypt, and their statements fully bear out the charges preferred by a special correspondent. Sir Garnet Wolseley is of opinion that the system will have to undergo considerable modifications, and that to its defects the collapse of the arrangements for the care of the sick and wounded is principally due. So far as this is meant to cast any reflection on the services rendered by medical officers in the recent Egyptian Expedition, we most emphatically deny that any such evidence is forthcoming, but rather the most reliable facts point to the contrary; and any defects that may have arisen have been shown to be clearly due to the working of the system, and not in any sense to the fault of individuals. That the present system will have to be improved is beyond doubt; and it is equally clear to any one who is at all well informed on this subject, that the medical officers in the recent campaign most efficiently performed their duties. It is to be regretted that credence should be given to statements so misleading and so utterly opposed to the authenticated facts.

PRESCRIBING DRUGGISTS.

DR. DANFORD THOMAS continues, we are glad to see, to direct public attention to the fatal results which from time to time come before him as coroner for Central Middlesex, of the illegal practice of counter-prescribing by druggists. Short of actual legislation on the subject, no means could be devised more likely to put a stop to the practice than the better education, in regard to this matter, of the class from which coroners' juries are mostly drawn; and by taking advantage of the opportunities which are constantly occurring to them, coroners may do a great public service in pointing out the danger of trusting either children or adults to the so-called "treatment" of druggists, who have no medical education whatever. Medical coroners, of course, speak with more authority, on a point like this, than their legal brethren, but all might well imitate the example set them by Dr. Thomas in the following case.

On November 20th, at St. Pancras Coroner's Court, Dr. Thomas held an inquest on the body of Josephine Carraccio, aged nineteen months, daughter of a provision-dealer at 204, Gray's Inn Road. Mary Ann Carraccio, the mother, said the child was delicate from its birth. On Monday, a rash came on, and, believing it to be measles, she sent to a druggist's, who prescribed some medicine for her, which she gave it. Next day, the child became so ill with its breath that her husband went for a doctor, but before he arrived the child was dead. Dr. Hug-

man, of Guildford Street, stated that deceased had died in a convulsive fit, no doubt resulting from congestion of the lungs and measles. Some of the jury desired to know if it were proper for a druggist to prescribe, as had been done in this case, without seeing the patient. The coroner said, by law, a druggist had no right to prescribe at all. His only province was the compounding and selling of medicines. Poor people were under an impression that measles was a very simple matter, whereas it was a disease that required the most careful medical attention. It had become a very common thing for druggists to prescribe in such cases, and frequently the treatment was altogether wrong and rendered them liable to severe punishment. Again, there was the question of the sale of patent medicines, and poor people purchased them for their children without knowing in the least of what the stuff was composed, frequently sending them to sleep for ever. An attempt was being made to get a law passed making it compulsory to put a label on patent medicines, showing of what they are composed. The jury, in returning a verdict in accordance with the medical testimony, strongly condemned the practice of druggists prescribing, more especially in cases they had not seen.

MIDDLESEX HOSPITAL MEDICAL SOCIETY.

DR. EDIS read a paper upon "The Art of Medicine," at the meeting of this Society on Thursday week. He thought the study of the science in modern times had tended somewhat to put the art, as practised by the ancients, in the shade. Medicine had as much to do with a knowledge of human nature, and of the human soul, as with the virtues of cunningly mingled drugs, and the revelations of a technical diagnosis. The science of medicine traced the causes of disease to their several effects, while the art of medicine put into practice the rules which the science afforded for the detection and discrimination of disease, and for the relief and prevention of human suffering. A science taught us to know, and an art to do. We needed not only wisdom, which was knowledge assimilated, and made our own, but we wanted also wit to use it. Even the best educated and most skilful of young practitioners must feel the tremendous responsibility of his first unnatural presentation in midwifery, among the croaking gossips who swarm round their sisters in the agonies of abnormal parturition. He would then find there was a great difference between the science of obstetrics and the art of midwifery.

SMALL-POX IN LINCOLN.

DR. HARRISON, the medical officer of health for Lincoln, has recently presented to the sanitary committee of that city, a report on the outbreak of small-pox which occurred some months ago. The outbreak began towards the end of April, and the first case which came under observation was that of a girl of 17, unvaccinated, who was removed to the workhouse hospital, where she died. Thereafter several other cases occurred, and the City Hospital on the West Common was opened for their reception. Here, however, the accommodation, which consisted only of eight beds, proved insufficient, and the hospital was enlarged so as to accommodate sixteen cases. It remained open till October 12th, but the last admission took place on August 30th. In all, 38 cases were admitted into the City Hospital. In the workhouse hospital twelve cases were treated, but two seemed to have been removed to the City Hospital. There were, in addition, 21 cases treated at home, so that the total number of cases during the outbreak was 69. Of the cases in the City Hospital, 28 were vaccinated, and 10 unvaccinated; of those in the workhouse hospital six were vaccinated, three were unvaccinated, and three were vaccinated while incubating small-pox; of those treated at home, the proportion of vaccinated and unvaccinated is not known. The deaths were 14, of whom 12 were unvaccinated, and two were stated to have been vaccinated, but presented no evidence of vaccination. From the small number of cases treated, no thoroughly safe inference can be drawn; but it may, nevertheless, be stated as an interesting fact that the death-rate among the cases treated at home was more than twice as great as the mortality of the cases treated in hospital. So far as these cases go, they give no countenance to the assertion that the mortality from small-pox is greater among cases treated in hospital than among cases treated at home.

CORPORAL PUNISHMENT IN SCHOOLS.

EVERY science must have its own terminology, and in the science of teaching it is, no doubt, proper to use words in a purely technical sense; but the practice is not free from danger and inconvenience. We gather from the evidence given by an assistant-master at the Ann Street Board School, at an inquest recently held by Dr. Danford Thomas, that the term "corporal punishment" has come, in School Board phraseology, to have a very limited interpretation, and to mean only "punishment with the cane." We do not desire now to discuss the question of the advisability of permitting corporal punishment in schools, but we do desire to protest, not for the first time, against the habit, too common not only among schoolmasters, it appears, but among other people, of hitting children with the hand upon the head, back, or any other part of their persons which may be accessible at the moment. To box a boy's ears is not only to inflict corporal punishment, but corporal punishment in an excessively dangerous form; and the same remark applies with hardly less force to blows upon the back, the chest, or the belly. Such blows may originate disease, or may light up into fatal activity disease which has been long quiescent. In the case to which we referred above, a little boy aged eight years received what is described as a light blow on the back from the hand of his schoolmaster, and is stated to have complained of pain in his back when he went home in the evening. About twenty-four hours later he began to experience severe pain, and vomited "continually;" two days later he was very ill, and on November 14th, six days after the blow on the back, he died. Examination of the body after death showed that there was a twist in the intestines—volvulus—and that this had caused fatal obstruction. It is difficult to say whether the blow in this case had anything to do with the death; but we may observe that a fall or blow has been so often recorded in the history of obscure cases of obstruction, that the probability of a causal relation has long been accepted by the profession. The coroner, without in any way imputing blame to the master in this instance, said that he thought it well to state that to strike a child with the hand was oftentimes a dangerous action; and we trust that his words may be well weighed by all who have to do with the education of youth. Our forefathers were flogged by their schoolmasters with startling frequency, and the fame of Busby and Boyer, as bearers of the rod, long lived in the memories of their pupils; but let that be remembered which Coleridge (according to Charles Lamb) wrote of the latter, whose severity he had experienced:—"Poor J. B. ! may all his faults be forgiven; and may he be wafted to bliss by little cherub boys, all heads and wings, with no bottoms to reproach his sublunary infirmities." Formerly the schoolmaster was armed with a birch-rod, a bundle of fine birchen twigs, and the blows were inflicted on the buttocks. It does not argue any increase in humanity or in knowledge to permit him to strike a boy in any chance situation with a stout cane or the open hand. Corporal punishment, if it must be inflicted, ought to be administered by the responsible head of the school, with all due and solemn formality, and with such an instrument and on such parts of the person as shall be officially approved.

FORENSIC ANALYSES.

THE report of the Chemical Examiner's Department for India, during the official year 1881-2, is an interesting document; and, in view of the recent appointment of official analysts by the Home Office for England, and the prospective alteration of the law relating to the sale of poisons, its perusal is highly instructive. The activity displayed by the Indian officials is in marked contrast to that of our home officials. The document before us is dated June 27th, 1882, No. 5,364, Calcutta. The number of human viscera examined in India during the official year was 225; and in no fewer than 93 cases was poison found, opium in 54 cases, arsenic in 20, aconite in 7, and morphia in 6 cases. In six cases, the poison employed is not defined in the report. In a large number of cases (58 per cent.), no poison was found, many of these being obviously cases of abortion, brought about by mechanical means;

in many cases, the *post mortem* examinations were meagre, and the information misleading; whilst the bad packing of viscera, it is thought, led to the non-detection of poison in many cases. Some caustic remarks are indulged in by Dr. Warden, the chemical examiner, at the expense of those medical men who busy themselves with chemical examination of viscera after making necropsies; and it is pointed out that such practices are not unlikely to lead to serious miscarriages of justice. It would be well were the Home Secretary to reprint this portion of the report, and distribute it among those unwise coroners who persist in ordering medical men not only to conduct necropsies, but to make analyses. Besides the large amount of work involved in the analyses of human viscera, there were 193 examinations for blood-stains, and 24 for semen. The activities of a large chemical staff would, one would imagine, have been exhausted by such an immense amount of work; but it appears to have been otherwise. Eighty-three sets of animal viscera were analysed, and, in 51 cases, poison (invariably arsenic, in large quantity) was detected. Beyond these, 652 suspected articles were examined for poisons, and in nearly one-half of these poison was found. It is well known that poisoning is rife in India; and the report of the Chemical Examiner's Department affords some information as to the prevalence of the practice. Nevertheless, there must be a great number of cases in which the administration of poison escapes detection; and it is hinted by the reporter, Dr. Payne, that one cattle-poison, "soutari", is largely used, and escapes detection by the chemist. It appears, too, that there is no efficient restriction of the sale of poisons in India; and, doubtless, poisons are easily within the reach of all classes. The necessity of limiting the sale of poisons has been pressed upon the Indian Government, and the subject demands their serious consideration and energetic action.

A PAINFUL CASE.

A VERY painful case is reported from Melbourne, which has led to the Chief Secretary of the Victorian Colony calling upon Dr. Barker, a senior medical practitioner in that city, to forthwith resign the appointment he has held under the Government, as member of the Medical Board and chairman of the Board of Visitors to the Metropolitan Lunatic Asylums. It appears that Mrs. Stentt, a married woman, when pregnant, had, according to the evidence of two other women, expressed her intention of "going to Dr. Barker's to get the child sent away", and according to one of these women, Mrs. Stentt said that she had had abortion procured before. This is to a certain degree corroborated by the statement of Dr. Barker, that the woman called at his surgery whilst being treated by him for varicose veins, stated that she was pregnant, and asked if he could relieve her of that. He, apprehending what she meant, replied, "Certainly not." Dr. Barker states that the woman was then seized with an epileptic fit, and died within three minutes, he and his son being the only persons present at her death. The subsequent conduct of Dr. Barker was, to say the least, incredibly foolish. He caused the body to be removed to the premises of an undertaker, charged himself with the conduct of the funeral and the purchase of the burial-ground, personally visited the city coroner, Dr. Youl, and obtained an order for burial without an inquiry. The police, hearing of the statements that the woman had made, obtained an order for the exhumation of the body. The *post mortem* examination, about six weeks after death, was of course made under difficulties; but it showed that there was an apparent internal wound, through which a probe could be passed upwards, about an eighth of an inch under the mucous membrane. The internal wound was not an effect of decomposition, nor was it produced during the examination. We presume that the wound, thus referred to, was in the vagina. Neither the husband of the deceased woman, nor Dr. Barker, gave evidence at the inquest, although it is stated that Mr. Stentt saw Dr. Barker on the day of the death; and thus the evidence of those who alone could throw any real light upon the cause of death was suppressed, and apparently with deliberation. We must express our surprise that a coroner, sitting to inquire into the cause of a woman's death, should not call the person to give evidence who was at once the

medical attendant of the deceased and one of the two persons present at the death. We say this with the more regret, as the coroner was a medical man. The result was of necessity an abortive verdict, couched in these terms: "The jury, having carefully considered the evidence, are of opinion that Mrs. Stentt may have gone to Dr. Barker's with the intention of having abortion procured, but that there is no evidence to show how she came by her death." They thus deliberately set aside the certificate of death given by Dr. Barker: "epilepsy and varicose veins"; and nevertheless called, so far as we know, no person who was present at the death, though Dr. Barker and his son could both have been called. A long letter has been addressed to the Under-Secretary for the Colony, by Dr. Barker, explanatory of his conduct, and calling for an inquiry. We trust that, in the interests of all parties, this may be acceded to, and that Dr. Barker may be able to clear himself of the aspersions cast upon his character. His position is a most trying one, and we anxiously await the results of the inquiry which will, we trust, be made.

GLASS COVERS FOR DISSECTING-TABLES.

DR. C. W. CATHCART, Lecturer on Anatomy in Surgeons' Hall, Royal College of Surgeons, Edinburgh, describes, in a recent number of the *Edinburgh Medical Journal*, that, on having to put a fresh cover to one of the dissecting-tables at Surgeons' Hall, he substituted thick glass for the zinc plating that had previously been employed for the purpose. It has answered so well, that Dr. Cathcart thinks it right that the method be submitted publicly to the notice of all lecturers, demonstrators, and others interested in the study of practical anatomy. The glass used is about half an inch thick, polished on one side, and ribbed or grooved longitudinally. The table is spread with soft putty, and the glass, cut to the exact size, is pressed evenly down upon it, with the polished side uppermost, one end of the table being slightly raised. The margins of the glass are secured with a border of lead or wood, which goes all round except at the lower end, where a wooden gutter is fixed to carry off fluids, which drain down along the grooves. The surface of the glass can be kept beautifully clean by simple wiping. With glass of half-inch thickness firmly imbedded in putty, any ordinary wear and tear need not be feared, although it would be unwise to test its strength by direct hammering. The price, with lead margin, runs to about 28s. per cover—that is, 12s. for glass, 4s. 6d. for putty, 5s. 6d. for lead, and 6s. for workman's time and wooden gutter. If the margin, which has been found practically unnecessary, were omitted, the cost would be considerably lessened, both for time and material. The consistence of the putty requires special attention. It should be so soft that it can readily adapt itself to the table and glass, and for this purpose requires a much larger proportion of oil than is necessary for ordinary glazing purposes; probably, cement would do as well as or better than putty, and it would be cheaper.

LUNATIC ASYLUMS: ANNUAL REPORT.

FROM the thirty-first report, it appears that, at the close of 1880, there were in district asylums 8,667 patients, and, at a corresponding period in 1881, 8,978, which, with 2,502 admitted last year, made a total of 11,169 under treatment. Of these, 1,019 were discharged cured; 306 improved; 69 unimproved, but tranquil; while 7 escaped. The deaths amounted to 790; leaving 8,978 in the asylums on the 31st of last December, or a surplus of 311 as compared with the corresponding period of 1880. The total deaths, as above stated, amounted to 790; of these, 783 were natural, 2 accidental, and 5 suicidal. In the first category, pulmonary or general thoracic affections, as well as cerebral, predominated—275 and 180 over all others combined. The mortality in Irish lunatic asylums for a series of years has been extremely low; and last year it was somewhat less than during the previous twelve months. Bearing in mind the fact that, out of 8,978 inmates of district asylums, 2,141, or less than one-fourth, offer reasonable chance of recovery, it may be asked why such a costly department should be kept up without, at least, corresponding advantages. To this the in-

spectors reply that, so far as the curative are concerned, there can exist no difference of opinion; but, as regards the other denominations, an incontestable reason can be adduced, in the fact that the quiet and orderly, who form the far larger section, can only be so maintained, as experience has proved, by an uniform system of well and fully regulated asylums; while the violent, refractory, hopelessly insane, but above all the suicidal, and no inconsiderable share of the epileptic, when excited, require, for their own or the safety of others, that unremitting care which is solely available in well organised establishments, managed by competent officers and servants. The report refers to the larger probability of cures which exists in proportion to promptness of treatment, as exemplified by the fact that last year there were 396 recoveries under four months; 279 between four and eight; while from twelve to eighteen, or in half a year, only 73 were recorded. With respect to improvements, the distinction is more marked, 103 occurring within four, and 51 between four and eight months. On the score of relationship, it would appear that 56 lunatic parents had children under treatment with them on the 31st of December last, at which date brothers and sisters numbered 193; first and second cousins, 266; besides 521, including uncles and aunts, who previously had relatives mentally affected within the above degrees of kindred—facts which speak for themselves. The last Report of the Commission on Lunacy, showing the continued increase of insanity among the pauper class in England, was noticed in our last number.

PURIFICATION OF ATMOSPHERIC AIR.

By the careful treatment this subject received, as a main branch of the Presidential address of Dr. Siemens to the British Association, and more recently of Captain Douglas Galton, President of the Congress of the Sanitary Institute of Great Britain at Newcastle, where the papers of Dr. Richardson "On Cleanliness," and Mr. R. Carr Ellison on "The Influences of Pure and Impure Atmosphere on the Health and Moral Tendencies of a dense population," appropriately followed the President's Address, once again the attention of the public and the legislature is called to that check to sanitary progress and bane of town life, the "smoke nuisance". Hope may be found in the fact that the subject now meets with a widespread public consideration never before accorded to it. The slightest reflection must serve to convince us that we can hope for no very material benefit to result from appeals being urged to regard cleanliness, and the advantages of ventilation, unless there be a more general apprehension of the fact that both cleanliness and healthy ventilation are practically impossible to the masses under an atmosphere laden with coal smoke. The *Times* of the 7th instant has a letter from "A Lancashire Landlord," complaining bitterly of "the terrible scourge of coal smoke in the populous towns of Blackburn, Darwen, etc., where trees are blackened and stunted, and vegetation everywhere destroyed by the thick volumes of smoke." In the same issue of the *Times*, particulars are given of domestic stoves which are smokeless, and apparatus adapted to large boiler furnaces efficient in preventing smoke, and at the same time sufficiently economical to secure adoption in large works in Newcastle, where manufacturing coal is worth but 3s. per ton, and the inducement to save fuel is consequently very small. "A Lancashire Landlord" refers to the cost of altering each furnace to consume its own smoke as varying from £60 to £100. The cost would not be more in many instances than 60s. to 100s. per furnace, and in the case of the apparatus used at the Newcastle works above mentioned, it is stated by the proprietors that more steam is obtained with ten tons of coal in the smoke preventing furnaces, than with fourteen tons in the ordinary type. "A Lancashire Landlord" asks, "when legislation will step in to remedy a terrible evil which all confess, and yet tamely endure?" It will be a practical answer to this inquiry to point to districts in London where the smoke has been materially diminished through the vigilance of the metropolitan police, who, under the control of the Home Secretary, administer the Smoke Abatement Act. It is true that there is urgent need for the extension and consolidation

of legislature bearing on the subject, but this, we think, can only be expected to ensue from a more general recognition of the fact that smoke may conveniently be abated, and that it is more economical to avoid smoke than produce it. It is certain that the attention which has been directed to the subject within the last two or three years has resulted in the improvement of appliances, the better knowledge of fuels and economy in producing and applying heat to various purposes. It must be remembered in the case of the particular districts referred to by "A Lancashire Landlord," as well as in the manufacturing districts generally, the authorities who have to administer the law or put it in force, are the chief smoke producers. This should, no doubt, be changed, and the provisions of the smoke Acts should be enforced by stipendiary magistrates, assisted if necessary by competent officers. It should further be remembered that, both in regard to the Metropolitan and the Provincial Smoke Acts, the remedy is virtually in the hands of the public, who can set the law in motion by complaints made against smoky chimneys which particularly annoy them. This course being adopted will ensure practical reform where mere general complaints fail in usefulness.

SCOTLAND.

DR. WILLIAM PIRRIE, ex-Professor of Surgery in Aberdeen University, has died this week. He had been suffering for a considerable time past, but he only recently resigned his professorship. He is succeeded in the Surgical Chair by Dr. Alexander Ogston. The deceased gentleman was a native of Aberdeenshire. He studied at Aberdeen and Edinburgh Universities, and commanded an extensive practice in the North of Scotland.

THE competition for medical bursaries at Aberdeen took place at the end of last week. Two Town Council Bursaries, the Greg and Milne bursaries, were open. A considerable number of candidates came forward.

SICK CHILDREN'S HOSPITAL, EDINBURGH.

THE Directors of the Royal Edinburgh Hospital for Sick Children, last week, appointed James Carmichael, M.D., F.R.C.P.E., one of the ordinary physicians to the hospital, and Mr. T. Burn Murdoch, M.B., one of the extra physicians.

EDINBURGH EYE DISPENSARY.

MR. GEORGE BERRY, Assistant-Ophthalmic Surgeon to the Royal Infirmary, Edinburgh, has been appointed Acting Surgeon to the Edinburgh Eye Dispensary, by the trustees and governors of the institution, in place of Dr. Argyll Robertson, who has resigned the appointment, which he has held for many years.

EDINBURGH POPULAR HEALTH LECTURES.

THE first of the valuable course of popular health lectures in Edinburgh (the third course that has been given) was delivered by Professor Douglas Maclagan, on Saturday last, to a large, intelligent, and appreciative audience. He selected for his subject, "Ventilation". The lecture was in Dr. Maclagan's usual racy style, and contained much that was valuable to the working classes, to whom it was addressed. The Earl of Rosebery presided; and, at the close of Dr. Maclagan's lecture, he also spoke for a short time on the subject of healthy homes.

LEITH DESTITUTE SICK SOCIETY.

ONE of the most useful adjuvants of hospital or dispensary practice is a destitute sick society. At the annual meeting of the Leith Destitute Sick Society, held last Monday, it was stated, in the report read by Dr. Macnair, that 410 adults and 370 children had been relieved during the year. After paying all expenses, a balance of £15 remained. A second sum of £250 has been received by the institution from the estate of the

late Mr. William Muir. It was stated by the Provost of Leith that the invested funds of the society now produced a fixed income of £80 per annum, and he advocated using the whole of the ordinary income, if necessary.

UNIVERSITY OF ABERDEEN: RECTORIAL ADDRESS.

ON Wednesday, November 15th, Dr. Bain, the Lord Rector of the University, attempted to give his rectorial address in the music hall. The Lord Rector, however, was unable to obtain a hearing, as a persistent noise was kept up during the whole time by a few disorderly spirits. Peas and crackers were freely scattered about the hall, and ultimately the Lord Rector said that he would hold his address as delivered, and then retired. The students were entrusted with making the necessary arrangements for the reception of the Lord Rector, but for all purposes there might as well have been no arrangements whatever. Dr. Bain chose for his subject: "The University Ideal."

GLASGOW BLIND ASYLUM.

THE new buildings recently erected as an extension of the Glasgow Asylum for the Blind were formally opened on the 17th instant by Lord Rosebery. In the course of his opening address, the noble Earl dwelt on the great calamity of blindness, and of what might be done to alleviate the position of the blind; and, as regards the Glasgow Asylum for the Blind, he threw out the two practical suggestions, that the adult section of the institution should be made as far as possible self-supporting, and that every effort should be made to obtain in its behalf some of the various Glasgow endowments that are at present but partially useful. The new accommodation consists of workshops and schoolrooms, together with dormitories, and will largely increase the facilities for the training and education of the pupils attending the institution.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending November 11th, it appears that the death-rate in the eight principal towns was 22.0 per 1000 of estimated population. This rate is 0.9 below that for the corresponding week of last year, and 2.3 below that for the previous week of the present year. The lowest mortality recorded was in Leith, viz., 16.4 per 1000; and the highest in Dundee, viz., 27.2 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 3.8 per 1000, or 0.2 above the rate for the previous week. Diphtheria, under which croup and laryngitis are included, caused 25 deaths. In Dundee, the deaths from zymotic diseases amounted to 7.9 per 1000, owing to the prevalence of measles, diphtheria, and whooping-cough. There were 130 deaths registered from acute diseases of the chest, being 5 less than in the previous week.

HEALTH OF THE PRINCIPAL SCOTTISH TOWNS.

THERE were registered in the eight principal Scottish towns, during the month of October, the deaths of 2,197 individuals—1,100 of whom were males, and 1,097 females; due allowance being made for proportional increase of population, the number is 123 under the average for the same month during the preceding ten years. The individual death-rates were, per 1,000 of the population of each town: in Aberdeen 18, in Edinburgh, Dundee, and Leith 19, in Greenock, Paisley, and Perth 23, and in Glasgow 24. As to infantile mortality, 1,005 died—equal to 45.7 of the whole; and the percentage in each town was: in Aberdeen 35, in Perth 37, in Edinburgh 39, in Glasgow and Paisley 48, in Dundee 49, in Leith 50, and in Greenock actually 56. Zymotic diseases caused 419 deaths, or 19.1 of the whole; in Greenock, Paisley, and Glasgow, however, this rate was exceeded. Whooping-cough was, as usual, most fatal; to it are ascribed 83 deaths, or 3.7 of the entire mortality. Of 39 deaths due to fever, 3 were returned as typhus, 35 as enteric fever, and one as simple continued fever. In Perth, fever contributed 10.5 per cent. of all the deaths. Scarlet fever caused 80 deaths (in Edinburgh 5.8, and in Paisley 10.8, per cent. of the entire mortality was due

to it), diarrhoea 77, diphtheria 43, croup 37, measles 20, metria 8, and dysentery 3 deaths. Of 4 deaths registered as from choleraic diseases, 3 were from choleraic diarrhoea, and one from diarrhoea and vomiting. Premature birth debility contributed 58 deaths, apoplexy 54, paralysis 47, hydrocephalus 43, and cardiac diseases 127 deaths. Phthisis pulmonalis caused 143 deaths—11.1 per cent. of the whole; while inflammatory affections of the respiratory organs, other than those referred to already, caused 455 deaths, or 20.7 per cent. of the entire mortality. Of 74 deaths due to violent causes, 6 were of suicides; and of 8 deaths due to the direct effects of intemperance, one was from delirium tremens. Three persons died over ninety years of age—all females, and one, a widow, was ninety-three. As to meteorological conditions, these eight Scottish towns were fortunate in having agreeable and favourable weather. The details show that the mean barometric pressure was less by 0.003 inch, and its monthly range greater by 0.090 inch; the mean temperature was greater by 1.0°, and its mean daily range greater by 0.41; the mean humidity was greater by 1; the rain in number of days greater by 2; the rain-depth in inches less by 0.33; and the wind-pressure greater by 0.23 lb. than the average of the same month for the preceding twenty-five years. The highest mean temperature (49.0°) was at Dundee, and the lowest (46.6°) was at Perth. The greatest rain-depth (4.95 inches) was at Greenock, and the least (2.65 inches) was at Edinburgh.

HEALTH OF GLASGOW.

FROM the report of the medical officer of health for the fortnight ending November 11th, it appears that there were 493 deaths registered, representing a death-rate of 25 per 1,000 living. The number of cases of fever registered was 83; viz., 61 of enteric fever, 18 of typhus, and 4 undefined. There have not been so many cases of typhus fever registered since February 1879, when there were 20. The report then details some circumstances connected with these cases of typhus, which deserve attention, and reflect credit on the careful manner of working pursued by the sanitary department in stamping out disease. It appears that no fewer than fourteen of these typhus fever cases were traced in their origin to one infected house; and of these fourteen, seven occurred in the house itself, and seven in separate parts of the city. A perusal of all the circumstances of this group of fever cases shows that the sanitary powers asked for under the new Police Bill are not at all too stringent.

IRELAND.

ONE death from small-pox was registered last week in Belfast, of a person certified as having been vaccinated.

Dr. MARTIN was last Saturday elected medical officer to the Portrush and Bushmills Dispensary, in the room of Dr. Carson resigned. There were eight candidates for the post.

VICE-REGAL MEDICAL APPOINTMENTS.

HIS Excellency the Lord-Lieutenant of Ireland, Earl Spencer, has made the following appointments to his household: *Physicians-in-Ordinary*: G. W. Hatchell, M.D.; T. Nedley, M.D. *Surgeons-in-Ordinary*: P. C. Smyly, M.D.; E. D. Mapother, M.D. *Dentist*: D. Corbett.

HEALTH OF CORK.

FOR the four weeks ending the 4th instant, the total number of registered deaths amounted to 138 (including 25 dying in the workhouse, and, therefore, outside the borough), and 174 births took place. The annual death-rate gives a total ratio of mortality of 22.8, but deducting those who died in the workhouse, the urban rate will stand at 18.7; from infectious diseases 1.8; an infant mortality of 5.4; and a birth-rate of 28.1.

SANITARY LECTURES.

Two series of popular lectures upon sanitary subjects are now in progress in Dublin. Drs. Cosgrave and M'Cullagh are giving a course to the Ladies' Sanitary Association; and Dr. Cameron, Medical Officer of Health for Dublin, delivered a lecture "On Public and Private Sanitation", last Tuesday, to the Rathmines and Rathgar Sanitary and Health Association, being the first of a series of lectures, by different gentlemen, on sanitary science.

BELFAST BRANCH OF THE ROYAL MEDICAL BENEVOLENT FUND SOCIETY OF IRELAND.

THE quarterly meeting of the Committee of Council was held last week, presided over by Dr. Ferguson. The death of Dr. Thompson (Lisburn), having been officially reported, Dr. Moore moved, and Dr. Higginson seconded, the following resolution, which was adopted:—"That the committee lament the loss the Society has sustained in the removal by death of their late eminent brother, Dr. Thompson, who for many years was a subscriber and friend to the Society; and that the honorary secretary be requested to transmit a copy of this minute to the family of the deceased." The annual meeting of the Belfast Branch will be held on the first Wednesday in February, 1883.

ACADEMY OF MEDICINE IN IRELAND.

AT a meeting of the Academy of Medicine in Ireland, held at the Royal College of Surgeons, on Saturday last, the following officers were elected: *President*: John T. Banks; *General Secretary*: William Thomson; *General Treasurer*: Robert M'Donnell. *Medical Section*—*President*: William Moore, President of the King and Queen's College of Physicians; *Council*: Samuel Gordon, Henry Kennedy, T. W. Grimshaw, John Wm. Moore, J. Hawtreys Benson; John Magee Finny, Christopher Nixon, Charles Cameron, Richard A. Hayes, Alex. Nixon Montgomery. *Surgical Section*—*President*: John Kellock Barton, President of the Royal College of Surgeons; *Council*: William Colles, George H. Porter, Edward Hamilton, William Stokes, Henry Gray Croly, Edward D. Mapother, William Ireland Wheeler, Archibald H. Jacob, Edward Stamer O'Grady, W. Thornley Stoker. *Obstetrical Section*—*President*: John Denham; *Council*: George Johnston, Lombe Atthill, Arthur V. Macan, John R. Kirkpatrick, Thomas More Madden, H. MacNaughton Jones (Cork), Fleetwood Churchill, Richard Dancer Purefoy, William Cox Neville, William J. Smyly. *Pathological Section*—*President*: John M. Purser; *Council*: Robert M'Donnell, Arthur W. Foot, Anthony H. Corley, Thomas E. Little, George F. Duffey, Charles Coppinger, John B. Story, Phineas S. Abraham, Edward H. Bennett, Walter Smith. Each of the Sectional Councils met on Monday to elect a secretary of the Section, and two members to serve on the General Council. These elections were by ballot, and the following were elected: *Medical Section*: Drs. Finny and Grimshaw (Registrar-General); *Secretary*: A. Nixon Montgomery. *Surgical Section*: Messrs. Jacob and G. H. Porter; *Secretary*: W. Stokes. *Obstetrical Section*: Drs. Atthill and Macan; *Secretary*: Dr. Neville. *Pathological Section*: Drs. Foot and T. E. Little; *Secretary*: E. H. Bennett. It has been arranged that the first meeting of the Academy will be held on Friday, December 1st, when the Pathological Section will have its opening meeting at the Royal College of Surgeons. The President of the Section, Professor Purser, will give an inaugural address. The Academy now numbers, we understand, 150 original Fellows. With such a beginning, coupled with the fact that these several candidates for admission as Fellows and members, it is to be hoped that the Academy will be a success, not only in the number of its members, but in forwarding, by the united efforts of its sections, the progress of medical science in Ireland.

DR. BATE, in his report for the years 1881-82, of the sanitary condition of St. Matthew's, Bethnal Green, states that the mortuary continues to be a great boon to the neighbourhood, and has provided a temporary resting-place for 232 bodies.

BANQUET OF WELCOME TO THE MEDICAL OFFICERS OF THE EGYPTIAN EXPEDITION.

A BANQUET of welcome to the medical officers of the Egyptian Expedition was given at Willis's Rooms on Tuesday, November 21st; Sir WILLIAM JENNER, Bart., K.C.B., in the chair. The vice-chairs were occupied by Sir Henry Thompson, Mr. Lister, Mr. Ernest Hart, Mr. P. Hewett, Sir James Paget, Bart., Sir W. W. Gull, Bart., Dr. Andrew Clark, Dr. Quain, and Dr. A. Carpenter.

In addition to these, there were present, the Earl of Morley, Under-Secretary of State for War; Mr. Campbell-Bannerman, M.P., Secretary to the Admiralty; Dr. Crawford, Director-General of the Army Medical Department; Dr. Reid, Director-General of the Medical Department of the Navy; Major-General Sir H. T. Macpherson, V.C., K.C.B., Sir J. R. Bennett, Colonel Sir W. O. Lanyon, Sir J. Fayer, Dr. Acland, Mr. Erichsen, Dr. Wilson Fox, Admiral Sir W. Mends, Mr. Spencer Wells, Inspector-General Maclean, Sir T. Lawrence, Bart., M.P., Dr. Cameron, M.P., Professor Huxley, Sir W. MacCormac, Surgeon-General Mackinnon, Dr. Farquharson, M.P., Dr. Cornfeld, Dr. Playfair, Dr. Ord, Mr. W. Adams, Mr. C. A. Aikin, Professor Aitken, Dr. W. H. Allchin, Dr. J. Andrew, Mr. W. Morrant Baker, Surgeon-Major J. W. Barnes, Dr. R. Barnes, Dr. M. M. de Bartolomé, Mr. R. Barwell, Brigade-Surgeon E. Becher, Dr. W. C. Begley, Mr. E. Bellamy, Surgeon-General J. A. Bostock, Dr. T. Bridgwater, Dr. J. S. Bristowe, Dr. W. H. Broadbent, Surgeon D. B. Brown, Dr. J. C. Browne, Dr. J. Mitchell Bruce, Mr. T. Bryant, Dr. T. S. Byass, Mr. S. H. Cartwright, Dr. C. Chadwick, Dr. Cholmeley, Surgeon-Major T. B. Christie, Surgeon-Major T. S. Cogan, Mr. Alfred Cooper, Mr. W. W. Cooper, Mr. Wyndham Cottle, Mr. G. Cowell, Deputy Surgeon-General J. Crerar, Mr. John Croft, Surgeon Cross, Surgeon-Major C. M. Cuffe, Mr. W. B. Dalby, Dr. G. C. Dale, Surgeon-Major F. S. B. De Chaumont, Mr. T. Dickinson, Dr. W. Dickson, Surgeon-Major W. G. Don, Dr. J. L. Down, Dr. Dyce Duckworth, Dr. J. Matthews Duncan, Mr. A. E. Durham, Mr. G. Eastes, Mr. S. Eastes, Surgeon-Major W. Elgee, Surgeon-Major G. J. H. Evatt, Deputy Surgeon-General J. Ewart, Professor Flower, Surgeon-General J. M. S. Fogo, Mr. J. C. Forster, Inspector-General J. A. Fraser, Dr. P. Fraser, Mr. W. Fuller, Deputy Surgeon-General W. J. Fyffe, Mr. E. H. Galton, Surgeon-Major W. C. Gasteen, Mr. John Gay, Dr. J. G. Glover, Surgeon-General C. A. Gordon, C.B., Dr. S. O. Habershon, Dr. F. Hall, Surgeon Hamilton, Dr. C. J. Hare, Dr. George Harley, Surgeon Harrison, Mr. R. Harrison, Dr. E. Haward, Mr. Christopher Heath, Dr. C. Holman, Mr. Barnard Holt, Mr. J. W. Hulke, Dr. E. Humby, Dr. G. M. Humphry, Surgeon-General W. G. Hunter, Mr. Jonathan Hutchinson, Deputy Surgeon-General J. Irvine, Brigadier-Surgeon C. M. Jessop, Dr. George Johnson, Surgeon-Major W. Johnston, Brigade-Surgeon J. Johnstone, Brigade-Surgeon J. Jones, Mr. Sydney Jones, Fleet-Surgeon P. Keelan, Mr. H. W. Kiallmark, Mr. G. Lawson, Deputy Surgeon-General T. Ligertwood, Surgeon-Major T. S. Lloyd-Barrow, Colonel Sir R. Loyd-Lindsay, Dr. S. Mackenzie, Mr. C. Macnamara, Dr. F. A. Mahomed, Surgeon-General M. F. Manifold, Dr. W. Marcet, Mr. John Marshall, Dr. R. Martin, Mr. F. Mason, Dr. R. N. Mitchell, Dr. H. Monro, Brigade-Surgeon W. H. Muschamp, Surgeon-Major A. Myers, Dr. J. L. Paul, Dr. F. W. Pavy, Mr. O. Pemberton, Dr. W. H. Platt, Dr. W. S. Playfair, Dr. T. T. Pratt, Surgeon-General G. H. Ray, Dr. G. Owen Rees, Dr. J. Russell Reynolds, Deputy Surgeon-General T. Ringer, Surgeon-Major W. F. Rutledge, Mr. E. Saunders, Dr. A. J. Scott, Brigade-Surgeon J. B. Scriven, Dr. C. B. Sewell, Mr. S. W. Sibley, Surgeon-General J. Sinclair, Surgeon-Major Smith, Mr. T. Smith, Mr. W. J. Smith, Deputy Surgeon-General W. Stewart, Dr. Sutherland, Dr. W. H. Tayler, Dr. J. W. Taylor, Mr. J. W. Teale, Mr. E. Tegart, Dr. G. D. P. Thomas, Dr. W. J. Treutler, Mr. J. Smith Turner, Dr. W. J. Tyson, Dr. W. F. Wade, Surgeon K. S. Wallis, Dr. E. Waters, Mr. T. Spencer Wells, Mr. C. G. Wheelhouse, Dr. S. Wilks, Dr. W. Wood, Dr. I. B. Yeo, and others. About 170 medical officers served in Egypt, and of those 115 have returned. The whole of the latter received invitations, and forty-nine army and twelve naval medical officers attended the banquet, including Deputy-Surgeons General Ekin, J. Lamprey, J. A. Marston, and Colvin Smith; Brigade-Surgeons Clarke, S. Fuller, J. G. Faught, E. M'Grath, and H. R. Veall; Staff-Surgeons C. C. Godding, H. M. Ellis, J. M. Stone, E. H. Pollard, W. Graham, and E. E. Mahon; Surgeons-Major R. Anderson, Baker, T. G. Bolster, J. E. Clarke, J. S. Comyn, L. Corban, B. Connolly, C. H. Harvey, R. C. Hickson, G. F. Hume-Spry, Lane, T. S. Lloyd-Barrow, H. F. L. Melladew,

but men who will, when once engaged in it, resolve to carry it to victory, in spite of all risk of life, of health, and of comfort—men whose admirable virtues the lovers of peace might well be proud to emulate. It would ill become me, in my ignorance of the science of warfare, to say anything of the late Egyptian Expedition, unless it be based upon the speedy result which it has brought about. We can all of us remember, though we could not judge of the sad forebodings about it—we can all remember that no one thought, if ever the war did begin upon land, that it would be soon ended. It appeared that there was one master mind that did reckon how soon it should be ended—the great mind of the gallant, calm, and cool-headed Sir Garnet Wolseley. He did calculate the very end of it: he could reckon the difficulties to be overcome; he could absolutely count on the valour and skill of the forces at his disposal; and so he brought the war to an end to the very day. It was done with such precision as to time and method, as reminds one only of the achievements of men of science, who work with easily calculated brute forces; he had to calculate with a force not less sure, but less easily reckoned as to its speed—the force of earnest, intelligent, and brave men working under him. And, speaking of its likeness to science, one cannot but be reminded of the degree in which, of late years, science has interwoven itself with the whole matter of warfare. War is no longer the mere matter of fighting that it used to be. Chemical and scientific skill is now at once applied to the production of the materials of warfare, and victory seems now to depend not much more upon the bravery of the men than upon the scientific skill extended to the materials. And of this science, surely we may now boast that the members of our profession bring to warfare their full and competent share. [*Cheers.*] They are still called surgeons, and it is not likely that I should wish to change the title; for I am proud to boast, and almost to believe, that surgery does include the whole of the medical and many other sciences. [*Cheers and laughter.*] The members of the medical department, whom we now expressly honour, do bring to their task an amount of scientific knowledge such as very few possess. They are not surgeons alone; they are now physicians, they are sanitarians, they are in the broadest sense men of science. The departments have, for a long time past, been able to boast of their relations with men of science. Our friend Professor Huxley, who honours us with his presence to-day—[*cheers*]; another who is nearly his equal in another branch of science, Sir Joseph Hooker; another who is unmatched in his branch, Mr. Spencer Wells; another whose name will be remembered long with honour in the ranks of the most minute and exact scientific inquirers, George Gulliver—all these show what men in the medical department of the services can do. Long before then, they were, indeed, among the leading sanitarians of the time, but now all science is fairly combined in them; and I think we civilians are bound to admit that it would be very difficult to find anybody among ourselves who can with so much skill and with such advantage to the country show themselves masters of surgery, of medicine, and of sanitary science. They exemplify this in numberless instances. I will not anticipate the next toast by speaking of the grand work done by those who have served in this expedition; but, at least, I may refer to two, Directors-General Crawford and Reid, as brilliant examples. We civilians, as representing a large number of them, say how proud we are that men of our profession, and fully equal in scientific and professional knowledge, can bring us into relation with the bravery, the courage, the self-denial, the perfect and complete endurance for their country's need, which the members of the medical department have shown during the time of war. They number amongst them men who have won the Victoria Cross. They can tell tales of men who have been in succession brave soldiers, fighting as soldiers for their own lives, and the lives of their comrades; and then men of science, men of perfect humanity, working for the relief of human suffering. We are glad of an occasion of this kind, when those engaged in civil practice may show how heartily they hope to be always reckoned as of one body with the men belonging to Her Majesty's services. [*Cheers.*] I shall take leave to couple with this toast the names of the Earl of Morley and Mr. Campbell-Bannerman. No two names could be more appropriately connected with this toast, because of the offices which they hold, and which, by the consent of all, they admirably fulfil; standing in relation, on the one hand, with the Queen, with the peers, and with the people, as represented in Parliament; and, on the other, with those to whom we desire to do honour—the Navy, Army, and Auxiliary Forces.

The EARL OF MORLEY: Sir William Jenner and gentlemen, I feel to-night that, before such a distinguished assembly, I am in a somewhat difficult position. In the first place, I have to follow so eloquent a member of your profession as Sir James Paget; and, in the second place, I wish that some more distinguished gentleman than myself could have responded for the army. We all regret—I regret more than any of you—the absence of Sir Garnet Wolseley to-night; and I

regret the absence of His Royal Highness the Duke of Cambridge, who, I know, was anxious to have attended on this occasion. I regret, also, the absence of my chief, the Secretary for War. But, as Sir James Paget has done me the honour of coupling my name with the toast, I must do the best I can to respond to it. I feel that, with regard to the army generally, my task is a light one; for, after all, I can add nothing to the sentiments that have been already expressed, not only in Parliament, by the leaders of the two parties, but also by the enthusiastic and somewhat rapturous welcome given to the troops; not merely to the combatant troops, but to all departments of the army, in the march past and through the streets on Saturday last. [*Cheers.*] Sir James Paget, in his eloquent speech, has referred to the application of science to the art of war. He said, and he said justly, that, year by year war is becoming more scientific; and I understand that it means that the science of war is becoming yearly more complicated, and that more sciences are applied to the destruction of the human race. But, at the same time, he referred touchingly to the fact that, concurrently with these increasing complications of science in the destruction of life, there is an increasing anxiety for the preservation of life, and for the alleviation of the miseries of those who are wounded or sick—incident inevitably to any campaign, however brief. The late campaign has been marked by one peculiar characteristic more than any other, and that is its brevity; and we all know that the briefer a campaign is, taking all other circumstances into consideration, the less the loss of life. But to night, perhaps, in a double capacity, I ought to say something about the distinguished guests who have received the highest compliment that their profession could pay them. I say in a double capacity, not only as occupying the position in the War Office which I have the honour to occupy, but also as holding the no less responsible position of Chairman of the Committee—of which I am happy to see more than one of my distinguished colleagues present on this occasion—to inquire into the general arrangements of the army. I should like to say one word about that Committee, and I am glad of the opportunity of saying it. It is not a new Committee; it was one that was appointed more than nine months ago, and the object of it was principally directed to the improvement of the organisation of what we know as the Army Hospital Corps. The Secretary of State, after the conclusion of the present campaign, thought it was a fit opportunity of utilising the experience that we had gained. In no sense whatever is the Committee over which I have the honour to preside an inquiry into the conduct of individuals, but of the department generally. [*Cheers.*] The whole object of our inquiry—I am confident that I shall be borne out by the distinguished members of the Committee who are present, not connected with the War Office in any way, and who possess the confidence of the public and the profession—namely, Sir Wm. Mac Cormac, my friend the Director-General of the Medical Department, and Sir W. Mends, who, situated as we are as an insular power, has such immense importance as director of transports—the object of our committee is thoroughly to sift all the evidence that we can get as to the results of our present medical arrangements for war. I am sure we shall freely get evidence from all quarters, and we shall not refuse to take any evidence that will throw light upon the subject. I can assure you we are only anxious for the good of the service, and our desire is to perfect the organisation of the medical department of the army. That is a perfection which, we all know, is very difficult to attain. If you will consider what it is to transport a large force three thousand miles from our own shores, and then, for strategical and military reasons, to transport it at once into a country absolutely incapable of providing supplies, the moment they have landed, without having any opportunity for any base organisation, I think you will all admit that the difficulties are so enormous, that it is absolutely impossible but that at certain points, and at certain early periods of such an expedition, certain things may be missing. Before I sit down, I should like to say that, coupled with the statement that has been read from Sir Garnet Wolseley to-night, I have heard many officers, of the highest distinction, speak of the zeal, of the untiring energy, under the most trying circumstances, of the officers of the medical department during the campaign. [*Cheers.*] I am sorry that the distinguished medical officer, whom I see within a few paces of me—Dr. Crawford, Director-General of the Medical Department of the Army—was not “told off,” if I may use the expression, to answer to this toast. He would have told you more than I can how the officers of the medical department behaved in the campaign; but I am consoled by remembering that his turn is coming later on. From what I have heard myself, I can assert that the officers whom you have honoured to-night have, by their zeal and their energy, under the most trying circumstances, under an extraordinary pressure of work in an unhealthy climate, admirably performed the duties which have been allotted to them in the army. I am not paying them a compliment which is not thoroughly deserved. We all know that there is

no other profession which so thoroughly calls out the qualities of self-sacrifice and self-denial: and I am sure the members of your profession who have been in Egypt with the forces, have not fallen short in the high standard expected from the medical profession at large. I need say nothing more, except to assure you that it has been a great honour to me, and an unexpected one, to respond to this toast, and to express the sincere hope, which I am sure will be shared by all my colleagues, that the experience of the Egyptian campaign may throw great light upon our medical organisation in any future campaign. Without finding any fault, but simply desiring to improve the organisation of the system, I trust that we may be able to effect some real genuine reforms, that will be helpful in accomplishing that which is the noblest of all aims—the alleviation of the sufferings of our fellow creatures. [*Cheers.*]

MR. CAMPBELL BANNERMAN, M.P.: Sir William Jenner, Sir James Paget, and gentlemen—I owe the distinguished honour of being called upon to respond to this toast, to the accidental circumstance of my being associated with the civil administration of the navy. Although, of course, I accept the position assigned to me, I cannot but express, like my noble friend who has just sat down, my wish that the duty had been allotted to some one or other of the officers of the navy who are present, and above all, if possible, to some one who had engaged in the expedition to Egypt. I entertain this wish, because such an officer would have been a more worthy representative of the navy than myself, but chiefly because he would naturally, as I believe, have attempted to disclaim some of the credit that has been attached to himself and his comrades, and some of the kind words that have been used by Sir James Paget; whereas I must confess for myself that my personal admiration for all the men who compose that great service, of every rank, degree and condition; is so great, and increases so much with every day's experience of my daily duties, that I cannot, in any conscience, do otherwise than echo their praises. [*Hear, hear.*] The recent war, singularly short as it was, afforded them an opportunity to display, within a brief compass, every quality which we ordinarily attribute to the navy. The diplomatic tact, the sound judgment, the technical skill, the cool courage of the officers was as completely tested as the bravery and the manifold aptitude of the blue-jacket, or the solid courage of the marine. [*Cheers.*] Sir James Paget and Lord Morley had said that one of the most remarkable features in the recent war was its speedy conclusion, and I venture to say that that speedy conclusion was, in a large extent, due to the admirable way in which the naval officers conducted their relations with what I may perhaps call the two great public services: on the one hand the army, so far as related to the actual duties of the campaign, and on the other hand, the great mercantile marine of this country, in carrying out the important enterprise of the transport of the expedition. [*Cheers.*] Gentlemen, these events have shown that the navy is worthy of its great traditions, and your response to the toast to-night is proof—if proof were needed—that it retains fully its old place in the affection, confidence, and pride of the country. It would ill become me to say anything more, but before I sit down I wish, in one sentence, to say, on my own part, and on that of my colleagues in the Admiralty, how highly we appreciate the services of the medical department, and how anxious we are, by every means in our power, to see its efficiency promoted, and how gratifying it is to us to find those services recompensed and acknowledged by a public demonstration of this sort on the part of the members of their profession. [*Cheers.*]

The CHAIRMAN stated that a telegram had been received from the members of the Berlin Army Medical Society, then sitting, sending greetings to their medical brethren at the banquet. He also stated that a telegram in reply would be immediately forwarded. The following is a translation of the telegram received from Berlin: "The members of the Berlin Army Medical Society now sitting, send greetings to the medical officers of the British army returned from the war, and present at the banquet given at Willis's Rooms. From Dr. VON LAUER, General Staff-Surgeon of the Army, and Honorary President of the Society." To the above message of greeting, the following reply was at once sent from the room: "The medical officers of the Egyptian Expedition now present at Willis's Rooms, London, return their hearty thanks for the good wishes just received from their friends."

The CHAIRMAN then said, in proposing the toast of the evening: Gentlemen, I owe some apology for occupying this chair. [*No, no.*] When the subject of this banquet first came under my consideration, I was most anxious that a surgeon should occupy the chair. I felt that the army surgeon, in the person of Sir James Paget, would be a most fitting representative of the medical profession in the army. I felt that the golden eloquence, beguiled me, and told me that it was rather the

duty of a physician, inasmuch as the duties of our medical officers were more medical than surgical. [*Oh, oh, and laughter.*] He told me—and it was quite true—that 7,039 men had passed through the hospitals in Egypt up to the 8th of November, and that of that number only 463 were surgical cases. He also urged upon me—and this had weight with me—that, as I was president of the first medical college or corporation in the kingdom, it was my duty to do what I could to do honour to the medical officers returning from this expedition. [*Cheers.*] I therefore felt that, although I could not lay claim to his eloquence, my halting words, from the position I held, would have some weight with you. Sir James Paget has told us that medical surgery involves everything. It may be so, but I should be very sorry to allow some of my medical friends in the College of Physicians to cut off my leg, and I think he would look twice at some of his surgical friends before he allowed them to treat him for a bad pneumonia. In England, the two branches are to a great extent distinct, and Sir James Paget's argument, therefore, had weight with me. But there is another department of medicine which is hardly surgical, I mean preventive medicine, sanitary science; and I felt that this belonged especially to the physician. It is physicians who teach it, and not surgeons: it is physicians who founded it, and not surgeons. Now preventive medicine, sanitary science, does seem to me, in regard to the army, more even than medical skill or medical treatment. I remember stating, after the Crimean war, to some of my medical friends, that if, being ill with fever, I had my choice of being placed in a tent with a jug of water beside me, and a little food such as I could take, I would rather be in the tent with the free air flowing around me—in the best sanitary condition—than in some of the hospitals I had read of, even though I had a whole college of physicians to treat me. [*Laughter.*] Our army is still decimated with disease—in Egypt, I mean—and was so from the beginning; and this disease, if it is to be met at all, must be prevented by sanitary arrangements. The army will be weakened in a short time, if disease continue to make the progress that it has made there. You may ask me if I attribute to the medical officers any want of sanitary knowledge, or of zeal in putting sanitary laws in force. Not at all. In this great metropolis, and in this country, where the powers of civil engineering are at our disposal, where sanitary arrangements can be conducted with precision, where the analyst tests the water, and publishes his tests week after week, where the analyst tests the milk and inspects dairies, we find, nevertheless, epidemics of typhoid; we find the subtle germs eluding the most carefully planned schemes for their obliteration. What then must it have been in the East where dead bodies infected the water, where thirsty men were fain to drink, although the drink was death? I say that no sanitary arrangements could have prevented these terrible disasters. Something has been said of the organisation of the hospitals. I am old enough to have witnessed an epidemic of cholera in this country, in which patients were thrust into large hospitals supplied with nurses, with medical staffs, and medical students: and I witnessed (because it came suddenly upon them) the confusion and upset of all previous arrangements; and I can therefore fully understand that in the East, where they had comparatively few officers, where those officers had, I am sorry to say, other functions than their medical functions to perform, where they were undermanned, under-nursed, and badly nursed—I say I can understand, (though I do not know that it was the case) that a certain amount of confusion might have entered into the arrangements of the hospital for a time. Then again, I am old enough to remember that, if the medical officers deviated one letter from the law, if they proposed this or that which they thought was for the good of the patients, it was disallowed, unless it was properly ordered. It might be some trifling thing that would only cost twopence halfpenny, but then it was said that twopence halfpenny had to be multiplied, perhaps by 150, and the medical officer's pay was not sufficient to enable him to order it, because it would come to a considerable amount. Then the surgeon was called upon to operate when shot and shell were dropping around him; and one distinguished officer, Surgeon-Major George Shaw, whose name should ever be mentioned with honour, fell dead at his post pierced through the head with a bullet. Now, to preserve a cool head and steady hand under such circumstances indicated a very considerable devotion, and mental power and training; and I say that all honour should be rendered to those who conducted themselves as medical officers in that expedition under such trying circumstances. None but the medical profession can appreciate all the difficulties and trials that you had to undergo, and none but your profession can judge of the skill and judgment that you displayed. This is a representative assembly; for here we have Oxford among us, the Regius Professor of Medicine, Cambridge its most distinguished surgeon; and we have also amongst us the most distinguished graduates of the Univer-

sity of London. The President of the College of Surgeons, and the ex-President of the College of Physicians, are with us, with all the most celebrated Fellows of the two colleges. The most renowned practitioners, in the largeness of, of medicine, surgery, and midwifery, are here to-night. And why? To express their thorough conviction that you did your duty. [*Loud cheers.*] It may seem faint praise to say that you did your duty; but remember what it is to do one's duty. It is to bring to bear on the work in hand the whole of your physical power, all your mental and all your moral power; and when the medical profession, in such a representative assembly as this, say that they believe you did your duty, that is a sufficient reason why you should receive a hearty welcome. We desire more; we desire to say that you exercised, under trying circumstances, skill and judgment, and we desire to draw closer the ties that unite us, your civil brethren, to you, members of the same noble profession. I think myself that the medical officers of the army have no greater honour than to belong to our profession. Highly as I respect combatant officers, highly as I respect other professions, I will yield to none in claims for dignity as regards calling in life. [*Cheers.*] And if we make every one here feel the same zeal, and the same claim to honour in their profession, I am sure we shall reap the reward. We wish our brethren to feel that we, the civil members of the profession, thoroughly sympathise with them in all their trials and difficulties; that we are one with them—one in their hopes and aspirations. I trust, then, that you will drink, with all honour, the health of the medical officers of the navy and the army who have served in Egypt. [*Loud cheers.*]

Staff-Surgeon MAHON: Sir William Jenner, my Lords, and Gentlemen, in responding, on behalf of the naval medical officers employed in the Egyptian Expedition, to this toast, that has been so cordially received, my only regret is that the task of replying has not fallen into abler hands; but I do not think I shall be wrong in bearing my testimony to the devotion and self-denial of my brother medical officers of the naval service in the performance of their duties in Egypt. I am glad of this opportunity of being able publicly to thank the officers of the Army Medical Department for the hearty co-operation, sympathy, and assistance which they always gave us during the campaign in the field. I refer both to Egypt and to the Transvaal, where I had the good fortune to be associated with them. The same good fellowship always existed between the two services. I beg to tender you our hearty thanks for the kind reception we have met with to-night. [*Cheers.*]

Deputy Surgeon-General EGIN: Mr. Chairman, my Lords, and Gentlemen, in rising to return thanks on behalf of the officers of the Army Medical Department serving in Egypt, I find myself at the greatest possible loss to return thanks in a suitable way before an assemblage of the most distinguished men of our profession to be found anywhere in the world—men who are accustomed, as you have heard to-night, to hear speeches made by orators. It is not so with the medical officers serving in Egypt; and I hope, therefore, that I shall have your indulgence while I attempt to say a few words. Sir William Jenner has spoken to you of the union that should exist between the medical officers of the army and our professional brethren in civil life. We have always known that we can at all times depend upon you for your sympathy and your assistance, if we require it. But, gentlemen, you have come forward on this occasion to give us a reception which deserves the heartfelt gratitude of everyone of us, not only of those who have come here to-night to partake of your princely hospitality, but of those who are absent from sickness or from some other cause, and those who are still serving in Egypt, to whom the events of this evening, I hope, will be the subject of many pleasant conversations in time to come. I will not detain you long with any remarks with reference to the medical transactions of the late campaign; that would be too long a subject to enter into. But, some time ago, one would have been led to suppose, by the remarks made in many newspapers, that the medical department had broken down. The medical department was never in anything like a condition of breaking down. There was no necessity for it. There was no great demand on the department at any time, and it is utterly wrong to suppose that there was anything approaching a breakdown. I trust that the committee now sitting and investigating matters connected with the department will find out any defects that exist; and I am sure that I, and every officer in the department who has its welfare at heart, wish that every existing defect may be found out and corrected. Let me say that, on the 27th of July, I saw the establishment of what I consider the very fine hospital of Alexandria; and I left it capable of accommodating two hundred and seventy patients; everything was complete. I went on to Ismailia; and there, in consequence of the sudden advance of our troops, everything was not so complete as it was at Alexandria. For many of the sick, there were stretchers, as comfortable as most beds;

for others, there were no beds, but there was a comfortable dry floor, with good ventilation; and that was better than sleeping in two or three inches of dust under a tent. I never saw men better looked after, whether in the field or in the hospital. They received every care and attention from the medical officers, and I do not think there was a single real case of neglect brought under my notice. It is my bounden duty to tell you candidly what I think about these matters, considering the reception you have given us. You have spoken in the most candid way of my department; you have spoken in the most flattering way; but we take your good wishes as we are sure you intend us to take them. My predecessor has spoken of the relations of the Army Medical Department with the naval medical officers. I must say there was no difficulty in working together; there is the greatest harmony between them, and every desire to assist one another to the utmost. We took any man in whom we could assist in any way, either for his wounds or for disease. I have again to thank you for the great honour you have shown us. [*Cheers.*]

Deputy Surgeon-General MARSTON: Sir William Jenner and gentlemen, I am very glad that some one worthier and abler than I am has returned thanks already for the Army Medical Department; but it would be affectation in me not to say that I am proud of the position in which I stand. I feel thoroughly with Sir William Jenner, that, proud as I am of being an army medical officer, I am prouder still of being a doctor. When once we lose touch of you, to use military language, when once we lose your sympathy, where are we? It is to you as a critical audience, as a special jury, that hereafter we shall have to appeal, in order that you may pronounce judgment upon us; because you, by your special technical knowledge, must know how we discharged our duty. Gentlemen, our arrangements will have to be tried on a very simple basis; the questions will narrow themselves down to this: What material had you? what steps did you take to make them accessible? and what use did you make of it when you got it? I do not wish to say anything that can in any way prejudice or prejudice the inquiry that is about to take place; we all desire to have the best attainable, however it is brought about. But there are circumstances which cannot be lost sight of. You cannot, in vulgar language, have your cake and eat your cake. You cannot have great mobility in the field, and at the same time have heavy things to transport. You must remember that when we landed the men were instantly moved up to fight, and that no sooner were other men landed than they were moved up to the assistance of the first. Then we had a hospital which was called a base-hospital. That is generally understood to mean a general hospital, but such could not be the case; for we had no means of making contracts out there. We had to depend upon the diet that was brought down; but with regard to medical comforts—such as beef-tea, milk, soda-water, ice, champagne, claret, and such things—I believe there was an abundance of them. Then you will remember that there was a great strain upon the transport—cartage had not arrived. Had the transport been there, it would have interposed a break between the fighting army and the so-called base, which is a temporary succour for the wounded who were to go on board floating ships. Sir William Jenner had said a great deal about sanitation. It was my duty to look after the sanitary condition of the force. In the so-called base-hospital, the men were on stretchers, as a rule. I think it is quite possible that there were some cases of privation, many cases of inconvenience, some of discomfort, and even of apparent hardship; but that there were cases of real actual hardship, I deny. Such hardships tell upon the health of the wounded and sick men. Now, from August 23rd to September 29th, 2,800 men, wounded and sick, some of them very badly wounded, passed through the hospital, and the percentage of mortality was .6 per month. [*Loud cheers.*] In other words, one man in two hundred, or six per cent. *per annum* died in the hospital. Then there is another thing I cannot pass over. You must have read many of the things that the newspapers said about us. There was, first of all, the question of chloroform. In the case that was referred to, the man had seven drops of chloroform, and he was treated with the greatest care. There were six pounds of chloroform ready at hand at the time the amputation was performed. Then it was said that some of the medical officers performed their duties in a very perfunctory manner; that they asked the patient—"Are you better?" and, if the reply was—"Better", they would say—"Then why did not you write it on your bed-head ticket?" Now, the fact is, that there were no bed-head tickets in the hospital. The next statement was, that pills were taken all round from the same box to the wounded men and to dysentery cases. If that had been the case, there would have been no harm in it if the pills had been opium; but, as a rule, pills being more difficult to prepare than other things, they were only given on the prescription for each individual

case. Now I should like to mention two or three things that I saw with my own eyes. Early on the morning of the 17th, the Surgeon-General and myself rode up to the field before the battle had taken place. A field-hospital was transported by the Canal, and the flag of the hospital was pitched in the earth-works that had been left by the enemy. The stores were disembarked from the floats or barges that were taken up, and twenty-five tents were pitched. The boats were littered with hay to a considerable depth, and planks were put out, so as to form an easy access for the wounded. The wounded began to come in about seven or eight o'clock. They were all treated very much in the same way; they all received, according to the gravity of the wound, a small or a large dose of opium. Preparations for them were thoroughly made at the bottom of the tent, where they were nursed and dressed as well and as promptly as possible, and, as far as we could, antiseptically. The opium soon began to take effect, and many of these men, though badly wounded, in less than an hour were asleep. Two hundred Europeans, including seven officers, some of whom were dangerously wounded, were transported in two boats down the Canal, with an ease that has probably never before been known. [Cheers.] There were about 200 wounded Egyptians who were sent by rail, so that, altogether, nearly 400 persons passed through the Dam Hospital at Kassassin. About six hundredweight of ice had been brought up by train. Most of the men had lumps of ice, and many of them champagne. I think, therefore, that, on the whole, it was not a bad day's work. Let me only say, in conclusion, that, if you put on one side of the picture all the defects and all the privations, and add them up and multiply them by ten, and then, on the other side, going on the political principle of "the greatest good to the greatest number", if you take the amount of positive good that was done, such as that which I saw with my own eyes, I really think that, under all the circumstances in which we were placed, never was a more comprehensive, varied, responsible, and successful medical service rendered in the field. [Cheers.]

Deputy Surgeon-General COLVIN SMITH: After the eloquence of the previous speakers, I really think that there is no necessity for me to reply to the toast with which my name is coupled on behalf of the Indian division of the army in Egypt. As the army was composed both of the army medical men and Indian medical men, I can only declare that no men ever did their duty more nobly than they did. They carried out everything to my entire satisfaction for the benefit of the sick and the wounded. Happily, everything was prepared in India on a very magnificent scale before we left, and we had no shortcomings whatever. Our sick-rate was only fifteen per cent. during the whole campaign. Our death-rate was nil; we lost one man from an injury received on board-ship. We had a few sunstrokes after drinking, and things of that sort; but from August 21st to October 19th, when we left, there was no death amongst our men. We had an admirable Army Ambulance Corps, which, I am glad to say, we were able to lend to the army medical department. We also lent four hundred men to carry off the wounded at the battle of Tel-el-Kebir, and they did their work admirably. [Cheers.] We gave them also an ambulance corps of 96 bearers, who, however, did not arrive in time, owing to detention on the railway. At Cairo we were glad to give them two hundred dhoolies to carry the sick. I was delighted with my department, composed of both army medical men and Indian medical men. They vied with each other to assist in every possible way for the benefit of all. [Cheers.]

Mr. ERNEST HART: Sir William Jenner and gentlemen,—It accords well with a wholesome tradition of the services, that we have present to-night the Parliamentary Secretaries of the War Office and Admiralty, and that we are also favoured with the presence of several distinguished officers of the army and navy, whose names I have to mention to you. The medical officers who serve their country in the army and navy entertain a profound respect for and warm allegiance to the officers of State who administer the services; they are bound to their comrades in the field by intimate friendships, and by the inexpressibly close alliance and comradeship which men have who share the anxieties, the labours and hardships, common to peace and to war. [Cheers.] They have the opportunity of being the daily witnesses of the courage, the discipline, the dash, the endurance, and the magnanimity in victory of their comrades in arms; and they honour, as we honour, those sterling qualities of British soldiers which have on so many fields achieved the high aims of British policy under circumstances of the greatest difficulty,—and never more gloriously than in that short and sharp campaign, which began under the towering forts of Alexandria, and ended so swiftly and so well in the plains of Cairo. [Cheers.] The progress of modern warfare leads the medical officer more and more to share the actual perils of war with his comrade in arms. The medical officer now advances in the first line of the army; he must be prepared to share the perils of the bullet and the sword; he must be ready to face the dangers which proved fatal in the early stages of the campaign

to Surgeon Shaw, who fell mortally wounded while tending a sick man in the front line of fire. [Cheers.] He must be willing, like Landor, to do his duty under the heaviest fire, and to be rewarded, as he felt rewarded when, dying, he was able to say "Tell my family that I have done my best for the wounded under my charge." If need be, he must be ready like Home, like Mackinnon, like Reynolds of Korke's Drift, like Reade, and many others whose breasts are decorated with the Victoria Cross, to draw his sword and to add the dangers of the soldier to the special duties and perils of the surgeon. From those duties and special perils the medical officers have not flinched; and we feel particular satisfaction whenever we read in the despatches of commanders, and when we read in the orders issued by the officers of State, of the commendations bestowed upon the medical officers of the army for their valour, for their cool courage and devotion as well as for their skill. Happily, in an increasing measure those rewards and those commendations have been bestowed, and never more freely than by the gallant commanders of the Egyptian Expedition, and by the Ministers who now control the various departments of State. [Cheers.] It would have added much to our satisfaction, had the illustrious chief who led the British Army to victory been present to-night. It was his intention, as we have heard, to be so; royal commands, however, and higher persons have called him elsewhere; but nowhere could he have received a warmer welcome than we should have accorded to him to-night. Gentlemen, I could not mention to you a name more honoured in the navy and more universally beloved than Admiral Mends. [Cheers.] Admiral Mends won distinguished honours as Captain of the *Albatross* early in life, by his gallant conduct, by his dash, and by his seaman-like qualities. Later, as we all know, he organised the transport department in the Crimea, and since he has organised the transport department of every one of our great wars. He is also the creator of the great Indian system of transport. The name of General Sir Herbert Macpherson—[loud cheers]—needed, I was sure, only to be mentioned to obtain the enthusiastic reception, which you have at once accorded to it. General Macpherson won his earliest honours by distinguished valour, which gained for him the Victoria Cross at Lucknow. Since then, in every great Indian campaign, at Cabul, in the great march on Candahar, and lately at the assault of Tel-el-Kebir, and in that brilliant forced march to Zagazig and Cairo, he has added to his early laurels. [Cheers.] Sir W. O. Lanyon has been for many years conspicuous in the eyes of the country. He has won distinguished honour, not only as a gallant soldier, but as a most accomplished administrator in the Zulu and Cape wars, as well as in Egypt. This toast has therefore a general and symbolic as well as a personal meaning. We desire to express our sense of the vast importance of the constant union and sympathy, and of the increasing mutual esteem between our medical and our non-medical guests. We desire to see that sentiment strengthened, for we believe that in the mutual sense of the vast though diverse importance of the professional proficiency of all branches of the service, lies the certainty which we all entertain, that the efficiency of the British army will not only be maintained, but increased; that with medical officers such as we are proud to see in the room, and generals and admirals and military and naval officers such as we are proud to welcome, we shall look forward, if need be, to further victories, and always hope to see the power and greatness of England maintained as it has signally been, by officers such as those we welcome here to-night. [Cheers.] I propose the toast of "Our Non-medical Guests," and with that, I couple the names of "Admiral Sir William Mends, Major-General Sir Herbert Macpherson, and Colonel Sir William Owen Lanyon. [Cheers.]

Sir H. T. MACPHERSON: My lords and gentlemen,—I beg to return you the most heartfelt thanks of the guests who have been just named by the last speaker; and, in doing so, I would ask your permission to name one of the guests who is sitting near me, and from whom the Indian Contingent, of which I had the honour to be in charge, received most valuable assistance. I refer to Colonel Sir W. O. Lanyon. He was commander at the port of Ismailia; and, but for his assistance, we never could have got on half so well as we did. [Applause.] No request that we ever made to him was delayed for an instant, and everything that we wanted from him was produced on the spot. I again beg to return you our best thanks. [Cheers.]

Colonel Sir W. O. LANYON: Sir William Jenner and gentlemen,—I can assure you that those whose health you have so kindly drunk, and of whom Mr. Hart has spoken so kindly, are very grateful for all that has been said, more especially as it comes from the heart. [Laughter.] I feel, from the position that I held at Ismailia, as commandant of the base, I ought to say one or two words with regard to certain matters which have been referred to to-night. From the time that the Surgeon-General went to the front, up to the time that I left Ismailia, I visited the hospital every day; and I went to the bedside of every patient, and

asked three questions: How are you getting on? Are you comfortable? Is there anything you want? In ten days, no fewer than 1,100 men passed through the hospital, and during all that time I only heard of two complaints. Those were from two men who were lying alongside each other, and who said that they had had nothing to eat for thirty-six hours. On inquiring into the matter, I found that certainly they had not had anything to eat, but they had had as much beef-tea and milk as would have kept more than those two men going—[laughter]; and, when I tell you that one of these men was badly wounded in the mouth, and the other through the shoulder, close to the lungs, you can easily understand why they had nothing to eat. I can only say, that a more devoted and hardworking set of men, than the medical officers who were down at the base with me, I never wish to meet. [Applause.] They had enormous difficulties to contend with, but they contended against them well; and I can only hope that some of those difficulties which they had to meet will, by the experience thus gained, be obviated in the future. I thank you very much for your kindness in listening to what I have said, and for your kind response to the toast.

Dr. CRAWFORD (Director-General): When I came to the dinner to-night, I congratulated myself on not finding any reference to my name in this list of toasts. I cannot say, however, that I am greatly distressed by the duty which the Chairman has been good enough to impose upon me at very short notice, because I do feel that I should like to join with my professional brethren of the army in thanking this august assembly for the honour they have done the medical officers who have served in Egypt. The toast which I have to propose to you to-night, however, is one of a different character. It is my privilege to propose for your acceptance the health of the Executive Committee, who have organised and carried to a successful issue this grand banquet. Having regard to the magnitude of the undertaking, and the shortness of the time which has elapsed since it was put in motion; having regard to the many difficulties which must be made in private for such a large assemblage of guests, I think we are greatly indebted to the Executive Committee for the manner in which they have discharged their duty. [Cheers.] As to the banquet itself, I am sure you will join with me when I say that we have most thoroughly enjoyed it. [Cheers.] It is simply magnificent. For the object of it, I think too much cannot be said. A passing allusion was made to-night to the army medical organisation by a very high military authority. Reference was made to what is called military administration; possibly some people would call it military medical unification. I do not intend to address you on that subject, but there is another form of unification, which is typified by this assembly to-night, and to which I wish to draw attention. It is no small gratification to the army to know that the medical officers of the Army, Navy, and Indian Medical Services are taken into the ranks of this great medical profession, and received here into a brotherhood which is as honourable to the givers as to the receivers. [Cheers.] It is a proud moment for us when we come here and find ourselves standing shoulder to shoulder in the ranks of our noble profession, amongst the great chiefs in this great country and in this great city; and it is still more gratifying to us to know that, after the fatigues of war, after many cares and anxieties through which our brethren must have passed in active service, we can come here and rest in the bosom of a profession which is prepared to do us justice. [Cheers.] That is an unification of which we may all be proud. I have, therefore, special pleasure in proposing the health of the Executive Committee, which has brought to such a happy issue this attempt to unite in one undivided phalanx, a professional union and loving brotherhood, the medical practitioners in all branches of Her Majesty's service. [Cheers.] I beg to couple with the toast the names of Mr. Ernest Hart and Mr. Eastes.

Mr. ERNEST HART: The honour of this toast is more strictly due to Mr. Eastes. I will therefore simply heartily thank you for the compliment, and ask Mr. Eastes himself also to return thanks for it.

Mr. EASTES: On behalf of the Committee, I thank you profoundly for the honour you have done us by drinking this toast. It would be vain to deny that there has been much mechanical and other work connected with the organisation of this banquet; but at this late period of the evening I will not dwell upon this nor upon other topics, but simply say that we are heartily repaid for our small trouble by the undeniable success of this gathering. We civil medical men have shown at any rate, that the members of the naval and army medical services have at all times, whether in war, or in the trying duties required of them in peace in all parts of the world, the utmost sympathy of their non-militant brethren; and, I think, we may be sure that, after this meeting, they at least will be fully aware that at all times we are all members of the same great professional brotherhood, that their rejoicings are ours, and that in their trials and sorrows we most deeply sympathise.

Mr. SPENCER WELLS: If the toast—the last on the list—which I have very great pleasure in proposing, be not acknowledged by you with at least as much enthusiasm as any of those which have been so cordially received earlier this evening, I am sure the fault must be wholly and solely mine; the toast is “The Chairman.” [Loud cheers.] Your cheers prove that not another word from me is required. But I must say a few words, not as President of the College of Surgeons formally proposing the health of the President of the College of Physicians—although that would be a very pleasant thing to do—but, setting aside my thought of collegiate distinctions, I will simply ask every one of you—physicians or surgeons, or both; English, Irish, or Scotch; guests who have returned from Egypt; guests of the army, navy, and volunteers; of the Lords and Commons; and those representatives of the Fourth Estate who will make known to the whole nation to-morrow something of what they have seen and heard to-night; and everyone of those who have been so delighted to welcome all our guests—one and all to unite in drinking to the health of our chairman—[cheers]—in wishing him a long and happy life, and a continuance of the respect and affection which he has for so many years past well deserved, not only from his professional brethren, but from all classes of the people, from the Queen at Windsor to the poorest patient in hospital. [Cheers.] If any one here had known nothing before now of Sir William Jenner, the manner in which he has performed the duties of Chairman this evening would alone be sufficient to prove that the position he has attained is well deserved. You must have observed the thorough earnestness, the plain straightforward determination, the warm sympathy with others, which they who have known him longest best appreciate, and which show the true man. [Cheers.] It is by these characteristics, as much as by his scientific work, that he has earned the confidence of the profession, and has proved himself worthy of the name of Jenner. The first Jenner is immortal as a benefactor of mankind. It may not be generally known, but it is true, that the first Jenner has saved, is now saving, and will continue to save in all coming ages, more lives in one generation than were destroyed in all the wars of the first Napoleon. After thirty years' friendship, I will not trust myself to make a comparison between the first and second Jenner. But I will do far more; I will read to you what has been said by one of the greatest physicians of our time. Sir Thomas Watson, after describing how, fifty years ago, “no definite line of genuine distinction could be drawn between the various forms of continued fever met with in this country,” goes on to say: “The Jenner of our time, with patience and sagacity worthy of the great name he bears, has traced out plain lines of division between two forms which had been confounded together, and which we now call typhus and typhoid.” By this work alone—by the discovery of the true characters of typhoid, of its origin and mode of propagation—he has led us, with the aid of Pasteur's recent researches, to entertain the confident hope that we shall as certainly prevent the spread and lessen the fatality of typhoid as we can modify small-pox by vaccination. [Cheers.] I will say no more, but, taking the words of the toastmaster, give the toast, “The Chairman, upstanding, three times three”. [Loud cheers.]

The CHAIRMAN: Gentlemen, I regret that a long friendship has made my distinguished friend, Mr. Spencer Wells, blind to my faults, and has enabled him to magnify enormously any virtues that I may possess. [“No, no.”] I thank you very heartily for the way in which you have received my name. I feel very proud of the position I have occupied to-night, though I still feel inclined to blame my friend, who has several times seduced me, as with a golden tongue, into many of the positions I have occupied. I must say, however, that I am very pleased to have filled this chair, and to have met to-night those whom I honour and respect. [Loud cheers.]

The company then separated.

MEDICAL MAGISTRATES.—The Lord Chancellor has, on the recommendation of the Duke of Wellington as Lord-Lieutenant, appointed Dr. Alfred Meadows, of Poyle Manor, Colnbrook, and George Street, Hanover Square, one of the magistrates for the county of Middlesex and the city and liberty of Westminster.—The name of W. W. Miller, M.D., of Eye, has been placed by the Lord Chancellor upon the Commission of the Peace for the county of Suffolk.

BEQUESTS AND DONATIONS.—Mr. Henry Spence, of Shrewsbury, has bequeathed £20,000 to the Salop Infirmary; Mr. James Jardine has given £500 to St. Mary's Hospital, Manchester; the British Home for Incurables has received £300, less duty, under the will of Mrs. Ann Sheerman; the Sussex County Hospital, Brighton, has received £200 under the will of Miss Laura Verrall; the Earl of Dartmouth has given £50 to the Charing Cross Hospital; the Brompton Hospital for Consumption has received £50 anonymously from the National Club.

Can any one who reads the history of "Cholera and Water-Supply" (by Dr. Snow) "in the South Districts of London," doubt that cholera was propagated by sewage-contaminated water; and that sewage was rendered choleraic by the mixture of cholera fecal matter in a privy from its use by a patient suffering from the disease? Dr. Budd's paper went further, and proved that the emanations from the privy in the Bristol workhouse were the cause of the disorder. "In every ward a large proportion had it; in several one-half died, and in one ward not one escaped death. Now, within a few paces of the very spot where this appalling calamity was occurring, there were sixteen persons housed in a separate building, who all escaped. Not one of them had even diarrhoea, and yet these sixteen persons were fed from the same table, and drank the same water, as their neighbours, who, close at hand, were dying by the score. But the circumstances of the sixteen who thus marvellously escaped were peculiar. Fortunately for them, those sixteen persons all had either itch or scald head, and were in consequence closely confined to their rooms, and, in particular, strictly debarred from all resort to the common privy." These facts seem distinctly to prove that cholera contagion was not, indeed, in fecal matter, or in emanations, which were fatal, as we have to do, to several persons out of eight, but in the water which was drawn out of sixty-six children, and used all at once with a large privy, which was flushed every morning, and the cesspool receiving its contents was unconnected with the general drainage. If Dr. Budd's papers be interpreted in any other interpretation than what he states, it remains with those who do not believe in infection, to point out how the facts may be otherwise interpreted. I could not agree with all points in the same direction, but your space must come to an end. In a paper read at the statistical section of the French Association, the late Dr. Anagnoste spoke of the occurrence of the first case of cholera at Geneva in 1817, as an *instantia crucis*, proving that cholera is contagious, or spread by the agency of human bodies. An old woman attended her son, who had been at Musselburgh when cholera prevailed, and she was speedily attacked and died. Now, this woman had never, probably, been out of the house, certainly not out of the close, and was exposed to contagion from her son.

"for a time it was an isolated case, no other appearing for ten days in a population of above 140,000 persons." Can this fact, even alone, not be regarded, as described by Alison, as an *instantia crucis*? Just so at Fogo, the first person attacked was a slave girl, who had nursed a child who appeared very ill, and whose evacuations had soiled her clothes.

Glancing over the BRITISH MEDICAL JOURNAL of 1866, I read only one leading article on the subject, namely, that of November 3rd, of which the following paragraph supports fully the view which I hold: "It is certain that the contagiousness of cholera is very different in kind and degree from that of the acknowledged infectious diseases. In this respect it appears to resemble typhoid fever more closely than any of the other diseases mentioned by Sir Dominic Corrigan. There is this important feature which is common to the two diseases, cholera and typhoid; namely, that the specific poison of each disease is contained in the intestinal discharges, and that these discharges are the chief, if not the only, vehicle by which the disease is transmitted from one individual to another." The leader then goes on, in the most eulogistic strain, as to the service rendered by Drs. Snow and Budd.

The paragraph from the leading article, above quoted, expresses exactly my idea as to what is proved by the references I have made to Fogo, Norway, and the Bristol workhouse. The same view is expressed more particularly by Mr. Macnamara, in quoting from the manuscript records of Dr. Rean (*vide Treatise on Asiatic Cholera*, page 257). After stating that none of the attendants were affected, he says: "I may here state that considerable personal experience in epidemic cholera has led me to the conclusion, that it is not contagious, but that the exhalations given off by the evacuations are decidedly infectious, when allowed to remain until decomposition takes place. I therefore make a point of having the evacuations received in chatties (unglazed earthenware vessels), charred, and immediately removed from the ward—the contents being emptied into pits dug for the purpose, between two and three feet deep, at some distance from the hospital, and then covered over with a layer of charcoal. These pits I do not allow to remain open more than four hours; and, should the hospital floor become the least soiled with the evacuations, I have the spot forthwith sprinkled with the chloride of lime, afterwards well washed, and chloride of lime again sprinkled over it, with the understanding that it is to remain three or four hours."

In such circumstances I do not believe that cholera is infectious, because the infection is at once prevented.

These remarks are penned by Macnamara as to a batch of convicts of 273, of whom 51 were attacked and 23 died. But mark the sequel, which I give *verbatim*: "These measures absolutely and entirely prevented the spread of the disease among the other convicts, some 8,000 of whom were located on the spot."

This occurred in 1864. Compare it with the hideous record of the cholera at Meen Meer (*vide Report of the Cholera Epidemic of 1861*), where "Out of a force comprising 2,452 men, women, and children, 880 were attacked with cholera, and 535 died in the space of little more than a month."

The records, as I have said, prove without doubt that the hospitals were infected with cholera-miasm to such an extent, that "when the wind blew from the hospitals, the horrible penetrating odour that issued from them was clearly perceptible at a distance of eighty yards from the buildings." "Out of a total of 1,002 men in the 51st Regiment, it is stated in the Regimental Returns that 863 were employed as hospital orderlies, and that 420 of these men were attacked with the disease." A proportion nearly as large was attacked in the 94th Regiment. I have jotted down one or two facts as to the attendants on the sick, which tell another tale than that implied in your original article; but mark the difference from the prisoners at the Andamans, and what the precautions did in the latter case. None of 3,000 were attacked; while here, at Meen Meer, the system of cleansing broke down, with the result that I have pointed out.

You have asked for my personal experience as to cholera in India; much of it was at the Jamsetjee Jeejeebhoy Hospital in Bombay, and here, with patients far advanced in the disease on admission, and in the centre of a town with more than 600,000 inhabitants, nothing could be done as to tracing out the point of infection. It is upwards of fifteen years since I left India; and the latest official record of an epidemic is that from which I have already quoted. As surgeon to the Agency, I collected information as to the outbreak or epidemic in Rajpootana; and though it was impossible to follow out individual attacks, yet nothing could be more distinctly proved than that, starting from one point, Bhurtpore, the disease could be traced all along the great lines of routes against the prevailing winds, and resting longest in the foulest part of the dirtiest native cities. Little more could be done than to find out the dates of its arrival, and how, on each side of the great

routes, the cholera died away, until the last recorded outbreak at "Ram Déo, a Hindoo shrine, about sixty miles to the north of Jedpore, where early in September each year a mela, or fair, is held." This attracted the lowest class from all directions, and cholera broke out severely. Then the whole, in dismay, dispersed to their homes. I suppose I need not say that they carried cholera with them; however, it accompanied them, some to the city of Jedpore, where their report had preceded them, and the Maharajah Tuckt Singh ordered that none should be admitted within the walls. They were kept out, and native hakeems and baidis (Mussulman and Hindoo medical practitioners) were sent by the Maharajah to attend to them. "The precautions were not altogether successful; but so much so, that cholera was only introduced into one or two places within the walls of Jedpore, and from these it did not spread." Ninety-nine deaths took place in Jedpore and among the refugees from Ram Déo. Cholera was introduced into Bickaneer, where, Dr. Coleridge informed me, it had been unknown for seventeen years, on September 28th, nine days later than Jedpore, from which it is distant about 130 miles.

This report of the Cholera Commission—Sir J. Strachey's—teems with facts, which can only be interpreted by Dr. Budd's theory, and even a little remark by Dr. Campbell of Delhi, to the effect that the two cases which occurred in inhabitants of the camp were persons who had been to visit friends at infected villages. The men of the Delhi force were then forbidden to visit the villages affected, and no further case occurred.

I do not believe it possible that quarantine by land can be effectual; and, to be useful, it must be absolute, so that the remark, quoted by you from the Sanitary Commissioner, need not be further noted; but quarantine for a ship with crew or passengers affected with cholera or choleraic diarrhoea is a very different affair, and it strikes me that few would wish that such centres of cholera should be dispersed broadcast through our land.

I may fairly ask on what supposition other than contagion, in all probability composed of fecal infection, would account for cholera radiating as from a centre in every direction (see map in Report of 1861, epidemic page 190), and then the revivals, or fresh outbreaks, such as Ram Déo; and we see the fresh dispersion of the infection again along the routes to their homes by the pilgrims who had been to the shrine. Inspector-General Murray's tables, in reference to the Hardwar outbreak in 1867, show how cholera accompanied home-returning pilgrims along every great route (see Macnamara, page 530 and following pages). These are not mere opinions; but Dr. Budd's papers tell us how, what in all human probability no other hypothesis can do, to account for these outbreaks.

I could give instances where the newly attacked had been just previously nursing relatives or friends; but of what value would such instances be, when the disease is prevailing in the place where the sickness occurred and the nursing took place?

Why should the most effectual remedy be to place Europeans under canvass, unless the barracks had become saturated with the cholera poison? All the remedies most useful have been those directed either to doing away with the cholera atmosphere by leaving it behind, or destroying it, or preventing its formation, as shown by Dr. Rean.

I have seen these plans, or a combination of them, most effectual. My practice for years was to isolate all cholera patients by twos or threes in a tent, and always to keep a sweeper on duty, so that he might immediately remove the dejecta, and, if any of the fluids fell on the ground, the earth was at once scraped, and thrown into a pit at a distance, the decipient earthen vessels being broken up every morning, and a fresh set provided.

I need scarcely reply to your query, How are such instances as those cited on the authority of Staff-Surgeon Flanagan to be accounted for, except by saying that I presume the places occupied by the sufferers were thoroughly cleansed? If so, the instances bear out what I have stated as to the conditions in which cholera may be stamped out by appropriate measures. The well known outbreak on board the *Britannia*, in the Black Sea, shows as conclusively as can be proved, that want of ventilation caused a second revival. "Upwards of one half the crew of the *Britannia* suffered either from diarrhoea or cholera between August 9th and 27th, of whom 139 died. The ship quitted Baljick on the morning of the 12th. As she drew out of the bay, she got the advantage of the prevailing north-east breeze, and on that day and the following the patients did well. On the night of the 13th the wind freshened, rendering the closing of the ports necessary, and the only ventilation between decks was by the imperfect means of wind-sails. The great outbreak commenced about 10 A.M. on the following morning, and, 'for the suddenness of its advent, the tempestuous violence with which it raged, and the wreck it left behind,'

was almost unprecedented. The deaths on the 14th, and four following days, were 13, 45, 21, 14, and 14."

In my day in India the contagion theory was not generally discredited—at least, such was my feeling from the medical press, and those medicos whom I knew. My opinion is confirmed from the cholera report of 1861.

I must apologise for the length of these hasty notes, but I may be pardoned when I express the strong conviction I have that, in working out to a practical conclusion the important discoveries of Drs. Snow and Budd, we have in our hands the means, in a great measure, to control the extension of the most decimating plague of this our time.—Your obedient servant, T. M. LOWNDS, M.D.

Egham Hill, November 9th, 1882.

* Dr. Lownds's personal experience as medical officer to the Jamsetjee Jeejeebhoy Hospital entitles him to speak as an authority on cholera. We leave his remarks upon the Norwegian statistics, and the outbreak of cholera in 1855 in the Island of Fogo, to the judgment of our readers; but must point out that Dr. Lownds admits that, in Bombay, he was unable to trace infection of cholera in individual cases, and relies rather upon the fact that the disease could be traced all along the great lines of routes. But the disease often spares large tracts which are crossed by pilgrims, in a manner inexplicable upon the theory of infection; and it is certainly instructive to note that the experience of a colleague of Dr. Lownds in the same hospital—Dr. Morehead—was of a like negative character. Summing up the results of his observations during three epidemics, Dr. Morehead concludes (*Researches on Diseases of India*, p. 205) that "the portable or contagious theory of the cholera-poison is not supported by these statements." Dr. Goodeve, after being connected for many years with the Calcutta Hospital, says: "It has been my lot, in numerous epidemics, to see many cases at a time, and for a long time in my own wards; to see the beds, the sheets, the hands of attendants, the floors frequently—nay, constantly—soiled with discharges; to see the utter impossibility of providing fresh beds and fresh blankets, etc., for every case; to see abundant opportunities for the diffusion of the poison from the discharges; and yet not to see cholera spread in the wards." And Sir Joseph Fayrer's experience in the same city led him to say, in his presidential address to the Epidemiological Society in 1879: "So far as I can judge, the direct contagion theory has now few supporters anywhere, for few believe that mere contact with the sick is attended with danger; and many believe the same with regard to the excreta, the enteric contamination of water—the water-theory in fact." The investigations of Drs. Budd and Snow command respect, but there can be little doubt that later observations have not invariably led to like conclusions. Even the admission of their substantial accuracy would not sanction maritime quarantine as at present carried out. Dr. Lownds has been accustomed to isolate his cholera-patients in tents, away from "the barracks saturated with cholera-poison," yet he is apparently content that a ship-load of passengers should be crowded for an indefinite period into a lazarette. With this opinion, we confess we have no sympathy.

QUARANTINE: YELLOW FEVER.

SIR,—Only now, in your issue of October 28th, have I noticed Dr. Imlach's letter in support of his views on the above subjects (as given at the recent Worcester meeting), and in controversion of my letter of October 7th.

Dr. Imlach says he can, in my account of the Bermuda outbreak, see neither proof of contagiousness nor an argument in favour of quarantine. If so, I fear no amount of evidence will convince him; but others, who may have the responsibility of battling against the disease and dealing on questions of isolation and quarantine, will, I hope, reason differently. Permit me, then, to recapitulate.

The Bermuda islands are, geographically speaking, about the most isolated settlement in the world, being about five hundred miles off any other land. These islands are, at long intervals, subject to devastating epidemics of yellow fever, but, at ordinary times, perfectly free from the disease. The last two epidemics have been the subjects of considerable interest; the present epidemic attracting the visitation of many of our Continental friends; and the outbreak, of this particular year, on a ship from Demerara. However, the *Barracouta* is a vessel we have now again to discuss. This man-of-war, with several cases of yellow fever on board, arrived at Bermuda in 1869; the island, however, and for the previous five years, free from the disease. The ship was at once strictly quarantined, and her sick and attendants sent for treatment on Port's Island, which is well isolated, and unvisited, save by a negro caretaker. After a time, the

Barracouta embarked her sick and proceeded to Halifax, N.S.; the disease having never extended beyond the ship's company. But, six weeks after her departure, a small working party of marines was ordered, not from the dockyard on Port's Island, as Dr. Imlach quotes, but from the dockyard on Ireland Island, about three or four miles across the bay, to clear out the quarantine hospital on Port's Island. Within a few days after their arrival at Port's Island, several of these men became affected with yellow fever; and the naval surgeon, who was then ordered over to attend them, also contracted the disease, and died before he and the others could reach Halifax, to which place all were shipped.

Now, as yellow fever was unknown at Bermuda for years before and for years after this, I will ask Dr. Imlach to explain how these marines and medical officer could have contracted the disease, except from contagion at the recently infected hospital on Port's Island. Quarantine, as Dr. Imlach states, did not benefit the ship; but it was not intended to do so, but to protect the outside community, and which in this case it certainly did, excepting the marines and medical officer, who had communication with the infected building and island.

The above occurrences, although they have no weight with Dr. Imlach, convince me that true yellow fever (not severe remittent, which so simulates it) is not only contagious, but virulently so, and in proof of which much other evidence might be obtained from the published Naval Medical Reports.—Yours faithfully, R. N.

November 20th, 1882.

MEDICINE AND PHARMACY.

SIR,—For reasons which are serious and of much more than professional interest, it would be of great value if the opinion of the profession could be obtained on the question of the advantages and disadvantages of keeping up the old system of practice which prevails largely in towns and in the country, and is expressed by the term "apothecary." Yesterday I met two gentlemen, both in large general practice, the one in the West-end of London, the other in the west central district. I put the question to both, "Would it be advisable to separate the pharmaceutical work in general practice from that of prescribing. What is your feeling upon the point?" The former answered, that it would be greatly to the advantage of men like himself, and of the profession generally, if the dispensing of medicines were handed over to druggists, and that the practitioner had nothing to do with it. He thought that the social position of medical practitioners would be raised, and that they would be more respected than they are.

The latter of the two gentlemen replied simply: "Impossible to do it. Why, if I were to order a draught and a liniment for a patient who paid me eighteen pence a visit, he would have to pay as well, say tenpence, for the two. He would not come to me if I did not give him the medicine inclusive. He would rather go to a druggist and pay him the same as me, than come to me. It would never do." He went on to observe that those who are advocating the improvement, and of the profession by the higher education of students, are not acquainted in the least with the kind of practice carried on among the poor, either in great cities or in the country. Is it not more than probable that, if the expenses of medical treatment were increased, the druggist would be still more largely the practitioner of the poor than at present, and, though the social character of our profession might be raised, society would suffer for it? What would happen in the country places where the druggist would probably be the stationer and general storedealer? What concurrence could be placed in his careful attention to a prescription?

There are a great number of medical men who must be interested in this question, to whom it is a matter of secondary interest; who have not yet decided to follow them, and who, while fully alive to the benefits of higher medical studies, can calculate the practical advantages of an old-fashioned and, in some ways, very useful system.

It is the duty of medical men thus interested to express their opinion, for the chief reason that the system of education is different according to the object in view. It is important that those engaged in teaching should know what view is held on these points, so that they may teach accordingly. I have often heard men of the highest practical knowledge, regarding the old system of medical pupil. It is not long since that Dr. Clark raised a discussion at the subject of medical education at a meeting of the Metropolitan Counties Branch, with no practical result, so far as I know. It must be decided distinctly whether a student is prepared for high class medical practice, or for the life of a country apothecary. In the latter case, he must have a practical knowledge of pharmacy, and materia medica, and of many minor details which are not taught so successfully in hospitals.

Dispensing, according to the view of the higher education men, is unworthy of attention, and is accordingly neglected. I have known

students in their final examinations admit that they have never made a pill or a plaster, nor even a linseed poultice.

I remember well that Professor Humphry did not think it below his dignity to teach men at Cambridge how to make a linseed poultice, and I think he was proud to follow the example of Abernethy.

If, however, it be for the benefit of our profession and society (the two are inseparable) that the apothecary should become extinct, then others like myself will know what to do. I think it would be a great pity to make this change.—Yours, etc.

AN EXAMINER IN MEDICINE.

INFANTICIDE.

SIR,—In reference to your remarks on the Martock case, in your issue of the 4th instant, you somewhat allude to the improbabilities as to the correctness of Mr. Ford's opinion as to the case being one of accidental strangulation by the cord. Mr. Evans's is, no doubt, one of supposition, but yet probable. You will, therefore, oblige me by inserting the following case that came under my care.

I was summoned by a young girl to attend her mother immediately, as she was very ill. I went at once; and on entering the bedroom, I found the woman alone, lying across the upper part of the bed in a prone position, with her clothes still about her. She said that she had been suddenly confined. On raising her clothes, I found a well-developed full grown dead child, with the cord tightly drawn around its neck. I told her that the child was dead; but she, being greatly astonished, almost angrily replied that it was living. I again told her that it was dead. She said: "All I know is, that being in great pains, I lay down, but would not move until I heard the child cry, which it did for some time. Fearing lest I should hurt it, I drew myself from it, after which it ceased to cry." I tried to resuscitate it, but failed. It had been born nearly half an hour. On visiting her the following day, I was rather anxious to see the child. The face was full, and somewhat swollen, and of a pale bluish colour, and having some darker spots irregularly scattered over it. Around the neck was a well marked dusky line, resembling the exact position of the cord on the previous day.

You will agree with me that this was a case of accidental death by strangulation by the cord; and that, if the lungs had been examined, they would have proved that the child had breathed many minutes. Since that time, I have been always convinced that, if the case had been one of illegitimacy and concealment, the mother would probably have been charged with wilful murder of her child, and no doubt have innocently suffered the full penalty of the law.—I am, sir, yours truly,

H. DAVIS, L.R.C.P.Lond., M.R.C.S.E.

Callington, Cornwall.

* * We are indebted to Mr. Davis for the report of his instructive case, which we gladly publish, together with his remarks. The case does not, however, in the least invalidate our endorsement of the remark of Dr. Weatherly, the coroner in the Martock case, that if death resulted from strangulation by the cord after the child had been alive five or ten minutes—the lungs being fully inflated—the case at Martock was unique. Assuming the correctness of the mother's statement in Mr. Davis's case—itsself open to doubt—that the child had cried, this might well have occurred before birth, in the legal sense of the term. No full necropsy was made, so that how far respiration had taken place is a matter of pure inference. The mark on the neck is known to be a *post mortem* phenomenon. Even if the child were born alive, and had subsequently cried, its death was probably due to the efforts of the mother to withdraw, as she termed it, from the child, thus perhaps tightening the cord round the neck of her infant.

MR. LAWSON TAIT ON MOVABLE KIDNEY.

SIR,—In the last number of the *BRITISH MEDICAL JOURNAL* is an article by Mr. Lawson Tait, entitled, "A Third Successful Case of Cholecystotomy", which contains the following remarkable passage. "I put the floating kidney theory altogether on one side, because I have never seen such a thing, either in life or in a museum; nor have I ever met anyone who has. In fact, I have no belief in its existence as a pathological incident." Surely a surgeon who declares that, in forming a diagnosis which may lead to a serious operation, he declines even to consider facts which have been proved over and over again by the evidence of good observers, is inexcusable. In the *Transactions of the Pathological Society of London*, vol. xxvii, a book with which I suppose, Mr. Lawson Tait is familiar, is a report on the subject of movable kidneys by a Committee, which contains the names of some of the most celebrated physicians and pathologists of this country.

They express themselves as satisfied with the evidence which already exists proving the occurrence of floating kidneys; they describe the anatomical conditions which are found in such cases; and they append *post mortem* records which they received from first-rate men.

But Mr. Lawson Tait considers the negative evidence of himself and some gentlemen, whose names he does not mention, as weightier than this. Anyone who sees many patients, and examines them methodically for movable kidneys, can find undoubted instances of them both during life and after death. In my own short experience, I have seen several cases in which the right kidney could be moved freely downwards and to the left, past the median line of the abdomen, in which the outline of the organ could be distinctly traced, in which a marked depression was left in the right lumbar region when the displacement was produced while the patient rested on her hands and knees, and in which the depression was again filled up on returning the organ to its normal position. But if persons who did not see the cases should still consider them as uncertain, and require absolute proof, I could add evidence from several *post mortem* examinations, where I have found the right kidney quite as movable as it was in cases which I only saw during life. And, finally, I could bring forward cases where I had the opportunity of observing the condition during life, and of verifying it at the necropsy. It is clear, however, that if Mr. Lawson Tait declines to receive as conclusive the clear evidence which already exists for the recurrence of this "pathological incident", nothing but his own individual experience will convince him. He appears, at present, to have only performed three or four successful cases of cholecystotomy; and it is not at all improbable that, if he go on long enough ignoring the possibility of the presence of floating kidneys, he may obtain, during one of his operations, such ocular evidence as may satisfy his incredulity, but may be less satisfactory to his patient.—I am, etc.,

SEYMOUR J. SHARKEY.

77, Lambeth Palace Road, November 20th, 1882.

THE CASE OF LADY SOMERS.

SIR,—In your notice of the case of Lady Somers in your last issue, you remark that "the case presents some points of great interest, both medical and surgical. One of these points is the origin of double pneumonia from injury to one side, and possesses to me a very great interest from the fact that it supports and corroborates a position, which I felt compelled by facts to hold recently, though with some misgivings. It was the case of a youth, aged 16 years, employed in a Manchester warehouse, who, during some horse-play in a leisure time, was running away, and pursued by a heavy man, when he fell, and his pursuer on him, in such a manner as to come with his knees, bearing his whole weight, upon the chest of the prostrate lad. Three days afterwards the symptoms of pneumonia were detected, followed by pleuritis and empyema of the left side, which was relieved by paracentesis thoracis; and, finally, by a spontaneous opening into the bronchi, most probably caused by the enlargement during dilatation of the re-expanding lung of what had been, in the denser tissue of the collapsed lung, only a superficial ulceration. What, however, I desire now to point out in the case of Lady Somers is that, on the third day from the injury, pneumonia appears not only in the lung of the injured side, but also in the right lung, on which side no injury is noted; and it is to be remarked that this is not a case of extension by contact, for in that case it would have been posterior in point of time to the inflammation of the injured side, whereas in this case the symptoms were recognised in both lungs on the same day. Is not this an example of the truth of the doctrine long preached by Brown-Séquard, that a peripheral irritation of a nerve or nerves may give rise to an inflammation of an internal and distant organ? And is not the action of cold (to which use so often attributes the origin of inflammatory condition) of a similar irritative nature, producing its consequences by a like reflex effect?

It seems to me that we have heretofore given scarcely sufficient credit to the reflex action under ordinary conditions; and, therefore, I venture to call attention to the case of Lady Somers, and the one which I have myself reported, and to ask the opinion of my brethren on these points.—I am always yours truly,

G. H. DARWIN, M.D., M.R.G.P., etc.

The Cedars, Albert Park, Didsbury.

DR. JAS. G. LA ROE reports, in the *New York Medical Journal*, a case of fracture of the hyoid bone, from gaping. For three weeks there were exquisite pain on touch, and great pain and distress in deglutition. The patient, who was a man, aged twenty-seven, managed to keep from starvation, although he lost in flesh. He ultimately recovered.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Thursday, November 16th.

Army Medical Officers.—Sir T. LAWRENCE asked the Secretary of State for War why the name of Surgeon-General Hanbury, commanding the medical branch of the Egyptian expedition, had been omitted from the Parliamentary vote of thanks to the general officers and others of the expedition; whether Surgeon-General Hanbury did not hold the relative rank of Major-General, and was of the same rank as the other Major-Generals whose distinguished services were specially acknowledged in the despatches of the General the Commander-in-Chief of the expedition; and why the names of Deputy Surgeon-General Colvin Smith and the medical officers of the Indian Contingent were omitted from the despatches recommending the promotion of medical officers in the last despatch of the General Commanding-in-Chief.—Mr. CHILDERS: In reply to the first question of the hon. baronet, I have to say, speaking for the First Lord of the Treasury and the First Lord of the Admiralty, who with myself were responsible for the language of the vote of thanks, that we followed the precedents, according to which it is not usual to name departmental officers, and I see no reason for enlarging the already long lists of names embodied on these occasions. In reply to the second question, it is true that Surgeon-General Hanbury does hold the relative rank of Major-General; as to the third question, it is not for me to ask the Commander-in-Chief of an army why he either excludes or includes in his despatches the names of particular officers; but, as a matter of fact, Sir Garnet Wolseley wrote a supplementary despatch, which will appear in to-morrow's *Gazette*, and in which I observe the name of Deputy Surgeon-General Colvin Smith.

Coroners in County Galway.—In reply to Mr. HEALY, Mr. TREVELYAN stated that there were four coroners in the county Galway, and they were all paid at the same time—namely, at the assizes following that at which the presentment was made for their salaries. There were no funds in the county treasurer's hands to pay presentments made at the last assizes until the cess had been collected and lodged to the credit of the county.

The Health of the Egyptian Army of Occupation.—Sir H. TYLER asked the Secretary of State for War whether he could inform the House what were the numbers and proportions of sick in the different branches of the army of occupation in Egypt, according to the latest returns; and whether any steps were in contemplation with a view to the better accommodation of the troops.—Mr. CHILDERS: In reply to the hon. and gallant gentleman, I have to say that the present percentages of sick in the army are: for the infantry, seven; for the artillery, eleven; and for the cavalry, fifteen per cent. The percentages are rapidly decreasing, as the sickly season has come to an end. General Sir Andrew Clarke, the Inspector-General of Fortifications and Director of Works, went to Egypt a week ago to inquire whether any improvements in the barrack and hospital arrangements are desirable. In the meanwhile, no expenditure on these services has been spared to put the buildings in a fit state.

Deaths on Board Emigrant Ships.—A return has been ordered, on the motion of Mr. JOHN HOLMS, "of the number of passengers (cabin and steerage) embarked on board British vessels, clearing from the United Kingdom, under the Passenger Acts, during 1881, for places out of the port; and of the number of deaths on board those vessels during the outward voyages, classified according to the line to which the vessels belonged and their destination, and specifying whether the deaths occurred among the passengers or crew."

MILITARY AND NAVAL MEDICAL SERVICES.

HONOURS AND PROMOTIONS AMONG THE ARMY MEDICAL OFFICERS WHO HAVE BEEN SERVING IN EGYPT.

THE *Gazette* of Friday, November 17th, contains a supplementary despatch from Sir Garnet Wolseley, in which he brings under notice the names of several officers which, "in his anxiety to lay before Her Majesty the Queen the names of the officers who deserve special mention for their services.... he omitted." Among the names are those of Deputy Surgeon-General Colvin Smith and Surgeon-Major J. H. Beath. Of these, Sir Garnet says:

"Deputy Surgeon-General Colvin Smith was Principal Medical

Officer to the Indian Contingent. The arrangements for the sick and wounded which were made under his direction were deserving of all praise.

"Surgeon-Major J. H. Beath, M.D., has been brought to my notice for some special favour; and I am glad to have this opportunity of recommending so zealous and hard working an officer."

The same number of the *Gazette* contains a list of officers promoted in, or appointed to, the Order of the Bath. Among the names are those of the following members of the medical staff. To be an extra member of the military division of the second class, or Knight Commander—Deputy Surgeon-General James Arthur Hanbury, M.B., C.B. To be ordinary members of the military division of the second class, or companions of the order—Deputy Surgeon-General George Colvin Smith, M.D.; Deputy Surgeon-General James Ekin, M.B.; Surgeon-Major John Henry Beath, M.D. To be an extra member of the military division of the third class, or companion of the order—Fleet-Surgeon Ingham Hanbury, Royal Navy. A long list of officers is also given, who have received permission to accept and wear the insignia of the order, of the Osmanieh and the Medjidie, conferred on them by the Khedive with the authority of the Sultan. Among them are the following: Second Class Medjidie: Deputy Surgeon-General J. A. Hanbury, C.B.; Third Class Osmanieh: Deputy Surgeons-General J. Ekin and G. Colvin Smith, and Brigade-Surgeons W. C. N. Manley, C.B., and J. A. Marston; Third Class Medjidie: Brigade-Surgeons O. Barrett, C.I.E., E. G. McDowell, E. McGrath, and R. W. Jackson, C.B.; and Surgeons-Major J. H. Beath and G. S. Davis; Fourth Class Osmanieh: Surgeons-Major J. D. Edge, G. W. McNulty, and W. N. Keefer. The following promotions for special services have been made in the Navy: Surgeons Charles C. Godding, Herbert M. Ellis, and Evelyn R. H. Pollard, to be Staff-Surgeons. In the Army Medical Staff, the following promotions are gazetted: To be Deputy Surgeons-General: Brigade-Surgeons Jeffery A. Marston, M.D., and William G. N. Manley, V.C.; to be Brigade-Surgeons: Surgeons-Major John Sarsfield Comyn, M.B., and Rhyng Thomas Giraud, M.D.; to be Surgeons-Major, with the relative rank of Lieutenant-Colonel: Surgeons-Major (with relative rank of Major) Thomas Francis C. Dwyer, M.D., and Laurance Corban, M.D.; to be Surgeons-Major: Surgeons John Godfrey Rogers, M.B., and Benjamin Bloomfield Connolly.

It is not possible to estimate the relative proportion of the honours and distinctions which have been conferred on the medical officers, as compared with those given to officers of other branches of the British service, until the full numbers of the officers of all descriptions that have been employed in the expedition are published. The promotions which have been gazetted in the ranks of the Army Medical Department itself are two in number of each grade. There have been two Brigade-Surgeons who have been promoted to the administrative rank of Deputy Surgeons-General; two Surgeons-Major, who have been raised to Brigade-Surgeons; two Surgeons-Major of the lower grade, raised to be Surgeons-Major of superior grade; and two Surgeons, promoted to be Surgeons-Major. As all the medical officers promoted stood several steps down in their respective grades, they have necessarily passed over a certain number of their companions in the same rank, who were previously above them in position. Thus, as the names in the *Army List* of the present month show, Brigade-Surgeon Marston steps over eleven, and Brigade-Surgeon Manley over eighteen, of the Brigade-Surgeons previously above them. Surgeon-Major Giraud, in becoming a Brigade-Surgeon, supersedes 29, and Surgeon-Major Comyn 33, Surgeons-Major. Surgeons-Major O'Dwyer and Corban, by being transferred from the list of Surgeons-Major, having the relative rank of Major, to that of the Surgeons-Major with the relative rank of Lieutenant-Colonel, pass by, respectively, 52 and 54 Surgeons-Major of their former grade. Surgeons Rogers and Connolly, having stood next to each other as Surgeons, and being promoted together, both pass over the same number of surgeons, viz., 33, in being gazetted to be Surgeons-Major. It thus appears that, although in each case the medical officer concerned has only been advanced

one step in the grades of his department, the value of the step gained is different in almost every instance, if it be estimated by the stride he has taken in gaining his new position. All this, like the promotion itself, with regard to less fortunate colleagues, must be put down to the hazards of war. Military service is undertaken with a knowledge that such chances exist, and that it is only open to the few to gain the prizes which occasionally result from active employment in the field. It was anticipated by some that Deputy Surgeon-General Hanbury having, although one of the juniors of his rank, been selected to be the principal medical officer of the expeditionary force, would have been promoted to the high grade of Surgeon-General, which he held locally in Egypt from the time the campaign commenced. We presume that his elevation to the military division of the second class of the Order of the Bath, or that of Knight Commander, a distinction rarely conferred on medical officers, is regarded as an adequate reward for his services in the campaign, more especially as this is not the only decoration which has been conferred upon him. Dr. Hanbury is the only medical officer who has been decorated with the second class of the Turkish Order of the Medjidie.

BRIGADE-SURGEON J. FERGUSON, Army Medical Department, has been appointed to officiate with the temporary rank as Deputy Surgeon-General Rawal Pindi Division, in succession to Deputy Surgeon-General A. H. Fraser, whose term of service has expired.

DR. JAMES JENKINS, C.B., retired Inspector-General of Hospitals and Fleets, has been gazetted as Honorary Surgeon to the Queen, *vice* Dr. Wingate Johnston, deceased. He is the son of the late William Jenkins, Esq., and was born in the year 1818. He graduated M.D. at the University of Glasgow in 1839, and became a member of the Royal College of Surgeons of England in 1845.

DEPUTY SURGEON-GENERAL WALKER has been appointed Surgeon-General North-West Provinces and Oudh, in succession to Sir Alexander Christison. Dr. Walker has been for some years past Inspector of Gaols in the North-West of India.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

CHILD-BED MORTALITY IN WORKHOUSES.—The recently issued report of the Local Government Board points out that, in 1867, attention was called to the unfrequency of child-bed fever in workhouses, and the small rate of mortality from it. Returns of births and of deaths in childbirth during ten years have been obtained from 30 workhouses in the metropolis, and 614 in the rest of England and Wales. Information is given respecting 87,284 cases, and the deaths are one in 114 in London, and one in 115 in the provinces. In 66,517 cases the mothers were unmarried, and 23,820 were first confinements. In 378 of the provincial workhouses, and five of those in the metropolis, there were 25,210 accouchements without a single death in the decade. Details are given as to the causes of the deaths that occurred, and comparisons made with the statistics for the whole country. The conclusion deduced is that the death-rate from metria alone, was less in the workhouse infirmaries than in the entire population, and that in a workhouse lying-in-ward a woman has as fair a chance of life, so far as metria is concerned, as a poor woman confined in her own home.

LONDON BAKEHOUSES.—Dr. Bate, medical officer of health for Bethnal Green, has issued a report giving the result of a thorough inspection of the whole of the bakehouses in that parish, 112 in number, one-half of which are owned and managed by Germans, and several of the pastry-cook shops by Italians. There are 41 bakers who carry on their business in underground cellars. The walls and roofs required lime-washing in 58, and the troughs and utensils were unclean in 22. In 57 instances he found refuse flour swept under the troughs, the refuse being, he says, usually sold for feeding pigs. Thirty-five bakehouses were badly ventilated and 41 badly lighted. In 14 cases the sink-traps in the bakehouses were defective, and the bell-traps were little better than none at all. The traps in the yards next the bakehouses were also defective in 32 instances; in 12 the water-closets were badly placed, but in only one was the closet actually within the bakehouse, though in another case it

was in the flour-loft; and the closets were either foul, dilapidated, or ill-ventilated in 61 cases. Looking at the results of his inspection all round, Dr. Bate is decidedly of opinion that the condition of the bakehouses in Bethnal Green is worse than when he visited last them in 1878; the pastry-cooks' and bun shops are in a very much worse condition than the bakers' proper, and they all require much looking after. He regrets, in common with most medical officers whose attention has been directed to the question, that the supervision of bakehouses has been taken out of the hands of the sanitary officers; and thinks that the Bakehouse Regulation Act of 1863 ought never to have been repealed. He is of opinion that it should have been amended, and the registration of all bakehouses made compulsory, power being given to the vestries to refuse to register unfit premises; and heads that, had such been the case, the present deplorable condition of things could never have obtained.

OUT-DOOR MEDICAL RELIEF IN THE BOSTON UNION.—Recently an inquest was held on the body of one Patrick Gintreg, by Mr. Clegg, coroner at Boston, who stated that he had caused an inquiry to be instituted, consequent on the refusal of Mr. Reckitt, the district medical officer, to give the ordinary certificate as to the cause of death of the deceased, Gintreg. From the evidence adduced, it appeared that the man had been ill for some months, but had only become seriously so a few days before his death, when Mr. Reckitt saw and attended him. It was also shown that an order had been given by the medical officer that the deceased should be supplied with certain necessaries and medical comforts, among them being a requirement that he should be supplied with half a pint of whisky, which the relieving officer declined to furnish, alleging at the inquest, as his reason, that he had been informed by the board of guardians that it was within his discretion to allow the recommendations of the medical officer, or to refuse to do so; and, from his knowledge of the persons, he had every reason to believe that the woman (*i.e.*, the wife) would have drunk the whole of the whisky ordered for her husband. The coroner, in the course of an unusually lengthened summing-up, proceeded to state that there was no doubt that the deceased had died from bronchitis. It appeared to him that a liberal supply of necessaries had been given, the half-pint of whisky alone excepted; that the medical officer was of opinion that life might have been prolonged if this stimulant had been supplied, and that he was also of opinion that the relieving officer ought not to be allowed any discretion in the matter, but should be bound to supply any extras, of whatever description, ordered as medical necessaries; and that the relieving officer was of opinion that he had a discretionary power, and that he was carrying out the wishes of the board of guardians in checking the supply of such medical extras; and that the medical officer had refused his certificate with the object of testing this question. The coroner then proceeded, at some further length, to adduce the opinions held by different authorities as to the use or disuse of stimulants in the treatment of acute disease. Whether the one or the other opinion be held, he considered that the medical attendant was the sole authority in the treatment of his own patient; and unless the law had been altered very recently, it was the duty of the relieving officer to grant the medical order; and if death should result as a consequence of the refusal, he would be certainly responsible. If such a case were brought before their court, it would be their duty to send it to a higher court. That with regard to the present inquiry, there was no necessity of this nature. The medical officer did not undertake to say whether the cause of death was the non-supply of whisky, nor did he positively say that the man would have lived longer if it had been supplied. This being the case, their verdict would record the fact that the cause of death was bronchitis; any further remark they might wish to make he would record as a note to the inquisition. The jury returned a verdict to the effect that the deceased died from natural causes, and recommended that the relieving officer should have more definite instructions with regard to the supply of wines and spirits on the medical officer's order.—In commenting on this case, we consider that Mr. Reckitt is to be commended for the spirit he has exhibited in causing this inquiry to be held. It is simply absurd that a relieving officer should be at liberty to give or to withhold stimulants at his discretion; notably, too, in a case where it was requisite to give other relief; or that he should be permitted to plead excuses such as this official has done, *viz.*, his belief that it would have been perverted from its use by the sick man, as the same would operate against any relief at all. But this, and many other anomalies in the administration of poor relief, arises in great measure from the enigmatical manner in which the general orders of the Local Government Board are expressed, admitting as they do, like the Delphic oracle of old, of any and every construction that guardians and their officers may choose to put on them.

CERTIFICATES OF PAUPER LUNATICS.

SIR,—Until very recently I have always received £1 1s. fee for attending before magistrates in the case of pauper lunatics. Now, one of the magistrates, who is likewise chairman of the board of guardians, refuses to allow more than 10s. 6d. fee. Will you therefore, in your next issue, kindly answer the following questions: 1. Can I, either at the workhouse or in my district, legally claim the £1 1s. fee? 2. If I cannot legally claim the £1 1s. can I refuse to certify? 3. Can a magistrate employ any other medical man than the workhouse medical officer to certify respecting a pauper lunatic in the workhouse? 4. Is it compulsory for a magistrate to attend at the workhouse, in the case of a lunatic residing in the workhouse requiring removal; or, can he compel the medical officer to attend at his house, with the lunatic? 5. Can a pauper lunatic be removed to an asylum on a certificate signed by only one medical man, that medical man not being a union officer? 6. If a medical man is called in by a magistrate to see a supposed pauper lunatic, and he finds that he cannot certify that it is a fit case for removal to an asylum, is the medical man entitled to any fee? I enclose my card.—I am, Sir, yours faithfully,
JUSTICE.

“1. No. The determination of the amount of the fee is vested solely in the justice or stipendiary magistrate. 2. No. You have no alternative but to sign the certificate, when called on by the proper authority. 3. Yes, if he choose so to do, as the power to select the examiner of the lunatic is vested in his hands exclusively. 4. This point is doubtful. The magistrate may refuse to come to the workhouse; but we believe that he has no power to cause the lunatic to be brought before him to be examined without paying a fee, or directing a fee to be paid to the certifying medical officer. 5. Yes. The Pauper Lunacy Act distinctly provides that the certificate of one medical man, endorsed by a justice of the peace, a stipendiary magistrate, or a clergyman and relieving officer, is sufficient to secure the admission of such lunatic to an asylum. Such certificate may be signed by any medical gentleman. 6. We fear here, that it is at the option of the magistrate or justice whether he will order reasonable payment; such grant often depends upon the terms on which the medical officer stands with the justice or magistrate. It is of no use to kick against the pricks, and we advise our correspondent accordingly.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

HANDSWORTH (NEAR BIRMINGHAM).—Mr. Welch sends, as usual, a complete, if somewhat brief, report. In many respects the sanitary condition of the district has been improved. The mortality from zymotic disease has declined from 2.4 in the five years ending 1875 to 1.9 per 1,000 in the five ending 1880, and for 1881 it was as low as 1.2 per 1,000. With the exception of measles and whooping-cough, which together were fatal in 14 cases, there was no widespread outbreak of epidemic disease. During the year, the total deaths registered from all causes amounted to 298, or at the rate of 12.8 per 1,000, which compares favourably with that recorded for any previous year. The deaths of infants under one year of age (67) constitute 22.4 per cent. of the whole, while 96 deaths occurred in persons over 60 years of age. Of these latter, 31 were between 70 and 80, and 22 above 80 years of age.

HENDON.—This district was not free from the epidemic of small-pox which recently overran the metropolis. During last year, 18 persons were attacked with the disease in the district, and two died. The first case appeared in a young man, who, without doubt, brought the infection from London. In April, two cases were discovered in a showman's caravan, which was then stationed in the grounds of a public-house. By the directions of Dr. Cameron, the caravan was removed to a large field belonging to the Local Board, where it remained until the patients recovered. Several other similar structures were examined, and two additional cases discovered. Dr. Cameron congratulates his authority upon their possession of an excellent temporary hospital, which was of the utmost value in preventing the spread of small-pox at a very critical period. Six cases of diphtheria, with two deaths happened, and were generally associated with unsanitary surroundings, the proximity of cesspools to dwelling-houses being in a great measure responsible. In one part of the district where these structures are numerous, Dr. Cameron states that, “some are situated under houses, others have party walls built across them, and others have trees and shrubs planted above them. None of them are ventilated, and when their contents are disturbed by heavy rains, foul gas must be driven into the dwelling-houses. The active presence of the virus of diphtheria, caused the only way of remedying this state of things. Only two deaths happened from infantile diphtheria, and one from the disease in a child of one year of age, during the summer of 1881. In all, the deaths from epidemic diseases amounted to 12, being equal to a rate of 1.1 per 1,000. Deducting the deaths which had happened in the workhouse, the total mortality due to the parish was 132 at 12.1 per 1,000, against 16.5 for the previous year. The zymotic mortality occurred in children under five years of age, 70, or 10.5 per cent. of the total deaths happening during these ages. Improvements in the drainage and the removal of the refuse, in the production of this mortality. I should be mentioned, however, that

some improvement is shown in the deaths amongst infants since, although 60 more children were born during the year, there was a diminution of infantile mortality, the death-rate having fallen from 49.3 to 38.1 per cent. Dr. Cameron deprecates the absence of a mortuary for his district, which, as he rightly insists, is of enormous value in receiving the bodies of persons who have died from infectious disease. Fortunately the inquests held during the past year were only about half as numerous as in 1880, but the urgent necessity for providing accommodation for such cases remains the same. The report shows that greater attention has been paid to the sanitary arrangements of the houses of the poor. Dr. Cameron concludes with the remark that, “when the proposed system of drainage has been effectually carried out, so that the numerous cesspools, which are a constant source of danger to the inhabitants, can be abolished, and when a constant supply of pure water has been supplied to the parish, the general health and comfort of the community will be greatly benefited, and Hendon may become one of the healthiest suburbs of the metropolis.”

ROMFORD RURAL DISTRICT.—The absence of the compulsory notification of infectious diseases was severely felt during the past year. At Barking, an epidemic of scarlet-fever existed for some time, and only casually came to the knowledge of the health-officer. On visiting the houses where the disease existed, Mr. Wright found it to be so general that isolation (even if the district possessed the means) would have been impossible. He found children running about the streets whilst in the stage of desquamation, and the mothers, on being admonished as to the serious results of such a practice, were quite indifferent in the matter. A proposed joint hospital for the use of the Rural and Urban Districts was unfortunately not proceeded with; but the fault does not seem to lie with this district. Mr. Wright recommends his authority to erect a small hospital on a site adjacent to the workhouse from which small-pox shall be rigidly excluded, all cases of this last disease being sent to the Highgate Hospital. Small-pox was for some time generally prevalent, principally in Barking. Altogether twenty-seven cases occurred in the whole district, five of which were sent to the hospitals and four died, two at the hospitals and two at home. Measles also prevailed somewhat extensively, the disease being imported from London in the early part of the year when the weather was exceptionally cold, so that the fatality from the disease was very great. About eighty cases came to the notice of the health-officer in one part of the district, six terminating fatally, all of which were due to bronchitis following measles—the result of the extremely low temperature. In alluding to the outbreak at Barking, Mr. Wright explains that no official intimation of the disease was received until the first death occurred, when the disease was very generally spread over the whole of the town. Four cases of diphtheria (two fatal) were due to an escape of sewer-gas into a cottage, owing to the faulty construction of the sink-drain. In all, the total deaths from zymotic causes amounted to sixty-six, or seventeen less than the number recorded for the previous year, and equal to a death-rate of 2.2 per 1,000. The birth and death-rates, calculated on a population of 29,706, were 35.1 and 17.9 per 1,000 respectively. In many respects, the sanitary condition of the district under Mr. Wright's charge is far from satisfactory, but improvement is gradually but surely being made. At Barking, a comprehensive system of drainage is awaiting the sanction of the Local Board, and Mr. Wright takes the opportunity of pointing out the great importance of proper house connections. A word of praise may be given to the exceptionally clear and thorough manner in which Mr. Wright chronicles the proceedings in which he has taken part or advised as Medical Officer of Health.

STRETTFORD.—For this township, Mr. Pettinger has little of interest to report. The mortality statistics show a considerable reduction in the deaths from zymotic diseases, the rate for 1881 being reduced to 25, against 73 in 1880, and 31 in 1879. Several cases of fever came under notice, all of which were found associated with imperfect drainage. Scarlet-fever was fortunately absent as an epidemic, only two deaths being registered from the disease. The local sanitary authorities, however, that there is a great necessity for the removal of infectious diseases, and for the improvement of the drainage of the district. The deaths from zymotic diseases amounted to 25, being equal to a rate of 2.5 per 1,000, or 31.8 per cent., of the total deaths. The deaths from zymotic diseases in persons over sixty years of age, amounted to 12, being equal to a rate of 1.2 per 1,000, and death-rates of 1.2 per 1,000, or 1.2 per cent. The water-supply of the district is derived from a well, and the water is of a good quality, and well adapted for domestic purposes. In this connection, Mr. Pettinger mentions that the water-supply is now pending with the Local Board, and that the water-supply is now pending with the Local Board, and that the water-supply is now pending with the Local Board. The absence of a mortuary and a dissection ground, Mr. Pettinger, who rightly

advises his authority to see that the provision of these important sanitary accessories is not delayed longer.

HEREFORDSHIRE COMBINED DISTRICT.—Dr. Vavasour Sandford's report on this combination is not well arranged, and he is too prone to draw conclusions from figures too small to warrant any definite deductions being made from them. Moreover, his style of reporting is not such as to inspire confidence, though there can be no doubt that in one way and another he gets much work done. For the Hereford Urban District he reports the lowest death-rate on record. Amongst a population of 19,822, and including 50 deaths which happened in public institutions, there were 307 deaths registered, equal to a death-rate of 15.4 per 1,000. The Hereford Rural District also shows a diminished rate of 13.6 as compared with 14.8 for the previous year, and 21.0 for 1879. Decreased rates are reported in the Rural Districts of Leominster and Weobley, but Ledbury and Bromyard are in excess of the previous year's rates. Scarlet fever was generally prevalent throughout the combination, especially in the Hereford Urban District, where the disease was present in a severely epidemic form, no less than two hundred cases coming under notice. Imperfect isolation and the exposure of infected children were, Dr. Sandford thinks, the means of converting the mildness of the type of the disease to one more malignant and fatal. The occurrence of sixteen cases in one row of houses led to a special inquiry by the health-officer into their surroundings. He found children convalescent from the fever, but in a highly infectious stage, out of doors playing with those who had not yet succumbed to the contagion, the chief resort of these children being a common water-closet and a filthy washhouse which adjoined it. The epidemic spread to the Rural District, where fifty cases occurred, when the schools had to be closed. The disease was also more or less prevalent in the Bromyard, Ledbury, and Weobley Rural Districts. Diphtheria also prevailed to some extent, most of the cases being associated with insanitary surroundings. In the Ledbury Rural Districts diphtheria caused eight out of a total of twelve deaths from zymotic causes. At Leominster one death from that disease occurred in the person of a boy, "who got fearfully heated at play, and, to cool himself, jumped into a river, went home and died." Diarrhoea and dysentery, whooping-cough and measles were also present in many parts of the district. One case of small-pox was imported into Hereford by a tramp, who was immediately isolated in a shed attached to the workhouse. The result was a complete recovery, without a single case of contagion following. This occurrence, and the contemporaneous prevalence of scarlet fever, led Dr. Sandford to urge upon the sanitary authority the urgent necessity for the provision of hospital accommodation for the isolation of cases of infectious disease. The absence of such accommodation was severely felt by many families, whose domestics and others had been attacked with scarlet fever. Had the case of small-pox spread, the most serious results might have followed, and in this connection the authorities would do well to at once take steps for what must be termed an absolute necessity for a town possessing a population of 19,822 souls. Dr. Sandford appends to each report a statement by the Inspector of Nuisances, showing the amount of sanitary work performed. The absence, however, of any general statement of the improvements which were effected during the year, renders the discovery of what advance has been made in the condition of the district a task of considerable labour.

COVENTRY.—In his report on this city for the past year, Dr. Fenton gives a short review of its progress from 1851 to the present time. For the decade ending 1851, the death-rate per 1,000 was 27.0; for that ending 1861, 25.0, for 1871, 22.0, and for the last decade 20.0. Dividing this last decade into periods of five years each, the death-rate during the first five years was equal to 22.0 per 1,000, and during the second five years 19.8, a reduction which indicates that the administration of the Public Health Act has not been without its effect. This is the more apparent in the marked diminution in the deaths from zymotic causes, 805 having occurred during the first period and 518 in the second. The death-rate for 1881 was equal to 19.1 per 1,000. Zymotic diseases, however, were somewhat prevalent, no less than 450 cases (109 of them fatal) having come under the notice of the health-officer. During the whole of the year scarlet fever was present in the city, and was more fatal than in any year since the epidemic of 1874. This increased and continued prevalence in the face of the extraordinary measures taken to prevent it may, the health-officer thinks, appear unsatisfactory; the fault, however, lies not in the measures adopted, but in the untimely and imperfect application of them. To deal effectually with this disease, Dr. Fenton, in common with innumerable health-officers, regards as essential the immediate notification of all cases occurring, so that isolation may be insisted upon at once. He says: "The so-called isolation, as carried out in the houses of small tradespeople and working people, is unworthy of the name. The same per-

son generally attends to the sick, to the members of the family, and waits in the shop upon the public, and this proceeding I find to be a most fruitful mode of spreading the disease." In addition to compulsory notification, Dr. Fenton thinks that greater power is also required to compel isolation, either in hospital, or by making it complete in private houses. Altogether there were 336 cases of scarlet fever, 58 of which terminated fatally. Small-pox was introduced into the city from London, and caused one death, this being the first fatal case registered since 1872. A considerable diminution is shown in the infantile mortality, the total deaths of infants under one year being 110 per 1,000 births against 151 for the previous year, and 148 for 1879. The fever hospital was of considerable value during the prevalence of scarlatina, no less than 156 persons suffering from that disease being treated there. It is satisfactory to note that the prejudice against hospital treatment in the minds of the people has almost disappeared, and that numbers of parents applied to have their children removed. During the latter part of the year, an outbreak of typhoid fever occurred, the infection being spread through the medium of polluted water, and subsequently by infected milk. Of eighteen families using the water, thirteen were attacked with the disease. The water in the first instance was polluted by sewage matter percolating from middens situated in the vicinity. During the year no less than thirty wells similarly situated were closed, the middens in all cases being abolished. The number of these abominations still existing in the town is still too great, and calls for immediate action.

OBITUARY.

EDWARDS CRISP, M.D.

WE regret to have to report the death of Dr. Edwards Crisp. This well known physician, who, during a long life, has taken an active part in the advance of medical and zoological science, died this week, suddenly, from heart syncope whilst visiting a patient. Dr. Crisp became a licentiate of the Apothecaries' Society in 1828, a member of the Royal College of Surgeons in 1829, and M.D. of St. Andrew's in 1848. His scientific labours were recognised by the award to him of several prizes, namely, two Jacksonian prizes of the Royal College of Surgeons of England; one, in 1845, for an essay on the Structure and Diseases of the Large Blood-Vessels; and the other in 1852, on Intestinal Obstruction within the Abdomen; and two Astley Cooper prizes—one in 1859, for his essay on the Structure and Use of the Thyroid Gland; and one in 1862, for an essay on the Pancreas. He was also the author, in 1872, of the Fothergillian prize essay of the Medical Society of London, the subject being Croup and Diphtheria. He contributed numerous articles of scientific and practical importance to the medical and zoological journals.

Dr. Crisp was at one time an active writer on the subject of examinations and examiners, especially objecting to the methods of examination at the Royal College of Physicians of England, in respect to which he had an unpleasant and unlucky experience. He was a voluminous contributor to the earlier publications of the Pathological Society, especially on the subject of comparative pathology, and an active writer on the subject of medical education and medical organisation. Busy, earnest, laborious in his work, and at one time somewhat voluminous in his writings, Dr. Crisp had always deservedly been credited with great professional zeal and singleness of purpose. He had little capacity for organisation, or power of attracting others to accept the views and adopt the methods of progress which commended themselves to him. With somewhat more of moderation and discreet consideration for the conditions under which reforms could be effected, he would probably have made a greater impression on the strongholds which he assailed. But the most earnest reformers are not always made of such stuff, and no one can doubt that, in his generation, Dr. Crisp did much service as an able and original thinker, and indefatigable worker throughout his life. He devoted himself to the cares of general practice in addition to his scientific and political pursuits, showing a remarkable example of professional industry and public spirit.

JAMES BRAID, M.D. Edin.

DR. BRAID, of Burgess Hill, Sussex, was the son of a well-known member of our profession—the late Dr. Braid, of Manchester, whose essays on hypnotism were pointedly referred to at the discussions on this subject during the International Congress. Dr. James Braid commenced his professional career at Neston, in Lancashire, where he resided for a long period. For some years past he has practised at Burgess Hill, where he was greatly esteemed by all classes. He died on the 22nd instant, after three days' illness, at the age of 60 years.

MEDICAL VACANCIES.

The following vacancies are announced:—

- CHELSEA.—Medical Officer and Public Vaccinator for the District of Kensal Green. Salary, £50 per annum. Applications by November 28th.
- CHELSEA WORKHOUSE AND INFIRMARY.—Assistant Medical Officer. Salary, £100 per annum. Applications by November 28th.
- CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Resident Medical Officer. Salary, £100 per annum. Applications by November 30th.
- DENBIGHSHIRE GENERAL INFIRMARY, Denbigh.—Honorary Dental Surgeon. Applications by December.
- DEWSBURY AND DISTRICT INFIRMARY.—House-Surgeon. Salary, £80 per annum. Applications by November 29th.
- DUNDALK UNION, Carlingford Dispensary.—Medical Officer. Salary, £100 per annum, and £25 as Medical Officer of Health. Applications by November 25th.
- EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—Two Resident Clinical Assistants. Applications by November 29th.
- ENNISCORTHY UNION, Killan Dispensary.—Medical Officer. Salary, £100 per annum, and £15 as Medical Officer of Health.
- GALWAY UNION, Arran Island Dispensary.—Medical Officer. Salary, £100 per annum, and £15 as Medical Officer of Health. Applications by December 1st.
- HALSTEAD LOCAL BOARD OF HEALTH.—Medical Officer. Salary, £30 per annum. Applications by December 2nd.
- HOSPITAL FOR WOMEN, Soho Square, W.—Assistant-Physician. Applications by November 20th.
- INISHOWEN UNION, Clonmany Dispensary.—Medical Officer. Salary, £120 per annum, with £15 as Medical Officer of Health, registration, and vaccination fees. Election on December 5th.
- KINGTON UNION.—Medical Officer. Salary, £30 per annum. Applications by December 4th.
- LONDON FEVER HOSPITAL.—Assistant Resident Medical Officer. Salary, £120 per annum. Applications by November 27th.
- LONDON LOCK HOSPITAL AND ASYLUM, Female Department.—Assistant House-Surgeon and Apothecary. Applications to the Secretary, Westbourne Green, Harrow Road, by December 12th.
- NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, E.—Resident Clinical Assistant and Registrar. Salary, £70 per annum. Applications by December 5th.
- PAROCHIAL BOARD OF PENNYGOWN AND TOROSAY.—Medical Officer. Salary, £80 per annum. Applications to Mr. A. McDougall, Inspector of Poor, Auchnairrag-by-Oban, by December 5th.
- ROYAL BERKS HOSPITAL, Reading.—Assistant to the House-Surgeon. Applications by December 5th.
- ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiners in Anatomy and Physiology. Applications by November 25th.
- STANLEY HOSPITAL, Liverpool.—Junior House-Surgeon. Salary, £60 per annum. Applications by November 30th.
- STOURBRIDGE DISPENSARY.—House-Surgeon and Secretary. Salary, £130 per annum. Applications to G. Perry, Esq., Fairfield, Pedmore, near Stourbridge, by December 5th.
- ST. GEORGE'S AND ST. JAMES'S DISPENSARY.—Physician, and Physician for the Diseases of Women and Children. Applications to the Committee of Management, No. 60, King Street, Golden Square, W., by November 29th.
- ST. JOHN'S HOSPITAL FOR SKIN-DISEASES, Leicester Square. Assistant-Physician. Applications by December 4th.
- ST. JOHN'S HOSPITAL FOR SKIN-DISEASES, Leicester Square. Assistant-Surgeon. Applications by December 4th.
- ST. OLAVE'S UNION.—Dispenser. Salary, £90 per annum. Applications by November 28th.
- ST. PETER'S HOSPITAL FOR STONE, Henrietta Street, Covent Garden.—Assistant-Surgeon. Applications by December 9th.
- WEST BROMWICH DISTRICT HOSPITAL.—House-Surgeon. Salary, £80 per annum. Applications by December 9th.
- WEST LONDON HOSPITAL, Hammersmith, W.—Surgeon-Dentist. Applications by November 27th.
- WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Junior House-Physician. Applications by November 25th.
- WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House-Physician. Salary, £100 per annum. Applications by December 4th.
- WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House-Surgeon. Salary, £100 per annum. Applications by December 4th.
- YORK COUNTY HOSPITAL.—Honorary Physician. Applications by December 8th.

MEDICAL APPOINTMENTS.

- BROWN, J., L.R.C.P.Lond, etc., appointed Medical Officer of Health to the Borough of Bacup.
- CARMICHAEL, John, M.D., F.R.C.P., appointed Physician to the Royal Hospital for Sick Children, Edinburgh.
- CORNELIUS, W. F., L.D.S.R.C.S.Eng., appointed Dental House-Surgeon to the Dental Hospital of London, *vice* Hern.
- GREVES, E. H., M.B., appointed Medical Tutor to the Royal Infirmary, Liverpool.
- HARTFORD, H. W., L.R.C.S., appointed Medical Officer and Public Vaccinator for the Milton District of the Lymington Union.
- HARTFORD, H. W., L.R.C.S., appointed Medical Officer of Health to the Lymington Union Rural Sanitary Authority.

HERN, WM., L.D.S.R.C.S.Eng., appointed Demonstrator of Cohesive and Contour Filling to the Dental Hospital of London.

HUTTON, R. J., L.R.C.P., M.R.C.S., etc., appointed Honorary Medical Officer to the Holloway and North Islington Dispensary, *vice* W. J. Qualtrough, L.R.C.P. Eng., resigned.

MILLS, Joseph, M.R.C.S., appointed Administrator of Anæsthetics to the Dental Hospital of London, *vice* Clover, J. T., F.R.C.S., deceased.

NETTLESHIP, Edward, F.R.C.S., M.L.S.A., appointed Assistant-Surgeon to the Royal London Ophthalmic Hospital, Moorfields, *vice* R. W. Lyell, M.D., deceased.

WHITCOMBE, P. Percival, L.S.A., appointed Senior Resident Medical Officer to the London Lock Hospital, Westbourne Green, W., *vice* G. Houlton Bishop, M.R.C.S., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

LUCY.—On the 15th instant, at Bush Hill Park, Enfield, the wife of William Cubitt Lucy, M.D., C.M., of a son.

SANDBERG.—On November 18th, at Liverpool Lodge, Brixton Hill, S.W., the wife of Dr. Arthur Gregory Sandberg, of a son.

MARRIAGE.

PICKUP—ALCOCK.—On November 7th, at St. Margaret's, Wolstanton, by the Rev. O. W. Steele, assisted by the Rev. W. E. V. Yonge, William J. Pickup, M.B. Lond., M.R.C.S., of Coventry, to Emily, youngest daughter of Joseph Alcock, Esq., J.P., Port Hill, Stoke-on-Trent.

DEATHS.

EWEN.—On the 18th instant, at No. 2, Park Place, Torquay, Arthur Benjamin Ewen, M.R.C.S., L.M., L.S.A., of Exmouth, Devon, and formerly of Long Sutton, Lincolnshire, aged 45.

GULLIVER.—At Canterbury, on the 17th instant, George Gulliver, F.R.S., formerly Hunterian Professor at the Royal College of Surgeons, and for many years Surgeon to the Royal Horse Guards.

HEALTH OF FOREIGN CITIES.—Statistics, published in the Registrar-General's last weekly return, show that the death-rate in the three principal Indian cities recently averaged 26.8 per 1000; it was equal to 24.0 in Bombay, 24.5 in Calcutta, and 34.4 in Madras. Small-pox caused 5 deaths in Madras, and cholera 14 in Calcutta; fever fatality showed the largest excess in Madras. According to the most recent weekly returns, the average annual death-rate per 1000 persons, estimated to be living in twenty-two of the largest European cities, was equal to 24.1, and exceeded by 1.5 the average rate last week in the twenty-eight large English towns. The death-rate in St. Petersburg was equal to 39.7, the 510 deaths including 50 from diphtheria and 27 from scarlet fever. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged only 18.3; it was but 14.5 in Christiania, while the highest rate was 20.5 in Stockholm; 3 fatal cases of enteric fever occurred in Stockholm, and 3 of diphtheria in Christiania. The Paris death-rate further declined to 23.3, although the deaths included 120 from typhoid fever, 27 from diphtheria and croup, and 6 from small-pox. The 124 deaths in Brussels were equal to a rate of 20.6. The death-rate in Geneva was 25.6, and considerably exceeded the recent average. The rate was equal to 21.5 in Rotterdam and 23.2 in the Hague; small-pox caused 4 deaths in Rotterdam. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 24.1, and ranged from 19.8 in Hamburg to 31.7 in Breslau and 32.9 in Prague. Small-pox caused 4 deaths in Prague and 2 in Buda-Pesth; and diphtheria showed more or less fatal prevalence in most of the other cities. The mean death-rate in four of the largest Italian cities was 22.6, the highest rates being 25.0 in Naples and 28.2 in Venice. Malarial fever caused 11 and typhoid fever 5 deaths in Rome; typhoid fever also showed fatal prevalence in Naples and Turin. In the four great American cities, the death-rate averaged 22.0, and ranged from 18.0 in Philadelphia to 25.7 in New York. Small-pox caused 13 deaths in Baltimore and 6 in Philadelphia; the fatal cases of diphtheria showed a marked excess in each of these American cities.

THE METEOROLOGICAL SOCIETY.—The opening meeting of the session was held on Wednesday, November 15th, Mr. J. K. Laughton, F.R.A.S., president, in the chair. A paper on "Certain Types of British Weather," was read by the Hon. Ralph Abercromby. The author showed that there was a tendency of the weather all over the temperate zone to occur in spells, associated with certain types of pressure distribution. In Great Britain there were at least four persistent types—the southerly, the westerly, the northerly and easterly. In spite of much fluctuation, one or other of these types often continued for weeks together, and tended to recur at the same date every year. The value of the recognition of type-groups was shown in the following ways. 1. They explained many phenomena of weather and many popular prognostics. 2. In some cases they enabled forecasts to be issued with greater certainty and for a longer

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C.; London: those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with Duplicate Copies.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

THE SANITARY SCIENCE CERTIFICATES AT CAMBRIDGE.

SIR,—For the Cambridge sanitary science certificates, some practice in analysing water and gases is necessary. About twenty afternoons spent in the laboratory of a public analyst might possibly be enough, and he would give advice about the chemical and microscopical work generally. Parkes and Wilson should be read pretty thoroughly, and Bailey Denton's *Sanitary Engineering* might also be looked through. On statistics, I believe, Dr. Fan's letters are very valuable, but I could not get even a sight of the reports in which they are. Rumsey's *Fallacies* should certainly be read; and special birth- and death-rates should be taken from the most recent Registrar-General's report, the introductory pages of which should also be read. Great help will also be gained by the perusal of the annual reports of some good medical officers of health. The Acts of Parliament mentioned in the schedule must be worked up, at least such portions of them as affect the duties of medical officers of health.

In addition to all this, I would advise the careful reading of sanitary articles in the medical press, for the questions of the day are sure to be touched upon. For example, in the recent examination, the following subjects were to my knowledge brought up: Infection of tuberculosis; compulsory notification of infectious disease; mortality in maternity hospitals and private practice; small-pox epidemics in the eighteenth and nineteenth centuries.

For the comfort of intending candidates, I may say that the number of failures is very small, and that the examination is, like all other Cambridge medical examinations, eminently practical and remarkably free from anything like catch questions. I am sure that it is quite possible for a middle-aged man, in whose student days very little chemistry was considered requisite, to work up for and pass with an hour's reading a day for six months, and a fortnight or three weeks' laboratory work. Still, work must be done; and not only done, but thought about. Again, it is well to have constant practice in examining the too often unsanitary arrangements of patients' houses and of public sewers and water-supply, with perhaps occasional rough analyses of the air of close rooms and of water from a patient's well, varied by battles with one's milkman about his extraordinary propensity for mistaking a mixture of skim-milk and water for new milk. In case anyone wishes for further information, I shall be happy to answer any questions in my power, though there are doubtless many others who could give more valuable advice than I can.—Yours truly,

THEODORE MAXWELL, M.D. Camb. and S.Sc. Cert.

Woolwich Common, November 6th, 1882.

SIR,—Having suffered from subacute bronchitis in cold weather for a few years past, I am compelled to have my bedroom warmed in winter. I should feel obliged if any of my professional brethren could suggest the best stove for the purpose. No doubt an open fire is best, but it requires frequent attention.—I am, yours respectfully,

T. B.

FEES FROM CORONERS.

SIR,—On September 30th, I was asked to furnish a report to the coroner of the illness and death of E. R., who, in a drunken brawl, had sustained fracture of the leg, etc.; six weeks after the injury, he died from pneumonia, etc. As a result of my report, no inquest was held. Am I entitled to a fee from the coroner for my report?—I am, etc.,

JUNUS.

* * * The only Act of Parliament under which a medical witness can legally claim a fee is the Medical Witness Act, 6 and 7 Will. IV, cap. 89, by which he is entitled to receive one guinea for evidence and one guinea for making a *post mortem* examination if previously ordered by the coroner. Any information or report furnished to the coroner by a medical man as to the cause of, or circumstances connected with, a death, previously to an inquest or pending the decision of the coroner, is given as an act of courtesy on the part of the practitioner, there being no funds at the disposal of the coroner for payment for the same. It is, of course, optional on the part of the medical man whether he supplies the information asked for. By a special arrangement with the magistrates for the county of Kent, the coroner is reimbursed out of the county funds for expenses attending preliminary investigation concerning the cause of a death when no inquest is held, and he is authorised to pay a fee of one guinea for medical reports. This is the only county in which such an arrangement exists.

TEMPORARY STETHOSCOPE.

SIR,—With reference to "G. R. Moore's" letter in the JOURNAL of September 23rd, I consider his arrangement of two cotton reels to possess the great disadvantage of loss of continuity for the transmission of sound; and in cases when his own stethoscope is not at hand, I should recommend him to try an ordinary plain vineglass, which is always obtainable, and is an excellent conductor of sound.—Your obedient servant,

ALEX. S. FAULKNER, I.M.D.

STAMMERING.

D. G. would be glad of the address of any reliable medical man in London who undertakes, and has successfully treated, cases of stammering.

VACCINATION INSPECTION.

SIR,—The following letter will probably interest some of your readers. The circumstances which gave rise to it show the way in which certain young doctors, "dressed in a little brief authority", with good salaries and easy irresponsible work, lord it over those whose lot is cast in a humbler sphere, who have poor pay with hard and harassing work, and who are responsible to many masters. The inspector referred to, in a recent visit, behaved to me in so insolent and arbitrary a manner, that I reported his conduct to the Local Government Board; and not long afterwards, a string of frivolous complaints, with a threat of dismissal, was sent to my board of guardians from the Local Government Board; and this is my reply. I inclose my name and address, and subscribe myself

A PUBLIC VACCINATOR OF FORTY YEARS' STANDING.

(Copy.)

"To the Board of Guardians.

"Gentlemen,—In reply to the charges brought against me, I beg leave respectfully to say: 1. That in occasionally extending the prescribed time for vaccination, I consider that I ought to be commended, rather than blamed, for two reasons. One is that it greatly facilitates that which the Local Government Board urge, viz., vaccination from arm to arm; and the other, that in some instances it gives parents an opportunity of having their children vaccinated within three months of their birth, as required by the Vaccination Act, which they would not otherwise have. The cause of efficient vaccination is thus greatly promoted. 2. Other initials than my own are only placed in the inspection column (for which its heading appears to provide) when the parents of the children neglect or are unable to attend at the stations, or when they delay bringing their children to be vaccinated till the last day fixed for my attendance. I always myself attend at the appointed times, and invariably affix my own initials to the cases I inspect. When they do not attend, I take the trouble to procure a reliable proof of successful vaccination. 3. Visiting cottages, when attendance at the stations is neglected, greatly helps the work of vaccination; and the time and trouble thereby saved to the mothers lessens very much the strong prejudice that still exists against compulsory vaccination. 4. Vaccinating a child residing in another district of the union, when brought for vaccination to one of my stations, which may perhaps be a mile or two nearer, likewise helps forward the cause, and saves much trouble. It does not often occur, and is generally connected with change of residence. 5. With regard to my vaccination being of a low class, I can trace such cases to the inefficient lymph provided by the National Vaccine Establishment. Its inefficiency is proved by the fact that I vaccinate from it in precisely the same way as I vaccinate from arm to arm. From the one source, hardly one case in twenty takes effect; whilst from the other, when the children are healthy, I always have a good quality of vaccination, and not long since received a bonus for meritorious vaccination. The quality of the vaccination is also in a great measure dependent on the children's natural constitution. A strong healthy child will show a better character of vaccination than a weakly one, although both may be vaccinated from the same child. Again, I submit that the inspector cannot, with any degree of fairness, report a general depreciation of my cases, when he sees so few in the town, and none in the country. 6. With regard to my alleged want of skill in operating, the opinion of Dr. — cannot be relied on, because he attributed the unsuccessful cases, vaccinated from inefficient lymph, to my having operated according to the mode directed by the Local Government Board, and then directed a theoretical mode which in practice completely failed.

"After all, the only object of vaccination is to obviate small-pox, and I challenge inquiry as to whether any case I have vaccinated has failed in this respect. My opinion, founded on practical experience, is that a moderate amount of inflammation set up by vaccination is quite sufficient to obviate small-pox, and that, where very large scars remain, it shows that an unnecessary degree of severity (not always free from danger) has been exercised in the operation.

"In conclusion, I beg leave to remark, from an experience of forty years as a public vaccinator, that the object of the Government to obtain efficient vaccination would, in thinly populated districts, be more readily attained, and the popular dislike to compulsory vaccination be diminished, by allowing the public vaccinator a discretionary power, instead of insisting upon his adherence to the hard and fast lines attempted to be enforced by the harsh and arbitrary system adopted by the present inspector of this district."

* * * Our correspondent apparently altogether fails to understand the reasons which have led the Local Government Board to make definite rules for the guidance of a public vaccinator. The intention of these rules is to promote the best form of vaccination. With this object, it is desirable that the number of children attending a vaccination station should be sufficiently large to give better opportunity for the selection of lymph for subsequent vaccination than would be possible if the number of children were less; and this, in many districts, can only be accomplished by strictly limiting the period during which vaccinations are performed. As to the other portions of our correspondent's letter, he will not fail to see, on further consideration, that, if the initials of any irresponsible person are to be accepted as evidence of the success of the operation, it is obvious that the visits of the inspector will be practically valueless. With regard to the suggestion that the indifferent quality of vaccination is due to some fault in the quality of the lymph supplied by the National Vaccine Establishment, our correspondent should remember that it is his duty, as well as within his power, by a proper selection of vesicles from which to vaccinate, to control the character of subsequent vaccinations. The lymph supplied by the National Vaccine Establishment is not intended to do more than to enable him to renew his stock. The total area of the scars thus produced should collectively measure at least half a square inch, and this area entitles the vaccinator to an award of the first class, while those of the second class must not have a less area than one-third of a square inch, and in both the scars must be well marked in their foveation. The relation of the area of the scar to the amount of protection against small-pox has been proved again and again. The whole letter tends to show that our correspondent has no great reason for complaint; but as his case is not a solitary one, perhaps, and as it is extremely important that the duties and powers of public vaccinators should be accurately appreciated, and the spirit of the supervision exercised correctly interpreted, his letter seems to us to be useful and to call for comment.

PRIZES OF THE ROYAL COLLEGE OF SURGEONS.—Competitors for the Triennial and Jacksonian Prizes of the Royal College of Surgeons, are reminded that the essays for these prizes must be sent to the secretary on or before Saturday, December 30th.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to the Manager, at the Journal Office, 161A, Strand, London, and not to the Editor.

MEDICAL SUBJECTS MENTIONED BY HERODOTUS.

SIR,—In the account of the multitudes assembled by Xerxes to invade Hellas (without doubt, prodigious exaggerations), there is singularly little mentioned about the deaths and diseases which always attend very large assemblages; and except those ordered to be executed and those killed in battle, hardly anybody would appear to have died. Even wounds, which from the nature of the weapons used must have been of frequent occurrence, are very rarely mentioned. There is the case of Pytheas, son of Ischenous, mentioned (*Polymnia*, vii, 181), from which it would seem that the recognised way of treating wounds was by pouring on balsams, which would seem to have had the same effect on human flesh and blood as glue would have in joining a wooden man who had been accidentally damaged. The treatment of wounds by Mædon seems to have been of the same kind.

Herodotus (*Melpomene*, iv, 2) seems to think it a peculiarity of the Scythians, that they much prefer what is skimmed off the top of the milk, and hold what is left in less esteem.

The Disease of the Enarees. (*Cho.* i, 105.)—The Scythians, in passing through Ascalon, pillaged the temple of Celestial Venus, who afflicted them, as the Scythians say in consequence of this, with a female disease; and those who visit Scythia, says our author, may see in what state those exist who are called Enarees. The disease alluded to could not have been syphilis, which appears to have been entirely unknown. It would most certainly have been mentioned by Aristophanes had he been aware of it, but he makes no allusion to it.

The Babylonian Method of Treating the Sick. (*Ibid.*, 197.)—They bring out their sick into the market-place. They do not employ physicians. Those who pass by consult with the sufferer as to the nature of the disease, and whether they themselves have suffered from the like disease or have known others to do so. The passer-by counsels him about these, and advises him as to the remedies by which he has escaped from a similar disease or has known others to do so. It was not allowable to pass the sick person without inquiring into the nature of his disease. This passage and one or two others are used by Montaigne.

Clysterisation of the Egyptians. (*Melpomene*, ii, 77.)—Their manner of life is this. They purge themselves three consecutive days each month with emetics and clysters, seeking to preserve health, supposing that all diseases arise from the food that has been consumed.

The Manner of Practising Medicine among the Egyptians. (*Ibid.*, 84.)—The art of medicine is thus distributed. Each physician applies himself to one disease and no more. In every place there is an abundance of physicians. Some physicians are for the eyes, some for the head, some for the teeth; others for the region of the belly, and others for disorders of parts which are not visible.

Drinking Bulls' Blood. (*Thalia*, iii, 15.)—Psammenitus was put to death by being compelled to drink bulls' blood. He died immediately. This is a curious superstition.

The Rewards of Successful Practice. (*Ibid.*, 129, 130.)—It happened that King Darius, while hunting, leapt from his horse and twisted his foot. It was twisted with such force that his ankle was dislocated. Thinking first that the Egyptian physicians who were about him were the most skillful physicians, he had recourse to their assistance. These, by twisting the foot and using force, made the evil worse. In consequence of this misfortune, Darius lay seven days and nights without sleep. On the eighth day, as he still remained ill, some one who had previously heard in Sardis of the skill of Democedes the Crotonian, mentioned it to Darius. Democedes at first denied his skill, but his memory being refreshed by the sight of whips and goads, he acknowledged himself to have some poor skill. After this, Darius placing himself under his care, he using mild remedies after the more violent ones, the king obtained sleep, and in a short time was restored to health, though he never expected to have his foot well again. After this, Darius presented Democedes with two pairs of golden fetters. Democedes then asked Darius whether he had presented him with this double evil because he had restored him to health. Darius, being pleased with this speech, sent Democedes to his wives as being the man who had saved the king's life. Each of these dipped a goblet into a chest of gold, and presented Democedes with such a munificent gift that a servant who followed, whose name was Sciton, gathered up the staters which fell from the goblets, and he collected no inconsiderable amount in this way. On the other side of the account, the Egyptian physicians who had wrongly treated the king's disease were ordered to be empared, and were only begged off by the successful physician. Physicians seem also to have been engaged on the public behalf. Thus it is related of this Democedes that, in his first year of settling in practice on his own account, though poor and unprovided with instruments, he surpassed the most skillful physicians; in the second year, the Æginetans engaged him by payment of a talent of public money; in the third year, the Athenians for a hundred minæ; in the fourth year, Polycrates for two talents. He also cured a tumour of the breast of one of the wives of Darius, but there was no money payment.

Therapeutic Waters. (*Melpomene*, iv, 70.)—The Tæarus is said by those who dwell near it to be the best of rivers. Besides its other virtues, it is especially good for curing itch in men and horses.

A Remedy. (*Ibid.*, 109.)—The testicles of otters, beavers, and other square-visaged animals, are said to be useful in uterine complaints.—I am, etc., G.

HYGIENIC CONGRESS AT GENEVA.

SIR,—In supplement of your report on the recent congress, I would remark that the general arrangements were exceedingly good, being apparently modelled on the plan hitherto adopted by the British Medical Association. The proper business of the congress was, of course, transacted in the sections, which were in the buildings of the University generously lent for the purpose, and the different railway companies also acted with great liberality by giving return tickets for a single fare from any part of France to Geneva. Amongst the questions debated were some which are "burning questions" in all countries; as, for instance, the question of sabbatical rest, and that of the best means of promoting temperance. It appears that there are no fewer than 30,000 drunkards in Switzerland, according to one speaker; and that the consumption of the stronger liquors is increasing. The minor matter of boots and shoes of a proper form was brought forward by Dr. Roh of London, who exhibited models of what he conceived to be well shaped boots. Certainly, the manufacture of boots is in a very backward state in Switzerland, as compared with either France or England; and it was stated that the soldiers are frequently crippled by the coarse ill fitting *chaussures* provided for them. But it appears to me that the greatest of all common defects were passed over

without notice. More feet are injured by the shortness of boots and shoes than by tightness or any other cause; and the difficulty of walking is greatly increased in almost all cheap articles of this kind, at home and abroad, by the stiffness of the leather in what is called the "waist" of the boot, muscular effort being always wasted in bending the thick leather of this part of the sole, which never touches the ground.

With regard to the hospitalities shown to members, they were saved expense in every way, and were sumptuously entertained and fêted by the municipality of Montreux, the well known and beautiful winter station at the head of the lake of Geneva, whither they were conducted in the magnificent steamer *Mont Blanc*, which was placed entirely at their disposition. Amongst the other places visited were the Hydropathic Establishment of Champel-sur-Arve and the mineral waters of Evian, where the members were hospitably entertained. Being myself interested in this department of medicine, I also, whilst at the congress, took the opportunity of visiting the splendid Hydropathic Establishment of Divonne, near Nyon, on the northern side of the lake. The proprietor, Dr. Paul Vidart, is an enlightened physician, using medicines and every other resource of the healing art.

I was not struck by the perfection of the actual hygienic arrangements in Switzerland and France; but I am sure that much good results from every congress of this kind; and amongst other persons present whose papers were "crowded out" was Dr. Douglas-Hogg, who is intrusted by the French Government with the preparation of a special report on French hygiene. My own opinion is, that countries with a strong tide round their coasts and river communication therewith ought not to have their system of drainage copied by others which are not so situated, and that the whole question of the best manner of drainage must be reopened before the people are adequately protected against epidemics traceable to wrong ideas on this subject.—I am, sir, your obedient servant,

EDWD. HAUGHTON, M.D., etc.

Spring Grove House, Upper Norwood, S.E., October 19th, 1882.

MIDWIFERY FEES.

SIR,—As the subject of midwifery fees is frequently under discussion in your columns, may I venture to put the whole subject in a different light to that in which it is generally regarded. To undertake the treatment of a person for a certain time for a fixed fee is almost sure to be unjust to one or other of the contracting parties. Take a case where the surgeon is not sent for until he is actually wanted, and where the visits afterwards are few; compare this with another where he is sent for and attends long before he can be of any use, and where the patient subsequently expects a considerable number of visits. Is it right that the first should have to pay the same amount as her less sensible and more fussy sister? It appears to me more equitable to have no fixed charge for these attendances any more than there would be if called upon to attend a man suffering from the result of an accident. The amount to be paid should depend upon the amount of services rendered. When called to a case, should the time be detained; and the same principle will apply to charge according to which should be charged at the same rate as ordinary visits. My remarks, of course, will be found to apply more particularly to those cases which we are in the habit of attending for fees ranging from three to ten guineas. I think if some such principle of payment were adopted as that which I have endeavoured to point out, we should hear less of disputed fees for these attendances.—I am, etc.,

FRED. STOCKWELL.

CHILBLAINS.

MR. R. J. COLLYNS (London) suggests the application of unguentum iodi. It should be well rubbed in two or three times a day. He has known this ointment to cure chilblains after the failure of many other remedies. The other preparations of iodine are, he believes, useless in such cases.

MR. W. B. PEBBLES (Howth) has found that small doses of arsenical preparations have the effect of preventing chilblains in subjects constitutionally obnoxious to them if administered to them before the season arrives.

DR. SPENCER THOMSON (Ashton, Torquay) recommends Startin's solution of nitrate of silver in pure spirit of nitrous ether of the strength of two scruples to the ounce. One, or at most two paintings, are sufficient to cure when the skin is unbroken. When it is broken, the application is too severe, and he uses a varnish of saturated solution of tannin in water, equal parts; this gives no pain, and answers well.

RUSTICUS has been informed of an empirical remedy for unbroken chilblains, which is said to have been effectual. It is to bathe the chilblains every night for a few nights in meat brine. He suggests that it is worth a trial.

J. E. S. has used, with never-failing success, the tincture of laurus communis rubbed in often, or simply painted over.

TINCTURE OF IODINE IN ERYSIPELAS.

SIR,—A good deal has been written lately in this and other medical papers in favour of the treatment of erysipelas by the local application of tincture of iodine, and no doubt in many cases it is a successful remedy. But it is not more useful than other forms of local treatment which provide the two great requisites, protection from the air and a constringing action on the superficial vessels. And it has disadvantages; the theoretical one that we are applying an irritant, which, if used too freely, may produce an effect opposite to the one we desire; and the very practical one that we scarcely improve the personal appearance of the unfortunate patient, whose face we are browning. Now, as far as my experience goes, flexible collodion may be used just as successfully as tincture of iodine; and its use is without the disadvantages attending the latter remedy.—I am, etc.,

JOHN L. UNTHOFF, M.D. Lond., F.R.C.S. Brighton.

TREATMENT OF FRACTURES OF THE LEG WITH SPLINTS.

SIR,—The following method of treatment of fractures of the leg, suggested to me in a case of emergency during the early part of my practice in the country, and which I have continued to use with advantage among both my club and other patients, I can confidently recommend for its general efficiency, simplicity, ease of application, its comfort to the patient, and the ready access it affords in cases requiring the use of dressings, and rendering the use of splints unnecessary. Having prepared the patient's bed in the usual way, obtain a soft pillow, which place in the axis of the limb, having first arranged beneath it equidistantly four looped bandages; next adjust the leg, taking care that the pillow affords equable support throughout the irregularities of the limb; fold up the pillow, and press close up to it on each side a good sized sand-bag, sufficiently long to reach from knee to heel; finally, bring up the looped bandages, and tie, and the operation is complete. The application of a bandage is not absolutely required; but, when applied, affords additional support, giving it a more business-like appearance, and is therefore more agreeable to the patient, who otherwise is apt to think, in the absence of the time-honoured splints, that his limb is not receiving due attention.—I am, etc.,

AUBREY WICKS, L.R.C.P. and S.E.D.

BRITISH MEDICAL ASSOCIATION.

FIFTIETH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

ON THE VALUE OF EYE-SYMPTOMS IN THE LOCALISATION OF CEREBRAL DISEASE.

Read in the Section of Ophthalmology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By E. NETTLESHIP, F.R.C.S.,
Ophthalmic Surgeon to St. Thomas's Hospital.

THIS subject, which might, I feel sure, have been much more appropriately introduced by a physician, presents itself to an oculist somewhat in the following form.

How far can one, who is engaged in treating ophthalmic cases, contribute to the diagnosis of intracranial or intraspinal disease? For my own part, on the present occasion, I propose to keep almost entirely to the question of intracranial disease, though I would by no means wish to see diseases of the spinal cord excluded from the discussion. Whether we include diseases of the cord or not, the whole subject naturally falls into two divisions, according as disturbances of vision and sensation, or affections of ocular movement, cause the symptoms we have to examine; and in each division, we must distinguish, as far as possible, between eye-symptoms due directly to peripheral changes, and those caused by disease of the oculo-motor or visual centres.

A. *Visual and Oculo-Sensory Disturbances.*—It is not necessary to occupy much time in discussing double optic neuritis (papillitis): for double optic neuritis very seldom helps us to decide where a brain-lesion is; and it lies beyond our present subject to ask what aid this condition gives us in deciding the nature of the disease. The occurrence of optic neuritis with meningitis points to the meningitis being basic; it is, according to all observers, rare in meningitis of the convexity. In regard to tumour, it is worth asking whether papillitis occurs more commonly, or comes on earlier, when the tumour is at the base, or in the anterior part of the brain, than when situated in the cerebellum, or posterior parts of the cerebrum. I do not know whether any statistics on this point exist; it is obviously a question on which the collection of good evidence would be full of difficulties. Unilateral papillitis sometimes occurs in cases of coarse brain-disease, and has some localising value—generally coming on, so far as recorded cases tell, in the eye opposite to the lesion. It is of importance that all cases should be carefully observed and recorded; and it would be well to include, as possibly bearing on the subject, cases in which the papillitis, though eventually double, takes place in one eye long before, or much more severely than in, the other; also cases of double and equal papillitis, where sight is much more affected in one eye than the other. I have seen a case (Miss K.), in which a tumour in the postero-inferior part of the right anterior lobe, adherent to the bone, had caused severe pain, chiefly on the right side of the face and head; then she had simultaneous double papillitis, with early extreme defect of sight in the right eye, but no failure of vision in the left till a year later. Here, contrary to the rule, the neuritis was worst on the side of the lesion. In another case, the only lesion was softening of the under surface of the left frontal lobe, with adhesion of the softened part to the dura mater, and atrophy of the left optic nerve; the symptoms had been severe pain in the left side of the head and face, followed by fits, with convulsion of the opposite arm; then, about two months later, recurrence of pain in the left head, with rapid blindness of the left eye without changes, and papillitis of the right without failure of sight; the left disc slowly became atrophied, the right recovered. (Alice S., originally in my hands, then under Dr. Bristowe's care; *post mortem* examination by Dr. Greenfield.) Although, in the first case, the papillitis was worst in the eye on the side of the lesion, and in the second was present only in the opposite eye, it will be observed that, in both cases, sight was affected most on the same side as the lesion. Dr. Gowers has recorded two cases bearing on the subject. In one (*Medical Ophthalmoscopy*, Case 17), a man had fits, with temporary weakness of the right arm, followed by pain on the right side of the head and face; then papillitis of one eye, passing off, and leaving the disc healthy, but sight defective; later, simple atrophy of both discs. In Gowers's second case, there was left hemiplegia, from embolism of the right middle cerebral artery, and conse-

quent softening of the corpus striatum; there were redness and haze of both discs, this change being more marked and lasting much longer in the right eye (*i.e.*, on the side of the lesion).

Cases of single optic neuritis from brain disease, with or without affection of sight, have to be distinguished from two other well known varieties in which the disease is not situated further back than the optic foramen. We meet with cases in which one eye fails with pain on the same side of the head, usually in the temple or at the back, sometimes also "behind the eye," and there may be pain in moving the eye. The pain and the amblyopia may both be slight, or both may be severe. In some cases the eye becomes quite blind, and when this occurs I have never yet seen it improve materially. At first the disc looks healthy, or sometimes shows some haze. In a few weeks, unless the defect of vision passes off, it becomes more or less atrophic. Neither vomiting nor cerebral symptoms occur, and the pain, though sometimes very severe, never becomes general; it is often called "neur-algic" or "rheumatic."

I have never seen the second eye suffer. In one case of this kind, my patient had previously suffered from Bell's paralysis of the opposite facial (*Lancet*, 1880, i, 765). Another patient, Miss B., had had a severe attack of sciatica, followed by numbness and weakness of the limb. Mr. Hutchinson published cases of the same kind many years ago, and drew a comparison between some of them, and cases of infantile paralysis (Hutchinson, *Ophthalmic Hospital Reports*, iv, pp. 381 and 120). It seems to me more likely that a rheumatic inflammation of the optic nerve occurs, probably in its course through the optic canal. In the other group of cases, we find severe papillitis with very great venous engorgement, with failure of sight, sometimes considerable in degree, and, as in the previous group, pain on the same side, but no cerebral symptoms. Probably the inflammation in these cases is always communicated to the optic nerve sheath from the orbital structures; orbital disease, either cellulitis or tumour, can, indeed, often be proved. I believe that the signs of oedema and venous stasis are usually more marked in the cases of this group, than in papillitis from intracranial disease.

In the present state of knowledge it would seem, from what has been said, that papillitis, with other symptoms of brain-disease, tells us something of the seat of the brain-lesion if it be single, if the second eye do not suffer until after a considerable interval, or if papillitis in one eye be accompanied by failure of sight, without immediate change in the disc, of the other.

Passing from inflammation to primary atrophy of the optic nerve, we here also fail to gain much help in localising brain-disease. I believe that atrophy following pressure on the chiasma, whether by tumour or by fluid distension of the third ventricle, presents nothing pathognomonic, either in its course or appearances.

I would like to ask here whether optic atrophy is often met with in chronic hydrocephalus, as is sometimes stated. I do not remember ever making the diagnosis. It is certainly possible in some, though by no means in all, cases of atrophy not preceded by papillitis, to distinguish between "spinal atrophy" (where the disc is often opaque and greyish, and the lamina cribrosa concealed), and atrophy secondary to injury, pressure, or destructive inflammation far above the eye, in which the lamina cribrosa is often exposed, the disc somewhat cupped, and its colour less grey than yellowish. But these differences are far from constant, and give no aid in localisation of brain-disease. Nor is it always possible to say whether atrophy has been preceded by papillitis or not.

In regard to the mode of failure of vision in optic atrophy, and its possible bearing on our present subject, the state of our knowledge leaves much to be desired. For example, colour-blindness does not seem to occur in any constant relation, either to loss of vision, or loss of visceral field, in optic atrophy. Some cases have very recently been recorded, which seem to point to the consciousness of colour depending rather on the special endowment of some part of the brain than on any differentiation of the retinal or optic neural structures. Three of these are cases of loss of colour-sense in one half of the field of vision with no loss of acuteness of sight in the affected part—Bjerrum,* Samelsohn,† H. D. Noyes.‡ Noyes's case presented partial optic atrophy with Argyll Robertson pupils and shooting pains. In one eye there was high amblyopia, with almost complete colour-blindness; in the other absolute colour-blindness in one lateral half of the field only, acuteness of sight being normal over the whole field. But cases are not wanting which seem to show that colour-defect, even when limited

* Bjerrum, *Hospitals-Tidende* R. 2, B. 8, p. 41 (referred to in a paper by Dr. Berry, *Edinburgh Medical Journal*, February 1882).

† Samelsohn (of Cologne), *Centralblatt für Medicinischen Wissenschaften*, 1881, No. 47 (referred to in Knapp's *Archives of Ophthalmology*, xi, 217).

‡ Noyes, *Knapp's Archives of Ophthalmology*, xi, 210, 1882.

to one half of the field, may be due to changes in the optic nerve. In the same paper, Noyes relates another case of hemiachromatopsia of the nasal half of each field, with glaucomatous cupping of the discs, the temporal halves of the fields, as in most cases of glaucoma, being normal. I have myself recorded two cases of injury to the optic nerve, in one of which colour-perception was enfeebled, whilst in the other, with about the same visual acuteness, it was perfect (Steffan, *Grafe's Archives of Ophthalmology*, 27, 2, p. 11). Steffan (*St. Thomas's Hospital Reports*, xi, p. 113, Cases i and vii) has given a case of colour-blindness, with very slight defect of visual sharpness, following an attack of giddiness, in an old man. The sight became quite perfect, and colour-perception improved; but some defect for green remained as long as four years after the attack. This case, which has been a good deal quoted as proving a colour-centre, certainly deserves attention, though it is not convincing. Colour-blindness is nearly always very marked in optic atrophy, associated with locomotor ataxy, yet it is probable that in these cases the changes begin at the ocular end of the nerve. It is clear, therefore, that failure of colour-perception, in its bearing on cerebral localisation, needs further study; and the point is one towards the solution of which we, as specialists, ought to be able to contribute.

I wish now to ask attention to a different subject. All ophthalmic surgeons know the cases often called "spurious glioma", in which a young child loses an eye with iritis and the clinical appearances of either detached retina or lymph in the vitreous body, followed by shrinking of the globe and secondary cataract. This clinical group includes several pathological processes. Some of the cases are, no doubt, instances of severe infantile syphilitic eye-disease; a few may possibly be the results of injury. On dissection, we may find intra-ocular hemorrhage, inflammation of the vitreous body, or detachment of the retina secondary to irido-choroiditis (Nettleship, *Pathological Transactions*, xxxi, 1880; Brailley, *Guy's Hospital Reports*, 1881, p. 497). The interesting point for our present purpose is, that severe cerebral symptoms sometimes occur just before the eye becomes blind with inflammatory symptoms. The two following cases are taken from amongst several others. D. B. brought me his little girl, aged eighteen months. The left eye was congested, and very soft; there was no anterior chamber; the iris was adherent to the lens-capsule. Three months previously, she had been taken suddenly ill, with quick breathing, dilated pupils, "glazed looking" eyes, and unconsciousness; there were no convulsions. She was seen by a high authority upon diseases of the nervous system. The temperature was 103-104° Fahr. for a fortnight; and two or three times it was thought she would die. Very early in the illness, the left pupil was smaller than the right, and the eye red, and soon afterwards a "fiery" reflection was noticed from deep in the eyeball; there was no proptosis. The child remained ill for three or four months. Soon after the onset, whooping-cough developed, and the relation between it and the severe cerebral symptoms and ocular inflammation was not clear. In another case, a little girl (Julia B., 3½ years), who had had bronchitis and measles one year before, and whooping-cough six months before, began to suffer one month ago from pain in the head, chiefly in the left forehead; a few hours later, convulsions set in, and she became, and is said to have remained for a week, totally unconscious; on the third day, the left eye was swollen and inflamed, and the iris discoloured; the child continued to have severe pain "in the eyeball" for another week, and then quite recovered. When I saw her, the left eye was soft, the periphery of the iris retracted, and a yellowish-red reflex, devoid of vessels, was seen from behind the clear lens. In the first of these cases, the eye-disease seems clearly to have been secondary to the cerebral attack; in the second case, the pain is said to have been all along localised on the side of the bad eye, and the question perhaps arises whether the convulsions and unconsciousness (which I have on the authority of Dr. Soper of Clapham Road) could have been merely symptomatic of the local affection of the eye. I do not myself think so; but the question is open for consideration. In regard to these cases of pseudo-glioma with brain-symptoms, we want to know what changes, if any, occur within the skull. I do not know whether these children ever die. If meningitis occur, is there anything unusual in its seat or its nature, and why does the child show this peculiar eye-disease instead of suffering from double optic neuritis? We may here remember that a form of choroiditis or panophthalmitis sometimes occurs in epidemic cerebro-spinal meningitis, and rarely after various infective diseases. The question of pyogenic and of cerebral thrombosis has also to be considered in connection with such cases. It may here be observed that, in the rare cases where a patient has died with purulent meningitis after panophthalmitis, or suppuration

in the orbit, it has often been impossible to find any visible continuity between the orbital and the meningeal disease.*

I pass to another subject. It is not uncommon to meet with cases of blindness without visible changes in infants. I formerly thought that the prognosis was necessarily fatal as regards sight. But, more lately, I have seen recovery of sight, apparently perfect, take place in several cases after the children had "taken no notice", and had had inactive pupils for several months. Some of these patients have shown signs of slight chronic hydrocephalus; but others have, so far as I could judge, been free throughout from all signs and symptoms of brain-disease. Is not recovery from infantile amaurosis commoner than some of us have thought? and to what is the blindness attributable when there are no signs of hydrocephalus? In another form of amaurosis in infants, we find extreme disorganisation of the choroid in the form of immense patches of atrophy, with grey membrane and accumulations of black pigment. In one of my own cases, the head was at first very small, but afterwards enlarged to an immense size.† Two cases of extensive choroidal atrophy in microcephalic infants recorded by Hutchinson (*Ophthalmic Hospital Reports*, v, 34, Cases 4 and 5) were most likely of the same nature. I believe that Dr. Barlow has found chronic hydrocephalus after death in one such case which ended fatally. Does the occurrence of this form of infantile choroidal disease, which is quite different from anything we commonly recognise as syphilitic, point to any particular variety of hydrocephalus?

We come now to cases of affection of sight without ophthalmoscopic changes, in which the cause is undoubtedly cerebral; hemipopia or hemianopia, defect of sight with hemianesthesia, and other forms of cerebral blindness. First, as to temporal hemianopia (loss of the outer half of each field), the symptom has, in rare cases, been proved to be due to tumour at the anterior part of the chiasma (*Saemisch*, *E. Müller*). These and the cases of hemianopia alluded to below have been collected and analysed in much detail by Dr. Wilbrand of Hamburg, *Hemianopsie und ihr Verhältniss zur topisch. Diag. der Gehirnerkrankh.*, 1881. That temporal hemianopia, however, does not necessarily point to disease in this situation, is shown by a case lately published by Dr. Baxter (*Brain*, January 1882), and which I had the opportunity of examining during life, where, *post mortem*, no lesion of any kind could be detected by the naked eye (except condensation of the vault of the skull). It may be observed that, in some cases of spinal optic atrophy, the invasion of the visual field is remarkably symmetrical in position in the two eyes, showing exact bilateral symmetry in the seat of the lesion, whether this be in the centres or at the optic discs. In two such cases, I found the lower and inner quadrant of each field lost. Many of the more important cases will be found repeated in all essentials in Ferrier's article on Cerebral Amblyopia and Amaurosis in *Brain*, No. xii; and in the Periopsis of the *Ophth. Hosp. Repts.*, vols. viii and ix.

The ordinary homonymous hemianopia (loss of the right or of the left half of each field of vision) has furnished and will continue to supply very valuable evidence of the locality of the lesion producing it, though the discovery of the cortical visual centres has widened the area within which such lesion may be expected to be found. 1. The fact that homonymous hemianopia occurs from destructive lesion of one optic tract demonstrates the semidecussation of the optic nerves at the chiasma in man. Cases of this kind, with good *post mortem* localisation of the lesion to the region of one optic tract, are rare; the best of them being, I believe, by Hjort, Dreschfeld, Gowers, and Hirschberg. 2. Several cases in which the lesion has involved the region of the corpora geniculata and the posterior part of the optic thalamus are also on record (Jackson, Dreschfeld). 3. And it has now been shown, further, in several cases, that lesions of the cortical or subcortical structures (posterior part of internal capsule) in the region of the angular gyrus and occipital lobe, may produce homonymous hemianopia. (Huguenin, Westphal, Pooley, Hughes, Baumgarten, Curschmann, Dreschfeld, and especially Haab.) It does not appear that we have at present any means of determining during life, by the characters of the hemianopia, in which of these three regions the lesion is seated. Ferrier (*Brain*, No. xii, 473) suggests that, in tract-hemianopia, the loss of field may be expected to come quite to the fixation point; whilst, in cerebral hemianopia, it may be expected to stop short of the fixation point by several degrees, leaving thus a small area of central vision perfect. If this distinction be trustworthy, we may, I think, say with some confidence that tract-hemianopia must be very rare, and cerebral hemianopia the rule; for in homonymous hemianopia a small area of central vision is almost invariably present. I have never been able to feel sure that it was absent. Ferrier quotes Gowers's case of tract lesion as one

* See Hutchinson, *Transactions of the Ophthalmic Society of London*, vol. vi, p. 10. The first part of this case was published in *Ophthalmic Hospital Reports*, vol. viii, p. 118.

† See also a recent case by T. P. Thompson, *Brain*, 1882, p. 10.

† The first part of this case was published in *Ophthalmic Hospital Reports*, vol. viii, p. 118.

in which the dividing line passed through the fixation point; but I have Dr. Gowers's authority for saying that, in the case referred to, no precise map of the field was made on the perimeter; and certainly no less rigorous test could be accepted on so delicate a point. Other clinical evidence of the rarity of disease of the optic tract as a cause of hemianopia may be adduced. Hemianopia, though it may be simple, is very often associated with hemiplegia. Indeed, Gowers (BRITISH MEDICAL JOURNAL, 1877, vol. ii, p. 729) says that temporary hemianopia is extremely common in the early period of attacks of hemiplegia; Ferrier thinks this temporary hemianopia may be caused by temporary pressure on the optic tract—an explanation which, though I cannot presume to criticise it, does not strike me as probable. It is important to note that what we call hemianopia is in numerous cases really a tetrato-anopia: loss of a quarter of the field or of a precisely bounded section between a quarter and a half. Now, in some of these there is paralysis of the limb corresponding to the blind gradient, *i.e.*, following Hughlings Jackson's law that in lateral hemianopia with hemiplegia the patient cannot see to his paralysed side, we have cases of tetrato-anopia in which he cannot see his one paralysed limb. I have seen a case illustrating this so far as the leg is concerned,* and I dare say physicians see many such. Loss of the upper quadrant alone also occurs;† but I am inclined to think that it is less common than loss of the lower quadrant. I do not know whether loss of an upper quadrant often occurs with isolated paralysis of the arm; but one case showing this coincidence has been published by Bernhardt, and will be found in abstract in *Brain*, part xviii. No single lesion involving the optic tract could account for paralyzes so precise yet so limited and so physiologically associated as these.

Again, in homonymous hemianopia, it is not uncommon to find also some peripheral restriction of the remaining half of each field; this may be greater in one eye than in the other, but from such cases as I have been able to refer to (including several of my own) it does not seem that the eye with the greater restriction always bears the same relation to the lesion.

Then the hemianopic loss of field is by no means always exactly equal in the two eyes; and this inequality, like the peripheral limitation just mentioned, does not seem to stand in any constant relation to the site of the lesion. Both these features in hemianopia cases deserve further attention. They could not easily be accounted for by lesion of the optic tract. But if, as the latest experiments seem to show (Fournier and Yeo think), lesions of the occipital lobe cause lateral hemianopia, whilst damage to the angular gyrus gives rise to crossed blindness, it is probable that variations in the seat and extent of disease, affecting these contiguous parts of the visual centre, might account for variations in the resulting hemianopia. I have lately seen a case, under the care of Dr. Bristowe, in which, together with symptoms thought to be suspicious of threatened general paralysis, there was word-blindness and homogeneous hemianopia, with no ophthalmoscopic changes; here all the symptoms point to cortical disease.

Finally, the rarity of decided atrophic changes at the optic discs, in cases of homogeneous hemianopia, even of long standing, points strongly against the tract being the seat of the lesion. The recently discovered cases of hemi-achromatopsia, already referred to, also seem to have a most important bearing on the localisation of the visual functions in the cortex; it is not unlikely that these cases may be found to be common, if sought.

Other pathological evidence is beginning to accumulate in favour of a cortical visual centre, and of its being seated in or about the occipital lobe. Thus, at least four cases are on record of double cerebral amaurosis, in which both occipital lobes were found implicated after death.‡ In one of them (Nothnagel's), hemianopia had occurred first. Again, according to Bastian, thrombosis of the posterior cerebral artery not unfrequently causes impairment of vision of the opposite eye, due, as Ferrier suggests, to interference with the cortical centre. A few cases are on record in which one eye was blind, and the other hemianopic in connection with chronic cerebral disease.§ In only one of these cases, by Ross, has a *post mortem* examination been obtained; here a tumour was found pressing on the corpora quadrigemina, and most on the side opposite the blindness; the localising value of the eye-symptoms here, however, was lessened by the presence of double optic neuritis. This lateral failure of sight has been seen in general paralysis, with lesion involving especially the occipital lobe (Fürstner, according to Ferrier||).

* This patient (Wm. C.) has been to many hospitals; and his case has lately been recorded by Dr. Berry (*Edin. Med. Jour.*, February 1882).

† See cases by Claeys in *Annales d'Oculist.*, T. 80, 1878; and others.

‡ Nothnagel, Griesinger, Moore, Chivostek; quoted by Wilbrand, *loc. cit.*

§ Gowers, *Medical Ophthalmoscopy*, Cases 30 and 35; Berry, *Edinburgh Medical Journal*, February 1882, Fig. 9; Ross, *Brain*, No. viii, p. 569, *unpublished*.

|| Ferrier, *Localisation of Cerebral Disease*, p. 132.

We should expect to meet with cases of unocular amblyopia or amaurosis from cortical lesion, without ophthalmoscopic changes, and uncomplicated by hemi-anæsthesia, just as we meet, not uncommonly, with hemianopia, probably cortical, without hemiplegia. It would be very interesting to know whether such cases occur; and, if so, whether they are rare. I have seen two in which such an explanation seemed highly probable.

It is most important, in reference to localisation, to note the state of the pupils, in all cases of damage or loss of sight from brain-disease. Loss of reflex pupillary action indicates damage not higher up than the corpora quadrigemina, whilst blindness with active pupils points to disease in the cortex or subcortical structures (internal capsule).

Megrim is a malady, the study of which may help towards localisation; the association between its ocular symptoms, and other occasional symptoms of one-sided nervous discharge, or irritation, being worthy of more detailed investigation.

With regard to the fifth nerve, the only questions which occur to me are: 1. Whether shooting pains in the territory of this nerve, in cases of progressive optic atrophy, have the same value for the diagnosis of locomotor ataxy as lightning pains in the legs? and 2. If so, can we infer that the degeneration is beginning in the cervical region, instead of lower down, and has this any value in prognosis? If we may count such cases as probably ataxic, the number of uncomplicated optic atrophy cases will be diminished—since progressive atrophy, with no other subjective symptoms than shooting pains in the head, is not very uncommon. While on this point, I may mention that I have found that about 20 per cent. of my cases of progressive optic atrophy presented no other symptoms, either objective or subjective, pointing to disease of the cord or brain; in about 80 per cent., some such symptoms were present; (the total number of cases on which this statement is based was fifty-eight). Herpes zoster of the fifth nerve may be mentioned as a malady of which our pathological knowledge is incomplete. When, as sometimes happens, it is associated with paralysis of neighbouring cranial nerves (*e.g.*, the third and the facial), we seem driven to assume a central, or, at least, thoroughly intracranial, affection.

B. Motor Disturbances.—In considering the motor paralyzes of the eyeball, in reference to localisation of cerebral disease, we should endeavour to distinguish between cases due to affections of (1) the nerve trunk; (2) the lower centres (nuclei of origin); and (3) the higher (cortical) centres, for complex co-ordinated movements. I do not pretend to have mastered a tithe of what has been written upon this complex subject, especially upon the last-named division—that of the disorders of associated movements. The writings of Prevost, Hughlings Jackson, Priestley Smith, and Landouzy, upon lateral deviation of the eyes; and those of Hutchinson, Gowers, Buzzard, Allen Sturge, Ormerod, and others, upon the varieties of ophthalmoplegia, are, no doubt, familiar to most of my hearers. I will, however, raise a few questions which seem suitable for further investigation.

Isolated Peripheral Paralyzes (cases in which the muscles, supplied by only one nerve trunk, are paralysed). I suppose we have no means of diagnosing the position of a syphilitic node on the trunk of the fourth or sixth nerves; and, as for the third nerve, it is only in the comparatively rare cases, where a single muscle is picked out, that we may guess its nerve-branch in the orbit to be the probable seat of disease. Isolated paralysis of the third nerve, with simultaneous hemiplegia of the opposite side, may, as Hughlings Jackson long ago pointed out, indicate a lesion of the crus cerebri on the side of the paralysed third. Though a large proportion of the cases of single ocular palsy are due to syphilitic disease of nerve-trunks, whilst a certain number are warnings of locomotor ataxy, or general paralysis of the insane, we meet with others, especially, I think, in old persons, where paralysis of single-nerves occurs without any cause discoverable during life. Probably *post-mortem* examination may, in future, clear up some of these.

It is well known that the relative frequency with which the third, fourth, and sixth nerves are paralysed singly is very different, paralysis of the fourth being much the least common. The anatomical relations of the sixth, in its long intracranial course, are supposed to account in great part for its proclivity; but this is a point on which there still seems room for the collection of evidence. The comparative immunity of the fourth may be partly due to its containing fewer fibres than the other two, and being, therefore, proportionately less liable, *ceteris paribus*, to the commencement within itself of spreading disease, such as gummatous inflammation. Isolated paralysis of the superior oblique following injury to the head, is probably often due to fracture of the roof of the orbit, and consequent mechanical interference with the pulley, rather than to damage of the fourth nerve. In my experience, the relative frequency of the single oculo-motor paralysis has been, in

seventy-seven cases—third nerve alone thirty-one cases, fourth alone nine, sixth alone thirty-seven.

Multiple Ocular Paralysis, when peripheral, is usually unsymmetrical. The seat of disease is presumably always either at and about the cavernous sinus, or about the sphenoidal fissure. There is generally severe localised headache; the paralysis of the third takes all its branches equally, including those to the levator palpebræ, and to the iris and ciliary muscle. The first and second divisions of the fifth nerve seldom escape; but the third division is often free, and when it is affected there is, in my experience, usually evidence of the disease having reached the zygomatic fossa; the optic nerve also often escapes, but, when affected, there is usually papillitis rather than progressive atrophy. In ophthalmoplegia externa from nuclear disease, the symptoms are bilateral; the levatores palpebrarum are much less affected than the ocular muscles; the fifth nerve seldom suffers; the iris and ciliary muscle often escape, at any rate in the earlier stages; the optic nerves not unfrequently suffer from progressive atrophy. Although symmetrical ocular paralyses are usually either nuclear or cortical, symmetrical syphilitic disease of nerve-trunks accounts for a few of them, and has been proved several times *post mortem*, at least for the third nerve. If, in a case of paralysis of both third nerves alone, the iris and ciliary muscles escape, the course is almost certainly central, the movements of these parts being under the control of centres separate from those which govern the movements of the external ocular muscles.

Central Paralyses (Paralyses of Associated Ocular Movements).—Our knowledge of these difficult cases is still very incomplete, both from the clinical and the pathological sides; but it is rapidly growing. As in the analogous case of disturbances of vision, we want to be able to distinguish between cases where the lesion is of the basal centres (the "nuclei" of origin) of the ocular nerves, and others where it is cortical (motor centres). In regard to the latter, I believe that, as yet, comparatively little has been proved, though there are some remarkable cases on record in which one or more of the associated movements of the eyes have been lost, with evidence of comparatively mild brain-lesion.* Cases are known, besides Priestley Smith's remarkable one of lateral deviation, of loss of power to look upwards, loss of power to converge the optic axes, and loss of power to move either eye outwards. How far such comparatively simple paralyses are due to cortical, and how far to nuclear disease, is very much a matter for future investigation; but analogy points to lesion of some part of the cortex.

The cases of ophthalmoplegia externa (Hutchinson, *Transactions of the Royal Medical and Surgical Society*, 1879), in which several movements are gradually lost, or in which the eyes have become almost fixed, are probably always nuclear or basal. Thus, though symmetrical, the symptoms are often for a time more advanced in one eye than in the associated muscles of the other; and the motor palsy is sometimes associated with progressive double optic-nerve atrophy, or with paralysis of both fifth nerves—i.e., with paralyses of nerves closely related at their basal nuclei, but presumably not associated in the cortical centres.

One form of single paralysis occurring in certain cases of apoplexy—viz., uncomplicated ptosis—has received considerable attention in France, especially from Landouzy (*Archives Générales de Médecine*). Ferrier thinks it possible that a separate centre for the elevation of the upper lids is situated towards the upper part of the anterior lobe of the cerebrum. We may remark that the levator palpebræ is functionally so distinct from the proper ocular muscles, that we certainly need feel no hesitation in provisionally assigning to it a separate centre. Indeed, other facts besides the occurrence of "isolated ptosis" favour this view. Thus, in the typical progressive ophthalmoplegia externa before alluded to, the levatores palpebrarum are far less affected than the other muscles: there is often only slight ptosis, though the globes are sometimes motionless.† Observation may be expected to show that, of the various associated movements of the eyes, some are lost more commonly than others. I am inclined to think that, hitherto, loss of upward movement has been noticed more often than loss of movement downwards. It will be remembered that upward movement is the most difficult and wearisome of all the ocular movements. I would suggest that attention to the order of recovery of movements or of muscles may be useful. I have for a long time thought (and probably the fact, if it be one, is well known) that, in paralysis of the third nerve, the levator was the first to recover. In central paralysis, that might perhaps be accounted for by the movements of the upper lid being more automatic than those of the eyeball; but this explanation could hardly apply in cases due to disease of the

trunk of the nerve. Some interesting remarks on this subject, the order of recovery in paralysis of nerve-trunks, will be found in a case just published by Dr. Ormerod in *Brain*.

Paralysis of one nerve, often quite incomplete and temporary, but sometimes permanent, is not an uncommon precursor of locomotor ataxy. I would ask whether it is common to meet with complex paralysis under the same circumstances. I had under care, some time ago, an ataxic man (Isaac L.) with incomplete paralysis of the external rectus, superior rectus, and levator palpebræ of the same eye, and dilatation of both pupils; he was under care for many months, and no other oculo-motor symptoms appeared. This combination is nearly the counterpart of the symptoms described by Ferrier as following stimulation of the oculo-motor area in the anterior lobe; but it may with more probability, perhaps, be assigned either to sclerotic change distributed in an unusual manner in the nuclear region, or to peripheral disease of the motor branches similar to the peripheral progressive atrophy of the optic nerve in this disease.

Before concluding, I should like briefly to allude to one other subject upon which observation is needed—*uniocular diplopia* from cerebral disease. Several cases have been recorded in this country and abroad, in which patients with brain-disease averred that they saw double with one eye. The symptom is so unintelligible, that a very natural scepticism has often been expressed on the subject. It is a point which can be settled only by very careful future observation, and especially by looking for the symptom in cases free from complication with ocular paralysis.

In concluding, I wish to express my thanks to my friends Dr. W. A. Fitzgerald and Mr. J. B. Lawford for their assistance in collecting the material for many parts of this paper.

BRIEF NOTES OF SOME RARE OPHTHALMOLOGICAL CASES.

Read in the Section of Ophthalmology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By ARTHUR BENSON, M.B.Dub., F.R.C.S.I.,

Lecturer on Ophthalmic and Aural Surgery in the Ledwich School of Medicine, Dublin; Assistant-Surgeon to St. Mark's Ophthalmic Hospital, Dublin.

It may not be uninteresting to give some brief account of a few cases, which have come under my care at St. Mark's Ophthalmic Hospital from time to time—cases which may help to supply material for the elucidation of future questions. In describing them, I shall do little more than recount the most salient points, omitting comment or theory.

CASE 1. Abscess (?) of Right Antrum, with intense Optic Neuritis and Proptosis.—Eva F., aged 2½, was sent to me by a medical man, in consequence of an affection of the eye lately noticed. The history obtained was that, three months before, the child got measles. A week later, the back upper tooth of the right side began to pain her, and she had what they thought was a "gumboil", which, however, did not burst. After some time, the face at that side swelled, and the eye began to appear prominent. That was a month before I saw her. A fortnight later, a sanguineo-purulent discharge came from the right nostril and lachrymal punctum, and continued to flow in considerable quantities ever since. The pain, which was severe before the appearance of the discharge, diminished afterwards. The mother thought the sight of the eye was not defective, but the age of the child rendered accurate estimation impossible.

When I first saw the child, there was considerable swelling of the right side of the cheek, with a thickening of the alveolar border behind. The right eye was considerably proptosed. On pressing the right nostril, or over the lachrymal sac, a thin unhealthy looking mucous fluid tinged with blood escaped in some quantity. These were the only means of exit for the contents of the tumour. The protruded eye (examined under chloroform) showed, with the ophthalmoscope, considerable cedema of the disc, which was greatly swollen, with dark large vessels. The tension of the eye was normal, and the action of all its parts good.

The presence of such well marked papillitis and proptosis render this case worthy of record. P.S.—The sequel shows the affection to have been sarcoma of the antrum, which has since proved fatal.

CASE 11. Very Large Iritic Membrane.—Philip M., aged 54, was admitted into St. Mark's Hospital on April 4th, 1882. He stated that he had had a blow on each eye many years ago, and an operation (probably for traumatic cataract) performed on his left eye twelve years before admission. He did not know what was the matter with his eye

* See *Journal of the Royal Medical Society*, vol. xiv., p. 100, 1879. See also *Journal of the Royal Medical Society*, vol. xiv., p. 100, 1879. See also *Journal of the Royal Medical Society*, vol. xiv., p. 100, 1879.

at the time ; but, from his description, it seems to have been traumatic cataract and iritis.

When first seen by me, the condition was as follows. The cornea was clear, with the anterior chamber of ordinary depth. The lens was absent. The iris was almost completely altered into a layer of dense looking white fibrous tissue, which was attached round its periphery to the ciliary region, in the usual position of the iris. There were a few shreds of iris-tissue (pigmented) still remaining at the lower outer side, which showed that the white membrane was really the remains of the iris. Through the white membrane, above its centre, was a rather oval aperture, possibly the remains of the original pupil. At the lower outer side, there was another break in its continuity, through which the fundus of the eye could be examined. There was considerable choroiditis, and vision was reduced to fingers at 3 m.; the lens was absent: Left V. c. + 15 D = $\frac{1}{80}$, c. + 26 D = J. 14. The other eye was also affected with choroiditis. He had had cataract extraction performed, and iridectomy. But what remained of the iris was normal.

It is seldom one sees such a complete fibrous degeneration of the iris as existed in this case.

CASE III. Spontaneous Dislocation of a Cataractous Lens into the Anterior Chamber, with Firm Corneo-lenticular Adhesions.—Thomas L., aged 12, was admitted into St. Mark's Ophthalmic Hospital, Dublin, on September 1st, 1881. The history given was that, for a long time, the right eye had been sore; that, five years ago, it suddenly swelled up as large as a hen's egg, burst, and finally shrivelled up. There was never any sign of soreness or inflammation about the left eye; but, when the right eye was swollen up, the "scum" came on the left one. When seen by me, the right globe was completely collapsed. The left eye was not vascular. The cornea was clear. The lens, which was smallish, was in the anterior chamber, perfectly dense white, opaque, and not movable with any motions of the eye; the anterior chamber was deep, and the iris, whose pupillary border was closely applied round the posterior pole of the lens, but not adherent to it, was atrophic. There was what looked like a white deposit on its free border. The fundus could not be explored, and the tension was normal. On passing a discission-needle into the opaque lens, it was found to be firmly adherent to the posterior surface of the cornea over a considerable area.

On tearing the lens-capsule, there escaped into the anterior chamber a quantity of the perfectly fluid milky contents of the lens, and the capsule shrank up and almost disappeared. On removing the needle from the cornea, this milky fluid escaped through the wound, leaving the anterior chamber nearly empty; and, when the aqueous humour was re-created, the lens was entirely gone, and only a slight milky appearance remained in the cornea, where the capsule had been adherent. Vision was greatly improved, and the fundus could be seen with the ophthalmoscope. A small patch of choroidal disease was the only abnormality discovered.

The cause of the dislocation of the lens in this case does not appear quite evident. It seems possible that, at the same time that the right eye was attacked with panophthalmitis, the left one may have suffered some increase of tension sufficient to dislocate the lens, but so transient as not to destroy the eye.

The case is remarkable for the position of the lens in the anterior chamber, its adherence to the cornea, its fluid consistency, and the result of rupturing the capsule.

CASE IV. Congenital Cholesterine Cataract: Cholesterine Degeneration of the whole Lens in an Infant.—Mary McG., aged one year, was brought to me at St. Mark's Hospital, on May 3rd, 1882. Her mother stated that her eye had been always the same as it was then; that she had herself noticed it the day she was born. The whole lens was a mass of brightly reflecting yellow crystals; the iris moved freely, and the tension was normal. The other eye was perfectly normal.

I introduced a discission-needle through the cornea, and tore slightly the capsule of the lens, but produced no effect on the cholesterine, which seemed composed of crystals agglomerated into one dense mass, the capsule being free from degeneration. Subsequent division of the capsule produced no change in the appearance of the mass.

This is the only case of the kind I have seen: for, though partial cholesterine degeneration of the lens is common enough, especially in adults, I know of no case of congenital complete cholesterine cataract.

CASE V. Sudden Amaurosis of Left Eye, resulting from Gunshot Injury to the Right Eye, caused by Penetration of a Grain of Shot through the Interorbital Septum.—Ellen F., aged 17, was sent to me at St. Mark's Ophthalmic Hospital, Dublin, on December 28th, 1881.

She stated that some weeks previously, when sitting in the kitchen, one of the men came in from shooting, with a fowling-piece in his hand. He was standing at her right hand side, about three yards away, cleaning his gun, when it suddenly went off, and some of the

shot entered her right eye. She retained perfect sight in her left eye long enough to see him place the gun on the table, and then the sight of it, too, vanished, and did not return in any degree.

Her condition, when I first saw her, was this. The right eye was completely collapsed from the direct perforating wound. The left eye was, in external appearance, normal. The lens was clear; tension normal; sight was lost. The optic nerve was completely atrophic, with very well-marked outline, and no visible thickening of the coats of the vessels, which were very small.

There was no detachment, hemorrhage, or appearance of injury. It seems certain that the grain of shot, after penetrating the right eye, pierced the bony septum, and wounded the optic nerve, its sheath, or the large blood-vessels of the left eye, without touching the globe; for there was no mark of any kind on the left side of the face where a grain of shot could have penetrated.

The fact of her retaining good sight for five or ten seconds after the injury, would point to hemorrhage into the sheath of the nerve as the most likely lesion. Rupture of the nerve itself would have produced sudden blindness. Rupture of the central artery or vein would have some history of left great swelling of the orbit, and continued echymosis; and, probably, some marked changes in the retinal structure, and in its vessels. There were no symptoms whatever of central mischief.

The next case, which I showed at the Pathological Society in Dublin, shortly after the accident, is of interest, as being perhaps of a similar kind of injury, but differently produced.

CASE VI. Injury to the Optic Nerve, without Injury to the Globe, followed by sudden Amaurosis, with subsequent Optic Atrophy.—James T., aged 11, while playing with another boy, got a "poke in the face" from an old broken foil, which at once blinded his right eye. The lids swelled, became echymosed, and he suffered considerable pain, but there was only very slight external hemorrhage.

On examining the eye with the ophthalmoscope, all its structures seemed normal; the retina was perfect; tension was normal; but the vision was lost, and the pupil was semi-dilated, and acted only consensually with that of the left eye, but not to the direct stimulus of light.

Very slight papillitis resulted in a few days, and total atrophy finally occurred, as in the gunshot injury. The vision, however, subsequently improved to seeing fingers badly at four inches at the outer portion of the field. The movements of the globe were in no way impaired.

The case was, I believe, one of injury of the optic nerve, far back in the orbit—probably just at its entrance through the optic foramen. The blunt point of the foil, making a punctured wound, penetrated deeply beneath the globe, and pinched the nerve firmly against the bone—avoiding, however, the ophthalmic vein and artery lying beside it: for the circulation of the retina was not in the least disturbed by the injury. The only other solution that seems probable is, that the foil injured the sheath of the nerve; and that the effused blood, by its pressure in the orbit, caused the amaurosis. This I do not think likely.

If the first idea be the true one, it is very remarkable that the foil should have penetrated so deeply into the globe, and done so little injury to anything else, and so much to the nerve.

AMOLE—A PLANT THAT YIELDS SOAP.—This cactus grows on the American continent, from Mount Shasta on the north to a similar latitude in South America, and from the Pacific coast to east of the Rio Grande, through New Mexico, and Western Texas. The flower-stalks are destitute of leaves, but are plentifully supplied with branches about eighteen inches long, from which flowers, of white and yellow colours, are suspended in the flowering season. The bulbous root is from one to six inches in diameter, and from six to eighteen inches long. A saponaceous juice is expressed from the root, and the fibre of the leaves is heckled for the manufacture of mattresses, cushions, and chair seats. The vegetable soap extracted from the root has been used by the Indians, Mexicans, and others for many years as a hair-wash, and exceeds in purity our manufacture from animal substances. The preservative qualities of the soap are well known, and its use gives the hair a fine natural glow, preventing decay of the hair, and entirely eradicating dandruff, or other impurities on the scalp. Cattle eat the leaves in the spring as a purgative; and when cut into bits, and thrown on water where fish abound, the effect is stupefaction of the fish, when they can be easily taken. The price among the Indians and Mexicans, who sell it in Tucson, is five cents for a bunch of two stalks interlaced (mancuerna). For cleaning flannels, the amole is found vastly superior. It may be hoped that the manufacture and preparation of amole may become one of the industrial pursuits of the age.—*Tucson Citizen.*

CONGENITAL DEFORMITIES OF THE DIAPHRAGM.

Read in the Section of Anatomy and Physiology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By W. BRUCE CLARKE, M.B., F.R.C.S.,

Surgeon to the West London Hospital, and Demonstrator of Anatomy at St. Bartholomew's Hospital.

THE congenital deformities of the diaphragm, though but seldom met with, are yet an object of considerable interest to the anthropotomist as well as to the surgeon. They have been described from time to time in various papers as isolated cases; but, so far as I am aware, no general account has been given of them; and there is one which, so far as I can learn, has never been described at all. But within the last few years a fuller knowledge of the development of this structure has been arrived at by the researches of His* and others, so that several abnormalities have received a further elucidation.

There appear to be two well-marked deformities; viz., absence of the right or left half, to a greater or less extent. The left half is the one more commonly absent; and this is, indeed, the only kind of deformity of which I have met with a specimen in any museum.†

I have come across three instances of left-sided deformity in the foetus, brought to the dissecting-room at St. Bartholomew's Hospital during the past year. The specimen I have with me is one of them.

In a right-sided deformity, the deficiency would—at any rate, at first sight!—probably not be very manifest, owing to the fact that it is very likely, if not very large, to be blocked up by the liver; and, indeed, I am inclined to believe that it is commoner than it is generally thought to be.

In a *post mortem* examination made upon a patient who had suffered from hydatids of the liver, in whom the hydatids found their way into the right lung, setting up a pleurisy of which she died, I was surprised to see the liver very clearly through the diaphragm, especially round the aperture where the hydatids had come through. Unfortunately, I have no notes of this case, and speak only from recollection. In the above instance, it is quite possible one had to do with a congenital deficiency of the diaphragm, in which the aperture had been blocked up by the liver, and which had contracted adhesions to the edges of that aperture. I am the more convinced on this point, because, in the case just mentioned, the heart and its pericardium were not attached to the diaphragm at all, but were freely movable in the cavity of the thorax. At the time, this did not strike me as anything more than an uninteresting peculiarity; but, on reading His's description of the development of the diaphragm a little while back, I found that he describes that portion of the diaphragm which is in contact with the heart as being developed from the same mass of blastema as the original venous sinus of the heart. It would appear, therefore, probable that the abnormality just described might well have been due to some arrested development of the blastema in question.

It is very rare to find evidence of any large diaphragmatic deficiency at a *post mortem* examination, as such conditions, even if compatible with life, are rarely attended with good health; so that most deformities are met with in children and still-borns. Instances are on record, however, of the attainment of adult life, with an active enjoyment of all its functions, notwithstanding a large aperture in the diaphragm. The most remarkable of these is the case of a soldier who had weathered many a campaign, had been wounded, and had begotten three or four children, but who died, apparently, from the description of his case, of an attack of internal strangulation. After death, his heart was found in his right lumbar region, his intestines in his thorax, and his lungs in his abdomen.‡

In addition to these deformities are others, in which but a small aperture exists, and which, in many instances, at any rate, should more properly be described as places where hernial protrusions have taken place, possibly of congenital origin. These protrusions have been found even at the oesophageal opening, or at the aperture which gives passage to the sympathetic nerve, and have been known in the latter case to cause symptoms of strangulation.§ In such instances, there is usually a well-marked sac, though, from some accounts, it would seem

that this was by no means always the case. It becomes, therefore, not if not quite impossible to determine whether these were

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cases of congenital deformity in which a common pleuroperitoneal cavity existed, or whether the sac which was formed, after contracting adhesions to the aperture, had, by its subsequent rupture, rendered an exact diagnosis of its mode of formation impossible.

It is obvious that these cases, where no remnants of a sac exist, provided they do not occur at any of the normal apertures of the diaphragm, and are not traumatic in origin, differ only in degree from the larger deficiencies of structure, which are usually the cause of death within the first few months of life, or earlier.

Apparently, also, from the description of Geoffroy St. Hilaire* and others whom he quotes, there exist cases which should be more properly described as misplaced diaphragm, in which that structure was found both incomplete and higher up the thorax than it should be, resembling somewhat the diaphragm of a *Lepidosteus*. In these instances, the lungs, contrary to what usually exists in deficient diaphragm, were found below it; and in one instance the heart was found outside the thorax and entirely situated in the neck.† In these abnormalities, however, there is nothing but what might be reasonably expected from a knowledge of the development of those parts. Inasmuch as the nervous system is early differentiated from the other structures, it undergoes, during the course of development, great changes of position, and is, from this very circumstance, a good indication of the course that development has taken. The usual instance of course to be given is the case of the recurrent laryngeal nerve; but the length and origin of the cardiac and phrenic nerves are equally good indications of the changes of position which the heart and diaphragm have undergone during the course of their development, not to mention the descending branches of the facial and cervical nerves and the descendens noni. For a further discussion of these points, and the causes which give rise to this alteration of place during development, consult His.‡

At present, however, one is rather concerned with the causes, not of development, but of its arrest. But little is known on this point at present; but, as my friend Mr. Lockwood has pointed out to me in the case of the colon, it seems as if some intra-uterine inflammations might be at the bottom of the process, in some instances, at any rate. I have not been able to discover any case in which the intestines were fixed by lymph in the upper part of the thorax. It would, however, be interesting to follow up this kind of inquiry, and to trace, if possible, in all cases, the connection between congenital deformity and any disease which is capable of giving rise to inflammation *in utero*.

GIACOMINI'S PROCESS OF PRESERVING BRAINS.

Read in the Section of Anatomy and Physiology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By A. W. MAYO ROBSON, F.R.C.S. Eng.,

Senior Demonstrator of Anatomy, Leeds School of Medicine.

THE specimens of brains which I here show you have been prepared by Dr. F. Greenwood and Mr. F. H. Mayo, the past and present curators of the Leeds School.

You will notice that, while the brain is firm and capable of being handled, it retains its form and colour, and is quite pliable. Although the organ shrinks one-twentieth in the process of preparation, it does not diminish afterwards. It can be exposed freely to the air without change or detriment, and does not crack or dry up. The convolutions are all very distinctly mapped out, and the parts at the base are as clearly seen as in a viscous just removed from the body.

Process.—The fresh brain, in its membranes, is placed in a saturated solution of chloride of zinc, in which it floats, and must be turned over two or three times a day. After forty-eight hours, the membranes must be removed, without taking the organ out of the fluid. Allow it to remain in this fluid until it ceases to absorb, as shown by its remaining at the same level, and not sinking. Then remove it, and plunge it in alcohol of commerce, where it must remain for a period of not less than twelve days, during which time the spirit should be changed two or three times.

When removed from the alcohol, it is to be placed in glycerine of commerce, to which one per cent. of carbolic acid may be added.

At first, it floats in the glycerine; but, as the spirit evaporates, and the glycerine penetrates it, it gradually sinks to the level of the surface of the fluid, when it may be removed; put aside to dry for a few days;

and, lastly, coated with several layers of gum-elastic varnish, or marine glue, diluted with a little alcohol.

Professor HUMPHRY remarked that he was much pleased with the results of this process: and that, although in one of Mr. Robson's specimens a shrinking, certainly over one-twentieth of its volume, had occurred, yet its general form and detail of parts were in remarkable preservation.

Dr. HOGGAN (London) asked if brains so hardened could be used for microscopical sections; and, if any had been so used, did they show any deposition of the crystals of the chloride of zinc?

Professor HAYCRAFT (Birmingham) remarked that, at that time, he was trying the effect of a weak solution of chloride of zinc as a hardening reagent for the brain and spinal cord. He had only examined the spinal cord as yet, which was very well preserved; but, of course, the brain was more difficult to harden—the method might with it prove a failure.

Dr. SYMINGTON (Edinburgh) said that the nitric acid method gave somewhat similar result; and, although not equal to it, in many respects, was yet very useful in the study of the fissures of the cerebral hemispheres.

PEROXIDE OF HYDROGEN (OXYGENATED WATER) AND ITS EMPLOYMENT IN SURGERY, ETC.

By C. T. KINGZETT, F.I.C., F.C.S., ETC.

It is now more than ten years since I commenced a series of experimental researches upon the products of the aerial oxidation of various substances, and in particular the terpenes (turpentine class of hydrocarbons). In 1874, I found it necessary, in order to advance this study, to obtain these products in a state of aqueous solution, and I then and subsequently ascertained that the solution contains peroxide of hydrogen, a camphoric acid, thymol, and certain other aromatic products of which information will be found on consulting the various papers referred to below.*

Originally, I had no other objects in pursuing these investigations than those with which all pure research is conducted; but, when I had made myself acquainted with the valuable properties of several of my products, I sought, and successfully, to obtain them on a commercial scale, and to apply them to purposes for which they are eminently well suited. These commercial products are now known, at least in this country, as the "Sanitas" preparations.

With the view of ascertaining to what extent each constituent of my aqueous product contributed to its total antiseptic and disinfecting properties, I performed the experiments of which an account was presented to the British Association in 1876. Apart from the previously well known oxidising properties of peroxide of hydrogen, I then proved (for the first time, so far as I can ascertain) that this substance exhibits striking antiseptic effects, and is capable, even when present in very small proportions, of entirely arresting those so-called processes of fermentation which are originated by living organisms. Experiments were made upon egg-albumen, grape-juice, milk, urine, brain-substance, flour-paste, and beer.

In my "Sanitas" fluid, the peroxide of hydrogen is associated with other compounds which assist and supplement its action by their respective properties. From time to time, I have published† experiments illustrating the antiseptic and other effects of this solution.

The antiseptic properties of peroxide of hydrogen were rediscovered apparently (for no mention is made of my earlier researches) by Messrs. Guttman and Fränkel in Germany; and the *Lancet*, on June 22nd, 1878, directed special attention to their experiments upon urine, meat-infusions, and grape-sugar, the results of which confirmed my own conclusions.

Yet a few more years have passed, and again the same discovery is made—this time by a Frenchman, M. Baldy, whose credit, however, as the rediscoverer is shared by MM. Paul Bert and Regnard (*Compt. Rend.*, 94, 1383-1386). Dr. Verneuil has recently summarised the interesting observations of these French investigators, and as I write, his paper (*Journal de Médecine de Paris*) is before me.

Before I proceed further, I should say that, in a most courteous letter which I have recently received from M. Paul Bert, he gracefully acknowledges, on the basis of the publications which I had just before sent to him, that I was before him and his collaborateur, M. Regnard,

in this study; and he has kindly promised to admit and state my claim when presenting a forthcoming communication to the Academy of Sciences.

I now propose to glance at the results of these recent labours, and to compare them with information of the same kind that has long been in my hands; attempting also to show how the valuable properties of oxygenated water may best be applied in surgery, etc.

The peroxide of hydrogen employed by M. Baldy was prepared after the well-known proceeding of Thénard, care being taken to neutralise the solution by means of argentic sulphate, and diluting it before use so as to work with a solution capable of yielding about twice its own volume of oxygen when subjected to decomposition into water and oxygen. It is necessary to interpose here, the remark that neutral solutions of the substance are by no means so stable as acid solutions; and the amount of acid required to attain this stability is very trifling. By the ordinary process of manufacture, however, a considerable amount of acid is liable to be left present; but this is not the case with my process of manufacture, and, the nature of the acid being entirely different, it presents no difficulty in the use of the product.

The observation made by M. Baldy late in 1881, viz., that a small quantity of the peroxide removed the fetidity from twelve to fifteen litres of putrid water, and further trials, convinced him that he was in possession of an antiseptic agent inferior in no respect to carbolic acid, and entirely free from the disagreeable and dangerous character of that compound.

MM. Bert and Regnard, confirming my earlier experiments, have shown that an extremely dilute solution of oxygenated water prevents the fermentation of glucose by the agency of yeast, prevents mycotic growth in red wine, prevents the lactic fermentation in milk, and the putrefaction of albumen, etc. On the other hand, they found that this antiseptic agent was incapable of arresting the changes induced by soluble non-organised ferments, such as diastase, in suitable media. I, too, have for many years been aware of the fact that the peroxide exercises no effect upon the transformation of starch into sugar by means of saliva. The distinction thus arrived at is most important, because, if peroxide of hydrogen be employed for internal administration, we have a guarantee that its presence in the system will not arrest nor interfere with the many assimilative and other processes carried on in the living body by means of ferments of the pancreatic type.

Incidentally, it may be observed that the study of peroxide of hydrogen presents many interesting points of contact with M. Bert's investigations of the action of compressed oxygen. Demarquay is stated by Dr. Verneuil to have observed the singular stimulating effect which oxygen gas exercises upon wounds, thus inducing rapid cicatrisation; and Bert has thoroughly studied the influence of compressed oxygen upon organisms to which it is fatal, while it leaves soluble non-organised ferments intact.

It is also of importance to bear in mind the remarkable attenuating influence which M. Pasteur has found to be excited by oxygen upon such morbid germs as the micro-organisms of chicken cholera and splenic fever, to the existence of both of which peroxide of hydrogen will almost certainly, in my opinion, be found fatal.

I am convinced that there is a very great distinction to be made between the micro-organisms which are so intimately connected with the most dreadful diseases, and the innocuous, or even highly useful fungi by the agency of which the process of slow decay (as distinguished from putrefaction) is carried on throughout nature. These fungi merely assimilate oxygen (even from peroxide of hydrogen), and give out carbonic anhydride, ordinary mycelium behaving in this manner. But who associates such a growth as that of mycelium with fevers and other contagions? It is very different when we come to deal with the micro-organisms which cause putrefaction and disease, and I am profoundly convinced that peroxide of hydrogen is fatal, even when very dilute, to all dangerous micro-organisms, and I also claim to have been the first to discover this extremely valuable property of the substance. Come we now to the application of peroxide of hydrogen in surgery.

It was to be expected, from what has gone before, that this compound would be found of peculiar benefit for the treatment of wounds, and, indeed, throughout the whole range of antiseptic surgery; and the expectation has been amply realised in the practice of M. Baldy, M. Regnard, and particularly M. Péan, in the hospital of Saint Louis. To be brief, it has been demonstrated beyond question that all wounds treated with peroxide of hydrogen have progressed well, healing by first intention, and giving no trouble whatever, all discharges having been healthy in character, and free from odour. Chronic ulcers, similarly treated, have yielded equally good results; so also have cases of gangrene been successfully dealt with, together with fetid suppurations and bad ozenic discharges.

M. Péan has performed many important operations in an atmosphere

* *Journ. Chem. Soc.*, series 2, vol. xii, p. 511; vol. xiii, p. 210. *Chem. News*, vol. xxxii, p. 138; vol. xxxiv, p. 127; vol. xxxix, p. 279. *Journ. Chem. Soc. Trans.*, 1880, p. 792. See also my *Nature's Hygiene* (1880), Baillière and Co.

† See *Chem. News*, vol. xxxii, p. 138; *Sanitary Record*, December 13th, 1878, and January 15th, 1880; *Brewers' Guardian*, September 18th, 1877.

impregnated with oxygenated water, instead of carbolic acid, with more than an average amount of success; and M. Baldy has employed gauze and wool soaked in the peroxide, and kept in contact with wounds by means of bandages in cases where prolonged contact has been desirable. He has also found that it may with safety be used as an injection for washing out cavities of the body; and he hopes to derive much benefit from its internal administration, particularly in the treatment of diabetes and certain pulmonary affections.

As regards diabetes, it may be mentioned that the late Dr. Day (of Geelong) employed peroxide of hydrogen for internal administration, as also in cases of gout and rheumatism, believing all these diseases to result from imperfect oxidation of the blood. I may be pardoned for expressing once more my opinion (see *Chem. News*, vol. 32, p. 183), that the idea of Dr. Day rests upon a gratuitous assumption; and I do not largely share the expectations of benefit to be derived from the internal application of peroxide of hydrogen; but for external use in antiseptic surgery and for inhalation in cases of pulmonary disease, I have no doubt whatever that, used as I shall hereafter describe, it will entirely replace, with enormous advantages, carbolic acid. The change will necessitate much time and teaching; but I am convinced that it is both natural and inevitable, and that phenol is no more wanted in surgery.

The "Sanitas" aqueous fluid made by my process is from one half to two-volume strength in terms of peroxide of hydrogen, and the No. 1 fluid is quite strong enough for all purposes. The other substances present, which have been named, amount to from one to three per cent., and increase the antiseptic intensity of the fluid, rendering it, as now made, fatal not alone to micro-organisms capable of exercising morbid influences, but also to all classes of fungi. The solution is pleasantly aromatic, and, like pure peroxide of hydrogen, it does not irritate wounds as does carbolic acid, nor can it by absorption give rise to lamentable toxic effects.

But there is another preparation of mine which presents certain advantages over the aqueous preparation, and that is the "Sanitas oil". This substance contains an organic peroxide, and continually yields peroxide of hydrogen to water when placed in contact therewith. Whether, therefore, the oil be used alone, or in the form of an emulsion made from it and gum acacia and water, or as a mixture with olive or other oils, it steadily goes on producing peroxide of hydrogen when in contact with wounds or mucous surfaces in which, of course, water is ever present. The advantages of the oil (see *Sanitary Record*, February 15th, 1881) for use in certain cases consists in its exceeding antiseptic intensity (being many times more powerful than pure peroxide of hydrogen or my aqueous "Sanitas"), its slow volatility, by which means the affected parts are always surrounded with an antiseptic atmosphere, and its lasting properties: the organic peroxide which furnishes the oxygenated water being within certain limits, indefinitely reproduced by the action of the air upon the oil. As, too, the oil is readily volatilised, the inhalation of its vapour mixed with that of water, is calculated upon the best scientific grounds to give the happiest results in the treatment of pulmonary diseases and affections of the throat.

Much has been written about the antiseptic properties of oil of eucalyptus; but, as a matter of fact, its antiseptic intensity is not so great as that of my oil, nor (except when oxidised by my process) can it be claimed to possess the important properties of an oxidising agent. I have no doubt that some share of the praise which has been bestowed upon it by Professor Lister is really due to the peroxide of hydrogen, which results, as I long since demonstrated, from its aerial oxidation when in contact with moisture. But this agent is, as I have said, much less useful than my "Sanitas" oil, and it is extremely expensive. The evidence of the usefulness of peroxide of hydrogen, gained recently in France, only supplements and confirms that which has previously been obtained in this country and elsewhere.

The late Mr. S. M. Bradley, of the Manchester Royal Infirmary, informed me that he had regularly employed my aqueous solution to wash out cavities and sinuses; and he, as also Mr. Bencraft of Southampton, and many other surgeons, have used the preparation with great benefit for the treatment of bed-sores. Mr. Lennox Browne has now for several years regularly used it also in the treatment of sore-throats associated with fever in ozonic diseases of the nose, and for offensive discharges from the ears, with remarkable success.

Dr. Hermann, of the Vienna Hospital, has made a special study of my solution in its effects upon syphilitic ulcers and old wounds, and he has derived much more benefit from its use than from that of phenol. There is no irritation, and no poisoning. The wounds become quickly cleansed; pus, when present, rapidly disappears; suppuration is prevented, and a cure quickly follows. As a remedy in eczemas, in hay-fever, for "sore heads", and many other complaints, I

have in my possession abundant evidence of the value of peroxide of hydrogen in the form of "Sanitas" fluid and oil; but I must not occupy more space, and I would prefer that others should say more regarding this part of the subject.

Perhaps I may pause to call attention to the usefulness of "Sanitas" in dental surgery, and for that purpose I would refer readers to the third edition of Stocken's *Dental Materia Medica*, and to the *Dental Record* for November 1882, in which will be found an account of the results attending the use of "Sanitas" in the treatment of suppurating pulps and alveolar abscess by Mr. F. Charters White, Mr. Frederick Bate, Mr. Gurnell Hammond, and Mr. W. R. Humby.

I am confident that the medical profession in this country will admit the justness of my reclamation, and I am equally convinced that further experience at the hands of those best able to decide will strengthen my contention that the dangerous substance carbolic acid, useful as it has been, can now be entirely replaced by an antiseptic and oxidising agent of greater value, but the use of which is quite free from danger.

PRODUCTION OF ENTERIC FEVER IN SUB-TROPICAL COUNTRIES.

By WILLIAM SKEEN, M.D.,
Brigade-Surgeon Army Medical Department.

How far can the new theory of the production of enteric fever by the influence of "heat and climate" in India and other sub-tropical countries be supported by the following history of a late outbreak among the troops in Natal?

Enteric fever in a serious form first made its appearance in the 6th Dragoons at Newcastle, Natal, during September 1881. Eight cases, two of which proved fatal, were admitted into hospital during this month, all of them in a detachment which had formed part of an escort accompanying Sir Evelyn Wood into Zululand in August. The duration of the expedition was about twenty-five days. The first admission occurred within a few days after the return to Bennett's Drift, near Newcastle, and the remainder at various periods extending up to twenty days afterwards. The origin of this outbreak was supposed to have been connected with some local circumstance during the last few days of the expedition, and therefore outside the camp. In October, several fresh cases of fever occurred; and during November, there were at least six attacks, none of the subjects of which were in Zululand or away at any time from the head-quarters camp of the corps. These occurrences led to an examination of the camp, more particularly with regard to the condition of the water-supply.

The camp was situated on a gentle slope. The water for drinking and cooking was furnished by a spring about four hundred yards below the camp, and considerably—perhaps one hundred feet—under its level, at a break in the continuity of the slope, towards which the ground gradually fell on all sides. The surface-drainage of the whole area above and adjoining the well or spring naturally converged at this point. To guard against surface-defilement from this cause, a trench had been dug round the spring; and probably, under ordinary circumstances, this was sufficient, but during heavy rains it could only be an imperfect protection from the wash of the whole camp and its vicinity, and it was at any moment liable to be broken down by cattle, etc. In addition to this apparent source of defilement, it is to be feared that the water-bearing stratum from which the spring was nourished had been contaminated by the latrines and refuse-pits of the existing and former camps. The latrines were situated above the camp. The soil in which they were dug was porous, and they were about six feet in depth. They were on the same slope and watershed as the camp and spring, and rain-water readily found its way into them. The water-bearing stratum of the subsoil was at no great distance, for water frequently rose rapidly in the pits while being dug. As long as the weather continued dry, the health of the camp was not likely to be materially influenced by this state of matters; but when the rainy season set in, and accumulation of filth had increased, soakage from the latrines was inevitable, and defilement of the water-supply and the appearance of enteric fever sooner or later were almost certain.

An analysis of the water from this spring was made by a medical officer, who reported "that the water was of a bluish white or milky appearance, free from smell, had an earthy taste, and a neutral reaction. Nitrites and oxidisable organic matter were largely present, and from the quantity of the former, along with indications afforded by the permanganate test, the impregnation of the water was probably recent. This water was impure."

The inference from the foregoing facts and analysis was that the cause of the outbreak now in operation was the polluted water-supply of the camp; whether the fever was introduced, in the first instance,

by the Zululand detachment or other previous case, or developed *de novo* by pythogenesis, or in any other way.

A severe outbreak was believed to be imminent, and the prediction of a great mortality and a prolonged inefficiency in this regiment of several months was but too surely fulfilled. It was, therefore, imperative that this source of water-supply should be at once discontinued. On November 25th, the camp was moved to a position to the north and east of, and considerably above the level of, the old camp, and water for its supply was taken from a spring that had heretofore supplied the field-hospital, the bearer-company, and several corps at Bennett's Drift. The water was considered good; but before advising its use, a qualitative analysis of it was made, which supported this opinion of its purity. Some time afterwards, this water was again tested, and found to be highly impure; and from the fact that there were signs of old encampments in the vicinity, the presumption was that the water was thereby defiled, and probably intermittently so.

On December 18th, the regiment was moved to the banks of the Ingagane, a considerable river seventeen miles distant. Up to this date, there had been thirty-eight attacks with three deaths, not including the September cases. The camp at Ingagane was in every respect a good one as regards position, water-supply, etc. During the stay here, which extended up to January 22nd, there were fifty-six admissions into hospital, including two officers, and there were five deaths. On January 22nd, the regiment was again moved to an encampment on the Mori River, where, by the end of February, there were twenty-five fresh admissions into hospital, two of which died. During the same period, there were thirteen deaths among those left at Newcastle and Ingagane. The outbreak ceased in February. The total admissions and deaths, from November to February included, were 129 and 23 respectively, in a strength of about 450 officers, non-commissioned officers and men.

About the same time, the battery of artillery and the 41st infantry, as well as the Royal Engineers and others encamped at and near Newcastle, suffered similarly, though not to the same extent, from enteric fever. The outbreak in these corps, etc., was found to be intimately connected with sewage defilement of their water-supply in every instance at Newcastle, and, in the case of the 41st, at Ladysmith also. The prevalence and mortality were not so great in these as in the dragoons, but in other respects the history of the fever is almost identical. While these corps were suffering from fever at Newcastle, others, under similar conditions of age, climate, and service, escaped almost entirely. The 7th Hussars, a regiment fresh from England, like the 6th Dragoons, had only three deaths (all in February) during the period in which the dragoons lost twenty-three. In the 60th Rifles (the head-quarters of which had been three years in Natal), there were 214 young soldiers fresh from England, and there was not an admission from fever among them. About an equal number of recruits of the 94th Regiment also escaped, while the telegraph troop of engineers, numbering about forty men, sent four cases to hospital at the same station. The engineers at one time did not use the water of the Vaal River, but dug a well for their own use at a place where defilement was certain. They had also other opportunities, from the nature of their duties, of becoming infected at outspanning places.

It is difficult to account for these and numerous other occurrences of a like kind among the troops in South Africa, except by referring them to the pollution of the water-supply.

The "heat and climate" theory of the production of enteric fever has been brought forward by Sir Joseph Payrer in his late Croonian Lectures, as the most probable factors of the same disease in South Africa. This theory will not solve the difficulty in the present instance, nor explain why one party of troops, the 6th Dragoons, encamped on the open veldt at an elevation of about 1,000 feet higher, should suffer more than another, the 7th Hussars, in a much warmer, and to all appearance a less healthy, situation.

On the other hand, if the usual causes of enteric fever be looked for, they are not difficult to find. The dragoons were using their own diluted sewage for drinking and cooking, and suffered the usual consequences; while the hussars encamped at Ladysmith, who had water from the rapid Klip River, escaped, for the few cases that occurred in that regiment did not appear for months after leaving Ladysmith. These cases probably were infected on the march to the new encampment.

The greater prevalence of enteric fever from June to October in India and other subtropical countries to the north of the equator, and from December to March in South Africa in the corresponding south latitudes, is at first sight a strong argument in favour of climatic influences. That the appearance of the fever at these periods is intimately connected with the rainy season on both sides of the equator, there can be no doubt; but the rainfall, by carrying sewage into the wells or

other sources of water-supply, either directly or by soakage of the sub-soil, would as certainly lead to outbreaks of enteric in winter as in summer, provided that the quantity used was the same in both cases, and other conditions were equal.

PUERPERAL FEVER IN WIGAN.

By W. CROUDSON BARNISH, M.R.C.S., L.S.A.,

Medical Officer of Health, Wigan.

THE following is an account of a recent epidemic of puerperal fever at Wigan.

The first death from puerperal fever occurred on September 5th; and, as October came on, and deaths from this cause became more numerous, I made an inquiry, and came to the conclusion that the disease was being carried about by a midwife. As a brother practitioner had already warned her not to attend any more labours for a time, and as I was then under the impression that she was continuing her practice as usual, I called in the aid of the coroner, and requested him to hold an inquest in the next case that occurred. This he consented to do; and, as another case was registered the same day, an inquiry was held, and a *post mortem* examination made.

In all, thirteen deaths occurred in about nine weeks; and, out of the thirteen, no fewer than ten were attended by Mary Ann R., an uneducated midwife, as accoucheur. In these ten cases, a medical man was only called in as the illness showed itself. With one exception (No. 3), the patients had normal labours; all were young—the average being under twenty-five years, and five at least were primiparae.

The general symptoms in the majority of the cases were ushered in by a rigor, followed by pyrexia, severe pain in the hypogastrium, sickness, headache, and occasionally delirium.

Of the contagious nature of the poison, in the majority of the cases enumerated, few will have any doubt. The persistent way in which the fatality followed the practice of Mary Ann R.'s cases points to no other conclusion.

In cases Nos. 2 and 3, the origin of the disease is not clear. No. 3 had previously lost a sister in "childbed fever", some months before, in a distant town, and the mother acted as nurse in each case. The mother administered injections, etc. No. 13 is possibly not puerperal. The patient made a good apparent recovery; had been "churched"; and had walked to the surgery of her medical attendant to show him a superficial abscess of the breast, before signs of peritonitis appeared. Neither of the three medical attendants had met with cases of the disease immediately previously; and, though Wigan has about 50,000 inhabitants, other practitioners, with extensive midwifery practice, had not met with a case.

Case No. 5 was certified as typhoid fever; but, from a conversation I have had with the medical attendant, he is willing it should be classed among the puerperal cases, as he had little opportunity of verifying his opinion; and, from the inquiries I have since made, I am satisfied of its being a case of puerperal peritonitis.

The town at the time was especially free from scarlatina, erysipelas, and the like.

The origin of the first case of Mary Ann R. is unknown; and I have not been able to catechise the midwife, as, at the rumour of the inquest, she precipitately fled the town.

The following is a tabulated statement of the cases; an account of the inquest; and notes of the necropsy.

Puerperal Fever.

No.	Date of Death.	Age.	Accoucheur.	Cause of Death as Certified.	Duration of Illness.	Days Survived after Confinement.	Number of Pregnancies.
	1882.	Years.			Days.	Days.	
1	Sept. 5	21	Mary Ann R.	Puerperal fever	5	7	Primipara.
2	" 19	21	Dr. A.	" "	2	3	Primipara.
3	" 22	30	Dr. W.	Septicæmia	5	8	Primipara.
4	Oct. 10	26	Mary Ann R.	Puerperal fever	2	4	Multipara.
5	" 19	22	" "	Typhoid (?)	4	6	Multipara.
6	" 26	21	" "	Puerperal fever	5	7	
7	" 28	19	" "	" "	5	8	
8	" 30	20	" "	" "	5	8	Multipara.
9	Nov. 1	22	" "	" "	5	8	
10	" 3	25	" "	Peritonitis	3	7	Multipara.
11	" 5	24	" "	Puerperal fever	4	6	Multipara (twins).
12	" 9	27	" "	Puerperal peritonitis	9	12	Primipara.
13	" "	24	Dr. B.	Peritonitis	7	27	Primipara.

Post mortem examination on Catherine C., aged 24, who died on November 5th, 1882. It was made by Mr. McLoughlin, fifty hours after death; present, Messrs. Berry and Barnish. The body was of medium stature and fairly nourished. Rigor mortis was complete. The superficial veins in the dependent parts were dark and well marked. Decomposition was setting in, the cuticle peeling off the back. The vulva was dark and sloughy, and the nates deeply congested, probably a *post mortem* result. The calvarium was easily removed. There were no adhesions, no congestion of the membranes. The lateral ventricles contained a little serous fluid. The brain-substance was healthy. The pericardium contained about half an ounce of serous fluid. The heart was slightly increased in size. The right ventricle was empty; the left ventricle contained a little fluid blood. The muscular walls were thin, pale, soft, and friable. There was about a quart of thin, serous, flaky fluid filling up the pelvis. The stomach was found empty; its mucous lining was healthy. The bowels were not removed. The liver was normal in size and appearance, but rather soft and friable. The spleen was normal. The kidneys were both slightly congested. The omentum had on its surface a few deposits of flaky lymph. The uterus was removed and examined. In size, it would have filled a pint basin; the peritoneum covering the body was slightly opaque. On opening the uterus, there was found, adhering slightly to the mucous membrane over the right Fallopian tube, a small blood-clot. There was general endometritis. The substance of the uterus was healthy. The external iliac veins were cut into, and found to contain a little fluid blood, but no clots.

INFANTILE PARALYSIS.*

By ROBERT J. LEE, M.D.,

Assistant-Physician to the Hospital for Children, Great Ormond Street.

It is almost unnecessary to observe that the subject of infantile paralysis is one of those of which our clinical and pathological knowledge has recently been greatly improved, and certainly the treatment of which is more scientific than it was only a few years ago.

I am inclined to think, however, that we have it in our power to benefit cases of this affection to a greater extent than is generally supposed; and that we may save parents much trouble and anxiety by instructing them in the observance of certain simple details, the neglect of which may produce serious consequences to their children.

It is doubtless within the experience of most of us, both in hospital and in private practice, to find that parents are extremely solicitous about a child that is affected with this form of paralysis; and we can understand how natural must be the desire to avert, as far as possible, the disadvantages which, in future life, are imposed upon those who are afflicted with any serious bodily defect.

In looking back over ten years' experience at a children's hospital, it appeared to me that, in regard to the treatment of infantile paralysis, I had neglected to give the subject all the attention it deserved, until a few months since, when a case of this kind (a girl twelve years of age) came to the hospital, eight years having elapsed since she was first brought under my care.

It is a matter of regret to me that, in a total of rather more than one hundred cases of this malady, entered in my note-book, there is little or no attention paid to the points which, I now perceive, are of most importance. The respective ages, the limb or limbs affected, the difference of temperature, degree of wasting, and muscular irritability or reaction to electrical stimuli—these are noted; but, after a period of a few weeks, the histories of the cases come to an end, and the patients are lost sight of. Generally, and at one time invariably, I followed the common plan of transferring the cases to the special department in which electro-galvanism, or some other form of electro-therapy, was practised.

In private practice, we have this advantage, that we are able to watch the patients for long periods—difficult in the case of hospital patients, unless some particular plan is adopted to keep them under notice.

The mother of the girl referred to reminded me, that she had promised to bring her daughter when she was twelve years of age; and the intelligent account she was able to give, led me to reflect on what might be best done for similar cases. When first seen, this was a typical example of paralysis of the left leg, of such a date, with such wasting, as to justify the belief that there would be serious permanent difference between the limbs. The chief means by which this had been prevented was, the great attention given by the mother to keeping up the temperature of the affected limb. Daily, for eight years, night and morning, the leg had been bathed in hot water for an hour at a time.

During the day, it was carefully covered with wool; and, during the night, heat was obtained by means of hot water in bottles. The girl walked with a limp; but there was no difference in size between the healthy and affected limb. In length and circumference, they were equal. The leg was paralysed below the knee; the foot was everted; and the lower part of the limb was moved with a slight swing, as is commonly observed in such cases. The state of nutrition of the tissues of the leg was such as to suggest the question, whether there might not be more advantage in the method of treatment, simple as it had been, which was followed in this case, than when electro-therapy is employed.

I am under the impression that the results obtained, in the special department of our hospital, where cases were treated by electro-therapy were not so satisfactory as to make us attach great importance to it; and I am inclined to think, when the excitement and terror which arose in some cases were considered, positive harm was done.

I am anxious to press this point on your attention, because there is a general belief that little or no good can be done to these cases without electro-therapy; and poor children who cannot obtain it are left to suffer many troubles, which could be prevented by proper directions given to parents in regard to details simple in themselves, but, when continued for several years, of great permanent effect and benefit.

It is true, apparently, that in cases where no attention has been given to the child for several months after the primary attack, the electric stimulation of wasted muscles, as is well known, on two or three occasions, may be beneficial; but this is different in its object from the frequent and repeated use of galvanism. I mean to say, that if we intend in using the battery simply to prevent the wasting which marks the disease, assumedly due to defective nervous action or stimulus, shall we not obtain the same physiological effects by following the treatment which had such good results in the case of the girl I have mentioned?

The question which is suggested is this: Have we not in artificial heat distinctly as powerful an agent in preventing the changes which take place in paralysed limbs in the disease we are considering, as that which electricity seems to afford us? Or may we go further, and ask whether, by artificial movement and heat combined, we do not possess all that is required for the sufficient treatment of this class of cases.

If we can assure parents that, by attention to those details which common sense will suggest in the direction indicated, and, desire particularly that the child shall be brought, at intervals of three or six months, for the purpose of comparing present with previous conditions, insisting much on careful daily attention to instructions given—I say, if this plan be pursued, will not the results be altogether more satisfactory than the plan now adopted of sending a child to the hospital to be galvanised or faradised once or twice a week; or, failing this, to leave it to the probable fate of some quack treatment more injurious than total neglect.

On some future occasion, I shall give fuller reasons for thinking that artificial heat is the most powerful agent we have in preventing the wasting of tissues, which is the striking feature of this form of paralysis.

THE STRAIGHT-BODIED POSITION IN LABOUR.

By A. DRUMMOND MACDONALD, M.B. Edin., Liverpool.

LACERATION of the perineum being a well-recognised connecting link between the practice of obstetrics and that of gynecology proper, its prevention demands the obstetrician's earnest attention; and it is important that the accessory extra-uterine muscular powers of parturition be rightly directed.

On both these heads, position exercises a powerful influence; but it is as regards the former that I wish briefly to write, and particularly to corroborate the observation of Dr. G. Hurt, in a paper to the *St. Louis Medical and Surgical Journal* for August of last year, to which attention was drawn in these columns on the 8th of April last. Dr. Hurt points out that a sharply flexed and abducted position of the thighs, though necessary in some cases, conduces to perineal injury and retards delivery; whereas extension of the limbs, he says, relaxes the perineum, and increases its inclination, so that there is less liability to perineal rupture, and less resistance to the passage of the foetal head through the vulva.

Now, while subscribing in the main to these statements, my contention is that, in every case when the presenting mass (be it head, breech, or placenta) has at most reached the perineum, and we have arranged for its delivery, the patient should be placed in the straight-bodied position, that is, with the lower extremities adducted, and in the same straight line with the body. If classic Greek be preferred to plain

* Abstract of a paper read before the East Sussex District of the South-Eastern Branch.

Saxon, this may be called the orthodematic position (from *ὀρθος*, straight, and *τὸ δέμας*, the living body). The British left-sided position is most suited to this.

It is true that the one great effect of this position is to make more obtuse, or rather to retain the natural obtuseness, of the angle of inclination of the perineal plane; it straightens the vaginal part of the passages, and prevents the sacral segment of the floor being converted into a valvular lid for the pelvic box in its coccygo-pubic plane. Hence a demonstrable source of speedier labour.

But it is not true that this position "relaxes" the perinæum; the fact is, that artificial tension is not put on. And this is the key to many cases of failure of methods of perineal attention, whether forcible, gentle, Goodell's anal plan, or incision. The obstetrician first has placed the patient in a position of which artificial tension is a result, and then has made more or less unsuccessful endeavours to undo his own work. Both these points can be simply observed by placing two fingers in the vagina, and causing the patient to flex and abduct, then extend and adduct, her thighs.

Proof of the practical benefit of the straight-bodied position must be given. In attempting this, we fully recognise the difficulty of exactly estimating the part played by the three Ps of labour—the powers (artificial and natural), passengers (the child's occiput or sinciput, chin, shoulders and buttocks, and the placenta), and passages (contracted, banded, or rigid outlet), singly or in combination—especially whether any given perinæum is sufficiently elastic to yield without much laceration, whatever the position, or method of support, or relaxation. The evidence of primiparous cases will meet this difficulty to some extent.

It is unnecessary to mention the majority of labours which I have attended since April last, further than to say that, with the two exceptions I shall mention, the practice of the straight-bodied position, with some amount of perineal support, as a matter of habit, especially to a large placenta, has given the general result of only trifling laceration of the vulvo-perineal margin. I will particularise eighteen cases. Ten were primiparæ, three secundiparæ, and five multiparæ. Nineteen children of fully average size—except twins, a little under average, at or near the full period of gestation—were born. One had been dead about four or five days, another had died during labour, a drachm and a half of the liquid extract of ergot having been administered to the mother by a certificated midwife about two hours before my arrival. The heaviest child weighed nine pounds and a half, the lightest about six pounds. Eleven mothers were delivered by forceps—five by Sir James Simpson's long, two by his short, and four by my indicating axis-traction forceps. Dr. Fox Morrish of Dingle Hill was present when I did three of these operations. I gave chloroform for him in a fourth, and the remaining seven I performed myself alone. Eight were primiparæ, one a secundipara, and two were multiparæ. They were of ages from twenty-three upwards. One was a persistent occipito-posterior case. Of the seven remaining cases, two were primiparæ, two secundiparæ, and three multiparæ. In one (the twins) the first child was delivered footling. I performed podalic version of the second for arm presentation. There were also one breech, two occipito-posterior, one face becoming occipito-posterior, and two cases of genuine primiparous labour, to which I shall again particularly refer.

Such are the chief facts which will enable anyone to judge whether the kind of evidence I offer, apart from quantity, is of a testing nature.

I shall now briefly state the results obtained. Fourteen of the cases afforded positive proof in favour of the straight-bodied position; two gave negative proof in its favour, and two tended to prove that straight-body *plus* support exercises only a slight beneficial influence where there is genuine rigidity of the perinæum, though I am bound to give the modifying opinion that the flexed-thigh position *plus* support would have produced a worse result.

Taking the two last mentioned cases first—they were primiparæ of thirty-two and twenty-four years, children both males, delivered by Simpson's short and my forceps respectively. Both perinæums were rigid, and of considerable comparative thickness—the powers could not overcome the passages, and the resistance in each case being considerably greater than the force. Delivery was slowly effected in the straight-bodied position, and with support; but, notwithstanding every care, there was laceration to within a quarter and half an inch of the external anal sphincter respectively.

Two cases furnished negative proof, as I have said. In fact, two vivisection experiments on the subject were ready made for me. In one, a primipara, with comparatively thin perinæum, had gone to stool during the second stage, when a storm of pains came on, by which a male child was born, the perinæum being ruptured to the external

sphincter. In the other, a secundipara, a female child was being expelled in an occipito-posterior position, the occiput rotating to the left, just as I was entering the room. The patient was in bed on the left side, partially uncovered by the nurse, in a doubled-up position; and the perinæum was as in the previous case. Compare the other occipito-posterior cases cited below with this one. It is evident that in the two cases the position was one of great flexion of the thighs, with a degree of abduction. I therefore hold that they go to prove not only the tendency to production of laceration by such a position, but they also bear a positive implication that the straight-bodied posture would have prevented the production of this effect.

Let us look lastly at the fourteen cases of positive proof. Seven were primiparæ, two secundiparæ, and five were multiparæ. The latter seven had had a degree of previous perineal laceration, which has long ago been pointed out as very common. The special results were that, in three primiparous forceps cases and one multiparous persistent occipito-posterior forceps case, as well as the version, there was only the traditional crack of the fourchette; the perinæum fitted the head and buttocks "like a glove". In the breech, the two terminating unassisted occipito-posterior, the one secundiparous, and one multiparous forceps, and also in the other three primiparous forceps cases, there was only trifling laceration beyond the fourchette. No pillow was used, and as little thigh-abduction as possible. In the case in which I gave chloroform, and in two of the cases where Dr. Morrish was present, he concurred with me in considering the straight-bodied position to be of benefit.

I have instanced above the case of one primipara delivered at stool. The other, which I promised to refer to, had a natural labour. I caused her to straighten the limbs when the occiput began to impinge upon the perinæum. The head was not delayed, and a male child was born, causing a scarcely appreciable crack. No support or method of relaxation of any kind was used; the case was a natural one in every sense.

Regarding the method of procedure in non-operation cases, it is simple and obvious; in operations, the patient must first be placed in the "established English obstetric position"; then the forceps-blades, for example, are to grasp the head (or breech) firmly, while the nurse lifts the patient's shoulders so that the body is brought round parallel with the front of the bed. A little additional assistance places the patient further from the edge, but within convenient reach; and the child is delivered, the accoucheur standing. This arrangement looks a little inconvenient, but practically is not so in the British left-sided position. I have no experience of the continental decubitus.

In stating my deductions, finally, I do not care to be too dogmatic, and it discords with the critical spirit of the age to ride a hobby hard; but I am sure that I state a very moderate conclusion from the premises I have laid down, when I give the opinion that the flexed-thigh attitude ought not to be maintained at the close of the second stage of labour, and that other methods for acceleration of delivery and prevention of laceration of the perinæum find a very valuable adjunct in the straight-bodied or orthodematic position.

THE PERIOD OF INFECTIVENESS IN SCARLET FEVER.

By JOHN S. MAIN, M.D., C.M., Withington, Manchester.

OUTBREAKS of scarlet fever having of late years become very frequent in all parts of this country, and the disease having acquired for itself the distinction of being the most prevalent, as well as the most fatal, of our naturalised zymotics, it is of the utmost importance that a definite opinion should be arrived at as to the duration of its infectiveness. From over three years' observations, made in a district where the disease was more or less endemic, coupled with some considerable experience since, I would pronounce a patient recovering from scarlet fever to be free from infection: (a) When desquamation has ceased, and a full week allowed to expire besides; (b) When the throat-symptoms have abated, and all lesions of the mucous membrane are healed; (c) When the body, clothing, and surroundings of the patient, have been thoroughly disinfected.

The first of these points needs no comment, only that, as some expert observers are of opinion that infectiveness remains for a variable period after desquamation has ceased, it is well to allow at least one week extra.

For boldly and prominently calling the attention of the profession to the second, we are indebted to Dr. Bond of Gloucester, in a paper read by him at the last meeting of the British Medical Association at Worcester, and printed in the BRITISH MEDICAL JOURNAL of September 23rd. In the case of children especially, my experience entirely

corroborates his. More than one of the outbreaks I witnessed were, in my opinion, clearly attributable to the fact of children otherwise free from infection, but with imperfectly healed throats, congregating with others in insufficiently ventilated schools. I am sure, also, that, in families, I have known the disease to be spread from one member to others in this way, when every other precaution had been used, owing to the room in which the children met being too small and badly ventilated.

Where the ventilation is deficient—and this is too often the case in schools, nurseries, and dormitories—such a person may act as a powerful focus of infection, owing to the concentration of the poison.

As regards the last point, I would only remark that, if the patient's surroundings, as well as his clothing and skin, be not disinfected before his mixing in society, he will clearly, in his outgoings, carry infection with him. It is necessary, therefore, that the interior of his dwelling be disinfected before this be allowed. This is a plain fact, but, perhaps, one not sufficiently attended to.

CLINICAL MEMORANDA.

PERIOD OF INCUBATION OF SCARLET FEVER.

AN outbreak of scarlatina recently occurred in a family here, which, I think, helps to give the period of incubation with greater certainty than in any of the cases lately reported in the JOURNAL. The family live some distance out of town, and the children never go out of the grounds except in a perambulator or pony-trap. On Wednesday, November 8th, a new groom arrived, coming from a house in a neighbouring village in which the children had had scarlatina. One child, which he had occasionally nursed during its illness, died, and he attended its funeral on November 7th. He did not come into contact with his master's children on the 8th; but on the next day, Thursday, November 9th, he assisted the nurse to place the baby in the perambulator, which was kept in the stable, and in which he had previously laid his coat. On the evening of Sunday, November 12th, the baby was taken ill; and on the next evening the rash of scarlatina had appeared; so that four days elapsed between exposure to infection and the first symptoms of illness. The second child sickened on Tuesday, November 14th, and the rash was out on Wednesday—an incubation of six days. In these two cases, the period of incubation could not have been more than four and six days respectively.

I remember to have had, some years ago, a case of scarlatina where there were strong reasons for believing the incubation was only twenty-four hours. I do not think that there was sufficiently strong evidence of exposure to infection in the cases reported by Dr. Myrtle to justify him in concluding that the incubation was fourteen days.

A. HAMILTON, F.R.C.S.Ed., Chester.

WHEN a youth, I attended for some time a school about six miles from my father's residence. It was my custom to go to school on Monday morning, to remain in the house of a friend during the week, and return home on the Saturday afternoon, where I remained till Monday morning. An epidemic of scarlet fever broke out in the village where my father lived, and among those attacked were my two sisters. As soon as this happened, I got instructions not to come home until I had permission. For six weeks, I was not allowed to go home; but meanwhile, my sisters having recovered, the restriction was taken off, and I was permitted to return on Saturday as usual. I returned to school on Monday; and on the following Thursday (I remember it well, for my school-days ended then) I was down with an attack of scarlet fever.

This experience is not absolutely conclusive; but it certainly is strong evidence in favour of the period of incubation being a much shorter one than some seem to think.

I. JAMIESON, F.R.C.S.Ed., Edinburgh.

THE facts which Mr. Sweeting mentions, in his memorandum on the above subject in the JOURNAL of November 11th, are of considerable interest, but scarcely bear out his conclusions.

He refers to the cases of four persons who entered the service of the hospital and were attacked with scarlet fever—five, fourteen, twelve, and eight days respectively after their arrival—and, taking for granted that these intervals correspond to the incubation period in each case, calls attention to two points, viz.—“the marked variability of the incubation-period; and that a period of fourteen days is by no means so impossible as Dr. Field would have us believe.”

As there is no proof, however, that these four persons became infected immediately on their arrival, the period between their arrival

and their attack cannot, in any one instance, be taken to represent the period of incubation. Hence, these cases prove nothing as to the variability of that period, or the possibility of its occasionally extending to “fourteen days.” Case No. 1 does seem, indeed, at the first glance to confirm what is already a prevalent opinion, that it is possible for the incubation period to be as short as five days. But even this would be an unsafe conclusion from this particular case, until it has been shown that the girl had not been exposed to infection before coming to the hospital.

CHARLES J. CULLINGWORTH, M.D., Manchester.

SURGICAL MEMORANDA.

DISLOCATION OF THE ASTRAGALUS.

AT a recent meeting of the Royal Medical and Chirurgical Society, Mr. Barwell's interesting remarks on an example of this rare accident raised a discussion equally interesting; and in general, removal of the bone was advised, at any rate, where torsion or version of the astragalus was present with dislocation. Some years ago a case occurred to me. A policeman, in a street quarrel, injured his left foot. When he was brought to me, I found the astragalus dislocated forwards, and its round convex head made a prominence under the skin of the dorsum of the foot, which looked and felt exactly as if a small billiard ball was underneath. My first impulse was at once to put the man under chloroform, anticipating great difficulty or even impossibility of reduction. On second thoughts, I decided to have one fair trial at once; and directing him to grasp the head of the iron bedstead he lay on with both his hands, and hold on; I got a powerful man to extend his foot, whilst I pressed with both my thumbs, and with all my might on the head of the bone. To my surprise and gratification, the bone went back with a loud snap into its proper place; and in a week I allowed the man to leave the hospital.

Yeovil, Somerset.

W. A. HUNT, L.R.C.P.Lond., etc.

OBSTETRIC MEMORANDA.

EXTRA-UTERINE PREGNANCY.

MR. CHARLES E. STEELE's case of extra-uterine pregnancy seems to me to be a very good instance of the results of the “do-nothing” policy adopted by Mr. Steele and Dr. Grimsdale. The case was clearly diagnosed by Dr. Moon. The cyst was clearly suppurating. If the woman had been suffering from an abscess in the breast, it would have been opened. Why should not an abscess in the abdomen be dealt with in the same way? There was not the slightest need, in the operative treatment of this case, for “removal of the ovicac, together with the uterus”. All that was wanted was a three-inch incision in the abdominal wall, a corresponding one through the omentum and ovicac, the stitching of the edges of these two together, the emptying and cleansing of the abscess, and its drainage for ten or fourteen days. As I have adopted this treatment in dozens of analogous cases with uniform success, it seems to me that Mr. Steele might easily have turned his failure into a brilliant triumph. I do not write this criticism upon Mr. Steele particularly, but generally on the obstructive attitude which is maintained by a large number of my professional brethren against the progress of abdominal surgery.

LAWSON TAIT.

PLACENTA PRÆVIA AND CROSS-BIRTH.

MRS. C., aged 34, has had, with the present child, two still-born, two abortions at the third month, and has three children living. She expected her confinement at the end of the month; labour, however, came off near midnight on November 13th, 1882. For the last three months of her pregnancy, she had become highly nervous—imagining, from her sensations, she should be prematurely delivered, particularly as she had been decreasing in size, and experiencing no movements of the child, as she had done during the previous weeks. For several days prior to delivery, much bearing down, without any particular pain, was felt. On the morning of her confinement, slight pains occurred, gradually increasing throughout the day. About 8 P.M., a swelling appeared at the vulva, which for some time neither advanced nor receded. There was not the least discharge of any kind. Upon visiting her at the latter part of the evening, she said she had then no pain—only a swelling externally. The bowels had been freely acted upon; there was no sickness. She was anxious, as she imagined she was going to have a cross-birth, having had one upon a previous occasion. On examination, I found a globose shaped non fluctuating

tumour at the external orifice, which completely filled the vagina, and covered by the membranes, which were extremely dense and unyielding; upon puncturing them, no fluid escaped. There was no discharge of any kind. The placenta was lying loose in the vagina, and completely blocking it; this was cautiously removed, when the child was found lying transversely across the uterine cavity, the head being in the sacral cavity, and the breech towards the pubes. The funis hung down into the vagina, being shrivelled. No difficulty was experienced in the delivery. The patient is making good progress towards convalescence. I consider the case peculiar, there having been no hæmorrhage at any time, which is extraordinary, when it is taken into consideration that the case was one of complete placenta prævia. The attachment, however, to the uterine walls, must have been only slight, and doubtless was the cause of the premature death of the child, from the want of sufficient nutriment through the uterine vessels. The child was much wasted, and the placenta also diminished in size. The patient appears certain in her own mind as to the time she ought to have been delivered.

SPENCER T. SMYTH, M.D., Honor Oak, S.E.

REPORTS

OF

HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

INFIRMARY OF ST. MARY ABBOTTS, KENSINGTON.

A CASE OF CEREBRAL ABSCESS COMMUNICATING WITH AN ABSCESS
IN THE PHARYNX, AND COMPLICATED WITH A TUMOUR
OF THE BRAIN.

[Reported by Mr. J. M. ATKINSON, M.B.Lond.]

WM. C., aged 45, single, was admitted on May 16th, 1882. He was brought up as a workhouse foundling, and knew nothing of his father or mother; at the age of fifteen, he obtained a situation as porter, and followed that occupation for the rest of his life. Sometimes he had been in the habit of carrying very heavy loads. His general mode of living was regular, but he had bouts of drunkenness, when he drank chiefly gin. He did not remember having been previously laid up with any serious illness, but he had at times been prevented from following his work for two or three days owing to "severe bilious attacks". He had also been troubled, during the last five or six years, with sudden attacks of giddiness, accompanied by pain in the head; his landlady stated that these attacks had come on more frequently during the last year or so; they had happened as often as once a month; during the attacks, she had noticed that his limbs shook very much, and "he worked his face a great deal". She had never noticed any foaming at the mouth; he always knew when the attacks came on, and often called out just as they were commencing, but he did not lose consciousness during the attacks.

On May 2nd, while working as porter at King's Cross, he suddenly became unconscious, and was taken by his fellow-workmen to the Royal Free Hospital. He regained consciousness, and left the hospital that evening, returning to Kensington, where he lived. (The order he had at the Royal Free Hospital was headed "Epilepsy".) He was not able to do any work after this. His landlady stated that he seemed too ill to get about, and complained of great pain in the head, accompanied by giddiness. As he did not recover, she obtained an order for his admission to the infirmary. He then complained only of a constant feeling of giddiness, accompanied by pain across the forehead.

On examination, all his organs seemed healthy; on the supposition that these attacks were epileptic, bromide of potassium in twenty-grain doses twice a day was prescribed. At noon, May 21st, he had a severe rigor, the temperature rising to 105.4° F. On recovering from the rigor, he said the pain in his forehead was much worse, otherwise he felt much the same. His speech from this time seemed a little thick; there was no loss of power in any of his limbs, nor any signs of paralysis. In the evening, his temperature was 101.8° F.

May 22nd. The temperature was 100.2° in the morning. He complained of great pain in the right half of the face and head; there was a slight swelling behind the right angle of the inferior maxilla. In the evening, he had another rigor, and his temperature rose to 105° F.

May 23rd. The temperature was 101.4° in the morning; the swelling behind the angle of the jaw had increased, and there was distinct

fluctuation. On examination by the mouth, there was found to be distinct bulging of the right anterior pillar of the palate; this seemed to be continuous with the swelling behind the angle of the jaw. An incision was made into the swelling in the palate by means of a bistoury, and two ounces of very fetid pus evacuated. This afforded him very little relief, though his temperature on this evening was not higher than 103°.

May 24th. The abscess was still discharging through the mouth; the temperature was 101.2° F. in the morning; he was much more apathetic, lay quite listless in bed, and would only just answer questions when spoken to. About midday, he had another rigor, not quite so severe as the two former. In the evening, his temperature was 102.4° F. In the morning, the left eyeball seemed to be pushed forward, and the conjunctiva was chemosed.

May 25th. The morning temperature was 103° F. The left eyeball was much more prominent, and was quite immovable; there was also some chemosis of the right conjunctiva.

May 26th. The temperature was 103.4° F. in the morning; both eyeballs were much more prominent, and there was great chemosis of both eyes; the pupils were equal and immovable. The evening temperature was 104.6°, and the patient was much worse.

May 27th. The temperature in the morning was 101.2°; in the evening, 104.4°. The patient was gradually becoming comatose.

May 28th. The morning temperature was 102.2° F. He had another severe rigor in the afternoon, during which the temperature rose to 105.8° F. At 6 P.M., his temperature was 103.6° F. He gradually sank, and died at 8 P.M., his temperature shortly after death being 105.8° F.

Necropsy.—After removing the skull-cap and dividing the dura mater, on gently raising the frontal lobes, a tumour, composed of brain-like structure and lobulated, was seen to be attached to the dura mater, a little anterior to the sella turcica; it was invested by the pia mater and arachnoid. This tumour was not attached to the brain at all, but had caused a distinct depression in both frontal lobes, on their under surface, pushing the lobes apart. It was situated, as nearly as possible, in the median line; and, on removal, was found to weigh between 1½ and 2 ounces. On proceeding to remove the brain, the middle fossa of the base of the skull was found to be full of pus, which proceeded from a large abscess situated in the region of the left temporo-sphenoidal lobe; this abscess had burst; it extended quite an inch and a half into the brain-substance, and its dimensions were two inches square. The brain-structure was softened, and had broken down around the abscess. On careful examination, after the removal of the brain, both ophthalmic veins were found blocked up with clot; the cavernous sinuses on both sides were full of pus; the superior and inferior petrosal sinuses on the right side also contained pus. In the anterior triangular space of the neck, on the right side, a large abscess was found, which involved the loose cellular tissue about the pharynx, and had extended over the ascending ramus of the right half of the inferior maxilla, anteriorly on to the cheek, and, posteriorly passing under the bone, had pushed forward and distended the anterior pillar of the left palate on that side. The periosteum was quite destroyed over the upper two inches of the ascending ramus of the inferior maxilla on that side; and, on careful examination, by removing part of the temporal bone and opening the carotid canal, the pus in the skull was found to be continuous along the carotid canal with that in the pharynx. The internal jugular vein, and the nerves passing through the jugular foramen, were all matted together, and surrounded by pus, which had evidently descended from the abscess in the brain, through the jugular foramen on the right side to the pharynx—thus causing the abscess, in the upper part of the right anterior triangular space, which had been opened during life.

REMARKS.—This case is of considerable pathological interest and clinical importance. If we accept the theory, that the tumour, which is described as "brain-like", and which may therefore have been of rapid growth, was in reality in existence for the whole of the five or six years during which obscure symptoms of some cerebral disturbance were present, then the absence of more definite symptoms at an earlier date is a point of considerable interest, as offering a confirmation of the views generally held with regard to the functions of the anterior lobes of the brain. A tumour, however, growing slowly, in whatever situation, is little liable to give rise to marked symptoms; and this is especially the case when, as in this instance, it is connected only with the membranes, and merely pushes the brain-substance aside without invading it. It seems more than probable that the abscess in the temporo-sphenoidal lobe was secondary to the tumour. Thrombosis had occurred in the cavernous sinus on both sides, and on the left in the inferior and superior petrosal sinus. It is conceivable that this thrombosis may have been produced by pressure of the tumour, which was situated at the sella turcica, and therefore in close relation with the

cavernous sinus; the thrombosis extending backward, as above described, may have involved the substance of the temporal sphenoidal lobe, and so resulted in the formation of the large abscess which was found in that situation. This explanation, in the absence of any active disease of the ear, and of any injury of the cranium, seems to us to be, on the whole, the most probable hypothesis to account for all the facts. The case would then resolve itself into one of tumour of the brain, complicated by a spontaneous local pyæmia. The abscess in the left temporo-sphenoidal region had a distinct pyogenic membrane—so that it had probably existed for some weeks. The abscess behind the right pillar of the soft palate, which was opened during life, was evidently caused by the pus from the abscess within the cranium, descending through the jugular foramen, and so leading to a secondary abscess in the anterior triangle of the neck.

ST. BARTHOLOMEW'S HOSPITAL.

CASE OF SYMMETRICAL GANGRENE OF THE SKIN OF THE ABDOMEN IN A CHILD.

(Under the care of Dr. SOUTHEY.)

ALFRED B., aged 5 years, a child whose health had been perfect up to the outbreak of the present illness (scarlet fever? two other children in the same family having had undisputed scarlet fever), was admitted on August 30th, 1880, into Faith Ward, for a very remarkable purpura-patch or ecchymosis round about his umbilicus. His mother was not very intelligent, and the history of his illness not easy to obtain. It appeared that he was the youngest of nine living and healthy children, whose father had died probably of phthisis, the mother being always strong and well.

The account of his present illness was that, three weeks before admission, he had been seized suddenly with vomiting lasting for some hours; he was afterwards hot and feverish, but presented neither rash nor sore-throat. He took scarcely any food, and his bowels had only acted once in the last ten days; a loose greenish-coloured motion was passed three days before his admission.

Remaining much the same for ten days, he, on the thirteenth or fourteenth day of his illness, complained of severe pain over his abdomen, for which linseed poultices were applied, and frequently renewed. A discoloration like an extensive bruise made its appearance on the skin of his abdomen, even before any poultice had been applied; and his mother was sure this patch had become much deeper and blacker in colour since it was first noticed.

Condition on Admission, Twenty-First Day of Illness.—He was a well nourished child, with dry hot skin. The temperature was 99 Fahr. in the morning; 103.2° Fahr. in the evening; the face was flushed and the lips dry; the tongue was dry and furred, and had the elevated papillæ suggestive of scarlet fever. The pulse was 128 and regular; the respiration 28. The heart-sounds were clear, the apex-beat was at the normal situation. The movements of the thorax were good; slight dulness was detected at the left base posteriorly, and the breathing-sounds were feeble towards the bases, but no moist or other abnormal sounds were heard.

The lymphatic glands were generally shotty and enlarged; the abdomen was full and tender, generally; a large, somewhat triangular dark purple patch, such as one sees in hæmorrhagic small-pox, but graduating off in bruise-like rings of colour at its margin, suffused the skin of the abdomen. The base of the triangular patch lay beneath the costal arch between the two hypochondriac regions, its rounded apex towards the pubes; it left the umbilicus free, or was less deep in colour there, but was very symmetrical on both sides of the mesial line, and extended a little below the navel. A second ecchymotic patch of smaller size occurred below the larger one. Examined closely, the skin of these patches was slightly depressed below the rest of the skin and its surface had a peculiar glazed look, as if the subjacent blood-coloured chorion shone through the semitransparent unstained epidermoid layer.

The treatment consisted of the local application of cotton-wool and a soft flannel bandage. A simple enema was ordered, and nourishing soup dietary and milk.

Course and Progress.—On the following day, September 1st, after a restless night, with a temperature of 103°, the thermometer, at 10 A.M., only reached 98.6°. The bowels had acted after the injection, and nourishment was taken fairly. The tongue was still dry; the pulse was 120; the urine was not obtained, and there was, therefore, no record of albumen. For the next four days the abdominal patches were the seat of considerable pain, relieved only by poulticing. There was reason to think that a large scybalous mass occupied the rectum, and, after repeated doses of castor-oil and enemata, a large lump came away. On the third day after admission, it was obvious that the skin

of these patches had gangrened, and would separate by slough. This separation first begun on the twenty-ninth day of the illness; five days later the sloughed cuticle had all come away, abundant healthy granulations covering the denuded part. The child took meat with good appetite, and, as medicine, some syrup of phosphate of iron (half a drachm), and hypophosphite of lime (three grains).

The granulating surface was treated with carbolised oil for fourteen days, and afterwards with vaseline (two drachms), and lead nitrate (ten grains), an application which agreed admirably with it. But it was not till the middle of October, or till nearly eight weeks from the first appearance of the gangrene, that the ulcerated surface was completely healed. A shallow dull red scar, without any contraction, subsequently marked the site of this gangrene of the skin.

I remember once only in my hospital experience having seen a similar large patch of local asphyxia of the skin of the abdomen in scarlet fever. The child died about twenty-four hours after admission into the hospital, and within thirty-six of the first notice of the patch. No necropsy was allowed in this case.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 28TH, 1882.

JOHN MARSHALL, F.R.C.S., F.R.S., President, in the Chair.

Spontaneous Postures of the Head considered as indications of the condition of the Brain. By FRANCIS WARNER, M.D.—The author defined a posture as the relative position of the several members of the body with regard to one another, and the relative position of the individual parts of a member. Every posture was due to a balance of the muscles produced by some portion of the central nerve-mechanism. A weak child spontaneously held out his hands in the "nervous posture." The limb was now free or disengaged; its posture was the spontaneous outcome of the action of the nerve-centres. The wrist was slightly flexed, the metacarpo-phalangeal joints were extended backwards, the interphalangeal joints being either flexed or straight. This posture was often seen in nervous children; it was usually bilateral. Explanation might be sought after Darwin's method, *i.e.*, as observing what advantage attended the posture. The following method appeared preferable, and analysis and analogy showed a wrist drooped as in weakness, and the knuckle-joints extended as in conditions of excitability. This posture was sometimes found in spastic contraction. The "energetic hand" might also be a permanent posture resulting from brain-disease. The wrist was extended, the small joints were all flexed. This posture was the antithesis of the "nervous hand." The following axiom was assumed:—"If we see some spontaneous nerve-muscular action often repeated in the same and in different subjects, it may be assumed that there is some nerve-mechanism corresponding which can act independently." In any particular case the existence of a special centre was strengthened if its action could be seen when excited, and again when it was weak. In analysing postures the following "principles" appeared useful. 1. The contrast of small parts with large parts. 2. Interdifferentiation, *i.e.*, the relative condition of the large and small joints; 3. Collateral differentiation, *i.e.*, the relative condition of collateral joints; 4. Symmetry or asymmetry in a posture; 5. Excitation of weak centres; 6. General excitement or general weakness—in this case the stronger muscles produce the posture; 7. Antithesis, *i.e.*, the principle that opposite postures may indicate antithetical states of the corresponding nerve mechanism; 8. Anatomical analysis and description; 9. Analogy between postures. The following suggestions were offered as to determining whether a posture was the outcome of the spontaneous action of the nerve-centres:—The part must be free or disengaged. Analogous postures should be looked for in brain-disease; also in infants, and in ancient art. Errors might be made by attributing all postures to the central nerve-mechanism. Postures might be due to joint-disease, local changes, organic conditions, *e.g.*, cardiac orthopnea, the effects of gravity, muscular rigidity, local injury to nerve. A table was given, applying the principles of analysis to eight postures, viz.—the nervous hand, the energetic hand, the hand in rest, the straight extended hand, the straight extended hand with thumb drooped, the convulsive hand, the hand in flight, and the feeble hand.

The President called attention to the chief points of interest connected with the paper.—Dr. HUGHLINGS JACKSON said that the author deserved great credit for taking up the subject, which was a new one, and very complex. The hand was one of the most specialised parts of the body, and was liable to be affected early in cases of local nervous dis-

cases, in which the ordinary progress was from the specialised to the generalised parts. The hand had not only a great number of different movements, but a great number of small muscles. As a general rule, a highly specialised part had the smallest muscles and the smallest movements, and was formed of parts having little weight. In diseases of the nervous system, such as epilepsy and chorea, the parts which suffered first and most were those which executed small movements. In paralysis agitans, the tremor began in the small muscles. Dr. Warner's work was capable of being further generalised. There were distinct attitudes in various diseases: in paralysis agitans, the attitude was different from that in disease of the cerebellum. In studying loss of expression—which was, in fact, a fixed and unvarying expression—of the face, two forms were found. One was that observed in ordinary paralysis; while, in paralysis agitans, the face was stiffened, giving a puritanical and aged look. He thought that Dr. Warner had condensed his paper rather too much.—Dr. WARNER said that his object had been to open the subject rather than to give details. In the clinical study of the postures of the hand, it was useful to begin by studying special types, such as those observed in works of art. The subject was not altogether new. Trousseau had described the posture of the hand in tetany, in his work on *Clinical Medicine*.

Seventeen Cases of Epilepsy treated by Sodium-Nitrite. By CHARLES HENRY RALFE, M.A., M.D.—The author, in the first place, claimed the credit of first introducing this drug for the treatment of epilepsy for Dr. Law of Hastings, who was the first to administer it, and who had fully described the theoretical reasons which led him to employ it, together with an account of its physiological action, in the *Practitioner* for June of the current year. Sodium-nitrite in its action resembled nitrite of amyl and nitro-glycerine. It had one advantage over these remedies for the treatment of epilepsy; its effects were produced more slowly, and were more permanent in character. The dose should just fall short of producing full physiological effect. The author advised that care should be taken to ascertain the purity of the drug, as many samples contained an admixture of sodium-nitrate. The details of seventeen cases treated by the author in the out-patient department of the London Hospital were given. Of these seventeen cases, three received no benefit, four improved slightly, one was a doubtful case, whilst nine benefited decidedly. Of all the cases, eight, previously to treatment with sodium-nitrite, had been treated with bromide of potassium. Of these, three had improved under its use, and went back when the medicine was changed to sodium-nitrite. Of the other five, the bromide treatment was inefficacious from the first in three cases; and in two, though it had done good for some time, it was losing its effect, and the patients were suffering from "bromism". In four of these cases, decided improvement followed the change to sodium-nitrite, and the other improved to a lesser degree under its use. Nine of the patients commenced treatment directly with sodium nitrite. Of these, the disease in four was of long standing, and probably the patients had already been subjected to a course of bromide of potassium at other hospitals. Of these, two improved under sodium nitrite, and two received decided benefit. The remaining five cases were all tolerably recent ones. Of these, three received decided benefit, one slightly improved, and one was a doubtful case. Among the cases that received decided benefit, the longest exemption from any kind of epileptiform seizure, was one who went eleven weeks without an attack—four weeks whilst under treatment, and seven weeks after leaving off the medicine. Another patient went eight weeks without an attack, and had no relapse at the time he was last seen; he was still an out-patient, and taking the medicine. Previously to commencing treatment, he had on an average three fits a fortnight, and they were increasing. Another remained free for a period of four weeks, and had had no recurrence when he gave up his out-patient letter. Another, who had a fit on an average every week, after taking the medicine was free for five weeks. The same result obtained with another, who was free for one month. The author drew the following conclusions from these results. 1. Those cases in which bromide of potassium is of marked service are not generally suitable for a trial of sodium nitrite. 2. Those cases in which bromide of potassium does not agree well from the first, will probably be found to improve under sodium nitrite. 3. To patients who have taken bromide some time, and in whom the drug is apparently losing its effect, or who are suffering from bromism, sodium nitrite is useful as a change medicine. 4. There are a class of cases, consisting chiefly of minor seizures or convulsive attacks, such as often occur in young persons usually at night, in which sodium nitrite is especially beneficial.—

Dr. LAW had not had a case of epilepsy since he had published his paper in the *Practitioner*. The idea that nitrite of sodium might be useful in epilepsy, was suggested by the probability that cerebral

anæmia was one of the factors of the case, and that sodium-nitrite had some analogy in action to amyl nitrite. This, he believed, was pointed out in 1865 by Dr. Richardson, who was disposed to attribute the action of the nitrite of amyl to the nitrogen.—Dr. GOWERS had given sodium-nitrite in about twelve cases of epilepsy, in only one of which it appeared to do good; although the cases were of the class in which Dr. Ralfe described its action as being most successful; namely, those in which bromide of potassium had failed. Epileptic attacks often ceased, no matter what drug was given; and no inference as to the actions of drugs in epilepsy could be drawn with certainty. He criticised the assumption of cerebral anæmia in cases of epilepsy. Nitrite of amyl relieved the spasm of tetanus more quickly, according to Dr. H. C. Wood, than anything else; but no one had suggested that there was anæmia of the spinal cord in tetanus. He had given the nitrite of sodium in doses increased from ten to twenty grains; and in some cases its use had been continued as long as five months.—Dr. RAMSKILL read brief notes of some cases of epilepsy which had been under his care at the hospital for epilepsy and paralysis, in which the use of sodium nitrite had failed to clear the patients. He thought that Dr. Ralfe's cases were of a different class. He had met with cases in which the nitrite of sodium appeared to have a poisonous action; and it should, therefore, be given with caution in the idiopathic epilepsy of children and young persons.—Dr. COXWELL read notes of three cases which had been under Dr. Ramskill's care, in which bromide of potassium appeared to be more useful than nitrite of sodium.—Dr. HUGHLINGS JACKSON thought that Dr. Ralfe's cases had been under observation too short a time to allow a conclusion to be drawn. In the treatment of epilepsy a regulated diet was of much importance; the amount of nitrogenous food should be limited. A restricted diet had been advocated by Heberden and Trousseau, by Dr. James Jackson, Dr. Ireland, and Dr. West. He thought bromide of potassium the best remedy in epilepsy.—Dr. DAWTREY DREWITT said it was the practice at the Children's Hospital to put a seton of silk at the nape of the neck. It seemed to succeed in many cases.—Dr. BROADBENT thought the cases too few for the foundation of a theory. He was not aware that nitrite of sodium had any action analogous to nitrite of amyl or nitro-glycerine. If it had such action, it would be important to know what changes it underwent in the system. With saline nitrates, there seemed to be an unsatisfied affinity for oxygen; but this could not be said of nitrite of amyl. It might be that favourable results might be obtained in different cases by different ways. He had noticed in epilepsy two distinct conditions of the circulation: a state of low vascular tension and one of high tension. If nitrite of sodium were found to be useful in epilepsy, it would probably be in cases of low tension.—Dr. WILKS agreed with the previous speakers, that almost any remedy or any other slight thing would arrest epileptic fits. He had known them to be arrested by toothache, fever, small-pox, etc. He was very sceptical of new remedies. He had been taught long ago that setons were good in epilepsy, and he had often used them and found them valuable.—Dr. BUZZARD said that the statement of Dr. Ralfe, that bromide of potassium had failed in several cases, was not quite clear, because the dose of the bromide was not stated. Small doses were sometimes sufficient to relieve severe cases, while, in other and apparently milder cases, the medicine required to be used till bromism was produced.—Dr. RALFE replied to the observations on the paper.

Photographs.—The PRESIDENT shewed a series of photographs belonging to Dr. Ziemssen of Munich, representing the action of localised galvanism on the muscles of the face.

MIDLAND MEDICAL SOCIETY, BIRMINGHAM.

WEDNESDAY, NOVEMBER 22ND.

E. MALINS, M.D., President, in the Chair.

Cyst of Broad Ligament.—Dr. MALINS showed a large cyst of the broad ligament which he had successfully removed by abdominal section.

Bacilli.—Mr. KENNETH MILLICAN (Kineton) exhibited some specimens of bacilli from cases of diarrhoea during an epidemic. The stools were of a typhoid character, and contained small gelatinous lumps. A coverslip smeared with these lumps, dried, and then stained with aniline blue, exhibited the organisms. An interesting therapeutical point was that the diarrhoea, which resisted all ordinary methods of treatment, yielded in about twenty-four hours to the internal administration of carbolic acid and terebene, the former being given in one and one and a half grain doses every two hours, the latter in doses of from five to ten minims. Mr. Millican also showed a specimen of bacillus anthracis.

Dr. A. H. CARTER showed specimens of the bacillus tuberculosis prepared by the method of Dr. Heneage Gibbs.

Mr. MILLICAN, referring to some remarks as to the diagnostic value of the bacillus tuberculosis, said he considered Dr. Heneage Gibbs's method absolutely diagnostic for the following reasons. (a.) It stained the *B. Tuberculosis* clearly, and did not stain other organisms found in phthisical sputum. He had tried Ehrlich's method and several stains of his own, but found that while they certainly brought out this particular organism, they obscured the diagnostic value by bringing out other organisms and putrefactive bacteria. Having assured himself that these organisms were present in the sputum, he then used Gibbs's method, and found that only bacillus tuberculosis appeared. (b.) On employing Baumgarten's method, viz., immersion in a 33 per cent. solution of caustic potash, he found that this rendered the bacilli visible; on afterwards staining by Heneage Gibbs's method, it was found that all the organisms then took the stain. (c.) He failed to make Heneage Gibbs's stain dye the organisms from epidemic diarrhoea, stale sputum, and stale hay infusion, until they had been immersed in the 33 per cent. solution of caustic potash; they then stained readily.

Extensor Paralysis.—Dr. SIMON showed a series of living cases of extensor paralysis.

Double Pyosalpinx.—Dr. SAVAGE showed two specimens of double pyosalpinx which he had recently removed from two young single women. There had been a long history of pain, and in one of the patients anæmia and a high temperature (104°). The tumours were each about the size of an orange. During removal of the tumours, rupture occurred, and there was a considerable escape of pus into the pelvis; this was cleaned out, and a drainage tube inserted. The operations were not performed antiseptically. The patients did well.

The Notification of Infectious Diseases.—Mr. J. H. PALMER (Solihull) proposed the following resolution: "That this society, recognising the necessity for legislation to provide for the better notification of infectious diseases, is of opinion that the duty of making such notification should devolve upon the occupier of the house, and not upon the medical attendant." He said the expediency of providing legislation for the better notification of infectious diseases had occupied the attention of the profession, with whom the idea had originated, and of the public. In many private bills which had passed into law, powers had been conferred upon sanitary authorities, to enforce which no one would dare to attempt. The Bill introduced by Mr. Hastings was sound in its object, but faulty in detail. The duty of making the notification was one which obviously devolved upon the occupier of the house. It was said that the occupier had no means of knowing an infectious disease. This was not correct, for to impart and to ask for information was part of the unwritten compact which was entered into by the medical attendant and the person employing him. If the medical attendant were compelled to notify, no doctor would be called in, and counter-prescribing and quackery would receive a powerful impulse. The confidential relations which now existed between the doctor and his patient must give way to a feeling of estrangement, when it was known that the former dare no longer keep his acquaintance with the affairs of his patients to himself. The position of the medical attendant would be rendered extremely difficult, and he would be laid open to vexatious action at law. It was said, "You objected in just the same way to give a certificate for registration of death some years ago, but now you do not mind—all your objections have vanished." The value of the death-certificate had, however, been much exaggerated. The death of the patient was not even certified; and, as to the cause of death, it was well known that from forty to fifty thousand persons died annually from the direct effects of alcoholism, but only seven to ten thousand were returned as such. So with syphilis and other diseases. No information which it was desirable not to state found its way into the death certificate. One principle of imposing the duty of notifying on the occupier had been admitted in the Public Health Act with reference to common lodging houses, and the same course was pursued in the Contagious Diseases (Animals) Act, when the penalty was inflicted on the owner. The feeling of the medical profession was decidedly against that portion of Mr. Hastings's Bill. In the Bill which Mr. Meldrum had brought in for Ireland, the duty of notifying was rendered compulsory on the occupier, and permission on the part of the medical attendant; that seemed the prudent course. The influence of the medical profession had widened the knowledge of the public with regard to matters of health; and, if untrammelled by legislation, it would be useful in leading the heads of houses to readily comply with the law. Mr. Hastings's proposal that the matter should go to a Select Committee was a fair one, and showed that Mr. Hastings was prepared to discuss the question in all its bearings.—Dr. GRIFFITHS seconded the resolution.—Dr. ALFRED HILL, in moving an amendment, combated the objections raised by the opponents of notification, by medical men, such as

compulsion and its alleged consequences, viz., antagonism between the medical attendant and the medical officer of health, the inquisitorial character of the duties of the latter in some cases, and the spread of disease from concealment. He showed that in many towns, where the Acts had been put in operation, the results predicted had not followed, but that, on the contrary, the most harmonious relations subsisted, and the best results had been obtained. Compulsion would not be felt irksome except by recusants, and if it were desirable to obtain certificates of cases after death, which came too late to be of much value for preventive action, it was so much the more desirable to have notification of living infectious cases early, so as to be in time for effective action. He maintained that partial notification was of comparatively little value; that, to be of real service, it must be universal and complete, and to be this, it must be compulsory. The voluntary principle had been tried long enough, and was a gigantic failure. Compulsion of the householder had been tried in Greenock for five years, and found signally to fail in achieving the amount of good to be expected from a compulsory system of notification. Nothing but notification by the medical attendant, either with or without the same by the occupier, would be of use. The medical man was the only person who could diagnose the disease, and who, from the nature of the circumstances, could early and efficiently supply the information required. The householder was disqualified from the duty by a variety of causes: anxiety, alarm, indifference, want of education, and the like. All the allegations of betrayal of confidence, ruin of business, forcible removal to hospital, violation of the sanctity of the home, destruction of the liberty of the subject, *et hoc genus omne*, were in turn considered and answered. Dr. Hill finally appealed to the sense of duty of the profession, and hoped that, instead of giving way to false notions of dignity and entertaining objections which were rather sentimental than real, they would do all in their power to help in forwarding the cause of preventive as well as curative medicine, and retain their character for the most philanthropic and the most benevolent of the professions. He concluded by proposing the following amendment: "That this society, sharing the views of the leading sanitary authorities that early notification is necessary for the control of infectious diseases, and having the benefit of the experience of the large number of towns which have already put the Compulsory Notification Act into force, is of opinion that every sanitary authority should possess Parliamentary powers to obtain notification from both the medical attendant and the householder or person in charge."

—Dr. WILSON (Leamington) seconded the amendment, and said there could be no doubt that, outside as well as inside the profession, there was a steadily growing conviction that no systematic or efficient control of dangerous infectious disease was possible without early notification, and that such notification could not be uniformly obtained unless under legal compulsion. No voluntary arrangement, however much it might assist, would suffice. It was quite true that the experiment had been tried in various quarters, and in part of his own district, of entering into an agreement with medical practitioners to report all cases of certain specified diseases, on payment of a certain fee; and, though he admitted that the experiment, so far as his experience went, had succeeded admirably, he felt quite sure that it would not and could not succeed in any locality of limited area and population, where the medical officer of health was allowed private practice, and could thus enter into competition with his medical brethren. Apart from all other considerations—and they were many—he maintained that any medical officer of health ought to be debarred from private practice, if notification of infectious disease were to be made compulsory and general. On that ground alone, he believed the profession could raise very just and reasonable objection to any general enactment in this direction, so long as the public health service remained in its present slipshod and unsatisfactory state. On that phase of the question, however, he did not wish to dwell, although he had little doubt that it lay at the root of much of the objection which had been raised in many quarters to compulsory notification of any kind, and especially when it was proposed to lay the obligation on the medical attendant. But, judging by his experience of the voluntary system to which he had alluded, he felt firmly convinced that there could be neither promptness nor efficiency in notifying, unless the medical attendant were made responsible; although he maintained, at the same time, that any measure would be faulty and one-sided if it did not render the householder liable to heavy penalties if he failed to report, even when he considered the case too mild to require medical assistance; or if, through neglect to call in medical advice, he had incurred the risk of spreading disease. And, after reading the evidence taken by the Health Committee of Liverpool and various other reports of the working of local Acts, he felt more firmly convinced than ever that to make the householder alone responsible would render the Act a farce, and would lead to evasion, equivocation, and inefficiency all round. That was clearly shown

in the extracts read by Dr. Hill concerning the working of the Act in Greenock; while, on the other hand, reports from Edinburgh, Dundee, Birkenhead, Accrington, and other large towns, where the obligation was laid on the medical attendant, were so satisfactory, that the various arguments which had been adduced in opposition to this plan were found practically to be weak and untenable, and the fears regarding betrayal of confidence and loss of patients were "frivolous and groundless." If compulsory notification of infectious diseases were recognised, he maintained that no one could logically advocate a measure which would lead to dangerous delay and frequent concealment, and which would often place the medical attendant in the invidious position of losing his patient if he had the courage to name the disease to the householder, should the latter be held responsible alone to notify.—Mr. GAMGEE spoke in favour of the resolution.—Mr. HENRY MAY (Aston) supported the amendment, looking at it both as a medical officer of health and as a private practitioner. By not notifying, a large annual income would be lost to the profession, as the sanitary authorities would compel notification from other sources, such as the householder, neighbours, etc.—Mr. H. R. KER (Halesowen) while believing compulsory notification to be necessary, objected to the onus being thrown on the practitioner. He knew from personal knowledge that a large number of cases of infectious diseases never came under the care of a doctor. He thought that a large field for immediate notification was opened through the certificates of the School Board.—Mr. HALE WRIGHT believed that in refusing to notify, the members of the profession would be doing an injustice to themselves and to the public by avoiding a responsibility it was their duty to take.—Dr. A. H. CARTER thought there was an official and a professional side to the question, and that the members of the profession had not been treated well in the matter. The Birmingham Town Council were about to apply for a Bill compelling professional notification, and he thought that a deputation should attend upon that body before the initiative was taken.—Mr. PALMER, in reply, stated that he regarded compulsory notification as the thin end of the wedge.—The amendment was then put and carried by a large majority, and subsequently as a substantive resolution.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

NOVEMBER 17TH, 1882.

J. W. TRIPE, M.D., President, in the Chair.

Drainage and Ventilation of Houses.—Mr. ROGERS FIELD read a paper on certain less recognised but highly important points in the drainage and ventilation of houses. He said that three sanitary principles governed house-drainage: 1, all refuse matter must be completely and rapidly removed from the house; 2, there must never be any passage of air from the drains or waste-pipes into the house; 3, there must be no connection between the drains and the domestic water-supply. These, although simple, were very frequently neglected. The first went absolutely to the root of sanitation; for, were it strictly complied with, there would be no leaky drains, no polluted subsoil, and no production of foul gases in the drains from decomposing organic matter. There could not be a greater mistake than to assume, as was commonly done in investigating drainage, that if water ran away with freedom, this was all that was required. Numerous cases were on record where the sewage from houses had apparently run away freely for years, but where the greater portion of it had really been leaking out of the drains into the ground under, or close to, the house. In illustration of this point, the author quoted two cases in his own practice, one in which the connection with the sewer was found to be blocked with shavings, which had been left in when the house was built three years before; the other that of a school, in which the drainage from the lavatories had leaked through disused drains under the floor of a large portion of the building, and where, although there was a mass of filth in some places seven feet deep, no leakage had been suspected. If the drains were exposed, and found clean and jointed with cement, this was not sufficient. The tops of the joints might be good and the bottoms bad. The only safe method was to actually test the drains by plugging them at the lower end, and filling them with water. Very few house-drains indeed stood this test. Even if the drains were outside the house, it was a mistake to assume that it was unimportant whether they were sound, or not only might sewage leak out of faulty joints and percolate under the house, but foul air might be drawn into the house. It was important to realise how small an amount of deposit would create mischief by decomposing and generating foul gases. A mere irregularity of the joints, even when the drain had a good fall, was sufficient to cause this. There was no better test of the condition of the drains than the amount of smell emitted from a ventilating opening, for if drains were properly

laid, and in thorough working order, practically no smell should exist. Examples were given. Faulty forms of traps and water-closet apparatus were strongly condemned by the author, and diagrams, descriptive of good and bad closets, were exhibited. The principle that there should never be any passage of air from the drains or waste-pipes into the house was then considered, and the means of isolating the house-drains from the public sewer, the necessity of keeping the drains outside the house, their ventilation as well as that of the soil-pipes, the position of the water-closets, the disconnection of the sanitary fittings inside the house from the drains were referred to. It was insisted that the danger should be guarded against of trusting too much to those parts of the drainage of a house which were visible as an index of the condition of other and important parts which were concealed, and an instance was mentioned of a house, the drainage of which had been recently reconstructed, and where all the sanitary arrangements appeared at first sight to be perfect, but where a subsequent examination of the drains which were under the house showed that the joints were in many places defective. At one point the pipes were not jointed at all, but a space left large enough to put a hand in, though it was stated that special care had been taken to make the drains water-tight. Old drains which had no outlet connected with gullies were found beneath the passages and rooms. The housemaid nearly died of typhoid fever; and beneath the room she occupied was found an old drain with a large amount of foul deposit. A long list of other defects was described, leading to the conclusion that the drainage, instead of being very good, was really so radically defective throughout, that it was necessary to reconstruct the whole of it. Another instance was given in which a lady and her cook were attacked with erysipelas and blood-poisoning shortly after occupying a house. Various alterations were made in the drainage in the absence of the family, but, on their return, the lady was again attacked with erysipelas, and shortly afterwards other members of the household. Again alterations were made, and again the lady was attacked with erysipelas, and the housemaid with typhoid fever. An examination of the house by the author, showed that an old stoneware drain in the scullery, into which the sink formerly discharged, before it was disconnected, had not been removed; and though it was stopped with cement, the stopping was imperfect, thus allowing the air of the drain to enter the house. The author next considered the various ways in which foul air from faulty drainage inside the house passed to different parts, and pointed out the opportunities which were given for the passage of air from one part of a house to another, depending chiefly upon windows and fires, the latter, of course, mainly acting by drawing air through passages, staircases, and doors. But other channels must also be borne in mind; and an interesting account was given of the passage of foul air along bell-wire tubes, the proximity of the bell-pull to the fireplace, giving an increased opportunity for air to be drawn from a distance to this part of a room. Channels for gas-pipes and for hot water pipes also not uncommonly gave facility for the admission of foul air. In connection with this part of the subject, a remarkable instance was given of a particular bed in a school, the occupants of which were constantly the subjects of slight attacks of pneumonia, with tendency to typhoid. In this case the foul air was conducted from a lavatory where there was defective drainage up a staircase, and impinging on the ceiling of the dormitory, was reflected on to the bed where the sickness occurred. An interesting account was given of the cause of the Duchess of Connaught's recent illness. Defective drainage was found in the basement of the house, and, after numerous experiments, the means by which the foul air entered the duchess's bedroom were discovered. These showed that it was only when occupying certain positions in the room, that she would be exposed to the influence of the foul air, while in bed she would escape. As a matter of fact in twenty-four hours after sitting on a sofa in one of these exposed positions, Her Royal Highness's symptoms fully developed themselves. These two cases were illustrated by diagrams. The necessity of a thorough disconnection between the drains and the domestic water-supply was then dwelt upon, and the mistakes most commonly made in this particular were pointed out.—In the discussion which followed, the President, Dr. Buchanan, Dr. de Chaumont, Dr. Corfield, Mr. E. C. Robins, Dr. Bate, Mr. Jacob, Dr. Rogers, Dr. Poore, and Mr. Shirley Murphy took part.

FELLOWSHIP OF THE ROYAL COLLEGE OF SURGEONS.—At the recent primary examination of the Royal College of Surgeons, all the candidates from Guy's Hospital (eight in number) were successful. The total number of candidates was thirty-six, of whom eleven were re-ferred for six months. The scholarship in anatomy, at the last intermediate examination of the University of London, was also taken by a Guy's student.

REVIEWS AND NOTICES.

HANDBUCH DES OEFFENTLICHEN GESUNDHEITSWESENS. Von Dr. HERMANN EULENBERG. 8vo, Band ii, Abth. 1 and 2, S. 1172. Berlin: Hirschwald. 1882.

DR. EULENBERG, who had already edited a similar work on manufacturing and other industries, has now, with the assistance of a brilliant staff of physicians, chemists, engineers, and others, completed a system of hygiene which contains a larger amount of information on every subject bearing on the public health than we have yet seen compressed into so moderate a space. Some of the articles, as those on special industries, are short and sketchy, but others are complete monographs on the subjects of which they treat. Of course there is much that will not be new to English readers, especially in the discussion of such questions as the construction of hospitals and the conservancy of towns, but in other cases the subject is gone into with an exhaustiveness, and at the same time a conciseness, peculiar to German text-books, different type being also used to aid rapid perusal. Each chapter is followed by a bibliography in which we look in vain for many well known English names, but a study of the text shows that, the references being intended for German readers, the latter are referred to the works of our countrymen as reported in one or other of the numerous scientific periodicals of Germany.

Infant Mortality is ably handled by Dr. Finkelnburg of Bonn, in an article which, besides showing an acquaintance with the labours of Farr and others in this country, contains much that is new or suggestive. He insists strongly on the importance of breast-milk, and enforces his argument by some remarkable statistics. In Norway, for example, where the mothers almost invariably nurse their own infants, the death-rate in the first year is only 106, and in the first five years 180 of 1,000 born. The Faroe islanders, mid poverty and cold, lose only 86 in the first, and 122 in the five years, a success scarcely surpassed by our own aristocracy; whereas in Iceland, where artificial feeding is universal, 295 per 1,000 die in the first year of their existence. In Paris, during the siege, while the general mortality rose to a fearful height, that of infants was reduced by 40 per cent.; and the same result of compulsory suckling was observed during the cotton famine in Lancashire. In Norway, again, but one-eighth of the deaths of infants are due to diseases of the digestive organs, in Paris not less than two-fifths to these causes. Dr. Finkelnburg refutes several fallacies, as for example, that of the inevitable connection between a high birth-rate and infant death-rate, by showing that, where thriving industries that do not involve female labour are the cause of the former, the death-rate is low; but if reckless marriages, general illegitimacy, and the rapid conception following refusal to suckle be the causes, it will be disproportionately high. The mortality among illegitimate infants is likewise due to neglect, and to being put out to nurse. To consanguineous marriages *per se*, he attributes no importance, maintaining that they act only, as any other union between two persons having the same constitutional taint by intensifying it in their offspring, and adduces the cases of isolated and healthy communities where continuous intermarriage in no way deteriorates the race. Many of his observations on the habits of the German peasantry in different parts are curious and instructive.

In connection with the employment of mothers in factories, he quotes with approval a law which exists in Alsace, forbidding such employment for six weeks before and after confinement; the full, or in some cases only reduced, wages being continued during the interval. To obviate the sacrifice of infant life through the ignorance of parents, the law can do but little: it is, he urges, an important part of "woman's work"; and he holds up for imitation the English "Ladies' Sanitary Association".

Dr. Eulenberg himself undertakes the treatment of the Disposal of the Dead. He considers the deleterious effects of the air of graveyards as improved, except of course where, as in Turkey and on battlefields, interments are so shallow as to permit the escape of fetid exhalations; but the pollution of water-sources is a real danger. He discusses very fully the action of various soils and the disposition and drainage of cemeteries. The general principle is that decomposition is rapid and complete or slow and imperfect, according as the interstices of the soil are filled with air or water; in the latter case, aminobases, pyramine, and fatty acids are formed along with ammonium sulphide. The period within which destruction of the corpse is complete and interments practicable varies from ten to fifteen years in chalk, dry sands, and loams, to twenty or thirty in clays or waterlogged sands. He is in favour of the lightest and most perishable of coffins.

The arrangements for the disposal of the dead in Vienna are worthy

of more general adoption. There are mortuaries in several parts of the city, and all corpses are removed so soon as possible in hearses, or, in the cases of hospital and pauper patients, in "fourgons" fitted up for eight bodies, both being lined with sheet iron, lacquered and air-tight, to the mortuary at the central cemetery, where there are well furnished *post mortem* rooms and separate apartments for infectious cases, suicides, murdered persons, and others in the hands of the police.

The question of cremation is treated very fully, and the Author expresses a wish that legal impediments to its practice were removed, special certificates involving in any doubtful cases *post mortem* examination and analysis being, of course, required to avoid the concealment of crime.

In connection with embalment, he gives the formula of Wickersheimer's solution, which preserves the colour and elasticity of animal and vegetable bodies unaffected by air or moisture. It consists of water three litres, alum 100 grammes, common salt 25, saltpetre 12, potash 60, arsenious acid 20; to the filtered solution, 1550 of glycerine and 300 of methylated spirits are added, and the body is injected with it.

Dr. Roloff writes on Diseases of Cattle other than tubercular in the pathological and sanitary aspects. After describing the bacillus anthracis in the body, he shows that, like that of malaria, it is capable of development outside the body, and thus the soil and water-courses may become infected. From this follows the necessity of the destruction by fire or caustics of the carcase, and its deep interment, where it cannot be a source of danger. Anthrax being undoubtedly communicable to man, the utilisation of the hide, wool, etc., should be strictly prohibited, for the spores are extremely resistant to disinfectants, including heat.

Foot-and-mouth disease, though not by any means fatal, is very contagious. The disease has been proved to be communicable to man by the use of the milk of affected animals, and several deaths of infants are well authenticated. The raw flesh, too, is capable of imparting it, but the poison in both is destroyed by heat, and he advises the boiling of milk in places where the disease is prevalent.

Professor Johnne of Dresden contributes the article on Pearl-Disease and Tuberculosis of Cattle, which he maintains to be identical with human tuberculosis, and to be communicable by means of the milk. Pearl-disease is simply tubercle of the serous membranes, especially the pleura. In an exhaustive analysis of the labours of numerous experimenters, he refutes the objections urged by some against the accuracy of the conclusions he adopts, and enters fully into the pathology, symptoms, and etiology of the disease. Dr. Johnne considers it as well proved that the milk of tuberculous cows is as capable of conveying the disease to man as it is to their own offspring (and as, presumably, that of human tuberculous mothers is to theirs), and should, therefore, not be used; but he admits that the question of the exclusion of the flesh from the market is more difficult. In the early stages of the disease, and so long as it is confined to the pleura, and does not implicate any important viscera, the effect on the general health of the animals is insignificant, and they are even capable of fattening. So long he would permit the sale of the flesh which may be passed as prime, but would condemn it if the health of the animal have begun to suffer, or the flesh be flabby and watery. The lungs and other viscera should, however, never be sold for food.

Dr. Esser, treating of Milk, is equally decided as to the communicability of tubercle by its means, as well as of foot-and-mouth disease (which Dr. Hertwig and others demonstrated on their own persons), though boiling destroys the activity of the poison. In acute febrile states, the milk is altered; and Wiedemann asserts that he has seen a pneumonia anatomically identical with the bovine form produced in children by the use of milk from cows suffering therefrom. Strange to say, though the milk of cows attacked with rabies is fatal if injected into the tissues or blood, the poison is destroyed in the stomach. Cow-pox, a mere local affection in the cow, does not impair the milk. Dr. Esser describes four typical aberrations from normal milk due to febrile disturbance, gastric disorder, or unknown causes: viz., the sour, the putrescent, the slimy, and the blue. In the latter, after it has stood from twelve to thirty hours, blue or indigo points appear, soon becoming confluent; the film, later, changes to a green or rosy hue. The pigment belongs to the anilin group, and is developed by means of an organism, according to Neessen. It can be "cultivated" in healthy milk, and in rice-water, etc., but not in animal albumen, nor in milk already sour. Serious consequences have followed the consumption of blue milk.

The Chemistry of Milk is from the pen of Dr. Pollens, who, as is the habit of German chemists, gives more attention to the rapid examination of milk by means of lactobutyrometers, lactosensimeters, optical tests, specific gravities, etc., than has hitherto been the practice here. While accepting Fleischmann's figures as to the possible range in the total solids of unadulterated milk—viz., 9.8 to 16.35

—he makes the very pertinent suggestion that milks containing not more than 12.5 per cent. should, though it may not be possible to prove the addition of water, should be condemned as of inferior quality, just as unripe fruit or the like would be; and that, in doubtful cases, what he calls the state test, or an official examination of milk taken at the dairy on the following day, be made for comparison.

Dr. O. Wachs describes a scheme for the Training and Licensing of Midwives, who in Germany, where "unqualified assistants" are unknown, attend full 50 per cent. of accouchements. He would establish lying-in institutions in towns having at least 50,000 inhabitants, with about forty beds. The staff of each should consist of a resident medical officer, on whom the duty of instructing the women should devolve, assisted by two trained midwives. A non-resident medical man of standing, to act as consultant in difficult cases, and a younger man to superintend the practise of the pupils in the homes of the poor, would complete the staff, the latter two being engaged in private practice. The instruction, oral and practical, should be based on an authorised text-book, and include regional anatomy, digital examinations, case-taking, diagnosis of presentations, treatment of emergencies, and prevention of puerperal diseases. A nine months' course, he thinks, would suffice, though the period varies in Germany from three to twelve, and elsewhere up to two years in Italy. It should be followed by a thorough examination, conducted by State-appointed examiners. Midwives engaged in the Poor-law service, should be so distributed as not to have more than fifty cases each *per annum*, should have a fixed salary, with allowance for incidental expenses, and be precluded from other practice. They should be directly responsible to the district medical officer, and keep diaries and reports for his inspection. Every five years or so, all midwives should be required to enter again for a three-weeks' course at the school, in order to refresh their knowledge, and keep pace with the progress of their art.

The proposal that midwives practising on their own account should keep diaries and be under medical supervision, may seem to many inquisitorial, and others of Dr. Wachs's ideas impracticable; but it cannot be denied that the freedom permitted to every ignorant, and perhaps drunken, old woman in this country to risk the lives of her fellows, is an anachronism and a scandal, and that some guarantee of knowledge and skill, higher than the so-called certificates of our lying-in hospitals, is much to be desired.

In a brief paper on Sewing-Machines, Dr. Blaschko expresses his belief that it is not so much to hard work, *per se*, as to long hours of labour, that the diseases of the lungs, heart, generative organs, and digestive apparatus, general among women thus employed, are due. He urges the extension of the provisions of the Factory Acts to home workers, who are often the victims of a veritable slavery, and would even provide some means of ascertaining the physical fitness of apprentices to trades demanding great strain on the heart or other organs, in the form of a medical certificate from the district or factory surgeon. Ladies' committees, too, might be formed for the unofficial supervision of the sanitary surroundings of places, public and private, where women and girls were employed; and the circulation of plain and simply-worded tracts on matters affecting their welfare, as are now supplied to newly-married couples in Munich on the feeding and management of children.

THE TRANSACTIONS OF THE PERTSHIRE MEDICAL ASSOCIATION.

Edited by C. R. URQUHART, M.D. Vol. i. Perth: 1882.

THE *Transactions of the Perthshire Medical Association*, which have been published, we are told, with the object of securing to its members a permanent record of its meetings, and in the hope that they may prove useful to the general medical public, can scarcely be regarded as likely to fulfil the purpose and anticipations which have led to their publication. If we may judge by the fate of similar ventures, we should predict that these *Transactions* will not be issued for many years continuously, and the early numbers of a defunct medical periodical are not, perhaps, the best of permanent records; while the papers which are contained in these *Transactions*, would unquestionably be of much greater use to the general medical public than they are now likely to be, had they appeared in one of the established medical journals, which have a far larger circulation than it is possible for these *Transactions* to attain to. There is nothing special in the work of the Perthshire Medical Association justifying the separate publication of its proceedings, the papers read before it being exactly of the kind that appear in the columns of weekly medical journals. It must always be an objection to *Transactions* like these that the editor can exercise no selection, but must publish all the papers read before the Society, whatever their merit may be.

Having said this much in depreciation of the scheme of the *Transactions of the Perthshire Medical Association*, we may bestow a liberal meed of praise on the manner in which that scheme has, up to this point, been carried out. Dr. URQUHART, the editor, displays in his own paper on the Home Treatment of Insanity, if not a leaning towards æstheticism, at least a keen appreciation of artistic refinement, which has obviously influenced him also in determining the outward form and style of these *Transactions*. They are beautifully printed upon toned paper of excellent quality, and are tasteful from title-page to tail-piece. But the merits of these *Transactions* cannot be summed up in an encomium on their external comeliness. The papers which they include contain many carefully collected observations and acute criticisms of medical theories. Dr. James P. Bramwell succinctly reports five cases in which sciatica was completely relieved by nerve-stretching. Dr. Alexander Thom inquires into the *modus operandi* of belladonna in removing intestinal obstruction, and supplies some notes on surgical cases and operations. Dr. Bendall contributes some valuable clinical notes on farcy in man, with remarks on its pathology; and his paper is illustrated by two well executed plates representing sections of the nasal mucous membrane, and of the tissue at the base of an ulcer in this disease. Dr. Henry Laing reports cases of chronic Bright's disease, throwing light on prognosis and the effects of treatment; and Dr. McNaughtan discusses the advantages of long sea-voyages as a remedy in phthisis pulmonalis. There are several useful papers on diphtheria, and perhaps the most notable feature in the *Transactions* is a digest of the replies to a series of questions concerning this disease, which were distributed amongst the members of the Society. Ten sets of replies, dealing with 157 cases, were received; and from these, conclusions in harmony with received pathological notions are deduced.

DAVOS PLATZ AS AN ALPINE WINTER STATION FOR CONSUMPTIVE PATIENTS. By J. E. MADDOCK. London: 1882.

MR. MADDOCK'S useful little volume does not pretend to offer any authoritative medical opinion on the question of the utility of residence in high altitudes in the treatment of phthisis; but it contains much useful information for the intending visitor, invalid or otherwise, to Davos, and just such an appreciation of the merits of the place, as a health-resort, as a shrewd and intelligent lay observer might be expected to form. That the author writes in ignorance of the prevailing medical opinion of the day, is shown by his statement, that "Madeira, the Riviera, the South of France, and the Cape of Good Hope, have had their day;" whereas, nothing is more certain than that Madeira, for instance, is fast regaining its former popularity, and that it is a far safer and more useful resort, in many cases of chest-disease, than Davos; the truth being that medical knowledge is growing more exact, and therefore medical opinion more discriminating; and that we find we need southern littorals, as well as high mountain valleys, in dealing with the various forms of pulmonary consumption.

Davos Platz, which we have ourselves twice visited—in 1869, and again in 1870—is an Alpine valley in the Grisons, lying parallel with the Engadine, and about twenty miles to the north of it, and having an altitude of 5,300 feet above the sea. It enjoys considerable protection from certain winds; and is, on that account, more suitable for the winter residence of consumptives than the Engadine, which, ten years ago, was advocated as a winter resort for the cure of phthisis, just as Davos is now.

The snow, which begins to fall at Davos in November, soon accumulates, and lies on the ground to a depth of three or four feet, and carriages have to be exchanged for sledges. "About the end of December settled weather may be looked for, and Nature in Davos falls into its long winter sleep. The conditions now are: perfectly still air, intense cold, absolute dryness, and absence of wind and fog."

"At night, the thermometer will frequently sink below zero; the stars shine with unsurpassed brilliancy; and, when the moon is high, Davos presents a picture of cold silvery-white beauty that can never be forgotten. The days are cloudless, the colour of the sky an intense *lapis lazuli*, and the sun so brilliant and hot that umbrellas and awnings are indispensable; and the most delicate invalid may, during the sunny hours, sit in the open air with impunity. As soon as the sun sinks, however, there is an instant change in temperature, often as great as fifty and sixty degrees; but, before this, every delicate person has sought the shelter and warmth of the house."

This intense cold is little felt, owing to the stillness and dryness of the air; and the favourable effect of this dry, still, and cold atmosphere upon the patient is manifested by diminished cough, arrest of hæmorrhage, freer breathing, and a sense of general improvement; increase of appetite, and consequent increase in weight, being most manifest,

Mr. Maddock admits that the winters at Davos may, as elsewhere, be very variable; and that, while the winter of 1879-80 was a peculiarly good one, last winter was a particularly bad one. "The snow-fall did not set in until late, and then it was singularly light; while a high temperature, and fogs and wind, were the rule, and not the exception. Those who derived any real benefit were in a very small minority, while the death-rate amongst the visitors rose to an alarming extent."

In a good season, a patient can remain in the open air, on an average, seven hours a day. This is a great gain. But the native population would seem to be doing their best to contaminate this fine air, and make it actually dangerous to visitors. "Of the drainage," Mr. Maddock "feels bound to say, that it is about as bad as can be; while heaps of offal, cow-dung from the low chalets, and other indescribable filth, are allowed to be exposed near the road—thereby not only offending the sight, but the smell, as well as tainting the atmosphere. The reader will not be surprised to learn that typhoid and other fevers, if rare, are no strangers to the valley." He also wisely protests against the method in vogue there of heating the hotels by means of German stoves, which rapidly deprive the air of its moisture, and make rooms stuffy and suffocating, causing patients to complain of "faintness, headaches, and other disagreeable sensations;" and he points out that the good effects of several hours in the pure balmy outside atmosphere must be neutralised, if the patient have to pass his evenings in a stuffy uncomfortable room, in which the air has been rendered too relaxing for diseased lungs.

The author discusses fully the merits of the different hotels; and, amongst other matters, calls attention to an extra "which all the hotel circulars preserve a solemn reticence about, but which cannot be too widely known." He refers to a charge, in some hotels of as much as a thousand francs, for the bed and bedding which a deceased person has used! Such extortion certainly ought to be resisted. On another very serious matter we must give Mr. Maddock's own words. "Another objectionable feature is the strong desire that exists on the part of the local medical men and others financially interested in the place to suppress the number of deaths that annually occur, in order to give a false impression as to the marvellous powers of the climate to delay death. In fact, we do not hesitate to say that in not a few cases patients who were known to be hopelessly ill have been hurried elsewhere by order of the medical men, for no other reason than that the Davos death-rate might be kept low!"

The spring is always a difficulty at Davos. About the middle of March, the winter shows signs of breaking up, and by the end of that month the snow commences to melt, and this unpleasant process lasts through April and part of May. During this period, Davos is thought unhealthy, and it is necessary for the invalid to make a move. Mr. Maddock has, however, met "many people who have remained through it without feeling any ill effects". Removal to the neighbourhood of Montreux, or the Lake of Geneva, or a sea-voyage, after a winter at Davos, may be commended, according to the nature of the case, the ages of the patient, etc.

This little book contains also some interesting analytical notes on the air, water, and food of Davos by the analytical chemist Mr. Philip Holland, Fellow of the Chemical Society. The amount of free and albuminoid ammonia in the air, ascertained by the method of washing, shows that the atmosphere at Davos is by no means so uniformly free from organic impurities as we should have been led to conclude; the mean amount of free ammonia being 36.458, and of albuminoid ammonia 39.744 grains per million cubic feet of air obtained in the streets and other open places at Davos, while these figures rose respectively to 65.958 and 68.252 in some "close and other places". If we compare these figures with those which represent the average of these constituents in London air—viz., 26.780 and 65.947—we must be struck with the fact that the air of this mountain valley, or at any rate the inhabited parts of it, is not nearly so free from organic impurities as it ought to be. The chemical examination of the water showed it to be exceptionally pure. Mr. Holland also gives the results of his examination of the milk, butter, beer, wine, and bread at Davos. At the end of the book are some valuable meteorological tables.

This little work seems to be carefully and conscientiously prepared, and contains much valuable information for those who intend passing the winter at Davos.

THE ILLUSTRATED QUARTERLY OF MEDICINE AND SURGERY. Edited by GEORGE H. FOX, Clinical Professor of Diseases of the Skin, College of Physicians and Surgeons, New York; and FREDERICK R. STURGIS, Professor of Venereal Diseases, Medical Department of the University of the City of New York, with the co-operation of Professors Parker, Van Buren, Thomas St. J. Roosa, Agnew, Austin Flint, and others. Published by E. B. Treat, New York; J. and A. Churchill, London; and Baillière and Sons, Paris.

WE have before us the first two parts of this work, the publication of which commenced in January of the present year. It purports to offer to the reader nothing but original matter. The text is a description of the cases represented by the plates and woodcut illustrations. We do not purpose to review very fully the various interesting papers which are given in these two parts, but we are glad to be able to say that we form a high opinion of the general plan and character of the publication. It is remarked, in an editorial notice, that many interesting cases, especially of a surgical or pathological nature, have hitherto been imperfectly reported, or have remained unrecorded for lack of the means of suitable representation, and that it is the object of the *Illustrated Quarterly* to meet this defect. The editors express a hope that by means of photographs from life, chromo-lithographs, and engravings of the highest artistic excellence, much valuable and instructive material may be brought within the reach of the profession which has hitherto been inaccessible. The names of the editors, and of the eminent men whose co-operation has been secured, are such as to ensure a valuable publication, and an useful addition to American medical literature.

The first part contains a paper by Dr. Alfred C. Post, upon a Plastic Operation for the Restoration of the Upper Lip, in a case which had been treated by caustic by a "cancer doctress". A large chromo-lithograph, and some very graphic wood-cuts, show practically the interesting points of the case and the operation. Professor Parker contributes a case of Fibrous Tumour of the Face; Professor Thomas a case of Laparotomy. A case of Separation of the Lower Epiphysis of the Femur is well illustrated and described by Professor Little. A case of Dislocation of the Columnar Cartilage of the Nose is described by Dr. Bosworth. Dr. Sexton illustrates some interesting instances of facial paralysis occurring in connection with aural disease, by means of some excellent autotype photographs. The part ends with a paper upon a rare form of Corneal Opacity, by Dr. Pooley. In the second part of this publication we observe, among other well written papers, one by Dr. Seguin, on a case of Progressive Facial Atrophy; and Professor Sabine gives some most telling autotype photographs of a Plastic Operation for the loss of the Nose. A case of Spinal Caries, by Dr. Gibney, and some cases of Hip-Disease, by Dr. Judson, are among the other papers contained in this part.

While we congratulate the originators of this publication upon the general character of the work, we consider that some of the illustrations might have been better. The execution of the chromo-lithographs, for instance, is not of a first rate order; and we consider that almost as much might have been shown by simple woodcuts, or by photographs. We shall hope to see an improvement in this respect as the work proceeds, and we think that the success of the undertaking depends, in a great extent, upon such improvement.

NOTES ON BOOKS.

The Practical Working of Direct Vaccination from the Calf. By BENJAMIN BROWNING, M.D. (Reprinted from the *Transactions of the Society of Medical Officers of Health*).—Dr. Browning's pamphlet may be divided into two parts: the first being a plea for the use of animal lymph; the second, an account of the method of procedure which the author adopted for the vaccination of, and removal of lymph from, calves. We fear his enthusiasm has somewhat led him astray, and he is disposed to resort to a line of argument which is open to criticism. There are, however, abundant reasons for the introduction of animal lymph into this country, and it is well that the experience of all who have practised this method of vaccination should be placed at the disposal of the profession. Dr. Browning's paper will, we think, be read with interest by those who have not studied the subject, although we are unable to give him the credit, which in a footnote he claims, of "originality, and priority of working out, and making public the details of calf-vaccination." At the time Dr. Browning's paper was written, he had inoculated but seventeen animals; with the experience he has since acquired, he may be disposed to modify his method in some particulars. We are surprised to find a recommendation to dry the lymph at a temperature of boiling-point. Surely there is some error here.

THE MOTHER OF THIRTY-TWO CHILDREN.—In a case lately heard at Aberdeen, in which a young man named Hooker was ordered to contribute towards the maintenance of his father, it was stated that the defendant's mother had had thirty-two children. Defendant said that on three occasions she gave birth to twins, twice she had triplets, and afterwards four children at a birth.

BRITISH MEDICAL ASSOCIATION. SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st.

Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, DECEMBER 2nd, 1882.

THE SUPERANNUATION OF ASYLUM MEDICAL OFFICERS.

THE opposition which has been offered at the Gloucestershire Quarter Sessions to the proposal of the Committee of Visitors of the County Lunatic Asylum to grant a retiring pension of £550 *per annum* to Mr. Toller, who had been for twenty years the medical superintendent of that institution, and who is now incapacitated by illness for the performance of his duties, ought to open the eyes of asylum medical officers generally to the kind of treatment they may expect when representatives of the ratepayers have a direct voice in the government of asylums. That opposition has originated at the boards of guardians in the county, and is founded on a repugnance to pensions generally, and a hopeless incapacity to appreciate the value of professional services. The pension proposed for Mr. Toller, although only two-thirds of the amount to which he might have considered himself fairly entitled, seems large to many of the humbler guardians, in comparison with their own earnings; so, in their ignorance that any special ability or skill is requisite in the management of a large lunatic hospital, they pronounce it a monstrous extravagance, and petition the justices either to withhold it altogether or to reduce it materially. Men of this class, and with such ideas, too often gain admission to asylum committees when county boards have been formed, and it is not difficult to foresee how medical officers will fare at their hands when salaries and pensions are in question. Both political parties are pledged to the creation of county boards, the advent of which cannot be much longer postponed; and it is now too late to hope that the guardian members of these boards can be excluded from participation in the government of lunatic asylums. Efforts might, however, be directed to limit the number of representative members on asylum committees, so that they might not have a preponderating voice in the management of these institutions, and so drag them down speedily from that high position which they have attained, under magisterial guidance, to the workhouse level. Efforts might also be directed to fix retiring pensions on a secure basis, exempt from the interference alike of committees and county boards. The present state of the law with reference to pensions in asylums has been long felt to be unsatisfactory. These pensions may be given or withheld at the discretion or caprice of a committee of visitors, or quarter sessions, and fixed at any amount, short of two-thirds of salary and allowances, that the generosity or parsimony of the magisterial body for the time being may determine. Under county boards, it would be simply intolerable. No pensions would be given, or only wholly inadequate ones; and men, with proper pride, would shrink from asking pensions at the price of having their merits and demerits, and private affairs, discussed publicly by farmers and tradesmen of the humbler types. If pensions are to be awarded for prolonged service in lunatic asylums, and public economy demands the continuance of the pension system, they ought, at least, to be secured to those who become entitled to them, without solicitation, and without haggling over their amount. A medical officer, who has completed the term of service entitling him to a pension, and who has

acquitted himself creditably, ought to be able to claim his pension as a matter of course; and ought to know exactly what sum he may expect, either as an annual allowance, or as a lump sum in commutation, should he prefer that form of settlement. In order to obtain such security and certainty, asylum officers would, perhaps, have to forego some of the privileges which they are at present supposed to enjoy in the matter of pensions—privileges, however, which have never been of much advantage to them. Twenty years' service, instead of fifteen, as at present, would probably be required as the minimum length of service creating a claim for a pension; and the age of retirement would probably have to be fixed at sixty, instead of fifty. But these changes, we believe, would be cheerfully assented to, could a definite understanding and complete confidence as regards pensions be obtained. The most satisfactory plan would, doubtless, be to make the pensions of asylum officers a charge on the Consolidated Fund, withdrawing a compensatory amount of the Government grant now made towards the maintenance of lunatics; but, should that scheme be found impracticable, these clauses might be secured in the County Government Bill, making pensions exigible as a charge on the county rates, whenever certificates of the necessary age and length of service, and of good conduct, were produced. Asylum medical officers would do well to consider the matter, and formulate their wishes without delay.

MEDICAL NUMISMATICS.

HISTORY has had to trust to many sources for the materials wherewith her substantial fabric has been built up. Remarkable events happening in the history of the world have been chronicled in various ways. To our minds, no more lasting or beautiful way of recording important chapters could possibly be conceived than the engraving of medals and such like tokens. It combines art with science. Cellini and Pistrucci, not to mention others, are names to be commemorated on the artistic side of numismatics.

Nearly 170 years ago, Dean Swift wrote: "The English have not been so careful as other polite nations to preserve the memory of their great actions and events on medals." Whether this proposition holds good at the present day, we should be inclined to doubt. But, absorbing as it may be, we have here not much to do with the artistic aspect of the subject; the work which has called forth these lines is of medical significance.

Drs. Pfeiffer and Ruland* have collected, from numismatic documents, medals and coins whose inscriptions treat of the great calamities which have befallen a section of the human race, more especially during the past three centuries.

Historically, medals serve to corroborate rather than found information, though rarely they may perform this latter function, and be the sole source from which knowledge may be gleaned.

That the present collection of medals, or rather their descriptions, possess a real value, no one can deny, and events can hardly be more substantially commemorated than by such means. We congratulate the authors upon the work which they have produced, not only because of the kind of stuff, but also for the methodical and pleasant way in which it is served up. We will not go so far as to say that it is a decided treat—that would be too much; for everyone knows how very dry a mere catalogue of descriptions of the legends and devices to be found on the obscure and reverse faces of a coin struck of this or that material, and of such-and-such a size, would be. But this dryness is made palatable by means of well timed episodes of truly useful information, a text, as it were, whereby the hard facts are softened and welded together. Indeed, the amount of collateral knowledge which has been appropriately interwoven, is not one of the least features of the volume.

Then, again, the introduction, at the end, of two plates of well executed photographs, decidedly increases the value of the work. More of such plates would have been very acceptable.

* *Pestilentia in Nummis. Geschichte der grossen Volkskrankheiten in Numismatischen Documenten. A Contribution to the History of Medicine and Culture*

The book, as we have hinted, has an admirable arrangement, and is divided into about six sections. In the first place, about seventy pages are devoted to medals preserving the memory of such disasters as famines, floods, severe winters, drought; of such natural events as the coming of comets, locusts; and of such benefits as good harvests. Altogether, we are reminded of the seven good kine and the seven thin and ill favoured kine blasted with the east wind, in Pharaoh's dream. The medals and tokens of this part date from 1505 to 1854, and are arranged in a chronological and geographical order. Some of the subjects are quaint and mirth-moving; of such are the medals of corn forestallers—happily, an extinct race since the advent of Free Trade. One of these represents an individual of this class walking towards the numismatic right with a sack of corn over the left shoulder, on which the devil is perched, and in which the latter gentleman has made a rift, which in time shall empty the store.

The next chapter deals with the commemoration of the Plague and pestilential diseases, together with their prevention. Here some tokens of earlier date (A.D. 250), under the Roman empire, are given. The Wittenberg plague medals of the 16th century are arranged under four types. Type A shows on the obverse a pillar round which a serpent twines; on the reverse, Christ on the Cross, with kneeling petitioners around, and the legend runs as a circle round the device. The other types are somewhat different from this, both in the allegory and in the legend, but all the sorts have a family likeness. Another series of medals struck in Italy, Germany, and the Netherlands, in memory of the Thirty Years' War follows; and is succeeded by a numismatic account of the Plague in the reign of the German Charles the Sixth. Medals exist commemorating quarantine and other measures adopted against the spread of the plague, and these are culled from Russia, Austria, Belgium, Venice, Moldavia, and Wallachia.

The third part deals with the medals on inoculation and vaccination; and under this head are included portraits, with statues and busts. Inoculation and small-pox, cow-pox, and vaccination, next receive treatment numismatically; and here the names of Jenner and Sacco stand conspicuous. Next we have a few pages on the medals for the promotion of vaccination; and sequent to this, a brief account of yellow fever. The penultimate chapter deals in a full manner with the numerous invasions of cholera in various European countries since 1826. We may mention that a medal was struck in Munich in 1836, which was to be a talisman against cholera when worn in the stomach region next to the skin. Other widely acting causes of excessive mortality, especially amongst children, form the subject of the concluding department. After a good supplement, with corrections, the book ends up with an index to the persons and places contained in the technical numismatic portion.

NON-INTOXICATING LIQUORS.

NON-ALCOHOLIC beverages, so-called, have been brought before the public very prominently during the last two or three years, both by means of the advertisements of those who are interested in the sale of certain articles, and still more by those who are seeking, in the public interest, to establish coffee-taverns or other places of refreshment where beer, wine, and spirits, which are usually classed as alcoholic stimulants, should not be sold.

When properly conducted, there can be no doubt at all that these establishments are doing good work by providing opportunities for those who desire to take refreshment which does not contain any alcoholic stimulant, and where they can yet be treated as regards convenience and attention in the same way as in an ordinary public-house. When the first public-houses were first established, it was hardly worth the while to keep any effervescing drinks other than those ordinarily in use; and the cold liquors on sale, or at any rate those in bottle, became limited to a few of the better known or most advertised effervescing liquors. After the introduction of these beverages to common use, it became evident that, in order to make them keep for a reasonable length of time, the ordinary retailer to deal

with them in a commercial way, it was necessary to have either a small proportion of alcohol in them, or that they should contain a considerable excess of iron or some other medicinal salts—in a good many cases salicylic acid—which should preserve the bottled liquors as long as required to enable them to be retailed over the counter.

In the first instance, there was no objection raised by the Government to the small quantity of spirit which was requisite for the purpose of keeping these beverages. It is possible, and indeed highly probable, that the authorities had no intention at all of allowing anything to escape the Excise duty which could possibly be brought in so as to cause an increase to the revenue; but it was tacitly admitted, if not expressly stated, that, if the proportion of spirit were kept below two, or at the very outside three per cent., no Excise objection would be raised. In other words, teetotallers might drink the very mild beer which was represented by this percentage of spirit, without the vendor being liable to Excise proceedings if he did not take out a licence under the Excise Acts.

From recent proceedings, however, it appeared that the liberty, if we may so call it, thus given to the manufacturers of these beverages, is being taken advantage of to what appears to the Excise authorities to be too great an extent, and that consequently they are endeavouring to draw the line rather more stringently.

A recent case at Nottingham shows the action which the Excise purpose taking in the matter. A vendor of a so-called non-intoxicating beverage sold under the name of Botanic Beer, but who held no license for the sale of alcoholic liquors, was summoned for selling a compound which was admitted to contain 3 per cent. of alcohol: in fact, it was very mild ale. After hearing the case, the Bench of Justices decided to dismiss the summons; but, as the Excise have given notice of appeal, this is only a temporary shelving of the question.

The right of the matter seems to us to lie in this. Why should any of these liquors be sold directly or indirectly under the name of beer? If non-intoxicating drinks are to be sold—and there certainly is no reason why they should not—let them be sold under names which are entirely distinct from those ordinarily applied to intoxicating drinks, and let the supervision of the Excise be confined simply to this point, that those drinks should not contain more than, say at the outside, 2 per cent. of spirit.

So far as we can see respecting this case at Nottingham, the Excise officers have not in the least exceeded what was their clear duty in the matter. It is quite true that they had to proceed under an old and, perhaps to some extent, obsolete Act; but there is nothing more in this, although the Act may be fifty years old, than has to be done in many other cases. If the proportion of spirit in these temperance beverages has to be increased from the 1 per cent. that was first talked of to 2 per cent., then to 3 per cent., it will be but few months before we shall find that ordinary bitter ale is spoken of as a non-intoxicating beverage.

THE WORKING OF THE ADULTERATION ACT.

It appears from the report of the Local Government Board for 1881-82, which has just been published as a Parliamentary paper, that, during last year, a total of 17,827 articles of food and drink were submitted for analysis to the public analysts, of 150 more than in 1880. Of these, 5,400—not far short of one-third—were made in the year 1880. As the public continue to avail themselves only to a very limited extent of the provisions of the Act, the Local Government Board, upon the extent to which local authorities are enabled to exercise their power of procuring samples for analysis; and the result is that, while in some districts the Act is well enforced, in others it is almost a dead letter.

Of the total number of articles, 2,617, or 14.7 per cent., were found to be adulterated. Samples of milk gave, as usual, by far the largest proportion of articles examined. Altogether, 6,926 samples of milk were examined, 1,786 or 25.8 per cent. of which proved to be adulterated.

terated. Some improvement in the purity of this article seems to have been effected by the Act, as the proportion of adulterated samples, which in the whole of England and Wales was 24.1 per cent. in 1877, was only 19.5 per cent. in 1881. In the metropolis, the percentage of samples reported against was 23.4; and this proportion, formidably large as it is, nevertheless compares very favourably with that recorded in previous years. The amount of water added is often very large, and in a few instances reaches the enormous proportion of 60 or 70 per cent. Probably 20 per cent. may be taken as about the average. The analyst for Woolwich, in reporting upon a number of samples diluted to about this extent, remarks that, according to experience, the inspectors are not generally successful in procuring the worst specimens, and he suggests that the inhabitants of that parish must be paying some thousands of pounds a year under the name of milkmen's bills, but really as an additional water-rate. The adulteration of bread seems to be steadily on the decrease, as only 4.7 per cent. of the samples examined were found impure. In these, the adulterations consisted for the most part of additions of alum, introduced in order to improve the appearance of the bread, but having the effect, when present in quantity, of making it very indigestible. Of the 429 samples of flour analysed, not one was found adulterated. In the case of butter, the returns show a marked improvement, the percentage of adulteration having dropped from eighteen in 1880 to fourteen in 1881. In some cases, the ingenuity of dairymen seems to be directed to the introduction of as much water as possible into the butter during the process of manufacture. The analyst for Southampton remarks, on one such sample, containing no less than nineteen per cent. of water, that water is rather dear at the price of 1s. 4d. per pound, or at the rate of 3s. 4d. per quart. In coffee, the proportion of adulteration is rather less than last year; it continues to consist principally of chicory. The adulteration of sugar is, practically, a thing of the past; and the very dangerous practice of using poisonous pigments for colouring confectionery, a practice which used to be very general in the early days of analysis, seems also to have been almost entirely abandoned. Eight samples of beer were reported against out of 326 analysed. Excess of salt was, in most of these cases, the cause of their condemnation. Spirits still figure prominently in the enumeration of adulterated samples, as more than a quarter of those examined were reported against. It is found that water is added, in many instances, in extraordinary profusion, and a good deal of gin is sold containing not much more than twenty per cent. of alcohol. The number of samples of drugs reported on (398) is smaller than is desirable, and the percentage of adulteration (15.0) continues very large. Of the 17,823 samples analysed during the year, all but 358 were obtained by officers of local authorities.

A much larger proportion of the private than of the public purchases were found adulterated, this being doubtless due, for the most part, to the fact that a private purchaser is not likely to take the trouble and incur the expense of analysis, unless he be tolerably confident that the goods sold to him are adulterated. Moreover, there are good reasons for believing that the inspectors are often served with better articles than the general public, as the adulterating tradesman learns to recognise the former, and his mission, too well. Probably the cost of analysis often tends to prevent the public from more largely availing themselves of the Act; and it deserves consideration whether the example of Bristol, Salford, and some other towns, in making the fee for analysis to private individuals half-a-crown instead of the usual half guinea, might not to be generally followed with great advantage.

At the Banquet given last week to the medical officers of the Egyptian Expedition, both Deputy Surgeon-General Marston and Colonel Sir Owen Lanyon spoke of the excellent administration and condition of the Base Hospital at Ismailia, which, it will be remembered, was under the able direction of Brigade-Surgeon Veale.

THE Contagious Diseases Acts were discussed at the recent annual meeting of the Royal Albert Hospital, Devonport. The port-admiral (Sir W. Houston Stewart), who presided, speaking of the Acts from the standpoint of a naval man, said he once commanded a vessel in the Mediterranean, and wintered in Malta harbour. The first winter the Acts were in force, and no case of disease occurred; the second winter the Acts had been suspended by the governor, and there were thirty cases of disease; the Acts were re-imposed, and then, in the third winter again, not a single case of disease occurred. Mr. E. St. Aubyn, the honorary secretary of the hospital, replied at considerable length to an attack upon the Acts recently made by Professor Stuart, of Cambridge.

THE QUEEN'S VISIT TO NETLEY.

AMONG the invalids whom Her Majesty the Queen visited at Netley on Wednesday last, one officer and eighty-six non-commissioned officers and privates of various corps had the honour of receiving the Egyptian medal from Her Majesty. The sun shone brightly during the whole of the Queen's visit. In traversing the wards of the Royal Victoria Hospital, Her Majesty was accompanied by Surgeon-General Holloway, C.B., Professors Longmore and Maclean, and the other medical officers in charge. Her Majesty showed the deepest interest in the welfare of the invalids.

ILLNESS OF THE DUKE OF EDINBURGH.

THE Duke of Edinburgh had been suffering for several days from slight bronchial catarrh, contracted while on duty on board the *Lively*; but on Thursday, the 23rd instant, Sir Oscar Clayton, who was attending the Duke while in London, found the temperature normal, and gave His Royal Highness permission to return, according to previous arrangements, to Eastwell Park. On the journey, the Duke was seized with a slight rigor, so that, immediately upon arriving at Eastwell, he took a hot bath, and went to bed. Growing rapidly worse, His Royal Highness sent for Dr. Wilks of Ashford, who, at 10 P.M., found the Duke with a hard bounding pulse of 120, temperature 103.5°, dyspnoea, short choking cough, much pain in the chest, especially on the left side, with some dulness and harsh puerile respiratory murmur over both lungs, great pain in the loins and limbs, flushing of the face, and marked restlessness. Under poultices and active medication, His Royal Highness shortly began to perspire, and by 4 A.M. was considerably better; but the renal implication rendered the attack, though short, a severe and minatory one. Sir Oscar Clayton arrived at Eastwell on Saturday evening, and, having held a consultation with Dr. Wilks, expressed his entire concurrence in the treatment adopted. His Royal Highness has since made steady progress towards recovery.

SIR THOMAS WATSON.

DURING the past few days, Sir Thomas Watson has, we regret to learn, become still more exhausted and helpless. He is much wasted, but takes a fair amount of liquid nourishment. At times, he becomes quite cold, the temperature again returning to 98°. The pulse is very feeble, and varies much in frequency. Although death does not appear immediately imminent, he is slowly losing ground, and speaks with difficulty. He still, however, remains conscious.

PORRO'S OPERATION IN LONDON.

ON Monday last, November 27th, Dr. C. Godson, Assistant Physician-Accoucheur to St. Bartholomew's Hospital, performed Porro's operation on a dwarf, aged 24, whose pelvis was distorted to an extreme degree. The patient was returned to her bed one hour after the commencement of the operation; the child was a girl, twenty inches in length, and eight pounds and a half in weight; the mother being but fifty-two inches in height. Up till Wednesday morning the case was reported as doing well; the temperature had not risen above a maximum of 99.4° Fahr., and the pulse had never exceeded 80 beats per minute.

NOTIFICATION OF INFECTIOUS DISEASE.

AT the last meeting of the Midland Medical Society, which was largely attended, at the Birmingham Medical Institute, a discussion took place on the desirability of making the notification of infectious diseases compulsory. After a prolonged debate an amendment was carried, in which such compulsory notification to the sanitary authorities, both by the medical attendant and the occupier of the house, was embodied, thus negating the resolution originally submitted, in which the onus of notification was laid upon the householder only.

THE MEDICAL SOCIETY OF LONDON.

AN interesting evening is promised for this Society next Monday, on which occasion Dr. Heneage Gibbes will show about twenty microscopic specimens under high powers. Amongst them will be exhibited preparations of tubercle-bacilli from the lung and sputum, bacilli anthracis, bovine tuberculosis, and also micrococci from subjects of various diseases. The subsequent discussion will be kept entirely to the objective side of the question of bacilli, that of the clinical aspect being reserved for a future evening.

THE DISCOVERY OF TRICHINA.

WITH regard to the discovery of the *Trichina spiralis*, it is stated in the autobiography of Mr. Gulliver (the manuscript of which is in the possession of Mr. T. M. Stone, formerly of the College of Surgeons) that "Dr. Arthur Farre, son of the excellent pathologist, was yet at St. Bartholomew's near the period of my arrival there, and he was a diligent and good anatomist, who made the best early observations on the *Trichina spiralis*, the muscle-worm now become the terror of pork-eaters. I think it was at Guy's that Mr. John Hilton first saw this worm, and specimens of it being soon afterwards found at St. Bartholomew's, were understandingly investigated by Mr. James Paget, at that time a pupil, and Professor Owen. Farre discovered the intestines and genitals of the creature, parts which Owen failed to find. So to Farre we owe the original and true description of this entozoon, and its claim to a higher organisation than had been allowed for it by Professor Owen." The late Mr. Wormald and Professor Quckett always gave the credit of the discovery to Paget.

THE FORMALITY OF A CORONER'S INQUEST.

IF the report of an inquest into the cause of death of Mrs. W. Morris of Llanstephen be correctly reported, the least that can be said of it is, that it was a marvellous instance of clairvoyance on the part of the jury. A lady and her husband, both invalids—the latter an epileptic—were seen, the lady for the last time alive, on Thursday evening, by the nurse, who took them their supper in bed. Two bottles of brandy were also supplied to them—by whom does not appear. On the following day, their little son knocked at their door to ask if they needed anything, and was answered by his father in the negative. Nothing more is seen or known of them until that evening (Friday), when, suspicions of something wrong being aroused, their room was entered. The husband was found sitting on the edge of the bed, on which the wife was lying dead and cold. We know nothing more of the attendant circumstances, and therefore can only observe that the death seems to be surrounded with mystery, and that the mystery has not been cleared up by the inquest. From whatever cause the omission may have arisen, the opinion of a medical man was not taken, and a verdict of "Death from natural causes" returned. That the verdict may have been correct, we do not deny; but, so far as the newspaper report goes, there was no evidence to support it.

IMPROPER BUILDING SITES IN THE SUBURBS OF LONDON.

IN the vicinity of Mortlake and Richmond, the refuse from dust-bins has been shot on land for the purpose of raising it to the level of an adjoining road, and a number of buildings are now being erected thereon, so that the health of a hundred or more persons who will in-

habit these houses when finished, must be more or less endangered. When a site near Liverpool, some years since, was being similarly utilised, a strong expression of opinion was made by experts that the site should not be built upon for at least three years; but excavations subsequently made on dust-deposits show that a period of seven years is insufficient to allow decomposition of the organic matters contained in a considerable accumulation of dust and house-refuse to be fully completed. In these cases, it appears that the local authorities have no power to prevent the erection of houses on such sites, as the only section in the Public Health Act which applies to the making of by-laws for buildings, states that the local authority may make them "with respect to the following matters, that is to say, to the structure of walls, foundations, roofs, and chimneys of new buildings, for securing stability, and the prevention of fires, and for purposes of health." It will be seen that the word site does not occur in the section. The same difficulty obtained in the metropolis until the Metropolitan Building Acts Amendment Act passed in 1878, since which time the Metropolitan Board have made such by-laws as render the erection of buildings on dust-shoots illegal. There can, however, be little doubt, if the accumulation and deposit of dust-refuse under the houses should prove to be injurious, that the local authority can get an order for its removal when the houses are inhabited; but why should it be possible for builders to erect houses on sites which are certain to be more or less injurious to the occupants for several years? The sooner an Act is passed conferring on all urban authorities powers similar to those possessed by the Metropolitan Board of Works, the better it will be for the inhabitants of the districts over which they have control.

METROPOLITAN SEWAGE.

A DECISION was pronounced by Mr. Justice Fry, sitting in the Chancery Division of the High Court of Justice on the 22nd instant, which has an important bearing upon the vexed question of the pollution of the Thames by sewage. The case also serves to show how the Metropolitan Board of Works feels itself under the necessity of limiting its operations, in dealing with sewage, strictly to the sewage of the metropolitan area. An action was brought, at the relation of the Metropolitan Board of Works, to restrain an alleged public nuisance by the fouling of the west branch of the Stamford Brook, and also to restrain the Acton Local Board from allowing the sewage to pass into the brook in such a manner as to flow into the metropolitan main drainage system. The natural drainage of the larger part of Acton, which is outside the metropolitan area, falls into the east and west branches of an old watercourse known as Stamford Brook, which flows into the Thames at Hammersmith Creek. The Metropolitan Board, when the present system of draining London was constructed, made intercepting sewers, one of which took the sewage below the point at which the west branch of the Stamford Brook, containing the Acton sewage, has joined the east branch. Consequently, a large part of the sewage of Acton is carried through the metropolitan system. The Local Board, as one ground of defence to the action, asserted a right to make use of the old natural watercourse for their drainage, and maintained that, as the Metropolitan Board by their own act had intercepted the sewage, they had taken on themselves the burden of disposing of it. Mr. Justice Fry held that no case of increased public nuisance had been made out, or of material damages, and dismissed the action so far as it related to claims on the grounds of increased cost of pumping sewage, etc. But he considered that the Acton Board were in no different position with regard to the Metropolitan Board from that of a riparian owner to another owner lower down, and could not cast on them any additional burden. He therefore granted an injunction to restrain the defendants from allowing any further connection of drains with the brook. But, as to the existing drains, looking at the whole circumstances—the balance of convenience, the enormous evil there would be in stopping the existing drainage, the acquiescence and delay on the part of the Metropolitan Board, and the fact that no material damage was shown; and, further, the doubt he had whether the Acton Board had power to

compel householders to cut off their drains—he refused to grant a mandatory injunction. The decision is one of great importance; and will no doubt rule others respecting the disposal of sewage on the borders of the metropolitan area.

RESIGNATION OF SIR JOHN LAMBERT.

WE record with considerable regret the resignation by Sir John Lambert of the post of permanent secretary to the Local Government Board. Sir John's health has, for some little time, been the subject of anxiety; and the great responsibilities of a position such as his were found to be telling too seriously upon his system. He will be followed in his well earned retirement by the cordial sympathies and regrets of all those with whom he came in contact in his official capacity. Lord Salisbury, in his address to the Edinburgh Town Council last Monday, took occasion to refer to the permanent servants of the State, and to more than hint that they constituted the real Government of the country. How far this may or may not be true as a general axiom, it is not our province to discuss; but it may safely be said that, in Sir John Lambert, successive Presidents of the Local Government Board have had at their elbow a wise and cautious administrator, but for whom important matters would often have fallen into an inextricable tangle of confusion. The inauguration and successful conduct of the whole public health system of the country has to no small degree been due to Sir John Lambert, although we have often had to differ with some important points of his policy, especially its too disjointed character, and the extent to which health administration was subordinated to Poor-law organisation and officials. His thorough mastery of the intricacies of the huge and cumbrous machine that he directed, has been of the greatest possible assistance, both to those within and without the department of which he was the chief. It can be small wonder that the cares of an office so responsible and so onerous should at length have told upon a constitution never specially robust. The new secretary, Mr. Hugh Owen, has been trained in the work of the department since he was a mere lad, and is known to possess considerable qualifications for the position which he has now assumed. But he will find it difficult to follow precisely in his predecessor's footsteps, and to maintain that intimate acquaintance with all the workings of an overgrown and badly organised department which made Sir John Lambert's career so brilliant and successful.

LADY STRANGFORD'S HOSPITAL AT CAIRO.

IN the report just presented by Dr. Grant Bey to the Medical Board at Cairo on Lady Strangford's Hospital, he gives an account of its formation and the following complete list of the hospital staff. *Superintendent*: Viscountess Strangford. *Surgeon*: Mr. H. Sieveking. Five nurses. *Ward Orderlies*: Three young lads (Arabs). One cook and one assistant for staff and English patients; one cook and one assistant for Arabs. *Staff Servants*: Three Arabs. *Laundry*: One superintendent (English) and some natives for washing and ironing. *Door-keeper*: One Arab. *Housekeeper*: One Englishwoman. *Steward*: One Copt. *Doctor's Interpreter*: One Copt. The whole staff consists of between twenty and twenty-five persons; and the following interesting record of cases admitted was furnished to Dr. Grant by Mr. H. Sieveking, the able surgeon connected with the hospital. Up to the present date, it appears, twenty-nine wounded Arabs have been admitted, having been given over by the Egyptian Government Hospital. Three of these had had amputations performed: two by English military surgeons, and one by a native surgeon, before admission. These are reported by Mr. Sieveking as improving. Eight are cases of fracture, some of them very bad; but the surgeon hopes to save all the limbs implicated. Fourteen cases of flesh-wounds and injuries to joints are all doing well. Of four cases in which amputation had to be performed, three are doing well, but one has died from gangrene and blood-poisoning. One Arab, with ophthalmia, is now recovering. Eleven patients have been admitted from the English army. Five of these have been discharged convalescent, while six remain under treatment.

These are more or less under the medical care of the regimental surgeons. One of the most instructive features of the hospital is the nursing, which is conducted entirely by women; and it is suggested that the Egyptian ladies, if ever they are to develop any public spirit, could not do better than visit this hospital, and learn the lessons that would be taught them there. To these native ladies, Lady Strangford would, it is thought, gladly give up the management of her hospital whenever they are fitted for taking it over; but, until then, it is hoped her ladyship will be encouraged to continue her noble work.

PROGRESS OF SMOKE ABATEMENT.

AT a meeting of the Smoke Abatement Committee, held on Saturday, at the offices, 44, Berners Street, under the presidency of Mr. Ernest Hart, it was announced that the Board of Trade had finally approved of the formation of a Smoke Abatement Institute, and of the articles of association; and that the Duke of Westminster, the Duke of Northumberland, and the Duke of Sutherland, had accepted the offices of vice-presidents; and Mr. Ernest Hart the office of President of the Council. Communications were read from the Foreign Office, enclosing official documents communicated to the Senate of the United States by the President of the United States, containing a detailed and important report which Dr. Hopkinson, F.R.S., had made on the Smoke Abatement Exhibition at South Kensington for the information of the American Government. Official communications were also read from New Zealand, the Dominion of Canada, and Chicago, conveying information as to the steps taken in those countries, on the impulse given to the question by the action of the Smoke Abatement Committee, and requesting information as to appliances and legislative measures, which was ordered to be furnished. It was announced that the volume containing the reports of the jurors, with detailed tabulation of tests, forming a work of important character and permanent value, with a considerable body of illustrations, was now in the press. Mr. T. W. Cutler, F.R.I.B.A., and Mr. J. Lowry Whittle, were appointed a sub-committee to report on the question of the formation of a museum and permanent exhibition of smoke-abating kitcheners, grates, and industrial appliances, for public use and information. Mr. Kegan Paul (honorary treasurer) presented the accounts, which were ordered to be printed and circulated; and it was announced that upwards of £200 had been subscribed towards the funds of the new Smoke Abatement Institute. A resolution was laid on the table which had been adopted by the Corporation of the City of London, who had appointed a committee to study the question of smoke abatement in London, and to consider the defects of present legislation, and the advisability of taking more urgent measures for the abatement of smoke. Arrangements were reported of meetings to be held at Higher Broughton and in the Pottery district, with the like object. Other business of an important nature having been transacted, the meeting adjourned.

THE ORCHARD ALUM SPRING.

DR. THRESH, writing to the *Pharmaceutical Journal*, on the subject of the Orchard Alum Spring, of which he has made a somewhat careful examination, says: "The spring, which appears to be a 'descending' one, originates in a disused coal-mine, near the summit of Axe Edge, the highest point in the Peak country. To get rid of this water, a narrow tunnel has been bored through the side of the hill, just over the Staffordshire border, and about five miles from Buxton, and the water flows from the open end of this conduit into a tributary of the Dane. As the farm on the hillside is known as the Orchard (a most singular name for such a bleak and desolate spot), and the water has a strongly astringent taste, the spring is usually called the Orchard Alum Spring. The country people round have great faith in the virtues of the water, and not only make use of it themselves, but frequently bottle it to send long distances to their friends or others who arrange with them so to do. It is chiefly valued as a vermifuge; and no matter what may be the description of the parasite, nor whether it infest young or old, human beings or cattle, one or more doses of this remedy is said to bring about

the desired result. It is for this purpose usually taken fasting. Cattle, after being kept without food and water for some time, are allowed to drink as much of the fluid as they will, and the effect produced is frequently described as astonishing. As a tonic, its reputation is waning, continued use of it even in small quantities producing obstinate constipation, and generally doing much more harm than good. I am informed that, years ago, many members of the medical profession in the neighbouring towns and villages prescribed it frequently, but I do not think such is the case at the present time. Applied externally, it is said to cure ringworm, and is largely used by the farmers as an outward application for various skin-diseases on cattle. The water has a very decided red tint, varying in depth according to the character of the weather. The sample analysed was collected after a period of continuous rain, and was not near so dark as it is usually seen, yet, when placed in a wine-glass, it looked like a pale sherry. Seen in larger volumes in the deeper portions of the stream, it has the colour of blood. It reddens litmus paper, but contains no free acid. When heated to about 150° Fahr., it becomes quite opaque from the separation of a basic ferric sulphate; but, if allowed to evaporate on the water-bath nearly to dryness, the basic salt redissolves and a yellow vitreous residue remains. When heated so as to cause the above salt to deposit, the supernatant fluid is quite colourless. The mean of two concordant determinations of the specific gravity gave 1.00351, as compared with pure water at the same temperature. Analysers of the composition of the water, show that the medicinal properties of the spring are due to the ferric and aluminic sulphates, of which it contains a large quantity. Undoubtedly," says Dr. Thresh, "it is of too powerful a character for internal use unless very considerably diluted, but even then as a tonic its value is impaired by the presence of the sulphate of aluminium. Its acid reaction, of course, is due to the presence of these salts, and the excess of ferric oxide explains the decomposition which takes place when the water is heated."

CONVICTION UNDER THE BIRTHS AND DEATHS REGISTRATION ACT.

A CASE which is reported in the daily papers seems to show that all practitioners are not even yet alive to the importance of great accuracy of statement in their certificates as to the cause of death. If the case be correctly reported, there seems to have been even less excuse than usual for the principal placing himself in the unpleasant position of having falsely certified that he had attended a patient who had only been seen by his assistant, for the assistant, it is stated, was qualified. How far the false statement that the child had been previously seen in September may have been induced by a decision of one of the metropolitan police magistrates a few months since, to the effect that one visit or consultation was insufficient to base a certificate of having "attended" upon, we are unable to guess; but, as we have reason to think that that decision was a very questionable one, we should advise, if such another case were to occur, that the matter be carried to a higher court. In the case recorded below, the defendant appears to have been leniently dealt with. At Worship Street, Mr. Benjamin Thornton, L.S.A., of Goldsmith's Row, Hackney Road, appeared in answer to a summons taken out under the Registration Act, 1874, 37 and 38 Vict., cap. 88, charging him with having wilfully made and given a false certificate of the death of one George Howlett. The prosecution was conducted by Mr. Howard, Superintendent Registrar of the district of Bethnal Green. Mr. Shakespeare Smith, solicitor, defended. Sarah Howlett, married woman, living at 51, Ann's Place, Hackney Road, deposed that her child, named George, three years old, was taken ill on October 5th, and she took it to the surgery of Mr. Thornton, the defendant. She did not, however, see him, but an assistant, and the latter saw the child, and he gave her medicine for it. The child died the same day. Mr. Howard put in the defendant's certificate that the child had been seen by him in the previous September, that it was diseased from birth, and died from convulsions in six hours. The witness added that it was not true that the defendant had seen the child in September. For the defence, Mr. Smith said that the defendant was a gentleman seventy-two years of age, who, from ill-health, had

employed a qualified assistant, a Mr. Wood, in the surgery. The defendant had practised for over twenty-five years in the district, and bore a high character. If it were true that he had not seen the child in September, as the certificate stated, it was only an error of memory. The magistrate, Mr. Hosack, thought the Act of Parliament was clear in its intention, and that the defendant had knowingly, though not corruptly, broken the law. He ordered him to pay a fine of £5, and 2s. costs. The fine was paid.

NORWEGIAN METHODS OF DEALING WITH CONTAGIOUS DISEASES.

The sanitary organisation of Norway was fixed by the law of May 16th, 1860, which provides that each district, urban or rural, shall have a board of health, to consist of the district physician, an engineer, one of the magistrates, and three citizens. When a parent or householder has in his residence a case of contagious or malignant disease, he must report the fact at once to the President of the Board of Health. The attending physician is also required to report such cases. When the board of health considers that the safety of the community is menaced by the presence of contagious disease, it has very great power of interference. It can divide the district into subdistricts, and place any of these under special supervision, can appoint physicians, establish temporary hospitals, and, if necessary, take any building for a hospital, the damages being fixed by a special jury. Each board prepares rules and regulations which, when approved by the king, become law for that particular district. In Christiania, the capital, for example, these rules require physicians to make a daily report of the specially dangerous diseases, including small-pox, cholera, typhoid fever, typhus, scarlet fever, measles, puerperal fever, erysipelas, diphtheria, and dysentery. The city has the most ample hospital accommodation for each class of the sick. The hospitals for small-pox, cholera, typhus, scarlet fever, measles, being each separate and distinct, besides a hospital where persons suspected of having contracted a contagious disease can be kept under observation without exposing them to danger. When a case of contagious disease is notified, the physician attending may advise the patient's removal to hospital. In this case, an order is at once issued, and the sick man is at once taken to hospital, his clothing, bedding, etc., are disinfected by dry heat, and the room is disinfected by burning sulphur. In case of typhoid fever, the privy vault, if there be one, is emptied and disinfected. All this is done under the supervision of the city physician of the ward. If the attending physician do not desire the removal of the patient to hospital, he confers with the city physician or the health-officer, who has discretionary powers. In case of small-pox or typhus, it is rare to permit the patient to remain out of hospital. These regulations, which prescribe with great minuteness the methods of disinfection, isolation, etc., went into effect in 1874. The following table shows the mortality of the city for two periods, and the improvement which certainly seems due to systematic sanitary work.

	Number of Deaths.		Average Annual Mortality per 1,000	
Diphtheria ..	161		1.7	
Typhus and Typhoid	18		1.7	
Cholera ..	90		0.4	0.08
Small-pox ..	1		1	0.01
Scarlet Fever	157	431	7.9	7.7
Measles	415	201	4	3.4
Puerperal Fever			1	1.1

Fuller details as to methods and results will be found in a paper by Dr. Bentzen, Secretary of the Board of Health of Christiania, which is given in the *Marseille Medical* for August, 1882.

SMOKE NUISANCES AND THEIR ABATEMENT.

WHILE the correspondents of many of our contemporaries are again urging the necessity for new or more stringent legislation, it may be useful to point out that the existing legislation is capable of being made considerably more effective than we find it really is in practice. In

comparatively few of the cases of conviction even the minimum penalty is inflicted, and in too many instances the fine is so absurdly small, that it is more likely to bring the law into contempt and depreciate public estimation of the evil than produce any other effect. As a case in point, the recent decision of Mr. Saunders at Lambeth Police Court may be cited. The stokers of several large firms were severally fined half-a-crown, without costs, although in some of the cases a second conviction was proved, and in all it was clearly established that dense black smoke had been emitted for periods of ten consecutive minutes and upwards. Several well-known manufacturing works, of which frequent complaints have been made through the press, were among those prosecuted. It should be remembered that in only one period of ten minutes each one of the chimneys in question would pour about 4,000 to 5,000 cubic feet of smoke into the atmosphere. Obviously, a very few of such chimneys, smoking for but a few minutes each, are needed to yield such a volume of smoke as to form, in combination with aqueous particles, that fog which prevails, more or less, in the neighbourhood of Lambeth and Vauxhall throughout the year. The authority of the Home Secretary in directing prosecutions, the ability of the Commissioner of Police in organising a comprehensive system of observation and reports, as well as the vigilance of the staff in carrying out the duty, are alike ineffectual to check the nuisance in the face of such treatment of offenders by the bench. Though, no doubt, a large discretionary power lies with the bench in regard to the amount of the penalty, still, we fail to find in the language of the Act a warrant for such relaxation of the law as we now refer to. It is enacted that "the best practicable means for preventing or counteracting smoke" shall be adopted, and that "any person in charge of a furnace who shall so negligently use such furnace as to cause a nuisance, shall, upon summary conviction for such offence forfeit and pay a sum not more than £5, nor less than 40s., and upon a second conviction for such offence the sum of £10, and for each subsequent conviction the sum of double the amount of the penalty imposed for the preceding conviction." The only power given by clause 111 of the Act to remit the penalty is in case that the justice or justices shall be of opinion that the person offending "has carefully attended to the furnace, and consumed or burned, as far as possible, the smoke arising therefrom." In cases where it is proved that, from want of proper construction or use of the furnace, a nuisance has been committed, it does not seem to be in the discretion of the magistrate to reduce the fine below the minimum penalty enacted. In a recent article by a contemporary it was pointed out, in reference to the last Report for the Commissioner of Police of the Metropolis, that it is impossible to help remarking that a decrease in the number of the cases reported always follows and does not precede a decrease in the number of convictions; showing, apparently, that the more severe the magistrates show themselves, the more actively the nuisance is dealt with by the executive. Such activity is hardly likely to prevail in the face of convictions being treated lightly by the bench. Fortunately all magistrates do not treat offences so lightly as Mr. Saunders. Sir James Ingham, in a recent action, for causing a smoke nuisance from the engines used to produce the electric light for the Savoy Theatre, told the defendants that he had found that by doubling the fines smoke had been prevented, even after evidence had been adduced to prove the impossibility of preventing the nuisance. The novel plea was advanced, by Mr. S. Vine of Peckham, as a defence for allowing dense black smoke to issue from the chimney of his bakery for a quarter of an hour at a time, that it was done early in the morning before many persons were out of bed. The magistrate (Mr. Chance) pertinently observed that if that plea were admitted, the atmosphere might become intolerable before persons left their beds; and he inflicted the reduced fine of 30s. and costs, it being the first offence.

MEDICAL COLONIAL EXHIBITION AT AMSTERDAM.

THE Executive Committee of the International Colonial and Export Trade Exhibition, to be held at Amsterdam from May to October 1883, have resolved, on the invitation of the Dutch Association for the Ad-

vancement of Medical Science, to add a section for colonial medicine, to be opened simultaneously with the colonial exhibition. The object of this medical section is to promote a knowledge of the sanitary and medical conditions in the colonies. It will be divided into three classes. The first class will embrace everything relating to the administration of public-health in the colonies. Sanitary Commissions, their organisation and labours, regulations and reports. Supply and testing of water for drinking purposes. Models of artesian wells, aqueducts, reservoirs, ice-factories. Distilling apparatus, filters, etc. Regulations against the adulteration of food. Testing of foods. Adulterated foods. Rules and regulations on the sale of opium, haschis, alcoholic and other intoxicating drinks. Intoxicating drinks made and used by natives. Bathing and sanitary establishments. Schools, dwellings for the labouring-classes, barracks, prisons, etc., from a hygienic point of view. Sanitary control. Burial grounds and cremation. Sewerage, sewers, cesspools, tubs, etc. Trades, professions, and cultures detrimental to health. Communications in regard to the diseases caused thereby; sanitary control; means of improvement. Measures against endemic, epidemic, and contagious diseases. Measures against diseases caused by marshes, even when drained, by inundations, etc., in connection with the origin of malaria, bilious and yellow fever, cholera, dysentery, etc. Measures for the prevention of parasitical diseases. (The Committee particularly desires the contribution of objects relative to parasitical diseases proper to the colonies.) Rules and regulations on prostitution, and measures for preventing the spread of venereal diseases. Rules and regulations on vaccination. Establishments for animal vaccination. Models, plans, and drawings of establishments for quarantine. (Buildings, vessels, barges, etc.) Regulations for the prevention of epizootic diseases (rinderpest, etc.). Objects relative to these diseases. Death-rates. Diagrams of mortality in colonies, if possible with indication of the sources whence the returns have been compiled, and of the method followed in grouping them. Class II will relate to the organisation of the medical service in the colonies, viz.: Direction and administration of the civil and military medical service. Laws and regulations relative to the qualifications for the practice of medicine, surgery, midwifery, pharmacy, and veterinary surgery. Laws and regulations relative to the military medical service. Rules and regulations on the practice of medicine, pharmacy, and veterinary surgery by Chinese and other native practitioners. The distribution of physicians, surgeons, midwives, apothecaries, and veterinary surgeons in the colonies. Special medical education of colonial doctors in the mother-country. Medical schools in the colonies (education of Doctors-Djawa, district-doctors, etc.). Regulations. Buildings. Text-books and other auxiliary means of education (anatomical preparations of tropical and exotic diseases, etc.). Schools for midwives. Regulations. Buildings. Text-books. Educational accessories. The instruction of vaccinators. Regulations. Text-books. Class III will relate to attendance on, and transport of, the sick and wounded; their treatment by the natives. Models, plans, and drawings of civil and military hospitals, lying-in hospitals, lunatic asylums, leproseries, ambulances in the colonies, etc. Objects used in nursing the sick and derived from the colonies. Means of transport of sick and wounded; by land: preliminary assistance, ambulance-carriages, brancards; by water: hospital and transport ships and boats. Medical literature, printed and published in the colonies (periodicals, pamphlets, treatises, and other medical publications). The medical treatment and hygienic customs (circumcision, etc.) of the natives. Instruments, contrivances, belonging thereto. The drugs of the natives, if possible with a correct description of their origin and application. Medical literature of the natives. Chinese apothecary's shop. Means used by natives (antidotes and medical treatment) in cases of poisoning and poisoned wounds (bites of poisonous or injurious animals, as snakes, spiders, centipedes, scorpions, mosquitos, etc.; contact of toads, bats, etc.; stings of some fishes; wounds from poisoned arrows, etc.). It is requested to send the native poisons themselves, with a correct description of their effect according to the appreciation of the natives,

adding, also, the animals or insects, arrow-poisons, etc. Treatment of the *chica* (*pulex penetrans*) by the natives. Obstetrical help, and treatment of mother and child during and after the confinement, as practised by the natives. Instruments, etc. The Committee of the Colonial Medical Exhibition consists of Prof. B. J. Stokvis, President; Dr. A. A. G. Guye, Vice-President; Dr. F. J. Van Leent, 1st Secretary; Julius Coronel, 2nd Secretary. The Executive Committee of the Exhibition are; D. Cordes, President; S. De Clercq, Delegated Member; J. Kappeyne Van de Coppello, LL.D., Secretary; E. Agostini, General Secretary. The Committee will also admit all contributions serving to promote the objects of a medical exhibition generally; but, as the space allotted to them is limited, the models, plans, or drawings of the objects to be brought before the public will be preferred to the objects themselves, if the latter should be too bulky. The space required for the exhibition of objects in the medical section will be allotted free of any cost. Objects of a commercial or not strictly scientific character will not be admitted, though exceptions may be made in such cases where duplicates are already exhibited in one of the other sections. Objects intended for the medical section of the International Colonial Exhibition will be received at Amsterdam up to April 1st, 1883, and the packages should be marked, "Exhibition of Amsterdam. Section, Colonial Medicine." It is also intended to hold an international congress for colonial medicine during the exhibition in September 1883, the programme of which will be duly published.

HOLIDAY COLONIES.

AT the International Congress for Hygiene, which met lately in Geneva, a subject was discussed by the famous sanitarian, Dr. Varrentrapp, of Frankfurt, which, we think, will have much interest, not only for philanthropists, but for all who love to see happy rosy childish faces in place of the wan cheeks and languid eyes that so often meet us in the closely populated side streets of London. It has long been the custom with large-hearted men and women, in London and elsewhere, to take bands of children from the centres of our large towns for a day's outing in the green fields and flower-grown lanes that lie not very far from even the largest cities. Those who know the heart of a child, and have seen these bands, know something of what that outing means to them. For many it is the one bright particular day of the year, preceded by breathless expectation, followed by lingering happy memories. But while in this way a day's outing is valuable, nay, most valuable, it cannot be compared with the system discussed by Dr. Varrentrapp, and already to some extent established among ourselves. This consists in taking bands of weakly, poor, but well-behaved school children, to the number of ten or fifteen, under the care of a teacher (male or female), away from their usual surroundings, for a stay of three to four weeks in the open country, where they can be well housed in large healthy airy rooms, well fed with plenty of nourishing food, and encouraged to be much in the open air. Some would question the physical benefit of one day's outing, some even that of three weeks. Dr. Varrentrapp says that experience of five Swiss and twelve German "holiday colonies," as he terms them (1877-1880), shows that the children gain not only in freshness of aspect and in cheerfulness of movement, but also in weight (on an average, one to three pounds), and in stature (three-quarters to one-and-three-quarter inches). This increase is distinctly greater than is observed in children of a like age in a like time. The measurement of the chest, Dr. Varrentrapp says, is difficult in children at this age, and has not yet given results that can be employed statistically. Dr. Varrentrapp distinctly emphasises that the children taken out in such "holiday colonies," ought to be weakly, poor, and well-behaved, but that they ought neither to be sick nor in the early stage of convalescence from sickness. For these last, individual care and nursing is necessary. For the "holiday colonies" the teacher's oversight should not be too much broken up. All the children ought to have uniform nourishing diet, and be encouraged to walk, run, bathe, engage in gymnastics, etc., without being

too much afraid of a little rough weather. This would not suit either sick or convalescing children, for whom children's hospitals must provide the necessary care. The cost for each child daily, Dr. Varrentrapp estimates at two shillings, admitting, of course, that in this there may be wide differences. He recommends specially as the site for "planting" such colonies, mountain or seaside, the details being arranged according to place and opportunity; and he closes his address with an eloquent appeal, in which we would most warmly join, that, as each bright summer-time comes round, all medical men will remember the children, and do what in them lies to further the number and success of our "holiday colonies."

STREET AMBULANCES FOR LONDON.

A PAPER "On the Use of Ambulance Litters and Horse Carriages for the Removal of Sick and Injured Persons, especially in reference to the Metropolis", was read by Mr. Furley at the general assembly of the Society of St. John of Jerusalem on June 24th, and is now published in the form of a pamphlet. It embraces a question of much importance to the metropolis, both from a pecuniary point of view, and as regards efficient management of the accidental cases of injury that daily occur in the streets of London, so far as speedy and suitable removal of the injured persons to their homes or to hospitals is concerned. The question mooted is, whether the system which is being carried out in New York and other American cities for the removal of injured persons to hospital on occasions of accidents—a system which some influential persons are now trying to apply to London—is really the best for the purpose; or whether a more economical plan, and one suggested by the writer to be better suited to meet the circumstances of the metropolis, may not be introduced with greater advantage. The American system is to have all the police stations in telegraphic or telephonic communication with the hospitals of the city, and at each hospital a complete ambulance establishment, comprising carriage, horses, driver, bearers, and surgeon, with the necessary equipment, always ready for service at a moment's notice by day or night. The intended working of the system is that, when an accident occurs, notice is to be given at the nearest police station, whence information is transmitted to the resident authority of the hospital of the district, who at once dispatches the ambulance carriage, with the surgeon and assistants, to the spot where the accident has occurred, and gives the necessary orders in the hospital itself for the reception of the patients. The American system for supplying the help which is required on the occurrence of accidental bodily injuries resembles very closely the fire brigade system for service on the outbreak of fires in a city. Mr. Furley argues that, owing to the crowded states of the principal thoroughfares of London in the day-time, the use of horse-ambulance carriages according to the American plan would entail needless delay in the conveyance of sufferers from accidents to the hospitals, and be more likely to aggravate the injury already done, from the movements to which the vehicle would be subjected, than carrying the patients on hand-conveyances; and he states, on personal experience, that he has taken a two-wheeled litter, with two bearers, through the most crowded part of the city with greater rapidity, and with less discomfort to the patient, than he could have done had he had a horse-ambulance carriage at his disposal. He urges, moreover, that the additions of fully equipped ambulances to the establishments of the metropolitan hospitals would lead to such a large increase to their annual expenditure that none of them would be justified in incurring it. He therefore recommends, instead of concentrating ambulance aid at the hospitals, that the system already commenced by the St. John Ambulance Association should be further developed; that the best stretchers and litters should be placed at all police and fire brigade stations, as they are now done at some particular stations; and that the training in the first aid and carriage of injured persons, which has now been given to numerous members of the police force and to others, should continue until the instruction becomes general. At certain points, especially in the suburbs where the distance from hospital

accommodation is great, horse ambulance carriages, ready to be sent out at short notice, could be stationed with advantage. Mr. Furley has designed two conveyances: one a two-wheeled litter, which is now being extensively used, known as the "Ashford litter"; and a light one-horse ambulance carriage, for the conveyance of one or two patients in a recumbent position, and three or four seated, which promises to meet a great want as an easy, strong, and at the same time economical conveyance. In the "Ashford litter", the bed part is separable from the wheeled support; and Mr. Furley mentions the following as an instance of the special advantages of such a contrivance. "A patient had to be removed a distance of sixty miles to St. Bartholomew's Hospital, in order that he might undergo an operation. He was put upon the stretcher in his cottage, and then placed between the wheels of the litter, and then taken to a railway station two miles off. Here the litter was lifted bodily into a luggage van, and, on its arrival in London, it was pushed through the streets to the hospital. The journey was commenced at 5 o'clock in the morning, and at 9 o'clock the patient was alongside his bed in St. Bartholomew's Hospital, without having been once shifted from the stretcher during the journey. He was subsequently taken home again in the same manner." Mr. Furley refers to associations which have been formed in several towns for providing ambulance conveyances and meeting the requirements of the medical practitioners as regards the removal of patients; and he adds the rules which have been adopted by these local ambulance corps; but our space will not permit us to enter upon this subject. With regard to the question to which we have more particularly adverted, the best mode of removal to hospital of persons injured in the streets of London, the observations of Mr. Furley certainly deserve earnest attention. One argument in favour of the plan which he advocates is the fact, though not referred to by him, that the system which has prevailed in Paris for many years past, and is still in force there, is precisely the same in principle, and very similar in its details, to that advised by Mr. Furley. We cannot believe it would have held its ground so long had the system not been found to work satisfactorily. Probably no one, however, has more practical experience in matters which bear on the subject than Mr. Furley himself. He is not only well known from the prominent part he has taken as a volunteer agent in ambulance work during the Franco-German and in several other wars on the continent, but he has been one of the most active members of the St. John Ambulance Association from the time of its formation; and one of the chief objects of this society is to disseminate a knowledge of the modes of administering preliminary help to injured people, and effecting their removal to hospitals without causing additional harm. A note appended to Mr. Furley's paper states that copies of it may be obtained on application to the assistant-secretary of the Order of St. John, at St. John's Gate, Clerkenwell.

SCOTLAND.

DR. J. BRAYTON HICKS, F.R.S., has been elected Honorary Fellow of the Obstetrical Society of Edinburgh.

DURING the past fortnight, there has been an increase in the number of the cases of fever reported at Johnstone; and, from November 6th to November 20th, nineteen deaths had resulted, which brings the total number of deaths up to sixty-five since the commencement of the outbreak.

GLASGOW DENTAL HOSPITAL.

THE annual reports of the treasurer and secretary, presented at the meeting of the hospital staff, held in Anderson's College, on November 15th, show a very satisfactory condition of things, and indicate that the work of the institution has been efficiently carried out during the year. The number of patients treated showed an increase of 464 over the corresponding period of last year.

LOCH KATRINE WATER.

THE monthly report of the quality of Loch Katrine water has been issued by Professor Mills. The results are returned in parts per 100,000:—Total solid impurity, 3.10; organic carbon, 0.152; organic nitrogen, 0.023; ammonia, 0.000; nitric nitrogen, 0.008; total combined nitrogen, 0.031; hardness, 1.1; chlorine, 0.66; temperature, 44.6° Fahr. The water, which was sampled on November 15th, was light brown in colour, and contained a considerable amount of suspended matter.

THE FEVER EPIDEMIC AT BONHILL.

THE report of Dr. Littlejohn, Medical Officer of the Board of Supervision, on the outbreak of typhoid fever in Bonhill Parish, has been made public. The cases reported number sixty, of which six had died. The cause of the epidemic is attributed to the employment of the water of an adjacent barn as a domestic water-supply; and, as it is quite unsuited for that purpose, the report advises that the local authority should prohibit its use; and that the Loch Lomond water-supply should be extended from Bonhill to some adjacent villages, where the epidemic is held to have originated.

UNIVERSITY OF ABERDEEN.

A RETURN has just been issued by the registrar, showing the number of students of medicine who have matriculated this session. In 1881, the matriculated number in winter was 286, and this winter the number has risen to 314; but, as Professor Siruthers pointed out in a letter to one of the local papers, there are 50 more or thereby, so that within the year there are 360 medical students or thereby. The increase is steady. The school has been greatly strengthened by the Sir Erasmus Wilson Chair of Pathological Anatomy, and by the recent munificent gift of medical bursaries.

PROPOSAL TO SELL LENZIE ASYLUM.

A DEFINITE proposal has been brought before the members of the Glasgow Barony Parochial Board, to the effect that Lenzie Asylum should be sold, its funds utilised in a way more for the benefit of the community, and the occupants of the institution boarded-out. Whether the board possess powers to permit of their legally carrying out such a step seems uncertain; but, as the term of office of the present board shortly expires, they have acted very wisely in postponing consideration of the matter until their successors are elected, on whom would fall all the arrangements consequent on such an important change.

REGISTRAR-GENERAL'S RETURNS.

THE returns of the Registrar-General for the week ending November 18th show that the death-rate in the eight principal towns was 25.8 per 1000 of estimated population. This rate is 3.5 above that for the corresponding week of last year, and 3.8 above that for the previous week of the present year. The lowest mortality recorded was in Leith, viz., 37.6 per 1000; and the highest in Paisley, viz., 37.6 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 4.2 per 1000, or 0.4 above the rate for the previous week. There were 26 deaths from whooping-cough, of which 19 were registered in Glasgow. From acute diseases of the chest, 172 deaths were registered, or 42 more than in the previous week. The mean temperature was 39.1°, being 4.5° below that of the week immediately preceding, and 10.6° below that of the corresponding week of last year.

WESTERN DISPENSARY, EDINBURGH.

THE annual meeting of the supporters of the Western Dispensary was held in the Dispensary, 90, Fountain Bridge, on Thursday, November 21st. The report submitted showed that, during the year, over 4,000 general cases had received treatment at the dispensary, or in their own homes; while the departments of the diseases of women, throat and ear diseases, vaccination and midwifery, had been largely taken advantage of. The number of students attending had also been satisfac-

tory. After clearing all expenses, a balance of £25 remains in the hands of the treasurer. The appointments of Dr. G. Sims Woodhead, as one of the medical officers, and of Mr. J. Maxwell Ross, M.B., to the throat and ear department, were confirmed. The Committee of Management regretted that they could not as yet reopen the sick kitchen, owing to lack of funds sufficient to make it effective. It is to be hoped, however, that means will be forthcoming, as, in many previous sessions, the medical officers experienced much advantage from their ability to let suitable cases have such valuable adjuncts in their treatment as chops, steaks, and well made beef-tea.

EDINBURGH MEDICAL MISSIONARY SOCIETY.

THE annual meeting (the first of the fifth decade since its institution) of the Edinburgh Medical Missionary Society was held, in the Royal Hotel, Edinburgh, on November 23rd, and was presided over by Mr. William Brown, F.R.C.S.E. The report submitted showed that, during the year, 9,938 patients had attended the dispensary; 2,847 had been visited at their own homes; 391 midwifery cases had been attended; and 306 vaccinations effected. It was stated that, during the last ten years, thirty-seven students were trained completely as medical missionaries; and that, of these, twenty-nine were now actively engaged in such work. During the decade just completed, the total receipts from subscriptions, donations, special funds, and legacies, amounted to £48,640; while, during the preceding decade, £19,223 had been received. Since 1871, the mission had remitted upwards of £1,700 for the purchase of medicines, instruments, etc., to medical missionaries labouring in various Oriental countries.

MILK AS A VEHICLE OF INFECTION.

AT the eighty-first annual general meeting of the Glasgow Philosophical Society, held on the 15th instant, a very interesting paper was read by Dr. John Dougal on the subject of milk-pollution, describing some experiments with regard to the impregnation of milk with gases and vapours of an offensive nature. The experiments consisted in exposing uniform portions of milk in a glass jar to the emanations of coal-gas, paraffin-oil, turpentine, onions, tobacco-smoke, sulphuretted hydrogen, ammonia, sulphide of ammonium, musk, assafoetida, stale urine, creosote, stale cheese, chloroform, putrid fish, decayed cabbage, etc. In every instance, the milk was found to have become more or less impregnated with the characteristic odours of these bodies. As the result of all his investigations and his previous experience, the lecturer stated that it was his strong conviction that milk absorbed, and could communicate, infection. At the same time, he was equally sure that the boiling of milk destroyed every organism and germ which it contained; and not only so, but, he was certain, also all infective putrid particles, which he still believed was the form assumed by zymotic poisons. Dr. Dougal's paper gave rise to considerable discussion, and a very hearty vote of thanks was awarded him for bringing the subject before the Society.

GLASGOW POLICE BILL AND THE MEDICAL FACULTY.

A MEETING of the medical profession of Glasgow and its neighbourhood was held in the Hall of the Faculty of Physicians and Surgeons on the afternoon of November 24th, for the purpose of considering certain clauses in the draft Glasgow Police Bill. The chief points discussed were the compulsory notification of infectious cases of disease, and the question as to the person on whom the onus of reporting such cases should lie. The meeting were unanimous in supporting the principle of compulsory notification of cases of infectious disease, but they expressed a very decided opinion against the duty of reporting these cases being placed on the medical man in attendance. To do so, it was argued, would place the medical man in an unpleasant and obnoxious position towards his patients, and it would lead to that concealment of disease which prevailed too much already, and led to the spread of disease and increased mortality. In the interests, both of

the public and the medical profession, it was deemed right that the duty of reporting infectious cases should rest on the householder. The meeting were also of opinion that if medical men were called upon to furnish to the authorities written certificates as to the nature of the malady from which any case was suffering, that adequate remuneration should be given for this service by the local authority. Eventually, a large committee was appointed to wait on the Town Council, to urge the necessity of modifying the draft Police Bill in accordance with the above views. It is just possible that the present Glasgow Police Bill may not be proceeded with, as there is a prospect of some general legislation on the subject for all Scotland, but the profession of Glasgow and its neighbourhood have done right in giving public expression to their views on points that affect very materially the interests both of the public and the medical faculty.

IRELAND.

A VIRULENT case of small-pox was admitted into Londonderry Workhouse on the 16th ult., and terminated fatally on the 21st ult. The patient was a seaman, who contracted the disease while on board ship.

HEALTH OF BELFAST.

IT having been asserted of late that the sanitary condition of Belfast is not as it should be, the average death-rate for the past six and three-quarter years for several of the towns in Ireland has been published. They are as follow: Dublin 29.97, Clonmel 28.00, Waterford 29.50, Limerick 27.70, Kilkenny 27.50, Belfast 27.25, Galway 27.20, Cork 27.13. The average death-rate in Belfast from zymotic diseases for last year was 2.4; and the average for the first three quarters of the present year has been 3.0, while in the same period, from chest affections, it has been 8.58.

CORK SOUTH INFIRMARY.

A SPECIAL meeting of the governors was held last week, for the purpose of electing a resident surgeon apothecary and registrar, in the room of Dr. Cummins resigned, when Dr. Rountree was appointed. The following resolution was adopted: "This Board of Trustees, in special meeting to-day, desire to record their regret at the resignation of Dr. William Ashley Cummins, who, for a period of nearly three years, has held the responsible position of resident house-surgeon and apothecary in this hospital, and has also acted as secretary to this Board; and they cannot but express the high sense they entertain of the ability and efficiency with which he has on all occasions fulfilled his manifold and important duties."

NORTH INFIRMARY, CORK.

LAST week, the trustees met for the purpose of appointing an assistant-surgeon to the institution. There were two candidates, Dr. Cotter and Dr. C. Yelverton Pearson, but the latter withdrew, and Dr. Cotter was unanimously elected. Dr. Cotter is a Doctor in Medicine, Master in Surgery, and Gold Medallist, of the Queen's University in Ireland, where his undergraduate course was a very distinguished one. Dr. Finn, late senior physician, having tendered his resignation at a previous meeting of the board, Dr. Cremen has been promoted to the vacancy. Dr. Finn has been connected with the Infirmary for the past forty years, and has been unanimously elected consulting-physician to the hospital.

NURSES' HOME AND TRAINING SCHOOL, BELFAST.

THE annual meeting was held last week, presided over by the Mayor of Belfast. The Chairman, in some introductory remarks, said that the training of properly qualified nurses to attend the sick was an important matter to any community, and the careful training received in the Home could not be too highly appreciated. The Institution sup-

plies the Belfast Royal Hospital with trained nurses, and also private nursing. There are at present thirty-one trained nurses in the Home, and ten probationers, and the private nurses attended 176 cases during the past year. It is satisfactory to learn that the subscriptions this year have increased by £108, while the private nursing has produced £228 more than last year. It is also gratifying to learn that the Home is now perfectly free from debt.

UNIVERSITY BIOLOGICAL ASSOCIATION.

THE opening meeting of this flourishing society for the current session was held in Trinity College, Dublin, on the 17th. Although the Association is mainly composed of members of the School of Physic, it is open to all the medical students of Dublin, and has shown itself to be most useful to them both socially and professionally. There were a large number of visitors at the opening meeting, including the President of the Royal College of Surgeons in Ireland, the Professors of the School of Physic, and many hospital physicians and surgeons. The incoming President, Dr. Bennett, Professor of Surgery in the University, gave an address on "The Physiology of Plastic Surgery", illustrating his remarks by the operation for the restoration of a lost nose, and referring particularly to the sense of sensation in the restored organ. A vote of thanks was warmly accorded to the President for his address, as was one also to the outgoing President, Professor Purser.

THE CATHOLIC "UNIVERSITY COLLEGE".

UNDER this title, a "great central college" of the Catholic University of Ireland has been established, to prepare students for degrees in arts in the Royal University. The classes in this College—which occupies the University buildings—commenced last Monday, and eight out of the ten Professors are Fellows of the Royal University. His Eminence Cardinal McCabe, Roman Catholic Archbishop of Dublin, has been charged by the Irish bishops with the government and administration of this College, as well as of the School of Medicine connected with the University.

BANQUET OF WELCOME TO THE MEDICAL OFFICERS OF THE EGYPTIAN EXPEDITION.

THE accounts of this fund have been promptly closed, and the sum in the hands of the treasurer is sufficient to meet all the liabilities. Besides the gentlemen whose names were given in last week's *BRITISH MEDICAL JOURNAL*, the following were also present at the banquet, viz., the Rev. P. F. Raymond, Chaplain to the Forces, who said Grace before and after dinner; Mr. W. Anderson, Surgeon A. H. Anthonisz, Mr. Henry F. Baker, Dr. A. Baldock, Mr. Edgar Barker, Mr. G. Brown, Mr. G. Beamish, Mr. T. W. Bullock, Sir O. Clayton, Dr. R. J. M. Coffin, Dr. W. M. Collins, Mr. E. Crookshank, Dr. D. Dallaway, Dr. F. D. Drewitt, Dr. C. J. Fish, Dr. G. Fowler, Mr. F. J. Gant, Dr. Clement Godson, Dr. J. T. Griffith, Dr. J. B. Henderson, Mr. W. Hickman, Mr. C. Higgins, Mr. G. A. D. Mahon, Mr. John Morgan, Dr. F. W. Pavy, Mr. C. Richardson, Mr. E. C. Ring, Mr. H. W. Roberts, Mr. H. S. Shaw, Deputy Surgeon-General W. Stewart, Dr. E. W. F. Stiven, Mr. R. T. Warn, Mr. H. T. Whiting, Dr. G. F. B. Willing, and Dr. W. S. Wyman.

Mr. George Simon, brother to Mr. John Simon, C.B., very kindly sent, as a present, three dozen of Moët and Chandon's fine dry champagne to be placed upon the dinner-table. The secretary, Mr. G. Eastes, requests us to announce that the following is the third and final list of subscriptions to the Invitation Fund:

	£	s.	d.		£	s.	d.
Mr. W. F. Favell	2	2	0	Dr. C. J. Hare	2	2	0
Surgeon-General J. M. S. Fogo	2	2	0	Dr. H. G. Sutton	1	1	0
Deputy Surgeon-General W. J. Fyffe	1	1	0	Mr. J. W. Teale	1	1	0
Dr. J. G. Glover	2	2	0	Mr. T. P. Teale	2	2	0
				Mr. J. Smith Turner	2	2	0
				Mr. T. H. Wakley	2	2	0

THE REPRESENTATION OF BRANCHES ON THE COMMITTEE OF COUNCIL.

IT will be seen by reference to our "Association Intelligence," that the Committee of Council has lost no time in grappling with the question referred to it at the annual meeting at Worcester, as to the alleged deficiency of representation of the Branches on the Committee of Council, and we are asked to call attention to the steps which have been taken.

At its first meeting subsequent to the annual gathering, the Committee of Council, recognising the importance of this question, appointed a subcommittee to investigate it, and to report, at as early a date as possible the result of its deliberations.

The Subcommittee had its first meeting on Tuesday, November 21st, and after very careful deliberation, starting from the desire to arrive at the real wish of the Association at large, determined in the first instance to issue a "circular letter" from the President of Council to the President and Secretary of every Branch, and through them, to the Branches, stating what the grievance is said to be, and seeking their assistance to probe it thoroughly.

To effect this end, the Subcommittee appends to the letter a series of "questions" calculated, it believes, to elicit the wishes of each Branch on the subject.

The letter and the questions appended we publish to-day; and we hope that, after perusing it, any member who takes an interest in the inquiry will, without delay, place his views before the President or Secretary of his Branch, and thus assist them in their official replies to lay those views before the Subcommittee.

The Subcommittee asks that the replies may be handed in at as early a date as is possible, in order that time may be given for their classification and consideration, and for the formulation of a definite scheme of reform to be submitted to the deliberations of the Committee of Council at its meeting in April.

Time will thus be given for the Committee of Council duly to consider any scheme so propounded, and to put it into a complete shape for presentation to the annual meeting at Liverpool. It is greatly to be desired that all members interested in the subject will give such aid as is in their power to the Subcommittee in its endeavours.

The following is the text of the circular referred to.

Representation of the Branches of the Association on the Committee of Council.

DEAR SIR,—For some time past a feeling appears to have been growing up in the Association, and is said, by some, to be already of widely spread extent, that, whatever may have been the case in former years, the Branches of the Association are not now properly and adequately represented on the Committee of Council.

At the recent Annual Meeting at Worcester, this feeling found expression, not only at the "general meetings", but also at the meeting of the "Council"; and that body, the "Council", passed a vote requesting the "Committee of Council" to consider the question, and if, after ascertaining the mind of the Branches on the subject, it should be found that any grievance really existed, it would consider, and report upon the way in which the evil could best be remedied.

The existing by-law of the Association on the subject reads thus: By-law 25.—"The Committee of Council shall consist of the President, the President-elect, the President of the Council, the Vice-Presidents of the Association, the Treasurer, and of the *Honorary Secretary for the time being of each Branch*, who shall be, *ex officio*, members of the Committee of Council, and also of twenty members of the Council to be elected by the Council, as hereafter described."

In 1879, in consequence probably of the rapidly increasing growth of the Association, a feeling—similar to that now supposed to exist—having made itself heard, the question of the representation of the Branches on the Committee of Council was considered, and the following resolution was passed at the meeting of October 15th, 1879: "That every Branch be informed that it is competent to it to appoint more than one Secretary, and to prescribe the duties of each, so that one may be required to discharge no other duty than that of representing the Branch on the Committee of Council."

It was argued that the Honorary Secretaries were men who received their appointments because they had sufficient leisure at their disposal to give to the *local* duties of their office, and had good personal knowledge of all the members of their Branches, but who had often neither the means nor the time at their disposal to act as the representatives of their respective Branches at the meetings of the Committee of Council, and were so placed at a disadvantage. And yet it was neither ignored nor forgotten that much of the real success of the Association was due to the exertions of the Honorary Secretaries—a body of men who have never ceased to use their utmost endeavours to advance the interests of the Association, and who have never received any adequate reward for their labours; and it was felt that to deprive them, when they wished to use it, of the right to attend the meetings of the Committee of Council, would be not only a hardship but a decided injustice.

But few Branches have availed themselves of this power, and yet the feeling of insufficient representation is not allayed, and consequently the Committee of Council has appointed a Subcommittee to reconsider the entire subject, and to report to it as speedily as possible whether any, and what, further steps are advisable.

In order that a definite conclusion may be arrived at, the Subcommittee so ap-

pointed desires to ascertain the opinion of your Branch; and requests that you will kindly consider this matter as an *urgent* and an *important* one, and that you will send in your reply, if possible, by December 31st next.—Believe me, dear sir, yours very truly, C. G. WHEELHOUSE, President of the Council, and Chairman of the Subcommittee.

Questions—1. Is your Branch satisfied with its present method of representation in the Committee of Council by Honorary Secretary *ex officio*? 2. Has your Branch, having the power to elect a Special Honorary Secretary to represent it in the Committee of Council, availed itself of that power? 3. What is the total number of members of your Branch, and what is the income of your Branch from Branch subscriptions? 4. Are the travelling expenses of your Honorary Secretary to the meetings of the Committee of Council defrayed by the Branch? 5. Is there any feeling in your Branch of inadequate representation? 6. Is the attendance of your Honorary Secretary at the meetings of the Committee of Council influenced by the payment, or non-payment, of his travelling expenses? 7. Have you any other suggestions to offer to the Subcommittee, with regard to the representation of your Branch in the Committee of Council?

THE EGYPTIAN EXPEDITION.

[FROM OUR SPECIAL CORRESPONDENT.]

Cairo, November 12th, 1882.

NEXT to the station hospital at the Citadel, No. 2 station hospital, at Abbassayah, comes in importance, and it is with this hospital I intend to deal in the present letter. Before doing so, however, it will be well to describe Abbassayah as a camp, and the Egyptian barracks, etc.; and then, possibly, we may see a cause for the extreme unhealthiness of the troops stationed here, and the overfilling of the hospital as a consequence. At least, we will put a few bricks in a heap, if we cannot build them into a wall.

There is not a single drain in all Cairo. This is a startling fact, and one to be borne in mind when we come to speak of the epidemic of enteric fever (and the numerous cases of diarrhoea and simple continued fever) which is prevailing among the troops, and particularly among those quartered at Abbassayah. Not a single drain! This means that the four hundred thousand inhabitants of Cairo use cesspools, one, and sometimes more than one, to each house. I was conversing with Dr. Grant Bey a few days ago on this point, and asking about the conservancy in force in the city. "Conservancy!" exclaimed he; "there is none". "How often are the cesspools cleaned out?" asked I. "Once a year, or once in ten years, as the stench becomes powerful enough to force the landlord into doing something", answered Dr. Grant. This statement quite bears out my own impression, and the impression was never stronger upon me than when I visited the barracks at Abbassayah. This station, under the Egyptian Government, was the cavalry dépôt, about three miles north of Cairo. To look at the buildings, you would imagine that more healthy or perfect stables and barracks could not be found. In one long row, about thirty stables have been erected on what appears to be as modern a principle as could be desired, and the accommodation for the men was equally good. What was the state when we marched in and took possession on September 15th? Every barrack-room, and they were lofty and spacious, was covered with human excrement, the stairs leading to the upper rooms worse than all. Cesspools there were in abundance; but the native seemed to discard these accommodations, or at any rate preferred the easier method of defecating in the room or nearest spot to taking the little trouble of going to the appointed place. Into these living cesspools, into these swarming latrines, our troops were placed. It is true, they cleaned them up as much as possible, and, after a time, used whitewash without stint; but the Egyptians, or rather the filth, had had a long start of us, and the effect of this was not to be wiped out in a day by a few buckets of water and a coat of whitewash. Into these barracks, our men, exhausted by the hardships of a campaign, went; and, to aggravate matters, the fatigue duty of the two cavalry regiments that occupied them was excessive. Duty had to be done at broiling hot hours of the day, when other Europeans scarcely ventured out of their houses; neither men nor horses were in a fit state to do this, and the effect was soon seen in the large sick list and great percentage in hospital—as much as eleven per cent. Even red tape could not be blind to this, nor could the authorities shut their eyes to the serious state of affairs, rendering, as it did, two of our finest cavalry regiments practically *hors-de-combat*. The medical authorities at length succeeded in getting both regiments moved out of these pestilential holes; and now, as I write, not a single horse or soldier is in them. But the mischief has been done; the seeds of disease have been sown; and, in my opinion, it is doubtful whether a prolonged residence in the country can be carried out by our troops. It would have been much wiser, could the future have been foreseen, to have sent out fresh troops from England to replace every man that had gone through the campaign. It is being done now, but not in the direct way I mean. Drafts are constantly arriving to fill up vacancies,

and these are only sufficient, and in some cases not sufficient, to fill up the gaps caused by sickness. I am speaking now almost entirely of the cavalry and artillery. It must be borne in mind that, up to the storming of Tel-el-Kebir, the fighting lay entirely with these two branches of the army. It was the cavalry and artillery that carried Tel-el-Mahuta, and had to push on to seize the lock at Kassassin—hard work in itself. The anxiety and excitement of this alone was not easy to bear by men landed only an hour or two before they were called upon to fight; and the hardships they had to put up with for two or three days—no food for horse or man—are well known. Indeed, if it had not been for the kindness of Arabi, in leaving a good camp-full of supplies, the sufferings would have been magnified tenfold. It is these very troops that have been so sick, and whose admissions to hospitals have been so numerous. Then, again, the water-supply. You are all familiar with the oft-repeated description of this poisonous liquid. There was nothing for it but to drink it or die of thirst. The pocket-filters, one for every ten men, even if they had been of any use, would not have supplied one man with sufficient good water for half a day's use. I know I had two with me, and both together, kept going all day, would not filter fast enough to enable me to quench my thirst. This water was drunk all the way to Cairo; and, after arrival here, it was no better, until, as I have said, the repeated representations of the medical authorities at last prevailed, backed up as they were by such a startling sick report as eleven per cent. in hospital; and now water-filters are provided in abundance.

So much for the barracks and the effect on the men. Now let us look at the camping-ground occupied by our troops. Abbassayah was the school of engineering and artillery for the Egyptians. The field-works, miles in extent, thrown up by recruits for practice, still exist; and the thousands of splinters from the sixteen-ton and other rifled guns, which may be seen away in the plains beyond, prove the place to have been used as a practice-ground. The soil is sandy, with finely pulverised lime intimately mixed. If an excavation be made, foundations of former houses are met with, and in some cases the streets can still be traced. Now, recollect that drainage never existed in these ancient cities. Customs and habits prevail now as they did hundreds of years ago. Cesspools must have been used then, as now; and the filth and squalor then was as marked as it is now in the densely crowded parts of the Arab quarters. It is on this old ground—one the site of former habitations, with all its evils, according to modern sanitary science—that our troops are now living under canvas; and, in addition to this, the numerous latrines necessary for such a large body of troops as that now stationed here add a not very pleasant atmosphere to that caused by past ages and decay. So long as this soil is perfectly dry—mummified, in fact—the danger may not be great; but water only is required to supply the essential factor for the production of a poison capable of causing diarrhoea, dysentery, and enteric fever in abundance; and it is these very diseases that are now so rife here. But more of this anon.

Wherever horses are massed together, watering of them must go on; and this is never done without much slopping and mess, which the constant tramping of the horses soon works into a slush and mire. Add to this the washing of clothes by the men in all available, and, of themselves, in all unavailable quarters, together with the washing out of stables, etc., and you have elements enough to supply the missing factor and produce the unwelcome results. Again, the day or two of rain with which Cairo is favoured in the year is noted as an unhealthy visitor. I shall not soon forget the pitiable plight in which the natives appeared on the only day of rain I have seen in Egypt; it reminded me of an unseasonable snow-storm at home. This may possibly be the cause of some of the sickness, but the great cause must be looked for elsewhere; and, up to this date, I have been unable to elicit from any medical officer a candid, honest conviction of what that cause is. Possibly the secret may lie in the fact that the causes are various and numerous, all pointing to a common ailment—fever, with malarial complications.

The station hospital at Abbassayah has been evolved out of old cavalry barracks, and was, at the beginning, in the same filthy state as those I have been describing. The requirements of the sick were so pressing, that a mere pretence to cleaning out the rooms was all that could be done before they came pouring in. Wards had to be opened, clean or dirty. Straw mattresses were placed on the floor, and on these the sick lay, until either drafted away or some other termination ended their sufferings. Gradually, as ward after ward, or rather bare walls, could be spared, thorough cleaning and whitewashing was carried out; so that now the place looks and smells as clean as could be desired. The great difficulty was obtaining equipment, mattresses, etc.; and it was only when extreme pressure and great exertion on the part of the senior medical officer in charge were brought to bear, that the

authorities sanctioned the purchase of native cots at 2s. 6d. each. This does not coincide with Sir Garnet's expressions on his visit to the Citadel, when he was heard to exclaim, "Expense is no object; I will purchase three hundred cots, rather than see the men on the floor." So the obstruction must have been in another quarter. In those early days of which I am speaking, the hospital commenced with nothing but an empty barrack-room. There was no stationery, and all the medicines available were what could be got out of a couple of field-panniers. Surgeon-Major Fergusson, however, steadily set to work to equip and organise, and soon succeeded in forming, out of chaos, a satisfactory hospital. At present, there are four hundred beds, made up as follows: six wards, lofty and spacious, containing fifty beds each, in four rows. The beds are native wickerwork cots, with hair-mattresses, pillows, and sheets, and plenty of blankets; so they cannot be said to be uncomfortable. The native cot makes as comfortable a bedstead as I ever wish to sleep on. There is one ward of twenty beds set apart for enteric cases; but this does not accommodate one-half; the remainder are scattered about among other cases of continued fever, etc. In all suspicious cases, the stools are at once removed, disinfected, and buried. All the old Egyptian latrines—cesspools, in fact—have been closed, and the dry-earth system alone prevails in its entirety. Two ordinary rooms are set apart as latrines; in these, rows of seats are placed, and underneath each seat a bucket. Dry earth is handy, and is at once applied as soon as the stool is used. Every morning, or when full, these are emptied by native labour. These latrines are perfectly sweet, and without smell, except that caused by a plentiful supply of carbolic powder.

I next visited the cooking arrangements for the patients' diets and extras. The cook is an Army Hospital Corps man, and seemed sharp enough for his work. He had good ranges to cook with, and plenty of pots and pans at his disposal, so there is no reason why satisfaction should not be given; and in proof, no complaints are made. The extras used are the same as those at all military hospitals. There is no restraint, but the quality of the champagne, brandy, and wine was complained of by the medical officers, so much so, that none of the first wine is ordered; and my own experience is that, with gastric irritation in enteric fever, champagne is the most appropriate and grateful wine that can be ordered. Eggs and milk are supplied in plenty, and of very good quality. Butter is the only commodity unobtainable here. The red cape is seen here, and seen to advantage; four sisters, I believe of the National Aid Society, have been working for some weeks, and good work too. They give all medicines and extras, and have a general supervision over the wards, paying particular attention to the more serious cases, and setting a good example to the orderlies. But there are too few of them—originally four, but now only three, one having been recently invalided. It is impossible to do justice to four hundred cases, many of them of a very serious nature; they do their best, and that best is gratefully received by the poor fellows, I can assure you. The main bulk of the nursing falls, of course, on the Army Hospital Corps. There appears to be enough of them, but they are sadly hard worked, having to go on night duty for two nights in succession, and the third night only being free to sleep for eight hours in succession. They are, in addition to this hard work, exposed to infection, if infection there be with this fever; and one is almost forced to believe there must be, when one hears of more than one attendant having sickened and died from the same disease. Of course, it is open to the assumption that the external influences which produced the fever in one can do so in another, without infection entering into the question.

The prevailing diseases are of the zymotic type, consisting of, in their order of frequency, "continued" or so-called Egyptian fever, diarrhoea, dysentery, and enteric fever. These form at least 90 per cent. of the total admissions, the remainder being made up of those diseases common to garrison towns all over the world. By far the greater number of these cases belong to the continued fever type; but, when we recollect how insidious the onslaught of enteric frequently is, how mild a case one sometimes meets with, it is open to suspicion that many of the so-called cases of simple continued fever were in reality cases of enteric. I have seen scores of these cases of Egyptian fever, and have noticed that a certain wind, or state of the nocturnal atmosphere, will produce them in numbers. A foggy close night, with a wind blowing from across the Nile, will invariably produce headache, depression, and possibly diarrhoea, in the healthiest; and, in numbers of cases, it produces an attack of this fever. That it is complicated with, if not produced by, malaria, I am convinced, for lately there have been numerous admissions of cases of undoubted ague. This fever is insidious in its onslaught, generally commencing with, or attacking those suffering from, a persistent diarrhoea. Frontal headache, great heat of skin, dry brown tongue, goose-flesh or creepy feeling, a rapid and full pulse, and a tem-

perature of 104°, are the leading symptoms. These continue for a few days, and then either subside or, the reverse, turn out to be a case of enteric fever; for, so far as I can see, there is no difference in their mode of attack. The diarrhoea cases are very numerous, and often prove to be dysenteric. Ordinary astringents have little effect in checking these diseases; dieting, and judicious administration of ipecacuanha and Dover's powders, appear mostly used; but there have been five cases of dysentery seen, where large doses of ipecacuanha have been administered without the slightest influence on the disease; and these doses have been taken with the usual precautions as to drinking liquids, have been retained in the stomach, but have failed to work the magical effect so often seen in the Indian dysentery. The total number of enteric fever cases admitted into the Abbassayah Hospital since October 1st is seventy; of these, sixteen have died, three have been transported to other hospitals, and fifty-one remain under treatment. The same remarks that were applied to the Citadel Hospital apply to this, both as to the varieties of the fever, and as to treatment, except that aconite is not used here to reduce temperature. Nursing and discriminate dieting are trusted to for recovery. Medicine is found to be of little use, except to combat local or exceptional complications; stimulants are given freely, and with marked effect. Now, nearly all these cases of enteric fever have come from the cavalry and artillery, and it was these regiments that had to stand the brunt of the hardships in the campaign; and, on arrival at Cairo, were placed in the filthy, unsanitary barracks I have described at the commencement of this paper. Is it to be wondered at that enteric fever has shown itself, and continues to show itself, in these regiments, in spite of the efforts that are now being made to shut the stable-door when the horse has run away? Nothing but a complete change will stop its ravages. The cavalry are being removed to Helwan, about fifteen miles from Cairo, a kind of sanatorium near some sulphur-springs, but I doubt if this change will do much good. The men are depressed, first, at being retained in the country after the work is done, and secondly, by the extensive sickness which strikes down the strongest before their eyes. It must naturally be depressing to them to see their comrades, one after another, sent to hospital with the "fever," as they call it, and many of them doomed never to return to the ranks. Strange to say, the horses are equally unhealthy, and suffer, so the veterinarians say, from "anthrax fever"; anyhow, it is a fact that two hundred, out of a total strength of five hundred, are on the sick list in one regiment alone. Can it be that the same state of affairs which produces disease in one influences the other as well?

As a system, I think it must be admitted that the much vaunted hospital system has not been a success. At the hospital of which I am writing, the few medical officers who were attached to it for duty were quite insufficient for the work, and the medical officers attached to regiments and in charge of batteries had to take their share of the hospital work in addition to their usual duties. It may be said, now-a-days, when the sick are all treated in a hospital without regard to corps, that a regimental doctor has little or nothing to do. In some cases, this is true; but in others, I know that, if the work of the regiment be properly carried out, he will have quite enough to do without spending all his morning in the wards of the nearest hospital. Besides, he is not supposed to do this; under the new system, the field, or rather station hospital, was supposed to be complete in itself, a perfect unit, movable as a body, and efficient wherever it rested. Practically, how does it work? I saw a diet-sheet once, where no fewer than seven medical officers, in about a fortnight, had had charge of the case, and signed for the usual diets and extras; and why? Because each one in turn had been removed to other duties; and these were not regimental officers, but officers supposed to be permanently appointed to the station hospital. Such an arrangement as permits this kind of thing is not fair to the medical officer, and it is certainly not to the patients' advantage. Another effect of taking up the regimental officer's most important time—namely, the morning—is to cause the neglect of the sanitary duties of the camp. He has no time to go about and minutely inquire into every hole and corner; he has no time to make himself acquainted with the habits of his men, or even inspect his food, water, and latrines; and these duties then go to the wall, sacrificed to bolster up a system, which, when put to the test, fails. What is wanted is a medical officer appointed to each regiment for a term of years, say five. He will soon know his men, and take an interest in their welfare; and let each hospital have its appointed staff immovable, as that of the regimental officers is, and then perhaps we shall not see so much enteric fever in our camps, or seven signatures to one diet-sheet.

The great desideratum, at all station hospitals, is to prevent a block, to have a constant flow through them, the chronic cases going home, the acute and temporary ailments treated in the wards. But this end has been obtained at the expense of many a curable case within the

last few weeks. The answer is, the sick list remained so very high that men had to be sent to England curable or incurable. A telegram would be received at the hospital: "Send one hundred sick by steamer to-morrow for passage to England"; that means, that twenty-five per cent. of the men in hospital were to be considered incurable in a reasonable time, and consequently invalided to England. With difficulty this number has been made up. It is no easy matter to decide offhand, that such and such a patient is not fit to remain in the country. Probably he may have been only under treatment a few days, and the medical officer has scarcely had a chance of seeing the effect of his treatment, or becoming acquainted either with the constitution of the man or the peculiarities of the case in question. Of course, there are numbers of undoubtedly fit cases for invaliding, but there is an equal number of doubtful cases, and yet the number one hundred has to be made up. The result is, that several curable cases are bustled off, and long before they reach England are fit for duty. On the other hand, I have known cases that have been kept back at Alexandria, and after a few days' treatment on board the *Carthage* sent back to duty at Cairo, only to be readmitted within a week or ten days with the same disease—dysentery.

Now comes another point. We will suppose the hundred cases to have been dispatched on board ship. Within a couple of days, another vessel sails for England; suddenly an order is received to supply another sixty or seventy men for this vessel. The wards have only within a few hours been emptied of all questionable cases, and yet out comes another order for more to go. Again the cases are scanned, pros and cons weighed, and generally ending in many going, as I have said, who would in all probability have been speedily cured if left for a week or two in peace and quietness under a medical officer and nursed by the sisters. All this wants altering. Management and organisation would prevent this, and produce a system that would work with ease and comfort to the medical officer and advantage to the patient, if allowed a fair chance.

MEDICAL LEGISLATION.

DEPUTATION TO THE LORD PRESIDENT OF THE PRIVY COUNCIL.

ON Wednesday, November 22nd, a deputation from the British Medical Association had an interview with Lord Carlingford, the Lord President of the Council, and Mr. Mundella, the Vice-President, at Whitehall, with reference to the reform of the law as to medical education and the granting of diplomas. The deputation consisted of the Duke of Westminster; Dr. Strange of Worcester, President of the British Medical Association; Dr. Waters of Chester, Chairman of the Medical Reform Committee; Mr. Wheelhouse of Leeds, President of the Council; Dr. Wade of Birmingham, Treasurer; Dr. Chadwick of Tunbridge Wells, and Dr. de Bartolomé of Sheffield, Vice-Presidents of the Association; Mr. C. Macnamara of London; Dr. A. P. Stewart, consulting physician to the Middlesex Hospital; Mr. Ernest Hart, editor of the *BRITISH MEDICAL JOURNAL*; Dr. Glover, of the *Lancet*; and Mr. A. T. Norton.

THE DUKE OF WESTMINSTER having briefly introduced the deputation,

Dr. WATERS said he had been deputed to speak on behalf of the deputation. He said: The present system of medical legislation was established in 1858. The British Medical Association was then said to be the representative body of the profession by Lord Mount-Temple, the Right Hon. Mr. Walpole, and Mr. Headlam, although it did not then number more than 2,000 members. The British Medical Association then played an important part in promoting the Act of 1858, which was mainly based on a medical Bill, introduced by Mr. Headlam on behalf of the Association. The British Medical Association failed to make that Bill as perfect as it desired. It sought then to improve the preliminary education of the medical man, by introducing a clause to that effect. The Association also drafted a clause to prevent the registration of half qualifications. Lord Mount-Temple was obliged to withdraw both these clauses to conciliate the support of the Government, which Mr. Walpole would have refused if they had been insisted on.

The General Medical Council created by the Bill of 1858 contained no representatives of the general body of the profession upon it, and the point was not insisted on by the profession and the Association, in consequence of the non-existence of any register of the profession.

The extensive registration of half-qualifications is proved by the large number of such qualifications on the *Registers*, whereby persons qualified in only one branch of the profession, are enabled to practise in all its branches. The evidence of Mr. Miller, the registrar, shows that, in 1879, more than 48 per cent. of the registrations were for single qualifications.

The Medical Act of 1858 has proved inoperative against the false assumption of medical titles by unqualified persons.

The Association has promoted several Bills in Parliament to remedy the defects of the Medical Act of 1858: 1. To remedy the defective constitution of the General Medical Council; 2. To establish a minimum uniform qualifying examination for practitioners by conjoint examining boards, established one in each of the three divisions of the kingdom, conferring a licence in medicine, surgery, and midwifery; 3. To strengthen the so-called penal clause of the Medical Act, so as to afford adequate protection to the public against the false assumption of medical titles by unqualified and unexamined persons.

The British Medical Association now numbers 10,000 registered members of the profession, and has numerous Branches throughout the kingdom. The Association publishes an influential medical journal, which is the organ of communication between the Branches, and represents the general opinion of the Association. The *BRITISH MEDICAL JOURNAL* has uniformly and persistently advocated the three points of medical reform which have been specified. The Medical Reform Committee of the Association has existed in its present form since 1870. It gives in reports at the annual meetings of the Association, which has year after year invariably approved of the work of the Committee, and directed its reappointment. At the annual meeting—the jubilee meeting of the Association—held in Worcester, the place of its birth, in August last, under the presidency of Dr. Strange, the Medical Reform Committee congratulated the Association on the Report of the Royal Commission on the Medical Acts, as including recommendations: 1. For the formation of divisional boards for the conduct of compulsory uniform minimum examinations in each division of the kingdom, which should confer the sole qualification for registration and licence to practise, and such examination to include medicine, surgery, and obstetrics; 2. For the direct representation of the profession in the General Medical Council, and for the diminution of the influence of the licensing corporations thereon; 3. For strengthening the powers of the General Medical Council, thus amended in composition; 4. For making more effective the penal clauses of the Medical Acts against the false assumption of medical titles; and 5. For the conduct of prosecutions for offending against the Act by the public prosecutor in each division of the kingdom.

In the vote of thanks, moved by Mr. Sibley, approving of the report of the Medical Reform Committee, was included an instruction to the committee "to memorialise the Privy Council, and to petition Parliament, in favour of a Bill based upon the report of the Royal Commission." It is in discharge of the duty thus imposed on us that we appear before your lordship to-day—not as representing the universities and chartered corporations, but as representing the profession, having no corporate interests to serve, but seeking only to remedy the defects and abuses in the existing licensing system, and to improve the preliminary and professional education of the registered medical practitioner, in the interest of the public.

In so far as we represent the Association and the profession, without unduly crowding the office, we have made our deputation as complete as possible—inasmuch as we have our President, Dr. Strange of Worcester; we have my namesake, Dr. A. T. H. Waters of Liverpool, who has been appointed President-elect, in anticipation of the meeting to be held in that great commercial city next year; we have our President of Council, Mr. Wheelhouse of Leeds; we have also Dr. Wade of Birmingham, the Treasurer of the Association. In addition to these gentlemen (the present chief officials of the Association), we have also Dr. Chadwick, and Dr. de Bartolomé of Sheffield, ex-Presidents; Dr. A. P. Stewart, Consulting Physician to the Middlesex Hospital, for many years Secretary to the Metropolitan Counties Branch of the Association; Mr. Sibley, an ex-President of the Metropolitan Counties Branch; and Mr. Charles Macnamara, who gave evidence on the existing defects of medical education before the Royal Commission, have also willingly accompanied us to support the deputation. Dr. Glover, one of the editors of the *Lancet*, and Dr. Norton, who is connected with the *Medical Press and Circular*, which represents the views of the Irish Medical Association, have also acceded to my request to accompany us; so that we may thus prove to your lordship that our action is supported by all the influential organs of medical opinion, which are guided by their knowledge of general professional opinion on the subject of medical reform, which has been subjected to the ordeal of constant discussion for more than half a century.

The evidence given before the Royal Commission has revealed a lamentable state of things in respect of the defective general education tolerated by the existing medical council, as shown by the grievous ignorance of English orthography, an ignorance which could not be met with, much less tolerated, in a common village schoolmaster. In my evidence before the Select Committee of the House of Commons,

I adduced egregious errors in spelling committed in the course of his examination by a successful candidate for the degree of Doctor of Medicine. I refer to a candidate who spelled height "hight," region "regon," and so forth. In the examination of Mr. T. Cooke, a graduate of Paris, a successful private teacher in London, who prepares candidates for their examinations, he was asked by Professor Huxley, page 247: *left has* : *word is height of examination and not region*.

(4975) "I suppose a great many medical men come to their medical education in London, not from the universities, but from the public schools or other schools?"—"The great majority do, and their education is deficient. It would be a very good thing for the medical profession if a better preliminary education were required."

(4978) "The young men who come simply from the ordinary schools of the country, which the great majority of the medical practitioners do, are deficient?"—"Yes, they are certainly deficient in general culture, and that is what does not occur in France, or, I believe, in Germany. In order to get the M.D. of Paris, a man must first obtain the B.A. and the B.Sc."

(4979) "Apart from the qualifications required for the B.A. degree, it is a matter of fact, is it not, that a vast number of the young men, when they come to their medical studies, cannot write a decent letter, and have not a notion of English composition?"—"That is the case."

So much for the necessity of improving the preliminary education of the candidates for a so-called learned profession. Now, as regards the granting of licences, entitling to registration as medical practitioners, it is notorious that candidates for the medical profession travel from one division of the kingdom to another, pass the first part of their examination in one division and the second part in another, and by thus, to use a familiar term, dodging different examining boards, gain admission to the *Medical Register*. Attempts have for years been made to establish a conjoint examining board in England. Supposing such a board established, candidates could still, as now, visit another division of the kingdom, and there acquire the coveted diploma, which will enable them to practise in England as well as elsewhere. Supposing one English body left out in any English projected conjoint board, the licence of the excluded body will entitle the possessor to registration, and thereby, however imperfectly he may have been examined, enable him to practise the profession in all its branches. In proof of the inequality of the present examinations, Professors Erichsen and Humphry (Royal Commission, 562, 1155) refer to the inequality of examination in England, as evidenced by the Apothecaries' Society of London. Dr. Jacob shows (1374) that 151 out of 232 Queen's College (Ireland) students obtained their diplomas from the Edinburgh colleges. It turns out that a very large proportion of the Irish students have, within the last fifteen or twenty years, taken their qualifications in Glasgow or Edinburgh.

Mr. Gamgee (of Birmingham) testified: (3229) "With regard to the Colleges of Physicians and Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons in Glasgow, I have known men get through these who had failed in our College of Surgeons repeatedly; and I have no hesitation in saying they were men who were utterly unfit to enter the medical profession. That has happened within the last three or four years. I have addressed my classes several times during the last seven or eight years—that is to say, successive classes in different sessions. I said, 'How is it that A. B. went to Edinburgh or Glasgow? Can you tell me anything about what is the feeling of the students on the choice of examinations?' They have said, 'We know very well that the Scotch colleges give the easiest examination. If a man is plucked here, he can go there and, to use a student's expression, bring his ticket back.'"

(3230) "Do you say that with regard to the Colleges of Physicians and Surgeons at Edinburgh?"—"Yes, I do."

(3231) "That statement is made upon cases which have come within your own knowledge as a teacher?"—"Yes, I speak of men that are now upon the *Register*. I have refreshed my memory by looking to see if they are still alive, and I know the men perfectly well."

(3232) "Do you think there are many instances of that kind?"—"I know several." He further stated that "It has a most demoralising effect on the students."

Mr. Christopher Heath, F.R.C.S., Holme Professor of Clinical Surgery in University College, London, was questioned as to men who fail to pass the College of Surgeons.

(3993) "Where do they generally go?"—"To Glasgow by preference, and sometimes to Edinburgh."

(3995) "Have you yourself any knowledge from experience of the Glasgow Faculty?"—"I only judge by the results; I know that men who go up, who failed here, come back with diplomas."

(3998) "Could you give us one or two particular instances, without mentioning the names?"—"I may mention one which occurred two

years ago. A man was plucked the third or fourth time at the primary examination at the College of Surgeons in anatomy and physiology. He afterwards, at my recommendation, went to Glasgow, and came back with a double qualification."

After stating that he had conducted examinations for the Doctorate of Medicine at Durham University, Mr. Heath was asked by the Chairman (4060) whether the Durham standard was as high as that of the corporations in London.—"Not quite so high."

Then, after stating that the standard depended mainly on the examiners, the Chairman asked:

(4902) "Then may I put it to you, why should you, as an examiner in Durham, make any difference as compared with what you do as an examiner in London?"—"Because, when you go to Cambridge or to Durham, or any place as a strange examiner, you find out from your co-examiner, who is in the room with you, what is the standard that is generally expected, and what they work up to."

This is an admirable illustration of the private understanding by which a Doctorate of Medicine, the most honourable degree that can be conferred, may be obtained. In proof of the inequality of the examinations entitling to registration, no stronger evidence need be adduced than that supplied by the minutes of the General Medical Council. On June 26th, 1868, the Council appointed an Education Committee. Sir Robert Christison, Mr. Syme, surgeon to the Queen for Scotland, Professor Allen Thomson, of the University of Glasgow, and Dr. Andrew Wood, strongly represented the Scotch interests on the Committee; Dr. Apjohn, the representative of Dublin University, Mr. Hargrave, and Dr. Aquilla Smith, sat for Ireland; while Dr. Acland, the present President of the Medical Council, with Mr. Cæsar Hawkins, Dr. Sharpey, and Dr. Parkes, represented England. In the report of this strong and representative committee, the inequality of the examinations was denounced in the following striking terms. "One of the great evils at the present moment is the inequality of the examinations for the licence. This inequality of the test of efficiency is the more unfortunate, as every licence confers an equality in the right to practise everywhere. The easy examination of one licensing body tends to depress the standard of the examination in all the rest. Visitations of examinations, doubtless, partly remedy this state of things, but, to completely remove it, a bolder course is necessary. The time has now arrived when, leaving to the universities and corporations full liberty to deal as they please with their honorary distinctions and degrees, the Medical Council should endeavour to effect such combinations of the licensing bodies included in Schedule (A), as may form a conjoint examining board for each division of the kingdom, before which every person who desired a licence to practise should appear, and by which he should be examined on all subjects. Any higher degrees he may wish to take should come after, and should be optional. The plan is one which the Council has often approached, and has recommended in principle. We feel assured that the examinations for licence will never be made satisfactory without it, and, therefore, that it is for the public good to enforce it without delay."

This report, which was submitted to the Select Committee of the House of Commons, June 1879, by Mr. Simon in his evidence (567), was drawn up some years before Mr. Simon became a member of the Medical Council.

I might multiply instances from the evidence taken before the Royal Commissioners on this point. I will, however, conclude by saying that the British Medical Association is of opinion that the only remedy for the present deplorable state of medical education lies in legislation on the basis of the report of the Royal Commission; and this deputation earnestly entreats your lordship to undertake it, with the assurance of the hearty support of the profession and Association; and I may add that, if the Government bring in a Bill, the Association and the profession throughout the country have power to carry it through the legislature. I have to thank you for listening to my remarks.

LORD CARLINGFORD: It is a very interesting statement indeed.

DR. WATERS: We are assured of the support of the profession. We have our Branches distributed all over the kingdom. The members of the Association, I know, have influence with the members of Parliament, and I think that members of Parliament are peculiarly open to reason, and that they have invariably agreed with us except where special interests have been involved. The difficulty that we have to contend with in this instance is, that the corporations seem to be looking after their monetary interests. In fact, amongst the corporations, Sir Dominic Corrigan invariably declared that it was "a battle of the shops."

DR. GLOVER: I see in yesterday's *Times* a case in point. In the list of those passing the examination of the College of Surgeons of England, I noticed that of twenty-six who passed their examination in surgery in that College, twelve of them went down to Edinburgh

and passed the examination in medicine. In that case, they must either have failed in medicine or have preferred to take one part of their examination in Edinburgh for a London diploma. That is an instance of the working of the system which has been shown to prevail by Dr. Waters. I hold a Scotch diploma. I am a graduate of Edinburgh, but I also hold the licence of the College of Surgeons of Edinburgh. I feel it a great hardship. This licence is only half a diploma, and it is a diploma that is spoken against. The authorities in London despise it, and hold my qualifications very lightly. I feel the want of a central board, above all suspicion, that will say to me as an Edinburgh diplomate—"There is the same guarantee for the respectability of your diploma as for others". I know that the opposition to this matter comes from Scotland. But I wish, as a graduate of Edinburgh (and the Commissioners have amply safeguarded the interests of the universities), and as holding a licence from a Scotch corporation, to have these matters remedied. I feel personally aggrieved; and I have tried to convince Professor Turner and others, that we ought to seek this legislation so as to take away the disparagement which attaches to the holder of a Scotch diploma.

Lord CARLINGFORD: Do you apply this to all the Scotch bodies?

Dr. GLOVER: To the Scotch corporations, not to the Scotch universities, which are very strong indeed in examinations now. Unless we are all very much in the wrong, these Scotch licences are not equal to others; and they are spoken of by such careful speakers as Sir James Paget. He says that there is a serious inequality in the examining boards; and I have just told you that out of twenty-six in yesterday's *Times*, twelve went from London to Scotland for their examination in medicine.

Mr. MUNDELLA: What is your remedy?

Dr. GLOVER: My remedy is an identical scheme for the three countries. You would have three licensing boards instead of nineteen. They could be supervised, and the examinations could be made fairly equal.

Mr. MUNDELLA: You know what Sir James Paget said about that. He said: "I think it would be desirable to have such a joint scheme, but from all that I hear it would not be without grave damage to the University of Edinburgh, and I should be disposed to hold that the prosperity of the University of Edinburgh is quite as important as any strict regulation that can be made concerning identity in the examinations."

Dr. GLOVER: Professor Turner of Edinburgh and Professor Gairdner of Glasgow both agreed to a scheme like this, for a joint board; and they were willing to exact from graduates that they should not be entitled to practise medicine until they had gone through the final examination as recommended by the Royal Commission. There is no difficulty on that matter; and the representatives of the Scotch universities have agreed to this.

Lord CARLINGFORD: But I did not understand that before the Royal Commission they expressed their agreement to it.

Dr. GLOVER: No, they would rather not; they wished all things to continue as they were.

Mr. MUNDELLA: But they were distinctly hostile.

Dr. GLOVER: But what I have mentioned was a distinct proposal by Professor Turner; and the Scotch universities would be perfectly uninjured. Some friends of this movement are getting discouraged; and they say that it is a scheme that, with Mr. Gladstone as a Scotch county member, and Dr. Playfair member for the University of Edinburgh, they will get no reform. That is an entirely new view of the matter.

Dr. WATERS: I may say that, before the Select Committee of the House of Commons, I was examined specially by Dr. Playfair on the scheme which has been suggested—viz., that the examinations in connection with the Scotch universities should simply be for the final examination, and that the fee paid to the joint board should be proportionately less, in consequence of their not taking the whole examination; and most certainly, unless he has changed his opinion, Dr. Playfair was at that time decidedly in favour of the plan which Dr. Glover has mentioned. Of course, the Scotch universities will not accept it willingly, and they prefer standing where they are; but I think that it is scarcely fair that the Scotch universities should stand in the way of the interests of the public.

Mr. MACNAMARA: The Scotch graduates form a small proportion of the 25,000 registered medical men. Of that number, 17,000 are English; so that a small minority of the Scotch stand in the way of a change for the benefit of a majority.

Lord CARLINGFORD: What is the state of Irish opinion? Is it in its favour?

Dr. GLOVER: The Irish practitioners are in favour of it.

Mr. WHEELHOUSE: I can bear out what Dr. Waters has said about

students preparing themselves for easy examinations in one part of the kingdom, for going through one-half of their curriculum, knowing where they could get it easily; and going to another part to qualify in a similar manner for the other half. It is certainly a great evil, that a man should be permitted, knowing that he is unfit for the examination in his own country, to go out of his own country to obtain that which he has not the knowledge to obtain at home; and that he should come back as fully qualified as though he had obtained his diploma in England. Having been connected with a large provincial school, I have known men rejected repeatedly in their examinations; and they have gone the same night to Glasgow and Edinburgh, and have there passed with flying colours, and come home with their diplomas, and have been able to register themselves. So long as there is a possibility of getting into a train and going straight off to another body, our efforts to raise the status of students will be fruitless, and we shall have no guarantee whatever that the *Register* is evidence of a person being thoroughly qualified. I may say, with regard to the profession, that the report of the Royal Commission has been hailed as a great step in advance; and it is generally believed that there will be a board for each kingdom, so that students will be unable to pass from one country to another in this kind of way. This practice is looked upon as a serious evil, so far as our observation goes.

Lord CARLINGFORD, in reply, said: I understand that this important deputation, which I know thoroughly represents the British Medical Association as that very largely represents the profession itself, has come here to ask the Government to legislate as soon as possible upon the report of the Royal Commission.

Dr. WATERS: That is the object distinctly, with the promise that the Association will exert itself to the utmost to facilitate the passing of any such Bill through Parliament. It is a distinct understanding on the part of the Association, which has been acting in this direction for now fifty years, and it has been pledged from the first to this scheme, and it hopes to see it realised, and, sooner or later, it must come.

Lord CARLINGFORD. Dr. Waters makes me shake in my shoes at the bare idea of opposing this Association [*laughter*], and I am sure Mr. Mundella must feel that sensation still more strongly; but I hope that such strong measures will not be necessary. [*Laughter.*] The deputation will easily understand that I am not able at this moment, on the part of the Government, to make any announcement whatever. And on the part of the department, I do not know that Mr. Mundella and I can say more than that we are entirely at one with the deputation, in believing and feeling that legislation upon the subject of medical education and licensing (and effectual legislation, too) ought to take place as soon as possible [*hear, hear*], and we certainly shall be very much disappointed here if that does not take place during the ensuing session. [*Hear, hear.*] I have had no opportunity yet of bringing the matter before the Cabinet, but I hope to do so before long, and, in doing so, what I have heard from you to-day will be a very important element in the matter, and, I think, a very great support to us here. I do not attempt to go into any details, but that is how the matter stands at this moment, and I think it is a great advantage to the Government to have heard what you have to say. We certainly shall be very glad to have the support that Dr. Waters promised us. Mr. Mundella will have a still more grateful feeling in the matter.

Mr. MUNDELLA: I should be very glad if we could get the same support all round as is promised us by the British Medical Association. I know that we could pass the Bill in the House of Lords, but it is quite another thing to pass it in the House of Commons. But this I am glad to recognise, that there is a general feeling in the profession that we did the right thing in appointing a Royal Commission instead of letting the matter go to a Select Committee, where time would have been wasted in going into complicated matters brought forward by interested witnesses. Now, there is no doubt that the Report of the Royal Commission has greatly advanced this question, and our only difficulty is as to what will be the order of legislation; and as to that, as Lord Carlingford has said, it is not possible for us to commit ourselves. We do not know, when there is so much pressing business, how we shall proceed. I know that in our department we had two or three most important questions which had to stand over. Welsh Education was deferred again to next session, and also the Endowed Schools—a most important question, and a pressing one, because the Act expired last year, and we had to put in a Continuance Act. Every part of the State was in the same condition with questions that want dealing with. I hope that we are putting the House of Commons in the way of dealing with these questions. Apart from politics, I say that you must feel as much interest as we do to get the legislature into a condition of dealing with matters of this kind. At present everything is at a complete block, but I hope and trust that

we shall remove all obstacles; and, if we can do anything for you, we shall be happy to do so. I have been reading a large amount of literature on this question, and I understand you want a Bill laid on the table of the House. [*Hear, hear.*] Perhaps the Lord President will enable us to do that, and take a sort of preliminary canter in the House of Lords, so that we may get the thing through the Commons.

Lord CARLINGFORD: As far as that goes, I think there will be no great difficulty; but one would wish for more than that. Everything would depend upon the amount of agreement that can be attained upon this matter. Now, so far as I can make out, there is a very large amount of agreement in England itself.

Dr. GLOVER: And there is also a large amount of unwilling agreement in Scotland.

Lord CARLINGFORD: I do not know about that; I am not so sanguine of that. Scotland is a country that will always make its voice heard.

Dr. WATERS: Certainly there was a preponderance of feeling upon the direct representation and joint scheme on the part of the profession of Scotland. I am speaking of the profession as distinct from the Corporations.

Lord CARLINGFORD: Quite so.

Mr. MUNDELLA: I hope we shall be able to advance it next session.

The PRESIDENT, Dr. Strange, on behalf of the Association, returned thanks to the Lord President and the Vice-President for their courteous and favourable reception of the deputation.

The deputation then withdrew.

THE RED CROSS SOCIETY AND AMBULANCE WORK IN RUSSIA.*

NOTES ON A RECENT VISIT BY CAPTAIN J. C. DALTON, R.A.

HAVING been in Russia in July and August 1882, I was enabled to see a little of the working of the Red Cross Society, which corresponds to a certain degree to our St. John Ambulance Association. In Russia, all associations and societies must be under the supervision and patronage of the Government. There is not such a thing known as a private society, as, for example, the St. John Ambulance Association. The Red Cross Society, though not the only one of the kind in Russia, is the largest and most powerful, and is under the direct patronage of the Emperor and Empress and other members of the Imperial house. It is protected by the Government, and is rich in funds. It is administered from a large central committee establishment in St. Petersburg, where the Council meets and settles all relating to the society and to its branches. The latter exist in the provinces; for example, at Moscow there is a branch under the Governor of Moscow, but the work is all done at St. Petersburg. Numerous boxes are to be seen at various points in the town for collecting voluntary donations for the society, and I have been told that rich superstitious merchants and others, in gratitude for some stroke of luck that may have come them, will often put a large sum into these boxes.

The Red Cross Society equips and furnishes ambulances in time of war, finding *personnel* and *matériel*. Dr. Karl Reyher of St. Petersburg, a life member of the St. John Ambulance Association, on whom I called, was most kind and obliging, and took me to the Central Committee rooms of the society with which he is intimately connected, and with which he served in the campaign of 1877-8 in the Caucasus in charge of a Red Cross field-ambulance. Besides this, he has a large private and consulting practice in St. Petersburg, and he has successfully instituted in that city, ambulance lectures on the same basis as ours, and has in several instances paid us the high compliment of utilising our small *Aide-Memoires* and *First Aid Manuals* for his classes, having had them translated into Russian for this purpose.

Dr. Reyher showed me the room in which he gives his lectures. The general arrangements for the classes are the same as with us, but there are necessarily a few points of difference, arising from the varied circumstances of the two countries. Like us, he takes twenty to twenty-five men for each class, and gives a course of five weekly lectures. Owing to the number of women who are specially educated in Russia to medical work in all its forms—from being actually qualified medical practitioners down to being nurses in hospitals—female classes do not exist, and Dr. Reyher is of opinion that they are unnecessary and would not answer in Russia. He devotes not more than the first half of his first lecture to anatomical and physiological explanations, being of opinion that it is a mistake to try to overburden the pupil's brain with technical details, which he will probably only half under-

stand and soon forget; his object being to merely explain to them what is actually necessary for them know, before they proceed to learn the appliances and *modus operandi* for "first aid."

In the class-room, besides the actual skeleton and diagrams, he has what he calls a "Fantôme," which is a coloured model of the human body as it would be without the outer skin, containing representations of all the principal parts of the body, and being so arranged that different parts can be removed to show what exists underneath. It fully explains to an unscientific pupil the course of the blood, and the positions of the main blood-vessels, digestive organs, etc. It is made of a species of composition like pasteboard, is very light, very ugly, and I should say comparatively inexpensive; as, for the purpose it has to fulfil, there is no need for it to be made absolutely correct as to proportions, etc.

He is particularly careful to use only those appliances for cases of bleeding and fractures which would be likely to be on the spot in case of accidents under different circumstances, as, for example, walking-sticks, umbrellas, fire-arms, swords, bayonets, newspapers, expanding flower-pot cases, pieces of wood, snow spades, brooms, and articles used in the streets, children's wooden spades, sacking, clothes, and anything out of which to improvise temporary stretchers; also, all kinds of domestic articles to stop bleeding with—such as garters, stockings-suspenders, handkerchiefs, scarves, India-rubber tubing, stones, etc. He finds the men very anxious to learn; and in applying for volunteers from among a very numerous class in Russia, viz., the *dvorniks*, or door-porters of the houses in St. Petersburg, he, in a very short time, got one hundred names. These men lead an idle and sedentary life, sitting outside the doors of houses generally (in summer), and necessarily are more likely to see accidents in the streets than any other class of men except the police.

The lectures are all free. The Red Cross Society is sufficiently rich to dispense with any payments. There is no examination at the end of the course, and, consequently, no certificate. This movement is, of course, only in its infancy in Russia, and has not been tried, to the best of my belief, in any other town but St. Petersburg. Dr. Reyher is, so far, the only lecturer, and, therefore, he can only instruct twenty-five men in five weeks during the time he is in St. Petersburg. I doubt if it will ever attain to anything like the proportions it has reached in our country; but Dr. Reyher is very enthusiastic and devoted to the cause, and, doubtless, it will extend a good deal yet.

He has had an illustrated triangular bandage made, after the principle of the Esmarch bandage, but more complete, inasmuch as it includes representations of the modes of stopping bleeding, which Dr. Reyher looks on as more important than the fractures. He kindly gave me some of them, as also some of his *Aide-Memoires*, etc., including a small diagram of the various places at which pressure must be applied to stop bleeding, which, I think, might with advantage be added to our stock of small diagrams.

In the central rooms of the Red Cross Society, I was shown several ambulance-carriages, and hand and wheeled litters, but the greater part of their stock had been sent to the Moscow Exhibition, of which anon. I saw no wheeled litter so good as the one we have, which Mr. Furley designed, and which I hope Dr. Reyher may see if he comes to England, as he says he means to do. If only Mr. Furley's litter were properly protected, I should think the Red Cross Society would buy it if they knew of it.

In a room, on the ground-floor of the building, is stored the stock of bandages, and "first aid" appliances of all kinds in charge of a woman, and beautifully kept. All the materials they are made of appeared to me to be of the best.

The Red Cross Society also maintains certain hospitals, and I was shown over some of the wards by Dr. Reyher, who is consulting surgeon to most of them, and has charge of one which is devoted to surgical cases.

These hospitals are also beautifully clean and well managed, and the patients, both adults and children of both sexes, seemed happy and well cared for, and it was particularly pleasing to see how delighted they were to see Dr. Reyher, who treated them with marked kindness and deference, shaking hands with them, and having a cheery word for each. The children seemed quite happy with toys and picture-books. All the attendants were duly qualified female nurses.

There is a grade in the Russian army medical profession which we have not, and which comes between the surgeon and the hospital attendant, or nurse. It corresponds, to some degree, with our apothecary in the Indian medical service, and is called in Russian "feldsher." The feldsher may be a man or woman, is educated up to a certain point, and can, in an emergency, replace the surgeon, and attend to all minor cases. Wallace, in his exhaustive treatise on Russia, devotes a good part of a chapter to them.

* Forwarded by Sir E. Lechmere, Chairman of the Central Executive Committee of the St. John Ambulance Association.

Before we parted, Dr. Reyher showed me his valuable collection of bones from the battlefields of 1877-8, which show the effect of every sort of wound from artillery and musketry fire. I should think this collection must be the most perfect of its kind that there is, and would be most interesting to military surgeons in particular.

The same evening I started for Moscow, and remained there a month, during which time I frequently visited the "All Russia National Exhibition," and was shown over the section devoted to the Red Cross Society by Dr. Anton Schmidt, a German by birth, but in the Russian army medical service. The pavilion of the Red Cross Society contains a most complete collection of every appliance to alleviate suffering and save life on the field of battle, or elsewhere. Amongst other things, I was shown the felt tents used in the Russo-Turkish war, and in the Central Asian campaigns. Though, doubtless, well qualified to keep out heat, they are, I think, generally condemned by most medical men, because, from the absorbent nature of the felt, every noxious exhalation from the patient must be absorbed in the tent. They are also very cumbersome, and more like huts than tents. They are very dark, the only light being from the door and small windows. All the interior arrangements of beds, bedclothes, crockery, etc., were very good; they generally took four to five patients.

There was a large exhibition of ambulances, litters, and stretchers of all sizes, several of which had been used in the recent war. There were very large cumbersome wagons to take eight patients (in two tiers) and for two horses; but these were too large for practical use, and would only answer in wide, well paved streets, which are not often seen in Russia. There was a litter for mountainous districts for one patient, to be carried by two mules or ponies. It was fixed with springs on two long poles, which rested in loops, passing over the pack-saddles of the animals, one of which was in front and one behind. I could see no object in this, because it would be difficult to make the animals step sufficiently together at an even pace. They would need each a man to be at their heads, in case of bad places, or of their being frightened. Four men would carry one patient easily, and better than the animals, and would carry him much more safely over the ground.

Another sort was a light wheeled ambulance-cart for two patients. It was on wheels, and a camel was harnessed to it to drag it. Then there were numerous ambulance carriages for four patients, very like ours, and also a collection of camp-beds and litters, and one very portable, and made of ticking, or straw, or wire.

One wheeled litter was something like Mr. Furley's, though not so good. It was very light, and was meant to be hooked on behind another, forming a four-wheeled carriage, and drawn by one or two men. On the whole, the ambulance carriages did not appear to present any striking or novel features.

The railway carriages for patients were, however, very perfect. They consisted of the ordinary carriages of all classes, and the ordinary closed food van improvised to take sick and wounded, and there were also some specially designed for the purpose. The first I saw was one of the latter class. It took eight beds, which could, if necessary, make up into sofas, and were very comfortable in either capacity. There were a good lavatory and water-closet, stove for cooking, cupboards, separate place for the doctor or nurse in charge of the carriage, telephonic communication, etc. The next was merely an ordinary first class extemporised, and almost equally comfortable with the last. Another was a third class carriage before the seats had been put in, and it contained eight ordinary iron bedsteads.

There were two goods vans, differently extemporised in the simplest way to carry camp litters. In one case, these were suspended in two tiers of four each, by means of strong rope knotted and fixed to hooks in the ceiling and floor of the carriage. The other was arranged by having vertical posts, fixed two and two, to receive the four corners of the bed, which rested on spiral springs working in these pairs of posts; the objection to both these last was the oscillation that must occur in shunting, moving off, etc.

The Russians seem to have gone thoroughly into this question. It is much more easy to adapt a Russian than an English carriage to this sort of work, because the former are all open, and generally on the American system; also, the railway journeys being so long, the carriages are fitted for sleeping, and with lavatories, etc. There were numerous models besides, showing different designs for the same purpose; also models of hospitals, etc.

I was shown the small housewife that each soldier carries on his person in war time. It is about $5\frac{1}{2}'' \times 3\frac{1}{4}'' \times 3\frac{1}{4}''$, and is in a water-proof case, which contains, sticking plaster, bandage, lint, etc. I think that this concludes all I have to say referring to the Red Cross Society, and I only wish that I had had some one with me more able to comprehend and describe all I saw.

THE WAYNFLETE PROFESSORSHIP.

PROFESSOR BURDON SANDERSON, F.R.S., has been elected Waynflete Professor of Human Physiology and Histology in the University of Oxford, this being the first appointment made under the new statutes. The income of the professorship is £600 a year, together with a Fellowship at Magdalen College. The appointment has caused some surprise to the uninitiated, in connection with Professor Burdon Sanderson's recent letter in our columns, and the *communiqué* published in a contemporary referring to our previous notice of the subject. It will, however, now be seen that Dr. Sanderson's letter related to a verbal form of expression, rather than to any solid matter of fact. We expressed, in anticipation, the opinions which are, we believe, pretty universally held on the subject. No one can doubt, or has at any moment doubted, the claims of Dr. Burdon Sanderson to any physiological appointment, which he chose to make it known that he was willing to accept; and the University of Oxford may be congratulated on having filled the new chair with a physiologist who stands at the head of his department of science in this kingdom. On the other hand, the most serious misgivings have been widely expressed, and will for some time continue to be entertained, as to the wisdom of the appointment under the peculiar circumstances of the case, and looking to the special requirements of the University. It is pretty generally understood among physiologists, that Professor Sanderson was looking to the appointment as one of a character to which he, better than any other man who could be named in the three kingdoms, is entitled: to a position of dignified ease and semi-retirement. The labours connected with the present appointment are not very considerable, in view of the large and highly skilled assistance at his disposal; and the emoluments of the Waynflete professorship, supposing the latter consideration offered any inducement, which there is not the slightest ground for supposing, are little larger than those attached to the chair at University College. On the other hand, those who have been most active in bringing about that progress towards the re-establishment of medical education in the University of Oxford, towards which the creation of the Waynflete professorship is an important step, feel most deeply the urgent need that this professorship should be considered as a post of laborious instruction. If the new professor is to fulfil, in any useful degree, the great opportunity which the creation of this chair affords, or to satisfy the aspirations of those who earnestly hope that Oxford will not long continue to be ignominiously excluded from the list of universities which possess a medical faculty, and which take a decided and an important part in medical education, then the duties of the new post must be laborious and homely. What is needed, above all things, in Oxford, is the organisation, for the first two years at least, of a medical education in such form and degree that students of medicine shall be able to receive there the daily instruction required for the examining bodies of the kingdom, and fulfil there the conditions of instruction and curriculum which are the *sine quâ non* for examination and registration. The teaching of anatomy and physiology at the University of Oxford has hitherto been absolutely valueless as the daily bread of medical students; and it is of the utmost importance that this state of things should be reversed, and it is to the Waynflete and the Linacre professors that we must look to take the necessary steps to establish classes and lectures, such as those which exist in the University of Cambridge, in the University of Edinburgh, and in every foreign university that can be named, but which do not yet exist at Oxford, for the actual teaching of medical students for the first and second year, in the subjects of anatomy and physiology. Professor Sanderson has, however, always shown a profound interest in confirming the connection between physiology and medicine. By profession a physician as well as a physiologist, and intimately connected with the teaching of medical students for a life-long career, he is in a position fully to estimate the daily requirements of students; and, having accepted the appointment, and knowing well what is the unanimous opinion of physiologists and the great body of the physicians of this country, he is in the position, better than any one else, to measure the responsibilities and the duties of the post which he has accepted. Nor can we entertain any doubt that he will, at even the sacrifice of that ease and leisure to which he might otherwise have naturally aspired, fulfil even the most laborious duties of the office.

DEATH IN A DENTIST'S CHAIR FROM CHLOROFORM.—A lady, living in Dunnville, Ontario, died in a dentist's chair on September 11th, while under the influence of chloroform, which had been administered by her physician for the purpose of having some teeth extracted.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL.

NOTICE OF QUARTERLY MEETINGS FOR 1883:
ELECTION OF MEMBERS.

MEETINGS of the Committee of Council will be held on Wednesday, January 17th, April 11th, July 11th, and October 17th. Gentlemen desirous of becoming members must send in their forms of application for election to the General Secretary not later than 21 days before each meeting, viz., December 26th, March 21st, May 21st, September 26th, in accordance with the regulation for the election of members passed at the meeting of the Committee of Council of October 12th, 1881.

November 9th, 1882. FRANCIS LOWKE, *General Secretary*.

BRANCH MEETINGS TO BE HELD.

NORTH OF IRELAND BRANCH.—A meeting of this Branch will be held in the Belfast Royal Hospital, on Thursday, December 7th, at 12 o'clock noon. Members intending to read papers are requested to communicate immediately with ALEX. DEMPSEY, M.D., Honorary Secretary, 26, Clifton Street, Belfast.—October 26th, 1882.

FRAMES VALLEY BRANCH.—The next meeting of this Branch will be held in the Board Room of the Richmond Hospital on Thursday, December 14th, at six o'clock. Members willing to bring forward any communications are requested to give notice to the Honorary Secretary. Dinner at the Station Hotel, at seven o'clock.—EDWARD L. FENN, Honorary Secretary, Richmond.

BATH AND BRISTOL BRANCH.—The second ordinary meeting of the session will be held at the Grand Pump Room Hotel, Bath, on Thursday evening, December 7th, at half-past seven o'clock; J. K. Spender, M.D., President. The following communications are expected: 1. Dr. Aust Lawrence: Notes on Cases of Placenta Prævia. 2. Dr. Cole: Notes on a Case of Diabetes Insipidus; a Case illustrating the effect of Salicylate of Quinine. 3. Dr. Fox: A Case of Pernicious Anæmia. 4. Mr. Green: A Case of Gastrotomy.—E. MARKHAM SKERRIT, R. J. H. SCOTT, Honorary Secretaries.

EAST SURREY DISTRICT: SOUTH-EASTERN BRANCH.—A meeting of the above District will take place on Thursday, December 14th, at the Greyhound Hotel, Croydon, at 4 P.M.; Walter Rosser, Esq., M.D., of Croydon, in the chair. The following communications, etc., have been promised: 1. Dr. Rosser (Chairman) will open a discussion on the Management of the Perineum during Labour. 2. Dr. Gervis: Chronic Ovaritis. 3. Dr. Savill: On the Use of Anæsthetics during Labour. 4. Dr. Stowers: Case of Paget's Disease of the Nipple. N.B.—Dinner (charge 7s., exclusive of wine) will be served at 6 P.M. precisely.—J. HERBERT STOWERS, M.D., Honorary Secretary, 23, Finsbury Circus, E.C.

MIDLAND BRANCH: GENERAL MEETING.

A MEETING of the above Branch was held at the Guildhall, Boston, on Thursday, November 23rd, under the presidency of Dr. HARRISON.

Collective Investigation.—A committee was appointed for the collective investigation of diseases in Lincolnshire, and several interesting papers were read and discussed. The meeting was largely attended, and the whole of the programme was carried out.

A dinner was provided in the same building.—Nov. 27th, 1882.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.

A MEETING of the above District took place at Eastbourne on Tuesday, November 28th, 1882; Dr. HAYMAN in the Chair.

Papers.—The following papers were read.

1. Dr. Habgood: On a Case of Tubal Gestation, with Specimen.
2. Dr. Ewart: Two Cases of Acute Dysentery in returned Anglo-Indians: with Remarks on the best Method of giving Ipecacuanha.
3. Dr. Fussell: Remarks on an unusual Case of Paracentesis Thoracis.
4. Mr. Sherwood: A Case of Injury to the Brain, and another of Disease of the Brain, both in Children.

The late Dr. Braid.—The following resolution, proposed by Dr. MOORE, and seconded by Dr. FUSSELL, was carried unanimously.

"The East Sussex District of the South-Eastern Branch of the British Medical Association would desire to convey to Mrs. Braid and the family of the late Dr. Braid their deep and heartfelt sympathy in the irreparable loss they have just sustained. In Dr. Braid, all who came in contact with him must have recognised a high-minded Christian gentleman, a zealous and conscientious medical practitioner, a warm friend, and, this Association especially, a steady and genial supporter. Dr. Braid has left a void which will be felt, and the members of this Branch especially deplore the loss of so able and kind-hearted a professional brother."

EAST YORK AND NORTH LINCOLN BRANCH:
HALF-YEARLY MEETING.

THE half-yearly meeting of the Branch was held at the Infirmary, Hull, on Wednesday, November 8th, at 3 P.M. The President, Dr. DALY, in the chair.

Homœopathy.—The SECRETARY read letters which had been received from the President of the Council, the General Secretary, and other gentlemen on the question of homœopathy.—Mr. DIX gave a brief account of the meeting at Worcester with regard to homœopathy, and complained of the unsatisfactory nature of the proceedings; and said that while the authorities professed themselves desirous of promoting an inquiry into the subject, they yet made no provision to secure one. He concluded by moving the following resolution, which was seconded and carried: "That this meeting begs to inquire of the Committee of Council what steps they propose to take to carry out their own proposal, made in their report to the general meeting at Worcester, to obtain 'a full expression of opinion on the part of the whole Association as to whether it will tolerate homœopathy in its ranks or not.'"

Ogston's Operation.—Mr. CRAVEN showed a child, aged 3½, on whom he had performed this operation, on both legs. He described the previous deformity, and the steps of the operation, which was done antiseptically, with a very satisfactory result.—Mr. EVANS thought that in these cases there was not an enlargement of the internal condyle, as was generally maintained, but that the deformity consisted of a twist in the femur. He had observed it in this child, although it was not very marked.

Lateral Lithotomy.—Mr. CRAVEN exhibited a calculus weighing 1 oz. 12 grs., which he had removed from a man aged 66. There was some bleeding afterwards. He went on well for six days, without any rise of temperature, after which he began to fail, and died on the ninth day. There was no *post mortem* examination, and there were no special symptoms to explain his death.—Mr. DIX inquired why lithotomy had been preferred to lithotripsy, as the former was a very dangerous operation in old persons.—Other gentlemen spoke, and Mr. Craven replied.

Renal Aneurysm.—Mr. CRAVEN also related the sequel of the case in which he had ligatured the external iliac artery for femoral aneurysm. The patient was readmitted in August, complaining of great pain in the back. He died the same day, and at the *post-mortem* examination a renal aneurysm was found on the left side.

The other paper was postponed for want of time.—November 27th, 1882.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE eighty-fifth meeting was held at the Kent and Canterbury Hospital on Thursday, November 9th, at 3 P.M., Dr. PARSONS in the Chair.

Next Meeting.—It was decided to hold the next meeting at Deal, and Dr. Davey, of Walmer, was elected President.

Collective Investigation.—Letters were read from Dr. Mahomed concerning the "Collective Investigation Committee." Dr. Parsons gave a history of the work and objects of the Committee, and it was settled to discuss the subject of "Pneumonia" at the meeting at Deal in March.

An influential and large local sub-committee had been at work since June, and every member of the Association in the district had received cards, many of which were filled in and returned; but the last meeting of the district being a "conjoint" one with the West Kent District, this was the first opportunity for discussing the collective investigation of disease, and it was pleasing to find how much support it had received in East Kent.

Communications.—The following communications were made.

1. Mr. Brian Rigden showed a Spurious Hermaphroditism, seven months old. There was a large clitoris, not perforated, and labia without testicles. A small opening existed beneath the clitoris; a probe passed into this went towards the perineum into a large cavity. From this cloaca urine flowed. There was no visible vagina, and the finger in the rectum failed to detect an uterus. The mother had borne three healthy boys previously. This child was considered a female by the meeting. A very amusing and interesting discussion followed.

2. Mr. Whitehead Reid read a paper on Endocervicitis. Taking the general practitioner's view of such cases, he insisted on the grand principles of general treatment, personal, moral, hygienic, and disciplinary. He also urged the importance of energetic local treatment in certain obstinate cases of chronic endometritis, which the general practitioner, as a rule, was but too prone to allow to run on from bad to worse under purely general principles, both from a dread of interfering

too much, and also from the feeling of the small amount of credit usually obtainable in the treatment of such tedious and obstinate complaints. Cases in point were cited.

In the discussion that followed, remarks were made bearing on the value of such treatment.

Mr. Dring read a case of Hernia in an old man, who discovered he was ruptured after vaulting over a counter 23 years previously. The hernia was a right inguinal one, and had been irreducible for three years. The bowel became incarcerated four days before he sought advice. When seen, he had hiccough. His temperature was 102°, and he had a very large scrotal hernia, which was hard and knotty in parts. Operative interference was not deemed prudent; rest and position were tried. After three or four days, fecal vomiting ensued; the scrotum was opened, and the coils of bowel found bound down by many adhesions, which were carefully divided, but a gangrenous portion gave way. The man lived ten days afterwards, experiencing relief from his artificial anus. The discussion turned on earlier interference; but under all the peculiar circumstances of the case, it was considered the wisest course had been pursued.

Collective investigation cards on Diphtheria were distributed.

Dinner.—After the meeting, the members dined together at the Fleur-de-Lis Hotel.

CORRESPONDENCE.

POISONING BY FUNGI.

SIR,—On page 1034 of the current volume of the BRITISH MEDICAL JOURNAL, your correspondent, Mr. T. Jackson, gives an account of the necropsy on the body of a child, whose life, as he asserts, "had been speedily ended, cut short by the intensity of the inflammation" (of the stomach), which, your readers are left to infer, was caused by eating the common mushroom, *agaricus campestris*.

This case has been the subject of a trial at the York Winter Assizes: and the facts thus elicited are so important, that it would not be right that Mr. Jackson's statement, in his article in the BRITISH MEDICAL JOURNAL, should go forth to the profession as embodying the whole facts of the case; and I add a statement of additional facts, taken from official documents, as a supplement to Mr. Jackson's article.

The body of a female child, unknown, aged about 1½ years, was found, naked and wrapped up in a newspaper, nine miles from Hull, on the 26th of September last. Mr. Jackson, who thought the body had been in the water about seven days, has already given an account of the *post mortem* examination made by him. At the inquest (September 27th), a verdict of "Death from inflammation of the stomach, caused by eating fungi," was returned. Two days after the inquest, information was given to the police that a child (Alice Jones) had been missing from Hull since September 20th. This led to the arrest of the mother on a charge of murder; and the body of the child was exhumed on October 1st, three or four days after the burial, under an order from the Secretary of State. The body was amply identified as that of the child Jones, and as that on which Mr. Jackson had conducted a necropsy. The second *post mortem* examination was made by Messrs. Henry Thompson and Sherburn. They found two marks on the neck: one high up, and apparently due to flexion of the chin upon the neck; but an inch below this, and on a level with the upper part of the trachea, in a line passing horizontally backwards, were some indistinct patches of skin, of a different and rather lighter colour than that immediately above and below. On the back of the neck, and to the right side of it, on a level with the patches just described, were two bruises, the larger of which was of the size of a sixpence, and the other about half that size. On incising these, extravasated blood was noticed in a varying depth of one-eighth to one-fourth of an inch; they were one inch distant from each other. The vessels on the surface of the brain were engorged. The thoracic viscera were still *in situ*. The lungs were considerably emphysematous. The right cavities of the heart were distended with dull blood, whilst the left cavities were nearly empty. The examiners were of opinion that the appearances pointed to death from obstructed respiration.

Several portions of the viscera were submitted to me for examination and analysis. These included the lower end of the gullet, in which was a small quantity of food evidently regurgitated, or pressed back from the stomach; the stomach itself; and the whole of the intestinal canal, from the stomach downwards, in one piece, with the bowel unopened. I detected no poison; and extracts made from the viscera, etc., were innocuous to frogs, and had no apparent action upon the frog's heart. Every trace of mushroom-tissue, even the microscopic,

had disappeared, although such things as apple-pulp and currants were clearly recognisable in the gullet, stomach, and intestines, and in the contents. I may add that the stomach itself, as well as the intestines—not much decomposed—were to all appearance perfectly normal, and free from congestion or any inflammatory products. Dr. Goodhart, who was kind enough to examine the stomach and intestines with me, pronounced them to be perfectly normal. Food, but no mushroom-tissue, was found adherent to the stomach.

The mother was tried, as I have said, for wilful murder; but there being no clear evidence as to the cause of death, and the marks of violence on the neck being admitted possibly inflicted shortly after death, the woman was very properly acquitted.

It will be remarked that there was an entire absence of a history of symptoms; without this, the presence of half a pint of the edible mushroom in the stomach—an extraordinary circumstance in a child so young—cannot be accepted as evidence that death resulted from the eating of fungi.—I am, etc.,

November 27, 1882.

THOS. STEVENSON.

THE DEPUTATION TO THE LORD PRESIDENT OF COUNCIL.

SIR,—In the only detailed report I have seen of the recent deputation to Lord Carlingford and Mr. Mundella (*Scotsman*, November 23rd), I find Dr. Glover referring to my name along with that of Professor Turner, and it would almost appear as if our supposed assent to the principle of a joint board was to be made a starting-point for the further assumption that the opinion of Scotland, or of the Scottish universities, might be reckoned upon in future as favourable to some modification of that principle. Were it not for this suggestion, I might be content to leave Professor Turner's opinion to be read in his separate memorandum (F), subjoined to the report of the Royal Commission and my own for the evidence, which is not at all in accordance with the views attributed to me—see especially Nos. 4,759-62, 4,765-68, 4,770-86. It is not my object at present to argue the matter; but as Lord Carlingford and Mr. Mundella, as well as others, may have been misled, I will ask you to permit the insertion of this letter along with any report that may appear in the BRITISH MEDICAL JOURNAL of the proceedings of the deputation.—I am, etc.,

University of Glasgow, November 25th.

W. T. GAIRDNER.

AMBULANCE FOR STREET ACCIDENTS.

SIR,—Since my return from New York about three weeks ago, I have been looking over the file of the BRITISH MEDICAL JOURNAL, to read some articles that had been written by Dr. Howard on the subject of ambulances for street accidents and for the transportation of emergency cases. My attention was directed to the subject by some of my friends in America, who expressed their surprise at my name not having been mentioned, either directly or indirectly, in connection with the scheme proposed by Dr. Howard.

I do not pretend to claim any priority or originality of idea in the system proposed by me in Paris in November, 1880, consequently prior to his paper, which appeared in the BRITISH MEDICAL JOURNAL of July 16th, 1881, or to anything that had been published by Dr. Howard.

The fact is, the first ambulance ever organised for street accidents, etc., was at New York, the scheme of which, and its entire working, were imported by me to Paris, and submitted officially to the Academy of Medicine, where my communication was received most favourably, and the ambulance system therein proposed adopted in principle. This circumstance you are aware of, as I forwarded you at the time my pamphlet, and the report of the Academy on the subject, which you kindly noticed more than once in the BRITISH MEDICAL JOURNAL. A Commission was then charged by the Academy to examine and report on the subject, the result being that my project, with the report of the Commission, were forwarded with a strong recommendation to the Minister of the Interior for favourable consideration. The latter functionary charged the Municipal Council of this city to study the subject. Orders were then given to the Prefect of Police to make arrangements for carrying out the scheme as soon as possible. On a report called for by the Prefect from Dr. Voisin, Member of the Council of Hygiene, it was decided that telegraphic communications should be established between the eighty police stations with that of the central station of this city.

I should not have troubled you about this matter, but I must say that I consider Dr. Howard's reticence concerning me is, to say the least, far from courteous towards a professional brother. I may, however, recall to his mind the personal conversation I had with him in

London on the same subject about July 5th, 1881, when I was on my way to America. After repeated inquiries on the part of Dr. Howard, I told him about all I had done in Paris in the matter. I have therefore the right to claim the credit, at least, of having been the first to propose the ambulance system of New York on this side of the Atlantic; and, in order to show that Dr. Howard not only borrowed the idea from me, but he actually copied, almost *verbatim*, what I have written on the subject, for I have only to refer him to the last paragraph, page ix, of my printed communication, which was submitted to the Academy of Medicine of Paris. Such a proceeding cannot be allowed to be passed over in silence. I have, therefore, to appeal to your sense of justice, and request you to insert this letter in an early issue, and thus render to me what is my due.—I am, sir, yours obediently,
Paris, November 12th. HENRI NACHTEL, M.D. Paris.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Friday, November 24th.

Sickness on Board the London.—Mr. CROPPER asked the Secretary to the Admiralty whether the hulk *London*, stationed at Zanzibar, had been reported as unsanitary by a competent surveyor, her timbers being rotten and leaky; and whether there had been since that report severe outbreaks of fever among the sailors who were stationed in the *London*; and if so, whether some other system could be adopted at Zanzibar, or some other ship substituted for the *London*.—Mr. CAMPBELL-BANNERMAN: It is true that there was for some time a good deal of sickness on board the *London* at Zanzibar. Much, however, has been done to improve her condition, and the latest reports show a diminution in the amount of sickness. The whole question is under the consideration of the Admiralty, and Rear-Admiral Sir William Hewett, the Commander-in-Chief on the station, has been directed to proceed to Zanzibar to inquire fully into the subject.

Monday, November 27th.

Scurvy in the Mercantile Marine.—Mr. DILLWYN asked whether the President of the Board of Trade was prepared to take any action in respect to the report of Mr. Thomas Gray on the increase of scurvy in the mercantile marine.—Mr. JOHN HOLMS: The report in question has been forwarded to the various local marine boards with a circular asking for their observations. Some of the replies have not yet been received; and, although the matter is under consideration, it is impossible at present to say what action the Board of Trade may decide to take.

Irish Coroners' Salaries.—Replying to Mr. HEALY, Mr. TREVELYAN said: The salaries of county officers in the several counties in Ireland are presented for in advance, and, therefore, can be paid when they become due. In the county of Dublin, I understand, the coroner's salary is presented for in this way, and there seems no reason why the same course should not be adopted in other counties. It is open to the coroners to bring the matter under the notice of the several grand juries, who have power to deal with it.

Tuesday, November 28th.

Vaccination.—Mr. HOPWOOD asked the President of the Local Government Board whether his attention had been drawn to the statement by the inspectors in the inquiry into the case of eight children attacked with erysipelas after vaccination at Norwich; as to four of the cases which terminated fatally: "We cannot divest our minds of the strong impression that the lymph used in vaccinating those children must have carried with it the elements of the disease which they subsequently developed"; whether the public vaccinator had been recommended for award from the parliamentary grant; whether Dr. Buchanan, the medical officer of the Local Government Board, in his memorandum charged the same vaccinator with using dirty or improperly cleansed instruments in the processes of vaccination during the years 1876 to 1880, and later; and whether it was any excuse by law, in answer to fresh summonses to vaccinate, for the parents of any of the children so attacked to urge their fear of similar risk to the survivors; if not, whether it was proposed by legislation to relieve such parents from the compulsion at present existing.—Mr. DODSON: My hon. friend asks me four questions. As to the first question, I must point out that the quoted words have reference not to four of the cases, which terminated fatally as the question implies, but to four cases vaccinated from one child, and of which two did not get erysipelas. As to the second question, the public vaccinator was recommended for award from the parliamentary grant in 1874, but not in 1876 or 1878, and he was again recommended in 1880; but the objectionable practice pre-

viously discovered by the inspector appeared to have been then discontinued. As to the third question, my answer is that, although Dr. Buchanan does charge Dr. Guy with using dirty instruments in 1876, he does not affirm that Dr. Guy did so at a later time. My answer to the fourth question is that it is no legal defence to a summons under the Vaccination Acts for parents of children attacked with erysipelas disease after vaccination to urge their fear of similar risk to their other children; and I am not prepared to assent to the view that, because one child may have happened to suffer, owing to *malap Praxis*, or some accidental circumstance, all the other children should be deprived of the protection which vaccination affords. At the same time I may add, that it is open to the justices in any such case to impose a nominal fine, or decline to make an order for the vaccination of the child; and I should hope that whenever any such case occurs, it will be considerably and tenderly dealt with.

Thursday, November 30th.

Police and Sanitary Regulations.—Mr. M'LAREN asked the Secretary of State for the Home Department whether, in order to give effect to the recommendations of the Select Committee on Police and Sanitary Regulations of this Session, and to put a stop to the recent practice of altering the general law of the three kingdoms by unsystematic and anomalous provisions in private Police Acts, he will, next session, in concert with the Local Government Board, introduce a General Police and Sanitary Clauses Bill for the United Kingdom, on the lines proposed by the Lord Advocate for the measure which he has promised for Scotland.—Sir W. HARCOURT said that he had imagined that the recommendations of the Select Committee on Police and Sanitary Regulations of this Session had been dealt with by a Standing Order, passed on the 5th of August, 1882. If the hon. member desired any further information on the subject, he should be happy to afford it to him privately.

MILITARY AND NAVAL MEDICAL SERVICES.

It is announced that the Queen has signified her intention of conferring the honour of knighthood upon Brigade-Surgeon Jackson, C.B. This honour will be felt by all to be well-merited, and afford a satisfactory solution of the difficulty to which we have recently adverted, and which has been the subject of some correspondence in our columns.

THE HEALTH OF THE ARMY IN EGYPT.

The Times, of Friday, November 24th, has the following interesting statement on this subject: As there is some anxiety with regard to the condition of the health of the Army of Occupation in Egypt, it will be interesting to state what is known of the matter. The strength of the Army is between 11,000 and 12,000 men of all arms, of which about 9,000 are at Cairo and its environs, and 2,500 are at Alexandria and at Ramleh. Those at Cairo are for the most part under canvas, but the Cameron Highlanders have been moved into the citadel, the King's Royal Rifles into the Abdin Barracks, and some other troops are quartered in the Kasr-el-Nil. The Royal Horse Artillery, the Royal Artillery, the 7th Dragoon Guards, the 19th Hussars, the 1st Shropshire, the 1st Staffordshire, the 1st Berkshire, and the 1st Sussex are quartered at Abbasieh, about four miles from Cairo, and there are three regiments of the Highland Brigade, also under canvas, on the left bank of the Nile, nearly two miles from Cairo. Some of these, however, have now been removed into barracks. The troops at Alexandria are 5-1 Royal Artillery, some Royal Engineers, the 2nd Royal Irish, the 2nd Duke of Cornwall's Light Infantry, the 1st West Kent, some Commissariat, the Army Service, and Army Hospital Corps. A portion of these troops occupy the buildings adjoining the Ras-el-Tin Palace, and some are under canvas. The barracks both at Cairo and Alexandria are undergoing a thorough painting and cleansing; they are mostly lofty buildings, but, as is well known, they were in a condition of horrible filth and dirt when first entered by our men. The sanitary arrangements in these buildings have been improved as much as possible, and the "dry earth system" has been resorted to and applied in the manner practised in India. The diet of the men has also received attention, and orders have been given to vary it as much as possible and supplement it with as much vegetable food as the local markets will afford. Large marquees have been supplied, and orders have been given by the Commander-in-Chief in Egypt that all the interior economy of the force shall be based on the Indian, rather than the European, system.

The hospital accommodation at Cairo was at first, owing to the con-

dition in which the public buildings were found to be, hardly sufficient, but the cleansing process having been now completed, it is, we believe, ample for all probable contingencies. In the citadel there is room for about 280 beds. The situation of this place, which is the highest in Cairo, is well suited for the purpose, and the rooms are lofty and well-ventilated. At Abbasieh there is a second hospital of 300 beds, and at Ghezireh there is a third, but this is a tent hospital, and it is capable of holding a varied number. There is a building near Abbasieh which is being prepared for a hospital—it is an isolated place and is reported to be suitable for the purpose. At Alexandria the principal hospital is a building, consisting of four large sheds, facing the sea, which will hold 300 beds, and it is contemplated to supplement it by the equipment of a hulk hospital capable of holding 200 patients.

The diseases to which the troops have been most subject are enteric fever, dysentery, diarrhoea, and ophthalmia. Of these, enteric fever has proved far the most serious; and, during the month of October, 126 patients were admitted suffering from this disease, and of these 52 died. Dysentery and diarrhoea have been and are still very prevalent, but ophthalmia has decreased both in extent and severity. It is feared that no improvement can be expected in the health of the troops until they are all well housed in barracks, and everything is being done to hasten the cleansing and painting of the buildings intended for this purpose. In the meanwhile, certain measures have been taken to improve the condition of those who have been sick, and who, it has been thought desirable, should be given the advantage of a change in order to confirm them in their recovery. At the suggestion of Sir Archibald Alison, steamers have been hired, and they will take the invalids for trips up the Nile to the First Cataract. Some will be sent for some days out to sea, while others will be removed for change to the hospitals at Malta. The arrangements for the expeditions up the Nile have been placed in the hands of Messrs. Cook and Sons, who have obtained the use of three steamers from the Khedive's Government. Messrs. Cook will supply all the food, but, as they do not look upon the operation as one of business, they have engaged to refund to the Government any profits which may accrue from the undertaking. We believe that no money will be spared to do everything that is possible to preserve the health of the troops in Egypt, and there is every hope that we may soon look for better reports from that quarter. It is hard to determine exactly how it has come to pass that, in so healthy a climate as that of Egypt in the month of November, so many have fallen sick; but it is probable that much of the illness from which the men are at present suffering, was contracted during the march on Cairo from the bad water which had to be drunk; and some of it, no doubt, is owing to the filthy condition in which the barracks and buildings were found when Cairo was first occupied. In spite of the salutary effects of the voyage home, there is considerable sickness among many of the troops who have returned to England; and it may fairly be hoped that when the effect of the privations of the war has worn off, we shall hear that the health of the army in Egypt has improved.

DR. A. C. DE RENZY, C.B., Surgeon-General of the Punjab Frontier Force, retires from the service next month. He was created a Companion of the Bath in 1881, and was recently granted a good-service pension. He has served in India for upwards of thirty years; and during his tenure of office as Sanitary Commissioner, in the Punjab and in Assam, he has inaugurated many important reforms.

PUBLIC HEALTH

AND

POOR-LAW MEDICAL SERVICES.

THE LAW CONCERNING THE SPREAD OF INFECTIOUS DISEASES.

THE case of *Booker v. Tayton*, decided in the Queen's Bench last week, and reported in the *Times* of November 21st, settles the law on a question of considerable importance with reference to checking the spread of infectious disease. Section 124 of the Public Health Act, 1875, gives power to a magistrate, on the certificate of a legally-qualified medical practitioner, that any person is suffering from a dangerous infectious disease, and is without proper lodging or accommodation, to order the removal of such person to a hospital, if there is one in or near the district, and the governing body is willing to receive the patient. In the case in question, the medical officer of health of the city of Coventry certified that a child of Tayton was suffering from scarlet fever, and, was without proper lodging or accommodation; and

upon that certificate a magistrate, without further inquiry, ordered the child to be removed to a hospital. When the inspector of nuisances went to remove the child, her mother refused to let him take her away, and insisted on her remaining at home. The inspector accordingly left her, and took out a summons against the mother under the section above mentioned for wilfully obstructing the execution of the order.

The magistrates who heard this summons received evidence to show that the house in which the Tayton family lived was cleanly kept, and that the child was well cared for. It appeared also that the house was in a narrow court, and that other children living in that court had caught scarlet fever, though there was no direct evidence to show that they had caught it from the child Tayton. The magistrates, however, decided that the child was not a person "without proper accommodation" within the meaning of the Act, and accordingly discharged the mother, though she had undoubtedly obstructed the execution of the order originally granted. Against this decision the inspector, Booker, appeals, and the judges in the Queen's Bench at once reversed it, holding that the magistrates on the hearing of the summons had no power to inquire whether the original order was rightly granted or not. They could only inquire whether the order had been wilfully disobeyed, and where, as in the present case, that was clear, they were bound to convict.

The result of this decision is that, where a magistrate orders a sick person to be removed to a hospital under the provisions of the Public Health Act, the order must be obeyed; and that any person who wilfully disobeys or obstructs the execution of such an order is liable to be ordered to pay a penalty of £10. The court before whom a charge of disobedience or obstruction of the execution of the order is prepared can reduce the penalty; but, if satisfied that the act complained of was wilful, are bound to convict. The order for removal is necessarily granted by a magistrate *ex parte*, without hearing the parties affected by it. The Public Health Act contains several sections which empower magistrates, in the interests of the public welfare, to make orders which may hurt the feelings or even the pockets of individuals who are affected by them, without giving those individuals an opportunity of being heard in opposition to the making of the orders, or of appealing against them when made. For instance, Section 116 gives power to order the destruction of unwholesome provisions; and Section 142, to order the removal of a corpse from the house where it is lying to a public mortuary, where public safety requires this to be done. In all these cases (to use the words of Justice Field in *White v. Redfern*, 5 Q. B. D., 718), "the responsibility and duty is imposed on the magistrate of satisfying himself" that the facts are such as to justify the order asked for. He must, for instance, be satisfied, before making an order for removal to a hospital, that the patient is suffering from an infectious disease, and is without proper accommodation. The certificate of the medical officer of the district, or of any respectable medical practitioner attending the patient, ought to be, and no doubt, in most cases, would be, sufficient to satisfy the magistrate, of these facts; but, if not satisfied with the certificate, he might require further evidence before making his order.

Though the final responsibility for making the order is thrown on the magistrate, a large share of it belongs to the medical practitioner who makes the certificate. He has to decide whether the patient is suffering from a "dangerous infectious disease," and, what is often a more difficult question, whether he is without proper accommodation. In the case of *Booker v. Tayton*, the magistrates held that the child was not without proper accommodation, inasmuch as the room was clean and she was fairly looked after. The Court of Queen's Bench gave no opinion on this part of the case, and the question of what constitutes "proper accommodation" for a patient suffering from an infectious disease still remains open. But, looking at the scope of section 124 of the Public Health Act, there can be very little doubt that the Coventry magistrates were wrong, and that a patient suffering from a dangerous infectious disease is without "proper accommodation" whenever either the size or position of the house in which he is such that there is a real probability of the infection spreading to other persons. A medical practitioner, looking at the section from this point of view, may with a clear conscience give a certificate that a patient is without proper accommodation, if he see that the patient is likely to become a centre of infection if left in his own house, even though he might be nursed and tended there as effectively as he could be in a hospital. The provisions of the Public Health Act with reference to infectious diseases are provisions which are intended for the protection of the community, and are, we fear, too little used.

MR. S. WELLS, F.R.C.S.D., Public Vaccinator for the Claines District, has received a grant of £22 3s. for efficient Vaccination in his District.

MEDICAL AMENITIES IN THE UNION OF PENZANCE.

IN our issue of October 28th we called attention to the conduct of Mr. R. B. Searle, surgeon, one of the guardians of the Penzance Union for the parish of St. Just, in impugning the professional conduct of Mr. Harvey, one of the district medical officers—first, in employing, as he alleged, an unqualified assistant to do his parochial work for him; secondly, in making claims for extra fees for fractures, which, according to Mr. Searle's unauthorised examination, were not fractures at all.

On that occasion we pointed out the law of the case, so far as it is laid down in the Circular Letter, and General Orders of the Local Government Board.

It would appear that our comment was brought to the knowledge of the Penzance Board, who are evidently at one with their medical officer in their estimation of the honest performance of his duty. Not so Mr. Searle, for we learn from our contemporary, the *Western Morning News* of November 17th, that, at a meeting of the Penzance Board held the preceding day, a scene occurred. Referring to our comment, Mr. Searle said, "that the cases Mr. Harvey's unqualified assistant had attended were extraordinary cases, and not ordinary ones," and moved that "this board repudiates the statement made by Mr. Dennis, that the cases charged for as extraordinary cases by Mr. Harvey, were ordinary cases." Several further remarks of a personal and offensive character were made by Mr. Searle, which it would not be profitable to reproduce in our columns. To the credit of the Penzance Board, the resolution and burst of vituperation met with no second, and so fell to the ground.

At this dull season of the year, our contemporary may be excused for publishing such sensational reports; but we would point out that the utterances of individual members of a board of guardians are not privileged, and he and all journalists run a serious risk in reproducing libellous matter, which finds expression too frequently at such meetings. At least, that is the law, as recently authoritatively laid down.

OBITUARY.

WILLIAM PIRRIE, M.D.

It was but in August of this year that we announced that Professor Pirrie of Aberdeen had, through weight of years, resigned the Chair of Surgery in the northern university, and last week we were called on to announce his death, which occurred at Aberdeen on November 21st. To many, Dr. Pirrie's death will come as a surprise; to all as an irreparable loss. During last winter session, Dr. Pirrie performed the duties of the chair with all his wonted enthusiasm, conscientiousness, and energy; but in the last days of March of this year he was suddenly seized with some hepatic affection, which prevented him from closing his course, and which confined him to bed for several weeks. His robust constitution tided him over this attack, so that he was able to conduct the professional examinations in July. As soon as convenient, he went to Braemar for a too short holiday at the end of August; so that in September he had apparently recovered from the effects of his recent severe illness; so much so, that he had partially resumed practice. About the beginning of October, however, he got a severe chill, which so prostrated him as to confine him to his room; and soon a severe abscess of the prostate developed, and this condition so weakened him, that he was confined to his bed. Notwithstanding the most careful treatment, his strength gradually sank; septicæmia seems to have taken place; and the veteran Professor breathed his last on the evening of November 21st, full of years and honours.

Professor Pirrie was eminently a self-made man. The son of a farmer, in the parish of Gartly, in the North of Scotland, he studied medicine at Aberdeen, and ultimately at Edinburgh, where he graduated as M.D. in 1829, having in the previous year obtained the L.R.C.S.Ed. He seems to have had the ambition early in life to become a surgeon; and he became specially attached to Liston, who left an indelible impression on young Pirrie's mind, and whose success as a surgeon inspired him so, that even to his last days, Pirrie used to refer with enthusiasm to the great deeds of his great and beloved master. Few students of Aberdeen can forget the eloquent tribute that the Professor of Surgery annually paid to one whose memory he cherished with almost filial love and reverence. Not content with the opportunities for study which the Edinburgh School afforded, young Pirrie, fired with ambition and enthusiasm, went to Paris, where he studied, at the Hôtel Dieu, under the illustrious Baron Dupuytren.

Besides having a love for surgery, Pirrie, under the inspiring lectures of Knox, acquired a liking for anatomy; and, without doubt, he owed no small part of his success in his surgical practice to his intimate and accurate acquaintance with the facts of surgical anatomy.

Having laid this extensive groundwork, and fired with the ambition of becoming a surgeon, Dr. Pirrie returned to Aberdeen, and started practice in 1830 or thereby. In this year he was appointed Lecturer on Anatomy and Physiology in Marischal College, a post which he held for eleven years. In the dissecting-room Pirrie acquired that intimate acquaintance with anatomy which must always form the basis of surgical knowledge. He loved to dwell on this period of his career, and students used to wonder at his perfect familiarity with all points of surgical anatomy, and it was a positive pleasure to him as a teacher to go over and illustrate the surgical anatomy of any region of the body. Like Syme, Fergusson, and Spence, his knowledge of anatomy was actual, real—a living knowledge acquired in the dissecting room, and with his own scalpel. His perfect anatomical knowledge gave him confidence and assurance, and stood him in good stead on many an important occasion.

The chairs of anatomy and surgery in Aberdeen were founded in 1839, when Dr. Allen Thomson was appointed to the former chair, while to young Pirrie was offered the chair of surgery, the chair which he has held up to August of this year, when he resigned, *i.e.*, for a period of forty-two years, so that he acted as a teacher for fifty-three years. Few know what a wrench it was for him to sever the tie that bound him so closely and so warmly to his Alma Mater. How could it be otherwise, as for more than half a century he had been one of her most devoted sons, and one of her most conspicuous ornaments? From the very outset of his career, Dr. Pirrie determined to devote his energies to surgery, and to teach it so as to bring credit to the Aberdeen school. With a high ideal set before him as to the requirements and responsibilities of a surgeon, he determined that, as far as in him lay, the medical students of Aberdeen should be second to none in the opportunities offered for acquiring a knowledge of the "principles and practice of surgery." At once Dr. Pirrie began to form a pathological museum, and the first collection he made was destroyed through a fire in Marischal College. Undaunted, but determined, he set to work to form another museum of surgical pathology, which remains to this day as a thoroughly representative and most valuable collection. Throughout his life, Dr. Pirrie never lost an opportunity of adding new specimens to his stock, and great were the pains and personal trouble he would undertake in order to secure a specimen which might serve to illustrate his lectures, and afford students an insight into the morbid changes of structure. There was no greater believer than Dr. Pirrie in the merits—nay, the necessity—of what he called "demonstrative teaching"; and, whenever it was possible to do so, he was not content until he had achieved this object. His collection of surgical instruments in Marischal College, for illustrating his lectures, which the University liberally augmented from year to year, is perhaps unsurpassed in this country. When any new surgical apparatus was invented, Dr. Pirrie was eager to obtain it, so that his students might have the opportunity of seeing the latest novelty, and be thoroughly abreast of the times in matters surgical.

After settling in Aberdeen, it was not long ere Dr. Pirrie got into an extensive practice; and, as years rolled on, it grew, so that he ultimately came to have the largest practice in the north of Scotland, and perhaps in Scotland. As a practitioner, Dr. Pirrie's name was a household word throughout the north of Scotland. The puzzle always seemed to be, how he managed to undertake all his work; for he never neglected his university or hospital duties, never sought rest or leisure from examinations; but, although one of the busiest men in the town, he found time to take an active part in all that affected the welfare and interests of the University, and, above all, in its Medical School. The secret of Dr. Pirrie's being able to accomplish so much work was his habit of early rising. During the time that he wrote his work on the *Principles and Practice of Surgery*, he was in his study at 4 o'clock in the morning, and often began his visits before 7 o'clock; indeed, it was no uncommon thing to find him making a visit in the country and returning to town before other and younger men were out of bed. Being a man of robust frame, powerful *physique*, and indomitable energy, he was able to go through an amount of work that caused young and energetic men to marvel. Dr. Pirrie's services were eagerly sought by rich and poor all over the north of Scotland; and no man ever exerted himself more conscientiously for his patients, or has left more grateful remembrances of his kindness and his skill in the hearts of his patients. On the day of his funeral, there was many a tear-dimmed eye in the crowd that lined the streets; and many of those who pressed near to see the last of one whose handsome figure was well known in Aberdeen

belonged to the lower ranks of life, and had received the benefit of his skill and advice in the Infirmary. It will be long ere the name and services of Dr. Pirrie are forgotten in many a family circle in Aberdeen.

Dr. Pirrie was for many years a surgeon in the Aberdeen Royal Infirmary, and, along with Dr. Keith and Dr. Kerr, maintained and extended the reputation of the Aberdeen School of Surgery. He resigned his appointment as surgeon only a few years ago. No detail in an operation was left unconsidered, and his success as a surgeon was proportionate to his carefulness. The value of human life was a prime factor with him—as with all great surgeons—and no considerations of time or trouble could prevent him from carefully supervising every detail of the operation and the after-treatment. Many a time his natural anxiety as to the progress of a case caused him to visit the Infirmary during the still watches of the night and see that all went well with his patient. At any moment he was ready to go and do his duty in the hospital ward or in the operating theatre. It is, however, as one of the most successful teachers of surgery in this country that Dr. Pirrie will long be remembered. He had the gift of imparting knowledge in an easy, impressive, and thoroughly practical way. In fact, he was a born teacher. He spared neither time nor trouble to make his teaching “demonstrative” and practical; and few who have heard him lecture can ever forget the success with which he left the main facts of a question fixed upon the mind. His lectures were soul-inspiring from their thoroughness, from their eloquence, and, above all, from the intensely real interest which the speaker had in his subject. His very manner and method begat enthusiasm, and inspired his students with a burning ambition. After one of his soul-stirring and brilliant lectures—such, for example, as one of his lectures on lithotomy—many a student has felt the ambition to be a surgeon, and to be like those great men whose deeds he related in eloquent periods. Nor were his lectures mere read, stated orations. He scorned to use a paper or notes, so that he was able to throw all his energy into the exposition of the subject in hand. His course was exhaustive, and what he rightly called a “faithful” review of surgery. No one who has ever heard him lecture can forget his impressive style and his often quaint yet catching way of putting his facts and his principles. Many generations of students will recall the pleasant and profitable days that were spent with Dr. Pirrie in Marischal College and in the wards of the Royal Infirmary. Not content with the ordinary work of the class, he often gave special lectures during the winter, and short courses on the diseases of the skin and other subjects, in summer. He was justly considered as one of the fathers of the Aberdeen Medical School, while as a member of Senatus, he was always active in promoting the welfare of the Medical School, and it is to the intimate acquaintance that existed between him and Sir Erasmus Wilson, that Aberdeen owes the foundation of its Chair of Pathological Anatomy. A happy inspiration enabled him to suggest to Sir Erasmus the necessity for such a Chair, and within a month from the time that Dr. Pirrie took the subject in hand, he had brought it to a successful issue. An early friendship existed between the great surgeon and the distinguished dermatologist; they belonged to the same parish, and as an outcome of this friendship, Aberdeen rejoices in a Chair of Pathological Anatomy. Had Dr. Pirrie rendered no other service to the University his name would have been held in grateful and affectionate remembrance. He was also an earnest advocate for medical bursaries, and he used all his powerful influence to secure these benefits for the students. His *Principles and Practice of Surgery* has long been a standard work, and his numerous contributions to acupressure, and to other surgical subjects have made his name known throughout the surgical world. No one who heard him deliver his address at the end of July, as President of the Medico-Chirurgical Society, of which society he was a member for nearly fifty years, could have thought that his end was so near, for he spoke with all his wonted vigour and his usual eloquence.

Dr. Pirrie was buried on Saturday, and the funeral was a public one. According to an old custom the body was conveyed to Marischal College, and from there the funeral procession started, attended by the Town Council, principal, rector, and professors, medical men and students, and by an enormous number of the public. Seldom has such a manifestation of public sympathy been seen in Aberdeen. The streets were lined, several deep, by a seething mass of people anxious to see and pay a last tribute to the memory of one who, for over half a century has been one of the best known and most respected sons of Aberdeen. Dr. Pirrie was seventy-five years of age, and during that long period he had made friendships with most of the leading men of the profession; he was a surgeon to his Royal Highness the Prince of Wales in Scotland. Now that he has gone, we mourn his loss, which is a severe blow not only to the University, but to the community of Aberdeen for many a quiet unostentatious act of philanthropy did he do, and it was through his instrumentality that the Christian Institute in Aber-

deen was founded. Dr. Pirrie was an earnest and religious man, nobly fought the good fight, and after a busy, and industrious career, after a loving and devoted attachment to his profession, and after a loyal devotion to his Alma Mater, he has entered upon his rest, and he carries with him the regrets of his pupils and his patients who esteemed his worth, and who loving, cherish his memory.

GEORGE GULLIVER. F.R.C.S. Eng., F.R.S.

It is with great regret that we announce the death of the well known anatomist and physiologist, which took place on the 17th instant, at his residence in the Old Dover Road, Canterbury, at the age of 78. He was born on the 4th of June, 1804, at Banbury, and received his early education from the Rev. William Woolstand, of Adderbury, near that town. On its completion, he was apprenticed to Messrs. Jones and Wise, surgeons in extensive practice at Banbury. Before his apprenticeship had expired he had made a *Catalogue of Plants in the Neighbourhood of Banbury*. His engagement with the above firm having terminated, he came to London and entered at St. Bartholomew's Hospital, where Mr. Abernethy soon appointed him Curator of the Museum, and engaged him to make the dissections for his lectures. After his admission as a member of the Royal College of Surgeons, on June 2nd, 1826, he continued his duties in the dissecting room and museum of the hospital until he was gazetted Hospital-Assistant to the Forces. His subsequent steps in the army were as follows:—June 12th, 1828, Assistant-Surgeon to the Forces; July 23rd, 1829, Assistant-Surgeon to the 71st or Highland Light Infantry Regiment; November 8th, 1834, again Assistant Staff-Surgeon at Chatham; September 1st, 1837, Assistant-Surgeon to the Royal Horse Guards (Blue); June 2nd, 1843, Surgeon to the Regiment; finally leaving the service April 1st, 1853. Soon after his arrival at Chatham he was placed in charge of the Museum of the Army Medical Department at Fort Pitt, to which he made many valuable additions. After a course of subordinate duties at the General Hospital, the charge of its Surgical Division was assigned to him: Dr. John Davy, the brother of the celebrated Sir Humphry Davy, being the principal medical officer: then and there commenced a long and cherished friendship between these two eminent men. Davy being, like Gulliver, an ardent disciple of old Isaac Walton, making, when able, frequent excursions, and subsequently enjoying the sport in all parts of the United Kingdom. In Davy's charming work on the *Salmonide* reference is frequently made in his other work, the *Angler in the Lake District* to his *Amicus* and his *Angler and Friend*—this being meant for Gulliver.

When the new Charter was granted to the Royal College of Surgeons, Mr. Gulliver was one of the first elected. This selection gave great offence to his senior brother officers in the army, who memorialised the Director-General of the Medical Department on the subject, whereon Sir James M. Grigor communicated with the Secretary of State, who called on the Council of the College for an explanation. The Council replied in effect that such members of the College as Mantell, Owen, Newport, Gulliver, and others had been chosen for the fellowship in recognition purely of scientific merits, and that the Council would be happy to add others for the same reason as soon as their claims should become known to and recognised as valid by the Council. To this reply there was no rejoinder, and the matter dropped. In 1852 Mr. Gulliver was elected a member of the Council of the College of Surgeons, in the affairs of which he took a very great interest, and served as chairman of the museum and literary committees. In 1861 he was elected Hunterian Professor of Comparative Anatomy and Physiology, giving courses of lectures on the Blood, Lymph, and Chyle of Vertebrates, in which were related the results of his extensive researches on these subjects. In 1863 he delivered the Hunterian Oration, in which he expounded points of Hunter's merits, which had previously been ignored; and concerning the vital endowments of the coagulable lymph; the aggregation of the red corpuscles as the proximate cause of buffy blood, and the fact that the modern “protoplasm” was but a synonym of the coagulable lymph.

Mr. Gulliver's name will be remembered in connection with the fatal duel, in 1843, between Lieut. Col. Fawcett, of the 55th Regiment, and Lieut. Monro, Adjutant of the Blues. This duel created a great sensation at the time, as the principals were brothers-in-law, and the cause of the quarrel some pecuniary matters, too trifling for such a sad termination. It had, however, the good result of putting an end to duelling in the Army.

On his retirement from the Council of the College Mr. Gulliver continued his literary pursuits. He was the author of a large number of papers in the *Transactions* of learned Societies, as the Royal and Geological, of both of which he was a Fellow, also of Notes to Verber's

General and Minute Anatomy; the Works of William Hewson (Sydenham Society Edition): Notes in Wagner's *Physiology*, and papers in the *Edinburgh Philosophical Magazine*, the *Medical Times and Gazette*, the *Annals of Natural History*, etc.

In 1847, Mr. Gulliver married Miss Anne Keown, sister of the member for Downpatrick, a woman, to quote his own words, "whose piety, love, and intelligence have always been blessings to herself and her family." By this marriage there was issue four children, two of whom died in infancy. George, his only son, inheriting the tastes of his sire, was some time a favourite pupil and Demonstrator of Anatomy under Professor Rolleston at Oxford, where he graduated B.A., taking a first class, and thence went out as naturalist with the *Venus* expedition, receiving the thanks of the Royal Society for his services on that occasion.

For some time Mr. Gulliver had been confined to his bed, suffering acutely from a chronic and most painful attack of gout, which all the kind skill and devoted attention of his friend, Dr. H. A. Gogarty, Physician to the Kent and Canterbury Hospital, and his son, Dr. George Gulliver, one of the assistant-physicians to St. Thomas's Hospital, could only ameliorate. Mr. Gulliver has left numerous friends to mourn their great loss.

Mr. Gulliver's remains were interred at Nackington, near Canterbury, on the 22nd instant. Besides the immediate relatives, there were his old friends, Colonel Horsley, the Rev. R. N. Gandy, the Rev. C. Bewsher, and the Rev. M. B. Moorhouse; his attached friend and medical attendant, Dr. Gogarty, Physician to the Kent and Canterbury Hospital; Dr. Robert Boyd and representatives of the East Kent Natural History Society, in which he took the greatest interest. The deceased gentleman leaves a widow and an only son, Dr. George Gulliver, M.A., Oxon, M.R.C.S. Lond., Assistant-Physician to St. Thomas's Hospital, and a host of friends to deplore the loss of a truly good man.

RICHARD CROSS, M.D., F.R.C.S., J.P.

DR. CROSS was one of the best known and most highly respected residents in the borough of Scarborough. His kindly attention as a medical practitioner and the courtesy and geniality which he manifested to every one with whom he came in contact, whether in public, private, or professional life, caused him to be much esteemed. By his death the poor have lost a friend and the town one of its most enterprising and successful citizens. He died on Nov. 19th, and was interred with military honours, the Magistrates, Mayor, and Corporation attending the funeral. After studying at Guy's Hospital, London, he qualified as L.S.A. in 1839, became Member of the Royal College of Surgeons in 1840, and commenced practice in Scarborough the same year. Shortly after that, he went into partnership with the late Mr. Thomas Weddell, a connection which was only severed by the death of that gentleman in 1862. Dr. Cross took the degree of M.D. at St. Andrew's University in 1852. Last year he was made a Fellow of the Royal College of Surgeons. He was a member and a Fellow of other Medical Associations, and he was Medical Referee for the Passengers and Imperial Union Accident Companies. In 1869, he contributed to the *Lancet* a Table of Obstetrical Studies. He was Surgeon to the East and North Riding Yorkshire Artillery Volunteers. At one time he was Physician to the Royal Sea Bathing Infirmary, and a member of the Committee of the Cliff Bridge Company. For 36 years he was Medical Officer to the Ancient Order of Foresters' Friendly Society, and his connection with that body only ceased when the Friendly Societies Medical Association was established. He was elected a member of the Scarborough Corporation in November 1st, 1849, at the head of the poll for the North Ward, and he was regularly re-elected until 1862, when he was made an alderman. He was Mayor of the borough in 1860-61, and he retired from the Town Council in 1874. He was a borough magistrate and a trustee of municipal charities.

INSANITY IN FRANCE.—The Prefect of the Seine publishes an account of the care taken of the insane in the city of Paris. Of all the French departments, it appears that the Seine furnishes the largest proportion of cases of insanity. During the last thirty years, while the population in that department has barely increased threefold, the number of patients in the madhouses has multiplied more than sixfold. The number of admissions last year was 2,438, of which number 180 were foreigners. The expense of the latter was 60,000 francs; for, among European States, only Russia, Switzerland, and the Grand Duchy of Luxembourg indemnify the French authorities for the expenses incurred in this way on behalf of their own subjects. The German Government, however, is willing to pay the cost of sending back to the Fatherland German subjects who it may be necessary to keep under restraint. The estimated expenditure for the Paris asylums for next year is 4,800,000 francs.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 23rd, 1882.

Cunnington, Cecil William, Bartholomew Road, Kentish Town.

Peskett, Alfred Freeman, Leyton, Essex.

Sergeant, George, Lewannick, Cornwall.

Tireman, Arthur Lumley, Howden, Yorkshire.

Omitted on the 16th.

Dalton, Arthur John, Albert Road, South Norwood.

The following gentlemen also on the same day passed their Primary Professional Examination.

Huxtable, Arthur Edwin, Charing Cross Hospital.

Phillips, Ernest William, Guy's Hospital.

Roosmaleloq, Frederick Owen V., University College.

MEDICAL VACANCIES.

The following vacancies are announced:—

BRADFORD INFIRMARY AND DISPENSARY.—House-Physician. Salary £100 per annum. Applications by December 6th.

BURY DISPENSARY HOSPITAL.—House-Surgeon. Salary, £120 per annum. Applications by December 18th.

CHIPPING NORTON UNION.—District Medical Officer. Salary, £65 per annum. Applications to the Clerk by December 25th.

DENBIGHSHIRE GENERAL INFIRMARY, Denbigh.—Honorary Dental Surgeon. Applications by December.

HALSTEAD LOCAL BOARD OF HEALTH.—Medical Officer. Salary, £30 per annum. Applications by December 2nd.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Ophthalmic Surgeon. Applications by December 13th.

INISHOWEN UNION, Clonmany Dispensary.—Medical Officer. Salary, £120 per annum, with £15 as Medical Officer of Health, registration, and vaccination fees. Election on December 5th.

KINGTON UNION.—Medical Officer. Salary, £30 per annum. Applications by December 4th.

LEEDS PUBLIC DISPENSARY.—Two Resident Medical Officers. Salary, £80 per annum. Applications by December 9th, to Dr. Jacob, 12, Park Street, Leeds.

LONDON LOCK HOSPITAL AND ASYLUM, Female Department.—Assistant House-Surgeon and Apothecary. Applications to the Secretary, Westbourne Green, Harrow Road, by December 12th.

NATIONAL DENTAL HOSPITAL.—Dental Surgeon. Applications by December 22nd.

NATIONAL DENTAL HOSPITAL.—Assistant Dental Surgeon. Applications by December 22nd.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, E.—Resident Clinical Assistant and Registrar. Salary, £70 per annum. Applications by December 5th.

NORTH-WEST LONDON HOSPITAL.—Physician. Applications by December 16th.

PAROCHIAL BOARD OF PENNYGOWN AND TOROSAY.—Medical Officer. Salary, £80 per annum. Applications to Mr. A. McDougall, Inspector of Poor, Auchnairag-by-Oban, by December 5th.

ROYAL BERKS HOSPITAL, Reading.—Assistant to the House-Surgeon. Applications by December 5th.

SCARBOROUGH UNION.—Workhouse Medical Officer. Salary, £70 per annum. Applications by December 13th.

ST. JOHN'S HOSPITAL FOR SKIN-DISEASES, Leicester Square. Assistant-Physician. Applications by December 4th.

ST. JOHN'S HOSPITAL FOR SKIN-DISEASES, Leicester Square. Assistant-Surgeon. Applications by December 4th.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington.—Pathologist and Curator. Applications by December 11th.

STOURBRIDGE DISPENSARY.—House-Surgeon and Secretary. Salary, £130 per annum. Applications to G. Perry, Esq., Fairfield, Pedmore, near Stourbridge, by December 5th.

ST. PETER'S HOSPITAL FOR STONE, Henrietta Street, Covent Garden.—Assistant-Surgeon. Applications by December 9th.

WEST BROMWICH DISTRICT HOSPITAL.—House-Surgeon. Salary, £80 per annum. Applications by December 9th.

WEYMOUTH UNION.—Medical Officer for the Parish of Melcombe Regis. Salary, £70 per annum. Applications, endorsed, "Medical Officer, Melcombe Regis", by December 4th.

WEYMOUTH UNION.—Medical Officer for the Parish of Weymouth. Salary, £50 per annum. Applications, endorsed "Medical Officer, Weymouth", by December 4th.

WEYMOUTH UNION.—Public Vaccinator for the Borough of Weymouth and Melcombe Regis. Salary according to the usual scale of fees. Applications by December 4th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House-Physician. Salary, £100 per annum. Applications by December 4th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House-Surgeon. Salary, £100 per annum. Applications by December 4th.

YORK COUNTY HOSPITAL.—Honorary Physician. Applications by December 8th.

MEDICAL APPOINTMENTS.

- BATESON, J. F., M.B., C.M. Ed., appointed House-Surgeon to the Liverpool Royal Infirmary.
- BEATLEY, Wm. Crump, M.B. Durh., M.R.C.S. Eng., L.S.A., appointed Resident Medical Officer to Charing Cross Hospital.
- BENNET, James, M.B., C.M. Edin., appointed Assistant Medical Officer to the Leith Hospital.
- BRADSHAW, T. R., M.D. Dub., appointed House-Surgeon to the Liverpool Royal Infirmary.
- BICKLE, L. W., L.R.C.P., M.R.C.S., appointed non-resident House-Physician to St. Thomas's Hospital.
- COOPER, G. F., M.R.C.S., L.R.C.P., appointed Assistant House-Surgeon to St. Thomas's Hospital.
- FELL, W., M.A., M.B. Oxon., M.R.C.S., appointed Assistant House-Physician to St. Thomas's Hospital.
- GRACIE, C. B., M.R.C.S. Eng., appointed House-Physician to the Liverpool Royal Infirmary.
- HAG-BROWN, C. W., M.R.C.S., L.S.A., appointed House-Surgeon to St. Thomas's Hospital.
- HARDIE, J., M.D., appointed Honorary Surgeon to the Manchester Royal Infirmary, Dispensary, and Lunatic Hospital or Asylum.
- IRELAND, William W. M.D., appointed Medical Officer to Miss Mary Murray's Hospital for Girls, at Prestonpans, near Edinburgh.
- JONES, D. Hlew-llen, M.R.C.S. Eng., appointed Resident Assistant Surgical Officer to Charing Cross Hospital.
- JONES, Wansbrough, M.A., M.B. Oxon., M.R.C.S., appointed House-Physician to St. Thomas's Hospital.
- LOWE, T. P., M.R.C.S. Eng., appointed House-Physician to the Liverpool Royal Infirmary.
- MARLOW, F. W., M.R.C.S., L.S.A., appointed Ophthalmic Assistant to St. Thomas's Hospital.
- QUINNELL, J. C., M.R.C.S., appointed Medical Officer of Health to the Ougar Union.
- REES, Robert, M.B., C.M., appointed Medical Officer to the West Bromwich Union Workhouse, *vice* Alfred Paget Evans, M.R.C.S., resigned.
- SUTTON, S. W., M.B. Lond., M.R.C.S., appointed Resident Accoucher to St. Thomas's Hospital.
- TESAUER, W. B. C., L.S.A. Lond., appointed Resident Assistant Medical Officer to Charing Cross Hospital.
- TYRELL, Walter, M.R.C.S. Eng., L.R.C.P. Lond., appointed Junior Anaesthetist to St. Thomas's Hospital.
- VAN, A. F., M.R.C.S., appointed Medical Officer and Public Vaccinator of the No. 4 District to the Wimbome and Cranborne Union.
- VEITCH, Archibald, M.B., C.M. Edin., appointed Assistant Medical Officer to the Leith Hospital.
- WELLS, A. E., M.B. Lond., M.R.C.S., L.R.C.P., appointed House-Physician to St. Thomas's Hospital.
- WHITE, E. F., M.R.C.S., L.S.A., appointed House-Surgeon to St. Thomas's Hospital.
- WIGAN, C. A., M.R.C.S., L.S.A., appointed Resident Obstetric Officer to Charing Cross Hospital.
- WILLIAMS, E. R., M.R.C.S., L.R.C.P. Lond., appointed Assistant Medical Officer to the Derby Amalgamated Friendly Societies' Medical Association.
- WILSON, A. H., M.R.C.S. Eng., appointed House-Surgeon to the Liverpool Royal Infirmary.
- WRIGHT, G. A., M.B., appointed Honorary Assistant-Surgeon to the Manchester Royal Infirmary, Dispensary, and Lunatic Hospital or Asylum, *vice* J. Hardie, M.D.
- WYBORN, S. Bargrave, M.R.C.S., L.S.A., appointed Resident Surgical Officer to Charing Cross Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

ILLINGWORTH.—On the 21st November, at Crowther Terrace, Clayton-le-Moors, Lancashire, the wife of C. R. Illingworth, M.B., M.R.C.S., of a son.

DEATHS.

BLECKLEY.—N. Bleckley, at Lorne House, Upper Norwood, T. M. Bleckley, M.D., in his fifty-third year.

WILSON.—A. H. Wilson, M.R.C.S. Eng., at his residence, West Brompton, in his fifty-third year.

THE recent return of the medical officers of health, and the state of the metropolis, have been reviewed by their predecessors of the metropolitan sanitary authorities, who have issued a report. We print that report in full, and in the course of it the Metropolitan Sanitary Authorities have recommended that further steps should be taken to improve the sanitary condition of the metropolis, and that the metropolitan sanitary authorities should be empowered to enforce the condition of the metropolis, with power to inspect and enforce the regulations.

HEALTH OF FOREIGN CITIES.—Statistics, published in the Registrar-General's last weekly return, show that the death-rate was equal to 26.9 in Bombay, and 35.7 in Madras. Small-pox caused 8 deaths in Madras, and fever showed the usual excessive fatality in that city. According to the most recent weekly returns, the average annual death-rate per 1000 persons, estimated to be living in twenty-two of the largest European cities, was equal to 24.5, and very slightly exceeded the average rate last week in the twenty-eight large English towns. The death-rate in St. Petersburg was equal to 42.0, and showed an increase upon the rates in previous weeks; the 539 deaths included 46 from diphtheria and 24 from scarlet fever. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged only 21.1, the highest rate being 22.5 in Copenhagen; 5 deaths from typhoid fever were recorded in Stockholm, and scarlet fever caused 5 deaths in Copenhagen and 4 in Stockholm. The Paris death-rate rose again to 24.9; the deaths included 79 from typhoid fever, 34 from diphtheria, and 10 from small-pox. The deaths in Brussels were equal to a rate of 22.6, 4 deaths resulting from fevers. The death-rate in Geneva was so low as 12.8. The rate in three of the principal Dutch cities averaged 22.8, the highest rate being 24.0 in the Hague, where 7 of the 57 deaths resulted from scarlet fever; 5 deaths from fever occurred in Amsterdam. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 23.3, and ranged from 20.2 and 20.6 in Hamburg and Dresden, to 25.6 in Trieste and 26.0 in Prague. Small-pox caused 3 deaths in Buda-Pesth, and scarlet fever and diphtheria fatality was excessive in most of these German cities. The mean death-rate in three of the largest Italian cities did not exceed 20.0; it was equal to 16.7 in Turin, 21.2 in Rome, and 23.2 in Venice. Five fatal cases of diphtheria were recorded in Turin. In the four great American cities, the death-rate averaged 22.6, and ranged from 19.0 in Brooklyn to 26.2 in Baltimore. Small-pox caused 21 deaths in Baltimore, and typhoid fever 11 in Philadelphia; diphtheria again showed excessive fatality in each of these four American cities.

SOCIAL SCIENCE ASSOCIATION.—At a recent meeting of the Council of the National Association for the Promotion of Social Science, the various resolutions which had been passed in the departments at the Nottingham Congress were considered and confirmed or referred to the standing committees. A cordial vote of thanks was passed to the mayor and corporation and the local officers of the congress. A complete list of the Council for the ensuing year, 1882-3, was laid on the table, and the following Executive Committee for the same period was appointed: G. Baden-Powell, M.A.; Joseph Brown, Q.C., Treasurer; R. Farquharson, M.D., M.P.; William C. Fooks; the Hon. Dudley F. Fortescue; Captain Douglas Galton, C.B., D.C.L., F.R.S.; Rowland Hamilton, Secretary to the Education Department; G. Wood-yatt Hastings, M.P., President of Council; Sir Ughtred J. Kay-Shuttleworth, Bart.; Francis G. P. Neison; Francis S. Powell, M.A.; Colonel Charles Ratcliffe; P. H. Rathbone, Secretary to the Art Department; A. Herbert Stafford, Secretary to the Jurisprudence Department; Edward Seaton, M.D., Secretary to the Health Department; Rev. S. A. Steinthal, Secretary to the Economy and Trade Department; R. Denny Ullin; Captain E. H. Verney, R.N.; John Westlake, Q.C., LL.D., Foreign Secretary; and Mervyn White, M.A.

SALICYLIC ACID AS AN ANTISEPTIC.—MM. Robinet and Pellet (*Comptes Rendus*, tome xciv, 1322-1324, and *Journal of Chem. Soc.*, September 1882) conclude that in the case of wines, worts, etc., 0.5 gramme per litre or 10 parts in 20,000 acts as an efficient antiseptic. One-tenth of a gramme prevents the action of yeast, and 0.2 gramme prevents the fermentation of worts to which sugar has been added. Generally, for quantities of 0.5 gramme per litre, the clear liquid retains 0.3 to 0.35 gramme, the remainder being in the precipitate. Moreover, when wine containing salicylic acid is put in casks, the wood absorbs the acid, and retains it with great tenacity. Bersch says, on the same subject, that the retention of salicylic acid on fermentation commences when 1 to 11 parts in 20,000 are present, 11 parts being sufficient to whiten the wine. Another writer, Denecé (*Chem. Centr.*, 1882) observes that 2 parts of salicylic acid in 20,000 of wine are not sufficient to prevent fermentation, but this quantity is sufficient to prevent fermentation.

THE sanitary authorities of the metropolis, with all the troops and police, have been furnished with Dr. Nott's portable purifying apparatus. The apparatus has recently been put into use at the metropolis. The apparatus consists of a windmill, which is driven by a small engine, and which is connected with a pump, which constantly purifying the air seems to have proved itself to be a most effective method of constantly purifying the air.

1911-1912. 1913-1914.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to the Manager, at the Journal Office, 161A, Strand, London, and not to the Editor.

BOVINE POST MORTEM EXAMINATIONS BY MEDICAL MEN.

SOME time ago, we published an article with the above heading, in which we commented on an order by the Bengal Government, directing civil surgeons under its jurisdiction to make *post mortem* examinations of cattle supposed to be poisoned. We must briefly recall the facts. The carcass of a cow, said to have been poisoned, was sent to the residence of a medical officer of the Bengal army, at the time officiating as civil surgeon of a district in Bengal, with an order from a magistrate to make an examination of the body, and to forward the viscera to the chemical examiner to Government. The medical officer refused compliance with this order, on the ground that it was not part of his duty to make examinations of this kind. This gave rise to a correspondence, and ultimately to a reference to Dr. Payne, the civil surgeon-general under the Lieutenant-Governor of Bengal. On the recommendation of this officer, an order was issued that, for the future, a butcher was to perform the duty of opening the body of the animal, under the superintendence of the civil surgeon, whose duty it is to forward the viscera to the chemical examiner. On this order we commented unfavourably, holding that the medical officer who in the first instance refused to examine the carcass of the animal sent to his residence in the indecent manner described, was right, and that the surgeon-general on whose recommendation the final order was issued was not only wrong, but that, in suggesting such an order, he inflicted an injury on his brother officers, and struck a blow at the dignity of his profession.

This view is hotly contested by our contemporary, the *Indian Medical Gazette*, in its issue of October 2nd, just received. Our contemporary protests against our encouraging resistance to authority in a matter affecting the administration of justice, and concerning a large and important interest and industry in India. We do not need to be reminded that distinguished members of our profession have studied comparative anatomy and dissected animals, and that Drs. Murchison, Beale, Bristowe, Sanderson, and Marcet, assisted the Cattle Plague Commission with their scientific knowledge; but we have yet to learn that a bullock, dead of rinderpest, was left at the door of any of the above eminent scientific men, with an order from a magistrate to eviscerate it, or even to attend at the shambles while a slaughterman performed the operation, although doubtless they subjected parts of the organism of the affected animals to scientific examination. We contend now, as we did before, that the order to which we took exception is, *ultra vires*, of any authority, at all events until the Government of India, when it advertises for candidates for commissions in Her Majesty's Indian army, notifies that those who elect to compete for appointments are expected to be ready to perform a duty of the above kind when ordered so to do by a magistrate. Until this is done, we contend that neither the civil or medical authorities, in Bengal or elsewhere, have any moral or legal right to enforce an order of this kind. We have abundant evidence before us that this is the deliberate opinion of a large body of medical officers of the Indian service, both on the active and retired lists.

We are thoroughly cognisant of Dr. Payne's services, both as a medical and sanitary officer, services that, to a considerable extent, have justified the exceptional favour shown to him at the expense of brother officers. In this matter, we consider that he committed an error of judgment, to the detriment of the dignity and rights of his brother medical officers.

TREATMENT OF FRACTURES OF THE LEG WITHOUT SPLINTS.

SIR,—I have read Mr. Aubrey Wicks's letter, and agree with him as to the efficiency and simplicity of his treatment in these cases. In fractures of the lower third of the tibia (the most common seat, and where there is generally very little displacement), my mode of treatment is as follows. After having adjusted the limb, I place it in a flexed position, and on its side, keeping it fixed by means of two sand-bags, one extending from the front of the knee to the toes, and the other from the ham, round the heel, to the toes; the whole to be supported by three or four looped pieces of bandage, and tied. I have no hesitation in saying that the position of the limb is far less irksome to the patient than that of extension, whilst the results are equally favourable.—I am, etc., W. HOWARD CORY.

Nailsea.

ACROSTIC: IN MEMORIAM. GEORGE CRITCHETT.

G one to the far-off land! the eternal shore!
E ntered, we humbly trust, into his rest!
O utspread your golden wings—ye angels blest—
R eceive him. Lord, close not the heavenly door!
G rant him—oh! grant him—mercy from Thy store.
E ver was he the kindest and the best.
C ome to his grave, with fairest flowers o'erstrewn;
R enew from day to day these emblems sweet;
I n recollection fond, we mourners meet.
T ell of his gifts so well, so widely, known,
C all to remembrance bounties broadcast thrown.
H eard o'er the world a wail of grief for thee;
E'en on unnumber'd eyes the tear-drop starts;
T hy name is graven on ten thousand hearts;
T hine acts of love shall live eternally.

Highgate, November 5th, 1882.

J. S. L.

THE CAUSE OF SICK-HEADACHE.

SIR,—As an addition to the article in the *JOURNAL* of November 4th (p. 909), "The Cause of Sick-Headache", I may say that, being very short-sighted at the age of fifteen (of course I am still), I went to Dr. X., who prescribed to me No. 8 focus, for reading, writing, etc.; No. 5 to be used only for seeing at a long distance, and to remain without any appliance for the other acts of life. As soon as I was under this treatment, I suffered most painful continuous headache, located in and around the eyes, which made me sick sometimes. Consequently, I made up my mind to wear constantly any spectacles which could suit my sight. I began with No. 8, going on progressively, till, at the end of the scholastic year, I went to No. 3½, which I wear since that time constantly, even when bathing or swimming in the sea. As soon as I did so, my headache disappeared, and has not returned, unless brought on by some other cause.

I may add, that a Genevese and a London oculist have both ascertained the existence of astigmatism in my right eye, for which I wear a cylindrical concave glass, wearing No. 3½ concave on the left.—I am, sir, yours respectfully,
Geneva, November 6th, 1882.

A. CORDES.

ON THE TREATMENT OF WHOOPING-COUGH.

SIR,—A few years ago, the great mortality caused by whooping-cough led me to make a study of the disease at the Hospital for Sick Children in Great Ormond Street, and the results of my observations have been communicated to the profession, with, I venture to think, good results. So many have been the various remedies recommended at different times, that it was, with proper reserve, that I suggested the trial of carbolic acid inhalation as promising well for the relief of some of the symptoms. It is more than ten years ago since I first began these observations; and it seems to me right to draw attention to the fact that some writers who have only little practical knowledge of whooping-cough are tending in the direction of denying the value of all treatment except that of prevention. The idea of "stamping out" whooping-cough seems to me so far at present from being realised, that, while a large mortality still prevails, it would be worse than a pity to neglect a remedy which is really of great value in the relief of the spasmodic cough, that is to say, in the relief of the most distressing symptom of the disease. Like other zymotic diseases, whooping-cough passes through certain definite stages, each of which requires appropriate treatment. In regard to the laryngeal spasm, however, such valuable testimony has been furnished by other practitioners in favour of carbolic acid inhalation, that it is right to make objection to the doubts of those who are not acquainted with its value.

I should have been as anxious to give my evidence against its value, and in opposition to my own suggestions, if further experience had shown me that they were not worthy of serious attention. As, however, the contrary is the case, it appears to me to be equally a duty to prevent others from throwing doubt where it is undeserved.—Yours, etc.,

ROBERT LEE.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following were the questions on Anatomy and Physiology submitted to the candidates on the 17th November, when they were required to answer at least three out of the four questions in each subject. *Anatomy*.—Describe the condition of the spinal column at birth, and the changes it undergoes up to the period of complete development. 2. Describe the dissection necessary to completely expose the internal branches of the posterior divisions of the four upper cervical nerves. 3. Compare and contrast the shoulder and pelvic girdles. 4. The abdomen having been opened, give the dissection necessary to display the solar plexus and its branches of communication within that cavity. *Physiology*.—1. Describe the nervous mechanism of the respiratory movements, and explain how it is excited and regulated. 2. Describe the manner in which the erect posture is maintained in man. 3. Describe the structure of the cortical grey matter of the cerebral hemispheres. What are its functions, and what is the evidence of localisation of centres in it? 4. Describe the minute structure of the liver, with especial reference to the arrangement of the blood- and bile-capillaries, and their relations to the cells.

The following were the questions submitted to the candidates at the half-yearly examinations for the Fellowship of the College on November 23rd, 24th, and 25th, when they were required to answer all four questions. 1. What do you understand by the term organisation of blood-clot? Describe fully the process to which, in your opinion, the expression may be applied. 2. Describe the causes, and discuss the treatment, of secondary hæmorrhage after amputation through the middle of the thigh. 3. What are the diseases to which the thyroid gland is liable? Give their diagnosis and treatment. 4. Describe the various surgical affections consequent on locomotor ataxy and their diagnosis.

VACCINATION AND ERYSIPELAS.

SIR,—*Apropos* to the Norwich vaccination report, I would ask, How is it that erysipelas following vaccination is not heard of in rural districts? For seventeen years, I held the post of public vaccinator to a district comprising sixteen parishes, without, I am happy to say, witnessing a single case of erysipelas following the operation, and where I had to use, extensively, ivory points, as arm-to-arm vaccination was impracticable in a so widely scattered population. Tubes were not in vogue. But, since I have practised in a town, with a population between 80,000 and 90,000, I have unfortunately had five cases, and although every precaution was taken, and no ivory points used in the operation. The two first cases occurred in the same house, in the same family, at an interval of two years. No. 1 was vaccinated by another practitioner, No. 2 by myself, and where, as a matter of course, extra precautions were taken as to purity of lymph, etc. In the same month (June 1880) as the latter case occurred, I had two other cases, having no connection whatever with each other, but which I attributed, as I did the first cases, to bad hygienic conditions. The last case occurred in August of this year, and which I attributed to the same cause, hygienic neglect. During my tenure of public vaccinator, I frequently found that the vaccine virus acted more virulently in very warm weather; and, on that account, I abstained, with the sanction of the powers that be, from vaccinating as much as possible in the months of June, July, and August, and do so now; but cases turn up occasionally where the parents have neglected to have their children vaccinated until compulsory powers are brought to bear on them, and where further postponement is impossible. Might not the time of year and bad hygienic surroundings account for the Norwich cases?—I am, sir, yours faithfully,

M. G. E.

AN OBSCURE DISEASE.

SIR,—The following case is, I think, peculiar, and I do not find it noticed in any medical work. A middle-aged man, of capital general health and good physique, consulted me about the following affection. He is able to urinate very well, except that he is unable to expel the last drops, which, remaining, dribble away, after he has adjusted his dress, on making any exertion, and wet his shirt. This seems to be owing to weakness, or want of power, in Wilson's and Guthrie's muscles. An instrument (full-sized) passes readily till it reaches the membranous portion of the urethra, where there is a little difficulty, but this is easily overcome by a little steady pressure. The affection thus simulates stricture, but the patient never has had gonorrhoea or syphilis in any form, and no injury to urethra. He first noticed it at about the age of sixteen years, when it came on quite suddenly, and he attributes it to severe straining at stool when motion was very hard and costive. At times, he can expel the last drops quite well, as on urinating after rising in the morning. Different remedies have been tried, as nuxvomica, iron, cold bathing, etc., but with little or no benefit. I should like to know if any of your readers have met with a similar case, or could throw any light on the matter.—Yours, etc.,

STUDENS.

SIR,—In Dr. Roden's interesting paper on "The Brine-Springs of Droitwich", an error has crept in which, I think, should be corrected. He speaks of the sojourn of the late Mrs. S. C. Hall the last few years of her life, "when over ninety years of age". Mrs. Hall died on January 30th, 1881, in her eighty-first year.—Yours faithfully,
AN OLD MEMBER.

REMARKS

ON

A NEW MODE OF AFFORDING PERMANENT
RELIEF TO INTRACTABLE CHRONIC CYSTITIS,
AND TO CONFIRMED PROSTATIC
RETENTION OF URINE.

By SIR HENRY THOMPSON, F.R.C.S.,

Surgeon Extraordinary to His Majesty the King of the Belgians, Consulting
Surgeon and Emeritus Professor of Clinical Surgery to University
College Hospital, etc.

I HAVE long been anxious to discover a means of affording some permanent relief to those who suffer with severe and long standing prostatic disease. I refer to a condition in which the patient, having for several years relied entirely on the use of a catheter for the removal of all his urine, finds the bladder becoming so intolerant of its contents, that the act of catheterism, at first perhaps employed but three or four times in the twenty-four hours, must now be repeated under penalty of unendurable torture, at least every hour or hour and half. His time is indeed chiefly spent, both by day and by night, partly in suffering from retained urine, and partly from the painful catheterism for the sake of the temporary relief it affords.

It is more than fifteen years ago since I first attempted to mitigate this condition by tapping the bladder above the pubes and establishing an opening thereby which to empty the bladder, and to supersede, for a considerable time at least, the otherwise inevitable frequent catheterism.

But the cases in which it appeared to be warrantable to adopt this somewhat grave remedy, were mostly examples of the disease in a very advanced stage; and, for three or four such, the last few weeks of a doomed life were rendered by that proceeding comparatively comfortable.

In two others, the disagreeable leakage of urine which took place round the tube, greatly interfered with the patient's comfort, and with his ability to take exercise, etc. The plan seems therefore to be applicable only to the cases first referred to; and it appeared that the power to afford substantial relief to patients who, were it not for the severe local suffering, possess healthy constitutions and some vigour, was still a desideratum.

The essential element of the difficulty in these cases is evidently the presence of a severe chronic cystitis, from which there is no escape; since the continued mechanical interference, rendered necessary by retention, perpetuates and intensifies the cystitis. The patient is, in fact, the victim of a vicious circle of actions, in which an indispensable remedy, the catheter, aggravates the inflammation of the bladder, which therefore, in its turn, demands the instrument with increasing frequency.

It occurred to me, then, that were it possible to suspend all action on the part of the bladder for a few days only, to prevent any accumulation of urine with the organ, to allay the constant and painful want to pass urine, and also at the same time to abolish catheterism altogether, with its irritating effect on the urethra, the inflammation of the bladder might subside, and its tolerance of urine might considerably increase. And I hoped that a state of things might be subsequently brought about, similar to that which is present in a less aggravated stage of obstruction, when catheterism is not needed more than six or seven times in the twenty-four hours. If, in place of hourly relief by the instrument, an interval of three or four hours could be made to suffice, an enormous boon would be conferred on the patient.

This object, it seemed to me, might probably be attained by a proceeding of the following kind. First, placing the patient in the lithotomy position, under ether, I proposed to pass a grooved median staff into the bladder, and make, from the raphe of the perineum, a small vertical incision just above the anus, large enough only to admit the index finger—the incision to terminate in the staff at the membranous portion of the urethra, which should be divided for half an inch at most, so as to admit the finger to traverse the canal to the neck of the bladder. Then, having withdrawn the staff, I proposed to insert a large vulcanized catheter or tube, say about No. 20 (English scale), with its extremity just within the bladder, fastening it there by tape to a bandage round the waist; the tube to be retained as a channel for the urine, for several days at least.

An opportunity soon offered of making an opening in the manner described, for a patient at the age of sixty, who was passing the catheter every hour, and whose vital powers were at the lowest ebb from constant suffering and loss of rest, but whose constitution was apparently sound; and I placed in the bladder, by the new passage, an India-rubber catheter, so that the urine might flow off continuously into a receptacle as fast as it arrived in the bladder. The relief was immediate, and most remarkable. He enjoyed long periods of unbroken sleep, and was unconscious of any pain; while the urine itself, which had been charged with mucus and blood, and had been alkaline and offensive in the highest degree, assumed in the course of a few hours a healthy colour, an acid reaction, and was almost clear. In two or three days, the patient had regained appetite and digestion, became cheerful, and showed a change for the better, which no one had been sanguine enough to anticipate. On the eighth day, I removed the catheter from the wound; during the next two days, urine issued by that route at intervals of some hours; but the wound, which was very small, rapidly closed, and the catheter was, of course, again necessary. But the passing of the instrument was no longer painful; the bladder was not inflamed, and could now retain urine three or four hours without inconvenience; while the patient himself, in less than three weeks from the operation, was enjoying an active life out of doors, having been long confined to his room in the suffering condition which has been described in general terms above. The operation was performed on the 20th of March last, in the presence of my friend, Dr. Chepmell, and others.

I saw my patient, a highly esteemed and well-known member of our own profession, on the 14th October last. The report, in his own words, was then as follows. "I use the catheter now only six times in the twenty-four hours, instead of eighteen or twenty times. The urine is a little cloudy—mostly acid, sometimes the reverse. I can drive for two or three hours in the afternoon without pain or fatigue, taking usually a morning walk of a mile or more. My general health is good. The degree of relief afforded by the operation can scarcely be exaggerated."

On the 30th of June last, I performed the same operation on a gentleman, eighty-three years of age, who was suffering from unusually painful and frequent micturition, the interval rarely amounting to three-quarters of an hour either by day or night. He could, however, nearly empty his bladder by his own efforts, and required the catheter only once a day; its employment affording very little relief. It was one of those rare examples of such a condition existing, in which no calculus and no organic changes in the urinary organs could be discovered. As his constitution was excellent, I did not hesitate (his age notwithstanding) to pursue the course described in the preceding case—failing to find, on examination, either tumour of any kind, or calculus. The immediate relief, however, was so great, that I did not remove the India-rubber tube from the wound until the twelfth day; and he was then very unwilling to part with it, since he had not been so comfortable for upwards of a year. He had also been able to dispense altogether with the use of morphia, which, up to the time of the operation, he had been compelled to take in full doses. The wound rapidly healed; he retained urine from two to three hours, using his catheter only once in the day as before. Such was the report he gave me in the early autumn, as I left town. During my absence, he ventured to take much more exercise than he had been of late accustomed to, and had a relapse. When I saw him on my return (October 7th), he was gradually improving, and was very grateful for the change; saying he would gladly again submit to the operation, if anything like the old painful condition reappeared, as he had experienced nothing but relief from the proceeding. However, such a course does not at present appear to be necessary or imminent.

Such are two typical cases widely differing; the former an example of a comparatively common condition, the latter one of very rare occurrence. In both instances, I attribute the benefit to a temporary suspension of function in both the bladder and the urethra; in the bladder as a containing viscus, in the urethra as a channel or transmitting one. By means of the tube the urine leaves the body almost direct from the ureters, while the bladder and the urethra, being in a state of perfect quiescence, cease almost immediately to be inflamed; all mucus disappears, and the urine is discharged in as healthy condition as it leaves the kidneys—that is, free from any adventitious product of the passages. Another illustration of the extremely rapid recovery which the bladder is capable of making, even when it has been inflamed for a long period of time, which I have often had to note after removing a stone from its interior. Within six hours after emptying the bladder of broken calculous matter I have seen the urine, which had been for weeks charged with inflammatory products, flowing off absolutely clear. I cannot doubt, therefore, that this great recuperative power may be

rendered available for the relief of obstinate cystitis produced by other causes than the presence of stone. By means of this simple incision, also, an opportunity is obtained of making "digital exploration of the bladder," on the plan which I recently proposed as a systematic procedure for the diagnosis and treatment of obscure cases. While the patient is fully under the influence of ether the operator is to make, with his right hand, firm suprapubic pressure, by which means he is able to bring every portion of the inner surface of the bladder consecutively over the tip of the left index finger, introduced by the opening to the neck of the bladder, and thus to ascertain its condition and contents. I fancy that calculus deposit, or impacted calculus, is thus detected. Its removal may be accomplished, supposing it to be movable, as it mostly is. I have now performed the operation described in ten cases for various purposes, and in two of these I have been able to remove adhering and impacted calculus where its presence was little suspected, in one instance, with a remarkably successful result. Both these cases I had the advantage of seeing in consultation with Sir William Jenner before deciding on the operation.

I am aware that proposals have long ago been made to "perform lithotomy" for cases of intractable chronic cystitis associated with enlarged prostate, no doubt partly on the ground that division of the prostate itself might be serviceable. This, however, is a measure of far greater risk than the operation I have employed, which is simply a very limited external urethrotomy, leaving both bladder and prostate free from any action of the knife. But I am satisfied that no benefit follows even the incision and dilatation which necessarily take place in the operation of lithotomy in prostatic cases, as far as restoration of the power of the bladder is concerned. I have performed the lateral operation for several patients who had been long previously unable to pass any urine except by catheter, and in operating I have sometimes removed considerable masses of tumour, and have always been disappointed subsequently at finding no improvement whatever in regard of the patient's power to micturate without artificial aid. The performance of lithotomy, then, ought not to be contemplated in any case with the object in view now under consideration. The withdrawal of the urine, however, by an opening into the membranous part of the urethra is a very safe and simple proceeding, and will, I am satisfied, afford more or less relief for a considerable period of time to patients whose sufferings are due to the action of very frequent catheterism upon passages which have long been severely inflamed.

NOTES ON A CLINICAL LECTURE ON CHOREA AND RHEUMATISM:

THEIR RELATIONSHIP ILLUSTRATED BY THE TIME OF THE
OCCURRENCE AND THE TREATMENT OF THE FORMER.

By THOMAS R. FRASER, M.D., F.R.C.P.E., F.R.S.,
Professor of Materia Medica and of Clinical Medicine in the University
of Edinburgh.

GENTLEMEN,—There is at present under my care in Ward xvi a patient who recently presented in a very exaggerated form the symptoms of the disease chorea. Many of you will recognise the case as that of a boy, 15 years of age, who was admitted a few weeks ago into the hospital. When we examined him on the day following his admission, he presented a remarkable picture of ceaseless disorderly movements. His face was constantly exhibiting the most grotesque grimaces, sometimes one set of muscles being affected, sometimes another; but these movements appeared most marked in the muscles of the eyelids and of the face, the eyes and mouth being opened and shut, and the latter also distorted, almost without ceasing. You observed, further, that the patient tossed about in bed, jerking his head, arms, legs and body in all directions, irregularly and without pause; and we learned that it had been found necessary to restrain the movements of the body by tying him down over the bed clothes, in order to prevent the patient from throwing himself out of bed by the unceasing jerks and contortions that were occurring. This strange madness of his motor functions was evident, and the control of his volition. However emphatically he was told that he was unable to remain quiet, although at times, by a strong effort, he succeeded in diminishing slightly the general unrest for a few seconds. When he attempted to stand, his limbs were jerked about in all directions, and they refused to support the body. When he was induced to extend his arms or fingers, they were suddenly projected and withdrawn, or the arms rapidly assumed the positions of flexion, exten-

sion, pronation, and supination. He could not convey a cup of water to his lips, nor hold a pen properly in his fingers; and when he attempted to do so the pen was twisted about in all directions, and sometimes fell from his grasp. His attempts to write resulted in jerky scrawls all over the paper. When he was asked to put out his tongue, although no effort to do so was obviously made at once, the tongue did not appear for fully half a minute, and then it was suddenly shot out and as suddenly withdrawn. Co-ordinated movements were altogether impossible, and it even appeared as if this riot of the muscles had extended to the involuntary muscles, as the swallowing of liquids and solids was attended with delay and great difficulty; but the difficulty seemed to depend upon the conveyance of the food from the mouth to the entrance of the œsophagus, and to cease after it had once entered that canal. His bowels had been confined for several days, but subsequently several involuntary evacuations occurred. Micturition was disordered; when he attempted to micturate he failed in doing so for several minutes, and at other times he was unable to retain his urine. I think you were able to convince yourselves that the intelligence and memory of the patient were unaffected; that he was free from hallucinations: that his special senses were unimpaired; and that, with the exception of slight hyperæsthesia over the chest, the general sensibility was not modified.

It is not, however, to this picture of a well known disease, although presented in bolder outline than is usually seen, that I wish to specially direct your attention. Many of you will recognise the patient as one who was first admitted into the hospital eleven days before he again came under my care, suffering from the symptoms I have described. On the former occasion (October 21st), the illness for which he sought relief was of an altogether different character. He then suffered from rheumatic fever, which began two weeks before his admission, and affected—with its ordinary symptoms of pain, tenderness and swelling—the ankles, knees, hips, and elbows. He also suffered from lesions of the mitral and aortic orifices, which had undoubtedly originated during this illness, and previously to his admission. In my absence from town, the resident physician had treated the patient—as such cases are always treated in my wards—with salicylate of soda. Twenty grains were administered thrice daily in the first instance; and, three days afterwards, the temperature had fallen from 102.6° Fahr. to 99.4°, while the joint-symptoms had become greatly relieved. In a few days, he appeared to have completely recovered from the acute polyarthritus, but he was permitted to leave his bed sooner than is advisable; and, on two occasions, a relapse occurred, which again disappeared after a few days of strict confinement to bed, and more frequent administration of salicylate of soda. These accidents, and the state of his heart, led to his being detained in hospital for a longer period than would otherwise have been necessary; and, at the end of November, while he was convalescent and an invalid only because of the cardiac disease, an event occurred of much significance in respect to his subsequent history. On the 30th of that month, one of the other patients in the ward is stated by him to have threatened to punish him for some petty fault, and it was noticed that his manner became depressed, that he wept bitterly at times, and refused to assign any cause for his distress. These circumstances were ascertained only several days afterwards. On December 1st, he disappeared from the ward, and we discovered that he had gone home. On December 3rd, his father, and the medical gentleman who had sent him to hospital, reported that our patient had become seriously ill, and urgently requested that he should be again admitted. When he returned, he presented the remarkable symptoms, totally different in their character from those for which he had been originally admitted, which I have described at the commencement of my remarks. He was now suffering from the characteristic phenomena of an exaggerated attack of chorea. The history of this illness strikingly illustrates the causal relationship, now familiarly recognised, between chorea and acute rheumatic polyarthritus on the one hand, and mental perturbations on the other. He had scarcely recovered from the former disease when the chorea appeared. The time interval between the mental perturbation and the chorea was a very brief one; for, on the day following the threat of punishment, we now learned that he became very restless; two days afterwards, when he had left the hospital, he observed twitching in his hands, feet, and face; and on the next day, his condition was as remarkable in the exhibition of general contortions and uncontrollable jerking of the limbs, as when he came under my observation.

The former relationship is still further illustrated by the further course of the disease, and, I think, very distinctly, also, by the course it pursued under treatment.

When the patient returned to hospital, the violence of the choreic symptoms, and their interference with sleep, led to our giving him bromide of potassium, in doses of fifteen grains thrice daily. The effect

was only slight during the two days in which the bromide of potassium was continued. On the third day after admission, the patient complained of pain in the left wrist and shoulder, and right knee, which were found to be swollen and red; and after some trouble—caused by the difficulty the patient had in speaking, the result of the involvement of the tongue and muscles of articulation in the choreic disorder—we ascertained that the pain in the left wrist had existed for several days. He was obviously suffering at the same time, from both chorea and rheumatic polyarthritis. He was, therefore, given twenty grains of salicylate of soda every three hours, and the bromide of potassium was discontinued. Two days afterwards, the pain had disappeared from the wrist and shoulder; the temperature had fallen from 100.8° to 98.9°; and the choreic movements had conspicuously abated, being now present, in the continued and involuntary form, only in the face, although, when voluntary movements were performed, they still appeared in the limbs and tongue. Four days after the commencement of the administration of salicylate of soda, the rheumatic polyarthritis had entirely disappeared, and the only remaining symptom of chorea was the jerking movement of the tongue when it was protruded and withdrawn. The very satisfactory result had, therefore, been obtained that, in four days, an acute rheumatic polyarthritis had been cured, and that, much beyond any anticipations I had entertained, at the same time, and under a treatment not usually followed in chorea, a specially severe example of this disease had apparently been cured.

The vicissitudes of our patient, however, had not yet come to an end. After continuing the administration of salicylate of soda for ten days, the appearance of its disagreeable effects in connection with the stomach and the sense of hearing, and the entire absence of any symptoms of rheumatism, led to its being discontinued and arsenic substituted in its place. This change in treatment was most disastrous. On the third day following its adoption, the right wrist of the patient became swollen and red, the morning temperature rose to 100° and the evening to 102°; and involuntary choreic movements appeared in both upper extremities. The salicylate was resumed, and on the second day thereafter the left wrist had returned to a normal condition, the temperature had fallen to 99°, and the chorea had almost disappeared. In a few days afterwards, the chorea entirely and finally disappeared. In order to complete the narrative of this case, and place you in possession of all the important facts that have occurred, I must add that on two subsequent occasions relapses recurred, which were restricted, however, to purely rheumatic manifestations, and to periods during which the patient was not being treated with salicylates; owing, to a great extent, to our desire to avoid the inconvenient toxic phenomena, to which he was peculiarly susceptible.

The relationship between chorea and rheumatism, and especially acute rheumatic polyarthritis, which is so forcibly illustrated in this case has long been recognised. First referred to by Bouteille and Berndt, it was afterwards acknowledged by Copland, Scudamore, and Abercrombie, and more recently stated in the exact form of statistical enumeration by Hughes, Kirkes, Séé, Roger, and many other physicians. Its existence is now generally admitted, although occasionally it is regarded as a mere coincidence, the relationship being relegated even to the trivial bond which connects any depressing agent with the production of a disease. A case such as that which I have to-day described, undoubtedly affords very strong support in favour of a causal relationship. It affords support from two aspects of the case, from its time of occurrence, and from the results of the treatment. The former is so significant, in the first occurrence of the choreic disease as well as in its subsequent appearance during a relapse of the rheumatic fever, that it is impossible to overlook it. The latter has, in addition to its equally clear significance, the further value that it constitutes a description of evidence, the quantity of which, so far as I know, is very limited. I can refer for evidence of probably a similar description only to the fact that some cases of chorea have been treated with success by Dr. Weir Mitchell and Dresch, with the same remedy as produced such striking results in my patient. The details of these cases I have not learned, and I therefore cannot tell you if they illustrate in so clear a manner the relationship between rheumatism and chorea by showing that the most certain remedies for the former disease with which we are acquainted—the several compounds of salicyl—may exert a like curative action upon chorea. It would be important to still further test this point by treating a number of cases of chorea by salicyl compounds, and especially cases where the chorea does not present so close a relationship to the rheumatic affection as to suggest the possibility of its being a mere symptom of rheumatism. This view is, indeed, one that has been already adopted. Its existence leads me to impress upon you the importance of avoiding any all-pervading opinion in regard to this disease. Nothing will appear more obvious, when the known facts in regard to chorea were considered,

than that it is far from being the product of any single pathological condition. There is now much evidence to show that, at times, it is accompanied by a lesion of the corpus striatum, at others of the medulla oblongata, at others of the medulla spinalis, at others of some part of the peripheral nervous system, at others of the heart, and at others by no lesion that can be discovered in any of these situations.

I can scarcely hazard an opinion as to its production in the case I have brought before you. The embolic theory is here entirely inapplicable, because of the rapidity with which the disease disappeared on two separate occasions. The mere existence of cardiac disease, of rheumatic origin, seems equally insufficient to afford an explanation. It existed before the chorea, it has persisted after its disappearance; and, further, the chorea was rapidly cured by salicylates, whereas salicylates do not directly affect the occurrence or the course of cardiac disease in acute rheumatism. A reflex influence, originating from the inflamed joints, cannot account for the chorea, as it often appears in rheumatic patients, while no inflammation of joints is present; and, in our case, the joints were on several occasions acutely inflamed, without a re-appearance or an exacerbation of the chorea. Such a case would almost indicate that chorea may be a mere manifestation of acute rheumatism, in the same sense as the joint or heart affections, a mere complication of that disease, produced, it may be, a rheumatic inflammation of some portions of the central nervous system, whether true nerve-substance or surrounding media.

STRICTURE OF THE COLON.

By SIR JOSEPH FAYRER, M.D., K.C.S.I., F.R.S.

Physician to the Secretary of State for India in Council.

THE following case of annular stricture of the colon is instructive. Its gradual formation and the attendant symptoms, which were the result of the slowly progressing obstruction, are of clinical interest, whilst the pathological changes are worthy of notice. The discovery of an epitheliomatous growth (on the limb), which had been carefully concealed during life, suggested the possibility of malignancy in the bowel; but, on careful examination, the stricture proved to be simply fibrous, and devoid of any trace of malignancy.

The previous health had been good; there had been neither diarrhoea, dysentery, nor ulceration to account for the stenosis. Latterly, the health had deteriorated, and there was emaciation, but the appetite had by no means failed. It was evident that an obstruction existed, and was increasing in the colon above the sigmoid flexure, but there was nothing to indicate its true nature. The gradually increasing distension of the bowel showed that faecal matter was accumulating in a large portion of the bowel, though beyond reach by the hand through the rectum.

In the hope that it might yield to treatment, and in the absence of urgent symptoms, operative interference by abdominal section was deferred. When at length permitted, though it gave some relief, it did no more. It is worthy of note that, beyond obstinate constipation, there was no very prominent symptom until just before the end; there had been neither tenesmus, tormina, blood, nor mucus; no vomiting, though occasional nausea; the urine had been freely secreted, and, though there was much inconvenience from distension, there had been little pain.

The appearance presented by the gut, when the opportunity for examining it arrived, was that as though a cord had been tightly tied round the bowel, just at the splenic flexure, constricting the calibre to an orifice through which a pin would pass with difficulty, this constriction consisting of a ring of dense fibrous tissue. For the rest, the bowel was healthy, showing no trace of former disease. The other viscera were also healthy. A certain amount of peritonitis had resulted from extravasation of faecal matter where the over-distended bowel had given way. Beyond this, and the existence of a large epitheliomatous growth, pendulous from the thigh, there was no evidence of disease; and careful microscopic examination failed to detect any sign of malignancy in the stricture itself.

The result of this case seems to show that earlier colotomy might have prolonged life. The indications for the operation were not sufficiently urgent at first to overcome the objections offered to it; but the importance of early surgical interference in similar cases is obviously suggested.

CASE. A widow lady, aged 64, with no children, had resided in India for some years, where she had good health, excepting for occasional bilious attacks. She returned to England in 1871, her general health unimpaired by residence in the Indian climate. During one or

two winters after her return she suffered from bronchitis; but, in 1879, she had little or none. In the summer of this year she underwent great anxiety and mental worry, owing to the dangerous, and ultimately fatal, illness of a near relation, and her own health began to suffer. She had irregular action of the bowels; she always spoke of bilious attacks. In July of that year, she went to Harrogate, and there appears to have been very much out of health, and to have lost ground, though under most careful and skilful treatment; the bowels were regulated, and her diet—a point in which she was apt to err—attended to.

She returned to London early in November, but I did not see her until the 20th of that month, and found her emaciated, and weaker than when I had last seen her. She was suffering from flatulent distension of the bowels, which were, however, acting daily or every other day. She expressed the greatest dislike to physic, especially if aperient, from which she said she suffered much lately. Some simple carminative, and a carefully regulated diet, were enjoined.

This state of things continued for some weeks, with no great change; the tympanites continuing to annoy her. Fomentations, carminatives, copious tepid enemata of soap, oil, and water, occasionally of sweet-oil alone, were given, and generally for a time acted fairly well, sometimes freely. The tongue was generally clear; the pulse good; there was no increase of temperature; the urine was copious, depositing lithates, but otherwise normal; the spirits were very good generally, and she very hopeful of recovery, saying that, but for the flatulence, she felt well. About a month before the end, the bowels began to be confined, and she had occasional fits of nausea, which were relieved by diluted hydrocyanic acid. At length, it became necessary to have recourse to aperients, as the enemata failed to produce any effect. The tympanites increased; she was carefully dieted, and solid food prohibited. The bowels now became obstinately constipated, and she passed nothing for some days; withal, it was remarkable how little she seemed affected by it; in some ways, she seemed better, and would get up, and even go out. The most careful examination could detect neither stricture in the rectum nor physical signs of any visceral disease.

It was obvious that, aperients and enemata having failed, they should not be repeated. She was brought under the influence of opium, when the tympanites were relieved, but there was no action of the bowels. The large intestine could be felt, though the abdominal wall distended with fecal matter. Enemata again had no results; the obstruction was too high to be reached with the hand introduced into the bowel.

The question of surgical operation now discussed, but it was not accepted.

Things went on much in the same way for a few days, when I was summoned and found her in great pain. Nothing had passed; the general condition was serious. An operation was proposed, and it was done without loss of time. The ascending colon was opened, a quantity of fecal matter escaped, and there was some relief. But symptoms of peritonitis set in rapidly, with collapse; and she sank in a few hours.

On examination of the body, it was found that the colon above the stricture, which was situated at the splenic flexure, was enormously distended with fecal matter, that a portion of the intestines had given way, and that peritonitis had resulted from the extravasation. The bowel otherwise and the viscera generally were healthy. There was no cancerous infiltration of any organ, and the stricture was peculiar, presenting the appearance as of a cord tied round the gut. The passage was practically obliterated; probably had been so for some days; it had been gradually contracting for weeks, and, when complete occlusion of the passage occurred, the urgent symptoms had set in.

Beyond an epitheliomatous growth, pendulous from the inner part of the thigh, there was no disease. No glands were enlarged, no extension of malignant disease had taken place in any direction, and microscopic examination failed to detect any other than fibrous tissue in the stricture itself.

The origin of stricture of the bowel of this character is very obscure. I may add that I saw another case about a year ago, of very much the same character, in a woman about 60, where the origin was equally obscure.

LIABILITY OF DENTISTS.—The liability of a dentist for the consequences of his own carelessness, or want of skill, has been decided in the affirmative in the United States courts of law. A gentleman named Thomas J. Kelly brought an action, in New York, against a dentist for injuries caused by a piece of tooth, which was extracted, but allowed by the operator to drop down the plaintiff's throat while he was under the influence of nitrous oxide. The piece slipped from the forceps, and for four weeks the plaintiff suffered great pain. Judgment was given for 500 dollars damages, and this has been upheld on appeal.

OBSERVATIONS

ON THE PHYSIOLOGICAL AND THERAPEUTIC ACTION OF THE ELEMENT ARSENIC IN THE FORM OF ARSENITE AND ARSENIATE.

By SYDNEY RINGER, M.D., F.R.C.P.,

Professor of Medicine in University College, and Physician to University College Hospital.

AND

HARRINGTON SAINSBURY, M.D., M.R.C.P.

BOTH oxides of the element arsenic—viz., arsenious and arsenic acids—are employed in medicine, either as such, or in combination with some base or other. In the *British Pharmacopæia*, the liquor potassæ arsenitis, the liquor arsenicalis, and the liquor sodæ arsenicatis, are given in practically equal doses. The solution strength of the former two is one part of arsenious acid in 120 parts of water; of the latter is one part of anhydrous arseniate of soda in 120 parts of water. Calculated out from their formulae, it will be seen that the arseniate preparation contains a little over half as much metallic arsenic as either of the two arsenious acid preparations. This is practically recognising the arseniate as the more active preparation.

The present experiments were made in order to test this point, the importance of which is apparent. Chemically considered, the arseniate is a stabler form of combination than the arsenite, the two salts standing to one another in the same relation as the phosphate and phosphite of the analogous element phosphorus, though the difference in degree of stability between these two latter combinations is much greater.

On the action of arsenious acid, there has been much work done; on the action of arsenic acid, but little. It is known generally that, qualitatively, arsenic acid acts similarly to arsenious acid; but, beyond this very general statement, little definite is discoverable. Of late, a series of papers have appeared (*Archiv für experimentelle Pathologie und Pharmakologie*) on the subject of the mode of action of the element arsenic in its oxygen compounds. In the first paper (*Op. cit.*, Band xi, p. 213) the authors, Binz and Schulz, state, with reference to the comparative action of arsenious and arsenic acids, that some investigators have found that arsenic acid was slower in its action, whilst others have found it to be the more active preparation. They further state that, so far as their own task is concerned, which of these two statements is the true one is unimportant. It is clear that no such statement as this could be made in the face of very definite experimental results, giving superiority of action to either of the two oxides of arsenic.

Some work, however, had been already done on this subject. Thus, in a paper by Wohler and Frerichs (*Annalen der Chemie und Pharmacie*, Band lxx, 1848), "On the Changes which Organic Bodies, in particular, suffer in their Passage into the Urine," two experiments with arsenic acid are quoted—one on a rabbit, one on a dog. From the results obtained, the authors concluded that arsenic acid was less poisonous than arsenious acid.

They further stated, as amongst the differences between the two oxides, that arsenic acid showed less local irritant and caustic action; that its effects appeared more slowly; and they suggested that these were probably, in part, due to a reduction to arsenious acid occurring in the alimentary canal: they thought that the marked injection of the large intestine which was found *post mortem* in the cases observed spoke in favour of this reduction.

With reference to this relative position of arsenious and arsenic acids, it is very natural that the analogous element, phosphorus, should have been looked to, in order to see if any particular relation existed between the corresponding oxides of this element. Of these, viz., the phosphorous and phosphoric acids, the latter, when its acidity is neutralised by a suitable base, e.g., soda, is very little, if at all, irritant; phosphate of lime is, of course, a natural constituent of the organism, and, indeed, it is probably in the form of phosphate alone that the element phosphorus occurs in the tissues.

As to the action of phosphorous acid, but little work has been done; it is not employed in therapeutics, nor mentioned in text-books on toxicology. In the above-mentioned paper (*Op. cit.*, p. 347), however, Wohler and Frerichs quote some experiments, three in number, with phosphorous acid; the doses used were from 0.5 gramme to 1 gramme

of the pure dried acid, administered in dilute solution. The animals experimented on—a pigeon, guinea-pig, and cat—in each case died, but the experiments were less satisfactory than they might have been, since in two of the three cases there is no doubt that the fluid may, in part, have entered the air-passages. Indeed, the value of this paper of Wöhler and Frerichs, both with reference to arsenic acid and to phosphorous acid, lies less in the experiments themselves, than in their statement of what they conceive to be the position of matters. In the end paragraph, treating of this subject, they say: "It is not without interest that the analogy between the elements, arsenic and phosphorus, is manifest also in the action of these elements on animals. The lower oxides of both the arsenious and phosphorous acids are most poisonous, whilst, of the higher oxides, arsenic acid acts relatively mildly, but phosphoric acid is harmless." In addition to this general view, must be remembered their suggestion that arsenic acid is reduced to arsenious acid, and then becomes active.*

Further evidence on the subject of arsenic acid is very scanty. According to Taylor (*Medical Jurisprudence*, vol. i, p. 276), Orfila states it to be more poisonous than arsenious acid, but gives no instance. Dr. Glover (*Loc. cit.*) introduced four grains of arsenic acid into the stomach of a rabbit; the animal died in four hours, with symptoms of irritant poisoning. Dr. Christison (*Treatise on Poisons*, p. 284, 1845, ed. iv.) cites the potash salt; stating, however, that he has read of but two cases of poisoning with it. He further mentions an account of the accidental poisoning of seven horses with this salt; the animals died with the symptoms and morbid appearances of well-marked inflammation of the alimentary canal.

More recently, in the *Journal of Physiology*,† the results of experiments with arseniate of soda and arsenious acid are given. These, so far as stated, agree with those obtained in the present series of experiments. According to them, the arseniate would be decidedly the weaker poison, but, in particular, they show forth the relative slowness of action of the arseniate as compared with arsenious acid; the object in view, however, being different from the present one, the experiments were not planned so as to furnish the data requisite for a precise comparison of the relative activities of the two oxides. This same objection applies to the experiments of Sklarek, referred to in the above-mentioned paper in the *Journal of Physiology*.

The evidence, then, so far as it goes, is to the effect of qualitative similarity of action of the two oxides, but, as to the quantitative relation, the evidence is indefinite on the whole.‡ The view of Wöhler and Frerichs as to the relative position of the two acids, though clearly enough stated, is scarcely supported by sufficient experimental work; still, as representing a scientific aspect of the question, it must be treated as a theory of the mode of action of the element arsenic in its oxygen compounds.

Against this view, comes the more recent one of Binz and Schulz. These authors represent the mode of action of these oxides of arsenic on the tissues as one, the essential part in which is played by the element oxygen. Throughout, an analogy is drawn with the process of burning; thus, they liken the action to that of ozone, and they hold that the fatty degeneration of the cells, and the diminution of glycogen, which both obtain in cases of poisoning by arsenious acid, are the results of such burning.

When the precise mode of action, as they state it, is examined into, it will be seen that the above is an incomplete representation; for the authors consider that arsenious acid, in contact with tissues holding oxygen, takes from them this oxygen, and becomes arsenic acid; that in this higher form of oxidation the element arsenic readily parts with its oxygen to the protoplasmic tissues, and becomes reduced again to the state of arsenious acid. This process is held to continue indefinitely, reduction to arsenious acid being followed by re-assumption of oxygen and reformation of arsenic acid; the steps are then retraced.

The process, then, as described by Binz and Schulz, would lead one to infer—indeed, there is actual statement—that the same molecule of protoplasm can take up oxygen from arsenic acid, reducing it to arsenious acid, and then may itself suffer reduction by the arsenious acid formed. It is just this to-and-fro movement (*Hin- und Hershwingen*) which, according to the authors, is the essential cause of

the disintegration of the tissues obtaining. Thus, then, we should have as cause for the tissue change, which is an undoubted fact, a process consisting of two precisely opposite steps—a burning and an unburning. It is, however, quite clear that no two such steps could yield any effective force whatever; for what the one does the other undoes; the resultant equals zero. That this is a true representation of the theory propounded will be seen on reference to the original papers. (Compare in particular vol. xi. pp. 213, 214, and again vol. xiv., p. 249, of the *Archiv für Experimentelle Pathologie und Pharmacologie*.) But even though one should not insist on this oscillation of the oxygen between arsenious acid on the one hand, and the protoplasmic molecule on the other, and should accept the view that arsenious acid reduces certain protoplasmic molecules, becoming itself thereby converted into the higher oxide, and then parts with its oxygen to certain other molecules, suffering thereby reduction to its former state, yet, even accepting this as their view of the process obtaining (a process to which, in no sense of the word, the term oscillation would be applicable), they would claim effect for each step in the process; i.e., reduction would effect disintegration of the tissues; so, also, would oxidation. Two opposite processes, burning and unburning, would be factors in the result obtaining.

Binz and Schulz instance, as analogous in kind, the action which occurs when nitric oxide, free oxygen, and a body capable of further oxidation, e.g., sulphurous acid, occur together. Here, as is well known, the nitric oxide takes up oxygen and becomes nitrous acid, and then suffers reduction by the sulphurous acid back to the state of nitric oxide; this process will continue indefinitely, provided a constant supply of fresh "oxygen" and fresh "oxidisable body" be maintained. It is, however, clear that this process is a continuous one and in one direction; there is a constant flow of oxygen by way of the carrier to the "oxidisable body"; at no time is oxygen passed on and then taken back.

If, without further criticism of previous statements, this representation be accepted as applicable to the function of arsenious acid in the organism, the position claimed for this compound will be that of a carrier of oxygen, whilst the active element will be oxygen, and the active preparation will be arsenic acid. The assumption of such would be quite warranted; for hæmoglobin appears to hold exactly such a position, as oxygen-carrier, in the organism. To such process the term "burning" would be strictly applicable. However, whether the last-mentioned theory, or the oscillation modification, be true, it is certain that, according to either theory, the two oxides of arsenic must have practically equal toxic value.

The method adopted by Binz and Schulz consisted in the admixture of arsenious acid and of arsenic acid, separately, with animal tissues just removed from the body, care being taken to secure intimate contact, whilst the steps of the process were effected as rapidly as possible, so that the metallic oxide might come into contact with tissues as near the living state as could be. The admixtures were then placed in an incubator. The further stages consisted in the separation by dialysis, and in the detection of the higher oxide where the lower had been used, of the lower oxide where the higher had been taken.

By such means, Binz and Schulz state that they were enabled to demonstrate that living protoplasm is capable of oxidising arsenious acid to the state of arsenic acid, and of reducing arsenic acid to the state of arsenious acid. But, even though this twofold action of oxidation and of reduction be granted, experiments of this nature yet yield no data as to the relative influence of these bodies on the organism. Indeed, with the knowledge that arsenious acid and arsenites are reducing agents, whilst arsenic acid itself is reducible, as, for instance, by sulphurous acid and by hydric sulphide, it would not be surprising to find that, in living tissues, where the processes of oxidation and of reduction are constantly going on, these oxides of arsenic should also take part in these processes. On chemical grounds, the settling of this question is extremely difficult; for qualitative negative results as to the oxidation of arsenious acid by living protoplasm will count as little against the positive results of Binz and Schulz; they will be put down to technical errors; whilst the quantitative solution of the question, viz., the determination of the amount of arsenious acid oxidised, would be extremely difficult, if, indeed, trustworthy results could be counted on.

There scarcely remains any other way of settling the question than by the examination of the symptoms produced. If the theory of Binz and Schulz hold, then, on their own admission, the two oxides of arsenic should be equally poisonous. This must be regarded as a test proposition.

Mode of Experimentation.—By the kindness of Professor Graham of University College, we were furnished with solutions of arsenious acid, arsenite of soda, and arseniate of soda, of definite strength. The

* Wöhler and Frerichs make reference to a paper by Weigel and Krug on the Different Effects of Pure and Impure Phosphoric Acid (*Casper's Wochenschrift für die gesammte Heilkunde*, 1844, No. 28, p. 455). The impurities here referred to are phosphorous and arsenic acids, both of which, according to the authors, render the comparatively inactive phosphoric acid very poisonous. The papers would be in point if the experiments were more conclusive, but the materials supplied are so scanty, that they are in themselves of but very little value.

† On the Action of Arseniate of Soda and Arsenious Acid on Frogs, *Journal of Physiology*, vol. i, No. 4, Drs. Ringer and Murrell.

‡ It must be mentioned that Garrod, in his *Materia Medica*, states that, as the result of numerous observations, he finds the metal arsenic, in the higher oxide as arseniate of soda, equally effectual therapeutically with the lower oxide, but milder in its action, and less likely to produce irritation of the mucous membranes.

ARSENIOUS ACID.

Date.	Weight of Frog in Grammes.	Dose and Solution Strength.	Death of Central Nervous System. (No voluntary movements, spontaneous or on stimulation. No reflex action unless stated.)	Death of Muscular Tissue. No Irritability of Muscles of:			REMARKS
				Anterior Limb.	Thigh.	Lower Leg.	
May 9	27	0.5 c.c. (1% As ₂ O ₃)	2 h. 15 m.	6 h. 30 m.	12 h.	12 h.	Desquamation began after 2 h. 45 m.; was marked at end of 6 h. 30 m.
" 11	20.7	0.1 c.c. (1% As ₂ O ₃)	7 h. 20 m.	9 h. 35 m.	9 h. 35 m.	9 h. 35 m.	The muscular irritability was not quite gone in thigh and lower leg at end of 9 h. 35 m. Desquamation slight after 5 h. 20 m.; more advanced after 9 h. 35 m., but not marked even after 24 h.
PART I.							
May 13	?	0.1 c.c. (0.5% As)	12 h. 15 m. (reflex action still present).	26 h.	26 h.	26 h.	Desquamation well marked over trunk and slightly over limbs at end of 12 h. 15 m. The weight of frog was forgotten, but it was a small specimen, less than that of 11th.
" 15	18.5	0.1 c.c. (0.25% As)	—	—	—	—	Experiment carried over 48 h.; frog appeared quite normal; slight desquamation appeared.
" 17	18.3	0.2 c.c. (0.25% As)	11 h. 15 m.	11 h. 15 m.	11 h. 15 m.	11 h. 15 m. (faint reaction).	Death of the central nervous system must have occurred some time before the 11 h. 15 m., on account of the state of the muscles. Desquamation present after 11 h. 15 m.; after 24 h., well marked everywhere.
" 19	18.9	Ditto	24 h.	24 h.	26 h.	26 h. (faint reaction)	Voluntary movement, sensation, reflex action, were all well marked at end of 12 h.; next morning completely gone. Desquamation present after 10 h., whilst frog was fairly lively.
" 23	21.3	Ditto	24 h.	24 h.	24 h.	24 h.	Frog fairly lively in evening, but respiration not good; next morning dead. Desquamation well marked after 24 h.
" 24	16.5	Ditto	11 h. 40 m.	24 h.	24 h.	24 h.	Muscles reacted vigorously everywhere at end of 11 h. 40 m.; next morning reaction = 0. Desquamation fairly marked after 11 h. 40 m. over back, slightly over limbs; subsequently more marked.
" 26	22.9	Ditto	24 h.	24 h.	24 h.	24 h.	Respiration slow at end of 12 h., else frog fairly well; next morning rigor mortis strong everywhere.
" 30	23.6	Ditto	24 h.	24 h.	24 h.	24 h. (faintest reaction).	At end of 12 h., frog helpless, though sensation and reflex action good.
PART II.							
June 1	21.7	0.3 c.c. (0.125% As)	36 h.	36 h.	36 h. (faint)	36 h. (faint)	After 33 h., frog moribund, scarcely respires, but heart still seen beating through abdominal walls. Desquamation fairly marked after 24 h. over back; after 36 h., desquamation everywhere.
" 7	14.6	Ditto	24 h.	24 h.	24 h.	24 h.	At end of 12 h., frog moribund. Respiration 0, but heart still feebly beating. Voluntary movement, sensation, reflex action still present. Next morning, frog dead; muscles also. Desquamation slight after 12 h.; well marked after 24 h.
" 9	23.8	Ditto	—	—	—	—	Frog still alive after 29 h. (the other two frogs being dead). Voluntary movements helpless; respiration irregular; desquamation slight. Frog killed.
" 14	15.7	0.2 c.c. (0.125% As)	27 h.	27 h. (faint)	27 h. (faint)	27 h. (more marked, but slight).	Desquamation general but slight after 27 h.
" 16	16.4	Ditto	29 h.	39 h.	39 h.	39 h.	Frog was breathing very badly after 24 h., else condition seemed fair. Desquamation well marked over back after 24 h.; general after 39 h.
" 19	16.7	Ditto	12 h.	12 h.	12 h. (faint)	12 h. (faint)	The reaction of the thigh and lower leg muscles was only on right side. Desquamation slight after 12 h. over back; general and more marked after 24 h.
PART III—LARGER DOSAGE.							
June 22	24.45	0.5 c.c. (1% As ₂ O ₃)	1 h. 10 m.	9 h. 30 m.	9 h. 30 m.	9 h. 30 m. (still present)	Desquamation commenced at end of 1 h. 30 m.; marked over whole body after 9 h. 30 m.; after 28 h. still more marked, strips off in sheets.
" 26	19.6	0.66 c.c. (1% As ₂ O ₃)	0 h. 40 m.	5 h. 10 m.	5 h. 10 m.	8 h. 40 m. (very faint).	Desquamation well marked after 4 h. over back of trunk and thigh.
" 27	20.75	Ditto	0 h. 50 m.	5 h. 30 m.	5 h. 30 m.	9 h. 30 m.	Desquamation slight over back after 2 h. 30 m.; strongly all over after 5 h. 30 m.
July 31	23.4	Ditto	0 h. 50 m.	4 h.	4 h.	4 h. (faint)	Desquamation well marked all over after 4 h.
Aug. 23	19.5	Ditto	0 h. 45 m.	7 h. 15 m.	7 h. 15 m.	7 h. 15 m. (very faint).	Desquamation well marked after 3 h. 15 m., epidermis stripping in large flakes.
" 25	16.5	Ditto	0 h. 50 m.	5 h. 40 m.	5 h. 40 m.	5 h. 40 m. (faint).	Desquamation general 3 h.; after 6 h. more advanced.
" 26	20	Ditto	0 h. 35 m.	(Still present after 3 h. 15 m.)	(Still present after 3 h. 15 m.)	(Still present after 3 h. 15 m.)	Desquamation began after 40 m. Muscular irritability was strong in thigh and calf after 3 h. 15 m.; moderate in the anterior limb of one side, not in the other.
" 28	22	Ditto	0 h. 50 m.	4 h. 45 m.	4 h. 45 m.	4 h. 45 m. (still present)	Slight desquamation after 60 m.; well marked everywhere after 4 h. 45 m.
" 29	24.1	Ditto	0 h. 50 m.	6 h. 10 m.	6 h. 10 m.	6 h. 10 m.	Desquamation present after 50 m. over whole back; marked everywhere after 6 h. 10 m.

ARSENITE OF SODA.

May 9	27	0.5 c.c. (1% As)	1 h. 35 m.	6 h. 30 m.	12 h. (flicker)	12 h. (flicker)	Desquamation began at end of 2 h. 40 m. over back; well marked everywhere after 6 h. 30 m.
" 11	23.3	0.1 c.c. "	2 h. 10 m. (faintest reflex action still persisted.)	7 h. 15 m.	9 h. 30 m.	9 h. 30 m. (flicker.)	Desquamation began after 5 h. 15 m., and became well marked all over.
PART I.							
May 13	?	0.1 c.c. (0.5% As)	8 h. 30 m.	12 h.	12 h. (faintest)	12 h. (flicker)	Desquamation began after 12 h. over back and back of head, and slightly over limbs.
" 15	18.5	0.25 c.c. (0.25% As)	—	—	—	—	Experiment carried over 48 h.; frog appeared quite normal at end; no desquamation.
" 17	19.7	0.7 c.c. (0.25% As)	11 h. 30 m.	11 h. 30 m. (feeble reaction.)	11 h. 30 m. (feeble reaction.)	11 h. 30 m. (feeble reaction.)	Frog appeared fairly normal after 4 h.; the feeble reaction of muscles persisting after 11 h. 30 m., was of course gone by next morning.
" 19	20.9	Ditto	24 h.	24 h.	24 h.	27 h.	Desquamation well marked over back, slightly over limbs after 12 h.; marked all over after 24 h. At end of 24 h. voluntary movements still present, but sprawling and helpless; whilst sensation and reflex action appeared, if anything, lessened.
" 22	20.5	Ditto	24 h.	30 h. 30 m.	30 h. 30 m. (faint response.)	33 h. 30 m. (faint response.)	Desquamation began after 10 h., whilst voluntary movements were well marked. Desquamation. At end of 22 h., the reactions were very slow, voluntary movement, when excited, very sprawling. Sensation appeared, if anything, lessened.
" 24	16.8	Ditto	11 h. 30 m.	11 h. 30 m. (feeble reaction.)	12 h. 30 m. (feeble reaction.)	13 h. 30 m. (feeble reaction.)	Desquamation over back after 11 h. 30 m.; general after 24 h., and more marked.

ARSENITE OF SODA—continued.

Date.	Weight of Frog in Grammes.	Dose and Solution Strength.	Death of Central Nervous System. (No voluntary movements, spontaneous or on stimulation. No reflex action unless stated.)	Death of Muscular Tissue. No Irritability of Muscles of:			REMARKS.
				Anterior Limb.	Thigh.	Lower Leg.	
May 26	19.5	0.2 c.c. (0.25% As)	12 h. (v. remarks)	24 h.	24 h.	24 h.	At end of 12 h., respirations were very slow and shallow, voluntary movements sprawling, helpless. Sensation appeared, if anything, excessive. Frog probably near death, but not seen till next morning. Desquamation commencing after 12 h., well marked over whole body after 24 h.
" 30	18.6	Ditto	12 h.	24 h.	24 h.	24 h.	Frog not quite dead at end of 12 h., but distinctly moribund. Respirations quite ceased, but voluntary movements still present, though helpless and sprawling; reflex action good, and sensation appears excessive. Desquamation slight after 12 h.; well marked all over after 24 h.
PART II.							
June 1	20.5	0.3 c.c. (0.125% As)	23 h.	23 h.	23 h.	23 h.	At end of 12 h., nothing special except irregularity and slowness of respiration. Desquamation, none after 12 h.; well marked after 24 h.
" 5	17.35	Ditto	24 h.	24 h.	24 h.	24 h.	Desquamation, none after 12 h.; well marked after 24 h.
" 7	12.9	Ditto	11 h. 30 m.	11 h. 30 m.	11 h. 30 m.	11 h. 30 m. (faintest response.)	Desquamation over back after 11 h. 30 m.; well marked everywhere after 24 h. Respiration very slow and irregular after 4 h.
" 9	16.9	Ditto	12 h.	12 h. (faint response.)	12 h. (faint response.)	12 h. (stronger but feeble.)	Frog moribund at end of 9 h.; slight desquamation after 12 h.; after 26 h. more marked.
" 14	16.8	0.2 c.c. (0.125% As)	52 h.	52 h.	52 h.	52 h.	After 43 h., respirations very slow, irregular, cease for long intervals; voluntary movement very feeble; sensation and reflex action appear fair. Desquamation slight after 32 h.; well marked after 48 h., and general.
" 16	16.1	Ditto	24 h.	38 h. (? 24 sec remarks)	38 h.	38 h.	Frog not quite dead at end of 24 h., but moribund, still sensation and reflex action appear good. Muscles not tested till next morning, but probably irritability gone soon after 24 h. Desquamation well marked over back after 24 h., general after 38 h.
" 19	19.25	Ditto	—	—	—	—	Frog appeared normal after 72 h.
ARSENATE OF SODA.							
May 9	27.5	0.5 c.c. (1% As)	12 h. (faint reflex action persisted)	24 h.	24 h.	24 h.	At end of 12 h., the muscular irritability was marked everywhere. Slight desquamation all over body after 24 h.
" 11	20.4	0.1 c.c. (1% As)	28 h.	28 h.	28 h.	28 h.	Frog appeared rather sprawling at end of 21 h., else movements, sensation, and reflex action appeared good. No note as to desquamation.
PART I.							
May 13	?	0.1 c.c. (0.5% As)	—	—	—	—	Weight of frog not noted, but smaller than on 11th.
" 15	18.5	Ditto	—	—	—	—	After 48 h., frogs appeared quite normal. Experiment ended. On May 19th, the experiment proceeded 72 h.; frog quite normal.
" 17	15.5	Ditto	—	—	—	—	
" 19	14.8	Ditto	—	—	—	—	
" 22	15.5	Ditto	—	—	—	—	
" 24	14.5	Ditto	—	—	—	—	
" 26	18.7	Ditto	—	—	—	—	
PART II.							
June 1	15	0.3 c.c. (0.25% As)	—	—	—	—	After 57 h., frog apparently still living; during 27 h. frog continued in a state of complete voluntary paralysis, prone, and not moving unless stimulated, but then kicking out hind limbs vigorously. Respirations during this time ceased, but heart still acting. This was condition at end of 57 h. Frog ultimately died. Desquamation present over back and fore limbs after 52 h.
" 5	17	Ditto	—	—	—	—	After 46 h., frog lively; no desquamation.
" 7	13.3	Ditto	—	—	—	—	After 40 h., frog lively; no desquamation. A very little of the injection escaped from the puncture in this case.
" 9	14.8	Ditto	29 h.	—	—	—	At end of 26 h., there was no respiration, but frog was still able to turn over from back. After death (29 h.) the muscles reacted well (no note subsequently). No desquamation.
" 14	15	0.2 c.c. (0.25% As)	—	—	—	—	After 31 h., frog appeared normal. No desquamation.
" 16	15.2	Ditto	64 h.	64 h.	64 h.	64 h.	At end of 63 h., frog still living, and voluntary movements fairly vigorous, though ill controlled; sensation and reflex action good. No desquamation.
" 19	18.75	Ditto	—	—	—	—	After 72 h., frog appeared normal. No desquamation.
PART IIIA.							
June 22	23.8	0.5 c.c. (1% As)	9 h. 40 m.	—	—	—	At time of death, viz., 9 h. 40 minutes from injection, the muscles reacted strongly everywhere. Desquamation general at end of 28 h., but only slight. No desquamation at time of death.
" 26	18.3	Ditto	8 h. 45 m.	21 h. 15 m.	21 h. 15 m. (fair reaction)	21 h. 15 m. (good response)	6 h. 15 m. subsequently, there was no reaction of muscles anywhere. At end of 21 h. 15 m., practically no desquamation.
" 29	23.7	Ditto	9 h. 30 m.	22 h. 30 m.	22 h. 30 m.	22 h. 30 m. (faint reaction)	Frog appeared moribund at end of 6 h. 45 m. The reaction in the lower leg-muscles after 22 h. 30 m. was faint but distinct. No desquamation after 9 h. 30 m.; slight after 22 h. 30 m.; more marked after 26 h.
July 31	25.7	Ditto	9 h. 20 m.	—	—	—	Respiration much affected at end of 4 h. Muscles reacted powerfully at end of 9 h. 20 m., and everywhere. No note subsequently as to muscles. Desquamation very slight after 9 h. 20 m.; after 31 h., much more advanced.
PART IIIB.							
Aug. 24	18.8	0.5 c.c. (5% As)	3 h. 20 m.	27 h.	27 h. (faint reaction)	27 h. (fair reaction)	After 7 h. 20 m., very slight desquamation over back; none elsewhere; at end of 27 h., well marked.
" 25	16.6	Ditto	2 h.	22 h.	22 h. (faint reaction)	22 h. (feeble reaction)	At end of 22 h., the reaction of thigh-muscles was only obtained by applying electrodes to bare muscle; the lower leg-muscles reacted more distinctly, and through skin. After 5 h. 45 m., ? any desquamation; after 22 h., desquamation very strongly marked, almost as strongly as for the arsenious acid frog.
" 26	18.75	Ditto	3 h. 20 m.	17 h.	17 h. (slight reaction)	17 h. (slight reaction)	Frog was very bad, ? moribund, after 1 h. 20 m. Moderate desquamation after 17 h.; after 41 h., desquamation was quite as advanced as in arsenious acid frog.
" 28	18.6	Ditto	5 h. 15 m.	19 h. 15 m.	24 h. 35 m.	24 h. 35 m. (faint response)	Respiration much affected after 1 h. 45 m., also movements sprawling; ? any desquamation after 5 h. 15 m.; after 20 h., desquamation well marked.
" 29	28.2	Ditto	6 h. 15 m.	15 h. 30 m.	17 h. 15 m. (distinct reaction)	17 h. 15 m. (distinct reaction)	After 2 h. 15 m., still breathing, but movements sluggish; ? any desquamation after 6 h. 15 m.; slight general desquamation after 15 h.; after 43 h., desquamation more marked.

arsenious acid solution contained 1 per cent. of the oxide, As_2O_3 ; the arsenite and arseniate of soda solutions contained each 1 per cent. of the element arsenic. From the formula As_2O_3 is easily calculated the quantity of the solution of arsenious acid which must be taken in order to contain as much of the element arsenic as given quantities of the arsenite and arseniate solutions. The strengths of all three would have been made equivalent to 1 per cent. of the element, but for the insolubility of arsenious anhydride.

Of these solutions, definite quantities, containing known and therefore comparable quantities of the element arsenic, were injected under the skin of the back of frogs. The common English frog (*Rana temporaria*) was taken; and care was observed to select, for the parallel series of experiments, specimens as nearly as possible of the same size and condition. Each experiment consisted in the injection of three frogs with the above arsenic preparations; for each frog, one of the arsenic compounds. The three injections were performed at the same hour, one after the other, as speedily as possible. Each frog was then placed under a separate bell-jar, and observed. The observations extended over two days, as a rule; sometimes over three; they were taken morning, noon, and evening. The experiments were performed during the months of May and June 1882; a few during August of the same year.

Thus, comparable quantities of the element arsenic, in three different states of combination, were administered to frogs chosen as nearly alike as possible. The results obtained are given in the form of tables (pp. 1138-39). The headings chosen for the columns will not need explanation, except perhaps that described as "Death of the Central Nervous System". The evidence of this death is, that the frog neither moves spontaneously nor answers to any stimulus by volitional movements. The absence of these latter in response to stimulation has been assumed to correspond with abolition of sensation. This absence of the more complex co-ordinated movements was at times to be noted whilst the less complex co-ordinated movements constituting reflex action still persisted; but, as a rule, reflex action outlasted but a very short time the abolition of the more complex movements. Hence, practically, "Death of the Central Nervous System" corresponded to:

1. Absence of spontaneous movement;
2. Absence of volitional movement on stimulation;
3. Absence of reflex action.

Though these three occurred so nearly together as practically to constitute but one group, the above is the order of their disappearance. It may be further mentioned that, together with the above noted, the automatic centres of respiration and circulation ceased to perform their functions. It is clear that, with a peripheral apparatus, nerves, and muscles, still efficient, the above indicates extinction of the functions of the central nervous apparatus of the brain and spinal cord.

The subsequent death of this peripheral apparatus is given in the next column, headed "Death of Muscular Tissue". The nerves are left out, because their condition is rather less readily examined, and hence not so well adapted for comparative examination. The sciatic nerves were, however, tested in nearly every case; and it was established that, at the time of "death of the central nervous system", as above evidenced, the nerve-trunks still conducted well; and, further, that death of the nerve-trunk preceded, as a rule, by a considerable period, the death of the muscular tissue itself. Hence, then, the two test-tissues chosen are:

1. That of the central nervous system;
2. That of the muscles.

In the column headed "Remarks," is given the peculiar action on the skin in the shape of desquamation, which may vary from a slight separation of the epithelium to a condition in which this may be picked up or scraped off in large flakes. This condition has been fully described in the *Journal of Physiology*, vol. i. In this same column, anything noteworthy at the time is recorded.

[To be continued.]

SOUTH MEATH AND DROGHEDA MEDICAL ASSOCIATION.—The usual annual meeting of this society was held on November 24th, in the Board-room of the County Infirmary, kindly lent by Dr. MacDonnell. Several papers were read, and matters discussed of interest in connection with the profession, after which the members dined together at the Queen's Arms Hotel. The chair was occupied by Dr. Gartlan, senior member, who presided with his usual tact and ability. A number of toasts were given and happily responded to by the several members, many of whom also contributed much to a very enjoyable and intellectual evening by capital singing. Owing to pressing duties and the unfavourable weather, a number were debarred from coming, who had signified their intention to be present.

NOTE ON MESENTERIC CYSTS AND TUMOURS.

By T. SPENCER WELLS,

President of the Royal College of Surgeons; Surgeon to the Queen's Household.

Up to the date of the publication of my last work on *Ovarian and Uterine Tumours*, I had not met with any cases of mesenteric cysts or tumours. In the chapter on diagnosis, I had spoken of collections of fluid in the peritoneal cavity more or less completely encysted by adhesions—of hydatid cysts—of peritoneal cancer—and of fibro-plastic and fatty tumours of the peritoneum, of the omentum, and of the sub-peritoneal cellular tissue. But I had not then read Mr. Doran's interesting case of cyst of the great omentum, published in the *Obstetrical Transactions* (vol. 23, page 165); nor had I ever seen a solid tumour of the mesentery. During the past summer, however, I have seen one case closely resembling Mr. Doran's, with Dr. Duke of St. Leonard's, but which appeared to be rather mesenteric than omental. I did not attempt to remove the cyst, only removing the fluid contents. The lady died a few weeks afterwards; and, as no examination of the body was permitted, I cannot say more of the case. About the same time, I removed a large solid mesenteric tumour from a married lady, forty years of age, a patient of Mr. Arthur Jackson of Sheffield. She had been married eighteen years, but had no children, though she had a premature labour some months after marriage. Two or three early abortions followed, and no further pregnancy. She was in good health until about four years ago, when pain in the iliac regions and slight abdominal enlargement was noticed; but no tumour was discovered until early in 1881. After that, increase was very manifest, with some apparent diminution after each menstrual period. Various opinions were given as to the nature of the tumour—some believing it to be ovarian, others uterine. I frankly confessed my own inability to give a very positive opinion as to its nature or connections; but expressed a very confident belief that I could remove it without any unusual difficulty or danger. It was quite solid, central in the abdomen, freely movable, about the size of an adult head, and imparting transmitted rather than associated movements to a uterus somewhat enlarged. I removed the tumour on June 20th, 1882, at Sheffield. Mr. Shaw kept the patient in a state of perfect anaesthesia with bichloride of methylene, and I was ably assisted by Mr. Arthur Jackson, Mr. Favell, and Dr. Redpath. Phenolised spray and all the usual antiseptic precautions and dressings were carefully employed. The tumour was solid, and its origin was clearly in the cellular tissue, at the root of the mesentery proper, near the lumbar vertebrae. The ascending colon was closely connected with the tumour in front, and to the right. All its blood-supply was derived from the mesenteric vessels. Those which were divided were secured with carbolic silk, the ends of all the ligatures cut off short, and returned. The uterus and both ovaries were healthy. No drainage was employed, and the wound was closed exactly as after ovariectomy. There was some sickness during the first three days; but recovery may be said to have followed without fever. The highest temperature was on the third day, but was only 100°. The patient left her bed on July 12th, and I have heard of her lately as being in good health.

The tumour was sent to the Sheffield Pathological Society for examination and report. I have not yet received the report; but I hope it will be forwarded, as the removal of a solid mesenteric tumour may still be regarded as a surgical curiosity.

ON FREE REMOVAL OF MAMMARY CANCER, WITH EXTIRPATION OF THE AXILLARY GLANDS AS A NECESSARY ACCOMPANIMENT.*

By W. MITCHELL BANKS, M.D., F.R.C.S.,

Surgeon to the Liverpool Royal Infirmary.

I HAPPEN to live in a district where cancer is common. Liverpool is in an area which the Registrar-General's statistics show to be clearly of a malignant habit. The reason of this I cannot say; but it is a fact, and possibly thus it is that my attention has been for some time drawn to the subject. In 1877, I published a little article in the *Liverpool and Manchester Medical and Surgical Reports*, based upon a paper read before a meeting of the Lancashire and Cheshire Branch of the Association. In it I asserted that surgeons did not remove cancers of the breast. Five years later, before the whole Association, I reasserted

* Read at the Section of Surgery at the Annual Meeting of the British Medical Association in Worcester, August 1882.

the statement. Surgeons, as a rule, do not remove cancers of the breast. They persuade their patients that they do, and they almost persuade themselves; but there is always that little bit which they leave behind, and which, they fondly hope, will not grow, because it is *such* a little bit. Alas! that so little leaven should leaven the whole lump. If one turns to the surgery-books of one hundred and fifty or two hundred years ago, the true method of removing a cancerous breast will be found. The breast was laid hold of with great pincers; and, having been cut clean off, the surface was rubbed over with a red-hot poker. Against a proceeding so shocking to the age, modern taste revolted; and so for many years surgeons have been removing a little elliptical bit of skin including the nipple, and have been carefully dissecting out the mamma. Then the remaining skin, all impregnated with cancer-germs, has been carefully laid down again, and neatly stitched together, so that everything should heal up quickly. Hence removal of a cancerous breast in this way came to be considered a safe proceeding. Very few people, indeed, died from the operation—very few indeed. Unfortunately, they *all* died at a little later period from want of a little more of it. Hence, looked at from another point of view, it was the most useless of all operations, inasmuch as it never effected a cure. My present contention, therefore, is for a return to the old plan of sweeping everything away, and leaving a great hole, if you like. The operation will no longer be the bit of surgical tailoring that it has been, and many more patients will die from it; but many more also will be spared to live useful lives, and escape the horrors of a return—tenfold worse than the original mischief.

I need not inflict upon my audience the steps of an ordinary operation for removing the breast and clearing out the axilla; but, when a man has done any job a good many times, he is sure to find out some small but perhaps useful details. In most cases, these may not be of any importance; in some, they may just turn the balance and save a weakly patient. May I venture to mention a few which have impressed themselves upon me?

First, then, as to Listerian antiseptics: as a rule, I employ them; in hospital, always. But, in the operation under consideration, they have one disadvantage; viz., that the spray seriously cools down the patient, and so lowers her vitality. If the operation be performed in the old-fashioned and useless way, there is very little shock; if performed in the thorough and sweeping way I am now advocating, there is a serious shock. From thirty to forty minutes is the shortest time in which it can be satisfactorily done. Now, let any healthy woman get out of a warm bed, strip herself naked to the waist, and then go and lie down on her kitchen-table for forty minutes; I shall be very much surprised if she have not a cold next day. But, in addition to this, let a cool spray play upon her; and, furthermore, let a great mass of heat-conserving skin and fat be carved away from the chest, so that nothing but ribs and muscles intervene between the lung and the air; and still let the cool spray play on her. Is this not likely to be very depressing? I am convinced that it is; and if the operator, in place of doing his work rapidly, niggles and fiddles about it, so that the patient is kept for a long time under the combined lowering influences of cold spray, anæsthetic, and loss of blood, then the result is such a depression of the *vis vite* that any erysipelatous or septicæmic condition finds a ready victim; while I have seen many times a distinct catarrhal pneumonia produced at once. For this reason, in private, where there is but little fear of septic influences, if the patient be weakly, I content myself with simply washing the wound well with carbolic solution, and maintaining a modified antiseptic dressing afterwards. Having cleared out the breast, I leave it hanging by the axillary end; and then, before attacking the armpit, I draw together as much of the wound as will possibly come, and cover the remainder up with sponges or gauze. This has two advantages; it keeps the cold from the chest; and it enables the operator, if he find he cannot thoroughly clear the axilla, or if he see the patient becoming collapsed, to terminate the operation at once. If the cancerous lump be deep, then some of the skin at the margins of the breast may be kept; but, if any part of the skin be involved, then a circle should be drawn round the breast, and it should be cut clean off, without the remotest regard to flaps or coverings of any kind. These are of secondary moment altogether.

The breast-wound being settled, the incision should be carried up into the axilla about an inch below the margin of the great pectoral muscle. Then comes a strong temptation to dissect down the lower flap, and lay bare the latissimus dorsi and the subscapular artery. There is very seldom any occasion for this; and, when it is done, if suppuration occur, a pocket for pus is left. I have twice seen the pus filter its way right to the back, and have had to make a counter-opening just below the angle of the scapula. With regard to the lower glands, they are capable of easy removal; and even the highest ones

can readily be brought down from the very top of the cavity and pinched away by the nails of the thumb and forefinger. I have never yet found occasion for dividing the pectoral muscles, as even in the three instances mentioned in the list, where I was unable to remove the glands, I saw them quite clearly, but was afraid to take away so much of the vein (to which they were closely adherent) as would have been necessary to remove them thoroughly. One must try this a little more. I last week removed an inch and a half of the internal jugular along with some cancerous glands of the neck, and the patient did not seem in the least affected by the performance.

Now, having cleared out the axilla forty-one times, I have naturally come to know something about the state of the glands; and the first point was the recognition of the fact that, until we have these glands in our hand, and have split them open with a knife, we cannot tell whether they are infected or not. The usual fumbling in the axilla, which is practised by surgeons, tells nothing. When the glands are as big as walnuts, any first year's student can tell they are affected; but there is a stage—the earlier stage—when they are certainly infected, and yet when to the touch, through layers of skin and fat, nothing amiss can be felt. As a result of this, I came to the conclusion, about three years ago, that, *in every case where the breast is removed, the axilla should be cleared out as a necessary accompaniment*; and this I beg to urge upon the meeting. The one operation is useless without the other. As you cannot tell whether the glands are infected or not, remove them and dissipate the doubt.

And now, gentlemen, you naturally inquire from me whether I can show any practical proof that the removal of the breast and glands is likely to prove a more hopeful proceeding than the limited operations which have been the rule until the last few years. On looking over my notes, I find I have records of forty-six cases. I have done a good many more, but of many of my earlier cases I, unfortunately, did not keep any memoranda, as I had no idea that the subject would interest me so much as it has done. Concerning the forty-six mentioned in the table, however, I know all about them, and have quite recently verified the condition of those who are described as remaining free.

Turning to the fatal cases, you will notice that six have died; that is to say, about 13 per cent. That this is a heavy mortality, I admit; but, as I have just been endeavouring to show, if the operation is to be of any service at all, it cannot be other than a serious one. In all the fatal cases, both breast and glands were removed. In five out of the six the cause of death was undoubtedly a septicæmic state, accompanied with breaking down of the wound, and very generally with a fleeting erysipelas. One death was particularly galling, as it occurred in a patient who had to all intents and purposes recovered. The wound was healed till only a piece about the size of a shilling remained, and she was going to the country next day. That night she had a rigor; a little red blush came, and, after struggling hard for nearly a fortnight, she succumbed, in an undoubtedly poisoned state. There is, however, some satisfaction in noting septicæmia as the main cause of death, because it is a remediable one, and it is one that is not in any way special to this operation, but to all operations where great wounds have been made. Had the patients died from shock, from secondary bleedings, or from exhausting suppurations, the operation might have been considered directly answerable; but we know that had these patients been all in perfect hygienic conditions—had they, for instance, had the atmosphere of Zermatt about them—they would have recovered. Fortunately, every year is improving our knowledge of how to ward off these poisoned conditions; and when we shall have done away with them, the range of operative surgery will hardly know any bounds. [As or the sixth patient, she was killed by the folly of a nurse, one who night left a window open above her head, pouring down upon her a cataract of cold air, which set up a fatal bronchitis. Here neither surgeon nor operation was to blame, but a mistaken zeal in the cause of ventilation.]

In this operation there will always be two serious difficulties to contend with—the age of the patients and their mental state. In my fatal cases the ages varied from 44 to 67. The patients were not young people of 13 or 20, whom it is hard work to kill by a surgical operation, but women who had seen their best days, and who, for the most part, had borne families, and seen much hard work. As regards age, therefore, the material is not good to work upon; and as regards hopefulness, it is very bad. The majority of women are completely prostrated by the discovery that they have a cancerous breast, and look forward to its removal with great horror and dreadful forebodings. Every surgeon knows what a thing it is to have a hopeful patient, and, unfortunately, everyone who has had much to do with cancerous breasts knows that the patients generally consider themselves doomed from the beginning, and submit to removal as a last resource. The time of life, therefore, and the despondent mental state induced by the

disease, are always likely to act as depressing influences, apt to produce a state in which any septicæmic poison finds a congenial soil.

Turning from the fatal cases, it will next be noticed that in eleven instances the disease has already recurred. Now, in three of these, when the highest point in the axilla was reached, it was found that there were still glands so adherent to the vein that they could not be removed, while the condition of the patient was such that it was clear the sooner she was off the table the better, lest an immediate sinking should occur. Thus, these three were known to be incomplete operations, and the continuance of the disease was expected as a matter of course. If it be asked, why were operations attempted under such circumstances? I reply that nobody can possibly tell what the state of the axillary glands is until he sees them. They may shell out like peas, or they may stick to the vein like limpets to a rock. To all appearances, none of these three cases seemed more unlikely to be incapable of thorough clearing out than any of the others. Not till the highest glands were reached did this become obvious. In two cases, the general nature of cancerous infection was manifested by the disease appearing in the other breast. The last case is interesting, inasmuch as the patient remained free for about a year and a half, and then the cervical glands over the subclavian artery and brachial plexus became enlarged. She suffered such intense pain in the arm that I cut down upon these and exposed them. I found one large cord of the plexus quite surrounded by a couple of hardened glands, which were so squeezing it that below the point of pressure it was red, and swollen to nearly twice its original size. With some trouble, I detached the glands from the nerve, and so freed it from their strangling embrace; but, unfortunately, there were others, which had become so intimately adherent to neighbouring tissues, such as the scalenus anticus muscle, that their extirpation was impossible. The wound was healed in about ten days, and the patient departed, greatly delighted with the immediate relief from pain which the freeing of the cord procured for her.

A very important matter is to note the period when reappearance of the disease was manifest, and the length of time the patient lived after the operation. In nine out of my eleven cases the disease reappeared, and the patients were dead and buried, before the lapse of twelve months. In the tenth, the patient lived fifteen months. This demonstrates two things: the first is that, if the disease be going to reappear, it is about ten to one that it will do so within eighteen months. In all the cases that I can remember, in the practice of other surgeons, I should say that pretty much the same thing held good. Now, in a paper upon this subject, read at the International Congress, by Dr. Samuel Gross, of Philadelphia (whose work on the breast is a most admirable one), he stated that, if a patient lived three years without reappearance of disease, the probabilities were most strongly in favour of her remaining permanently well. With this statement I am firmly inclined to concur.

The second thing that is demonstrated is, that the popular idea that operating prolongs life is quite wrong. I believe it to be a perfect delusion. I believe that all these patients would have lived longer if they had never been touched. Yet you hear the operation being constantly advised, on the ground that, if it do not cure the patient, it will give her a little longer lease of life. On the contrary, the excitement that is set up by an operation makes everything that is left behind of a malignant character grow with double and treble speed; and I am even inclined to think that the deaths after reappearances are more painful than those where the cancer has never been touched. If a surgeon do not see his way to a clean sweep, I can only implore him to let things alone; for in few diseases does meddlesome interference work more mischief than in this. It is but right that, while pleading the advantages of early and free operation, one should also admit that, if it fail thoroughly to cure, it does not improve the patient, but makes her most decidedly worse.

Let us now turn from the fatal cases, and from those where the disease has returned, to those more satisfactory ones where surgery has been of service. The list first shows three instances where the patients died in eighteen months to two years from the time of the operation, without any signs of return of the cancer. One died from paralysis, one from liver-disease, and the cause of death in the third instance I could not find out. Even if the disease, which finally took these patients off, had been internal cancer, the operation would have been one of immense service to them; but, as I have no evidence that that was the case, they may fairly take a secondary rank as cures. I can point to ten cases having an immunity for periods of two to ten years, and five from one to two years. Seven cases have reached the period of three years, which, as we have just seen, makes the chance of reappearance of the disease in them but little greater than that of its original appearance at all. Now let us take only these cases of three years

and upwards. They are seven in number, which may reasonably be reckoned cures, against seventeen deaths and reappearances; or one success to two and a half failures. Even at this very low rate, I claim that the operation is worth doing, considering the hopeless nature of the disease, and considering that, for a very long period, surgeons have been operating so unsuccessfully, that many had quite given the matter up in despair. I think any patient, if offered the chance, would take it, even with the odds of 25 to 10 against her; but, if we go down to one year and nine months, then there are twelve cases without return as against seventeen failures. And, remembering that I have showed you that every one of my reappearances were manifest within one year and six months, I think I may guarantee these twelve as safe. If I am right, it reduces the odds to 15 to 10 against the patient. Gentlemen, I firmly believe that that proportion will be attained by the time my cases are all followed up to the end, and I hope I may live long enough to report upon them once more to you, and prove the correctness of my estimate. I know that the weak feature in my paper is, that sufficient time has not elapsed thoroughly to test the cases; but some years must come and go before that can be done. Meantime, I am sufficiently sure of my ground to feel justified in pressing upon operating surgeons an early and free removal of cancerous breasts, and, as a necessary part of the operation, a thorough clearing out of the axillary glands.

The following is a synopsis of forty-six cases, in five of which the breast alone was removed, while in forty-one the breast was removed and the axillary glands cleared out. Six cases proved fatal after the operation. Eleven cases had reappearance of the disease, and ten are already dead from it. Three cases remained free, and died from other causes under two years. Ten cases remain free from two to ten years after operation. Five cases remain free from one to two years after operation. Nine cases have been done within the last twelve months, and cannot be reckoned upon yet. One case recovered, but has been lost sight of. One operation was done for relief only, without hope of cure.

Cases fatal after operation.

No.	Condition.	Age.	Cause of Death.	Period after Operation.
1	Married	43	Septicæmia and fleeting erysipelas	3 weeks.
2	Single	...	Erysipelas	3 weeks.
3	Married	44	Bronchitis	7 days.
4	Married	44	Sloughing of wound and erysipelas	7 days.
5	Married	43	Septicæmia and fleeting erysipelas	6 days.
6	Married	49	Septicæmia and fleeting erysipelas	2 weeks.

Cases in which the Disease reappeared.

No.	Condition.	Age.	Notes.	Interval between Operation and Fatal Termination.
1	Married	42	Operation incomplete, inasmuch as glands could not be thoroughly removed, those remaining to be removed by subsequent operation in a few weeks since Radical operation performed.	8 months.
2	Single	36	Operation incomplete for same reason as above. Reappeared in axilla of same side.	8 months.
3	Married	52	Operation incomplete for same reason as above. Reappeared in axilla of same side.	13 months.
4	Married	70	Breast alone removed, but seemed small, and glands were not palpably affected. Reappeared in axilla.	10 months.
5	Married	74	A sarcoma growing in the sarcoma; not a thing, but a mass of cancerous tissue in the axilla.	A few months.
6	Married	38	Operation incomplete for same reason as above. Reappeared in axilla of same side.	10 months.
7	Married	40	Operation incomplete. This recurred, but operated on and removed. Reappeared in axilla of same side.	6 months.
8	Single	54	Operation incomplete for same reason as above. Reappeared in axilla of same side.	11 months.
9	Married	45	Recurred in upper part of axilla.	Under 12 months.
10	Married	...	Recurred in upper part of axilla.	Under 12 months.
11	Married	54	Recurred in upper part of axilla.	Under 12 months.
12	Married	54	Recurred in upper part of axilla.	Under 12 months.

Cases where Death has occurred from other Causes in Patients remaining free from Breast-Cancer.

No.	Condition.	Age.	Operation.	Cause of Death.	Period between Operation and Death.
1	Married	54	Breast only	Not known	Died after 2 years; no reappearance.
2	Married	41	Breast only	Paralysis	Died after 1 year and 6 months; no reappearance.
3	Married	52	Breast and glands.	Liver-disease	Died after 1 year and 9 months; no reappearance.

Cases remaining free from Two to Ten Years.

No.	Condition.	Age.	Operation.	Period since Operation.
1	Single	62	Breast and glands	10 years.
2	Married	40	Ditto	7 years.
3	Married	56	Ditto	3 years, 8 months.
4	Married	49	Ditto	3 years, 4 months.
5	Married	63	Breast only	3 years, 4 months.
6	Single	67	Breast and glands	3 years, 2 months.
7	Married	57	Ditto	3 years.
8	Single	—	Ditto	2 years, 6 months.
9	Married	47	Ditto	2 years, 3 months.
10	Married	50	Ditto	2 years.

Cases remaining free from One to Two Years.

No.	Condition.	Age.	Operation.	Period since Operation.
11	Married	47	Breast and glands	1 year, 10 months.
12	Married	37	Ditto	1 year, 9 months.
13	Married	41	Ditto	1 year, 3 months.
14	Married	50	Ditto	1 year, 2 months.
15	Married	52	Ditto	1 year.

In the case where the operation was done for relief, without hope of cure, the patient was a married woman, aged 58. The breast was a great ulcerating mass, smelling horribly, and giving great pain. It was removed along with both pectoral muscles, which were infiltrated. The glands were removed. The third costal cartilage subsequently necrosed and dropped out, but the wound healed over. She died, after eight months, from recurrence in the lungs and lower end of the humerus, having lived free, during that time, from pain or serious discomfort.

"THE CHEMICAL LUNG:"

OR A READY MEANS OF SURROUNDING PATIENTS WITH ABSOLUTELY PURE AIR.*

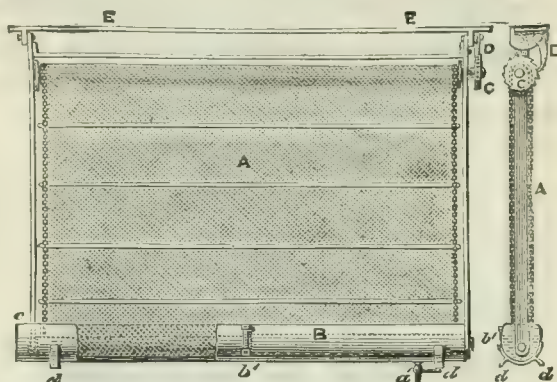
By RICHARD NEALE, M.D.

THE vast importance of securing a supply of pure air, whether to restore health, or to retain that great essential for the enjoyment of life, is being daily more and more intelligently pressed upon the consideration of both medical and non-medical minds.

Two years since, when nearly suffocated in the Metropolitan Railway, the idea occurred to form a "lung" that should rob the atmosphere of noxious gases, just as the human lung appropriates the surrounding oxygen; and hence the title "chemical lung". Some, however, object to this name, as there is no strict analogy between the human lung and the "chemical lung". The great affinity that the caustic alkalies have for carbonic acid and sulphur gases, showed that the idea was not impossible to carry out. In its punkah form, the "chemical lung" is constructed thus. An endless cellular sheeting (A), four feet broad by five feet in circumference, giving a superficial area of 140—150 cubic feet (calculating the cells), is caused, by a simple mechanism (C D), to revolve, when swayed to and fro like an ordinary punkah, through a trough (B) containing between two and three gallons of a weak solution of caustic soda or potash. This, hung in the sick-room or ball-room, or in any other place where the heat and impurity of the atmosphere are objectionable, renders the air perfectly cool and absolutely pure; and free not only from carbonic acid and other products of respiration, but also from all the mechanical impurities of the atmosphere, such as dust and infective germs, which, coming into contact with the wet sheet, are fixed and washed down into the trough. On one occasion, eight young children were treated, during an attack of measles, in one small room, it being essential to isolate them from the mother, who was daily expecting her confinement; and, by the aid of the "chemical lung", the air was kept perfectly pure, and they all rapidly recovered without any complication, the mother also escaping the infection. One such "chemical lung" has for months kept the air of a mission-room, in one of the poorest localities in London, so pure, cool, and sweet, that, despite twenty-four flaring bat-wing gas-burners,

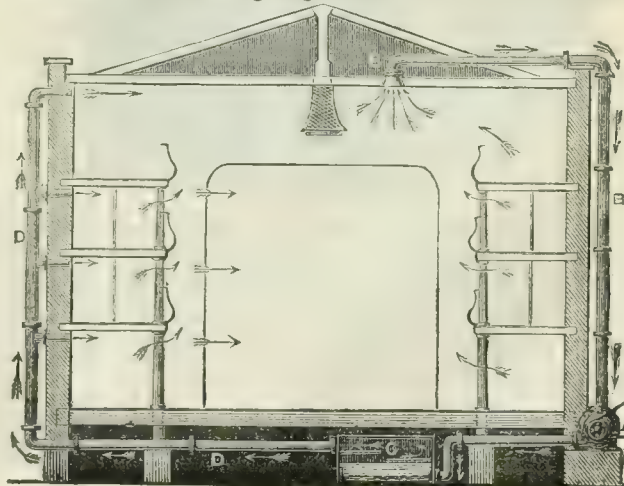
and crowded audiences, the missionaries and other workers leave, after many hours' labour, free from headache and from that peculiar nausea frequently attending work among large assemblies of unwashed poor in confined spaces. During the winter, the room of a consumptive patient was kept so pure and fresh, night and day, that, on entering, one involuntarily took a deep breath to inhale the deliciously pure air. At Aden Civil Hospital, a ward previously untenable, owing to a case of phagedænic gangrene, was kept perfectly pure by the aid of the "chemical lung", in its punkah form. Last June, a room crowded for five hours by twenty couples, while dancing, was also most efficiently cooled and purified, the windows being purposely closed.

The importance of being thus able to surround both patient and attendants with a chemically pure atmosphere will be particularly appreciated, should the experiments of M. Giboux prove to be accurate, who found that rabbits, made to inhale the air expired by consumptive patients, rapidly became tuberculous; and, although it is not proved that such air is as noxious to the human race as to rabbits, still no one doubts that pure air is an essential in the cure of pulmonary, as well as of all other diseases. During an experiment before Professor Lister, a room filled to suffocation with the odour of burning fat and sulphur, together with the products of fifty gas-jets burning for an hour or more, was absolutely purified, and its temperature lowered seventeen degrees, in twenty minutes, while a few whiffs of the burning fat vapour that had escaped into other parts of the house were appreciable for hours.



In its punkah form, the "chemical lung" has the power of rendering the air of any room absolutely pure, and of any required temperature; evaporation cooling the atmosphere if overheated, while, by simply placing a spirit-lamp below the trough, filled with hot water, the temperature may be raised, and the room filled with warm moist air. The accompanying diagrams illustrate how this "chemical lung" can purify theatres and other buildings, and also that great opprobrium of sanitary science, the atmosphere of the underground railway, when, for an outlay of less than one shilling per train, a noxious atmosphere could be rendered pure and pleasant, to the great advantage of the shareholders.

Reference to the following diagrams will show how the "chemical



* Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

lung" can be adapted so as to purify the air of large buildings, without causing draught, by means of a fan and tank.

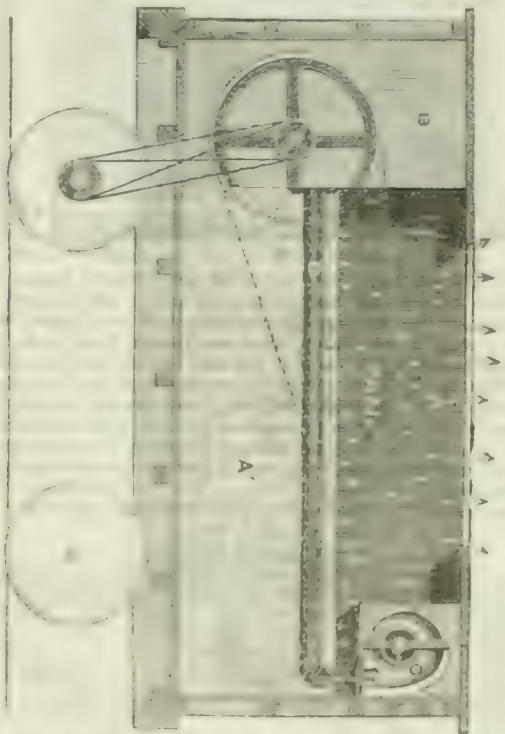
The figure (3) represents a diagram of the application of the "chemical lung" to a theatre or any other large building. A is a rotary fan, set in motion by an engine (not seen) which draws the vitiated atmosphere from the upper part of the building through the funnel-shaped orifice of *u*, placed in the ceiling where the air is hottest and most foul, and forces it through the tank *c*, which contains the chemical solution. The air, entirely deprived of all its impurities, passes out through the trunk *D*, at a temperature regulated at pleasure. By this arrangement, all draught is avoided, the pure air being either distributed by the branches opening out at the upper part of the several box or gallery floors of the building operated upon, or allowed to escape at once into the basement of the building, and so flood it with pure air cooled or warmed at pleasure.

The application of the principle, and the position and form of the apparatus, will necessarily depend on the structural features of the building itself.

The vitiated atmosphere may be forced by means of a fan either through a moist or dry chemical substance, at the rate of 5,000 to 16,000 feet or more per minute.

The advantages claimed for this scheme are:

1. Simplicity of adaptation, as the pipes may be carried outside the building like ordinary rain-water pipes, only larger.
2. Utilising the heat of the building, so that no warming apparatus is necessary, and the purified air can be supplied at any required temperature.
3. Economy: the chemical agent when used up having a market value equal to, if not exceeding, its original cost.
4. That the air is perfectly pure, being deprived of all organic and chemical impurities incident to a crowded building.



The above diagram illustrates one of the means by which it is possible to render the atmosphere of a theatre, railway, or any other crowded, partially-enclosed building, suitable for the use of the human system, without the necessity of heating, and, indeed, without the need of any artificial supply of air. A fan, in a separate constructed carriage, in which a fan, is set in motion by the engine of the train. The tunnel-air is forced out of the carriage, and so flood it of pure air.

The apparatus is adapted to any building, and is capable of operating at any rate of speed, and is so constructed that it can be used for any purpose, and is so designed, that it can be used for any purpose, and is so designed, that it can be used for any purpose.

ON INVALID TRANSIT.

By RICHARD DAVY, M.B., F.R.C.S.,

Surgeon to the Westminster Hospital.

SINCE publishing my observations on invalid transit in 1876, public attention has been directed more carefully to the absolute necessity of improvement in carriage building for such purposes; and my present object is, to again refer to the essential points demanded by the civil population. 1. For the comfort of the patient. 2. For the convenience of the surgeon in charge.

1. *The Comfort of the Patient.*—The necessity for conveying a patient from one door to another, in any part of Great Britain, without any shift, must imply a van capable either of being drawn by a horse, or shunted on to a railway truck, or embarked on a steamer, and therefore able to resist inclement weather, or stand exposure; and carry on, so to speak, the wants of a sick-room during the journey. The utmost rest must be afforded to damaged structures; and this, I have always contended, is granted by the swing element in bed construction. The provision of plenty of room, air, light, etc.; stretcher mechanisms; and the easy entrance to and exit from the van, are necessary conditions for invalid comfort. The general appearance of the carriage should be quiet and unsuggestive; seclusion must be guaranteed at the option of the patient or surgeon; and the floor must be so constructed as to be easily cleaned without any hitch. The van must not exceed one-horse power; and must clear, on a truck, railway bridges and tunnels on the line.

2. *The Convenience of the Surgeon in Charge.*—Free communication must exist between the driver and the attendant inside. Space for chloroform, brandy, lint, bandages, and general provisions; also for sanitary utensils. All mechanisms—such as blinds, doors, windows—to be of the simplest and strongest kind. Within reasonable limits, the greatest amount of cubic capacity, and no fixtures capable of interfering with the rapid execution of surgical or nursing details. I have recently ordered Mr. John U. Burt, of 23, Swinton Street, King's Cross, to build a van for me embodying these conditions; and Mr. Burt has succeeded in every respect; and the van permits the carriage of one, or even, on an emergency, six invalids, one surgeon, and the driver.

Annexed are two drawings. Fig. 1 shows the general appearance of the van, with the door open (see also BRITISH MEDICAL JOURNAL,



Fig. 1.

October 28th, 1876). Fig. 2 exhibits an inside view; showing a ham-

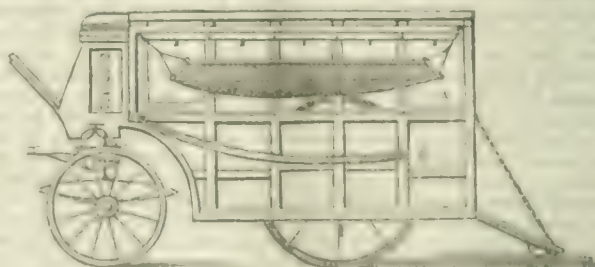


Fig. 2.

per (A); the line of two duck-litters (n), capable of easy removal; the board for provisions, etc.; and the low-level floor-line, and the high, elevated platform floor, etc. The greatest inside length is 10 ft. 6 in. and height, 4 ft. 6 in.

The carriage is built of wood, and is so constructed that it can be used for any purpose, and is so designed, that it can be used for any purpose, and is so designed, that it can be used for any purpose.

In conclusion, I may state that the journeys I have made in this van have practically been very comfortable; that the railway rates are too dear, and the arrangements between so many different companies cause much complexity; but the future of invalid transit rests entirely with the British public, who will eventually decide on the best and most easy method of conveying sick and injured relatives. I shall be happy to exhibit my hammock, van, and stretchers to any professional man who may be interested in this subject; and arrangements may be made for the use of this van in cases of any description, excepting those of an infectious nature.

DEVELOPMENT OF THE MAMMARY GLAND.*

By ANTHONY A. BOWLEY, F.R.C.S.,
Curator of the Museum of St. Bartholomew's Hospital.

THE manner of the development of the breast has never until recent times been the subject of much controversy; the accounts in all works which described it as occurring by a process of involution of the cells of the epiblast, and the subsequent hollowing out of the ingrowth into a series of tubes, from which the acini were developed, were generally accepted without hesitation.

The chief authority for this description was Kölliker, and, in his last edition of his *Entwicklungsgeschichte*, he depicts the origin of the mamma as being visible at the fifth month as an ingrowth of epithelium, from which by the seventh month ten to fifteen processes are protruded. Langer, while agreeing partly with Kölliker, maintained that, "the development of the mammary gland is bound up with the existence of a peculiar and independent body, in which the ducts develop without connection with the groove in the skin."

It was not, indeed, until Dr. Creighton, in his work on *The Physiology and Pathology of the Breast*, threw doubts on the accuracy of previous observers, and suggested that conclusions had been arrived at after too scanty investigation, that the possibility of the origin of the mammary gland to a great extent from mesoblast was seriously entertained. The reputation of the author, the manifest care expended on his researches, and the arguments adduced, all combined to bring into great prominence the original conclusions contained in this work.

It is, perhaps, on this account the more remarkable that, although four years have passed since the publication of Dr. Creighton's book, no further investigations have been made public in this country with a view either to confirm or to refute the accuracy of his statements.

Yet, considering the importance to pathology, as well as to descriptive anatomy and embryology, of an accurate knowledge of this subject, it appears to me that the matter ought not to be allowed to rest in its present unsettled state; and it is rather with a view of reawakening interest in it, than with any idea of settling the question offhand, that I have brought it under your notice.

The following is a brief statement of the opinions expressed by Dr. Creighton which are at variance with those of other authors. He maintains that the epiblast is not the source from whence the acini are developed, and says, "The contention of the first part of this chapter is that the acini, or secreting structure of the breast, develop from a matrix-tissue at numerous scattered points or centres; that the matrix-tissue or embryonic cells is the same from which the fat surrounding the mamma develops; and that the mode of development of the acini is, for the individual cell, exactly the same process as in the development of the fat-lobules. The mammary gland would therefore be a further specialisation of fat-tissue, and a product of the mesoblast."....."The present description agrees with that of Goodsir in the important point, that the development of acini is not by means of protrusions of the ducts so as to form infundibula or recesses at many points along their course, but that it is an interstitial development from the embryonic tissue that surrounds the ducts." (Page 99.)

As regards the development of the ducts, Dr. Creighton writes: "In the wedge-shaped body of embryonic tissue in the groin of a foetal guinea-pig less than half grown, but with the nipple already formed, there are seen, extending backwards from the nipple, certain narrow tracts of cells which are simply the embryonic cells of the part closely packed together. These tracts of closely packed cells form at various points throughout the embryonic mass independently of each other, and no continuous extension of them can be traced from the nipple."....."There is certainly no evidence of a process of growth downwards from the rete mucosum under the nipple."....."The ducts are therefore held to be formed as aggregations of the embryonic cells of

the matrix along certain predetermined lines; that preliminary point may be taken as established."

"The conclusions of this inquiry are the following. 1. The mammary acini of the guinea-pig develop at many separate points in a matrix-tissue; the embryonic cells from which they develop are of the same kind that give origin to the surrounding fat-tissue, and that the process of development of the mammary acini is step for step the same as that of the fat-lobules. 2. The ducts of the mamma develop from the same matrix-tissue by direct aggregation of the embryonic cells along predetermined lines; the ducts develop in the individual guinea-pig before the acini, whereas, in the phylogenetic succession, the ducts are a later acquisition; and this reversal of the order of acquisition of parts is in accordance with the principle



Fig. 1.—Section of the mammary gland of a fetus in the fifth month, showing the ingrowth of the epithelium into the subjacent tissues.

stated by Mr. Herbert Spencer that, under certain circumstances, the direct mode of development tends to be substituted for the indirect."

It is needless for me to summarise further Dr. Creighton's opinions; they are expressed with admirable clearness; but it deserves to be remarked at the outset that the animals selected were mainly either kittens or guinea-pigs, while the conclusions arrived at as a result of his observations, and of a consideration of the types of gland-development in other animals, are equally applied to the human mamma (see pages 136 and 137); indeed, had it been otherwise, the work would have lost much of its interest. My own investigations have



Fig. 2.—Section of the mammary gland of a fetus at the beginning of the sixth month. [The ingrowth is larger, and the bridge of epithelium yet intact.]

been conducted entirely on the human subject, the material at my disposal consisted of thirty-four breasts taken from fetuses whose age varied from four months of intra-uterine life to one month after birth. Sections were cut of the whole of these, and between 200 and 300 were mounted and examined; those which I show you to-day have been selected as most suitable for my purpose, and most of the conclusions I shall ask you to accept, may either be confirmed or negatived by an examination of them.

The age given must be taken as to a great extent approximate. I judged of it by the most ordinary and trustworthy methods. The exact time at which the first rudiment of the mamma becomes evident,

* Read in the Section of Anatomy and Physiology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

admits of some variation. I could not discover anything at the fourth month, but succeeded in doing so at the fifth (Fig. 1); it consisted of a very slight thickening of the deeper cells of the epiblast, exactly similar to that which may be noticed in a developing hair, or sweat-gland. It was covered by a thick bridge of cuticle, and limited by an ingrowth of the cells forming the rete Malpighii. This ingrowth, at first simply of a round or flask shape, later on becomes bifurcated, and shows a tendency to become hollowed out at the point nearest to the horny layer of the epithelium. (Fig. 2.) This hollowing out seems to be effected by a great increase in the size of the cells which are superficial to the rete Malpighii, so that their contiguous borders form a network, the meshes of which constantly tend to increase in diameter, the cell-wall finally giving way, and its substance shrivelling up. The horny layer of epithelium which is at first spread over the mass of cells then breaks away, and a hollowed out ingrowth, lined by the rete Malpighii, results.

Before, however, this has occurred, processes of the epithelium have begun to grow downwards into the subjacent tissue, and by the seventh month have become tolerably numerous (Fig. 3). They in their turn



Fig. 3.—Section of the mammary gland of a fetus aged seven months. The ingrowth is now hollowed, the bridge has broken away, and ducts are being developed from the epithelial ingrowth.

are excavated in a manner similar to that described above, with the exception of some, which appear to be hollow at their commencement. During the last two months of intra-uterine life, the processes of epithelium penetrate still further into the subjacent embryonic tissue; they divide and subdivide, and at their extremities, and as direct outgrowths from their walls, the mammary acini are formed. (Fig. 4.) During the month immediately subsequent to birth no material changes seem to occur; and, judging from the quietude of the gland, I think it may be safely assumed that, until puberty, no further development takes place. I did not notice any material difference in the manner of the development in the two sexes, but the extent to which a gland had undergone developments in any given month was very variable. Now as, in all the 200 or 300 sections I examined, there was never any appearance of acini in the early months, as the first rudiment of the gland was entirely epiblast, as the ducts could be plainly seen to originate by a process of sprouting from the growing mass of epithelial cells; and, as the development of the acini was in every case strictly proportionate to, and in direct continuity with, the ingrowths of epiblastic tissue, I consider that the only conclusion to be arrived at is, that the acini as well as the ducts are developed from epiblast.

I shall now turn very shortly to the part played by the subjacent mesoblastic tissues, and to some of the points on which I differ from

Dr. Creighton. I have no hesitation in affirming that, in the specimens I have examined, the mesoblast acts an entirely passive part. At the fifth month it consists almost entirely of spindle-shaped cells and embryonic connective tissue, the former of which may be found

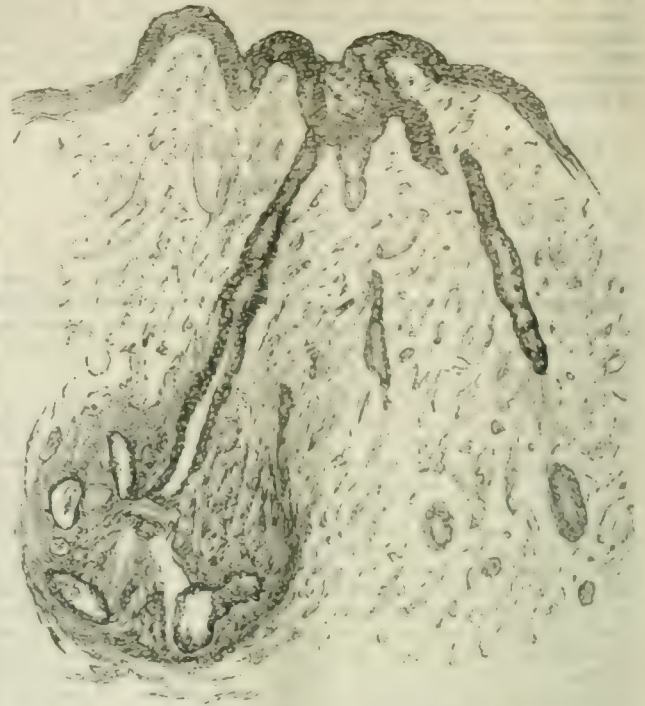


Fig. 4.—Section of a portion of the mammary gland of a fetus aged about seven months. Acini are being developed at the terminal extremity of one of the ducts.

collecting into groups where the fat is subsequently to be found. There is no mapping out of the shape of the future gland in the mesoblast, there is no independent formation of acini; and, though I am quite prepared to admit the similarity which exists between the developing fat-tissue and the cells of the acini, it is merely a superficial

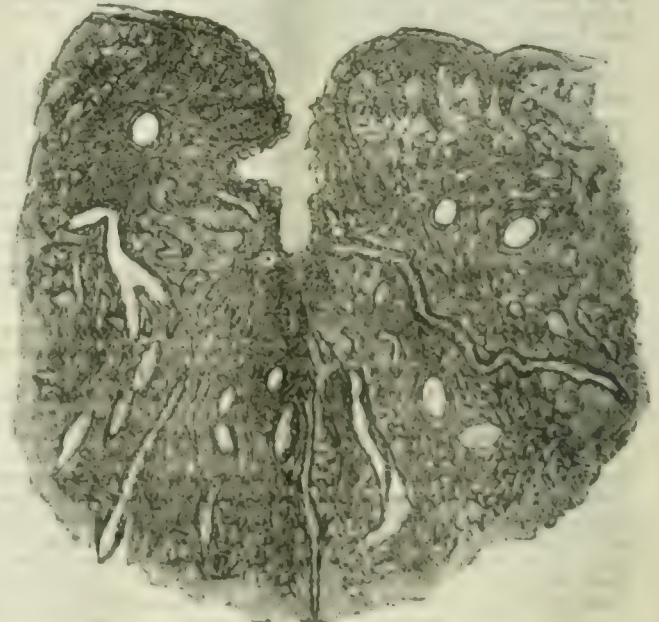


Fig. 5.—Section of the mammary gland of a new-born child, showing the ducts originating from the nipple.

resemblance, and, at any rate, in the human subject, the two cannot well be confounded.

The description by Creighton of the development of the ducts in the guinea-pig, does not obtain in the human subject; for, in this account, the ducts are said to first make their appearance as small channels in the mesoblast; further, "there is certainly no evidence of a process of growth downwards from the rete mucosum under the nipple;" and later on the same author remarks: "the ducts are therefore held to be formed as aggregations of the embryonic cells of the matrix along predetermined lines; that preliminary point may be taken as established."

But, however much it may be established in the guinea-pig, I allege that there is before you ocular demonstration of a different method of formation in the human mamma. No attempt at the formation of a duct can be discerned in the mesoblastic tissue, except in direct continuity with the epithelial ingrowth, and there is abundant evidence of a process of growth downwards from the rete mucosum under the nipple.

It will thus be seen that my observations are in accordance with the views of Kölliker, as referred to above. The conclusions drawn from them may be briefly summarised as follows.

1. The mammary gland is developed from epiblast.
2. The acini do not appear until the ducts are formed by an ingrowth of the epithelial cells of the rete mucosum.
3. The acini are developed from the epithelial cells forming the ducts.
4. The mesoblast takes no part in the formation of the glandular structures.

CASE OF PECULIAR CONGENITAL DEFORMITY OF THE LOWER LIP: OPERATION: RECOVERY.*

By T. SYMPSON, F.R.C.S.,
Surgeon to the Lincoln County Hospital.

As congenital malformations of the lower lip similar to those about to be described are of extremely unfrequent occurrence, and may, moreover, be easily and effectually treated by operation, I have thought it well to place the following examples upon record.

Last June my opinion was sought respecting the case of a vigorous,

also presented on side either of the middle line of the lip and separating the muco-membranous from the transitional part, which was normal, a sulcus of semilunar form having its concavity directed forwards, and measuring three-quarters of an inch in depth by half an inch in length.

This malformation produced great deformity in an otherwise comely girl, made her an object of ridicule to her schoolfellows, and occasioned a large amount of inconvenience through the redundant portion of the prolapsed being frequently caught between the teeth during mastication.

I expressed my conviction that there would be no difficulty in forming a shapely lip by means of an operation. Accordingly, on June 14th, the child was placed under the influence of chloroform, the growth and pouches were excised by an elliptical incision, and the edges of the wound accurately approximated by several sutures of Chinese silk. On the 18th, the sutures were removed, and on the 21st, the wound was found to be quite healed.

The photographs now shown afford a fair idea of the appearance of the lip before and subsequent to operation. The first was taken on June 13th, and the other on July 27th.

Microscopical examination showed the growth to consist of dense connective tissue.

The father and mother of the child are strong and healthy, but the mother displays the same peculiarity of her lip as her daughter, though in a minor degree. The lips of three other children—a sister of my patient, and her two brothers—are similarly malformed. The lips of the grandfather and grandmother, as well as those of their two sons, are quite normal in form, and they are not aware that any of their relations, other than those just referred to, show anything exceptional with regard to their lips.

Grandfather, aged 63	} lips normal.
Grandmother, aged 60	
Maternal uncle, aged 34	
Maternal uncle, aged 31	
Father, aged 38	} Two pouches in lower lip.
Mother, aged 35	
First child (girl), aged 11	
Second child (girl), aged 8 (the patient)	
Third child (boy), aged 5	
Fourth child (boy), aged 6 months	



well grown girl, aged eight, the muco-membranous and mesial portions of whose lower lip were considerably hypertrophied, and who

* Presented to the Section of Surgery at the Annual Meeting of the British Medical Association in Worcester, August 1882.



The grandmother, whose upper incisors were formerly prominent in a very marked degree, attributes the condition of her daughter's lip to a habit in which she indulged when pregnant with her of biting her lip. The daughter is her oldest child.

In the case of the patient who was operated upon, the existence of true hypertrophy of the lip was manifest. It cannot, therefore, be included among the instances in which the thickening is due to an increase in the size of the natural glands of the part, and which are stated by Mr. Bryant (*Practice of Surgery*, vol. i, pp. 492-3), to be often found both in the upper and lower lip.

With regard to the presence of sacculi, the cases of the patient, her mother, and brothers and sisters, bear a very close resemblance to those related by Mr. Jardine Murray (*British and Foreign Medical Chirurgical Review*, vol. xxvi, p. 502, *et seq.*) After enumerating the conditions on which he considers that the sacculi were not dependent—as hare-lip, erratic development of tooth-sacs, arrested formation of lower lip, and peculiarity of development of frenum—Mr. Murray seems somewhat to incline to the supposition of their being due to intra-uterine disease of the labial glands. Probably, our present knowledge of teratology is not sufficiently precise to enable us to arrive at an accurate conclusion with regard to this vice of conformation: but, as perhaps throwing some light upon the subject, I would ask your attention to what occurs when the lip is in the position of “pouting.” In this condition you may notice that the surface of the normal lip presents a slight depression on each side of the mesial line. It is obvious that an arrest of development of the muscular tissue in these situations would occasion these natural depressions to become more marked, and this, I am inclined to believe, is really what has occurred in the cases in point.

In conclusion, permit me to draw your attention to the fact that it would almost seem as though we had here an example of a malformation arising in a family, and present thus far in two generations only.

ON THE EMPLOYMENT OF ATROPINE IN CORRECTING ERRORS OF REFRACTION.

By ANDERSON CRITCHETT, M.A.,

Ophthalmic Surgeon to St. Mary's Hospital, and Lecturer on Ophthalmic Surgery at St. Mary's Hospital Medical School.

I AM well aware that the subject-matter of this short paper does not contain even a germ of originality. My plea for its publication however, consists in that which must, I think, be an acknowledged fact, namely, that with respect to the employment of atropine in correcting errors of refraction, there exist two antagonistic views. On the one hand, we hear that its use is seldom, if ever, necessary; on the other, it is had recourse to with extreme frequency.

The former of these views is supported by the practice of many leading ophthalmologists, and presents to its opponents such a formidable quadrilateral as the names of Professors Donders, Snellen, Liebreich, and Javal; the first of these being in itself a tower of strength, for it was Professor Donders who first let in the light of knowledge upon the chaotic ideas which once existed, and elevated the entire subject of refraction to the dignity of a science.

The latter of these views is strongly advocated and put in practice by many of those younger workers who have especially devoted themselves to this branch of ophthalmology.

We may feel well assured that, whenever men of high scientific attainments profess to accomplish the same end by widely diverse methods of procedure, good reasons will be advanced on both sides in defence of the particular plan which is selected; and my chief aim in bringing the matter forward is to elicit opinions which may materially aid us in arriving at correct views on the subject, and in establishing some definite rules of practice.

Having formerly acted as clinical assistant to my friend, Mr. John Couper, at Moorfields Hospital, for nearly seven years, I have had ample opportunities of witnessing the treatment of refraction by absolute paresis of the accommodation, as is almost universally practised by this champion of the method by atropine; and, upon the whole, the impression left upon my mind was favourable to his plan, though I must admit that patients were occasionally put to considerable inconvenience without a compensating advantage; and where, for all practical purposes, the same end might have been otherwise obtained. I find that in my own practice, in working out six hundred and fourteen cases of astigmatism, I have induced paresis of accommodation in two hundred and seventy-three; and, in rather a less proportion, in cases of simple hypermetropia with spasms, and in progressive myopia. Inasmuch as the treatment by atropine is frequently objected to by patients, and involves not a little delay and inconvenience to all concerned, it is self-evident that I was only driven to its adoption by the difficulty, and, as it seemed to me in some cases, im-

possibility, of arriving at a correct and scientific conclusion without it; nay, more, I have found, in not a few instances, that this was the only method of inducing the eyes to submit to a refractive correction which was essential to their well-being, but which, while the ciliary muscle retained its spasmodic power, they would by no means tolerate.

I may, perhaps, best explain my meaning, and establish my position, by citing a typical case which bears upon these points. A young lady, aged eleven, was brought to me more than a year ago, with the statement that for some months past it had been found impossible to proceed with her studies, since every effort to read produced pain and confusion. On testing her sight, I found that each eye saw $\frac{2}{3}$, and was improved to the extent of one letter in $\frac{2}{3}$ by -0.50 D. She would tolerate no convex glass. On ophthalmoscopic examination, I diagnosed the existence of hypermetropia to the amount of at least 4.5 D, with slight astigmatism in addition, while the discs were in that state of hyperæmia which Mr. Couper has described in connection with high degrees of uncorrected hypermetropia. The eyes were subjected to the full atropine treatment, and examined at intervals of three days. On the first occasion, the child tolerated $+1.50$ D, with which she saw $\frac{2}{3}$, and was slightly assisted by the addition of weak convex cylinders. On the sixth day she selected $+2.50$ D, and I was then able to ascertain by the ophthalmoscope that the hypermetropia consisted of fully 6 D. Three days later, the patient, with $+4.25$ D and weak cylinders, saw nearly $\frac{2}{3}$.

On the fourteenth day, very little progress had been made since the last occasion. I therefore substituted sulphate of duboisia, two grains to one ounce, for the atropine, with the remarkable result that, at the end of three days, the manifest hypermetropia amounted to 7 D, and the vision obtained equalled $\frac{2}{3}$. In accordance with the suggestion made by Professor Knapp, I, in determining the final correction, made due allowance for the partial recovery of accommodation. The child was enjoined to wear the glasses constantly; in fact, to regard them as part of her attire. I saw her a month ago. She sees $\frac{2}{3}$, and reads Jäger I with each eye. The retinal hyperæmia has entirely disappeared, and the parents informed me that she decidedly resented any proposal to take away her glasses.

I merely select this as a specimen of a large group of cases which occur in the practice of every ophthalmic surgeon; and I venture to submit that, in such instances, I should be unable either to arrive at a true diagnosis, or to establish a proper refractive correction, unless aided by complete paresis of the ciliary muscle through the agency of mydriatics. I readily agree, however, with those who assert that the ciliary muscle should, wherever it is practicable, be allowed free and natural action; and I admit that the dogmatic treatment by atropine, where the eyes are forced to accept a permanent and complete correction, is open to the imputation that they are doomed to a perpetual though friendly servitude; but in many instances the sense of permanent relief from strain is so agreeable to the patient, that “the captive hugs his chain”.

CASE OF SPASTIC PARAPLEGIA IN AN ACROBAT.

By H. DONKIN, M.B., F.R.C.P.

Senior Assistant-Physician to the Westminster Hospital.

ON October 12th, 1881, I saw, among my out-patients at Westminster Hospital, an acrobat or “contortionist”, aged 20, who complained of weakness and tremulousness of his legs, the left being the worse. These symptoms had been coming on gradually, being first noticed about six months previously, and were steadily increasing. He was apparently in excellent health, and made no other complaint. He had been a “delicate child”, but “in the business” ever since he was four years old. He has certainly not had syphilis, nor, indeed, any illness whatever. His family history is good, and he has several brothers and sisters, healthy, and all following the same occupation as himself. About three years before I saw him, he appears to have hurt his back while going backwards quickly. He felt the pain for about three or four weeks at the most, and kept on performing without intermission, thus continuing his work till he came to the hospital; the symptoms of weakness and shakiness of the legs having, as I have said, been noticed in a very slight degree only six months before coming, and the previous two years and a half (since the hurt to his back) having been absolutely free from any kind of discomfort or failing.

On examination, I found him apparently quite healthy, with the exception of the symptoms of which he complained. He seemed to have some difficulty in walking, saying his legs were not strong enough for him to walk fast; and he used a stick. The front part of the left foot occasionally scraped on the floor as he tried to mend his pace. His muscular development was everywhere good. The knees

jerk in both legs was well marked, but not excessive, with no remarkable difference between the two. I failed to elicit the ankle-clonus. The functions of the rectum and bladder were normal.

Ordering him as complete rest as possible, and absolute cessation from his work, I saw him at irregular intervals till the end of November. He made marked improvement at first, being able to walk faster and without the aid of a stick. But he soon began to "practise" a little every day (a fact which I did not know at the time), though taking no regular engagement; and on November 30th, although he confessed to no relapse, he was again walking with a stick. The ankle-clonus was then found to be readily elicited, and the knee-jerk excessive. He also said that he passed his urine rather more slowly than before, and that his bowels were rather confined. At the end of December, however, he took an engagement abroad, and worked hard—first in Berlin, and then in Paris—literally every night for six months. During the whole time he felt himself gradually getting worse; he fell several times on getting to his legs, and found that he had to restrict his "business" to the arms as much as possible.

On July 12th of this year (1882), I saw him again. His general health was very good. He still says that he cannot empty his bladder quite so quickly as he used, that his bowels are rather confined, and that he does not sleep quite so soundly as in former times; but these complaints are not prominent, and only stated in answer to questions. The note of this date states: "The knee-jerk is extreme, passing into knee-clonus, and shaking the whole body. Spastic gait well marked, though there is but slight rigidity when he sits or lies down. Very ample tremors elicited by the slightest attempt to produce ankle-clonus." He was now ordered complete rest again; and since that, though he says he is again better, and can walk more easily, the above mentioned symptoms are much the same, if not more marked. His arms seem very strong, and his grasp powerful, though they appear, he says, a little smaller than before—probably from disuse since the end of June.

This case appears to be a well-marked one of spastic paralysis, or so-called "primary lateral sclerosis": a disease which, though but lately distinguished clinically, and still more lately connected with definite *post mortem* lesions, is probably not so rare as is sometimes taught, being detected with increasing frequency. The primary nature of this case is, I think, clear; for, with all due regard to the history of the hurt to the back, the rapid recovery and the absence of all symptoms during the subsequent two years and a-half may be looked upon as putting out of court the existence of any inflammation of the spinal cord at the time, and forbidding us to attribute the disease to this accident. But it is the possible causal connection of the disease with the occupation of the youth that gives the case any special value; and it would seem that the speculative view of the cord-change, now, in all probability, existing, being a possible result of the abnormal action of the muscles of the lower extremities, is at least worthy of some consideration.

The patient is apparently now *in statu quo*. The functions of the bladder and rectum are performed quite normally; and, beyond occasional complaints of flatulence after food, his general health is thoroughly good.

A CASE ILLUSTRATING THE USE OF GYMNASTIC TREATMENT.

By ALFRED H. BUCK, L.R.C.P.Ed.

Mr. S., aged 84, consulted me on August 11th, 1882, for a pain situated in the posterior portion of the right thigh over the great sciatic nerve, being most intense just below the great trochanter, and extending down to the knee-joint. Movement and pressure upon the nerve increased the pain. He had been suffering for more than two months prior to his visit to me. The pain was of a gnawing character; and, when he was in bed, the limb had a burning sensation, but to the touch was quite cold. During the early portion of the illness, the pain became most intense at 4 A.M. and 4 P.M. Shortly after he had been under my treatment, pain of a similar character attacked him close to the spine, on a line with the crest of the ilium, and corresponding to the third lumbar vertebra. His nights became disturbed, and he looked wan and ill. No assignable cause could be ascertained for these symptoms, except that, some months previously, he remembered stumbling over a stove, and, in the effort to save himself from falling, he twisted the muscles of his back; and since that time he had had more or less pain when walking.

The local treatment consisted of belladonna, chloroform, morphia, aconite, fomentations, turpentine, hot hip-baths, flannel bandages; and other remedies were tried, without producing any beneficial effect,

or relieving the stiffness and inability to walk. The principal medicines given internally were arsenic, belladonna, and quinine. The arsenic relieved the burning sensation in the limb, and the quinine the periodic paroxysms of pain. After he had been under treatment for about six weeks, with the result above described, I advised him to try the treatment at the Zander Medico-gymnastic Institute in Soho Square; and, as the medical officer considered it a suitable case for the treatment, he undertook the case.

Mr. S. is now (November 4th) able to walk in comfort for upwards of an hour, and there is only a slight tenderness on pressure at the previously painful spots. He is also able to rest well at night, and he has quite regained his usual health and strength. The medical officer, Dr. Oxley, writes me: "The treatment consisted in rapidly 'percussing' the affected parts every other day, and giving the hips and lumbar regions carefully regulated movements; this being done by machines of a very ingenious yet simple character. The apparatus employed consisted of, (a) a machine by which carefully graduated extension and flexion of the hips was made; (b) a machine by which the lumbar region was in like manner carefully rotated from side to side; (c) a machine by which very powerful friction and a kind of vibration or trembling was applied to the painful and adjacent parts. My reason for applying the above means was founded on observation. I had treated several cases before Mr. S. was sent by you, and had been very much struck by the results of the treatment. I had always thought that, for such ailments as lumbago, muscular rheumatism, and sciatica, as soon as the early acute symptoms had passed, no treatment would be so likely to be successful as that of giving to the affected parts movements of at first a very slight degree, and then carefully increasing them. By means of Dr. Zander's appliances, such movements can be most exactly performed; and repeatedly they have accomplished what was desired. In the case of Mr. S., as often happens, the bad symptoms increased at first; and I had some difficulty in persuading him to continue the treatment. In a few days, however, the pain and stiffness began to disappear; he could sleep well, and very soon began to walk in a much more erect manner and without help. At the present time, after ten visits, he walks without sticks and without pain. Mr. S. seemed to find most benefit from the 'trembling' machine. Whether this was the result of the friction, or of some deeper physiological effect, I cannot say. The trembling or shaking has, however, a marked effect upon the circulation, increasing it in a striking degree; and it may be in this way that the good is done. There is no doubt, however, that the nerves are also powerfully influenced. In whatever way achieved, however, the cure was a most painless and satisfactory one."

I should relate to follow.

THERAPEUTIC MEMORANDA.

LOCAL TREATMENT OF ERYSIPELAS.

THIS subject deserves every attention, and the readers of the BRITISH MEDICAL JOURNAL ought to be thankful that it has been so often discussed. But the question of etiology is, perhaps, not always clearly grasped, although it must determine to a large extent the type of the disease, and its successful management. Take erysipelas of the scalp, for instance: a superficial erysipelas is a very innocent thing, and easily controlled; but there is hardly a more dangerous malady than traumatic erysipelas of this part, accompanying profuse suppuration in the connective tissue between the occipito-frontalis muscle and the cranium.* Again, if the sanitary arrangements of a private house or of a large public institution be defective, there may be frequent epidemics of facial erysipelas and of enteric fever, either separately or conjointly, as happened in the Somerset Lunatic Asylum in 1879 and 1881 (BRITISH MEDICAL JOURNAL, October 29th, 1881).

But if surgical and hygienic agencies can be safely put aside, it may be acknowledged that the local treatment of erysipelas deserves a large amount of professional care and discrimination. Call it by what name we like, it is essentially a spreading dermatitis, which may cause peril by the extent of cutaneous surface involved, or by the degree of constitutional irritation which may be provoked. It is not often that we have a quasi-inflammation so completely under therapeutic command. Iodine may be useful if there be any suspicion of a pyemic complication; but, for the so-called idiopathic erysipelas, I cannot speak too highly of the free and frequent application of a solution of tannin in equal parts of spirits of wine and water, as recommended by Dr. Braithwaite in the JOURNAL for April 30th, 1881. This solution is

* See an excellent lecture by Mr. Erichsen on this point, *Lancet*, January 26th 1878.

quite as beneficial when erythema approaches erysipelas in local and general severity.

I give the bare outlines of two cases. 1. A lady, a little past middle age, had a sudden attack of erysipelas all over the left thigh and leg, after a trivial injury. The general health was tolerably good. About a dozen "paintings" with the solution of tannin were sufficient to drive away every trace of the disease, the swollen skin soon presenting a shrivelled look. 2. A maiden lady in middle life, entrusted to my care by Mr. Clouting of Thetford, suffered from erratic erysipelas on the face, after exposure to cold, in October 1881. The tannin solution was very successful, and a recent letter from Mr. Clouting tells me that the lotion has been frequently used during the last twelvemonth with the same good result.

Tannin completely dissolves in equal parts of water and spirits of wine; and, when applied to the skin with a camel's hair brush, a delightfully cool feeling follows from evaporation. A proper strength is six grains to the drachm of fluid.

One of the great literary wants of our profession is, a first-rate monograph on erysipelas in its medical and surgical aspects. Just because it has these two aspects, the subject has rather "fallen between two stools", although handled with more or less ability in various dictionaries and encyclopaedias. But there are several points in its pathology and treatment on which most medical men would like to have new and trustworthy teaching.

JOHN KENT SPENDER, M.D. Lond., Physician to the
Mineral Water Hospital, Bath.

URTICARIA FROM BROMINE.

THE administration of bromide of potassium is well known to be followed not unfrequently by skin-eruptions, for the most part papular in character; and although Voisin (*Gazette des Hôp.*, 1868) has described urticaria as one of these forms, his observation has not, so far as I am aware, been confirmed, while good authorities (Van Harlingen, *Arch. of Dermat.*, vol. vi) have cast doubt upon it. On October 10th, Mr. J. B. consulted me for a troublesome cough, which made him a little anxious, as his father had died of phthisis. On examination, the thoracic organs appeared free from any evidence of disease, and the cough was attributed to the state of the pharynx, which was relaxed and presented a remarkable degree of hyperaesthesia. Before coming to me, he had been taking quinine, with some benefit to his general health; and with the view of allaying the great irritability of the pharynx, I prescribed ten grains of bromide of potassium, one grain of sulphate of quinine, and thirty minims of hydrobromic acid, to be taken in a wineglassful of water three times a day. I afterwards heard that, after a few doses of the medicine, an intense nettle-rash broke out over the trunk and extremities, but chiefly on the former, which seemed to be aggravated by each dose of the medicine, but disappeared rapidly after its use was discontinued. I did not have an opportunity of seeing the eruption, but from its description and fugitive character, there can be little doubt that it was urticaria. How far the hydrobromic acid accounted for this unusual phenomenon, I cannot say. This is the first case of the kind I have met with, although I have used the acid freely for the last few years.

ROBERT SAUNDY, M.D., Assistant Physician
to the General Hospital, Birmingham.

THE ACTION OF HYOSCYAMINE.

THE communication in the JOURNAL of November 25th, on the Therapeutic Effects of Hyoscyamine, is very interesting, and the conclusions drawn from two years' experience of the drug are of great weight. I am quite at one with the naval surgeons in regard to the uncertainty of the action of hyoscyamine when given by the mouth; but the following cases, that occurred to me while medical officer to an asylum, shook my belief considerably even in the certainty of its action when given hypodermically.

CASE 1.—A strong robust young woman, aged 23 years, suffering from melancholia, was admitted. Soon after admission, she became violent, destructive, and unmanageable. As I had, in former cases, used hyoscyamine with good effect, recourse was had to it here. At 6.45 P.M., one-twentieth of a grain was injected. At 8 P.M., the nurse came for me, desiring me to see the patient at once. I did so, and found her lying on the floor perfectly helpless; the pupils widely dilated, insensible alike to light and touch; the pulse feeble, irregular, and not easily detected. The face wore a dusky tinge, while there was occasionally slight puffing of the cheeks on expiration. A convulsive twitch now and then affected the muscles of the angles of the mouth, sometimes the eyelids, and at other times an arm or leg, and occasionally the muscles of the neck; there was also coldness of the

limbs. The temperature was not taken. Accompanying these grave symptoms were dryness of the throat, and inability to protrude the tongue. Brandy was at once administered, while stimulants and warmth were applied to the surface of the body. In about an hour, the pulse gradually became more perceptible and regular, the breathing more normal, yet a little heavy and prolonged. She began to move her hands about before her, seemingly weaving some imaginary thread, and rubbing her eyes as though but half awake, and wishing to rouse herself. She did not speak; nor could she, from the perfectly prostrate and powerless condition of her limbs, rise when told, although it was quite apparent she understood what was said to her, and quite willing to get up if she had been able. By 10.30 P.M., she was out of danger, and slept quietly the whole night, there was no further destructive and noisy mania, and in course of time she was discharged cured.

CASE II.—In a married woman aged 45 years, suffering from mania, one-twentieth of a grain produced, for a time, a most quieting effect, which lasted for two or three days. By-and-bye the dose lost its influence, and one-fifteenth of a grain was tried with the desired result. One night in which she was particularly noisy and destructive, the usual injection of one-fifteenth of a grain was given, and she was then put to bed, the night-nurse keeping a watch over her. Two hours after the injection, on the pretence of feeling very ill, she enticed the nurse into the padded room, and nearly strangled her. Another injection of one-fifteenth of a grain was given, and, soon afterwards this woman reached much the same degree of collapse as noted in Case 1, needing the prompt application of the same remedies.

Finally, the drug was discarded as one too dangerous to be used. My experience of it, which extended over three months, using it frequently, was not to favourably impress me with either its utility or its certain action. It was never found to do more than quiet the patient, and had to be periodically given when a fresh outburst of violence occurred; it did not stop, nor tend to stop, the frequency of the attacks; it merely acted for the time being—a result that can be perfectly well attained by other more trustworthy and less dangerous drugs. In some cases, the physiological effects were produced by small doses, even one-fortieth of a grain; in others, not until one-fourth of a grain was used.

W. J. SIMPSON, M.D.

PEROXIDE OF HYDROGEN IN OPHTHALMIC DISEASE.

THE excellent paper by Mr. Kingzett, in the JOURNAL of December 2nd, on the uses and applications of the peroxides in medicine and surgery is full of interest to surgeons, as we are now becoming more and more alive to some of the disadvantages of carbolic acid, both to patient and surgeon; and I certainly shall extend my trial of the peroxide of hydrogen into the region of general surgery. The paper referred to contains no allusion to its use in cases of purulent discharge from the conjunctiva; and it may be gratifying to Mr. Kingzett to know that M. Landolt of Paris has been using it with great success, in these cases, for nearly a year. Having seen its application on my visit to Paris in May, I determined to use it myself, and have done so, more or less, ever since, with very excellent results; and the only reason why I have not published the matter systematically, has been that I have been expecting M. Landolt to send us a communication on the subject, and I was anxious not to forestall him. My belief is, that it will prove a most useful adjunct to our present mode of treating severe purulent ophthalmia, if it do not altogether replace it.

JAMES E. ADAMS, Surgeon to the London Hospital,
and Royal London Ophthalmic Hospital, Moorfields.

OBSTETRIC MEMORANDA.

SUMMARY OF A THOUSAND CONSECUTIVE CASES OF MIDWIFERY.

THE following brief summary of a thousand consecutive cases of midwifery may be interesting to some of the readers of the BRITISH MEDICAL JOURNAL. Out of the 1,000 cases, 901 were brought to a termination without any complication. In seventy cases it was necessary to use forceps (Barnes's long forceps), in five cases of which the head was above the brim. Turning was employed seven times. The face presented four times, in two of which forceps were used. The breech presented twelve times. There were four cases of placenta previa, in one of which the placenta was expelled first, without much hæmorrhage, and the child delivered by turning. In the other cases, separation by the finger of the portion of the placenta attached to the cervical zone of the uterus, as recommended by Dr. Barnes, was carried out with successful results. There eight cases of twins—two acephalous monsters and two cases of hydrocephalus. Of maternal deaths there

were seven: one from collapse, half an hour after abdominal section, in a rickety dwarf, who had refused to submit to the induction of premature labour; one from metritis, followed by septicæmia; two from peritonitis; three from sudden death—half an hour, twenty-four hours, and fourteen days respectively after delivery. No *post-mortem* examination was obtainable in any of the cases. Ergot (in the form of Richardson's liquor secalis ammoniatus) was administered freely, especially in those cases where there seemed any tendency to flooding. This may in part account for my never having had a really serious case of *post partum* hemorrhage. HARRISON COATES, M.R.C.S. Eng.
Hucknall Torkard, near Nottingham.

CLINICAL MEMORANDA.

PERIOD OF INCUBATION OF SCARLET FEVER.

CASE I.—A boy, aged 14, coming from a place where scarlet fever was not known recently to have occurred, was admitted, on November 12th, into a school where others were being daily laid up with scarlet fever. On November 18th, this boy was himself laid up with it.

CASE II.—On January 10th, a boy, aged 8, was admitted into a scarlet fever ward, on account of a letter stating that he was suffering from scarlet fever. At the time, he had an erythematous rash on the chest and feet; but the temperature, pulse, respirations, throat, and urine were normal. It became evident, in a day or two, that what he had suffered from was a sharp attack of erysipelas, accompanied by delirium and a temperature of upwards of 104°. One ear had suddenly swelled up, the parts around becoming red and brawny; a bulla forming on the back of the auricle; and pus welling up from the meatus. He had never had scarlet fever; but it was thought advisable, now that he had occupied a scarlet fever ward among other patients for upwards of one day, to leave him in this ward, watching him closely for any signs of scarlet fever, especially taking his temperature frequently, and examining his urine daily. On January 17th, he complained of headache, was sleepy, and felt sickly without vomiting, and took a long time getting through his dinner. In the afternoon, he was himself again. Next day, a white patch was observed on the right tonsil; the tongue, however, being clean, and the patient looking and feeling quite well. So matters continued for three or four days, the white patch remaining unchanged. On January 22nd, although he woke up quite well, and ate a hearty breakfast, he was seized in the course of the morning with all the symptoms of a sharp attack of scarlet fever, the temperature running up suddenly from 97° to 104°, the pulse to 150; the white patch on the tonsil becoming thicker, eaten away in the centre, and surrounded by inflammation of the entire fauces; and the urine (normal every day until now) becoming very scanty (under 10 ounces, instead of over 30); of specific gravity 1028, instead of 1015-1019, with abundant urates (instead of scanty mucous cloud); and affording, with nitric acid, a mass of crystals of nitrate of urea, occupying five-sixths instead of one-sixth of the bulk of urine.

Is it conceivable that the boy became infected on January 17th, thus explaining the appearances which presented themselves then and soon after, and which would have escaped unobserved, except for the unusually close attention paid to the case, in anticipation of the coming attack?
W. R. PARKER, M.A., M.B. Cantab.

Liverpool.

INCUBATION-PERIOD OF SCARLET FEVER.

It affords me satisfaction that the note on the above subject which I contributed on November 11th has both provoked interesting discussion, and evoked criticism, albeit severe, from high quarters. At the same time, I regret that my description was not more succinct.

I am quite alive to the fallacy of supposing that each person was necessarily infected on the first day, but I would ask Dr. Squire and Dr. Cullingworth whether, in the case of a group of people, circumstanced fairly equally as regards age, habit, absence of previous attack and of evidence of previous exposure, being exposed at about the same time to approximately the same amount of infection, some, if only a comparative, conclusion might not be drawn as to their incubation-periods? I fail to understand how Dr. Field can accept Case 1, whilst rejecting the others, except on the hypothesis of its according with opinion and authority. For mention of authorities for a longer incubation-period than is usually accepted, I would refer Mr. Bryden to Thomas' article on *Scarlatina* in Ziemssen's *Cyclopadia* (vol. ii).

R. D. A. SWEETING, Medical Superintendent.

Fulham Fever Hospital, December 4th, 1882.

REPORTS

OF

HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

ST. BARTHOLOMEW'S HOSPITAL.

CONSULTATIONS.

Dementia after an Injury.—Mr. WILLETT brought before his colleagues, on November 16th, 1882, a young man, aged 20, who had been the subject of a consultation in July last. It appeared that on May 26th, 1882, while engaged at work in a sawmill, a splinter of wood, detached by a circular saw, struck him with great violence on the forehead, inflicting a deep wound, and producing unconsciousness. He recovered gradually; he did not speak for at least a fortnight, and it soon became apparent that his mental constitution was profoundly modified. There was no paralysis of motion or of sensation, speech was correct, but memory seemed entirely abolished, and ratiocination destroyed; from an intelligent "promising lad," he had passed into a condition resembling imbecility. He was admitted into St. Bartholomew's Hospital in July last. The wound in the forehead was unhealed, and Mr. Willett, after consultation, removed a number of necrosed fragments from the frontal bone. Since this operation, there had been a slight improvement in so far as regards memory, but in other respects the deterioration of his mental and moral faculties had been unchecked. He had become excessively troublesome and abusive, and had developed homicidal tendencies; he had also become dirty in his habits, and passed urine in his bed nightly. When seen on November 16th, he was a fairly nourished young man, rather below the middle height, of a dark and somewhat sallow complexion; he was quiet in his behaviour, and spoke very little; he seemed dull and heavy, but recollected that he had been in the hospital during the summer, as well as various incidents of his stay there. Over the frontal bone was a deep depression, a little to the left of the middle line, which traversed the level where the superciliary ridge had existed, and extended vertically for fully two inches; there was a slight discharge. The optic discs were in a condition of white atrophy. Mr. Willett said that he had brought the case before his colleagues, in the forlorn hope that some suggestion might be made as to a line of treatment which might improve the patient's mental condition; for himself, he felt that it was useless to expect anything from surgical interference, and that nothing remained but to consign the unfortunate young man to a lunatic asylum. Mr. Walsham thought that, taking into consideration the hopeless nature of the case at present, it would be justifiable to trephine. The operation of trephining was not in itself dangerous; he had examined all the cases which had occurred at St. Bartholomew's, and had found only one death which could be fairly attributed to the operation. He admitted, however, in reply to Mr. Willett, that it was difficult to point out the exact spot where the trephine should be applied, and, after consideration, the latter surgeon determined not to attempt the operation.

It may not be improper to draw attention to some of the many interesting questions which arise in discussing such a case as this. In the first place, the recovery of the young man from so severe a wound would, in itself, be not a little surprising, were it not that the history of many cases has rendered it plain that the anterior part of the brain can endure the most severe and extensive injury, and the patient yet survive without any paralysis of motion. Perceval Pott had already noticed this in the last century, for he writes thus: "I will not assert it to be a general fact, but, as far as my own experience and observation go, I think that I have seen more patients get well, whose injuries have been in or under the frontal bone, than any other bones of the cranium." The recent researches in cerebral localisation have not only verified Pott's opinion, but have afforded a philosophical explanation. It would appear also that, under certain conditions, the brain can endure severe long continued irritation, which, under ordinary circumstances, we are in the habit of regarding as certainly fatal.

Bartholine tells us of a man in Pavia who was wounded behind the ear with a sword, the point sticking in the bone. He remained at Pavia some months. It would appear that the surgeons had made many attempts—but surely they must have been irresolute ones—to take it out. He left Pavia, and died; but how long he lived with the point of the sword sticking in his skull, Bartholine did not know. I. Dom. Sala told Bartholine that he had seen a person live, with the point of a sword sticking not only in the bone, but in the substance of the brain itself. This person enjoyed tolerable health, except that he had fre-

quent epileptic fits. John Bell, who relates this story, shrewdly observes, "How they could allow a man to continue in such a dangerous situation amazes me. Why, if it had been a thorn sticking under the nail of the great toe, they would have cut it out!"

But such timidity was not the rule among the old surgeons. On the contrary, John Bell's great work is, in no small part, directed against the abuse of the trephine and the trepan by his predecessors of the seventeenth and eighteenth centuries. They had maintained that the operation of trephining was not in itself dangerous; that it might be performed, therefore, for comparatively trivial affections; and that it might be repeated frequently on the same individual. And it must be admitted that their practice afforded a certain support to their precept. It is manifest that a considerable amount of dexterity in the operation, and of success in after treatment, must have been attained before Moulins could dare to trepan Prince Rupert. On January 15th, 1665, Pepys was distressed to hear of the Prince's disease, and of "the horrible degree of its breaking out on his head," but it was not until a year later that he became "very ill." Then it was (on February 3rd) that Moulins trepanned him, doing the work "in a few minutes without any pain at all to him, he not knowing when it was done." "Having cut the outward table, as they call it," Pepys goes on to say, "they find the inner all corrupted, so as to come out without any force." The Prince apparently made an excellent recovery, for two months later Pepys saw him "abroad in the vane-room pretty well as he used to be, and looks as well, only something appears to be under his periwig on the crown of his head." The French Academy had laid it down that openings could be well and safely made in the cranium, to allow of various operations, and Dionis taught that in extensive fractures three or four operations might be performed. He relates the case of a young girl who had fractured the whole of the parietal, and a part of the temporal bone; the trepan was applied twelve times by M. Maréchal and his assistants, and all the bone which remained between the trepan holes was also torn away by the surgeon. By this treatment, Dionis adds, she was thoroughly cured. Great, however, as is this achievement of a French surgeon, it remained for an Englishman to surpass it. On August 12th, 1664, Mr. Henry Chadborn, chirurgeon, obtained the following astonishing certificate:—"I, the under written, Philip, Count of Nassau, hereby declare and testify that Mr. Henry Chadborn did trepan me in the skull twenty-seven times, and after that did cure me well and soundly;" and to "lessen our astonishment at the operation," M. Lassus calculated that it was "possible to apply the trepan forty times or more to the human skull." Thus it would seem that the old surgeons had some grounds for their belief in the harmlessness of the operation of trephining. The reckless manner, however, with which it was resorted to in quite trivial affections has led to the disgrace of the operation, which was brought about in great part by the trenchant criticism and caustic wit of John Bell, one of the greatest, as he is certainly the most amusing, among writers on surgery.

Of recent years, however, fresh experiments have been made in cases of traumatic epilepsy and traumatic insanity, and recent results seem to show that the prevalent opinion with regard to the dangerous nature of the operation is not well founded. Echeverria records 145 cases with 28 deaths; Professor Briggs, an American surgeon, has had 28 cases with only one death; and Blum collecting statistics of trephining for injuries of the head, found that in 626 cases, 307, or 49 per cent. recovered. As we have said, trephining was extensively resorted to during the last century, for diseased conditions of the brain following on injuries to the cranium. La Motte, in 1705, first, it is said, trephined for epilepsy with only partial success, but John Bell quotes from Marchetti the case of a man, who had been wounded with a dagger: "He was apparently cured, a sort of cicatrix was formed; but all was not sound below; for in about three months after, he began to have epileptic fits; and he had his fits about two or three times every month." He was trepanned at the seat of the injury. In thirty days he was cured, and the epilepsy never returned.

In 1804 Cline operated with complete success, and in 1828 Dr. Dudley had three successes in five cases. Coming down to later times the operation has been twice performed at Guy's Hospital for traumatic epilepsy, once by Mr. Cooper Forster, and once by Mr. Howse, both patients recovered from the operation, but in one only were the fits cured; Mr. J. F. West of Birmingham trephined in 1878 in a case of traumatic epilepsy with dementia, where the injury had been inflicted in 1871. After the operation, the epilepsy never recurred, and two years later the patient was described as being in perfect health. In a second case, however, though no ill effects followed the operation, no good result as the cerebral condition was produced. (*Lancet*, 1879, 1881.) In the hands of other surgeons, however, the results as to life have been not at all so favourable. Dr. Gross of Philadelphia, for instance, in his recent

systematic work on Surgery, says that he has only operated in four cases, and that of these three died; the patient who survived was cured. But it requires no arguments or statistics to prove that there are many dangers surrounding the operation of trephining; the same may be said of many other operations, not more urgently called for by the patient's condition, which are yet performed daily without hesitation. One of the most frequent causes of death after trephining is suppurative and decomposition of the wound leading to septicæmia; with modern appliances, and with antiseptic surgery in one of its various forms, such a complication ought never to arise, in cases where the operation is done for long antecedent injury. In the cases reported by Echeverria, death was due in most cases to suppurative, to abscess, or to meningitis, in a few cases only to hæmorrhage; altogether the mortality in his cases was slightly over 19 per cent.; of the 117 who recovered from the operation, 93, or almost 80 per cent. recovered also from their epilepsy, and only 6, or about 5 per cent. received no benefit, or were rendered worse. Hasse urges that any indication whatever that warrants trephining should be followed; and Nothnagel, in Von Ziemssen's *Encyclopædia*, expresses the opinion that the operation is generally allowable, but regards its success as a piece of good fortune which cannot be predicted. Much, however, may be hoped from the application of recent advances in cerebral localisation, and something has been already done. Altogether, we are inclined to believe that though the operation of trephining for traumatic epilepsy or dementia has not yet taken its place as a recognised procedure, yet it has, to borrow a phrase from the politicians, come to be within a measurable distance of practical surgery.

POPLITEAL ANEURYSM: CURE BY LIGATURE AND DIVISION OF THE FEMORAL ARTERY, AFTER THE FAILURE OF COMPRESSION.

(Under the care of Mr. MORRANT BAKER.)

[FOR the notes, we are indebted to Mr. HARPER, House-Surgeon.]

R. S., a potato-porter, aged 39, was admitted into Harley Ward on September 25th, 1882, complaining of a swelling in the popliteal space. He gave no history of syphilis, rheumatism, or gout; but his occupation involved much walking, and his daily allowance of beer was about three quarts.

About the middle of August, his right leg became somewhat swollen, without, as far as he was aware, any sufficient cause. A few days after, he lay up for a week, and then, for the first time, noticed a swelling in the right popliteal space; the only other symptom was pain of a shooting character down the right calf; this supervened a few days after the swelling was discovered.

On admission, the following notes were taken. The right leg was larger than the left, swollen, oedematous, and warmer; the anterior tibial artery beat feebly in front of the ankle-joint. The posterior tibial was imperceptible. There was no pain in the limb. In the upper part of the right popliteal space was a tumour about the size of a hen's egg. It pulsated in a distensible manner, the pulsation being completely arrested by pressure on the femoral, the tumour almost disappearing at the same time. On removing the pressure, the tumour increased by "bounds". A slight systolic bruit also existed. At the level of the greatest bulk of the tumour, the right leg measured three-quarters of an inch more in circumference than the left.

The patient was otherwise in excellent health, and the urine was quite normal.

Treatment.—After two days' rest, the patient was put on moderate diet, and ten grains of iodide of potassium given three times a day. At the same time, compression was applied to the femoral artery, just below Poupart's ligament, on the following plan. A Martin's elastic bandage was applied for half an hour; a shot-bag (14 lbs.) was then placed on the common femoral, and pressure thus kept up till the dinner-hour. The Martin's bandage was then readjusted, and the patient took his dinner; in another half-hour, the shot-bag was again applied for some hours, and the elastic bandage put on for the last half-hour at night. After a week of this treatment, the aneurysm showed signs of marked improvement. It was harder, the pulsation was feebler, and the sac did not refill with the same "bounds" as before. The same treatment was continued, with the addition of gentianin, between the hours of compression, for as long as could be borne. The daily periods of compression varied from four to eleven hours, and, after the longer periods, the greatest improvement was noted.

After a fortnight, the aneurysm appeared almost cured, pulsation could hardly be detected, and sometimes ceased entirely for nearly an hour, after removing the shot-bag. The aneurysm was hard, almost solid, and very easily controlled by pressure from above. Alternate

pressure and genuflexion were continued till November 16th, but with very little further result.

The patient was then brought down to the theatre for a consultation, and it was unanimously agreed that the femoral artery should be tied, as compression, carried on for six weeks, had failed to complete the cure.

On November 17th, the operation was performed. Under ether, the femoral artery was exposed in the ordinary way at the lower part of Scarpa's triangle, and having been separated from its sheath by a director, was tied with kangaroo tendon ligatures in two places, about half an inch apart. It was then completely divided between the ligatures. The pulsation in the tumour and the tibials immediately ceased. There was hardly any hæmorrhage. The edges of the wound were partly brought together with silver sutures, and it was dressed with eucalyptus gauze, a strip of gutta percha tissue having been passed into the wound for drainage. The limb was wrapped in cotton-wool. The carbolic spray was not used.

After the operation, the temperature remained normal, and even sunk below normal, for some days. The wound healed well, and no pulsation recurred in the aneurysm, which shrank considerably in size, and became much harder and firmer in consistence.

On December 2nd, the patient was practically well.

REMARKS.—The case is of some interest on account of the failure of pressure, with the help of Esmarch's bandage and genuflexion, to complete the cure of the aneurysm, even when pulsation had been almost entirely stopped. It may be also thought worthy of record, as another instance in which the kangaroo tendon, as suggested by Mr. Girdlestone, of Melbourne, has been employed with success.

UNIVERSITY COLLEGE HOSPITAL.
STRANGULATED INGUINAL HERNIA IN AN INFANT AGED TEN WEEKS: OPERATION: RECOVERY: WITH REMARKS ON THE UNFREQUENCY OF STRANGULATION IN CHILDREN.

(Under the care of Mr. MARCUS BECK.)

[For the use of the notes of the case we are indebted to Mr. STANLEY BOYD, late Surgical Registrar.]

ARTHUR I., aged 10 weeks, was brought to the hospital on April 12th, 1881. A swelling in the scrotum had been noticed for the previous four weeks, but it had always "gone up of itself." On the morning of the day in question, the mother found that the swelling had come down during the night, and that a small motion had been passed; after this the bowels did not again act, and vomiting soon afterwards commenced. The right half of the scrotum was found to be distended to about the size of a hen's egg; the swelling was very tense and elastic; it was quite translucent, and evidently, at its lower and front part, due to fluid. Behind this the testis could be obscurely felt; the upper end of the swelling passed through the external abdominal ring and along the inguinal canal. No impulse was perceived, though the child cried violently. Taxis produced no change in volume. The fluid collection at the bottom of the scrotum was tapped, and about two drachms of clear yellow fluid drawn off. The diagnosis of strangulated hernia was now arrived at, and the infant was admitted into the hospital. Mr. Marcus Beck was sent for, and, on his arrival, attempted to reduce the hernia by the taxis, first without, and then with chloroform; but such force as he thought safe to employ made not the least impression on the hernia. Herniotomy was, therefore, determined upon. The sac was exposed by an oblique incision, and an unsuccessful attempt at reduction without opening the sac was made; an opening large enough to admit the finger was made in the sac, and a very tight, firmly-constricting band was found in the situation of the abdominal ring. Being anxious, owing to the diminutive scale of the structures involved, not to make use of a knife, Mr. Beck endeavoured to notch the constricting band with the nail; failing in this, he partly stretched and partly tore the band with the finger. The hernia consisted entirely of gut, which had a smooth polished surface, and was of a purple colour; it lay in the tunica vaginalis, the testis being seen bare at the bottom of the sac. The gut was returned without difficulty. A few threads of catgut were placed in the wound to act as a drain, and the edges were brought together with three silk sutures. The carbolic spray was used during the operation; the wound was covered by a piece of protective, and over that was laid a pad of lint steeped in eucalyptus oil.

During the night following the operation, the child was very restless, and vomited several times. The temperature steadily rose, and reached 104° at 4 P.M. on the following day (April 13th); but the vomiting had ceased after 7 A.M., and the wound looked very well. The next night was passed quietly, and the temperature gradually fell to 100° at 11 A.M.,

on April 14th; sickness had not recurred, and the abdominal fulness and tenderness had decreased.

From this time the patient made an uninterrupted recovery, and was discharged, well, on April 25th. Up to May 18th, when it was last seen, the hernia had not come down since the operation.

REMARKS.—"It is extraordinary," says Mr. Holmes, in his work on the *Surgical Diseases of Childhood*, "how rarely hernia in children becomes strangulated. At the Hospital for Sick Children, during the thirteen years of its institution, I cannot learn that an operation has been required." Mr. Beck informs us, that only one case has been operated on at University College Hospital during ten years; and, by reference to the *Reports* of St. Bartholomew's Hospital, it appears that only one patient, under five years of age, was operated on there during the ten years ending 1881. At St. George's Hospital, since 1870, herniotomy has been performed six times on children, whose ages ranged from five months to two years. At the London Hospital, two cases are recorded between the years 1860 and 1866, both inclusive; one of these, which occurred in the practice of Mr. Curling, is remarkable—inasmuch as it is said to have been "not congenital"; the patient was a boy, aged six months. All the patients, in whom this accident is recorded, have been boys; and it is worthy of remark that, in six out of eight cases in which the fact is noted, the hernia was situated on the right side. In all the cases here referred to, the sac was opened; while in nine cases, where the result was known, death occurred in two only. One of these was a case at St. George's Hospital; the child was aged nine months, and the hernia, which was on the left side, had been strangulated for twenty-four hours; death occurred ten days later, from sloughing of the wound and peritonitis. The other fatal case is recorded by the late Mr. C. F. Maunder, in the *Reports* of the London Hospital for 1866; this case is of special interest, as the patient was only four weeks old—y younger even than Mr. Beck's; there had been a swelling since birth on the left side of the scrotum, and this had become suddenly larger eight hours before Mr. Maunder saw it; it was then tense and elastic; after pressure, it was somewhat reduced in size, and it could be made out that the testis was situated at about the middle of the swelling. Mr. Maunder appears to have felt much hesitation in arriving at a diagnosis, and did not operate for twelve hours more, and then only "on the principle that it is better to perform an unnecessary operation than allow a patient to die with a strangulated hernia". Pressure applied to effect reduction, after the skin had been incised, burst the sac, gave exit to a quantity of sero-sanguinous fluid, and disclosed some highly injected, thickened, fleshy bowel, which was returned; the child died fifty-eight hours later of acute peritonitis. The difficulty of arriving at a diagnosis was also felt in the case here recorded, and was chiefly due to the resemblance of the condition to infantile hydrocele, caused by the translucency of the structures, and the clear yellow fluid contained in the sac. According to Mr. Erichsen, the sac of a strangulated congenital hernia commonly contains a large quantity of fluid, usually clear, but often dark in colour—there being, in fact, a hydrocele conjoined with the hernia. The same writer observes, that the stricture appears to be formed by the contraction of the funicular prolongation of the peritoneum, which, as is well known, becomes normally entirely obliterated. "The stricture," he says, "will always be found in the neck of the sac, which appears to be condensed, elongated, and narrowed: hence it is useless, in these cases, to endeavour to relieve the strangulation, without laying open the sac, and dividing its neck from within." Though these remarks are probably meant to apply chiefly to the condition found in the adult, or young adult, and though Mr. Holmes expressed (in the work above quoted) an opposite opinion, they are yet fully borne out, in their more general application, to include all cases of congenital hernia which have become strangulated, by the few cases occurring in infants which we have referred to in these remarks, since, in every one of these, the sac was opened.

ST. MARY'S HOSPITAL.

A CASE OF ABSCESS BETWEEN THE RECTUM AND UTERUS, GIVING RISE TO SYMPTOMS OF ACUTE INTESTINAL OBSTRUCTION.

(Under the care of Mr. WALTER PYE.)

[Reported by Mr. T. H. RICHARD CROWLE, Dresser.]

F. P., aged 56, but looking older, was admitted on September 4th, 1882, for acute obstruction of the bowels. She stated that she had good health until eight months earlier, when she fell and fractured the neck of the right femur. From the effects of the fall she never completely recovered, and from that time she had difficulty with her motions. The scybala gradually decreased in size, and she had occasional diarrhoea, alternating with constipation. There was never any bleeding or discharge from the rectum.

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Eight days before admission, after steadily increasing constipation, symptoms of acute obstruction set in, with vomiting, tympanites, and great distress. The obstruction remained absolute up to her entrance to the hospital. The urine had to be drawn off by a catheter. On examination by the rectum, a mass was found high up between it and the uterus, as large as a fetal head, situated in the middle line, very elastic and hard at the upper part; not distinctly fluctuating, and not firmly fixed. On vaginal examination, the uterus was found to be normal in length and direction, but the cervix was greatly hypertrophied, and filled the vagina. The abdomen was enormously distended with flatus, and it was not very tender on pressure. The mass, pressing backwards, kept the rectal walls in contact with each other, but it could be displaced sufficiently to admit the passage of the finger. It was obvious that, in the pressure backwards of the mass lay the cause of obstruction, and that the muscular walls of the intestine were not powerful enough to force a passage for the faeces. It seemed at the time probable that the tumour was some form of uterine fibroid, but no definite diagnosis was arrived at.

The symptoms of obstruction remained as acute during the twenty-four hours which followed the patient's admission into the hospital as before, in spite of copious enemata, which, by means of a long tube, could be passed well beyond the site of the obstruction; and it was clear that, although the bowels were only occluded by a pressure which could be overcome by the finger, or the passage of a tube, nevertheless this pressure was greater than the peristaltic action of the intestinal wall could cope with. (The effect of the kneeling position had been tried, and had failed.)

The tumour being considered probably a solid one, it seemed that the only way of relief was by a colotomy: for any large operative measure for the removal of the mass was obviously unjustifiable; but it was determined to put a trocar and cannula into the tumour, from the rectum, before proceeding further.

Accordingly, the patient having been placed under chloroform, a rectal speculum was introduced, and a large cannula and trocar passed into the swelling. The withdrawal of the trocar was followed by a flow of pus. This pus was extremely fetid, and from forty to fifty ounces in amount. After all the pus had drained away, the abscess cavity was syringed out with carbolic lotion (1 in 20); and, a piece of catgut having been introduced to act as a seton, the cannula was withdrawn.

An enema of warm water having been given, the patient was removed to the ward.

The result of this operation was, that, during the night, and on the day following (September 6th), the patient's bowels were open three times, the motions amounting to about three pints of partly fluid and partly solid faeces. The sickness also ceased; and, in fine, there was an immediate cessation of all the pre-existing symptoms of obstruction. For the ten days following the evacuation of the abscess-cavity, the patient showed no bad symptoms whatever. The bowels were opened naturally, and her appetite and strength returned. There was always a little pus in the motions, showing that the abscess discharged into the rectum. After this interval, however, symptoms occurred indicating a more acute inflammation of the sac of the abscess; and soon, that the inflammation had spread to the pelvic fasciae. There were heat, fulness, and tenderness on pressure, both above Poupart's ligament and on rectal examination. These symptoms of pelvic cellulitis were accompanied by an adynamic pyrexia, with rapid loss of strength; and death occurred on the eleventh day after the relapse. There was no recurrence of the obstruction.

REMARKS BY MR. WALTER PYE.—The surgical interest of this case turns upon the fact that symptoms of intestinal obstruction, as acute as those due to a strangulated hernia, a volvulus, or an intussusception, may be caused by the pressure on the rectum, or the sigmoid flexure of an uterine abscess; and I have, since this case came under my charge, satisfied myself that similar ones have occurred, in which abdominal section has been performed for this very condition, with the results which may be supposed. In this particular case, a rectal examination having once been made, the mechanical cause of the obstruction (*i.e.*, the backward pressure of the swelling) was not at all doubtful, but neither the "feel" of this swelling, nor the past history of progressive diminution in the size of the scybal for a period of some months, in a woman between fifty and sixty, led me, or those who also saw the case, to suppose otherwise than that this tumour was some form of new growth. The swelling having turned out to be an abscess, and the symptoms having been immediately and completely removed by its evacuation, the eventual fatal result was very disappointing. Defective drainage of the cavity was, with little doubt, the cause of the cellulitis which led to death; but I hardly know how, taking into consideration

the situation of the abscess, lying high up, as it did, in Douglas's pouch, it would have been possible to secure any better drainage or less septic condition.

THE QUEEN'S HOSPITAL, BIRMINGHAM.

A CASE OF SPASMODIC PARAPLEGIA, OR LATERAL SPINAL SCLEROSIS, WITH OPTIC NEURITIS.

(By C. W. SUCKLING, M.B.Lond., etc., Physician for Out-Patients.)

THE patient, J. P., aged 27, was a farm-labourer. His family history was good. He had had syphilis twelve months earlier, and said that he had a sore on the penis and a rash, and that his doctor told him he had "the pox". About four months before he came to the hospital, he first noticed that he could not turn round easily, and that he often stumbled and fell when he hurried or tried to run. Later, his legs began to twitch, both in the daytime and at night, but especially during the day. He could control the twitching to some extent by straightening his legs out.

When he first came as an out-patient to the hospital (on February 20th), the tremors were very violent; they were confined to both lower extremities, but were especially marked in the right. The patient walked in a manner characteristic of the disease from which he was suffering. To use his own words, he could not "kick his toes forwards"; this was evidently due to paresis of the extensor longus digitorum. His feet cleaved to the ground, and his toes caught in any irregularity, causing him to stumble. He could not walk more than about half a mile without being tired and stiff; but, by resting a few minutes, the stiffness passed off, and he could go on again. The body in walking was bent too much forwards, and he raised his hips alternately to a much greater degree than was natural. He had difficulty in turning round, having to take several steps in so doing. His legs constantly twitched, but during the previous fortnight the twitching or spasm had much diminished, and the paresis had increased. He complained greatly of constipation, his bowels not being relieved more than once in four or five days; and he said that he had no power over the act of defaecation. On introducing the finger into the rectum, the sphincter was felt to contract, and it remained tightly contracted as long as the finger was kept in the rectum. It appeared that, as soon as faeces passed into the rectum, the reflex act of defaecation was brought about, but the path by which volitional impulses, affecting the centre, descend, was interrupted. The bladder seemed to be affected in the same way; as soon as a sufficient quantity of urine collected, the reflex act was brought about independently of volition. There was decided paresis of the muscles of both lower extremities, but the right leg was much weaker than the left. There was wasting on both sides, especially on the right. The measurements of the circumference of the leg were as follow: opposite the tubercle of the tibia—right, 11½ ins.; left, 12 ins.; middle of leg—right, 9½ ins.; left, 10½ ins. As to the superficial reflexes: the plantar, cremasteric, and abdominal were absent; the epigastric and scapular were present. The muscles of the abdomen were affected, the belly being prominent and hard. The patellar reflex was greatly increased on both sides, but especially on the right. Pushing down the patella caused the quadriceps extensor to tremble violently. The front tap contraction could easily be obtained on both sides, but was especially marked on the right. Ankle-clonus was well marked on both sides, but was greatest on the right. Sensations of pressure, temperature, touch, and pain, were normally perceived. The reaction of the muscles to faradism was feebler on the right than on the left side. Mr. Priestley Smith kindly examined the patient's eyes, and he found distinct evidence of optic neuritis on the right side. The urine contained no albumen, but was loaded with lithates. There were no cerebral symptoms beyond pain over the eyes.

There was a scar on the glans penis, and evidence of iritis in the left eye. The patient was treated with iodide of potassium, and for the first few weeks there was a great improvement, and the spasms diminished; but in April the paresis increased and the patellar reflex and ankle-clonus, although well marked, were not so pronounced as at an earlier date.

REMARKS BY DR. SUCKLING.—This disease is by no means a common one. I would call attention to the early age of the patient, the distinct history of syphilis, and the presence of optic neuritis, the latter being extremely rare in lateral sclerosis. The greater degree to which the right side was affected is also a point worthy of notice.

It is said that the heaviest brain ever weighed in the United States was taken from James H. Madden, who died in Leadville, Colorado, last July. The weight was sixty-two and a quarter ounces. The man was a professional gambler.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, NOVEMBER 25TH.

JOSEPH LISTER, D.C.L., F.R.C.S., F.R.S., President, in the Chair.

Living Specimens.—Those shown were the two patients illustrating Dr. Cavafy's cases of symmetrical congestive mottling of the skin—one of the patients the subject of Dr. Duckworth's paper on subcutaneous rheumatismal nodes; and a case of extreme rickety deformity, chiefly of the lower extremities, by Mr. Howard Marsh. Some excellent casts of the rheumatic nodules were exhibited by Dr. Duckworth; the elastic material colour of which they were made gave a singularly natural appearance. This substance was composed of gelatine, French chalk, and some other constituents. An account of it was given by Mr. Bowlby at the meeting of the British Medical Association in Worcester.

Symmetrical Congestive Mottling of the Skin.—Dr. CAVAFY described two cases of a curious affection of the blood-vessels of the skin. The first was a young woman, aged twenty-two, who was first seen in March 1882, when the condition had existed for three years. It began as a reddish mottling of the left shoulder, which gradually spread down the arm, and soon afterwards appeared on the right arm, the cheeks, and both thighs, gradually increasing in intensity. At the date of her first visit, the skin of both cheeks was mottled with blotches and irregular rings and streaks of a bluish-red colour, most marked on the right side, not prominent, and covered by normal epidermis. Similar dull bluish-red macule, and irregularly confluent blotches and streaks, forming reticulated, annular, and gyrate figures, occupied the extensor surfaces of both arms and forearms, and the backs of the hands, being especially distinct over the left wrist. The front and outer surface of both thighs near the knee were similarly mottled, but in a much less degree. The blotches and streaks were not sharply circumscribed, and disappeared completely on pressure, leaving, in some spots, a delicate fawn-coloured pigmentation; the marking also disappeared from the arms when they were held up, and again returned when they were allowed to hang down. The neighbouring skin was normal in all respects. The girl's general health was perfectly good. She had had rheumatic fever a year before the mottling commenced, but the heart was unaffected; the only departure from perfect health was a liability to "dead fingers" and occasional dyspepsia. She continued to attend for a month, with no change in the state of the skin. The markings were always intensified by cold, never completely disappeared, and were throughout unaccompanied by pain, numbness, tingling, or any abnormal sensation. She was still in the same condition. The second patient was a healthy young woman, aged 21, who had been under observation since August, and in whom the affection had existed eighteen months. It began over the ankles, and gradually spread to the legs and thighs; twelve months later the arms became affected, and quite recently blotching had begun on the waist; the face had remained free. The mottling was an almost exact counterpart of that in the first case, but more extensive, and of a deeper bluish-red colour over both legs and the front of the thighs, especially near the knees; it was situated on the extensor surfaces chiefly, but also extended slightly over on the flexor sides. The congestion was much increased by cold in this case also. The condition described was obviously due to venous stasis, or passive congestion of the skin, and appeared to be an exaggeration of the marbling often seen on the skins of children and young persons after exposure to cold; but in the cases related, although cold intensified the marbling, the congestion remained more or less evident at all times. It was probably due to a vaso-motor neurosis, but the share taken in its production by arteries and veins was not easy to apportion. The affection appeared to be quite harmless, and had not led to any changes except pigmentation, and that only slightly; but the disfigurement, especially when the face was attacked, was considerable. The treatment employed had not in any way influenced the condition.—Dr. S. MACKENZIE said that these were cases of rarity, in which the condition was so marked. The state of the skin was allied to the coloration produced by heat, though it varied therefrom in certain respects. Probably the cases were allied to conditions of vaso-motor paralysis.—Dr. GLOVER inquired if Dr. Cavafy had tried the effects of bandages. In a young lady who had a chronic purpuric condition, he had found an elastic stocking productive of great benefit.—The PRESIDENT thought the perfectly symmetrical character of these swellings a point of great interest, and that it seemed to point to a nervous origin. The cases were very rare.—Dr. CAVAFY replied that the pigmentation was not allied to that produced by heat, as in his cases it disappeared when

heat was applied, and was increased by cold. The local asphyxia of the limbs which led to local gangrene seemed to be a severe degree of the condition present in these patients. In both patients the fingers became numb and cold, "dead" at times. The suggestion of a bandage might be of service so far as the legs were concerned, but could not be utilised for the face and other parts.

Case of Lumbar Nephrectomy for Carcinoma.—Mr. JAMES E. ADAMS said his patient was a male, aged thirty-nine, who had suffered from intermittent hæmaturia for two years, with pain in the right loin. Latterly profuse hæmorrhage from the kidney had occurred, leading to marked anaemia. Blood, pus, triple phosphates, and epithelium were detected in the urine. The disease was clearly located in the right kidney, but its exact nature was not certain. The operation was undertaken in order to explore, and if necessary to remove, the right kidney. By an incision parallel with the inner border of the last rib, the kidney was easily exposed, and found to be the seat of a new growth, which had increased its size to about double the normal. In order to extract the organ it was necessary to enlarge the incision upwards. The kidney was adherent to the peritoneum, and in separating it the serous cavity was opened. Owing to the size of the tumour, the ureter and vessels could not be tied separately, and so were encircled *en masse* by a whip-cord ligature. The peritoneal wound was closed with a catgut suture; the skin wound was freely drained. Antiseptic dressings were used. The hæmaturia ceased at once. The wound healed in a few weeks, but the patient gained no strength, and suffered much throughout from cough, and for these reasons was transferred back to the care of the physician, and died forty-four days after the operation, with effusion into both pleurae. Plugging of the left renal vein, and numerous deposits in the other kidney, lumbar glands, and ribs, were found at the necropsy. The microscope proved the new growth to be a medullary carcinoma.—Mr. R. C. LUCAS said that so many cases of kidney-disease gave symptoms supposed to be typical of calculus—viz., pain, hæmaturia, etc., that possibly many of the cases of supposed calculus might be due to other causes. He had twice within the last year cut down upon the kidneys for supposed calculus, and pricked the kidney in places with the needle, without discovering a stone. One of the cases, he thought, would probably turn out to be one of strumous kidney. Neither patient was at all prejudicially affected by the operation. In each case the wound healed by primary union; therefore, he concluded that exploratory incisions of the kidney were quite safe, and not more dangerous than similar incisions into the calf of the leg would be.—Mr. GOLDING BIRD inquired how Mr. Adams had enlarged the wound, whether by simply making it larger, or by adding an incision in the vertical direction.—Dr. FOWLER said that, in a case at the Middlesex Hospital similar to that of Mr. Lucas at Guy's, the operation-wound healed successfully at once.—Dr. D. POWELL inquired what were the results of these cases when successful, as success rarely followed the operation. Cases of stone in the kidney often went on for years, and eventually did well by the discharge of the calculus from the bladder in the ordinary way. A small stone often gave rise to as severe symptoms as a larger calculus. A patient, with severe symptoms, passed a small calculus, left the hospital, and returned with his symptoms increased. The kidney was explored, but no calculus could be found. Mr. Barker thought surgeons ought to explore in many more cases of kidney-trouble than they at present did. Such exploratory wounds did well. The question of nephrectomy, in cases of renal calculus, turned upon the question as to how much of the kidney-tissue was already destroyed. Small calculi might be removed without risk; but with large calculi, and great destruction of kidney-substance, the case was one of much increased gravity.—Dr. WILBERFORCE SMITH desired to mention a point as to the diagnosis of calculus which might be drawn from the effect of treatment. He had always found that excessive diuresis, produced by the drinking copiously of water, diminished the symptoms of pain when that was produced by calculus; but with any other disease of the kidney diuresis so effected did not produce any benefit.—Mr. HAWARD said that enlargement of the kidney was found at the operation, and he inquired if the kidney had been previously examined whilst the patient was under anæsthetic. By its use, the muscles of the abdominal wall were relaxed, and a calculus in the kidney might often then be felt, as in a case under his own care. Often, in calculus of the kidney, a marked symptom was constant micturition.—Mr. MARSH said that a patient in St. Bartholomew's Hospital was examined under an anæsthetic by several very able surgeons, none of whom detected that it was enlarged; yet, at the operation, its size was found to be much increased.—Mr. ADAMS, in reply, remarked that the opening was enlarged in a vertical direction, by an incision running nearly at a right angle to the first incision. As to the situation of the opening, he thought that in most cases of large growths the abdominal

should be preferred to the lumbar incision. He considered that the results of the operation of nephrectomy should scarcely be characterised as disastrous; the operation was not undertaken except when the patients' sufferings were severe, and their lives almost useless. Then an operation seemed justifiable. The question as to the removal of the kidney should also partly depend on the amount of kidney-tissue destroyed. A large kidney might be easily overlooked, even when anaesthetics were employed, especially in a stout person.

Subcutaneous Rheumatismal Nodules.—Dr. DYCE DUKWORTH related two cases. Case 1: S. C., aged 24, domestic servant, came to St. Bartholomew's Hospital on account of painful swellings upon the right hand and knee. She had had no serious illness, no rheumatic fever, or chorea, but had suffered for eight years past with pains in the joints and limbs. Crackling in the larger joints was noticed. The nodules had begun eight months previously on the right hand, elbow, and knee; and were found to be quite subcutaneous, painful on pressure, and attached for the most part to sheaths of the tendons or deep fascia. The fingers were knotty at the joints, and the right little finger was twisted outwards at the last phalanx (not as the result of injury). The first sound of the heart was found roughened and somewhat reduplicated. The urine was alleged to be occasionally thick. (The patient was exhibited, and casts of the right hand and knee were also shown.) In three months' time it was found that some of the nodules had grown larger, and that new ones had appeared. Signs of slight hypertrophy of the left ventricle of the heart were noted, and the first sound was rough and reduplicated at the apex. Treatment by cod-liver oil and iodide of iron and potassium had not proved of material service, and there were still some articular pains. The nodules ached more in damp weather. Case 2: E. L., aged 9, a school-girl, had suffered from pains in the feet, knees, and arms for two months, and at that time nodules were first seen on the ankles, elbows, and knees. The legs and hands were also swollen "as if dropsical." There was no history of chorea. Nodules of various sizes were found on the sheath of the extensor tendon, on the metacarpus, on the olecranon, on the spine of a dorsal vertebra, on both patellae, and on an external malleolus. The nose and finger-ends were clubbed. The cardiac physical signs indicated mitral regurgitation. In three weeks, the nodules on the patellae appeared larger. The child ceased attendance, and its parents could not be traced subsequently. A cast of one knee was taken at the first visit. Both cases were well-marked examples of rheumatismal subcutaneous nodules. Both occurred in females, as in most instances. The nodules had persisted longer in the first case than had hitherto been previously noticed, fourteen months against five, and the age of this patient was more advanced than in most cases recorded. The heart was affected in both patients. All the points noted supported the previous observations of Drs. Barlow and Warner, as communicated last year to the International Medical Congress. The PRESIDENT thought it remarkable that a disease of this kind should have been only recently described, as the particulars of the cases were sufficiently striking, and the cases were not now found to be very uncommon. It was curious that in these cases there should always be found some cardiac affection.—Dr. GREEN had seen a case of the kind in a boy, aged 10, who had subacute rheumatism after acute rheumatic fever. The nodules, in his case, were discovered accidentally, as he did not at all complain of them. He had coexistent heart-disease.—Dr. BARLOW also cited cases in which there was concurrent heart disease without feverishness. He and Dr. Warner had thought the nodules were outgrowths of the fibroid tissues, and, therefore, the homologies of the rheumatism of the cardiac valves, minus the fibrinous deposit from the blood which became attached to them.—Mr. GODLEE reported that the nodules were found.—Dr. BARLOW said that the nodules were attached to the deep fascia, and in close relationship with the tendons, but not united to the periosteum, as had been surmised by two French authors.—Mr. BARKER inquired the age at which these outgrowths occurred. He rather thought he had met with them in elderly patients.—Mr. FRASER STOKES said that, in a case of the kind, the nodules appeared near both patellae, and lasted two months.—Dr. GODDARD said that he had seen a case of Dupuytren's Contracture. It was probably the result of the nodules of the tendons, but he did not think they had ever been the cause of the contracture. The nodules had never again become quite straight.—Dr. DYCE DUKWORTH said that there was much due to Drs. Barlow and Warner for their observations. The formation of the nodules was not a new discovery. The nodules were found to be in close relationship with the tendons, and went to the same place, as when the tendons were cut, the nodules were found to be in the same place. The nodules were found to be in the same place, as when the tendons were cut, the nodules were found to be in the same place. They were generally found in young

people; and he thought the less done for them in the way of active surgical treatment the better.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, DECEMBER 5TH, 1882.

SAMUEL WILKS, M.D., F.R.S., President, in the Chair.

Acute Dilatation of the Stomach.—The stomach from a patient who died with this condition was shown by Mr. HENRY MORRIS. The patient was a man, aged 37, who was admitted into the Middlesex Hospital for suppurative of the ankle-joint. An operation having been determined on, on November 11th, ether was given for about half a dozen respirations, and afterwards chloroform for about a quarter of an hour. For the following two days he vomited excessively a thin greenish fluid: the longest interval between the acts of vomiting was never more than one hour. He had taken a mixture of chloroform and ether on a former occasion without ill results. He had been prepared for the anaesthetic by giving a dose of house mixture, and an enema; a light breakfast was taken early: after the anaesthetic, orthopnea became marked, the temperature fell below normal, the quantity of urine decreased, until towards the end none was passed, the pulse was weak and rapid, and the skin was cold; death was due to exhaustion. At the necropsy, the stomach measured 7 12 4 inches, and reached almost to the symphysis pubis; it contained twenty-eight ounces of fluid; the coats of the stomach were thin, and contracted when cut; the kidneys were contracted and scarred on the surface, and one contained a cyst. In the upper lobe of each lung was a cavity, and the lungs contained miliary tubercle. The vomiting was unlike that seen after chloroform, and there was no intestinal obstruction. Mr. Morris referred to a few other cases of a similar kind on record, where excessive vomiting occurred in patients with a similar condition of the kidneys; but all the other cases were much more chronic in their course, with the exception of three reported by Dr. Hilton Fagge. Mr. Morris was inclined to attribute the dilatation of the stomach to the large quantity of gastric fluid secreted, this over-secretion being brought about by nervous influence. He, therefore, thought that the term acute dilatation of the stomach was not a good one to describe the condition, and suggested the word gastrorrhoea. Cohnheim had suggested that in cholera there might be such an influx into the intestines from some nervous influence.—Dr. GODDARD said that in the last seven years he had made necropsies at Guy's Hospital in five such cases; all the cases had some peritoneal disease, with the exception of one, in which there was disease of the sympathetic in the neck. In the earliest case he had seen, the patient was a male, aged 22, who died of suppurative peritonitis after operation for strangulated hernia: the stomach was dilated to twice its natural size. The second case was that of a woman aged 48, who presented a tumour in the neck, which obstructed the veins, and pressed on the left vagus and sympathetic nerves: the stomach occupied a great part of the abdominal cavity, and lay flat on the surface of the coils of intestine; it contained only about a pint of fluid. The third case was one of ulceration of the colon, with acute enteritis and thrombosis of the superior mesenteric artery; the stomach in this case also occupied a large part of the abdominal cavity; it was quite flaccid, and almost empty; the patient was a woman aged 49. The fourth patient was a woman aged 24, who had undergone amputation at the hip eleven days before her death: the stomach filled the greater part of the abdominal cavity; its walls were thin from over-distension, but it contained chiefly gas, the quantity of fluid being only about two ounces. In this case, there was suppuration in various joints, and there were enlarged glands in the lumbar region. The fifth and last case was that of a woman aged 34, who died nine days after ovariectomy. Flatulent distension was first considerable two days after the operation; four days later, she suffered from constant vomiting, and was very sick and weak. At the necropsy, the stomach was found extremely dilated, and there was thrombosis of the iliac veins, but not much evidence of peritonitis.—Dr. PYE-SMITH pointed out that the theory that the intestinal flux in cholera was due to an over-secretion, which owed a nervous origin, did not originate with Cohnheim. Dr. Lauder Brunton had advanced this theory long before, and had maintained it at various times. Dr. Pye-Smith inquired whether any analysis of the vomited fluid had been made, to determine whether it really were gastric juice.—Dr. MAHOMED said that in kidney-disease it was not unusual to meet with cases in which there was over-secretion of fluid from the stomach surface, such as in a case recently had from a patient.—Dr. PYE-SMITH remarked that there were cases on record where the intestine had been stimulated by a similar condition; and he had seen one where the symptoms, during life, resembled those of cholera.

tion. As this same oversecretion occurred in cholera with the result of immediate excretion, and not of dilatation, it seemed that there must be some other condition determining the dilatation; most probably, there was some muscular paralysis.—In replying to questions that had been asked, Mr. HENRY MORRIS said that he regretted that the fluid had not been examined chemically. With regard to Dr. Payne's remark, he would observe that, in the earlier stages of these cases, the fluid was, as a rule, immediately vomited, and that it was only later, when the stomach had become apparently exhausted, that dilatation occurred.—The PRESIDENT remarked that these cases were of considerable interest: since, if so many cases were fatal, it appeared probable that the same condition, to a less degree, might give rise to distressing symptoms. This condition might, for instance, be a factor in cases of "gout in the stomach": gouty patients did undoubtedly suffer from great distension of the stomach and colon.

Osteitis Deformans.—Mr. HENRY MORRIS showed photographs of a patient who was the subject of osteitis deformans. The disease had been present for about twelve years, and had begun in the left leg. The legs, and thighs, the patella, the ribs, the vertebrae, the clavicles, and, to a slight extent, the cranial bones were affected. The lower extremities of the tibiae, the fibulae, the feet, and the lower jaw were not affected in this case. His general health was good, but he had a mitral murmur, and the urine contained less than the normal quantity of urea.—Mr. TREVES said that in males, the subjects of this disease, the bones of the forearm were not generally affected, while in the female cases, the bones of the upper extremity were, as a rule, affected. He thought that by comparing the deformity produced by osteitis deformans with that sometimes occurring in syphilitic disease, evidence in favour of the theory that this disease was due to some kind of inflammation was obtained, since the deformity was identical in both cases.—Mr. NOBLE SMITH asked whether any treatment had been adopted. As Sir James Paget had found that iodide of potassium did no good, he had, in a case now under his care, acted on the idea that there was a defect in nutrition.—The PRESIDENT observed that one of the first cases recorded had been brought before this Society many years ago by himself. The patient had been to a great number of physicians and surgeons, and had given to Dr. Wilks a very large bundle of prescriptions. Dr. Wilks, when he proposed to read out this bundle, was asked by the then president, Sir William Fergusson, to refrain. The reading, however, was quickly accomplished, for all the prescriptions contained the same ingredient—iodide of potassium. There seemed to be an idea in the minds of surgeons, that there was some natural association between iodide of potassium and bone.

Extreme Deformity from Rickets Osteomalacia.—Mr. RICHARD BARWELL showed to the Society a girl, aged 17, but apparently very much younger, who presented a most extraordinary series of deformities. She had been under his supervision for about three years, and the deformity during that period had not altered much. Her family history threw no light on her condition, which was not congenital. In her mental development she was juvenile rather than weak, and she had not reached puberty. Very few of her bones were free from deformity. Both humeri were much bent, but especially the right, so that on that side, whereas the humerus measured seven inches and a half, the length of the arm from acromion to olecranon was only four inches and a quarter; again, the right tibia measured nine inches and a half, but the length of leg was only four inches and a half. This was owing to the bone, at about the lower fourth, being bent back on itself, so that it ran upwards behind, and parallel to, the rest of the bone. The left olecranon process was greatly lengthened, and placed at an oblique angle to the shaft of the bone. The deformities in the other bones not mentioned above were the same in kind, but rather less in degree. The patient could not stand or move herself about. The bones, a few years ago, were remarkably brittle, and still remained so, but to a less degree. Between the ages of nine and thirteen she broke her arms four times, and her lower limbs on several occasions. There was no bending of the ribs, and no enlargement of the epiphyses. Mr. Barwell did not think that the case could be classed either with rickets or with osteomalacia. He had had under his care, some years ago, a boy who presented similar deformities, but less marked, and he had endeavoured to straighten the femur. On cutting down on to it, however, he found that, on the slightest force, the chisel sank through the whole structure of the bone, and that there flowed from the wound a quantity of liquid fat, that was estimated at five ounces. Both of these patients suffered from pain referred to the convex side of the distorted bone. He believed that these cases of extreme distortion were due to a hypertrophy of the medulla at the expense of the bone-substance proper.

Stricture of Intestine at the Ileo-caecal Valve.—Dr. NORMAN MOORE showed a specimen of this condition from a man in whom colotomy

had been performed in the right lumbar region. The wound showed no unhealthy suppuration. The intestines above and below contained a considerable quantity of soft fluid faeces, but were not greatly distended; the stomach was normal, the small intestine was dilated, oedematous and reddened; three and a-half inches above the valve it showed extensive irregular ulceration, which extended all round. Some of the ulcers seemed healing, and there were puckering of healed ulcers. The ridge of the ileo-caecal valve was very low, and the orifice was so contracted, as but just to admit a large probe. Below the valve, for three inches, there was a less degree of ulceration. The colotomy wound was two inches below the valve in the large intestine. No tubercle was discoverable. The mesenteric glands were normal; the lowest part of the ileum was slightly adherent to the abdominal wall. The intestinal wall was thickened above and below the stricture. The rectum and all the muscles and bones were normal. Microscopic examination showed that the stricture was associated with a new growth, consisting of abundant round cells, penetrating all the structures of the intestinal wall. The patient was aged 47 years, and died under the care of Dr. Andrew, in St. Bartholomew's Hospital. An attack, the first, of obstruction of the bowels began on October 18th. The bowels not having acted up to November 1st, on that day colotomy was done by Mr. Marsh. At the time there was no relief, but the next day a quantity of faeces came through the wound. The patient died on November 4th.

Symmetrical Gangrene of the Extremities.—The body of a child, which presented a most remarkable example of this rare condition, was shown by Dr. SOUTHEY. The body was that of a well nourished girl, aged two years and a half. A few months ago, she had a "feverish attack", which was accompanied by some purpuric spots on the limbs. On November 13th, another slight feverish attack occurred, and lasted three days. The child remained in good health up to the afternoon of December 1st; she then complained of headache; on the following morning, she appeared quite well. In the afternoon, she complained to her father that she had "hurt her legs". He rubbed the backs of her calves, but this increased the pain; and he noticed that the skin in that situation was livid; soon after, she vomited, complained of headache, and was "feverish". At 6 P.M. on that day (December 2nd), she was worse, the patches on the calves were blacker, and were extending up and down the calves; the parents also noticed, at this time, that the backs of the arms were becoming affected in a similar way. At 6 A.M. on the following morning, it was noticed that the buttocks had become livid. At noon on December 3rd, she was admitted into St. Bartholomew's Hospital in a moribund condition; the pulse at the wrist was feeble, somewhat wiry, but could be counted. The tibial pulse could not be felt. The patches of lividity felt hard and tough; the lungs and heart appeared to be quite healthy; liquid nourishment, brandy and milk, were taken, but soon vomited as a rule; two doses of nitro-glycerine were also given, but immediately vomited. At 7 P.M., a convulsion occurred; up to this time, intelligence had been preserved; but, after this, convulsions became very frequent, and she died at 11.45 P.M., on December 3rd; the whole duration of the case was thus not much over thirty-two hours. The necropsy had been made by Dr. Norman Moore, but no coarse lesion could be found in the viscera. He had examined the femoral and other arteries of the left lower limb, but had found no embolus. The parts affected were the legs, in almost their whole extent, the buttocks and the neighbouring part of the back, the backs of the arms, and the cheeks; the lesions were remarkably symmetrical. A theory to account for these cases, of which Dr. Southey had seen three or four, but none so well marked as this, had been put forward by M. Reynaud, who supposed that there was a spasm of the arteries, with subsequent migration of blood-corpuscles, and transudation into the skin.—Dr. NORMAN MOORE said that the blood, on standing, developed a somewhat abnormal appearance; it had the so-called "raspberry-juice" character, such as was seen in some cases of diabetes, and showed, on microscopical examination, numerous fat-globules.—The PRESIDENT referred to a case of a boy who had been under his care, in whom symmetrical gangrene had been associated with intermittent hæmaturia.—Dr. SOUTHEY said that he had had under his care, last year, a boy in whom the fingers of both hands were affected with a local asphyxia, and who suffered from well marked intermittent hæmaturia. The urine of the girl he now showed had contained some albumen.

Fracture of Skull.—Mr. EVE also showed the cranium of a man who had died an hour and a half after sustaining a fracture of the skull. The line of fracture crossed the groove in which the middle meningeal artery lay; the artery was ruptured, and a large extravasation had occurred.

{To be continued.}

COVERED BY
GLASS

MEDICAL SOCIETY OF LONDON.

MONDAY, DECEMBER 4TH, 1882.

FRANCIS MASON, F.R.C.S., President, in the Chair.

Bacilli.—Dr. HIENEAGE GIBBES showed a large number of specimens of bacteria, including *Bacillus anthracis*, *Bacillus tuberculosis*, from cattle and from the human subject; the so-called "typhoid bacillus"; *Bacillus anthracis* after cultivation; putrefactive bacilli; bacilli from septicæmia, diphtheria, sheep-pox, purples; bacilli from the Welbeck poisoning case; and the so-called infective micrococci from the spleen of a tuberculous patient. A great part of the evening was spent in the examination of these specimens. Dr. Gibbes drew attention to the two forms of tubercle met with in the human subject, as already defined by Klein: the reticular and non-reticular forms (specimens of bacilli in both were shown). In the former class of cases, bacilli were rarely found; in his own observations, in only one lung out of ten, and then in the smallest numbers, singly or in groups of three or four, in the meshes of the reticulum. In the non-reticular tubercles, on the contrary, bacilli were of almost invariable occurrence in large numbers, and were aggregated into masses, especially to be found in the midst of the caseous centre. He was inclined to think that the latter form indicated a more acute disease than the former. Bovine tubercle was always of the reticular form, with large and numerous giant-cells; the tubercles being aggregated in large masses, which are caseous in many places. In bovine reticulated tubercle, however, bacilli were abundant, but found, not as in the human subject, solely in the reticulum, nor, as in human non-reticular tubercles, in the midst of the caseous matter, but partly in the reticulum, partly around the edge of the caseous region, and partly in the interior of the amœboid and giant-cells. He was inclined to think that the bacillus would prove to be of a different kind from the human one. He had found the bacillus in the liver and spleen, not in the omentum.—Dr. C. THEODORE WILLIAMS had found *Bacillus tuberculosis* by Dr. Gibbes's method in the sputa of nearly all cases of advanced phthisis, but not in all. He thought the exceptions were cases in process of recovery.—Dr. RADCLIFFE CROCKER and Dr. HERON remarked on the various processes for staining the tubercle-bacillus.—Mr. JABEZ HOGG remarked on the clinical aspects of the investigation.—Dr. GREEN said that we had still to learn what were the conditions which enabled the bacillus to produce tubercular lesions.—Dr. DRYSDALE also made remarks on the question from the point of view of diagnosis.—Dr. GIBBES said he had not yet examined the blood in tubercle. He pointed out that, in his method, a definite chemical compound was formed by the mixture of rosaniline and aniline, and that the magenta used by Ehrlich was not a definite chemical substance. On the clinical points raised, it was too early yet to say much.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

ORDINARY MEETING, DECEMBER 1ST.

F. E. MANBY, F.R.C.S. Eng., in the Chair.

Tumour of Iris.—Mr. LLOYD OWEN exhibited a woman with a small vascular pedunculated tumour of the iris, about the size of a large pin's head, situated near the free border, on the temporal half. The tumour had shown very little disposition to increase in size since its first appearance six months ago. Its nature was doubtful, being either a pigmented sarcoma, or perhaps a vascular papilloma.—Mr. EALES thought that it was right to delay any operation where there was no interference with vision, where there was no increase in the growth, and where, as in this case, its position at the margin of the iris rendered its removal at any time a work of no difficulty.

Epithelioma of Oesophagus.—Dr. B. C. A. WINDLE showed a specimen of epithelioma of the oesophagus from the body of a man who died from starvation, the result of stricture. This mode of death had been shown by statistics to be uncommon. The man refused to submit to gastrostomy. There was a fistulous communication with the trachea.

Tuberculous Ulceration of the Bladder.—Dr. WINDLE also showed a specimen of tuberculous ulceration of the bladder, removed from a man of middle age, who had died of phthisis. There had been frequent micturition, pus in the urine, and difficulty in passing instruments, a small metal catheter being always obstructed at the neck of the bladder, while a large one passed with facility. The kidneys were almost free from disease.—Mr. MANBY knew of no recorded case in which tubercular disease began in the bladder. It was always secondary to disease of the kidney.

Malignant Tumour of Testis.—Mr. BENNETT MAY showed a malignant tumour of the testis, which he regarded as carcinomatous. The tumour had existed seven months, but without leading to glandular infection, or secondary deposits elsewhere. The tumour was referred to

a committee, consisting of Dr. Saundby, Dr. Windle, and Mr. Bennett May, for further investigation as to its microscopical structure.

Renal Calculus.—Mr. BENNETT MAY exhibited a renal calculus, one and a quarter inches long, passed *per vias naturales*, and an oxalic calculus encrusted with urates, removed by lateral lithotomy, after symptoms of only eleven weeks' duration.—Mr. MANBY showed a renal calculus of the size of a hemp-seed, which had been passed after five days of intense suffering.

Ulceration of Stomach and Small Intestine in Infantile Diarrhoea.—Dr. WINDLE showed (for Dr. SAUNDBY) the stomach and portions of the small intestine, from the body of a child that had died, last August, of infantile diarrhoea. There were numerous ulcers, often aggregated together, and of the size of peas, especially in the lower part of the ileum; and in the stomach, there was a shallow ulcer, the third of an inch in diameter, with slightly raised and reddened edges. The child was admitted only two days before its death; but no history could be obtained to throw any light upon the case, or to distinguish it clinically from others, apparently similar, then occurring in considerable numbers.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

TUESDAY, OCTOBER 10TH, 1882.

GEORGE BUCHANAN, M.D., in the Chair.

Supposed Hernia in Lower Part of Thorax.—The report, by Drs. FRASER, CLARK, and FINLAYSON, on the patient shown last session with supposed hernia in the lower part of the thorax, was read by Dr. Finlayson. The swelling was situated to the left of the xiphoid cartilage, and consisted of a prominent part, which gradually lessened as it passes downwards and to the left. It was in no way discoloured; it felt tense, but not definitely fluctuant. It did not pulsate. It yielded a tympanitic note on light percussion, differing in its quality from the stomach note, and the note over the colon; but, owing to the proximity of these organs, and also the lung, this tympanitic percussion was less definitely ascribable to the tumour itself. There was no special respiratory murmur audible in the tumour, nor was there any sense of crackling on handling it. Firm pressure failed to reduce it even to the slightest extent, but caused the patient to have violent paroxysms of coughing. The tumour underwent no alteration in size with the respiratory movements. On tracing it with the finger, its upper border could be felt just to the left of the xiphoid cartilage, at its junction with the sternum; and this cartilage felt as if it were divided by the tumour, so as to form a fork, the left branch being concealed by the tumour. The committee did not come to any definite opinion regarding the exact nature of the tumour, further than that it came from within the chest, and might be either an empyema, a tumour growing out of the chest, or a hernia of the lung, pericardium, or pleura. The patient was shown to the Society, and the only change in the tumour which called for remark was, that the sense of fluctuation was a little more distinct than when he was shown last year.—Dr. GEORGE BUCHANAN observed that he was still of opinion that the tumour was a chronic abscess, but that he did not feel disposed to interfere with it at present.

Case of Cyanosis.—Dr. MIDDLETON showed a girl, fourteen years of age, suffering from a congenital malformation of the heart. The history of the case was, that she "had been born blue," and had suffered since early infancy from paroxysms of breathlessness ending in a sort of syncope. The patient, who was very small for her age, showed well marked cyanosis of face, lips, and extremities. The terminal phalanges of the fingers and toes were highly bulbous and livid. A loud ventricular systolic murmur was heard, the area of greatest intensity being over the pulmonary cartilage; the murmur was also very distinctly conveyed down the left margin of the sternum and outwards as far as the left nipple, but it was scarcely heard at the apex and over the aortic cartilage. There was little or no enlargement of the cardiac dulness to the right, and no signs of tricuspid insufficiency were present. Beyond bronchitic rales, there was nothing to be noted in the condition of the lungs. The most probable diagnosis was obstruction of the pulmonary artery with either deficiency of the interventricular septum or patency of the foramen ovale.

Perforation of the Septum Ventriculorum.—Dr. NEWMAN showed three specimens of patent foramen ovale, and one of perforation of the septum ventriculorum. The perforation in the last mentioned specimen was situated just below the aortic valve, and was large enough to admit the little finger. The channel was about half an inch long, and lined by a layer of thickened endocardium which protruded on the anterior wall of the right ventricle for nearly an inch, so as to form a valve, which nearly closed the right orifice of the opening when placed against it. There was no disease of the aortic, pulmonary, mitral, or tricuspid valves, and the foramen ovale was completely closed. The patient died of phthisis; and during life there was no cyanosis, but a

systolic murmur was audible at the apex. In only one of the cases of patent foramen ovale was there a history of cyanosis.—Dr. FINLAYSON made some observations in connection with the clinical history of the case of perforation of the septum ventriculorum, the details of which he published in the *Glasgow Medical Journal* in 1874.

Diverticula of the Urinary Bladder.—Dr. JOSEPH COATS showed a specimen of diverticula of the urinary bladder. There was one cyst larger than the urinary bladder and communicating with it by an aperture large enough to admit the tips of the finger. There were also several smaller diverticula. The mucous membrane of the bladder was inflamed and the muscular coat hypertrophied, with the usual trabeculated appearance. The diverticula were probably of the usual kind, the mucous membrane being pouched out between the thickened muscular trabeculae. The cause of the hypertrophy of the muscular coat was not apparent. There had been before death extravasation of urine with perforation of the urethra, but no hypertrophy of the prostate existed.

Hydronephrosis.—Dr. JOSEPH COATS showed a peculiar specimen of hydronephrosis. There were two chief peculiarities. In the first place, there was what might be described as dilatation of the pelvis and calices separately. The pelvis formed a large, nearly globular cyst, to which was attached the kidney with dilated calices. The calices communicated with the dilated pelvis by a series of apertures generally large enough to admit the tips of the finger. The other peculiarity was that the ureter was perfectly pervious into the cyst. The contents of the cyst did not, however, escape when the ureter was cut, the reason obviously being that the ureter runs some distance in the wall of the cyst, and enters it at an acute angle. The aperture of the ureter would thus be commonly valved. The contents of the cyst were the usual urinary constituents, with albumen.

REVIEWS AND NOTICES.

CLINICAL LECTURES ON DISEASES OF THE NERVOUS SYSTEM.
By THOMAS BUZZARD, M.D., Physician to the National Hospital for the Paralysed and Epileptic. With Engravings. London: Churchill. 1882.

AT intervals during the last ten or twelve years, studies of nervous diseases by Dr. BUZZARD have appeared in the medical press, which have commanded attention by their sterling qualities. No reader will have failed to note in them a close observation of nature, a power of co-ordinating diverse facts which does not run away into weaker speculations; and, finally, a personal reserve which, in these days of display, is rarer than one might desire. They are the work of a genuine lover of pathological nature, and of a strong and steady intelligence. The present series consists of lectures in parts thus previously published but now enlarged, and of others issued for the first time. The lectures are well edited in all respects but this, that they admit of a better classification than they have received. Two lectures on tendon-reflex are followed by one on infantile palsy, then comes a lecture on hysterical palsies, and then a series on *tabes dorsalis*. Spastic paraplegia would well have followed *tabes*, but is separated from it by lectures on peripheral and syphilitic palsies; and so on. However, this is not of very great importance, as the work does not, of course, pretend to be systematic, but consists of a collection of essays of an incidental kind, arising from the study of cases as they successively presented themselves to the author. By preserving their occasional character, the author is enabled to discuss the more special, novel, or interesting features of his cases without any regard to proportion. Many so called clinical lectures are rather essays of the study. Dr. Buzzard's sketches and notes, on the contrary, both in their directness and in their waywardness, speak from the wards, and impress us as we should be impressed, by following the work of the physician himself as he passed from bed to bed in his own hospital. We cannot give a better instance of the author's method and of the value of his comments, than by reference to his fifth lecture. This chapter deals with the differential diagnosis between certain hysterical conditions and myelitis, a subject of the utmost importance, one which must have tried the knowledge and insight of many experienced physicians, and yet one which has scarcely had a place in systematic treatises.

"There is, at any rate, much consolation to be derived from Dr. Buzzard's saying (p. 89) "That it is often extremely difficult, and occasionally, for a long time impossible to arrive at a confident opinion in cases of this kind." And yet, as Dr. Buzzard himself reminds us, our success, in a case of hysteria, depends almost absolutely on the firmness of our opinion, the strength of our conviction, and the con-

fidant hope of our forecast. At the outset, Dr. Buzzard brings us to a sense of realities by describing the case of a school-girl, aged 14, who was admitted into hospital for symptoms of an alarming kind, which were, however, hysterical, and which disappeared on appropriate treatment, but which simulated bilateral sclerosis so strongly, that it was, perhaps, the possession of a complete history alone which could have given certainty to the diagnosis, and, consequently, success to the treatment, the kind of treatment being of less importance than its impressiveness. In the next case, diagnosis was made by way of electrical examination. A third case was likewise hysterical, and duly recovered. A fourth was admitted as hysterical paralysis, but the necropsy showed spinal meningitis and basilar (meningo-myelitis with inherited syphilis. The next two cases were simply hysterical, but the seventh case was insoluble, for such symptoms as the girl presented might have been caused by slow compression of the spinal cord, and the case "furnishes a good illustration of my remarks, that you cannot cure a case of hysteria so long as you have any serious doubts as to its nature. The girl has been ill three years. If the condition be one of hysteria, she will be cured some day, probably by a bone-setter, and my eminent colleagues, as well as myself, will be covered with ignominy." Need we stay to point out how wholesome is this honest suspension of judgment, and how excellent an example it is to those who are so often led away by the easy omniscience of the popular professors of the day. Of the next three cases, the first two supposed to be hysterical turned out to be organic; the third, a very obstinate and baffling case, finally submitted to the more hopeful verdict. We remember sadly the early stages of a still lingering and hopeless malady, sclerosis disseminata, which has blighted the fair life of the sister of a valued colleague, in which stages his medical friends were wholly unable to decide between this dreaded evil and the far lighter alternative of hysteria. Nor can we now, in looking back, see much better how such confusion might be avoided. Dr. Buzzard adds his testimony to our own when he declares that exaggerated tendon-reflex and foot-clonus are quite consistent with the supposition of hysteria, and that even electric tests, by far the most helpful of any single means, may fail to reveal the nature of such cases unless repeated on several occasions.

We might quote passages from many pages of this volume to illustrate the great advantages of such lectures as these to older or younger students, even in the presence of complete handbooks and systems. Such discussions on the living subject in the class-room counteract the tendency of systematic reading to produce in the pupil too precise and formal an apprehension of disease. Pupils only thus instructed fail at the bedside, or become disheartened when they are honest or acute enough to see that individual cases decline to conform to classic descriptions.

To turn from the chapter on Hysteria to page 331, on Paralysis Agitans, Dr. Buzzard says of one of his cases of insular sclerosis: "The tremor occurred as well in a condition of repose as on the occasion of intentional movement. On the other hand, I think I can call to mind more than one case belonging, probably, to the class of paralysis agitans, in which the tremor was disposed to cease during muscular repose, and evince itself during voluntary movement of the limb." It needs a man strong in his observing power and memory to dare to repaint the lines of the standard pictures of disease; but herein also our impressions certainly favour the author's statements. Did space permit, we would gladly enlarge on other independent judgments of his on other subjects; but we may especially refer to his treatment of posterior sclerosis, and his free handling of locomotor ataxy, not as a substantial malady, but as a symptom not more essential than others, if more frequent; and his estimate of its alliances with associated phenomena. This kind of free-handed if not absolutely original treatment of posterior sclerosis in Dr. Buzzard's writings is already well known, and has been made possible not only by the discovery of the knee-jerk itself, but by the accumulating evidence of its greatest constancy.

The student who makes Dr. Buzzard's careful and naturalistic chapters on *Tabes Dorsalis* his own will benefit not only in knowledge, but more abundantly in mental exercise and discipline. Too often, we sadly admit that the study of organic nervous disease is a study of inexorable evil; we the more gladly, therefore, recall attention to a brilliant instance of the converse, and remind our readers that the alarming case of rapid and almost universal paralysis cured by antisyphilitic treatment, published in the seventh volume of the *Clinical Society's Transactions*, is paralleled by another recognised by its likeness to the former by Dr. Buzzard, and, like it, cured by specific treatment. These published cases lay a heavy responsibility on the profession; for they are terrible in their threatenings, and, if not relieved by antisyphilitic means, no doubt would end in rapid death. The subject of acute general palsies is one of the utmost importance; and the chapter thereon in the present work is not among the least valuable to the

"practical man". As, among busy practitioners, few perhaps will find time and concentration of mind enough to read the remoter or more elaborate treatises on diseases of the nervous system, we are glad to be able to commend to all medical men the comparatively small book now under review—partly because its concrete character makes it easy to read, partly because it has the true note of modern scientific work in this department, and partly because it deals almost entirely with subjects of the utmost practical importance, and not with narrower events or very special lines of thought. Much of this kind of modern work is scattered widely in the home and foreign journals, and, by the mediation of Dr. Buzzard, is given to the general reader with a new attraction and strength of its own.

A DESCRIPTIVE CATALOGUE OF THE ANATOMICAL AND PATHOLOGICAL MUSEUM OF ST. BARTHOLOMEW'S HOSPITAL. Published by order of the Governors. Volume 1: Pathology. London: J. and A. Churchill.

A SUPPLEMENTARY CATALOGUE OF THE PATHOLOGICAL MUSEUM OF ST. GEORGE'S HOSPITAL: a Description of the Specimens added during the years 1866-1881. By ISAMBARD OWEN, M.D., Curator. London: J. and A. Churchill.

DEMAND creates supply; and the constant production of new or revised catalogues is a sign of a very healthy demand, and a proof of the zealous pursuit of pathology among British medical men. The more a museum is used, the sooner will deficiencies in catalogues be detected; and as one of the features of the prevalent interest taken in pathology is the readiness of young workers to take appointments in museums: there is no lack of heads and hands to carry out the work of classification and compilation.

It would be a great boon to pathologists if not only catalogues of all the museums in London were brought out in a complete form, within the next two or three years, but if, likewise, a printed sheet of yearly or biennial additions were issued, obtainable from the publisher of each catalogue. This practice of notifying additions in print is carried out, in the case of the museum of the College of Surgeons, by Professor Flower in the conservator's annual report; when catalogues become more than five or six years old, its advantages are obvious. Everything that can be done should be done to avoid the waste of time involved in a search over twelve museums, or in the despatch of letters to as many curators, to find out how many specimens of, let us say, gluteal aneurysm are preserved in London.

All curators who have, within the last few years, completed their catalogues are to be congratulated as deserving well of science and the profession. The particular merit of the new catalogue of the museum at St. Bartholomew's Hospital is that the pathological collection is included within one volume. As the specimens illustrating disease amount to over 3,400, exclusive of 300 calculi, 186 microscopic specimens, 224 casts and models, and 600 drawings, the labour of preparation must have been very great, and Mr. F. S. Eve deserves much credit for the manner in which it has been performed. The catalogue is published in an attractive form, the binding being handsome, and the type excellent. The classification may be epigrammatically described as surgical first, and then anatomical, with less of the "medical" element, using the term "medical" in its limited and conventional sense. The pathology of bones, joints, and muscles form the earlier series, then follow the viscera in the usual anatomical order. General pathology is placed last, and is made highly valuable by a very complete table of references to specimens illustrating the different points in general pathology amongst the other and more special parts of the collection. As a rule, each specimen is described as an anatomical preparation first, and then its essential pathological features are indicated. This enables the student to identify and understand the specimen thoroughly: the advantages of the method have already been alluded to in our notices, in our notice of the first volume of the new edition of the College of Surgeons' Catalogue. It is instructive to compare the two following extracts from the new catalogue of the museum at St. Bartholomew's Hospital.

"879. Posterior portion of the right parietal bone of a boy, aged 3 years, showing a compound depressed fracture of the skull. The small portion of bone suspended was detached, and found lying on the dura mater. Death took place from meningitis (see Lawrence Ward Book, vol. 11.)"

"21. Congenital hernia from an adult. The roll of paper is passed through the inguinal canal into the cavity of the tunica vaginalis, as the space formerly occupied by the protruded intestine. (See text by F. S. Eve, Esq.)"

The first description points out what part of the body is to be seen, and then what injury, indicated by the term compound depressed frac-

ture, it illustrates. The second merely gives a term first, and then a brief indication that congenital hernia has something to do with the inguinal canal and the tunica vaginalis testis. In not a few catalogues every example, even the first of each series, would be described in this incomplete manner. In this particular example, the description of 2138 follows that of several similar specimens, the first in the series, 2136, being fully described as an anatomical preparation of congenital hernia, hence abbreviation in the description of 2138 is quite allowable. Only we once more insist on the necessity of complete anatomical details of the first specimens in every series. The history of previous catalogues of the museum at St. Bartholomew's was given in our issue of October 14th last, page 750.

Dr. Isambard Owen has done a useful piece of work in preparing his supplementary catalogue of the pathological museum of St. George's Hospital. The author has described all the specimens after an uniform plan, free from the objections to which we have above alluded; for, although each description begins with a mere name of the nature of the disease illustrated by specimen, this name is clearly intended to serve as a heading to the generally complete description which follows. Thus, 3510 is described as "Carcinoma penetrating the Cranium;" and if this were followed only by the microscopical appearances of the tumour and the history of the case, there would be much to criticize; but Dr. Owen adds a complete description of the specimen as it appears in the bottle. As the whole collection at St. George's has been re-arranged and re-numbered, a table of the old and new numbers has been appended to the supplementary catalogue—a most useful arrangement, that should be carried out in the case of every collection that is re-numbered, especially in these days, when the authors of pathological works and essays so constantly refer to specimens in London museums. Another excellent feature in Dr. Owen's catalogue is the addition of a simple index, as in the old catalogue, where pathological conditions are notified alphabetically, as events and names are indexed in a work on history. Thus, at a glance we can learn what specimens of aneurysm have been added to the collection, and what are still wanting. The supplementary catalogue is strongly bound, and printed in good, clear type.

DIE WANDERNIERE DER FRAUEN (MOVABLE KIDNEYS IN WOMEN). Von Dr. L. LANDAU. 8vo., pp. 104, with nine Woodcuts, Berlin: 1881.

SINCE Dr. Keppler's remarkable article on the surgical treatment of movable kidneys, published in 1879 in the *Archives for Clinical Surgery*, no such important addition to our knowledge of the subject has been made as this monograph by Dr. LANDAU. It is based on personal observation of forty cases on the right side, two on the left, and three of both sides. The author thinks that the condition is often overlooked, but also often suspected when not present: sometimes regarded merely as an anatomical curiosity, often, with little cause, leading to great anxiety, and of late leading to the dangerous operation of nephrectomy without sufficient reason. But the real frequency of this condition in women proves the necessity for a systematic treatise. Accordingly, we find in twelve chapters a fuller and more trustworthy treatise on the whole subject than has hitherto appeared in any language. The history and literature, the topographical anatomy, statistics, pathological anatomy, etiology and pathogenesis, symptoms, objective signs, diagnosis, prognosis, treatment, and a record of cases observed by the author, are all treated in succession with great care. The two chapters on diagnosis and treatment are specially valuable. We commend this monograph to the attention of the New Sydenham Society. It is just the sort of work wanted by the practical members of the society.

NOTES ON BOOKS.

Diaries, 1883.—Among the diaries for 1883 which have come to hand, and which are specially designed for the use of the medical profession, is the Physician's and Surgeon's Visiting List, published by Messrs. J. Smith and Co., 52, Long Acre. This highly useful pocket companion records its 37th year of publication, and is applicable to the use of all branches of the profession. The diary, or journal, is so arranged that each day has its column and every patient his line, and the decussation of the two describes a small space common to each. A table of signs is also furnished for the help of those who may require this guidance. It contains, besides, a large amount of useful information, in an easily available form, including, in addition to the usual postal notices, a list of "fees legally claimable by medical men;" "the physician's compendium," including, in a tabular form, the doses of all the principal drugs, and

Pharmacopæia, and other non-official medicines, revised by Dr. Sheldon; a table for calculating the period of utero-gestation, by Dr. Protheroe Smith, and other useful information. Separate pages are provided for obstetric and vaccination engagements, and a large amount of space is allotted for memoranda and addresses of patients, nurses, &c. This diary, which is both portable in form and moderate in price, is worthy the attention of those who have not already made themselves acquainted with its useful qualities.

The diaries of Messrs. Letts, Son and Co. (Limited) are marked by their usual fulness of information and careful adaptation to the uses of the different classes of the community for whom they are intended. The one most interesting to the medical profession, the Medical Diary, provides especially for all matters of interest to the general practitioner, including space for the entry of daily visits, accouchements, vaccinations, and many useful notes on emergencies occurring in ordinary practice, together with all necessary information for the business conduct of daily life. The workmanship of these diaries is, of course, beyond reproach. They are neat, strong, and durable, so as to endure rough wear for the twelvemonth. Messrs. Letts also send us a smaller and less expensive Appointment Diary, which provides an hourly arrangement for the punctual keeping of engagements by all classes of the community, but is intended especially for professional persons, lecturers, and students. This is a most useful little book, as its size enables it to be carried comfortably in the pocket. The most forgetful person can have no excuse for not keeping an appointment if his engagements be duly entered in this diary. The tablet, rough, and desk diaries issued by the firm are all useful in their various ways, and contain a mass of valuable information.

We have also received some specimens of useful Library Table Diaries from Messrs. Charles Letts and Co. These, which are issued in useful 8vo., 4to., and folio sizes, are noticeable for their cheapness. The folio, improved scribbling, two and three day diaries, which are modelled upon an entirely new plan suggested by the late Dr. Livingston, will be found extremely serviceable for the desk or table.

Another very cheap and convenient form of Scribbling Diary is that published by Messrs. James Blackwood and Co.

The Diary of the Sanitary and Medical Records (Smith, Elder and Co.) is a cloth-bound desk diary, which aims at supplying a vacant place, being useful to the medical profession and to sanitarians. It opens with forty pages of selected and condensed information useful to medical practitioners and to medical officers of health. There is a paucity of diaries whose literary contents are devoted to matters connected with hygiene and sanitation; but if the proprietors continue to publish annually such a work as that now before us, and on such terms, there will be no reason to complain of lack of useful information for the medical practitioner or the sanitary engineer. There is a well-written article on the therapeutics of the new remedies, and another on food for invalids, &c. The mean time of digestion of various articles of food is given, as well as tables of the nutritive value of foods. A list of natural mineral waters, with indications of their chemical character, and a statement of "poisons and their antidotes," the treatment of asphyxia from various causes, and methods recommended for restoring apparently drowned persons. This is followed by the doses of common and rare drugs, of those used by subcutaneous injections, and of those suited for atomisation, proportionate doses according to age, relations of measures of capacity of the British *Pharmacopæia* to the metrical measures, the metric system in medicine, tables of doses of the more potent medicines, tables of quantities, saturation table, &c. For the guidance of the practitioner in a legal sense, fees claimable by him in a court of law are set out, as well as some useful medico-legal notes, and instructions and recommendations to them as to the performance of vaccination, registration of births and deaths, including the duties of householders, the rules in force for visitors to the fever and small-pox hospitals. A variety of information is given respecting sanitary matters, including Acts of Parliament, model by-laws, memoranda issued by the Local Government Board, lists of sanitary societies and associations, British and foreign sanitary and medical publications. A great amount of other cognate sanitary and medical information is given. The general information is similar to what we find in other almanacks and diaries. The diary proper contains spaces for engagements for each day in the week on one page interleaved with blotting-paper, and at the end are pages devoted to cash account. This is the first year of what promises to be an useful publication.

The Journal of Anatomy and Physiology, vol. xvii, part 1, October 1882, contains: On the Lymphatics of the Walls of the Larger Blood-vessels and Lymphatics, by Drs. George and Elizabeth Hoggan. On Micrococcus Poisoning, by Dr. A. Ogston. On Omphalo-mesenteric Remains in Mammals, by Dr. W. Allen. On the Action of Saline

Cathartics, by Dr. M. Hay. On a hitherto Undescribed Fracture of the Astragalus, by Dr. F. J. Shepherd. On a Secondary Astragalus in the Human Foot, by Prof. W. Turner. Note on the Rectus Abdominalis et Sternalis Muscle, by Dr. G. E. Dobson. On a Case of Ectopia Vesicæ, etc., in a Newly-born Infant, by Dr. F. Ogston. On Nickel and Cobalt; their Physiological Action on the Animal Organism. Part I, Toxicology, by Dr. T. P. A. Stuart. A Kerato-thyroid-muscle as a Variation in Human Anatomy, by S. G. Shattock. On Cesalpino and Harvey, by Professor Humphry.

CHRISTMAS CARDS are not only now used as the universal language of seasonable congratulations and good wishes, but are the special joy of the sick in homes, hospitals, and public institutions, to whom they are widely distributed. We have received from Messrs. Eyre and Spottiswoode, and from Messrs. Raphael Tuck and Sons, some highly artistic specimens of the Christmas and New Year's cards they are issuing for the present year. The designs are novel and numerous, and some of them are by the best known artists of the day. Portfolios of angels' and children's heads by Sant; pretty girl figures by Marcus Stone, R.A., and Leslie, R.A.; and fantastic designs of elvins of the air, by Yeames, R.A., all conveying Christmas and New Year greetings, are particularly worthy of notice among the productions of Messrs. Tuck. Some of the floral designs issued by Messrs. Eyre and Spottiswoode are also particularly good, especially, we think, those executed by Mrs. Maurice. The rustic figures also, by Linnie Watt, are quaint and charmingly drawn. Both publishers issue a great variety of the cheaper as well as of the more costly and highly finished varieties of cards. Many a home will be gladdened, and many a hospital ward brightened, by the distribution of sheaves of these pretty, kindly, and welcome pictures, breathing hope and good wishes, and instinct with the spirit of love and the image of beauty.

REPORTS AND ANALYSES AND DESCRIPTIONS OF NEW INVENTIONS IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES. IMPROVED MEDICAL THERMOMETERS.

A REPORT from the Kew Observatory on some "Medical Thermometers constructed in a special manner," by Mr. S. G. Denton, of 25A, Hatton Garden, proves that these instruments are very trustworthy. It was found that the mean variation of twenty-three clinical thermometers, tested at different points of the scale, after the interval of a year, amounted to only 0.06 Fahr. In many of the thermometers the variation was quite inconsiderable, and in none was it more than 0.2 Fahr. in any part of the scale.

Such instruments as these are very valuable in clinical thermometry considering the great number of thermometers now employed, especially at hospitals, where observation is most important, which are far worse than useless. It may not be generally known (but it is a not uncommon occurrence) that the index of thermometers, owing to faulty construction, frequently rises several degrees after being removed from the axilla or other position of observation; and that in several thermometers this error obtains at one part of the scale and not at another. It therefore comes to be of more than theoretical importance to have thermometers of proved accuracy and constancy at all parts of the scale, such as those now under notice. The outward appearance of these thermometers is not different from that of an ordinary mercurial instrument, the improvement being verified by the testing. It is certain that we have already many most excellent clinical thermometers supplied by our best makers. Mr. Denton's rival to these will doubtless be largely influenced in its popularity by its relative price, a statement of which is not before us.

COMBINATION STETHOSCOPE.

DR. W. H. TAYLER, of Tudor House, Anerley, in reference to the notice which we published in the BRITISH MEDICAL JOURNAL, page 900, under the above heading, calls renewed attention to a "combination stethoscope" which carries concealed within its stem a clinical thermometer and female catheter, and also a *porte-caustique*. We described and commended this ingenious instrument in the BRITISH MEDICAL JOURNAL of September 18th, 1880.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st.

Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, DECEMBER 9th, 1882.

MEDICAL REFORM.

WE published, last week, the full report of the action of the Medical Reform Committee of the British Medical Association in bringing under the notice of the Lord President of the Council, Lord Carlingford, and Mr. Mundella, the Vice-President, the urgency for early action by the Government to bring about a solution of the pending question of reform in medical education, examination, and registration, on the basis of the conclusions of the Royal Commission. We need not refer again to the overwhelming arguments in favour of such a course, which are ably set forth in detail in the statement read by Dr. Waters (Chester), Chairman of the Committee, supported by other speakers in this highly influential deputation. We have good reason to believe that the desired result has been attained, in so far that the Government are now, we understand, resolved to prepare such a measure on the basis authoritatively laid down by the Commission; and that the Bill will be drafted and introduced by the Government having this object, and drawn upon these lines. The announcement which we are thus able to make, will be received with great satisfaction by the immense majority of the profession—so overwhelming a majority, that we feel justified in saying that the Government will, in this matter, receive the active support of the profession at large. It must, however, be remembered that no satisfactory measure of the kind can be prepared without opposing the views of some highly influential persons in the profession, especially some who are at present connected with corporate bodies whose interests either are, or are supposed to be, adverse to medical reform and to the improvements in medical education, examination, and registration, which the profession at large have for many years urgently demanded, and for which the British Medical Association has long strenuously contended. It will, therefore, behove all the branches of the profession, and all those members of the branches who can individually bring influence to bear upon members of Parliament in support of the Government, to take active steps for lending the Government the whole weight of their influence and support in this measure. In the step which is being taken, the Government have yielded to the unmistakable wish of the profession; and they may fairly look to the British Medical Association, to all its branches, and to all its members, for earnest, active, and unwavering support. This support, we feel sure, will be rendered with enthusiasm, without stint; but, unless this assistance be so rendered, it is possible that the opposition to which we refer might seriously hamper even the present powerful Government in carrying forward this great and salutary measure of medical reform.

A REVIVING MEDICAL SCHOOL.

MEMBERS of the British Medical Association, and the medical profession at large, will have watched with deep interest the gradual, but still promising, progress made in the effort to restore the lost Medical School of Oxford during the last few years. When first we took this weighty matter in hand, and undertook to demonstrate how truly the Medical School of Oxford was indeed a lost school and its faculty a dead medical faculty, we were fully conscious of the gravity of the task taken in hand, and of the immense power of the forces arrayed against the cause of reform.

All the more earnest will be the feeling of congratulation and solid sense of satisfaction and approval of the progress which has, in a few years, been made towards the desired end of restoring Oxford to her place as an *alma mater* of the medical profession, and removing from this University the singular reproach of being the only great University in Europe which can be mentioned that had abdicated its teaching functions in relation to the science and art of medicine, and had perverted to other uses the large funds with which it was endowed for the purposes of medical teaching. The memorial for the restoration of the medical faculty, which was signed by upwards of two thousand members of the medical profession, and intrusted to us for presentation to the Oxford authorities, expressed the earnest hope of the profession that the chairs necessary for the teaching of medicine and its allied sciences would be reconstituted, at an early date, in such a manner as to enable medical students to receive at Oxford such instruction in their profession as is so admirably provided at the sister university of Cambridge, and at other great universities in this kingdom and throughout Europe. Since then, no small progress has been made; and we have chronicled with hopeful satisfaction the successive steps taken towards realising the object in view. Last week, we had the great pleasure of referring to the appointment of the new Waynflete Professor of Human Physiology and Histology. Another step forward is now to be recorded. A statute of considerable importance for the future of medical studies in Oxford has passed the first stage in Congregation. Its object is to provide clinical instruction in medicine and surgery for members of the university at the Radcliffe Infirmary, by the appointment of a physician and a surgeon at that hospital to clinical lectureships in medicine and surgery respectively, for which the funds of the Lichfield Trust will serve as an endowment.

We had to comment strongly, and with plain speaking, when first we took this question in hand, on the lamentable fact that, for a long series of years, there had been no clinical teaching in connection with the Lichfield professorship. Under the new arrangement, such teaching will be provided, and provided in a manner recognised by the university, and declaratory of the importance of the Trust. There still, however, remains much to be done before Oxford can claim to be regarded as possessing even the necessary elementary medical teaching of the first two years of the medical student's career. Foremost among the necessities of the university is the reconstitution, in a practical sense, of the anatomical teaching. Mr. Moseley was appointed, under pledges that he would spare no pains towards this end. We have the fullest confidence that he will redeem these pledges. Meantime, Oxford does not possess any such systematic teaching of human anatomy for the medical student, as is required by the curricula of the General Medical Council and of the examining bodies. Mr. Moseley has still to do for Oxford what Professor Humphry has done for Cambridge: to arrange a dissecting-room adequately provided with subjects; to provide a systematic course of teaching of human anatomy and a systematic supervision of dissections. We are far from being insensible to the difficulties which he will have to encounter both from within and from without, but we cannot doubt that he will resolve to overcome these obstacles. What Humphry and Foster have done for Cambridge, Sanderson and Moseley can do for Oxford. The profession and the university have a right to expect that they will do it. On them rests the most weighty part of the immediate work which has yet to

be done to restore the medical faculty of Oxford. Once they have organised adequate and systematic teaching of human anatomy and physiology, the rest will be comparatively easy. There exist at Oxford all the elements for the teaching of the accessory sciences; and, when once they have done their part, it will no longer be possible for those on whom already a clear responsibility rests to organise the existing courses in such a manner as to make them available for the purposes of medical students, to plead that they do not feel called upon to do so, while the fundamental elements of medical teaching, viz., the teaching of human anatomy and physiology, are still in a disorganised state. This subject is one of which it is impossible for us to lose sight. The elements for medical teaching are now floating about at Oxford in irregular abundance; they need still a vigorous stirring to resolve them into a crystallised and regular shape. Those who have already done good work in this direction, and to whom the University owes so much for their gallant energy in carrying on this arduous but important undertaking, must now more than ever exert themselves to bring to a satisfactory conclusion these series of reform, which have already made promising progress.

THE ANNUAL MEETING OF 1883.

IN accordance with our usual custom at this time, it becomes our agreeable duty to lay before our readers some details, so far as they have been matured, of the arrangements made for our annual meeting of 1883. The name of Dr. A. T. Houghton Waters, under whose presidency this meeting will be held, is in itself, perhaps, a sufficient guarantee that the arrangements will not be wanting in completeness, and that no efforts will be spared to render our annual meeting of 1883 worthy of its predecessors.

The annual meeting of 1883 will be held in the important city of Liverpool, commencing on July 31st. The well-known and magnificent buildings of St. George's Hall, unfortunately, could not be obtained for the meeting, being required during the whole of August for the Assize Court and Sessions. The buildings of the School of Medicine and the new University College, which were in other respects well suited for the Association meeting, failed in having no large hall for general meetings. The local committee, therefore, selected Liverpool College, Shaw Street, a splendid building, with abundant accommodation in its class-rooms for all the sections, a large hall, a grand gallery for the museum, a luncheon-room, and every other convenience. This building is situated near London Road, five minutes' walk from the Royal Infirmary, and about ten minutes' from the chief railway stations and principal hotels. The local members of the Association in Liverpool have already begun to organise plans for preparing to make the meeting a great success. Various subcommittees have been appointed, some of which are already at work.

The Committee of Council, at their last meeting in London, appointed the officers of the various sections and readers of addresses.

The following are the officers of sections: *Medicine—President:* John Cameron, M.D. *Vice-Presidents:* Thos. Robinson Glynn, M.D.; Frederick Thos. Roberts, M.D. *Secretaries:* Richard Caton, M.D., 18a, Abercromby Square, Liverpool; Byrom Bramwell, M.D., 23, Drumsheugh Gardens, Edinburgh. *Surgery—President:* Edward R. Bickersteth, F.R.C.S. *Vice-Presidents:* W. Hargreaves Manifold, M.R.C.S.; W. Mitchell Banks, F.R.C.S. *Secretaries:* Wm. Rushton Parker, M.B., F.R.C.S., 61, Rodney Street, Liverpool; Edmund Owen, M.B., F.R.C.S., 49, Seymour Street, Portman Square, W. *Obstetric Medicine—President:* W. M. Graily Hewitt, M.D. *Vice-Presidents:* John Wallace, M.D.; David Lloyd Roberts, M.D. *Secretaries:* J. E. Burton, L.R.C.P., 64, Rodney Street, Liverpool; W. C. Grigg, M.D., 6, Curzon Street, Mayfair, W. *Public Medicine—President:* T. P. Teale, M.B., F.R.C.S. *Vice-Presidents:* William Carter, M.D.; W. Honner Fitz-Patrick, M.D. *Secretaries:* F. Polard, M.D., 52, Rodney Street, Liverpool; George Goldie, M.D., 123, Hyde Park Road, Leeds. *Anatomy and Physiology—President:* Professor E. A. Schafer, F.R.S. *Vice-President:* William Stirling,

M.D.; Richard Norris, M.D. *Secretaries:* James Barr, M.B., 1, St. Domingo Grove, Everton, Liverpool; A. W. Mayo Robson, F.R.C.S., Hillary Place, Leeds. *Pathology—President:* T. H. Green, M.D. *Vice-Presidents:* E. H. Dickinson, M.D.; Joseph Coats, M.D. *Secretaries:* Frank T. Paul, F.R.C.S., 44, Rodney Street, Liverpool; Jas. F. Goodhart, M.D., 27, Weymouth Street, W. *Psychology—President:* T. L. Rogers, M.D. *Vice-Presidents:* G. H. Savage, M.D.; D. Yellowlees, M.D. *Secretaries:* G. E. Shuttleworth, M.D., Royal Albert Asylum, Lancaster; W. Julius Mickle, M.D., Grove Hall Asylum, Bow, E. *Ophthalmology—President:* T. Shadford Walker, M.R.C.S. *Vice-Presidents:* E. Nettleship, F.R.C.S.; C. E. Fitzgerald, M.D. *Secretaries:* E. A. Browne, M.R.C.S., 86, Bedford Street, Liverpool; C. E. Glascott, M.D., 23, St. John Street, Manchester. *Diseases of Children—President:* Samuel Jones Gee, M.D. *Vice-Presidents:* M. G. B. Oxley, M.D.; T. R. Jessop, F.R.C.S. *Secretaries:* H. G. Rawdon, M.D., 42, Rodney Street, Liverpool; H. Ashby, M.D., 13, John Street, Manchester.

Mr. Reginald Harrison of Liverpool has undertaken the delivery of an Address in Surgery, and Dr. Creighton that of an Address in Pathology.

It is expected that a large number of leading American and continental physicians and surgeons will be present.

There will be, probably, at least two evening entertainments, but nothing on the subject is as yet settled.

Apart from the meeting, there is much in and near Liverpool to interest a visitor. Among the most important places, are the new University College, the well organised School of Medicine, three large general hospitals, and the workhouse infirmaries, special hospitals for diseases of the eye, diseases of children, etc.; the new Eye Infirmary, one of the least expensive, yet most effective and artistic buildings in the town; the large docks, and new docks recently opened by the Prince of Wales; St. George's Hall Art Gallery with collection of pictures; the Derby Museum (collection of natural history, etc.); numerous private collections of art in the neighbourhood; St. Helen's with its glassworks; Widnes, with its chemical works; Knowsley Park (Lord Derby's seat) with its collection of pictures, etc.

The most attractive excursions after the meeting will be those by sea. The following will probably be arranged: 1. By sea to Llandudno and Conway; 2. By sea to Blackpool; 3. By river to Runcorn and Widnes; 4. By land to Chester and Eaton Hall; 5. By land to Southport. Arrangements will also probably be made for excursions to the mouth of the river, to meet the great American steamers which arrive almost daily.

No exertion will be spared by the powerful and numerous body of the profession who act as hosts, to make this meeting both numerous and successful; and we feel sure that their power is equal to their will, and that the Liverpool meeting, which has long been looked forward to, will be a brilliant success scientifically and socially.

ON NERVOUS DERANGEMENT IN DIABETES.

THE subject of diabetic coma, and its supposed connection with lipæmia, fatty embolism, and acetonaemia, has been lately much discussed, while less attention has been given to many other signs of disturbance of the cerebro-spinal nervous system which are apt to occur in that disease. We do not intend in the present article to take up the subject of diabetic coma, further than to say that it is by no means proved, as some of the most recent writers on this subject seem inclined to assume, that the presence of acetone, or the superabundance of fat in the blood, is really the cause of that peculiar form of dyspnoic coma, which in a number of instances terminates the malady in such a striking manner; but the pathogeny of this peculiar condition will probably be found to be connected with the general exsiccation of the tissues, and more especially of the nervous matter, which is found in diabetic subjects, and to which attention has been more particularly drawn by Ranke.

On the present occasion we intend to refer to some other forms of neurotic disturbance liable to crop up in the course of diabetes, and to

which an able and laborious essay by Bernard and Féré in the *Archives de Neurologie* for November, has been devoted. These symptoms occur in the sphere of motion, general and special sensibility, and the intellect, while trophic disturbances are on the whole rare; and they have all one feature in common, viz., that they appear most unexpectedly. They seem, on the whole, to depend less on the diabetes itself than on the general nutritive changes in the system which are determined by the glycosuria. Analogous symptoms are not unfrequently observed in patients who are subject to uric acid diathesis, which is so closely allied to diabetes; moreover, they appear often when the quantity of sugar in the urine has diminished, and diabetic patients are occasionally found to succumb to cerebral symptoms just at the moment when they are no longer glycosuric.

In the sphere of motility, the earliest, most frequent, and diagnostically speaking, the most important symptom is a sensation of fatigue, lassitude, and utter want of muscular energy. This does not depend on muscular emaciation, which is one of the later symptoms of the malady; but comes on, without apparent cause, either in the lower extremities or the loins, and may be severe enough to raise suspicion of spinal disease. There is difficulty in walking, the movements are slow, awkward, and without vigour; and the degree of the trouble varies a good deal, according to treatment, diet, etc. This lack of power may occur quite suddenly after a slight injury, and it has been attributed to defective nutrition of the muscles by the saccharine blood.

Various forms of paralysis are also observed, which are either localised, partial, and incomplete, or there is regular hemiplegia. At first, there may be an attack of apoplexy, with consecutive hemiplegia, which may get well; and there may be a repetition of these symptoms later on. In other cases, the apoplexy proves fatal, or there is simple loss of consciousness without subsequent paralysis, or a bad attack of vertigo. Again, paralysis may come on without being preceded by apoplexy; and hemiplegia of one side may be combined with monoplegia of the other. Monoplegia is, indeed, so frequent in the course of diabetes, that it is always advisable to examine the urine for sugar in such cases. Palsies of this kind may be confined to a limb, or part of a limb; to a single muscle, or a small group of muscles in the face; and they affect frequently the tongue and the muscles moving the eyelids. They may be quite transitory, indeed last for a few hours only, and are often incomplete.

Difficulty in speaking may be either of the aphasic or the anarthric kind, or be simply owing to general debility combined with dryness of the tongue. Sometimes, there is a more or less complete loss of the memory for words. A temporary kind of aphonia is probably owing to transitory paralysis of the muscles of the larynx. There are not as yet any very conclusive observations on palsies of the muscles of the eye, although Kiwatskowski has recorded a case of paralysis of the fourth nerve in a diabetic patient, and the rectus externus has been found paralysed under similar conditions.

Another interesting symptom in the motor sphere is loss of the muscular sense, and a consequent tottering gait, especially in the dark. This may be combined with "pins and needles" in the lower extremities, and therefore simulate tabes spinalis or locomotor ataxy. In such cases, one cannot help being struck by the close similarity of many of these symptoms to those of tabes.

Cramps and convulsions are far from common. The former appear generally at an early period of the malady, together with the muscular lassitude. Cramps occur mostly in the lower extremities, and at night, and thus lead to insomnia, in the same way as polydipsia, nocturnal urination, sensations of pricking, tingling, and cold. Sometimes, however, insomnia appears without any of these apparent causes, and should lead us to test the urine for sugar; it is then, indeed, the first sign of disturbed cerebral circulation, and may be the precursor of more serious troubles. Convulsions may be observed, either by themselves, or associated with a comatose coma, or with different kinds of palsies. In the latter case, they are most probably owing to cortical lesions, more especially because they sometimes show the characters of

partial monoplegic epilepsy, and alternate with temporary paralysis seated in the same area of the brain. The vertigo which is sometimes observed is probably allied to these epileptiform phenomena.

An important feature of the pathogeny of these cases is, that such palsies may be developed some time before the diabetes appears, as seen by Dr. Pavy, or just when the sugar disappears from the urine, or after it has been completely absent from it for several months consecutively. All the symptoms hitherto mentioned are subject to frequent remissions, which has led some observers to consider them due to congestion; but they may also be explained by limited destruction of certain parts, which are afterwards supplemented by other similar parts. Dr. Dickinson has described lesions in the nervous system of diabetic patients which he looks upon as primary, and as explanatory of all localised morbid phenomena—viz., milary excavations along the blood-vessels, containing extravasated blood or crystals of hæmatine, and areas of milary sclerosis in the brain, as well as in the cord. Subsequent observers have, however, not been able to corroborate these observations, and it seems exceedingly doubtful whether such lesions are really primarily developed.

With regard to sensibility, it is found that complete anæsthesia is rare; local areas of insensibility, however, are sometimes noted, so that hairs may be pulled out without causing any pain to the patient. More frequently there are complaints of tingling, tightness, cold, heat, and numbness, especially in one or both lower extremities, or in the sexual organs. Like the tabetic patient, the diabetic is exceedingly sensitive to external cold. Tactile sensibility may vanish, so that the patient is unable to hold a pin between his fingers without looking at it. Some patients lose the proper sensation of the ground on which they are walking. Pain in the joints, the loins, the haunches, and the back is common, and it seems particularly to invade the neck, where it is felt as a burn or the bite of a dog, and is combined with stiffness of the muscles. This rigidity extends occasionally from the back of the head down to the sacrum. There may also be headache, pressure on the top of the head, and various forms of neuralgia, more especially symmetrical and obstinate sciatica. Lightning-pains, similar to those of ataxy, have likewise been observed, and may, if combined with difficulty in standing, plantar anæsthesia, and areas of hyperæsthesia, lead a hasty observer to the diagnosis of tabes.

Sexual desire is generally in abeyance. In men there is frigidity and impotency, in women actual repugnance to connection. Certain neuroses, such as asthma, angina pectoris, and exophthalmic goitre, may be combined with glycosuria. Deafness is more frequent in the diabetic than in other persons, and seems sometimes purely nervous, while in other cases it is owing to lesions of the middle ear. Anorexia and perversion of the sense of smell have also been observed.

It is, however, the ocular affections occurring in diabetes which are of the greatest importance for diagnosis and prognosis. A more exact knowledge of the lesions found in the retina of the diabetic will probably, in time, lead us to a better comprehension of the cerebral symptoms occurring in the same disease. Diabetic amblyopia may be slight or grave, and may be the first symptom of diabetes. All objects appear to the patient in a kind of yellowish haze, and this is worse after meals. In general, both eyes are unequally affected. In most cases this appears due to paresis of accommodation, and the ophthalmoscopic examination of the fundus of the eye shows this to be normal, or, at most, the presence of a slight congestion of the optic disc. Glycosuric retinitis occurs in severe cases, chiefly towards the end, and does not appear to differ materially either in objective or subjective symptoms from albuminuric retinitis. Further researches on the finer changes of the retina in diabetes are most desirable.

The intellect is generally below par, the memory impaired; there is much despondency and apathy, interrupted by terrifying dreams, hallucinations and delusions, which may lead to suicide. At other times the patient is simply passive, hates to be disturbed, and cares for nothing but to be left alone. This intellectual decay often coincides with gradually progressive physical debility: but general paralysis of the

insane and other similar affections, which have been occasionally observed towards the end, seem to be mere coincidences.

Trophic disturbances, such as are common in certain diseases of the spinal cord, may occasionally be observed in diabetic patients, such as perforating ulcer, with formation of eschars and copious hemorrhage, localised sweating, atrophy of the skin and adjacent tissues, and muscular atrophy.

THE SCIENTIFIC WORK OF THE ASSOCIATION.

WE are glad to see, from the report of the meeting of the Collective Investigation Committee, which appears in another column, that the work of the Committee is enlisting the best efforts of a large body of the ablest workers in our profession. Sir James Paget and Sir William Gull, we learn, have both promised to deliver lectures upon the subject, to what will be, without doubt, a very large and representative audience; it will consist not only of members of the Metropolitan Counties' Branch, but invitations will be issued to a large number of others who have taken interest in the movement. When so many of the most distinguished, and probably the most deeply occupied men in the profession, are willing to give the large amount of time involved in preparing and delivering addresses on this subject, it is not too much to hope that a very large number of our members will be found willing to spare the small amount of time needed in this scheme for the advance of our knowledge of medicine. The Committee ask each member to fill up one card, containing the details of a single case, for each of the diseases under investigation; of these, there are three for the present year. The questions are exceedingly simple, and can be easily answered from the ordinary examination of a case; no especial or unusual observations are required. Each card requires about five minutes to fill it up, ten minutes at the outside. Each member is therefore asked to contribute thirty minutes of his time during twelve months towards the advancement of his science. If every member did this, the Committee would obtain over 12,000 replies to their inquiries, which would be more than sufficient to set at rest for ever the many vexed questions to which they seek answers. Our knowledge of the three diseases—acute pneumonia, chorea, and rheumatism—would be very greatly increased, and our methods of treating them would probably be much more defined and reliable. The cards and memoranda have been drawn up with great care and ability, by men who have devoted a large amount of time to the work; few will even read them through without deriving valuable information from them. Unfortunately, past experience gives reason to fear that, great as this advantage would be to the profession, and to each individual member of it, only a comparatively small number may be found sufficiently self-sacrificing to give half an hour out of the 8,760 hours of the year to this good work.

If only one member out of every four gave the returns that are asked for, three thousand replies would be obtained, and this would probably suffice to settle many of the questions that have been raised. We do not, however, fear that the members of the British Medical Association at large will be found wanting. Many of the leaders of the profession are ready to do their utmost; young and active workers are spending much energy and time in preparing, organising, and making easy the paths. It only remains for each individual member to do his mite, and the work will be accomplished.

ASSOCIATION AMONG PRISON MEDICAL OFFICERS.

FROM time to time, appeals to those in authority have been made by prison medical officers, praying for redress for their grievances, or, at least, for an investigation into their complaints; but either their applications have been treated with contemptuous silence, or with a merely formal acknowledgment, and have come to nothing. We ourselves also, on various occasions, feeling the justice of their complaints, have advocated their cause in these columns, but in vain. No doubt guided

by our advice, candidates for employment have been deterred from entering the prisons service; but, at the present moment, one result, we learn, has been that of throwing extra work on those holding appointments.

We believe the administrative authorities of this department fully sympathise with their medical officers, and would willingly advance their claims had they any hope of succeeding with the Treasury; but something more than a favourable representation of just claims is required to influence this high department of the State.

Finding that individual appeals, and those through the press, are unnoticed, it has been proposed to form an association of prison surgeons—not with the object of any revolutionary design, or of any movement that might resemble an illegitimate combination—but simply an association of gentlemen employed in similar capacities, in order that they may find additional strength for their duties as such, and also that they may determine together what are their just claims, and, having settled them, be in a position to bring them, with some weight of authority, before the Secretary of State.

We do not see why such an association should not succeed, embracing, as it should do, all the prison surgeons in Wales and Scotland, the more especially as the Home Secretary has just now directed that the claims and grievances of the subordinate officers of the convict prisons are to be brought officially to his notice.

Alterations in the prison department have transformed it into a large service, and with its growth and the changing conditions of the times, and gradual elevation of our profession, a revision of the conditions under which medical men serve in it is much called for. These could most satisfactorily be considered by an association which could discuss the opinions of individuals, and thus arrive at a definite conclusion as to the best means of promoting the welfare of its members. The condition and wishes of such an association could be effectually furthered by the Parliamentary Bills Committee of the British Medical Association, which could bring to the task the greatest goodwill and no small experience and influence.

The question of pay, present and prospective, would be of the first importance. That the pay is quite inadequate, there can be no question. Absolutely, it is insufficient for the amount of work and responsibility, and relatively, when compared with that of other officials whose work or responsibility is less. For instance, the pay of the senior medical officer should, we are of opinion, equal or approximate that of the governor, and the junior surgeons should be put on a par with deputy-governors.

Of equal importance is the question of retirement. Under the present system, retirement is permissible at the age of 60, but not before, except through ill-health; but is not compulsory at any age. Thus, there is no certainty of promotion, and the holder of an appointment has no means of deciding anything of his future. This, of course, should not be; compulsory retirement should prevail, as in the military services, and they also might be taken as a standard for retiring allowances, ranging from £300 to £450 per annum.

Besides these questions of pay and retirement, there are those of a less substantial but equally practical nature. The position of the surgeon is anomalous: whilst he holds equal rank with the governor, he is subordinated to him in many respects. Considering the extraordinary responsibility of a prison surgeon, and seeing how much his responsibility and his sole judgment and knowledge protect the prisoner and control the acts of the governor, who, on his part, cannot interfere with those of the surgeon, it seems an anomaly for the latter to assume a superior position. Medical officers of prisons should have the power to hold direct communication with their superior officers, from whom alone they should obtain leave of absence; and, like the governors, they should be able to take twenty-four hours' leave on their own responsibility.

These are some of the subjects which the proposed association could discuss, and embody in a memorial, should such a step be found necessary. Nor should a statement of the duties be omitted. Office hours

over, every other official is free from work and care until a new day brings with it its own responsibility; the lowest subordinate officer goes home when his work is done, to rest till morning. Not so the medical officer, whose last hour of duty for the day precedes the first hour of duty for the morning. Except when enjoying his hardly earned leave, he has no rest from care throughout the year.

With such firm ground for a foundation, we think an association of Prison Surgeons would not fail to obtain a hearing. As to the organization of such an association, there could not be any valid objection to it. It should be formed without disguise or secrecy, and would have for its object not only the welfare of its members, but that of the service to which they belong, and of the prison administration in which they bear such heavy responsibilities.

THE University of Zurich will, at the end of the current winter term, celebrate the fiftieth anniversary of its foundation.

THE Metropolitan Asylums Board have passed a resolution that ambulance stations, similar to that in George Street, London Fields, should be established without delay in other districts of the metropolis.

WE understand that Dr. Gervis, obstetric physician to St. Thomas's Hospital, will be nominated by the Council of the Obstetrical Society of London for election by the Fellows as the new President, in place of Dr. Matthews Duncan, whose term of office expires in February next.

A MEETING of the subscribers to the Napper Testimonial Fund was recently held; J. Eric Erichsen, Esq. F.R.S., in the chair. It was resolved to close the Fund: and a subcommittee was appointed, with full power to decide the form the testimonial should take, and to make arrangements for the presentation at an early date.

AMONG the casualties from the great fire at the Alhambra Theatre, two, which were admitted into Charing-cross Hospital, under the care of Mr. Bellamy, early on Thursday morning, are very serious. One is a case of severe fracture of the skull, the other is a case of rupture of the urethra and fracture of the pelvis.

THE Lumleian Lectures for 1883 at the Royal College of Physicians will be delivered by Dr. A. B. Garrod, on "Uric Acid: its Relation to Renal Calculi and Gravel". The Croonian will be given by Dr. J. E. Pollock, the subject being "Modern Theories and Treatment of Phthisis"; and the Gulstonian, on the "Nature, Causes, and Treatment of Sterility in Woman", by Dr. Matthews Duncan.

WE are informed that the late Dr. Peacock, long connected as physician and lecturer with St. Thomas's Hospital, has left a bequest sufficient to establish a scholarship in the medical school, of the value of forty guineas. The scholarship will be tenable for two years, on the same terms as those of the "Musgrove" Scholarship, founded by the late Sir John Musgrove, formerly President of the Hospital, and will bear the title of "The Peacock Scholarship".

DR. OLIVER WENDELL HOLMES, has, it is announced, resigned his professorship of anatomy that he might have more leisure to devote to literary work of an especially congenial nature, and not, we are glad to understand, from any consciousness of decreasing strength. A finally revised edition of his works will be prepared under his personal supervision, than which there can be no more agreeable or suitable occupation for the ripe years following the threescore and ten of an author who, though having written much, has given nothing to the world of

which he has cause to be ashamed. Everyone will wish that the "Autocrat of the Breakfast-table" may find time not only to revise, but to add to his delightful writings. Holmes and Lowell are, perhaps, the only two American authors thoroughly dear to the hearts of British readers.

THE jubilee of the election of M. J. B. Dumas, the celebrated chemist, into the Paris Academy of Sciences, was celebrated on the 6th instant. He has been secretary of that body since 1868, and his colleagues marked the occasion by presenting him with a bronze medal bearing his effigy. M. Dumas, who is in his eighty-third year, made a touching reply, and expressed his delight at seeing his pupils advance beyond him in scientific researches.

THE BRADSHAW LECTURE AT THE ROYAL COLLEGE OF SURGEONS.

WE call the attention of our readers to this lecture, which will be delivered for the first time by Sir James Paget, at the Royal College of Surgeons, at three o'clock on Wednesday next, the 13th inst. The subject of the lecture is "On some Rare and New Diseases," illustrated, as we understand, by the contents of the museum of the College.

PORRO'S OPERATION.

ON Wednesday last, Dr. Godson exhibited to the Obstetrical Society an uterus with placenta, which he had removed from a dwarf by Porro's operation. The placenta adhered to the posterior wall of the uterus. The specimen was interesting, as showing the rugae of the contractions of the peritoneum over the contracted uterus. Dr. Godson thought these might, perhaps, have been made plainer by the spirit in which the uterus had been placed. The patient has progressed uninterruptedly from that time, and is now fairly on the way towards recovery. The infant is also well.

MR. ANTHONY TROLLOPE.

MR. ANTHONY TROLLOPE'S illness, which terminated fatally on Wednesday night, presents many points of medical interest. In January last he consulted Dr. Murrell for shortness of breath on exertion, and other symptoms which had been attributed to angina pectoris. On inquiry, it was found that there had been no true anginal attack, but an examination disclosed the existence of an aortic diastolic murmur. It was decided that Mr. Trollope should take a rest, and he accordingly went to Ireland for a holiday. In October he returned to town, and resumed his literary labours. On November 3rd he was suddenly seized with aphasia and paralysis of the right arm and leg, evidently due to embolism. At first there was great mental excitement, which was with difficulty subdued by the free administration of bromide of sodium. For some days he was able to utter only a few simple words, which served to express his wants, but, little by little, the power of language returned and the paralysed limbs regained power. Last week he had so far recovered as to take outdoor exercise, and there was every prospect of a speedy restoration to health. On Saturday last there was some return of the mental irritability, and it was apparent that further changes were taking place in the brain-substance. He gradually became comatose, and for the last three days of his life took nothing by mouth, with the exception of a little iced water. Predigested foods were used in the form of enemata, and suppositories of peptones were found useful. The immediate cause of death was congestion of the lungs.

THE EPIDEMIC OF SMALL-POX IN SOUTH STAFFORDSHIRE.

WE are glad to learn that the serious epidemic of variola, which has existed for several months in South Staffordshire, and has attained its greatest prevalence in the borough of Wednesbury, is steadily declining. This good result has promptly followed the adoption of efficient

measures for isolating cases of small-pox as they have arisen. The local medical officer of health reports that there has been a marked abatement of the disease during the last fortnight, only eight fresh cases having been reported in that time.

MUNIFICENT CHARITY.

MRS. LLOYD BAXENDALE, of Greenhow Lodge, Newbury, in memory of her late husband, who recently died of aneurysm, is, we learn, about to establish a convalescent home for six inmates, to be maintained at her expense. Dr. Andrew, of St. Bartholomew's Hospital, who attended the late Mr. Baxendale, is, in grateful acknowledgment of his skill and attention throughout the treatment, to be the almoner. A not very distant ancestor of Mr. Baxendale was a surgeon of eminence in Lancaster.

MEDICAL REFORM.

AT the first meeting for the season of the North London District of the Metropolitan Counties Branch, held on November 30th, the secretary, Dr. G. W. Potter, brought forward for discussion the subject of the direct representation of the profession in the General Medical Council. After remarks had been made by several speakers, the following resolution was unanimously passed: "That, in the judgment of this meeting, no medical council can be in any sense satisfactory to medical men, which does not provide for the direct and adequate representation of the whole profession."

SIR THOMAS WATSON.

THE condition of Sir Thomas Watson is one of increasing gravity. On Saturday and Sunday he was quite cold and livid, with a hardly perceptible pulse, and he took but little food. He rallied somewhat on Monday, and has since been able to take small quantities of nutriment. His temperature then ranged from 96.2 to 97. On Monday night he was much disturbed with cough and hiccough, but he afterwards slept a good deal, although his respiration was, at times, very irregular. He still remained sensible, though he spoke with difficulty. On Thursday morning his temperature was 96.8, and his pulse scarcely perceptible.

THE EPIDEMIC OF TYPHOID FEVER AT BANGOR.

THE leading practitioners of Bangor have recently met and passed a resolution, to the effect that the following letter should be forwarded to the press for publication.

"We, the undersigned medical practitioners of Bangor, have much pleasure in stating that the epidemic of typhoid, which has prevailed in this city for some time past, has now subsided, and that the town and neighbourhood are in a remarkably healthy state. As reports relating to this epidemic have, from time to time, appeared in your columns, we trust that you will kindly insert this letter."

HIGHER MEDICAL TEACHING.

THE following winter courses of lectures are announced at the Collège de France. M. Brown-Séquard lectures on the effects of lesions and diseases of various parts of the nervous system. M. Ranvier lectures on the mucous membranes and the glandular system. M. François-Franck lectures on applications of physiology to the study of diseases of the circulatory system (aneurysms, valvular lesions of the heart, pericarditis). These lectures are free to all comers, whether medical practitioners or students. How long will it be before we see some analogous institution in England, where medical students who desire to supplement their hospital courses with scientific laboratory teaching, or practitioners who desire to keep themselves up to the level of contemporaneous scientific knowledge, can get the opportunity of so doing, without incurring expenses which are practically prohibitive? Until this desirable consummation shall have been attained, it is to be feared that the glories of English scientific medicine must pale before continental research; and the British practitioner must console himself with the

satisfaction to be derived from his "practical" qualifications for the practice of his art.

A FRESH-AIR FUND.

BY far the largest and most successful season in the history of the "Fresh-Air Fund" of New York has just been brought to a satisfactory close, and the results are reported in the *Tribune*. A fortnight's vacation was given to 5,599 poor people from the city; 3,944 were received as guests by the people in the country, and for 1,655 board was paid. The total cost was 21,556 dollars, being an average of 285 dollars per child. The work of the Fresh-Air Fund began in 1877, with only seventy beneficiaries. [A similar work has been carried out pretty extensively in London, on the initiation of the Rev. S. A. Barnett and the curates of St. Jude's, Whitechapel. Possibly, if the excellent and attractive title chosen by the New York organisation were adopted, equally extensive results would be attained here.]

THE OPIUM TRADE.

A PARLIAMENTARY return just issued gives the quantity of opium imported into the United Kingdom and exported therefrom in each of the years from 1860 to 1881. The figures show a remarkable growth in our national traffic with this drug. In 1860 we imported 210,867 pounds, and continued to import about that quantity till 1865, when the imports reached 401,571 pounds. The figures never fell to their former level again, and in 1870 the imports were 371,665 pounds, or an increase of nearly 60 per cent. over the figures for ten years back. Since 1870, we have three times imported more than 400,000 pounds, five times more than 500,000 pounds, once more than 600,000 pounds, and once (in 1881) nearly 800,000 pounds. The quantities re-exported amount generally to about half the imports.

PROFESSOR FLOWER, F.R.S.

WE extract the following remarks from the anniversary address of the President of the Royal Society. "One Royal Medal has been awarded to Professor William Henry Flower, F.R.S. During the last thirty years, Professor Flower has been actively engaged in extending our knowledge of comparative anatomy and zoology in general, and of the mammalia in particular. His memoirs on the Brain and Dentition of the Marsupialia, published in the *Philosophical Transactions* for 1865 and 1867, established several very important points in morphology, and finally disposed of sundry long accepted errors. His paper on the Value of the Characters of the Base of the Cranium in the Carnivora (1869), and numerous memoirs on the Cetacea, are hardly less valuable additions to zoological literature. Professor Flower has been for more than twenty years Curator of the Museum of the Royal College of Surgeons, and it is very largely due to his incessant and well directed labours that the Museum at present contains the most complete, the best ordered, and the most accessible collection of materials for the study of the vertebrate structure extant. The publication of the first volume of the new Osteological Catalogue in 1879 affords an opportunity for the recognition of Professor Flower's services in this direction. It contains carefully verified measurements of between 1,300 and 1,400 human skulls, and renders accessible to every anthropologist a rich mine of craniological data."

SPURIOUS PROVIDENT DISPENSARIES.

UNDER this title a case was tried in the High Court of Justice on November 23rd, before Mr. Justice Kay, in which the plaintiff obtained a verdict against the defendant, and an injunction under which Dr. J. A. H. Budgett was restrained from representing Dr. Herbert Davies to be consulting physician to "The Stratford Provident Dispensary." It appeared that handbills and circulars, in which the plaintiff was represented as being thus connected with the defendant's institution, had been issued for some time past. Two years ago, the plaintiff had remonstrated through his solicitor, and had received an assurance

that the act complained of was a clerical error, and that such a thing should not occur again. But in August of the present year, Dr. Herbert Davies discovered that his name was still being so used; and he was, therefore, compelled to take legal action. We have often pointed out the mischief that is done by spurious provident dispensaries. Such a case as this shows, in a strong light, how necessary it is that all institutions calling themselves "provident" should not be at once accepted as such, but that investigation should be made into their character and management, lest a wise and beneficial movement should be brought into discredit.

THE LATE MATRON OF GUY'S HOSPITAL.

MISS BURT, late matron of Guy's Hospital, was married on Saturday, and the occasion, perhaps, ought not to be allowed to pass without saying that, much and severe as was the opposition which she raised during the early part of her career at Guy's, and serious as were the troubles to which she and her somewhat injudicious supporters gave rise, she carries with her into her retirement the good wishes of nearly all those with whom she has been most intimately brought into contact, and the assurance of their appreciation of the rectitude of her motives. In many respects Miss Burt has rendered a service to the nursing of Guy's Hospital, which she has latterly improved. With somewhat more suavity and discretion, she would certainly have encountered much less opposition. To some extent she was the victim of circumstances, acting under a system of tentative lay dictation, of which she became a sort of representative, and to which it was impossible to submit without such energetic protest as must, and did, lead to a modification of the ill-judged system. On the whole, it may be said that the storm which Miss Burt raised, like most similar disturbances, has had in the end a salutary effect, and Guy's Hospital is all the better for her short but stormy passage through it. By her marriage, Miss Burt becomes connected indirectly with the medical profession, and she has, we are assured, the best wishes of the Guy's Hospital Staff for her future happiness.

TYPHOID FEVER IN PARIS.

IN one of his bulletins respecting the recent typhoid mortality in Paris, Dr. Bertillon writes as follows. "Mortality and morbidity agree in representing the eighteenth arrondissement as having been most severely visited by the epidemic. It will be remembered by those interested in the sanitary condition of Paris, that this arrondissement was the most severely affected during the last epidemic, which occurred during the same season last year. From this circumstance, it is naturally inferred that, where there are constant results, there is a constant cause, M. Bertillon then inquires whether this constant cause is not the proximity of the population of the eighteenth arrondissement to the Canal de l'Ourcq. He says that, if the map of Paris be studied, it will be seen that this canal enters the district of la Villette, where it opens into the wide *basins* of that neighbourhood. Here the flow of the water is of necessity considerably slackened, and the result is a localised concentration of the organic matter held in solution and in suspension. The water held in these basins and in their vicinity is the usual drink of the surrounding population. Wherever it overflows, it deposits detritus, which, when the dry season arrives, is carried by the wind into the surrounding atmosphere, and contaminate it as much as the water is contaminated. This water also serves for domestic purposes, the cleansing of ordinary utensils, and specially those which are used to hold that most delicate of all fluids—milk. The result is only too evident and explicable.

SOOTHING SYRUPS.

How long will the public endure the present state of the law regulating the sale of patent medicines? Mixtures, containing often powerful ingredients, are dubbed with some high sounding title, and may be purchased in any grocer's shop, from a man as ignorant of the properties of the stuff he is selling, as is the buyer of the dangers which

may arise from its administration. Legislation is required no doubt, but, meanwhile, we would commend to every parent the excellent advice given by Dr. Danford Thomas, at an inquest held by him on the body of an infant, whose mother had been in the habit of dosing it, when it was restless, with "a patent medicine of a sedative character." The coroner observed that he had had many instances brought under his notice, where the parents, although intending to do right, in administering to children these patent medicines, of the composition of which they knew nothing, did a great wrong, in many instances killing their children from the effects of narcotic poisoning. When children became, as in this case, irritable, it was due to some cause, and that cause should be found out, instead of giving medicines to soothe, which possibly only increased it. With these patent medicines directions for their administration were no doubt given, but if one spoonful did not have the effect of soothing the child, mothers foolishly gave it another, and even a third, not being aware they were doing wrong, and the mischief was found out when too late.

THE DANGERS OF VEGETARIAN DIET.

THE wife of the celebrated Dr. Tanner has lately taken up her abode in France, having obtained a divorce from her eccentric husband under the following circumstances. Dr. Tanner, it appears, is peculiarly addicted to extraordinary fancies; and, some time since, he thought that he had found out that the human character becomes modified according to the food taken by the individual, and especially in relation to the vegetables consumed. Carrots, he avers, make people fidgety and sly; turnips produce extreme amiability; whilst a prolonged diet of French beans induces great irritability of temper. The carrying out of this theory has brought great trouble into Dr. Tanner's home. He made a heavy wager on the question with some friends, and experimented on Mrs. Tanner with French beans, giving her to eat about three pounds of this vegetable daily. It is not altogether to be wondered at if, after such a regimen, Mrs. Tanner became rather more irritable than was, perhaps, contemplated, and threw a jug at Dr. Tanner's head. The doctor, however, gained his bet; and, more thoroughly convinced than ever of the truth of his theory, put his wife on the turnip diet, so as to make her as amiable as she was before the French bean regimen. This time, however, the result was not so strictly in accordance with the theory. Mrs. Tanner objected to be any longer a subject for these vegetarian experiments; sued for a divorce, and, what is more singular, obtained it.

SIR J. W. REID, K.C.B.

ALL well-wishers of the service will rejoice in the honour which has just been bestowed on John Watt Reid, M.D., Director-General of the Medical Department of Her Majesty's Navy, Dr. Reid having been summoned to Windsor on Thursday, November 7th, to have the dignity of K.C.B. conferred upon him. We recently foreshadowed the event, expressing our strong sense of the honourable character, kindliness, and administrative ability of the present head of the navy medical department. Dr. Reid served as assistant-surgeon first in the paddle-steamer *Inflexible*; then in the line-of-battle ship *London* during the Russian war, receiving the Crimean and Turkish medals and the Sebastopol clasp. During the war with China, in 1857-59, he filled the appointment of surgeon to the hospital ship *Belleisle*, and was awarded the China medal. Dr. Reid had been raised to the rank of Fleet-Surgeon when the Ashantee war broke out; in that campaign he had charge of the hospitals at Cape Coast Castle, and was then promoted to the rank of Deputy Inspector-General. While holding that rank he served at the Hospital at Bermuda and also at Haslar Hospital; at this latter institution he was in acting charge, for some time, after the death of Inspector-General William T. Downie, C.B. In the spring of 1880, Dr. Reid became Director-General of the Navy Medical Department. He also holds the appointment of Honorary Physician to the Queen. We hope that, before long, a similar distinction may be granted to

Director-General Crawford, who has performed his duties in the Army Medical Department with singular ability and courtesy.

SYMMETRICAL GANGRENE.

THERE are few diseases more calculated to excite the curiosity and wonder of the pathologist, than that one of which Dr. Southey exhibited so striking an example, at the last meeting of the Pathological Society. The obscurity in which the etiology of the disease is enwrapped, the severity of the symptoms, the impotence of any kind of treatment, and, often, the tender age of the patient, are circumstances which all tend to make a strong impression on the imagination. M. Reynaud was, we believe, the first to describe a form of gangrene which he called "symmetrical gangrene of the extremities," though it does not confine itself to the limbs, but attacks also the face and the trunk; it is characterised by the absence of any discoverable lesion in the viscera or in the arterial system, and by its symmetrical arrangement, homologous portions of the two halves of the body being attacked. The affected parts become quickly livid, apparently from arrest of the arterial blood supply and venous stasis; this is quickly followed by transudation from the vessels into the skin and connective tissue, and is accompanied by numbness and by sharp, darting, or stabbing pains. Cases are described where the process stops short of this stage, the affected limbs becoming temporarily pale and cold, and then recovering, after a few minutes or hours, to be again attacked, however, after a varying interval. Arguing from such cases as these, the phenomena of the disease have been attributed to spasm of the walls of the arterioles in the affected part. Though the symmetrical distribution of the gangrene suggests a central, probably nervous, origin, yet there is absolutely no evidence on the point which can be considered at all conclusive. Some connection has been supposed between this symmetrical gangrene and scarlet fever and measles, since it has sometimes occurred after one or other of these diseases. A suggestion which may, perhaps, bear fruit, was made by Dr. Wilks, when he pointed out that in several cases the patient had been coincidentally affected with intermittent hæmatinuria, or hæmoglobinuria, as it is more properly called. We may remark, in passing, that Mr. Solly recorded, as long ago as 1839, a case in the *Transactions of the Medico-Chirurgical Society*, which seems to have been a chronic form of this disease, and that Dr. Henry, of Philadelphia, met with a case in a woman, aged forty-two. She was of dissolute habits, and died about a fortnight after the onset of the disease, which affected all four extremities (*Brit. and For. Med. Chir. Rev.*, 1856.)

A LURKING DANGER.

IN the course of a paper read before the Society of Medical Officers of Health, reported in our columns last week, Mr. Rogers Field, C.E., drew attention to a little regarded channel, along which sewer-gas, or other noxious vapours, may be conducted about a house. A very unpleasant and peculiar smell was noticed in one particular bedroom of a house, the sanitary arrangements of which Mr. Field had himself thoroughly examined and put in order. The odour was very evident, but what it was, or where it came from, could not be even surmised, until Mr. Field discovered the same odour hanging about a cupboard under the stairs in the basement, and traced it to a pot of decomposing blacking. Still the puzzle, how the odour reached a bedroom at the top of the house, without being detected in any intervening room, seemed to be as great as ever, until the engineer bethought himself of the tube which carried the bell-wire. Paper yielding a thick smoke was ignited and placed in the cupboard, and in a short time the smoke was seen issuing in the bedroom, from the hole through which the bell-wire passed; the other end of the wire passed through the top of the cupboard. The lesson taught by this experience is obvious: it is not that we must do away with bells and bell-wires, but that the only defence against unseen sources of disease is a thorough attention to every detail in every part of a house. The latest patents, the most æsthetic

tiled walls, or marble floors, will not afford any efficient protection, if the appliances in the basement, or those devoted to the use of the servants, are of bad design, badly constructed, and badly adjusted. In this respect, too many London houses are but whited sepulchres, and the soft words of the plumber but as sounding brass and tinkling cymbal.

THE OLD KENT ROAD MURDER.

IT seems highly desirable that the extreme penalty of the law should not be inflicted on Charles Taylor, who now lies under sentence of death for the murder of his wife, without some further inquiry into his mental condition. The plea of insanity, which was set up at his trial at the Central Criminal Court, was rejected by the jury, who, however, were doubtless influenced by the direction of Mr. Justice Hawkins, that the question for them was not whether the prisoner was a madman, or whether he was sane, but whether, at the time he killed his wife, he was in such a condition of mind as to be aware of the nature and quality of the act he was committing. Without questioning the correctness of Mr. Justice Hawkins's exposition of the law, it may be pointed out that whatever the question for the jury might be, the question for the Home Secretary certainly is, whether Charles Taylor be sane or insane, as it would be a deplorable event that a madman should be executed, even although he retained a comprehension of the nature and quality of the illegal act which he had committed. The meagre reports published of the evidence adduced at the trial of Taylor do not justify any decisive judgment on his mental state, but they certainly leave a doubt on the mind whether he be or be not a lunatic—a doubt which ought to be cleared up before his execution is permitted. The strong testimony of Dr. Forbes Winslow, to the effect that Taylor is of unsound mind, is, perhaps, counterbalanced by that of Dr. Savage, to the effect that he did not detect in him any distinct indications of insanity; but, outside such specialistic antagonism of opinion, there was evidence well calculated to create serious misgivings as to his mental state. Dr. Sparkes, Assistant-Surgeon at the House of Correction, expressed his conviction that Taylor is insane; and several of his fellow workmen proved that, for several years past, his conduct had been most extraordinary. Of taciturn habits, and frequently seen muttering to himself, Taylor had inspired fear amongst his associates, who regarded him as a madman. No adequate motive for the crime which he committed was established. He had lived on friendly terms with his wife up till the time of his killing her; and his own explanation of his conduct was that she was always "nagging" at him. It was alleged that he laboured under the impression that she had acted immorally before her marriage to him, but it did not appear that there was any foundation or justification for this belief, which may, therefore, have been an insane delusion. Dr. Savage seems to have laid stress on the fact that the prisoner, at his interview with him, called his special attention to the circumstance that he had had his head injured, and that one of his relations had been insane; but surely the suggestion here implied is not worth much in the case of a man who was at the time labouring under the consequences of a desperate attempt on his own life. There has been no attempt at feigning on the part of Taylor, and even an indisputable madman may sometimes try to extenuate his insane acts. The case of Taylor calls for immediate and careful inquiry by thoroughly competent and independent medical men.

ON WORD AND A BLOW.

A SHORT time ago we referred to the subject of corporal punishment in schools, and expressed the opinion that such punishment ought only to be administered, if inflicted at all, by the head of the school, and after due inquiry into the case. We are glad to see that this doctrine, which we are confident is founded on good medical grounds, has been held by the magistrate at Worship Street to embody also a good legal principle. An assistant master at the School Board School in Gainsborough

Road, Hackney, was summoned for assaulting one of the pupils of the school, a boy aged 12, by "boxing his ears" and beating him on the hands and thighs with a "pointer." The facts were not denied, and the only defence set up was that the boy had been rude, and that the punishment was not excessive. A rule of the Schools Management Committee of the London School Board was, however, put in evidence, which provided that corporal punishment should only be administered by the head master. The magistrate pointed out that, in face of this rule, the question whether the punishment inflicted was deserved, or whether it was excessive in quantity, was of no importance, inasmuch as an assistant-master had no right to inflict corporal punishment of any kind, or in any degree; the defendant had acted illegally, and had committed a common assault, and must, therefore, pay a fine of ten shillings. We think the public are to be congratulated upon this decision of Mr. Hannay's; we have no desire to minimise the difficulties which the masters in board schools have to contend with in attempting to maintain discipline among a large number of boys, unaccustomed to discipline elsewhere; nor, looking at the subject from a purely medical point of view, and leaving out of consideration the ethical questions involved, are we prepared to say that the moderate application of a birch rod to the buttocks of a healthy boy is likely, if wielded by a temperate hand, to cause any very serious injury. But corporal punishment ought never to be inflicted by an angry man, and it ought never to take the form of chance blows, directed against any conveniently accessible part of the culprit's person. Above all, schoolmasters ought to learn that it is dangerous to "box the ears"; a blow over the ear may cause, in a moment, irreparable damage to a healthy ear; in a diseased ear, it is still more likely to set up fatal mischief; and how frequent disease of the middle ear occurs in children is only known, in the absence of any trustworthy statistics, to those who see much of the children of the poor. Long-continued suppuration of the ear leads, very frequently indeed, to disease of the mastoid cells and of the petrous portion of the temporal bones, and to absorption of the thin layer of bone which separates the ear and its connected cavities from the cavity of the cranium; a blow upon the ear in this condition of chronic inflammation may, and often does, lead to acute inflammation of the ear, and that again to blood-poisoning, or to inflammation of the membranes of the brain—a complication which is invariably fatal. Even if the inflammation stop short of this, such damage may be done to delicate structures as may render the ear useless as an organ of hearing, and a never absent source of danger. A striking instance of the truth of these remarks is afforded by the history of the illness of the late Lord Justice Thesiger, who died a little more than two years ago. He had had scarlet fever when two years old, followed by inflammation of the left ear, and partial deafness on that side; no serious results, however, were seen for many years, and a brilliant career seemed to be before one of the youngest judges who ever sat on the bench, when, while bathing one day in a rather rough sea, a wave violently struck the diseased ear; this set up fresh mischief, the area of inflammation extended, and eventually the patient died of pyæmia; his death was thus distinctly traceable to a blow on an ear, which had long been diseased, it is true, but so slightly that it had not interfered with rapid forensic success.

RECKLESS MIDWIFERY.

UNDER this heading, we reported in our issue for November 4th a case which occurred at Eye, in which an unfortunate woman, who had been attended by a midwife and a nurse, was found dead by a surgeon who had been called in, the uterus, one ovary, and Fallopian tube having been torn or cut away by the women in attendance. We are now informed that, the evidence given at the coroner's inquest having been reported to the Director of Public Prosecutions, that official did not consider that his interference was required. The local magistrates also, it seems, thought that the difficulty of fixing the violence on one of the two women made it impossible for them to direct the chief constable to take any action in the matter. The lamentable result is,

that the women can go on dragging away other uteri and ovaries, without any one being authorised to interfere, or even to hint to them that such reckless violence is truly criminal. Instances like this show the importance of pressing on, next session in Parliament, some such measure as the Bill for the Registration of Midwives, which has been most carefully elaborated by the Parliamentary Bills Committee of our Association, with the assistance of the Chairman of the Board of Examiners, and of several of the past presidents of the Obstetrical Society, and which was laid before the Lord President of the Council some months ago, and by him referred to the Medical Council for consideration and report, who expressed their approval of such legislation. One of the most important provisions of the Bill is that there should be a number of local midwifery boards, composed of local medical practitioners, who would examine all midwives seeking fresh registration (provision being made for the registration of those already in practice, on the production of proper certificates), and would have the power, in cases of gross misconduct or incompetence, to suspend a midwife's certificate, or even remove her from the register. This is, probably, the only way to prevent such lamentable occurrences as that at Eye; and our provincial members, especially those who see much of the ill effects of midwives' ignorance and recklessness, would do well to endeavour to interest members of Parliament in the matter, and to point out to them how imperatively required is some such provision to protect the public from these fatal malpractices of ignorant, unqualified persons.

OVARIOTOMY, FRENCH AND ENGLISH.

A FRENCH translation of Mr. Spencer Wells's work, by Dr. Paul Rodet, has just been issued by Masson, the Parisian publisher. It is enriched by a valuable preface contributed by M. Simon Duplay, who dwells at length on questions where the author and other British surgeons differ from their French colleagues. After noticing the comparatively low value set upon the new discoveries and theories which concern the pathology of ovarian cysts, by Mr. Spencer Wells, M. Duplay is delighted to find that the former still advocates tapping for diagnostic purposes. "I am very glad to find," says he, "that Mr. Spencer Wells opposes, with all the weight of his vast experience, the detractors of exploratory puncture; proclaiming, on the contrary, its utility for the diagnosis of cysts of the ovary." Duplay quotes the aphorism of Stilling, "Tapping is a crime". He feels inclined to say, on the other hand, that those who dispense with an exploratory tapping before any other operative measure commit, if not a crime, at least a grave error. Tapping proves the nature and the presence or absence, the scantiness or abundance, of fluid in an ovarian cyst. By diminishing the size of the tumour, it allows the surgeon to be more certain about its relations with adjacent structures. It actually cures certain unilocular cysts; and, lastly tapping "may prove a very useful prelude to ovariectomy, in improving the general condition of the patients; the diminution of the bulk of the abdomen and of intra-abdominal pressure, causing the disappearance of albumen from the urine, improving the condition of the blood, and facilitating digestion. In many patients suffering from enormous abdominal tumours, I have observed marked improvement in their general condition, after tapping performed a short time before ovariectomy, and I have not a doubt that, thanks to this little preparatory proceeding, these patients have borne successfully the consequences of a "greater operation." M. Duplay has performed exploratory tapping more than a hundred times, and believes that, if the first aspirating trocars be used, the adhesions that may be thus produced are of no consequence. He cannot understand how any surgeon can prefer an ordinary trocar to an aspirator for this purpose. M. Duplay advocates the use of a trocar furnished with an aspirating pump, for the rapid evacuation of large cysts, and the prevention of the escape of any of their contents into the peritoneum, but this accident is of little importance, now that operators do not fear to sponge out the peritoneal cavity freely. He also speaks strongly in favour of a temporary clamp to hold the pedicle, whilst the tumour may be cut away

directly it is emptied of its fluid contents. M. Duplay prefers silver wire to silk for suturing the abdominal wound, no material being better, in his opinion, for the thorough apposition of two wide surfaces of peritoneum. The reticence of Mr. Wells with regard to Battey's operation is commended by M. Duplay. It is not only performed too freely in England, but still more recklessly undertaken, he thinks, in America and Germany. "I believe," says he, "that I am the only surgeon that has performed it in France, and I only halt succeeded." In other words, French experience is avowedly too limited, to use the mildest expression, for any French opinion on oöphorectomy to be of much value. M. Duplay's preface is of high interest. It must be remembered, however, that it represents personal opinions rather than the general views of French surgeons on ovariectomy.

ILLNESS OF THE POSTMASTER-GENERAL.

MR. FAWCETT'S serious illness presents several points of much interest to the medical profession. It is an instance of the rare co-existence of diphtheria and typhoid fever, which Dr. Murchison, in his large experience, appears to have met with only once, and which is only occasionally mentioned by other authors, chiefly foreign, who lay much stress on the gravity of the complication. Mr. Fawcett first felt ill on November 23rd, with general *malaise*, feverishness, and sore throat. The throat was red and glistening, and, four days subsequently, true diphtheritic patches were found on the uvula and the left tonsil, afterwards extending to the roof of mouth. There was no enlargement of the cervical glands. Under appropriate treatment the patches on the throat became loose, and separated on December 2nd. Since that date the diphtheritic symptoms have not been so urgent, although the exudation reappeared for a few days, and even still the throat shows traces of the disease. It is worthy of note that there was also an erysipelatous redness on the face, and the presence of albuminuria was noted as early as the first week of the attack. The medical attendants first felt justified in announcing the presence of typhoid fever on December 2nd, although its co-existence with the diphtheria had been suspected almost from the first. Since the 2nd of December, several of the symptoms of typhoid fever—such as the state of the tongue, the rash on the skin, the enlargement of the spleen, the congestion of the lungs, and the abdominal symptoms—have been typical. Other important symptoms, characteristic of typhoid fever, have also been present. Thus, the temperature, which has varied from 102° to 103.8°, has not shown the usual temperature curve of typhoid fever. Instead of the evening rise and morning fall of temperature, typical of typhoid fever, the thermometer has, on several occasions, been stationary the whole twenty-four hours, and on others has risen in the morning and fallen in the evening. The pulse has never risen above 104, and the signs of nervous disturbance have been excessive, and out of proportion to the vascular excitement. Roughly speaking, then, for the first ten days, the diphtheria was the dominant disease, and subsequently the signs of typhoid fever have prevailed, although many of the usual signs of both diseases have been either modified or altogether absent. We confine ourselves to this short general outline of Mr. Fawcett's case, which is most instructive, quite apart from the personality of the distinguished patient. His condition must necessarily continue to cause anxiety for some time; but we are glad to announce that, up to the hour of going to press, the symptoms were encouraging.

THE LAST HOURS OF THE PRIMATE.

SOON after our last report of Archbishop Tait's condition, he seemed somewhat to improve; the immediate danger subsided, the lungs cleared, the respiration decreased in frequency, the heart maintained its improved condition, but the pulse kept up, seldom falling below 100, and the temperature a degree more than natural. To outside observers, he seemed to be gaining ground; he sat up for several hours each day, and transacted a good deal of business; but, on one occasion, when an attempt was made to stand upright, his breathing became rapid, and

the pulse rose to 130, but the aortic murmurs did not return. He was, however, taking food well, and apparently digesting it, and the alvine secretions were satisfactory, so that hopes were entertained by his friends, but not by his medical attendants, that he might be able to make a change to the more sunny south. In this opinion, Dr. Carpenter was supported, as in everything else, by Sir W. Jenner and Sir W. Gull. There was occasionally a sudden vomit, with nausea, after sleep. The contents of the stomach were thrown up suddenly; now and then, there was a tremulous motion in the left arm and leg, which occasionally extended to the right arm. The tremor would last a few minutes, and was similar to that of paralysis agitans. This tremor culminated now and then into a convulsion, which affected the left arm and leg only; it did not affect the face or power of speech. This was manifest on one occasion when an attack came on whilst Dr. Carpenter was present. The Archbishop at once expressed his satisfaction, whilst the convulsion was continuing, that it had come on, so that his doctor could see its nature. These attacks were similar to those which affected His Grace fourteen years ago. They recurred, at first, at intervals of a few weeks, then they returned after a few days; they were generally (not always) preceded, for a day or two, by a continuing nausea, and a condition which the patient described as a bilious state. When the cold weather set in in the middle of November, there was a rise of temperature from 99.5° to 101°, a return of congestion in the lungs, with considerable dulness on percussion; but the cough was not very troublesome, and the expectoration did not again become rusty or abundant. But, notwithstanding this, the Archbishop did not like to remain in bed, but continued to sit up for a few hours every day until four days before his death. The troubles connected with the state of the kidneys continued, but urea did not fail. On several occasions, it was manifest that a large cyst existed in the right kidney, which filled occasionally, and gave rise to great discomfort; this was usually remedied by gentle pressure with friction, by means of which the cyst was emptied. During the last week of his illness, the pulse gradually became more frequent, and the respirations shorter; but there was no continuous pain. The tremulousness was more disturbing and more distinct on the right side. Early on Friday morning, a more general convulsion occurred, affecting both sides, but not affecting speech or consciousness; it lasted for about a minute, and there was no abiding paralysis, but from that time temperature began to fall. With the power to take food, there was difficulty in swallowing; and the urinary secretion diminished in quantity. Three other convulsive tremors occurred before the end came. There was one on Saturday night, which he recognised by calling out, "It is coming"; though for some time previously he seemed to be dozing. After it had passed, he spoke quite easily, asked for wine-and-water, and soon afterwards sank into a doze again. The temperature at that time was 96.8°. There were two slighter convulsions in the course of the night, without any other change than a falling temperature, retarded pulse and respiration, until the latter ceased at 7.15 A.M. on December 3rd. The following day, the appearance of the body was most remarkable. The wrinkles had all disappeared from the face, all signs of heaviness and suffering were gone, and the face of the Archbishop was more like to that of a young girl smiling in her sleep than that of an aged man. The absence of hair on the face, with slight curls at the side of the head, increased this appearance.

WESTMINSTER SANITARY ASSOCIATION.

AN article in the *Globe* gives an interesting account of a local sanitary association, which may well serve as an useful model for general imitation. It has been shown again and again that all classes of the community are imperilled by infection prevailing in small homes in which garmen's are made and laundry-work is carried on, and from which workmen, charwomen, and others go directly into all sorts of houses, bearing with them, perhaps, small-pox, measles, and other diseases. Pure selfishness, apart from any benevolence of motive, would suggest to

those who would be as safe as possible that any organisation proposing to prevent such dissemination of disease ought to be strongly supported. A fundamental assumption with the Association is that, so long as infectious illness involves loss of any chance of employment, the poor and ignorant will conceal it, if possible. To prevent this concealment, this Association seeks to help all families requiring assistance, and to guarantee them against loss arising from any contagious sickness breaking out among them. There are many ways in which this may be done. The father of a family in which small-pox breaks out, for instance, when from any cause prompt removal to a hospital is impracticable, must leave either his work or his home, if he is not to be a source of danger. If need be, the Association will bear the expense of a lodging for him apart from his family. Female sanitary visitors are employed to go from house to house, under medical advice, to teach the practice of disinfection, and, as far as circumstances will permit, to provide for isolation of the sick among families. They are to promote the removal of patients to hospitals wherever practicable, and to see that every precaution is taken against infection after the patient has left and on his return. When children are sick, the mother is encouraged to devote herself exclusively to the nursing of them, and, if she is neglecting any kind of employment by so doing, compensation is made to her on condition that she strictly observes the rules laid down for her guidance. In many cases it is necessary to destroy clothing, bedding, and so on. Here again the Association will lend such assistance as the circumstances of the case may seem to demand in providing fresh supplies. In many such ways may be carried on a work of which, if the real achievements could be traced in their after effects—which unfortunately they cannot be—would often no doubt be rather startling. Prevention, we all know, is better than cure, but it is a good deal less showy as a performance. It does not, however, need a very remarkable effort of the imagination to perceive what the influence of such systematic effort must be in numberless instances, and it certainly is greatly to be hoped that the pecuniary support solicited by the Association will be forthcoming in a measuring permitting of the fullest development of the work. The movement was inaugurated by the St. George's, Hanover Square, Committee of the Charity Organisation Society. The first quarterly meeting of the Association was held on October 31st, at St. James-the-Less Schools, Westminster (by kind permission of the Rev. G. D. W. Dickson), His Eminence Cardinal Manning in the chair. The managing committee reported that the sanitary visitors, in the four months during which the Association had been at work, had visited 104 cases. In thirty-two families where there was scarlet fever, visited by the sanitary visitor, there had only been one case in each family, thus demonstrating that the practice of disinfection, when fully carried out, does check the spread of disease. We believe that the National Health Society, 44, Berners Street, is encouraging the formation of similar associations all over the country, and the secretary will be happy to receive communications and give assistance to this end.

SCOTLAND.

ROYAL SOCIETY EDINBURGH.

At the statutory meeting of the Royal Society, Edinburgh, held last week, Professor Douglas MacLagan, and Emeritus Professor I. Hutton Balfour, M.D., F.R.S., were elected vice-presidents, and Professors Turner and Crum Brown secretaries to the ordinary meetings. On Monday, December 4th, the first meeting of the session 1882-83 was held. The president, Lord Moncrieff, in his inaugural address, directed attention specially to the fact that the society has now entered upon the hundredth session of its existence, and gave an eloquent and interesting *résumé* of its history. Obituary notices of various ordinary and honorary Fellows of the society who have died recently were read by members present. Professor Ewart read that of Darwin, Mr. George

Seton that of the late Wm. Robertson, M.D., and Professor Chiene that of the late Professor Spence.

AYR COUNTY HOSPITAL.

At the annual meeting of the supporters of the County of Ayr Hospital, on the recommendation of the committee, Mr. Chalmers C. Scott, M.B., was appointed house-surgeon. The meeting arranged that the new hospital (of which an account appeared in the JOURNAL some time ago) should be opened at Christmas, and it was stated that the sum of £6,900 had already been received towards clearing of the cost of the new hospital, which had been £8,500. An agreeable announcement was also made that Sir A. B. Walker had, for the support of children in the hospital, given a donation of £500.

SMITHSTON ASYLUM AT GREENOCK.

We understand that the authorities have decided to adopt the recommendation of the Asylum Committee, and gradually introduce into the management of the institution the open-door system, in accordance with which the doors are kept unlocked. This change has been chiefly brought about by the success which has attended its employment in Woodilee Asylum. At Smithston the new system will be adopted by degrees, and the doors leading to the outside will still be kept secured.

HEALTH OF EDINBURGH AND LEITH.

The mortality in Edinburgh was 20 per 1,000 last week, being five above the weekly average of last year. Phthisis and pulmonary diseases caused 38, out of the total 92, deaths. There were only four deaths due to zymotic diseases, and of these three occurred in the old town, there was no death from fever. Ninety-two cases of infectious disease were intimated the medical officer of health, and were made up of scarlatina, 51; measles, 28; fever, 11; and diphtheria, 2. In Leith last month, there were nine deaths from zymotic diseases, and all occurred in South Leith. There were reported during November 51 cases of scarlatina and 10 of typhus. In Glasgow last week the mortality was 28 per 1,000, as compared with 20 per 1,000 the same week last year.

EDINBURGH POPULAR HEALTH LECTURES.

On Saturday last Dr. J. Batty Tuke delivered the third of the Health Lectures in Edinburgh. The subject was "The establishment and maintenance of Brain Health." He treated of the moral, educational, and physical surroundings that were desirable in the rearing of the young; of the most suitable food, and pointed out some of the evils of the present day as telling on brain health. On the previous Saturday Mr. Charles W. Cathcart, M.B., F.R.C.S., Lecturer on Anatomy, Surgeon's Hall, Edinburgh, delivered the second lecture of the course, and chose as his subject, "Physical exercises, their place and function." In it he treated from an anatomical and physiological point of view the subject, and concluded by giving some valuable hints as to the times and methods of healthy exercise for children and adults.

THE MUNICIPAL FEVER HOSPITAL, EDINBURGH.

It will be remembered that (some time ago) the Town Council of Edinburgh purchased from the Infirmary managers the unused portion of the old infirmary buildings for the purpose of converting it into a municipal infectious diseases hospital. The Committee entrusted with the consideration of the carrying out of the plan having recommended the reconstruction of the surgical portion of the old buildings, the Town Council on Tuesday agreed to it, and remitted to a committee to obtain estimates. It was stated by the convener of the Public Health Committee that the new arrangement, when complete, would be ample for a long time, and would leave a considerable amount of ground available for other purposes.

FEVER AT DUMFRIES.

IN Dumfries and in Maxwelltown, contiguous to it, there has recently been an outbreak of fever, which threatened to flood the Dumfries Infirmary. The managers, therefore, declined to receive more than a certain number of fever cases in the part of the building set apart for infectious cases. The infirmary buildings are not entirely occupied, and the local authority, anxious to utilise these, requested Professor Douglas MacLagan to visit the infirmary, and make such suggestions as he considered best in the circumstances. This has been done, and the necessary steps will doubtless be taken to give effect to Dr. MacLagan's suggestions. As showing the strain upon the infirmary, no less than eight cases were sent from one household, the number the committee had been compelled to limit the admissions to, while five applications were at the same time received from Maxwelltown. In the low lying districts situated at the east end of Aberdeen also, there has been an outbreak of fever. The sanitary authorities have applied themselves vigorously to disinfecting the houses, in one case closing the house altogether. Already there are twenty cases in the Royal Infirmary.

REGISTRAR-GENERAL'S RETURNS.

THE returns of the Registrar-General for the week ending November 25th show that the death-rate in the eight principal towns was 24.3 per 1000 of estimated population. This rate is 4.0 above that for the corresponding week of last year, but 1.5 below that for the previous week of the present year. The lowest mortality recorded was in Perth, viz., 17.2 per 1000; and the highest in Glasgow, viz., 27.7 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 3.3 per 1000, or 0.9 below the rate for the previous week. Diphtheria, including croup and laryngitis, caused 20 deaths, 13 of which were registered in Glasgow. From acute diseases of the chest, 167 deaths were registered, or 5 less than in the previous week. The mean temperature was 39.5°, being 3.4° above that of the week immediately preceding, but 5.7° below that of the corresponding week of last year.

THE HEALTH OF GLASGOW.

THE report of the medical officer of health for the fortnight ending November 25th shows that there were 555 deaths registered, representing a death-rate of 28 per 1,000 living. It seems that there has been no development of the group of typhus fever cases brought under notice in the previous report, and alluded to in the JOURNAL of November 25th. In connection with these cases, a point of some interest has been made clear, especially as it bears on a question which is at present under discussion; namely, the compulsory notification of infectious diseases, and with whom the duty of reporting these cases should lie. At first, it was thought that the nature of the disease from which the first case suffered was not suspected; but it has now been ascertained, without doubt, that the girl was seen by a medical practitioner, who gave it as his opinion that the case was one of typhus fever; and that, consequently, the mother's duty was to report the case at once to the sanitary department. This, as is now known, she did not do; and the consequences were, from that case alone fourteen cases of typhus and two deaths, one of whom was a nurse. An instance such as this seems to show the advisability of putting some compulsion on the medical attendant as to the reporting of such cases. Had the medical gentleman who saw this case reported it at once to the sanitary authorities without any delay, steps would have been taken to remove it, and the disease probably would have been stamped out.

IRELAND.

THE Portadown Town Commissioners passed a resolution last Monday, that the proprietors of the temperance coffee-stand in High Street be required to remove that structure. The only reason assigned for this arbitrary conduct was, that the owners only paid a nominal rent,

which permitted them to compete unfairly with those who kept eating-houses. Instead of removing the coffee stand, the Commissioners ought to be thankful that the town possesses a temperance establishment of the kind.

THE first meeting of the session of the Ulster Medical Society was held in the Belfast Royal Hospital on November 14th. There was a large attendance of members present, and the President, Dr. McKeown, delivered the inaugural address.

ON the 26th ultimo, collections on behalf of Hospital Sunday took place in about twenty-five churches in Belfast and neighbourhood, while in other churches different dates have been selected for the same purpose. The sums obtained will go to the funds of the Belfast Royal Hospital, the only general hospital in the city.

SUDDEN DEATH OF A MEDICAL MAN.

DR. MURDOCK of Magherafelt died suddenly last week. He was a member of the British Medical Association, and was highly respected by all classes.—The sudden death of Dr. Deazley of Dromore is also reported. This is the third sudden death among medical men in this province within the last month.

KING AND QUEEN'S COLLEGE OF PHYSICIANS.

MR. GEORGE R. PRICE, Barrister-at-Law, and Mr. Mervyn J. B. Pratt, C.E., and Master in Engineering of the University of Dublin, have been appointed, respectively, Examiner in Sanitary Law and Examiner in Sanitary Engineering, for the certificate of Sanitary Science of this College.

SUBSECTIONS OF THE IRISH ACADEMY OF MEDICINE.

A SUBSECTION in State Medicine, under the direction of the Medical Section, and another subsection in Anatomy and Physiology, under the direction of the Surgical and Medical Sections, has been formed in connection with the Academy. These subsections will meet during the session as may be arranged by the Councils of each section. The following Committee has been elected for the State Medicine Subsection: Prof. C. A. Cameron (Chairman), Drs. Chapman, Duffey, Grimshaw (Registrar-General), J. W. Moore, Pollock, and Purcell; and for the Anatomy and Physiology Subsection: Professor Macalister (Chairman), Messrs. Abraham, Cunningham, Heuston, Knott, McArdle, and Purser.

THE DUBLIN BRANCH.

THE King and Queen's College of Physicians have kindly renewed its permission to this Branch to hold its annual meeting and dinner in the College halls. In accordance therefore with custom, the next (the sixth) annual meeting of the Branch will be held on Thursday, January 25th, 1883, when the President-elect, Dr. Banks, Physician in Ordinary to the Queen in Ireland, will deliver an address. The Branch now, under the presidency of Dr. Kidd, numbers nearly 180 members; and a large accession of new members, which it is expected will bring its number up to at least 200, before the annual meeting, is confidently looked for. The Council of the Branch have at present under their consideration some subjects of much interest to the profession, which will probably be brought forward at the annual meeting.

THE REUBEN HARVEY MEMORIAL FUND.

THE Honorary Treasurers of this Fund have, by a declaration of trust deed, transferred this fund, in accordance with the instructions of the subscribers, to the King and Queen's College of Physicians in Ireland, and the Royal College of Surgeons in Ireland, as future trustees of the fund. The trust has been accepted by both colleges; and the fund, after payment of all necessary expenses, is now represented by a sum of £267 New Zealand Four per Cent. Inscribed Stock. It has been decided that the accumulated interest of the fund shall be awarded, once in every three years, as a prize to the writer of the best essay on a subject to be selected by the candidate, evidencing original research in

animal physiology, including pathology; such essay to be illustrated by drawings or preparations. The competition for the prize is open to all students of the Dublin schools of medicine, and also to graduates and licentiates of the Irish licensing bodies, who shall not be of more than three years' standing from the date of their degree or licence. The examiners for the prize are to be two in number: one to be nominated by the President of the King and Queen's College of Physicians, and the other by the President of the Royal College of Surgeons. The first award of the prize must be made on or before the 1st of July 1885. Six months' previous notice of the date upon which competitors must send in their essays is to be given; and provision is made that, in the event of the essays being of insufficient merit, or in the absence of any competition, the prize may be held over until the next triennial period.

THE ACADEMY OF MEDICINE IN IRELAND.

THE first meeting of the Academy took place on Friday evening last, the 1st inst., under the auspices of its pathological section, which met at the Royal College of Surgeons. In the library, living specimens of Hodgkin's disease, and of lupus of the conjunctiva, were shown by Mr. W. Thomson and by Mr. A. H. Benson respectively. Several interesting specimens were also exhibited by card in the same room, notably by Dr. J. Magee Finny; the thoracic and abdominal viscera, and the affected glands of a boy, aged 17, also the subject of Hodgkin's disease, who had died a few days previously of an intercurrent attack of pleurisy. There was a very large attendance of fellows, members, and associates of the Academy, and of visitors, and at 8.30 o'clock the chair was taken by the president of the section, Dr. J. M. Purser, King's Professor of the Institute of Medicine. Amidst much applause, Dr. Purser delivered a short and able address, which was very much to the point, and was extremely well received. The section then heard from Dr. Finny and from Mr. Thomson some details as to the cases of Hodgkin's disease, of which they had exhibited specimens, and papers were subsequently read by Dr. Barton (president of the Royal College of Surgeons), on *volvulus*; by Dr. T. E. Little, on *aneurysm of the internal iliac artery*; and by Mr. Wheeler (vice-president, R.C.S.I.), on *nasal polypus*. Both Mr. Barton's and Mr. Wheeler's papers gave rise to interesting discussion. Notwithstanding unworthy and discreditable attempts on the part of some persons, whom we can hardly conceive to be members of the profession, to stir up in the columns of a daily contemporary public as well as professional bad feeling towards the Academy, under the most wretched pretence that could well be imagined—viz., religion, we venture to trust that its institution will prove in every way successful, and advantageous to all connected with it.

THE ATTEMPTED ASSASSINATION OF MR. FIELD.

OUR Dublin correspondent informs us that this gentleman, whose life was attempted by assassins on the evening of last Monday week, is now progressing favourably. It will be remembered that Mr. Field was attacked when walking home, and when he was actually next door to his own house. He states that he was jostled against the railings, and partly surrounded, by some men, one of whom, uttering the exclamation, "Now, you villain, I've got you!" struck him two blows on his back from behind with some sharp instrument. The second blow knocked Mr. Field down, and, when on the ground, he received two stabs on the face and neck; two further stabs on the left forearm, which he naturally raised to protect himself; and an abrasion, about four inches in length, in the right axilla, showing where the weapon had passed between the arm and side without, fortunately, inflicting more than a superficial wound. All these wounds were inflicted by one individual with the same weapon, which was probably a sword-cane, from the fact that, with the exception of the last-mentioned wound, they were uniformly triangular in shape, and not more than half-an-inch in width. After his assailants had run away, Mr. Field walked without assistance to his house. Medical aid was quickly

procured, and Mr. Field, who never lost consciousness, was found in his room washing the blood from his face. Subsequently, he coughed, or rather spat up three or four ounces of bright arterial-looking blood, which had all the appearance of having come from the lung, and was mixed with air-bubbles. He then became a little faint, probably from the shock, as he did not lose much blood, but rallied well after the administration of stimulants. An examination of the wounds showed that one of the stabs in the back was situated between the left scapula and the spine; and that the second stab was situated just below the spine of the same scapula, and had apparently transfixed the bone. The wound in the face entered the left cheek through the whisker and passed into the mouth, wounding the tongue. On the other side, there was a penetrating wound, which entered close to the right ramus of the lower maxilla, and was directed downwards and forwards towards the neck. The two wounds in the left forearm were possibly the result of a single stab passing through the limb. A very considerable and alarming amount of swelling about the jaw and face set in very rapidly after the receipt of the injuries; this caused much discomfort to the patient, and gave rise to great difficulty in swallowing and in speaking for some days. The first two nights were passed fairly; but the succeeding two were not so good, owing to some fever. The temperature, however, never exceeded 101°. The patient is now (Wednesday) convalescent, and able to sit up; and there is but a slight sanious discharge from the wound in the cheek. Although there was for a time evidence of some solidification in the lung, with slight subcrepitation over a small area corresponding to the wounds in the back, it cannot be positively stated whether the lung was actually wounded or not.

THE PROGRAMME FOR 1883.

IN issuing the programme of the BRITISH MEDICAL JOURNAL for 1883 (p. 1185), according to annual custom, but few words seem necessary. The new volume will be the first volume of the second half-century of the publications of the British Medical Association. During the last fifteen years, since we first became responsible for the editing of the JOURNAL, it has risen in circulation from two thousand to eleven thousand—a circulation never before attained by any weekly medical journal—and the size and contents of the JOURNAL have been more than trebled, without any addition to the annual subscription. We had placed our largest expectations at an ultimate circulation of ten thousand; this has already now been largely exceeded, and we have good reason to anticipate a yet further extension during the ensuing year. The increasing favour with which the JOURNAL has been regarded for a series of years by the profession at large, both at home and abroad, will encourage us in the unceasing effort to enlist for its services, and to exhibit in its pages, every kind of talent and acquirement, and to make it representative of every branch of medical knowledge, and the mouthpiece of all the youngest and most progressive, as well as of the oldest and most eminent workers in every part of the kingdom. We have successively added, during past years, departments representative of the Army, Navy, Militia, the Poor-law Medical Service, the Public Health Service, Hospital Administration, and Asylum Management. We have continually increased, year after year, as space was allowed us, the reporting of provincial hospitals and societies, and this year shall expect to be able still further to add to them. The growing number of the Branches of the British Medical Association, and the steadily increasing value of the papers read, enable us to represent the work of provincial practitioners throughout Great Britain and the Colonies as it has never before been represented. The Committee of Council have enabled us, by a large addition to the number of pages, to publish the text of the papers read at the Worcester meeting—of which the number and importance were unsurpassed by those of any meeting on record—with unexampled rapidity. The demands upon space, however, proceeding from the eleven thousand members and subscribers, each of whom is apt to think

that his special demand is that which calls for the most immediate satisfaction, grow necessarily beyond possible fulfilment, whatever the extension of space. The necessity of weighing week by week the relative claims of each department of the JOURNAL, and each interest of the profession scattered throughout the Queen's dominions, and all largely represented in the Association, becomes a task of no small responsibility and difficulty. Of the grace and kindness with which the inherent difficulties of such a task are habitually recognised, we cannot speak in too warm terms. We must still appeal to that same sentiment, and to the courteous consideration of the requirements of others—both readers and contributors—and of the primary importance making the JOURNAL relatively just to the varied claims of scientific, clinical, and social workers in our profession in all parts of the kingdom.

In the coming year we shall spare no effort to do impartial justice, and to make the JOURNAL increasingly instructive and useful to all classes of professional readers. In this effort we hope to receive, as hitherto, the generous support of our readers and members, and to make the JOURNAL frankly representative of all opinions, and of all sound professional work.

COLLECTIVE INVESTIGATION COMMITTEE.

MEMORANDUM ON DIPHTHERIA.

BY SHIRLEY F. MURPHY,

(On behalf of the Committee).

THE intention of this inquiry is to obtain information as to—

1. The conditions which give rise to diphtheria, and the means by which it is communicated.
2. The relation of diphtheria to other diseases.
3. The behaviour of the disease in the individual attacked.

Any one studying the etiology of diphtheria, or indeed any of the infectious diseases, must endeavour to learn accurately the conditions associated with the existence of the disease amongst those attacked, and compare them with the conditions present in those who escape. By means of this comparison, it becomes possible to eliminate those conditions which are common to both groups of individuals—viz., those who are attacked, and those who escape; perhaps to identify some condition as specially coexistent with the disease, and, finally, to accumulate sufficient evidence to enable it to be regarded, in its relation to the disease, as cause is related to effect.

An inquiry such as this must necessarily include a study of all the conditions of life, and must be undertaken for many districts, those where the disease under consideration is peculiar for its absence, being not less deserving of careful study than others in which it has been exceptionally prevalent. Rural districts, more than any others, best promise to reward the investigator for his labours: for, in such regions, the habits and movements of every individual are far better known, and the probabilities of exposure to any existing contagion, can be better estimated than in populous cities.

When it is found that a disease is constantly more prevalent, in any one locality than in neighbouring districts, these should be carefully compared. The geology of all should be studied; the altitude; the condition of the soil; the opportunity for exposure to different winds; the drainage and mode of dealing with refuse; the water-supply; the food, clothing, and occupations of the inhabitants; the relative proportions of old and young persons; the extent to which marriages of consanguinity occur; all diseases to which the inhabitants are subject, as well as the ethnological peculiarities of the latter; the liability of the inhabitants to exposure to diseases of animals, as well as the relative opportunities which exist for the introduction of disease from other places.

Following the same lines, it should be noted whether the disease is habitually more prevalent in one part of a town or village than another; and if any local condition co-exists with this special prevalence in the one part compared with the other.

Again, when an individual household only is concerned, where it may be possible at once to eliminate some of the larger conditions which must be common to the rest of the town or village, it becomes necessary to take cognisance of everything relating to the house itself and its occupants.

Observation should be directed to the possibility of the person attacked being exposed to some known source of infection.

The incubation period of the disease is not at present known, nor whether it have any approach to constancy; and no opportunity should be lost for ascertaining as exactly as possible the incubation period of diphtheria; to do this presupposes the recognition of a cause; and instances of spread by infection should be studied in this aspect. It must not be forgotten that those cases are of the greatest value in which the receiver of infection is exposed to it but for a limited time, and all other sources of infection can be eliminated.

But though the incubation period cannot at present be stated, it is pretty certain that there is an interval between the reception of infection and the manifestation of symptoms; and in enquiry about exposure to the infection of diphtheria, the investigation should not be limited to the one or two days immediately preceding illness, but should be extended to at least a fortnight.

While studying the incubation period of this disease it will be well to take advantage of every opportunity which may present itself for learning accurately the length of time a person who has recently suffered from diphtheria, or a garment, or other article which has been exposed to infection of the disease, retains the power of giving origin to a case of diphtheria.

Failing satisfactory evidence of infection being received from some source which can be traced, the degree of probability should be noted (*a*) whether infection may have been received from some unknown person suffering from disease or from some infected article; (*b*) the extent to which such possibility can be excluded.

The opportunity for excluding the ordinary means of conveying infection will be found more often in country places, where every individual and his condition of health is known, than in more populous places. In both classes of cases an examination of the house in which the patient resides and its contents is of much value; especially in those cases in which the patient has not left the house for some time before his illness began.

When two or more members of a family are simultaneously attacked, the probability of infection being received from a common source is considerable, and an inquiry into the conditions common to both, and which differ from conditions relating to those who escape, should be made, regard being had to the question whether all are equally susceptible and equally exposed to suspected infection.

In all such cases, an examination of the house should be carefully conducted, and the condition recorded. It should be particularly noted whether the house has any relation with neighbouring houses, either in its drainage or its water-supply, and the existence or absence of cases of illness in these ascertained.

On the occurrence of diphtheria, it will usually be desirable to communicate with the medical officer of health; on the one hand for the purpose of learning as to other cases that may occur in the neighbourhood; on the other hand in order to supply him with information of the locality of the house, the number of persons in each household, the number of persons attacked, and the date of the beginning of illness in each, together with the names of the tradesmen supplying the various articles of food. If any number of persons, especially if living in different houses, be simultaneously attacked by any infectious disease, there is a probability that the outbreak is due to an infected food-supply. Thus, infected milk or infected water will simultaneously produce certain infectious diseases in a proportion of those persons who have taken it.

Care must be taken to distinguish between the first case of such a disease introduced into a household, and secondary cases arising from the first by means of direct contagion. No conclusion must be come to from positive evidence alone, without due regard being had to any negative evidence which may be forthcoming. It must not be assumed because a majority, or even a very large majority, of those attacked with disease have their food-supply from a particular source, that the food is responsible for the disease; nor will it do to assume that, because some sanitary defect is found in a large majority of the houses attacked, that this defect is the occasion of the illness. It is, first of all, necessary to ascertain the total number of houses in a district with the food-supply or defect, as well as the total number without, and then to learn whether there is any special incidence of the disease upon the former. For this purpose, inquiry should be made at all the houses in a district.

It will be evident that an inquiry of this character must be mainly conducted by some investigator holding an official position, such as the medical officer of health. While he, however, is engaged in ascertaining facts concerning the district generally, and especially relating to those houses which are free from illness, he should be receiving information concerning the households in which the disease has occurred, from those investigators who are themselves engaged in the treatment of the affection.

EAST SURREY DISTRICT: SOUTH-EASTERN BRANCH.—A meeting of the above District will take place on Thursday, December 14th, at the Greyhound Hotel, Croydon, at 4 P.M., Walter Rosser, Esq., M.D., of Croydon, in the chair. The following communications, etc., have been promised. 1. Dr. Rosser (Chairman) will open a discussion on the Management of the Perineum during Labour. 2. Dr. Gervis: Chronic Ovaritis. 3. Dr. Savill: On the Use of Anaesthetics during Labour. 4. Dr. Stowers: Case of Paget's Disease of the Nipple. N.B.—Dinner (charge 7s., exclusive of wine) will be served at 6 P.M. precisely.—J. HERBERT STOWERS, M.D., Honorary Secretary, 23, Finsbury Circus, E.C.

ABERDEEN, BANFF, AND KINCARDINE BRANCH: GENERAL MEETING.

An ordinary general meeting of this Branch was held at 198, Union Street, Aberdeen, on Wednesday, November 22nd. ANGUS FRASER, M.D., President, in the chair.

Communications.—The following communications were made.

1. Professor Alexander Ogston gave a demonstration of Tubercle-Bacillus, and made remarks on the subject.

2. Dr. R. J. Garden read a paper on Ulcers, which was discussed by Dr. A. Ogston, Dr. Ogilvie Will, Dr. Jackson, Dr. Hall, and the Chairman.

December 7th, 1882.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

A MEETING of this District was held at St. Bartholomew's Hospital, Chatham, on Friday, November 17th; A. W. NANKIVELL, Esq., in the chair. Twenty-two members and visitors were present.

The Next Meeting was fixed to be held at Erith; F. Jessett, Esq., to be Chairman.

Papers.—The following papers were read.

1. A. W. Nankivell, Esq.; A case of Dislocation of the Femur on to the Pubes.

2. F. B. Jessett, Esq.: A case of Fibroid Tumour of Uterus, removed by Abdominal Section.

3. F. A. Mahomed, M.D.: Medical Life-Histories.

Dinner.—Seventeen members and friends afterwards dined together at the Bull Hotel, Rochester.

December 6th, 1882.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

A MEETING of this district was held at Guy's Hospital on November 24th, John M. Hobson, M.D., in the chair.

Papers.—The following papers were read:

1. Mr. Clement Lucas: The Operative Treatment of Oozæna.

2. Dr. Hall White: Tea Poisoning.

COLLECTIVE INVESTIGATION COMMITTEE.

At a general meeting of the Collective Investigation Committee, held at the offices of the Association, on Wednesday, November 22nd, at 4.30 P.M., there were present: Professor Humphry, F.R.S. (in the chair), Dr. Barlow, Dr. Lauder Brunton, F.R.S., Mr. Davies-Colley, Dr. Dyce Duckworth, Dr. Green, Dr. Grigg, Dr. Withers Moore (Brighton), Mr. Murphy, Mr. A. Napper (Cranleigh), Mr. Herbert Page, Dr. Sharkey, Dr. Sieveking, Dr. Frederick Taylor, Dr. Tyson (Folkestone), Dr. Burney Yeo. Letters of apology for non-attendance were received from Dr. B. Foster (Birmingham), Mr. Hallows (Maidstone), Dr. Handford (Nottingham), Dr. Hudson (Redruth), Dr. Jones-Morris (Portmadoc), Dr. Parsons (Dover), Mr. Paul (Liverpool), Dr. Saundby (Birmingham), Dr. E. S. Scott (Shrewsbury), Mr. R. Scott (Bath), Dr. Stowers (London), Dr. Wilson (Cheltenham).

Letters containing suggestions concerning the work of the committee, and proposing alterations in the cards, were read from Dr. Hallows (Maidstone), Dr. Jones-Morris (Portmadoc), Mr. Paul (Liverpool), Dr. Bury (Manchester), Mr. R. Scott (Bath), Dr. Neal (Sandown), Dr. Green (Sandown), Dr. Rich (Ryde), Dr. A. Davies (Swansea), Dr. Davies (Newport), Dr. Taylor (Penrith), Dr. Norris Mackay (Elgin), Dr. Kelly (Taunton), Dr. Annington (Cambridge), Dr. Trend (Southampton), Dr. E. S. Scott (Shrewsbury), etc.

It was announced by Dr. Grigg, honorary secretary of the Metropolitan Counties Branch, that the council of that Branch had decided to hold a general meeting of its members, to consider the best means of promoting the work of collective investigation of disease in the Branch, and that Sir James Paget and Sir William Gull had both consented to deliver addresses on the subject at the meeting, which would probably be held on January 17th, the day of the next meeting of the Committee of Council, at 8 P.M. It was proposed to hold the meeting in one of the large lecture-theatres of the metropolis, and a hope

was expressed that the theatre of the University of London might be available for the purpose.

The diphtheria cards and memorandum were presented for the approval of the meeting; some alterations which had been proposed were accepted, and it was decided to send specimens of the cards to all the medical officers of health in the United Kingdom, with a letter placing the organisation of the Committee at their disposal, as a means of assisting them in the investigation of any local epidemics that may occur. It was felt that the Sanitary card (IV a) would be of especial use to the medical officers of health as a means of obtaining strictly comparable records of epidemics in various parts of the country, while they would act as guides to any medical men who wished to thoroughly examine the sanitary condition of a house in which epidemic disease had appeared. The cards were considered unsuitable for general distribution, as they might fairly be thought too great a tax upon the time and leisure of many. They will be available, however, for all who wish to assist in the investigation of this disease, and can be had on application to the Secretary, who was directed to insert a notice to this effect in the JOURNAL.

The inquiries concerning congenital and acquired syphilis, together with the memorandum explaining them, were also submitted to the Committee, and, after some alterations had been made, were accepted, and ordered to be printed. It was resolved, in like manner, that these inquiries also should not be generally circulated, at any rate for the present, but that they also should be obtainable on application to the Secretary.

The Secretary was also directed to send the papers and inquiries on diphtheria and syphilis to the editor, with a request that they might appear in the JOURNAL.

It was very generally felt that the chief fault of the cards already issued was their length and complexity, and it was thought desirable to issue some short and simple question, of evident utility. The question of the contagiousness or communicability of phthisis was suggested as one requiring an immediate and definite answer; and a small subcommittee, consisting of Dr. Duckworth, Dr. Burney Yeo, Dr. Frederick Taylor, Dr. Tyson (Folkestone), and the Secretary, were requested to draw up one or two questions with a view to elicit information on this subject.

Important Notice.—The passage in the notice inserted in the JOURNAL of November 11th and 25th, which reads, "Members of the Association and others are earnestly requested to fill up cards describing *all* cases of these diseases coming under their care," should read, "*any* cases, etc." The object of the notice was to call attention to the fact that it is not merely *interesting* cases that were asked for; no case is too simple to be of use. *One case from each member* will amply satisfy the requirements of the Committee.

NOTICE.

CARDS and explanatory memoranda for the inquiries concerning Acute Pneumonia, Chorea, and Acute Rheumatism, can be had by application to the Honorary Secretaries of the Local Committees appointed by the Branches, or to the Secretary of the Collective Investigation Committee. Of these diseases, each member of the Association is earnestly requested to record at least *one ordinary case* coming under observation during the year.

Inquiries concerning Diphtheria and Syphilis have also been prepared, and can be had on application by those willing to contribute information on these subjects. There are two cards on Diphtheria, one containing clinical, the other etiological inquiries, together with an explanatory memorandum. One of these cards is intended to serve as a guide to the systematic examination of a house or district for sanitary purposes.

There are also two sets of inquiries concerning Syphilis, one for acquired, the other for inherited disease. These are accompanied by an explanatory memorandum giving information concerning the most recently observed symptoms of the inherited disease.

F. A. MAHOMED, Secretary to the Committee.

12, St. Thomas's Street, S.E.

DONATIONS AND BEQUESTS.—The Derbyshire Infirmary has received £1,000 anonymously. Mr. Peter Walker, of Wrexham and Liverpool, has bequeathed £500 to the Wrexham Infirmary.—The Corporation of the City of London has given 100 guineas, and the Dowager Duchess of Northumberland £25, to Miss Mary Wardell's Convalescent Home for Scarlet Fever; and £60 has been received as proceeds of a Rose Show at the Mansion House on the 30th June.—University College Hospital has received £100 from the People's Contribution Fund.—"L. E. B." has given £50 to the Royal Medical Benevolent College.

SPECIAL CORRESPONDENCE.

ABERDEEN.

Review of the Changes and Improvements that have occurred in this Medical School during the Year.

SINCE the issue of the corresponding number of the JOURNAL of last year, many changes and improvements have taken place in the Aberdeen Medical School. The anatomical department has been greatly extended, and now there is a dissecting room, with museum and osteology room, all *en suite*, forming a convenient arrangement, such as is not surpassed by any anatomical department in the country. The rooms are splendidly lighted, and the floor space is ample, while the air is pure and sweet, and at an uniformly agreeable temperature. By the construction of a broad gallery along one side of the dissecting room, ample space is obtained for the beginners to study osteology, who may look down upon the busy and animated, and partly inanimate, scene below, crowded with its groups of students, with scalpel in hand. The compact and well-provided museum opens from this room, and to it students have free access; and, taken as a whole, this department is complete, and is replete in every way for comfort and for purposes of anatomical instruction.

The foundation of the Chair of Pathology necessitated the institution of a Pathological Laboratory, which has been effected by re-arranging certain of the laboratories and class-rooms. An excellent laboratory has in this way been found for Professor Hamilton, who has fitted it up in such a way as to make it admirably adapted for teaching pathology practically, as far as it can be so taught in a laboratory. The pathological specimens in the Museum have been added to by the new Professor, and there is every prospect of the Pathological Department becoming—if it is not already—as complete as any other department in the College. A new Lecture-room has been provided for the Professor of Midwifery, and improvements have been effected in the Physiological Department, so as to increase the teaching facilities. All the classrooms are now heated by Perkins' hot-water system, so that an uniform temperature and general comfort are obtained.

There have been great changes in the *personnel* of the College. Dr. Ewart has been transferred to Edinburgh; and Professor Alleyne Nicholson has succeeded him. Now that the new regulations regarding graduation in medicine are in force, students may take botany and natural history early in their course; and many students have availed themselves of this arrangement. The greatest change in the school is the loss of Dr. Pirrie, whose death we noticed last week. In his successor, Dr. Alexander Ogston, Aberdeen has gained a professor who will maintain the high reputation of the Aberdeen School of Surgery.

Classes for demonstrating the apparatus, or specimens that are lectured upon, and for practical instruction in bandaging, etc., have been commenced, and meet once a week. One chair has been added through the munificence of Sir Erasmus Wilson, and already Professor Hamilton has given an impetus to the study of this subject—such as only a man of his energy can give. It is only in this way that we can have successful teachers; and the success of the new department of pathology amply justifies the wisdom of the course which required that the Professor of Pathology shall not practice. The teaching of pathology is not one whit less engrossing than the teaching of anatomy or physiology; and Aberdeen has done well to recognise this fact, and act upon it.

The hospital staff remains unchanged. It is desirable, however, that the professor of pathology should have access to the materials which an infirmary affords. This question is under consideration by the managers. The question of additional hospital accommodation is being discussed, and we trust that new wards will soon be added to the infirmary, and that wards will be set apart for special diseases, such as the skin, diseases of women, etc. The question as to the appointment of an assistant-physician will be discussed by the managers at their next meeting. An assistant-physician has been appointed to the Sick Children's Hospital.

Not the least important event of the year was the foundation of the Pathological Chair by Sir Erasmus Wilson, by which act Sir Erasmus has conferred the greatest benefit on his Alma Mater. This is not the only benefaction that has befallen the Aberdeen medical student. For long the energetic professor of anatomy cried aloud for bursaries for our medical students. For a time it looked as if there would be no response, but at last the cry was heard, and something more than a beginning has been made during the year. In addition to town council bursaries, bursaries in memory of Dr. Greig of Fyvie, and

Dr. William Milne, have been founded; while only a few weeks ago, £2,000 was given by Mrs. Marr, and £6,000 were given by Mr. Thompson of Pitmedden, exclusively for behoof of medical students. Already nearly a score of medical bursaries exist, but it is desirable that there should be more than double this number, and also some scholarships for graduates. In due time, we trust this will be realised.

The Aberdeen Medical School has long had a reputation for the care which it exercises over its students, and this arises from the fact of the professors being able to take a personal interest in their pupils. This is a main factor in the success which has attended the progress of this school.

BIRMINGHAM.

The Midland Medical Society.—Dr. Andrew Clark.—The Notification of Infectious Disease.

THE Midland Medical Society is, at the present time, one of our most vigorous institutions, its prosperity being, no doubt, in a large measure owing to the energy and character of its secretaries, Messrs. Eales and Chavasse, but also, in part, to its time of meeting, as it is the only society that meets in the evening.

The inaugural meeting of this session was held at the Grand Hotel, Colmore-row, on the evening of Wednesday, November 8th, under the presidency of Dr. Malins, when an address was delivered by Dr. Andrew Clark on the Varieties of Phthisis. The first part of the address was devoted to a vigorous criticism of the infective theory of tubercle, and the experiments of Koch, which the speaker pointed out required confirmation; and, in his opinion, this would not be forthcoming. The second part of the address was a brilliant description of the three main types of phthisis, which Dr. Clark has often insisted upon—the tubercular, the pneumonic, and the fibroid; and the last form was illustrated by a patient brought down from London for the purpose. The address was a complete success, so far as the pleasure of the audience was concerned, and a very large number of guests remained to honour the supper with which the evening's entertainment concluded.

More recently, the same society has had another meeting of scarcely less importance. On November 22nd, the society met to hear a paper from Mr. J. W. Palmer of Solihull, on the Notification of Infectious Disease, after which the reader of the paper submitted a resolution to the meeting, to the effect that it was inexpedient to impose the duty of notifying cases of infectious disease upon the medical profession, the householder being the proper person to bear the responsibility. This was met by an amendment, moved by Dr. Alfred Hill, the borough medical officer of health, and seconded by Dr. E. Wilson, medical officer of health for the county, that the duty of notifying should be imposed upon the medical man and the householder jointly. The meeting was well attended, and the discussion was kept up to a late hour, many members having to leave before the voting took place, but the evident sense of the meeting was in favour of the amendment, which was ultimately carried by a majority of three to two. This vote is of importance, as a Bill is now being promoted by the Corporation of Birmingham, in which power is sought to compel the notification of infectious diseases in the manner expressed by Dr. Hill's amendment.

The feeling appeared to be that the notification of infectious diseases is admittedly desirable in the sanitary interests of the community, and that the only practicable way of effecting this in the case of the poorer classes, where it is most necessary, is by imposing the duty on the medical profession.

MANCHESTER.

Owens College.—Royal Infirmary Appointments.—Hospital Sunday and Saturday Fund.—St. Mary's Hospital.

A VERY influential meeting was held at the Town Hall last week, which had for its object to bring before the public a scheme for the further development of Owens College. It appears that the most indispensable requirement of the University at present is a museum for the display of the large natural history collection already in the possession of the College. The scheme laid before the meeting includes a proposal for the erection of a block of buildings which is to contain, besides a museum-hall, space for lecture-rooms and laboratories for the professors connected with the chairs of mineralogy, geology, botany, and physiology; the projected physiological laboratories are said to be designed on an especially elaborate scale. A number of old friends of, and donors to, the College have already promised large contributions; but it is intended, by means of a more comprehensive canvass, to ask the general public to supplement the sum already raised. I understand

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Friday, December 1st.

Devonport and the Contagious Diseases Acts.—Mr. STANSFELD, who had on the paper a notice of motion for copies of correspondence in 1871 between the Town Council of Devonport and Mr. Bruce, the then Home Secretary, concerning his statements to his constituents in Renfrewshire as to the moral condition of Devonport prior and subsequent to the passing of the Contagious Diseases Acts, asked the Home Secretary whether he could give any information on the subject.—Sir W. HARCOURT said that on inquiry he had found that none of the papers referred to were in the Home Office.

Mortality in the Bengal Gaols.—Mr. O'DONNELL asked the Secretary of State for India what steps had been taken to reduce the mortality in the Bengal gaols, since the last report showed that, though less than in the exceptional year 1879, it was still considerably higher than among the free population of all conditions.—The MARQUIS of HARTINGTON: Since I presented certain papers in July last, the only additional information which has been received on the subject referred to in the question is contained in a recent despatch from the Government of India. It is there stated that, in consequence of my despatch of May 25th (which is among the papers presented), a circular has been addressed to the various local governments with a view to insure greater vigilance in the matter of mortality. The Government of India consider that the diet-scales now in force are sufficient to keep the prisoners in good health, but they have their attention still specially directed to the subject. They remark—and no doubt with reason—that the returns of deaths among the free population cannot be relied upon in the same sense as those of the deaths in gaol, where every case is strictly recorded; but the Government of India promise to send home annually a general review of gaol-statistics, which will be carefully scrutinised.—Mr. O'DONNELL asked whether the noble lord would direct inquiries to be made as to the effect, not only of the dietary scale, but also of the absence of ventilation and the overcrowding, upon the health of the prisoners confined in these gaols. And also whether he would take steps to ascertain whether it was true that the prisoners had to lie upon mounds of earth instead of upon beds, and whether these mounds of earth, having been used by generations of prisoners, were not often soaked with disease.—The MARQUIS of HARTINGTON: The subject to which the hon. member refers is now under the consideration of the Government of India, and they are now making the inquiries which the hon. member desires should be made.

Artisans' Dwellings.—Sir R. CROSS asked the President of the Local Government Board whether his attention had been drawn to the evidence given before the Committee on Artisans' and Labourers' Dwellings, 1881-2, as to a want of sanitary regulations with regard to the erection of such dwellings in the metropolis, outside the jurisdiction of the Metropolitan Board; and whether he would consider the advisability of giving further statutory powers to the authorities.—Mr. DODSON said he had referred to the evidence upon which the Artisans' Committee based the recommendations that many of the sanitary provisions of the Metropolitan Building Act should be extended to the suburbs. He pointed out that, under the Public Health Act, 1875, all urban sanitary authorities are empowered to make by-laws prescribing sanitary regulations with regard to the erection of dwellings, and any rural sanitary authority can have this power conferred on them. In this way sanitary authorities in the suburbs can make provisions in some respects even more stringent than those contained in the Metropolitan Building Acts; and, in many cases, not only have the sanitary authorities made by-laws, but they have shown commendable zeal in enforcing them. He was not prepared to say, therefore, that it is necessary to give further powers to sanitary authorities on this subject, but he would consider the matter during the recess.—Sir R. CROSS hoped the right hon. gentleman would draw the attention of the local authorities to the powers they possessed. There could be no doubt that wretched buildings were being put up.

HOSPITAL AND DISPENSARY MANAGEMENT.

WEYBRIDGE PROVIDENT DISPENSARY.

We have received the third annual report of the Weybridge Provident Dispensary, and we are glad to see that it is making satisfactory progress. The number of provident members, both from the Weybridge and from the Otlands districts, has somewhat increased. As in almost all provident dispensaries, it has been found necessary to supplement the members' payments by voluntary subscriptions. But it is satisfac-

tory to learn that for each guinea subscribed to the honorary fund, two guineas are paid by the provident members themselves. The figures are as follows: Provident members' payments, £184 16s. 5d.; honorary members', £95 15s. 5d.; whilst £176 were divided between the two medical officers.

THE WEST CHESHIRE PROVIDENT DISPENSARY.

THE third annual meeting of this institution was held on October 11th. The progress which the dispensary has made is most satisfactory. It owed its origin to a meeting of working men held three years ago, and it now bids fair to become one of the established institutions of Birkenhead. It has been well supported by the industrial classes from the beginning. During the first year, the contributions from this source alone were £104, the second year they reached £149, while last year they amounted to £208—just double what they were in the first year.

During the year 414 new members were enrolled. The total number of patients seen by the medical officers during the year amounted to 6,168. The number of prescriptions dispensed was 4,976, against 2,664 last year.

Experience has shown that it is impossible to balance the year's expenses without some honorary subscriptions. The working men's contributions are sufficient to pay for medical attendance, dispensing, drugs and rent; but the other expenses require to be met by an honorary fund.

MILITARY AND NAVAL MEDICAL SERVICES.

VOLUNTEER AMBULANCE INSPECTION.

THE Ambulance Company of Tower Hamlets Rifle Brigade, the annual inspection of which took place on Wednesday, November 29th, numbers thirty members, two or more men being taken from each company of the regiment for instruction in ambulance duties and stretcher drill. The company was commanded by Surgeon Platt, assisted by Acting Surgeon A. O. White.

Surgeon-General McKinnon, A.M.D., the inspecting officer, accompanied by Surgeon-Major Don, A.M.D., expressed himself highly satisfied with the inspection, the result of which reflected great credit upon Surgeon Platt, the non-commissioned officers, and men of the class. The work which they had learnt, whilst invaluable and absolutely necessary, were they ever called upon for active service, was no less useful to them and the community in times of peace. After inspection of the lines, the men were formed into five stretcher detachments, and went through the different movements of stretcher drill. Men were told off to act as wounded, and the various detachments went through various forms of attention to the wounded, after which pertinent questions were put to each of the bearers as to their reasons for using different dressings in particular cases.

THE HOSPITAL SHIP CARTHAGE.

Much indignation has been aroused by the unfounded charges, which recently appeared in a contemporary, with respect to the accommodation and treatment experienced on board the hospital ship *Carthage*. We are assured, from a most reliable source, that these statements are entirely without foundation; and that at no time have vermin existed on board this ship. The ablution arrangements, consisting of marble baths, with supplies of hot and cold water, available at all hours of day and night, can hardly form the subject of just complaint. With respect to the charges against the food, we are informed that there has never at any time been any complaint on this score, and the cooking arrangements were the same as those for Indian and Australian passengers.

In fact, everything that could conduce to the comfort of the patients on board the *Carthage* seems to have been afforded. Books and newspapers arrived by every mail in great abundance; and the convalescent patients were provided with long arm-chairs to rest in. The arrangements on board this ship have won the admiration of the French, Russian, Austrian, and German medical officers, who have inspected her.

THE late Dr. Peacock, so long connected as physician and lecturer with St. Thomas's Hospital, has left a bequest sufficient to establish a Scholarship in the Medical School of the value of 40 guineas. The Scholarship will be tenable for two years, and will bear the title of "The Peacock Scholarship."

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

SIR,—If you can inform me upon the following point I shall be much obliged. I am a dispensary doctor, and I am contemplating removal to another residence, situate within the district; is it necessary for me to obtain permission to do so in any way?

An influential member of my committee remarked to a friend of mine that he was *positive* that I could not remove without obtaining permission to do so.

I have looked up the regulations and general orders, but can get no information from them.—I remain, yours sincerely,
A. G. YOUNG, M.B., M.B.M.A.

. We are of opinion that, under the circumstances above stated, our correspondent could move his residence, without the previous sanction of the Dispensary Committee. Much, however, will depend upon the special circumstances of the case. Thus, whether the alteration of abode will entail additional inconvenience to his dispensary patients. Knowing a great deal of the courtesy at all times evinced by Mr. Benjamin Banks, the Secretary of the Local Government Board, Ireland, we would advise that a letter be sent to him, *marked private*, and his opinion invited thereon.

COMPLAINTS AGAINST DISTRICT MEDICAL OFFICERS.

SIR,—In the experience of a large proportion of your readers probably nothing is more common than to hear of, or to be themselves the victims of, complaints brought against medical officers of districts under the Local Government Board.

Most of these complaints are in the form of charges of neglect to attend with sufficient promptitude, or to provide what the pauper considers sufficient attendance and medicine, and, as a rule, the pauper is backed up by some guardian or the local clergyman, who, knowing nothing of the real necessities of the case, or of the doctor's numerous calls, and often taking no trouble to hear the other side of the question does not hesitate to threaten the doctor with terrible pains and penalties, the least of which is a formal complaint to the Local Government Board, with all its serious consequences. I wish to ask you, on behalf of a numerous and notoriously underpaid class, if there is no such thing as a *lex talionis*—in other words, is it not possible to bring some punishment upon the head of the offender, especially if he be a guardian?

I am, myself, at this moment, smarting under such a complaint, (which, fortunately I can prove to be entirely groundless, vexatious and frivolous,) yet am advised by my solicitor not to take legal steps (by an action for libel) against the offender, although he is habitually bringing complaints of a like vexatious and frivolous nature against other officers of the union with which I am connected.

I am, of course, well aware of the most useful work done in many cases by the Poor-Law Medical Officers' Association, but this has always been, I fancy, in cases involving very serious charges and important interests.

In plain English, what we want is a remedy, not against the tigers, but against the small vermin.—Yours faithfully,
A DISTRICT MEDICAL OFFICER.

. Our correspondent writes very sensibly and forcibly on a subject which has engaged the attention of the Poor-Law Medical Officers' Association, who, we learn, have cast about for some time past, for an adequate remedy. It is, in the absence of action, well to know that if a proprietor of a journal, in publishing the reports of a board of guardians, inserts any libellous reflection on any of the officers, by whomsoever uttered, he does so at his own peril, and can be proceeded against in a court of law. This point has been recently decided; similarly an individual guardian speaks at his own risk, as he can be similarly sued. We advise our correspondent to inform his slanderer of the consequences that would result from the repetition of his conduct.

THE CHESTERTON BOARD OF GUARDIANS AND MR. GRUBB.

We learn from the *Cambridge Independent* of December 2nd, that at a meeting of the Chesterton Board of Guardians held on the previous Thursday, a letter was read which had been forwarded by the Local Government Board, declining to institute an official inquiry, into the conduct of Mr. Grubb, unless the guardians were prepared to set forth specific charges against that gentleman. This, it would appear, the board was unable to do; and, after some discussion, it was eventually decided, that as the only complaint they could substantiate against him was that of a clerical error in his medical relief book, which Mr. Grubb had explained and apologised for, it would be as well to let the matter drop. Thus ends most ingloriously for the Chesterton Board of Guardians their attempt to deprive Mr. Grubb of an extra fee, and their further effort to drive him from office. As, however, the cost of defending Mr. Grubb's action must be considerable, and the judge of the County Court has decided that the defence was an unjust one, we earnestly hope that some ratepayer of the Chesterton Union will attend the next audit and make objection to the expenses being thrown on the union.

DR. W. B. CARPENTER.—Of the twelve Lowell Lectures which Dr. William B. Carpenter is now giving at Boston, U.S., the first six are on marine geography, the rest on psychology. Mrs. Kate Gannett Wells, author of *Lessons in Ethics*, has given a reception in honour of Dr. Carpenter, which was attended by many men of science and letters.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 30th, 1882.

Holton, Richard, Lincoln.
Masters, Alfred Thomas, Westbury Road, Westbourne Square.
Osborn, Frank Charles, Keppel Street, W.C.
South George, Peckham.

The following gentlemen also on the same day passed their Primary Professional Examination.

Bowhay, Albert, Charing Cross, Hospital.
Burrows, Walter Horncastle, Charing Cross Hospital.
Josling, Charles Langford, Charing Cross Hospital.
Wise, Walter, Middlesex Hospital.

MEDICAL VACANCIES.

The following vacancies are announced:—

BRINGTON, STREATHAM, AND HERNE HILL DISPENSARY.—Resident House-Surgeon. Salary, £150 per annum. Applications to the Secretary at the Dispensary, Water Lane, Brixton, S.W., by December 16th.

BURY DISPENSARY HOSPITAL.—House-Surgeon. Salary, £120 per annum. Applications by December 18th.

CASTLEBAR UNION, Castlebar Dispensary, North Division, No. 2.—Medical Officer. Salary, £110 per annum, with £15 as Medical Officer of Health, registration, and vaccination fees. Election on December 16th.

CASTLE WARD UNION.—Medical Officer. Salary, £20 per annum. Applications by December 15th.

CHIPPING NORTON UNION.—District Medical Officer. Salary, £65 per annum. Applications to the Clerk by December 25th.

COOKSTOWN UNION, Stewartstown Dispensary.—Medical Officer. Salary, £100 per annum, with £15 as Medical Officer of Health, registration and vaccination fees. Election on December 13th.

CUMBERLAND INFIRMARY, Carlisle.—Assistant House-Surgeon. Salary, £60 per annum. Applications by December 26th.

DENBIGHSHIRE GENERAL INFIRMARY, Denbigh.—Honorary Dental Surgeon. Applications by December.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Out-patient Clinical Assistant.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Ophthalmic Surgeon. Applications by December 13th.

LEEDS PUBLIC DISPENSARY.—Two Resident Medical Officers. Salary, £80 per annum. Applications by December 9th, to Dr. Jacob, 12, Park Street, Leeds.

LONDON HOSPITAL.—Medical and Surgical Registrar. Salary, £100 per annum. Applications by December 18th.

LONDON LOCK HOSPITAL AND ASYLUM, Female Department.—Assistant House-Surgeon and Apothecary. Applications to the Secretary, Westbourne Green, Harrow Road, by December 12th.

NATIONAL DENTAL HOSPITAL.—Dental Surgeon. Applications by December 22nd.

NATIONAL DENTAL HOSPITAL.—Assistant Dental Surgeon. Applications by December 22nd.

NORTH-WEST LONDON HOSPITAL.—Physician. Applications by December 16th.

NOTTINGHAM DISPENSARY.—Resident Surgeon. Salary, £180 per annum. Applications by December 21st.

NOTTINGHAM DISPENSARY.—Resident Assistant-Surgeon. Salary, £160 per annum. Applications by December 21st.

OWENS COLLEGE, Manchester.—Demonstrator and Assistant Lecturer in Zoology. Salary, £150 per annum. Applications by January 6th.

ROYAL FREE HOSPITAL.—Junior Resident Medical Officer. Applications by December 20th.

SCARBOROUGH UNION.—Workhouse Medical Officer. Salary, £70 per annum. Applications by December 15th.

SMETHWICK AND HANDSWORTH MEDICAL ASSOCIATION.—Medical Officer. Salary, £220 per annum. Applications to J. Mitchell, 32, Crockett's Lane, Smethwick, near Birmingham.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington.—Pathologist and Curator. Applications by December 11th.

ST. PETER'S HOSPITAL FOR STONE, Henrietta Street, Covent Garden.—Assistant-Surgeon. Applications by December 9th.

UNIVERSITY COLLEGE, London.—Jodrell Professor of Physiology. Salary, £604 per annum. Applications by January 24th.

UNIVERSITY OF EDINBURGH.—Examiner in Medicine in each of the Departments of Chemistry, Anatomy, Midwifery, and Practice of Physic. Applications by January 15th.

WEST BROMWICH DISTRICT HOSPITAL.—House-Surgeon. Salary, £80 per annum. Applications by December 6th.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.—House-Surgeon. Salary, £70 per annum. Applications by December 20th.

MEDICAL APPOINTMENTS.

BULLER, A. C., M.R.C.S.Eng., appointed Resident Clinical Assistant to the City of London Hospital for Diseases of the Chest, Victoria Park.

BUTTERWORTH, Samuel, M.R.C.S., appointed Resident Clinical Assistant to the City of London Hospital for Diseases of the Chest, Victoria Park.

JACKSON, P., L.S.A., appointed Resident Obstetric Assistant to the Westminster Hospital.

JESSETT, F. N., F.R.C.S., appointed Surgeon to the Royal General Dispensary, Bartholomew Close, *vice* W. Morrant Baker, F.R.C.S., resigned.

JONES, W. G. Gordon, L.D.S., appointed Dental Surgeon to the Princess Mary Village Home, Addlestone, Surrey.

JORDAN, Frederick William, M.R.C.S., L.R.C.P. Lond., L.S.A., appointed Medical Officer of Health to the Heaton Norris Local Board, *vice* J. D. Bird, M.B., deceased.

JOYNES, F. J., M.R.C.S., re-elected Medical Officer to the Dursley Union.

LARDER, H., M.R.C.S., appointed Junior House-Physician to the Westminster Hospital.

MONTFORD, J., M.R.C.S., appointed Medical Officer and Public Vaccinator for No. 3 District to the Upton-upon-Severn Union, *vice* J. S. Cowley, M.R.C.S.

MOODY, James M., M.R.C.S., L.R.C.P. Edin., Senior Assistant-Physician, Surrey County Asylum, Brookwood, appointed Medical Superintendent of the Surrey County Asylum, Cane Hill.

MORGENROOD, E. H., M.B., appointed Resident Medical Officer to York Dispensary, *vice* T. Kirsopp, M.B., resigned.

OXLEY, J. A. R., M.D., appointed Physician to the St. George's and St. James's Dispensary, *vice* T. C. Fox, M.B.

SPENCE, W. J., L.R.C.P., appointed House-Surgeon to the Bradford Infirmary.

UNDERWOOD, A. S., appointed Surgeon-Dentist to the West London Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGES.

FIELD—BURT.—On the 2nd of December, at St. Stephen's Church, Hampstead, by the Rev. J. Kirkman, Vicar, assisted by the Rev. J. P. Flood, Chaplain of Guy's Hospital, Alfred Field, Esq., of Leam, Leamington, to Margaret Elizabeth Burt (of Guy's Hospital), eldest daughter of the Rev. J. T. Burt, Rector of Stoke Doyle, Oundle, Northamptonshire.

ROBERTSON—FRASER.—At Tornaveen, Aberdeenshire, on the 21st November, by the Revd. Gavin E. Argo, of Kincardine, O'Neil Douglas Argyll Robertson, M.D., F.R.C.S.E., 18, Charlotte Square, Edinburgh, to Frances Garden Carey, youngest daughter of Wm. N. Fraser, Esq., of Tornaveen.

DEATHS.

DELL.—On December 2nd, of acute pneumonia (six days), at 67, Cleveland Street, Fitzroy Square, London, W., aged 27, Alfred John Dell, for fourteen years a compositor on the BRITISH MEDICAL JOURNAL, leaving a widow and two children.

HANKS.—On the 3rd inst., at 146, Mile End Road, Henry Hanks, L.R.C.P., M.R.C.S., L.S.A., aged 54.

HEALTH OF FOREIGN CITIES.—Statistics, published in the Registrar-General's last weekly return, show that the death-rate was recently equal to 24.4 in Bombay, and 29.8 in Madras. The deaths in Madras included 4 fatal cases of small-pox, and no fewer than 61 of "fever". According to the most recent weekly returns, the average annual death-rate per 1000 persons, estimated to be living in twenty-two of the largest European cities, was 25.8, and exceeded by 3.5 the average rate last week in twenty-eight of the largest English towns. The death-rate in St. Petersburg was equal to 44.3, and showed a further increase upon the rates in recent weeks; the 568 deaths included 53 fatal cases of diphtheria and 20 of scarlet fever. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged only 22.0, the highest rate being 25.6 in Stockholm; 7 fatal cases of scarlet fever occurred in Stockholm, and 6 of diphtheria and croup in Christiania. The 166 deaths in Brussels, including two cases of "fever", were equal to a rate of 21.2 per 1000. The rate in Geneva did not exceed 16.5. In the three principal Dutch cities, the rate averaged 28.5, and ranged upwards to 33.7 in the Hague; measles caused 6 deaths in the Hague, and whooping-cough 6 in Amsterdam. The Paris death-rate was equal to 24.7, and scarcely differed from the rate in the previous week; typhoid fever caused 73 and small-pox 11 deaths in the city. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 24.3, and ranged from 21.8 and 22.0 in Berlin and Hamburg, to 28.2 and 30.8 in Prague and Breslau. Small-pox caused 3 deaths in Prague, and scarlet fever 6 in Trieste; while the mortality from diphtheria was most excessive in Dresden and Munich. The mean death-rate in three of the largest Italian cities was 24.4, the rate being 21.4 in Rome, 23.4 in Turin, and 33.2 in Venice; malarial fever caused 9 and typhoid fever 4 deaths in Rome, and diphtheria 6 in Turin. In the four great American cities the death-rate averaged 22.9, and ranged from 18.7 in Philadelphia to 31.4 in Baltimore. Small-pox caused 20 deaths in Baltimore and 3 in Philadelphia; the fatal cases of diphtheria were 29 in Baltimore and 13 in Brooklyn, and the deaths in Philadelphia included 14 from typhoid fever.

M. Houzé de l'Aubriott, Professor of Surgery at the School of Medicine of Lille, has lately died.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopaedic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY...St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopaedic, 10 A.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.

FRIDAY.....King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu, F., 1.30; Skin, M. Th., Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu, 1.30; Obstetric, M. W. F., 1.30; Eye, M. W., 1.30; Tu, F., 12.30; Ear, Tu, F., 12.30; Skin, Tu, 12.30; Dental, Tu, Th, F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu, Th, S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th., 3; Throat, Th., 3; Dental, Tu, F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M, Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu, F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear, and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu, Th, S., 2; o.p., W. S., 9; Eye, Tu, W. Th, S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopaedic, F., 12.30; Dental, Tu, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu, F. S., 1; Obstetric, Tu, S., 1; o.p. Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopaedic, W., 2; Dental, Tu, S., 9; Th. 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu, F., 9.30; o.p., Tu, F., 2; Eye, Tu, F., 9.15; Ear, M. Th., 2; Skin, Tu, Th., 1.30; Throat, M. Th., 1.45; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu, 12.30; Skin, Th., 12.30; Throat, Tu, 12.30; Children, S., 12.30; Dental, Tu, F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu, T, F., 1.30; Eye, M. Tu, Th, F., 2; Ear, S., 1.30; Skin, W., 1.45; S. 9.15; Throat, Th., 2.30; Dental W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu, F., 3; Eye, M. Th., 2.30; Ear, Tu, F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Mr. Richard Davy will exhibit his Invalid Carriage. Mr. Walter Pye will show the Subject of a Hairy Mole treated by Transplantation of Skin. Mr. Rose will show a case of Talipes treated by Excision of Tarsal Arch. Dr. C. Theodore Williams: On a case of Bronchiectasis treated by Tapping.

TUESDAY.—Royal Medical and Chirurgical Society, 8 P.M., Ballot. 8.30 P.M., Mr. Frederick Treves: On Resection of Portions of Intestine. The paper will be illustrated by Diagrams and Pathological Specimens.

WEDNESDAY.—Hunterian Society, 7.30 P.M., Meeting of Council. 8 P.M., Dr. Ormerod: Two Cases of Locomotor Ataxy, with Joint-Disease. Mr. R. Clement Lucas: Cases of Wounds of Large Vessels.—Royal Microscopical Society, 8 P.M. Ordinary Meeting.

THURSDAY.—Ophthalmological Society of the United Kingdom, 8.30 P.M. Mr. Mules: 1. Hydatid Cyst in Orbit; 2. Panophthalmitis from Purulent Ophthalmia. Mr. Lediard: Ivory Exostosis of Orbit. Mr. Snell: Hard Chancre at Inner Canthus. Cases of Central Amblyopia in Diabetes, by Mr. Lang, Mr. Lawford, Mr. Stanford Morton, Dr. Edmunds, and Mr. Nettleship. Living and card specimens at 8 P.M. Dr. Samuel West: Sequel to a case of Optic Neuritis. Mr. Gunn: Case showing Peculiar Appearances in the Retina. Drs. Edmunds and Lawford: Optic Nerve from a Case of Diabetes. Dr. Stephen Mackenzie: Drawing from a Case of Extreme Tortuosity of Retinal Vessels.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication. PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with Duplicate Copies.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

SIGNATURE OF MEDICAL BULLETINS IN DAILY PAPERS.

SIR,—May I suggest that the College of Physicians, which has recently considered the subject of medical advertising in lay papers and passed resolutions thereon, should also consider the question of the signing of medical bulletins intended for public use? The number of bulletins now issued signed by more or less distinguished practitioners is greatly on the increase; and, wittingly or unwittingly, becomes the means of an amount of "medical advertising" which is the subject of much, and not always favourable, comment in and out of the profession.

Perhaps it is in some measure owing to the feeling that half-measures are of little use that the resolutions as to advertising medical books in daily papers appears to have had little effect, even on some of the distinguished Fellows of the College, judging from a cursory examination of the *Times* and *Saturday Review*.—I am, sir, yours faithfully,
December, 1882.

ROYAL COURTS OF JUSTICE.—Dr. Lockhart Robertson and Dr. Crichton Browne, the Lord Chancellor's Visitors in Lunacy, were officially present at the opening of the Royal Courts of Justice by Her Majesty the Queen, on the 4th instant.

MEDICINE AND PHARMACY.

SIR,—With reference to the question of medical men dispensing as well as prescribing medicines for their patients, I agree with your correspondent "An Examiner in Medicine," whose letter appears in the JOURNAL of November 25th, that there are "reasons which are of serious interest" involved in a discussion of the subject. You will agree with me that, in this matter, the first and gravest question is: What is best for the patient whose bodily welfare is placed in our hands? Professional and social status are, I submit, beside the question where human life is at stake. Now, for my part—and I do not speak without some experience in this matter—I am strongly of opinion that all medical men should make themselves assured that the means they employ in the treatment of disease are of the most reliable character procurable, and therefore that they should themselves, as a general rule, procure the medicines they employ. In fact, I do not consider it would be beneficial to the patient if he were to be troubled by a doctor who dispensed his own medicines where the well-being of his patient is at stake. I once was not so successful as I felt I ought to have been in the treatment of my cases; my therapeutics seemed much at fault. I therefore looked carefully to my drugs, changed my drug-merchant, and became again successful, to the satisfaction and benefit of my patients.

"An Examiner in Medicine" thinks "it must be decided distinctly whether a doctor is prepared to dispense, or whether he is content to prescribe." I think the latter course is the safer, and the one which will best serve the interests of the patient. I am, sir, yours faithfully,
A DISPENSING PRESCRIBER.

A DISPENSING PRESCRIBER.

SIR,—Thanks for your notice of the paper of a miserable idiot child referred to in my former note. The paper of the Middlesex and, therefore, is ineligible for admission to any of the three asylums mentioned by you. If you, or any of your correspondents, know of one for the Midland counties, I should be obliged if I could be recommended to it.—I am, etc.,
RUSTICUS.

"There is an asylum for idiots in the Midland counties, but it is not for paupers. It is known as the Midland Counties Middle Class Idiot Asylum, Knowle, near Birmingham. If the candidates are elected, £50 per annum has to be paid. If received on what is called the reduced rate of payment, £35 per annum, and £5 for clothing, must be paid; and such cases must belong to the counties of Leicestershire, Shropshire, Staffordshire, Warwickshire, or Worcestershire. Full particulars may be obtained of Miss Stock, the Superintendent, or of the Secretary, Mr. W. G. B. Smith, K. Asylum, Birmingham. If the patient is not received, the case must be taken to the nearest county or borough idiot asylum. Such a case must be admitted there; and, being incurable, no harm would result.

THE MIDDLESEX DEPARTMENT.

"With reference to the notice in your issue of the 25th inst. regarding a 'Country Surgeon' desirous of bringing before the public a case of a very peculiar nature, I am, sir, yours faithfully,
M. D.

"VACCINATION AND VACCINATION INSPECTORS."

SIR,—I am glad to see that the above is at last commented on. It is time that the public vaccinators were heard on the subject. I am only one of many who feel aggrieved by the manner in which the late inspection was carried out. Some of my brother vaccinators have consulted me on the propriety of having the matter brought before the House of Commons, and a protest made against the rudeness which we have been subjected to, and against which, as you will see from the letter in your issue of the 25th, we dare not remonstrate.

I trust, sir, you will give us your protection from the injustice to which we have been subjected. The tyranny of a Radical Government is well known, and it would be as much as our positions are worth to move personally in this matter. The lymph sent out from the central department is well known to be perfectly useless. I myself never had a case of successful vaccination performed with it; and in this I am not singular.

The statement that the protection from small-pox depends on the area of the scars, though supported by statistics, is a pure fallacy, and has done more to make vaccination a bugbear than all the outcry of the antivaccinators. The order to cover a child's arm with pustules is not only inhuman, but it is useless. I believe an excessive amount of inflammation, as is caused by a large area of pustules, does more to damage the protective quality of the vaccination than to improve it. I do not think the size of the chancre is an indication of the severity of the syphilis infection. It is well known that the indolent soft inflammatory Hunterian chancre is the most certainly followed by constitutional symptoms. Vaccine virus is known to be capable of unlimited auto-multiplication. The pustule is only developed when the virus has taken hold of the system, and is the evidence that the vaccine has been developed. The lymph taken from a case in which one small pustule only has been developed gives as good, if not better, results than the lymph taken from large and more inflamed pustules, showing that the system has been brought under the influence of virus; and that is what is required. I am of opinion that the present system of prizes for proficiency in vaccination should be done away with; and, if a prize is given, let it be given to the vaccinators who have the fewest number of cases in which secondary mischief has resulted, such as erysipelas, prolonged sore arms (syphilis, if this is a possible result), etc.—I am, sir, yours truly,

ANOTHER PUBLIC VACCINATOR.

"Another Public Vaccinator" raises three separate questions: 1. The behaviour of the inspector of vaccination. 2. If our correspondent has any real grounds for complaint on this score, he should lay his complaint before the Local Government Board, when his grievance is not likely to fail to receive attention. If it did so, he might communicate again with us. 3. That he has never had a case of successful vaccination performed with lymph from the National Vaccine Establishment, is a statement that surprises us. It is well known that the greatest possible care is taken to supply practitioners with lymph cultivated by public vaccinators, whose work is most thoroughly performed. Stored lymph is not to be trusted with anything like the same assurance as that which is taken from a child's arm or from the calf, and there and then directly inoculated; and stored lymph should not, therefore, be resorted to unless direct vaccination is an absolute impossibility. 3. Our correspondent can surely hardly mean that "the statement that the protection from small-pox depends on the area of the scars, though supported by statistics, is a pure fallacy." We fail to understand what other evidence than that of a statistical character can be brought to throw light upon this point. The experience of every small-pox hospital teaches but one and the same lesson, whether the area of the cicatrices is measured, or whether their number alone is stated. Thus, of 6,553 cases admitted into the Homerton Small-pox Hospital from 1871 to 1878, the mortality per cent. of those with four or more good marks was less than half that of those with one good mark. Again, we find Dr. Cayton, the medical superintendent, remarking, "how lamentable it appears when one cicatrix only is the usual number seen upon those received here as patients." At the Deptford Small-pox Hospital, Dr. McCombie found that small-pox patients who had cicatrices of a superficial area of less than one-third of a square inch, died at three times the rate of those who had a larger cicatricial area; and such evidence can be multiplied indefinitely.

INTERMITTENT PULSE.

SIR,—I have been reading with interest the account of a patient from whom Dr. J. H. Greenhalgh has been treating, and I am glad to hear that the patient is now recovering. I am, sir, yours faithfully,
ONE WHO HAS SUFFERED.

PROBABLE FREQUENCY OF MICTURITION.

SIR,—Under the above heading a letter from "A Country Surgeon" appeared in your last issue, in which it was stated that a patient suffering from frequency of micturition had been treated by the use of a very peculiar remedy, and that the result was a cure. I am, sir, yours faithfully,
M. D.

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THE TREATMENT OF RHEUMATISM BY BLISTERS.

SIR.—In the interval between the date and the publication of my letter of October 21st, I observe that quite a number of disputants have appeared, whose criticisms hardly touch even the fringe of the subject-matter of my paper, and that a large amount of energy has been unprofitably squandered on the burning question of priority. One of the number, who assumes the title of "A Dublin Hospital Physician," has politely charged me with ignorance of a subject (the pan-blistering of Dechilly and Davies) which I discussed at length twelve months previously in the pages of the *Dublin Monthly Journal of Medical Science*, and has also benevolently tendered me information on that important point. In the next sentence, he states that he is not quite certain that the merit of priority is due to Davies, and further, "that he had been told that, before Dr. Davies's publication, the practice had been pursued by the late Dr. R. B. Todd." Hearsay and uncertainty are confessedly the characteristics of his information. Dr. Herbert Davies, however, informs him "that Dr. Todd's method of employing blisters differed *totally* from the plan which I published in the *London Hospital Reports* of 1864." My letter, bracketed in the same column with that of "a Dublin Hospital Physician," supplies the information he required. He will now be able to speak with confidence on two points, of which he was previously admittedly ignorant.

Mr. Henry Brown, in a very discursive letter (*JOURNAL*, October 14th), remarkable for truisms and *ex cathedra* statements, objects equally to my plan of treatment and claim to priority, but appears chiefly exercised at my audacity in undertaking the cure of gout and rheumatism without the assistance of "orthodox medicine." "It is impossible," he says, "to treat acutely painful diseases without the aid of drugs." Had he added the words "in my opinion," I should perhaps have passed over without any notice his pronouncement. But he has failed, in spite of blistering; therefore I could not possibly succeed with similar remedies. I may perhaps offer an explanation of the cause of his failure. It is supplied by Aitken, vol. 1, pp. 826, 827, in referring to the Dechilly blistering plan. "If this plan be adopted, no medicine ought to be given beyond an occasional purge. No advantage arises from combining the alkaline system of treatment with that by blisters. If the two methods are combined, the period of convalescence is protracted."

Mr. Brown next gives a summary of a case recorded by the late Dr. Graves, and this is the conclusion announced after its relation. "This case clearly illustrates the uselessness of each blistering as a preventative of an attack of acute rheumatism." And so, the fact of Dr. Graves in 1832 having failed in preventing an attack of rheumatism by the application of a blister, conclusively proves that Dr. Harkin, in the year 1882 (fifty years later), cannot by that method cure a developed case of the same disease. The case to which he refers, that of Fitzgerald, appears in Graves, vol. ii, article Pericarditis, page 160; and, to any impartial reader, with the light of modern pathology, simply presents the characteristics of idiopathic pericarditis, cured by heroic doses of calomel and opium, by cupping, and blistering. Take, for instance, Aitken's definition of pericarditis, with and without rheumatism. "In pericarditis, rheumatism has been found to assume a new and formidable aspect, and rheumatic pericarditis is generally attended with more violent symptoms than non-rheumatic pericarditis. When acute pericarditis is not the result of rheumatism, the patient may suffer no pain, the countenance is pallid, and assumes an aspect of distress." When describing Fitzgerald's case, Dr. Graves uses the same terms, nay, the very words: "Face pallid and anxious, pulse falling from 90 to 49, no cough nor pain in the chest, no palpitation." This woman came into hospital on September 1st, "suffering from febrile symptoms of a trifling character." On the 5th, pericarditic symptoms appeared; and, with other depletory agents, she was given thirty grains of calomel every day, even after salivation had been induced. She got over the cardiac symptom. On the 8th, she was free from *fröment*; pulse 80, regular and soft; sounds and impulse of the heart natural. On the 13th, symptoms of acute rheumatism set in, which ran the ordinary course.

Now, I do not question the facts, but the conclusions come to. This poor woman, the victim of the *nimia diligentia medicina*, when in an anemic condition, was most likely exposed to a current of cold air in the wards of the Meath Hospital, and, instead of pleuritis or pneumonia, was struck down by arthritis, just as Graves tells us another patient in the same hospital was prostrated by pneumonia after recovery from bronchitis, through the faulty over-ventilation of the wards. We must bear in mind that, at the time when Graves's lectures on acute rheumatism appeared, in the winter of 1832-33, in the pages of the *London Medical and Surgical Journal*, the medical world was greatly divided upon the subject of cardiac diseases, and the import of their symptoms, and relations with other maladies. Many points of doubt and difficulty concerning the physiology of the heart, its sounds in health and disease, were still undetermined; and the writings of Bouilland, whose object was to establish the coincidence and interdependence of pericarditis, endocarditis, and rheumatism, had doubtless an influence upon men like Graves. Many hypotheses then advanced confidently, were afterwards modified by increased experience; and Graves's apparent adoption of the endocarditic theory was not more strange than the mistake of Latham, who maintained that the coexistence of the *bruit de soufflet* with pericarditis, were peculiar to the rheumatic variety.

A desire to generalise and arrive at rapid conclusions, is a common failing, and leads us often to mistake an accidental for an essential sequence of events, regardless of the law that the relation of cause and effect cannot be established but by the fact of one event following the other in a uniform manner, and in a great number of instances. A remarkable circumstance related by Dr. Goldsmith just occurs to me, which I consider not irrelevant. He tells us, among a number of facts creditable to Mrs. Bledge, that—

"The King himself has followed her,

When she went on before."

I have not learned, however, that any of his numerous admirers have suggested, as the natural conclusion of that event, that Mrs. Bledge never after went abroad without being honoured by His Majesty's presence in her train.

The letter of Dr. Collier (*JOURNAL*, October 7th), although of limited dimensions finds space for a number of assumptions and fallacies to which he assigns the title of facts. With your permission, I shall notice them *seriatim*, regretting that it takes longer time to explode a plausible theory or to rectify an error, than to announce them in dogmatic terms. Dr. Collier's first assumption takes the form of an interrogatory: "Is not the vesication in its action constitutional rather than local?" I reply, "Is there really any necessity for conjuring up such a shadowy theory, for which there is little or no proof?"

In every standard work on therapeutics, vesicants are defined, as topical agents, counterirritants, derivatives, etc. As such, their use is indicated in the treatment of pleuritis, endocarditis, and pericarditis, enteritis, peritonitis, etc. Thus, when Fuller states (page 238) "that, in rheumatic carditis in its advanced stage, when effusion has taken place, blistering, of all local remedies, is the most serviceable,"

would anyone have the hardihood to assert that, by local, he meant constitutional remedies? Or that, where Sir A. Carlisle or Dr. Day applied the hot iron in cases of rheumatic lumbago, sciatica, or neuralgia, it was by its constitutional influence it acted.

The second assumption is contained in the question, "How can we account for the fact that rheumatism is as much benefited by the application of blisters to the joints or any other part of the body?" I reply, that one does not usually try to account for a fact which is non-existent, for a fiction unsupported by observation or experience. The nearest approach to this statement is found in the second corollary of Dr. Gowan's upon the Dechilly method, as published in the *JOURNAL* of September 30th, "that it is immaterial whether the blister is applied over the heart or over the articulations," in fact over the inflamed organs. Surely this does not justify the statement, "over any other part of the body." Perhaps Dr. Collier has peculiar personal knowledge on the subject; nevertheless, to be properly deemed a fact, a statement should be generally recognised; and, although pretty conversant with the literature of the subject, I have never met with such a proposition from an authoritative source. His last sentence begins with, "Blistering acts in the same manner as an alkali does." This is true, but only in a restricted sense, namely, when a blister is applied to the region of the heart. When an alkaline carbonate, such as potash, is administered, say, in thirty-grain doses in acute rheumatism, two effects are produced; one primary, its sedative action on the heart; the other secondary, its neutralisation or even alkalisation of the urine; but, as it often happens, the essential is overlooked in our admiration of the accidental. Dr. Garrod, in Reynolds's *System of Medicine*, vol. 2, page 910, says, "Upon the heart, the alkaline carbonate acts as a sedative, reducing the frequency of the pulse sometimes forty-eight beats in the minute, but not causing any faintness," while the potash-salt, being one of those which are eliminated by the kidney in the same state as when they enter the stomach, is found in the urine in its free state, giving rise to the idea of neutralisation, and of its destroying the hypothetical acid of the blood. Again, "and tends to neutralise the acid morbid material which exists in the blood of the rheumatic patient," but who has ever found this fanciful *materies morbi*? And Dr. Garrod declares that, after repeated analyses, "no abnormal principle has been found in the blood; lactic acid has been assumed to exist, but no proof has been given of its presence (*op. cit.*, p. 827). Again, in page 905, "from acute general gout, rheumatism may be separated by the absence of uric acid in the blood."

In conclusion, Dr. Collier says, "and changes in a few days the acid urine to a neutral or alkaline state." Now Dr. Garrod states: "No proof has been given that lactic acid exists in the urine in rheumatic fever in greater amount than in healthy urine" (page 898). If, then, there exist no abnormal amount of acid, there is none to be neutralised, and Dr. Collier's last pronouncement is not more happy than his first. Besides, if further proof were wanted, I have shown in my letter to Dr. Gowan that Erb asserts that "he never saw the blistering plan cause any change in the state of the urine." I regret that, in the interests of science, so much space is required for the refutation of commonly received opinion, which in so many minds assumes the form of unquestionable truth.

As the lucubration above the name of Dr. R. H. Dale is merely a distortion of facts, doubtless not wilful, but arising from careless perusal of my paper, I pass it over without further notice—and am, sir, very sincerely yours,

Belfast, November 1882.

ALEXANDER HARKIN, M.D., F.R.C.S.

SIR,—I feel quite confident that Dr. Harkin of Belfast will view with pleasure any thing having a tendency to throw light upon the treatment of rheumatism; and I am also certain that he will not be offended if I tell him that the blistering treatment is at least forty years old. Only one of your correspondents does the name of Todd even the least modicum of justice. Three of his lectures are devoted to rheumatism, and every phase of treatment, including blistering, is fully gone into.

When I wrote my letter of October 9th, I had scarcely time to examine the question. Indeed, the impression was so clearly on my mind, that the blistering treatment of rheumatism, as advocated by Dr. Harkin, was very old; and also that the names of Dechilly and Herbert Davies were brought forward in a manner which deprived others of their laurels. My opinion is confirmed, and I only wonder that old pupils of Dr. Todd have not come forward to claim for him that which he so meritoriously deserves; viz., the first place as a clinical teacher, and the best expositor as to the blistering treatment of rheumatism. No man before his day, and certainly none since his death, has so fully and clearly gone into the subject. Stillé, whose works on therapeutics are unrivalled for accuracy, curiously falls into the mistake of attributing to Stoll, Dechilly, and Davies, the first places as pioneers, together with Martin Solon, of the blistering treatment of rheumatism.

Scudamore, Hippocrates, and others, with the moxa treatment of joints, are ignored by Dr. Harkin and others. Why Herbert Davies's name should appear so prominent, I am at a loss to know. In 1844, Dr. Todd practised the mode of treating cases of rheumatism by blistering the joints, and the præcordial region as well. Solon's report was made to the Academy of Medicine in 1850; and it was not till 1864 that Davies's report became known. But what are we to say about all this blistering? In 1869, Alfred Fleischmann (*vide Lancet*, May 1st) actually affirms that: "blisters should be a later resort, with the exception of one, half the size of a playing card, an inch and a half below the left clavicle—an application I look upon as an almost certain preventive of cardiac mischief. In all my cases," Fleischmann says, "I have had only one instance of original heart-complication, and that was a case rather of carditis than of rheumatic fever (the patient was well and dead in thirty-six hours)." After this, it is useless discussing Dr. Harkin's "new" plan of the treatment of rheumatism. The plan is neither "new" nor "a new departure." Dr. Harkin has just lit upon a few cases favourable to a certain view, and, from what I know of him, he will be the last to delve into absolute quackery, and the first to confess that his pathology and treatment are neither new nor novel.

I cannot help turning to old friends, such as Scudamore; and if I controvert anyone in his opinion, and point out his error, I know friendship will not be curtailed; and Dr. Harkin will not consider me sarcastic if I narrate the "brown paper" episode. Under "blisters" for rheumatism (*vide Scudamore*, 1816) a young man was cured of rheumatism in the left arm by the application of brown paper in one night. But the sequel is that a large blister failed to remove the affection on another occasion. I am sorry to differ from Dr. Harkin as to the pathology of rheumatism. It is not "a specific form of endocarditis of neurotic origin." I have attended cases without the least sign of endocardial or pericardial mischief. Rheumatism is an inflammation of a peculiar type. It is a blood-disease, due to a morbid state of the blood, owing to acidity (lactic, if you choose), but the *tons et origo mali* is not the heart, or its inflamed endocardium. Endocarditis is a result, not the cause of the specific fever. In 1882, Dr. Harkin proposes to cure acute rheumatism by a blister over the region of the heart; Fleischmann, in 1869, advo-

cated the practice of placing the blister an inch and a half below the left clavicle—(neither more nor less)—and it was a *sine qua non* that it should be only half the size of a playing-card; brown paper alone cured a young man in Scudamore's time; Gull and Sutton use mint-water; but such individuals as myself, in spite of every care, fail to accomplish such results by legitimate therapeutics.

Bleeding was once the cure for rheumatism; and I have little doubt that, before long, some "thought-reader," like Mr. Cumberland, or Maskelyne and Cook, will be engaged to unravel the pathology of all known diseases. If a blister, in 1882, applied over the heart, can cure gout and rheumatism, Cullen, Scudamore, Garrod, and a host of other writers in our own day, must have spent their time in vain, teaching that art which we call by the dignified title therapeutics. That the blistering treatment is not novel in the cure of rheumatism is perfectly clear. Cantharides may be looked upon as a specific by some, but it will only have its day. Davies's plan is simply another mode of blistering to Todd's, and Dr. Har-kin's is placing a blister over the heart, or a little lower than that adopted by Fleischmann.

The heart-affection that is so prone to occur in rheumatism has for long enough been treated by blisters; but the faith which novelty engenders is ever evanescent, and it does no harm to the credulous, but rather good, to hear betimes of "my plan" of treatment; but I pity the patients upon whom experiments with cantharides inwardly and outwardly are exclusively used as curative agents in gout and rheumatism. I am, etc.,

HENRY BROWN.

Northallerton, November 6th, 1882.

WARTS AFTER PERFORMING A NECROPSY.

Sir,—A medical friend of mine performed a *post mortem* examination about two years ago, having at the time a scratch over the back of the interphalangeal joint of the right thumb. About a month afterwards, a pimple appeared at the seat of the scratch, and ultimately developed into a growth like a wart, but surrounded by an inflammatory areola, and accompanied by occasional itching. At the present time, a considerable portion of the back of the thumb is occupied by similar growths. He has tried shaving the warts, and applying various escharotics, such as nitric acid, nitate of silver, resin, etc., but without benefit. Excision, from their situation, would seem inexpedient. Could any of your readers inform me of a treatment which has been tried and proved successful?—I am, etc.,

B. C.

"* We have referred this question to an eminent surgeon, whom we knew to have special experience in the matter, who replies: "I believe the best plan is not to excise the warts, but to steep them and the skin around them thoroughly in the acid nitate of mercury, and repeat this from time to time as its effects pass away. It must be done repeatedly, and at as short intervals as practicable." He cured himself of an affection of the kind some years since, but not till after numerous applications, repeated over a space of at least three months. Great patience and perseverance are required. The application is not seriously painful.

W. E.—Yes, we believe the same gentleman.

EFFICIENT VACCINATION.

Sir,—I have been much interested in your kind information as to what is respectively the first and second award for efficient vaccination. I have received the first prize, but could never understand the principle on which the amount was founded.—I am, sir, your obedient servant.

PUBLIC VACCINATOR.

"* The scars produced by the vaccinator must be thoroughly well marked in their foveation; and where this character is satisfactory, two grades of merit will be recognised: first grade, with scars having collectively at least half a square inch total area; second grade (admitted only in cases of a first award), with scars less than the above, but having collectively at least one-third of a square inch total area. No vaccinator who has once received an award for work of the second grade is deemed eligible for any subsequent award unless his work have attained the first grade.

AMBULANCE INSTRUCTION.

A MEMBER.—There are no special books on ambulance instruction, published solely for Volunteers. The manuals used by all volunteer surgeons are the same as those in use by the Army Hospital Corps, and are as follows: a *Manual of Instruction for Ambulance Companies*, and a *Manual of the Army Hospital Corps*, printed at the War Office, and issued by the War Office, and a *Beaver-Companies*, both are published by Messrs. Chapman and Hall, 11, Newgate Street, London. The latter book contains the instructions for a *Beaver-Company*, whilst the former treats of rudimentary anatomy, bandaging, etc.

URINARY CABINET.

E. M.—The *Urinary Cabinet* is a very useful and interesting work, in the form of a *Manual of the Urinary System*, published by Messrs. Chapman and Hall, 11, Newgate Street, London. It contains a full and complete description of the urinary system, and is illustrated with numerous woodcuts, and is a most valuable work for the student and practitioner. It is published in a small form of 16, in vulcanite, price £3.

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CLIMATE OF CYPRUS.

Sir,—I have a patient, a lady, who proposes going to Cyprus next spring. Can any of your correspondents give me any information with regard to the climate, etc., particularly what are the diseases; and at what ages is it habitable for children? My patient has one child aged eight years, one eighteen months, and a baby. Any other information likely to be of assistance I should feel very grateful for.—I am, sir, yours truly,

C. F. PORTER, M.R.C.S., etc.

Fleetwood, Lancashire, November 13th, 1882.

D. TACEY wishes to know if there is a home for the partially paralysed. He has a patient who is able to be led about, but who, in every other respect, is helpless. He could pay from 20s. to 30s. a week.

CARMEN.—We doubt it.

COMMUNICATIONS, LETTERS, etc., have been received from:—

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- Solomon, J. Vose, F.R.C.S.,** Surgeon to the Birmingham Eye Hospital.—NOTES of LECTURES on CERTAIN OPERATIONS of the EYE.
- Southam, F. A., M.A., F.R.C.S. Eng.,** Assistant-Surgeon to the Royal Infirmary, Manchester.—SURGICAL CASES and NOTES.
- Spencer, W. H., M.A., M.D.,** Senior Physician to the Bristol Royal Infirmary.—THE TREATMENT of ENTERIC FEVER with COLD BATHS.
- Spender, J. Kent, M.D.,** Physician to the Mineral Water Hospital, Bath.—THERAPEUTIC MEMORANDA on DIFFERENT REMEDIES.
- Stowers, J. Herbert, M.D.,** Clinical Assistant to the Department for Diseases of the Skin, St. Bartholomew's Hospital.—DERMATOLOGICAL SUBJECTS.
- Simpson, T., F.R.C.S.,** Surgeon to the Lincoln County Hospital.—REPORTS of SURGICAL CASES.
- Swain, Paul, F.R.C.S. Eng.,** Surgeon to the South Devon and East Cornwall Hospital.—NOTES on HOSPITAL CASES.
- Thompson, E. Symes, M.D., F.R.C.P.,** Physician to the Hospital for Consumption and Diseases of the Chest at Brompton.—AMYLOID CHANGES in CHRONIC PHTHISIS.
- Thomson, William, M.D., F.R.C.S.I.,** Visiting Surgeon to the Richmond Surgical Hospital, Dublin.
- Thornton, J. Knowsley, M.B., C.M.,** Surgeon to the Samaritan Hospital.
- Tirard, Nestor, M.D.,** Senior Physician for Out-patients to the Evelina Hospital for Sick Children.—THE TREATMENT of CHILDREN'S DISEASES.
- Uthoff, John, C., M.D.,** Surgeon to the Sussex Eye Infirmary.—SUBJECTS in OPHTHALMIC SURGERY.
- Watteville, Armand de, B.Sc., M.R.C.S. Eng.,** Electro-Therapist to St. Mary's Hospital.—CONTRIBUTIONS in ELECTRO-PHYSIOLOGY and ELECTRO-THERAPEUTICS.
- Weatherley, Lionel A., M.D.,** CASES of INTEREST.
- Wherry, George, M.A., M.B.,** Surgeon to Addenbrooke's Hospital, Cambridge.—1. HEAD INJURIES. 2. THE TREATMENT of GENU VALGUM.
- Whipham, Thomas T., M.A., M.B., F.R.C.P.,** Physician to St. George's Hospital.
- Whitehead, Walter, F.R.C.S. Eng.,** Surgeon to the Royal Infirmary, Manchester.
- Wicks, W. Cairns, M.B.,** Physician to the Hospital for Children, Newcastle-on-Tyne.
- Williams, C. Theodore, M.D., F.R.C.P.,** Physician to the Hospital for Consumption and Diseases of the Chest at Brompton.—THE RELATIONS of PHTHISIS and ALBUMINURIA.
- Williams, Dawson, M.D.,** A CASE of HYSTERICAL SNEEZING.
- Yeo, I. Burney, M.D.,** Physician to King's College Hospital.—THE ETIOLOGY of PHTHISIS.

THE BRADSHAW LECTURE ON SOME RARE AND NEW DISEASES.

*Delivered at the Royal College of Surgeons of England on
December 13th, 1882.*

BY SIR JAMES PAGET, F.R.S.

MR. PRESIDENT AND GENTLEMEN,—It is my first duty, in delivering the first Bradshawe lecture in our college, to offer a tribute of respectful thanks to the generous lady by whom it was founded, the widow of Mr. William Wood Bradshawe, a Fellow of this college, who practised at Andover and at Reading, and died in 1866. He was a home-loving and studious man, who diligently cultivated his mind in both literature and science; and his widow, who survived him fourteen years, being desirous to testify her gratitude for the happiness which she owed to him, bequeathed a thousand pounds to this college, and as much to the Royal College of Physicians, on the condition that each should institute a lecture, to be given annually, and to bear his name. She desired that the lecture should be on some subject connected with medicine or surgery, and that the choice of the lecture should rest with the president of each college for the time being. She made no stringent regulations, and seems to have wished only to maintain her husband's name in good repute, by associating it with the advancement of the science which he loved.

In my endeavour to fulfil her exemplary wish, I have chosen the subject of "Some Rare and New Diseases." I hope to be able, in speaking of them, to illustrate a part of the natural history of disease which I think is too little studied—that part, namely, which relates to the variations and the combinations of diseases in hereditary transmission. Besides, both in the choice of its subject and in the whole enterprise of giving this lecture, I have looked for an opportunity of promoting pathology by promoting pathological museums, a motive which, I am sure, will be pardoned, though I am conscious of its being in some measure personal, for I have spent so much time and thought in museums that I feel as if, in their greater utility, I should myself become more useful.

Now, first, respecting rare diseases, there may seem no want of opportunity of studying them. Our journals and the proceedings of our societies are full of the records of rare cases; many collections of such cases have been published, and there are many rare specimens in every museum. All these have that kind of attraction which belongs to everything that excites our wonder, but we too seldom let the wonder have its proper consequences; we too seldom let it provoke our curiosity so far as to make us search for the meaning and reason of the rarity. There is a question which we should often ask ourselves, Why is any disease rare? at least, why is any rare which does not depend on some accident or some rarely occurring external cause? I shall try to suggest answers which may be, in some instances, sufficient; but I fear that, in more instances, if I can be useful at all, it can only be by suggesting how answers may be found.

First, there is a difference, though it may often seem only a verbal one, between rare cases and rare diseases. A case may be called rare when, though it is evidently one of a common disease, it differs from the usual type or standard of that disease in some one or two features. Thus it is a rare case when a common disease is found in an unusual place; as an epithelial cancer on the upper lip, or this fatty tumour on a finger; or in unusual quantity, as in this large cartilaginous tumour on a femur; or, again, a case may be rare in respect of the time of its occurrence. For instance, I have lately seen cancer of the rectum ending fatally in a lad of eighteen, and scrofulous abscess in a man of eighty; and many of us must have seen instances, though they are rare (and these are very important in the history of diseases), in which manifestations of syphilitic inheritance, usually evident in infancy, have not appeared till the time of youth or even of adult age; or cases may be very rare in respect of accidental complications or of the absence of some usual symptom. But of all these and other rare cases, the number and variety are so great, that it would be impossible to deal generally with them, except as with mere story-telling. It would be very useful if someone would collect hundreds or thousands of them, and arrange them, even though it were only under such headings as I have just indicated. But even as they are, singly and in disorder, let me say that we ought not to set them aside with idle thoughts or idle words about "curiosities" or "chances". Not one of them is without a meaning;

not one but might be the beginning of excellent knowledge, if only we could answer the question, Why is this rare? or, being rare, why did it in this instance happen?

But, because of their number and variety, I must pass by rare cases and will speak only of some rare diseases—that is, of some diseases which are rarely seen and yet occur in a sufficient number of cases, and with sufficient uniformity, and sufficient difference from other diseases, to permit of their being described in general terms, and to justify their being called by distinctive names. And of these again, for they are numerous and various, I shall select only that group which seems most attractive; the group of those, namely, of which there seems reason enough for believing: first, that they were, lately, new diseases and have become more frequent; and, secondly, that they are due mainly to morbid conditions changing and combining in transmission from parents to offspring—I say due mainly. It is certain that changes in the external conditions of our life have influence on even those morbid conditions which are most personal; but this influence is very hard or impossible to trace in the cases which I have in mind, and it may to-day be neglected though not forgotten. For, in all these cases, the personal factors and those of which alone I have to speak are more potent than the conditional, the inner than the outer. We call these diseases constitutional, diathetic, or by similar names; but the chief fact in them is that they, or the necessary previous states or predispositions to them, are inborn and inbred.

Let me first show that there is reason enough for believing that some rare diseases of this kind were recently—say within the last century—new; and that, more recently, though still rare, they have become more frequent. There is, I know, a general unwillingness among pathologists to admit that there are new diseases of this kind; and this unwillingness is often just, for many diseases that may seem new have probably existed long and been overlooked; they may be new to knowledge, but not new in fact. Bright's disease and Addison's disease were new in the sense of having first been well observed and described by those whose names they bear; but no one would venture to say of diseases so difficult to detect, as these used to be, that they did not exist long before they were well observed. We could as well believe that embolism never occurred until just before it was found out, or that right-side hemiplegia used not to be associated with aphasia. These things were old before they seemed to be new; but how long they had existed neither records nor museums can tell. It would be, indeed, very interesting if we could tell the time and manner of first appearing in the case of many diseases which are now common; but it is scarcely ever possible. And yet, if you will allow me a digression, let me show what in some instances museums may supply, and what I hope they will in the future supply much more largely. Here are specimens of typhoid ulcers of the intestines, preserved by Hunter. Few things have been more important in the knowledge of fevers than the clear proofs of the distinction between typhus and typhoid given by Sir William Jenner in 1850. It was one of the best life-saving discoveries of this century; before it both diseases were at least partially misunderstood, and neither was so well treated as now. Since the distinction between them was discovered, it has been possible to trace, in old recorded cases, probable instances of both; but there is nowhere so clear evidence of the occurrence of typhoid, a century or more ago, as is given in these specimens of Hunter's, preserved without name or history; not unobserved, and yet not in any fair sense understood. Now in this, as in many things, Hunter set us a good example. He did not think those things unimportant which he did not understand. He was a thorough naturalist, and kept specimens of everything in his field of study, which, though not yet, might become useful.

But, however much of what seems to be new we may justly ascribe to our previous oversight of what was old, there yet seems to be evidence enough that new diseases are in progress of evolution, and that, as I have said, some of the rare diseases of which I have to speak, are the earliest instances of the new. Good evidence of this kind is to be found, I believe, in the peculiar joint-disease discovered by M. Charcot in association with locomotor-ataxy, and in the disease of bones, to which I have given the name of osteitis deformans. Neither of these, I believe, was described till within the last few years. They may have been overlooked, but, to believe this, we must believe what is very improbable. We must believe that all the most acute and observant practitioners before our time overlooked, not merely obscure and transient diseases, difficult to study, but cases which lasted many years, and gave constant great distress, and were manifested in signs so plain, that they could be recognised in the shape and gait, in the posture and whole aspect of the patients, in strangely large heads and curved limbs. And, further, we must believe that the morbid anatomists before ourselves overlooked changes of structures of the largest, most obvious, and most striking kind. It is, surely, very un-

cases in which leprosy has been seen, even of late years, in this country, in persons never exposed to any of its external causes; and to the like of this we may refer, I think, some of the rare cases which defy all efforts to refer them to any combination of types of disease now prevalent.

Now, I half wish that I could escape from the necessity of testing my doctrine by my facts; but as I have often asked myself, so others may ask, how can the cases of rare diseases of which I have been speaking be explained as the results of morbid conditions changing and combining in transmission from parents to offspring? In the phlebitis, we may often trace a variation from the customary type or standard of the very old and heritable disease, gout. In many cases, its relations to typical gout are clear. The patients are members of gouty families, and in many of them other signs of gout are evident, either coincidentally with the phlebitis or at other times; it has, in short, all the evidences of being one of the many forms of what is called "incomplete gout". But, for a reason why this variety of gout settles (if I may so speak) in veins, especially in those of the lower extremities, I can only guess at a convergence of inherited dispositions, both to a modified form of gout and to some conditions of veins rendering them, among all the structures, the most sensitive to the gouty process. Certainly it is not accident which determines the disease to the veins, for this disease "runs in families". I know of its occurrence in two brothers and three of their cousins; and I have heard Sir Charles Locock tell of four sisters who had phlegmasia dolens, and whose father had crural phlebitis.

I am conscious that this is little more than guessing, and for the osteitis I must guess still further; or, rather, let me say that, to the furthest bounds of propriety, I must exercise that use of the imagination which may happily discern a way towards the truth. I imagine, then, that a likeness of the osteitis deformans to several other diseases may indicate a combination, in definite proportions, of transmitted dispositions to those diseases—a combination which has become possible by changes of the type of one or more of them. First, it shows some relationship to mollities ossium and rickets: for, though it is an inflammatory disease, which they are not, yet the softening which permits of the curving of the bones is distinctive, and hardly occurs in any other form of inflammation of bone in middle or later life. And, again, the relation of the osteitis to rickets and mollities ossium is notably indicated in the porous thickening of the skull, which is found in some instances of them all, and which is well marked in our specimens of genuine rickets from erroneous diet in young lions and young monkeys. Further, there appears some relation to gout: for some of the cases have known inheritance of gout; and instances are sometimes seen, in typically gouty persons, of a single bone having all the characters of the osteitis, though all the other bones appear healthy. Such a one is this femur, for the opportunity of showing which I am indebted to Mr. Bowlby of St. Bartholomew's. There is a likeness, also, it may be said, to the osteo-arthritis and other forms of rheumatic gout in the remarkable maintenance of good general health during even many years of a painful and crippling inflammatory disease; and, further, there appears some relationship to cancer, in the singular frequency with which cancer or sarcoma occurs in the healthy bones or other parts of those who have suffered for many previous years with osteitis deformans.

Thus, I imagine, by inherited dispositions, accumulating and combining, or converging in definite proportions, this disease may be produced. I would try to imagine the genealogy of M. Charcot's disease, but that I have too little clinical knowledge of it. I can only suggest a combination of osteo-arthritis with syphilis chiefly localised in some spinal nerve centre; but I believe far better suggestions may be made by those who, suspecting a combination of diseases rather than many radiating from one source, will carefully study the essays of Professor Charcot and Dr. Buzzard's admirable clinical lectures on Diseases of the Nervous System. Besides, I may seem to have guessed already more than enough. Let me, therefore, say that, even if my guesses are wrong, my error cannot weaken the probability of the belief that these, and other rare diseases of like kind, are instances of settled varieties of disease, due to variations and convergence of morbid conditions in hereditary transmission. And, if this be in any measure true, or even not more than a reasonable hypothesis, then it must be of great importance that we should know much more than we yet do of the variations which, in progress of time, diseases, or certain examples of them, may undergo; of their deviations, in a gradually increasing number of instances, from typical or standard forms; their acquirements, in those instances, of other comparatively fixed and long-abiding characters; of the occasional disappearance of old forms of disease, and the evolution of new ones. Such variations in diseases should be studied as Darwin studied the variations of species. Let me be clear in saying as Darwin studied, for, in the pursuit of new knowledge, he may be a model to all, as he has been to me, so far as I

could imitate him. He, as I know, would have studied these things, not by deduction, as from a law exactly formulated, and from which he could trace the course of every change, but by a most careful collection of facts, facts to be seen in specimens and read in full records, and by a study as complete for every case as if no law of evolution had ever been discovered.

Let me add that the study of these variations of disease is not one of mere pathological curiosities; it may be of great practical utility. Let me show how, if only that I may provoke some to pursue it vigorously to whom mere pathology is not attractive. We hear much, and often, of the uncertainty of medicines, of disappointments in the use of this or that supposed remedy, and substances which have long been in good repute for the treatment of this or that disease are spoken of with disrespect. It need not be questioned that in many cases the belief in the utility of a medicine has been maintained by completely erroneous observations. Such was the belief in the utility of infinitesimally small doses of anything ever yet swallowed. And other beliefs less evidently absurd may have been nearly as ill-founded. But there are many of which this is not to be said. It cannot be doubted that bromide of potassium is often very useful in epilepsy; yet sometimes, as we say, it fails; or that guaiacum is useful in some cases of chronic rheumatic arthritis, and is in others very disappointing; or that opium sometimes does, and sometimes does not, do good in cases of senile gangrene. I suppose there is not a medicine in the pharmacopœia which does not sometimes disappoint him who gives it hopefully; not one which is not, therefore, spoken of with contempt or blame as if it were a responsible agent convicted of default. But here is an unfair imputation. It is not these medicines which are in fault, but ourselves. That which some call the fallacy of therapeutics is generally the fallacy of diagnosis. To state the facts roughly, we suppose cases to be alike which are really different; and, very naturally, the medicine that does good in some of them is useless in others. For example, in the group of cases which I chiefly have in view, we do not always discern when a disease has varied so far from its usual type that it is no longer amenable to its usual remedies. A better diagnosis must precede a better therapeutics. We need not only the diagnosis between diseases essentially different, but that between the different and varying forms of each of those which we call by a generic name; and beyond this, we need a more exact power of what may be called analytic diagnosis; for there are few simple cases, and in those which are not simple we need to be able to discern all the components, and the proportions in which they are mingled or combined. Better treatment will follow better diagnosis, and better diagnosis will certainly follow a more exact pathology.

Let me illustrate this with an instance which is besides of some interest in the study of the variations of transmissible diseases and of the utility of museums. Questions are often asked as to changes which syphilis may, in course of time, have undergone; and especially, whether the internal organs were always, as they are now, liable to its attacks. It is hard to answer such questions on the evidence of any existing records; indeed, I might cite the whole history of syphilis as an instance of the inefficiency of records for the tracing of the natural history of diseases. But here is something suggesting what museums may do: a portion of muscle preserved by Hunter, and at least a century old, in which are morbid changes which may be safely referred to syphilitic gumma. Probably similar evidence may be found in other museums, and there are other facts significant of the existence long ago of these internal syphilitic diseases, as well as of the improved treatment following better diagnosis. Fifty years ago it was the custom, as it long had been, to give mercury not only in all recognised syphilitic cases and in most acute inflammations, but in a large number of cases of which one could scarcely say more than that they were all chronic and all obscure. Especially there were many such cases of what were considered chronic inflammation of the eyes, and of the brain and spinal marrow, the liver, and the testicle. To all of these cases it was customary to give mercury till, as one said, "the mouth was touched", and then some were cured, and some uncured, and some harmed. The cures were enough to keep the mercury in such good repute that it was given more and more generally; and then the disappointments, as they were called, became too many, and the mercury was blamed, and was almost disused for chronic inflammations. But, meantime, a more exact pathology, a pathology more exact both in its morbid anatomy and in its clinical studies, was discovering the previously unsuspected syphilitic diseases of internal organs, and with this better pathology there came a better diagnosis, and with the better diagnosis a more judicious use of mercury, and good reason to believe that the chronic and obscure cases which mercury used to cure were those of syphilis overlooked. The case is an exemplary one of the relations between the true pathology and the right treatment of disease

exemplary not only for encouragement, but for method of study; for the study was both clinical and anatomical, in the living and in the dead, with records and with specimens. Such must be our study of all the cases which I have chosen to speak of—the cases in which diseases deviate from their usual type, or combine in various proportions. But there are some rules in study which are especially applicable to these cases.

1. We should very carefully study all cases which are not according to an admitted type. We should study all exceptions to rules; never thinking of them as unmeaning or accidental. Especially, we should never use, in its popular, but wrong, translation, the expression "*exceptio probat regulam*"; as if an exception to a rule could be evidence that the rule is right. If we use it, let this be in its real meaning; translating it, as surgeons should, that an exception probes a rule, tests it, searches it—as the Bible says we should "*prove all things*"—to its very boundary. In this true meaning, the words may be an excellent motto for the study of all diseases that deviate from types.

2. We should look out for indications of the existence in the same person of two or more morbid conditions or dispositions such as may be derived from both parents or from several ancestors. For, as in plants and animals there are hybrids and mongrels, or, as in chemistry, many compounds and many mixtures, so are there in diseases. We see them in the multiform and confused varieties of what we have to call rheumatic gout; in gout crossed with scrofula, and syphilis crossed or mingled with scrofula or with gout. It is often not difficult to discern some of these combinations among our cases; and I know few things in practice more useful than to be able, even in some instances, to adjust our treatment to the proportion of each disease in the compound. But we may be sure that there is much more to be learned in this direction; and it is best to believe that we rarely have to do with a simple and unmixed morbid constitution. There are few worse habits in practice than that of commonly saying of one case, "*It is all gout*", and of another it is all scrofula, or all syphilis. We might as well say of any Englishman that he is all Norman, or all Anglo-Saxon, or all Celt. We may, indeed, sometimes see persons who appear to be as types of races unchanged in many centuries, but in practice we had better study every man as, for better or worse, a composite of many ancestors.

3. We should have for all these cases a much more complete and exact study of all the personal conditions of disease than is now usual. Of course, this should include all that can be learned of each patient's family history; though there are few parts of medical inquiry more fallacious than this often is; and at the best it will need, besides, the exactest study of the patient's self. Perhaps the brilliant success which has been achieved by the recent studies of disease-producing organisms or other materials acting on us from without—a success not equalled in any other field of medical inquiry—has made some think too little of those changes within ourselves which occur in such ordinary conditions of life that they may be called spontaneous. Yet these are not less important in the production of diseases, and these must be studied, just as in agriculture soils must be studied as well as seeds. This is true even in respect of those diseases whose essential causes are most evidently external, even of those which are due to specific contagia; their germs or seeds, if I may so speak, will not germinate in an unfit soil. I suppose there is not a day in which most of us do not inhale or come in contact with the germs of some frequent or contagious disease; but they do not germinate in us any more than do the seeds of tropical flowers in our streets or in the fields to which the wind scatters them; we do not offer the fitting soil. And even among those in whom they do germinate, the product varies according to the soil. And the study of this soil, this living soil, is yet more necessary in respect of diseases which come, in part or wholly, by inheritance; for it is in each as personal and distinct as any other constituent of personal character, and the study of it must be intimately personal, with an exact analysis of every disposition to disease. The aim of study in this direction should be for knowledge like that of the keen family practitioner, who, as he says, knows the constitution of every member of a family.

All this is equivalent to saying that these variations in diseases must be studied both in practice and in scientific pathology. It is hopeless that either a practitioner who thinks lightly of pathology, or a pathologist who thinks lightly of observant practice, should do more in the study of these questions than attain to that measure of partial truth which is often as deceptive as error. Each must be tested by the other. The living and the dead must be alike and equally studied; and the dead must be studied in exact observations with accurate records, and especially with museums.

I need not dwell on the value of good records, good descriptions, and good photographs, or other representations of disease; but they never have been, and probably never will be, enough. We need, with them,

museums in which changes of structure may be preserved for repeated and revising study and comparison. For instance, in regard to the group of diseases of which I have been speaking, we ought to have in our museums specimens in which we might study all the gradations of change of structure from type to type, all the changes due to mingling of forms, all varieties of diseases, all hybrid forms. We need to be able to study all these things, as the naturalist or the comparative anatomist needs his specimens; not only for teaching what is already known, but for continued re-examination and continued additions to his own knowledge.

And for complete study, we must have large museums showing the coarse naked-eye characters of diseased structures. I am sure no one will think me likely to depreciate the microscope; it has added, and will continue to add, more than can be told to our knowledge, but it has not diminished the value of other evidence; and in pathological anatomy, as in all our sciences, there are many instances in which the naked eye sees facts with more meaning than the microscopic one can.

This is, especially, true in the case of morbid structures resulting from nearly allied diseases, and, therefore, especially true for those of which I wish to urge the study. In morbid structures, as in species, the nearer the alliance the less are the differences to be found in minute structures, and the more must we depend for distinctions on the study of visible shapes, and sizes, and constructions. I suppose that we could not with the microscope distinguish the human skeleton from that of the monkey; certainly, we could not distinguish one skull from another in all those varieties of national form which are collected in our museum. And so it is in many instances of morbid bone formation. I doubt whether microscopic examination could detect characteristic differences in each of this group of specimens. But with the naked eye, it is sure that this is a syphilitic node on a tibia, and this a growth beneath a chronic ulcer of the skin, and this a pedicled exostosis or ossified cartilaginous outgrowth from the shaft of a long bone, and this an instance of osteo-arthritis, and this a portion of the skeleton of an osteo-sarcoma or osteoid cancer. Moreover, it is to be observed that in morbid structures, as in those that are natural, in the same proportion as the aggregated elements of embryonic structures acquire their complete and final form, so do the bodies composed of them acquire distinctive shapes and methods of construction plain to the unaided senses. The ova of many species may seem alike both in outer shape and in their component elemental structures; but in proportion as these structures are differentiated, and developed into their higher and abiding forms, as into nerve-fibre, and muscular fibre, and the rest, so the larger characters of even the nearly allied species—the characters of shape, and size, and appropriate construction of the whole body, and of each part of it—become more and more different; and these constitute the real distinctive characters of each species.

And so it is in morbid products. The acquirement of distinctive shapes and methods of construction coincides with the development of elemental forms. For example, in these sarcomata are only the lowest elemental structures, round cells, spindle cells, and shapeless plasma; and the masses thus combined are shapeless, featureless, decisive by negation. But in these fatty and fibrous and cartilaginous and bony tumours, in which the elemental structures have advanced to higher forms, and the masses which they severally compose are almost as characteristic and distinct in visible shape and construction as are the several normal organs of the body.

In every case, then, both the largest and the smallest characters should be studied. The naked eye can discern one set of facts, the aided eye another; both are essential to complete knowledge; no one should be content with either, for neither is alone sufficient. So we must have large specimens as well as small ones, and certainly large ones, for the study of the gradual variations of diseases as they deviate from typical forms, and become variously mingled.

And now, as I come near to my term of time, let me, as customary in certain other places, conclude with an earnest appeal to your liberality. We want liberal contributions, not of money, but of specimens to our museums. We want specimens of many kinds; of course, we want whatever is rare, but not these alone; we want some to complete our series of typical specimens; and, to keep to the chief subject of my lecture, we want the opportunity of choosing, among many of what are called "*bad specimens*." We are all too ready to collect what are called good specimens, as being well-marked instances of the standard characters of diseases, and to put aside as "*bad*" those which deviate from those characters, just as, clinically, we speak of good and bad cases of a disease. Of course, good specimens, typical specimens must be at hand for the teaching of pupils who have to study illustrations of the accepted descriptions of diseases; but it is among bad specimens, even as it may be among exceptional cases, that those who are past

pupilage, though they have not ceased to be students, may study the variations of disease.

I ask the more boldly for contributions to the pathological collection, because of its present satisfactory condition, and the activity of work in it. You will soon see it in the repaired and renovated building. Looking at the number and value of the specimens, and the wide range of pathology which they illustrate; looking at the interest of the history of our science which is told in many of them; at the memorials of Hunter and Matthew Baillie, of Astley Cooper, Liston, Howship, Lawrence, Hammond, Fergusson, Hilton, and many more; looking forward to what the museum will tell of the researches and skill of those who are still with us; and among whose names, I venture to feel sure, Mr. President, that none will take precedence of your own, while men study the specimens with which your skill and just audacity in operating have enriched the series of diseases of the ovaries and uterus. Looking at all these things, and then at the perfect order and condition in which the specimens are preserved, I feel that the collection is one in which all we members of the College may feel personal pride in calling our own, and should feel a personal duty to enrich. And its utility is being constantly more appreciated. I have been often made happy by the contrast which I have seen while working at the new edition of the catalogue. While I was writing the last edition, between thirty and forty years ago, scarcely a student ever entered the museum. Hour after hour, I sat alone; I seemed to be working for no one but myself, or for nothing but the general propriety that a museum ought to have a catalogue, though no one might ever care to study with it. Now, and for some years past, a day rarely passes without many pupils and others being at work in every part of the museum.

All this is good, but much more is to be done. Our museum should be, even more than it is, the centre in which all pathologists may find help in searches after that which is not yet known; in such searches, for example, as may lead to a complete knowledge of the variations of diseases. For many years, even from the beginning, the anatomical and physiological departments of our museum have been not only a noble collection of specimens, but, through the renown and learning of its conservators, a great centre of teaching. Scientific men, especially comparative anatomists and anthropologists, have known that here, if anywhere, they could find whatever help a museum and a master in those sciences could give. A fortnight ago the President of the Royal Society, presenting one of the royal medals to Professor Flower, said: "Professor Flower has been for more than twenty years conservator of the museum of the Royal College of Surgeons, and it is very largely due to his incessant and well directed labours that the museum at present contains the most complete, the best ordered, and the most accessible collection of materials for the study of vertebrate structures extant."

It is not for me to praise the pathological collection with similar words. But great as may have been its utility hitherto, we may be confident that it will henceforth be more useful than ever. In the vast increase of the biological sciences it became impossible that one man should be nearly complete in the knowledge of both natural and pathological anatomy, I say impossible. I believe there is not such a one living; if there could have been one it might have been Mr. Flower. Now, we may hope that labours as "incessant and well-directed" as his will be devoted especially to the pathological collection.

It is known to many of you that Sir Erasmus Wilson, in his usual liberality, gave the College £5,000, of which the interest should be spent in the promotion of pathology; and he agreed that this would best be done by helping to the appointment of a curator of the pathological department of the museum; and we have an admirable one. Mr. Eve is a worthy colleague and helper of Mr. Flower, excellent like him not only in knowledge, but in that which is even more rare, the love of museums, and of all that belongs to their maintenance and illustration, even to the making of catalogues. In all these good qualities he has distinguished himself at St. Bartholomew's. I believe that we may rely on him for making so good use of the museum, and of all that can be brought to it, that the College shall be the chief centre for the study of pathology, even to the furthest point at which it can be studied in specimens of diseased structure. I beg your help that it may be so; and if I shall have helped to-day to this good result, the first Bradshaw lecture in our College will have well fulfilled the purpose of its founder.

RIDES FOR INVALIDS.—A society in Boston has engaged itself in the work of providing free rides for invalids during the warm months. From last May to the present month, 1,343 persons were given rides. In addition, 1,400 car tickets, and 640 round tickets on the harbour steamers, were distributed.

OBSERVATIONS

ON

THE PHYSIOLOGICAL AND THERAPEUTIC ACTION OF THE ELEMENT ARSENIC IN THE FORM OF ARSENITE AND ARSENATE.

By SYDNEY RINGER, M.D., F.R.C.P.,

Professor of Medicine in University College, and Physician to University College Hospital.

AND

HARRINGTON SAINSBURY, M.D., M.R.C.P.

[Continued from page 1138.]

The results set forth in the tables may be summarised thus.

As to the comparative action of arsenious acid and arsenite of soda, the series of both salts are perfectly parallel, the same doses of each drug being administered in each experiment; hence the comparative action may be read off at once in the "time" columns. If these numbers be individually compared, it will be seen that there is considerable variation, but certainly not more than one would expect with the individual differences which must exist between frogs, however carefully selected; added to which, there must be taken into consideration the range of variation necessitated by the mode of experimentation. If, however, the results be taken in the aggregate, the agreement is certainly as close as one could expect. Thus, the tables show seventeen experiments with arsenite of soda, and sixteen with arsenious acid. Of these, thirteen are available for comparison, since in each case definite results were obtained. If the double series of numbers be summed up, we get as follows:

Death of Central Nervous System.		Average.	Death of Muscular Tissue.		Aver.
Arsenious acid	266 hours	20.5	299 hours	23	
Arsenite of soda	223 hours	17	278 hours	21.5	

The numbers representing the death of the muscular tissue were obtained by adding up the "anterior limb column." It was thought unnecessary to repeat this operation for the other two columns, though, of course, each column, or all three, may be used for comparison.

The numerical agreement which thus appears, requires no further comment. In addition to this, however, the agreement qualitatively between the arsenite of soda and arsenious acid was throughout the experiments so very marked, that one could scarcely doubt that one had to do with equally active preparations of arsenic.

The solution of sodium arsenite used was strongly alkaline; hence it would appear that the element arsenic is equally active, whether in the form of arsenious acid (the aqueous solution would probably be represented by the formula H_3AsO_3), or of a further combination with sodium as sodium arsenite, Na_3AsO_3 . This being so, it was thought unnecessary in the further experiments to continue the parallel series of threes, and accordingly the arseniate of soda and arsenious acid were thenceforth alone contrasted.

Proceeding at once to the consideration of the arseniate series, the experiments recorded in the table may be divided into three parts. In part I, the arseniate dosage is the same as that of the arsenious acid and arsenite of soda. The results here obtained show that, whilst these latter caused death after a maximum of 24.26 hours, the arseniate frogs were not only alive after 48 hours, but appeared quite normal. In part I, then, we have the results of "equal dosage."

In part II, the dosage of arseniate was at first increased by one half, then brought back again to the original dosage of part I; but all the experiments included under part II in the parallel series corresponded to a dosage of two parts of the element arsenic as arseniated against one part as arsenite and arsenious acid—i.e., in part II, we have double dosage of arseniate.

Of seven experiments with the arseniate, the dose was fatal in two cases, at the end of 29 hours and 64 hours respectively. In a third case, the experiment was discontinued at the end of 57 hours. The frog at this time was severely affected, and ultimately died; but beyond this period of 57 hours, the comparative observations were not continued, and the time of death was not noted. Accepting, however,

57 hours as the interval after which death occurred, we should have the numbers 29, 64, 57. The remaining four frogs appeared normal after periods of 46 hours, 48 hours, 31 hours, and 72 hours respectively.

Of the six corresponding experiments with arsenious acid, death occurred in five cases; in the sixth, the experiment was ended, and the frog killed at the end of 29 hours. At this time, however, the frog was severely affected, the voluntary movements being helpless, and the respirations markedly irregular, so that there is not the least doubt but that the frog would have died. However, leaving this frog out, we have the times of death, ranging between the extremes of 36 and 12 hours, with an average death-interval of 29½ hours.

Of the seven experiments with arsenite of soda, death occurred in six cases, whilst, quite unaccountably, in the seventh, the frog appeared normal after an interval of seventy-two hours. In the six cases of death, the times varied between the limits of eleven hours and a half, and fifty-two hours, with an average death-interval of 24¼ hours.

The arseniate series of part II, showing three deaths against four survivals, would seem to indicate that one had come near the limits of the toxic dose; the three deaths are too few to strike an average from, even were this not inadmissible on the grounds of inconstancy of result. In part II, then, we have a marked contrast between the toxic effects of the arseniate on the one hand, and of the arsenite and arsenious acid on the other; the former not only yielding an inconstant result, but also in those cases where death did obtain, a considerably higher death-interval than the two lower oxides. This contrast is the more striking that the dose of metallic arsenic, as arseniate, is in this series twice as large as that in the form of arsenious acid and arsenite of soda.

In part III, we pass to the consideration of larger dosage, and here the experiments were between arsenious acid and the arseniate alone.

Under (a), the experiments represent equal dosage of metallic arsenic. The doses being large, death occurred in each case, but the time differences are very striking here. Thus, for the four experiments in this series, we have, for the arseniate, the following results:

Death of Central Nervous System.

9 hrs. 40 min.
6 " 45 "
5 " 30 "
9 " 20 "

57 hrs. 15 min. : Av. = 9 hrs. 20 min.

Death of Muscular Tissue.

9 hrs. 40 min.
21 " 15 "
22 " 30 "
9 " 20 "

62 hrs. 45 min. : Av. = 15 hrs. 40 min.

Against these, we have for arsenious acid the following:

Death of Central Nervous System.

1 hr. 20 min.
50

3 hrs. 30 min. : Av. = 52 min.

Death of Muscular Tissue.

9 hrs. 30 min.
30

24 hrs. 10 min. : Av. = 6 hrs.

The ratios stand, then, arseniate to arsenious acid as 9 hrs. 20 min. : 52 min.; and as 15 hrs. 40 min. : 6 hrs.

Thus we see that, death being effected in each case, the death-interval varies greatly with the preparation used: arsenious acid causing death of the central nervous system in one-tenth of the time taken by the arseniate, whilst, with regard to the muscular tissue, the very lowest estimate makes the arsenious acid two-and-a-half times as active in point of time.

It is remarked here that the two numbers with regard to the muscular tissue, not of death of the muscles, but of death of the muscular tissue, and that at these times in question the muscles all acted powerfully. Through some mischance, the time of destruction of muscular irritability was not noted; however, the error is in the direction of making the arseniate more active than is actually the case, probably very considerably so; this is borne out by the

results obtained in part III (a), in which, with larger arseniate dosage, the intervals of the muscular tissue in no case fell as low as ten

hours. In the experiments with arsenious acid, the times of death of the muscular tissue were five times as long as in part III (a). The results obtained here give

Death of Central Nervous System.

1 hr.

Tissue of Anterior Muscles.

1 hr.

Arsenious Acid.

0 hr. 45 min.
— " 50 "
— " 35 "
— " 50 "
— " 50 "

220 min. : Av. = 46 min.

7 hrs. 15 min.
5 " 40 "
3 " 15 "
4 " 45 "
6 " 10 "

27 hrs. 5 min. : Av. = 5 hr. 25 m.

Here, the dose being fatal in each case, the arsenious acid caused systemic death in one-fifth of the time taken by the arseniate; and this, though the dosage of metallic arsenic, as arseniate, was five times as great as that in the form of arsenious acid. The contrast between the times of death of the muscular tissue in the two cases is almost as marked, the arsenious acid acting four times as quickly.

We may point out here a result of some interest. On referring back to the tables with smaller dosage, it will be seen that the muscular tissue outlived but by a short time the central nervous system. Thus we have the average numbers 20.5 and 17 for the latter, against 23 and 21.5 for the former; whilst in these latter tables, we find very considerable difference between the death-intervals of these two tissues; this is well marked for the arseniate, but is much better marked for the arsenious acid; here, indeed, the ratio, one to six, is within the mark. We see, then, that, as we increase the intensity of our poison, the action on the two tissues does not keep equal pace, but affects the more delicately balanced structure at a relatively increasingly growing rate; indeed, the action on the delicate structures of the cardiac and respiratory centres is so sudden as almost to be of the nature of shock. The loss of reflex excitability of the spinal centres is possibly considerably accelerated indirectly through the impairment of the circulation.

The results may be advantageously recapitulated. It will be remembered that the element arsenic is here given in various forms of combination; and that the dosage refers, in all cases, to the amount of metallic arsenic present. We find, then, that in its lower grade of oxygen combination, whether in the form of arsenious acid, or in further combination with soda, as arsenite of soda, metallic arsenic manifests equal activity; that, in its higher grade of oxygenation, as arseniate, metallic arsenic manifests considerably less activity than in its lower grade of oxygenation.

The latter proposition rests on twofold evidence.

1. We have the fact, that, taking equal dosage of metallic arsenic, the doses may be so selected, that the lower oxide shall cause death, whilst the higher oxide is ineffectual.

2. The further fact, that, increasing the dosage so as to cause death in each case, the difference between the action of the two oxides appears as difference in rate of action, the lower oxide acting much more speedily; and this, even when the dosage of metallic oxide, in its higher combination, is five times as great as in its lower.

So much for the quantitative comparison of the action of different forms of arsenic combination. With regard to qualitative comparison, it is perhaps a little difficult to avoid classing difference in degree of action amongst qualitative differences; but certainly much of the difference in effect witnessed is rather in degree than in kind. The lower oxide is the more active; and, especially with the larger doses, there is observed a degree of rapidity of action which scarcely allows of the completion of the injection before its appearance. Amongst these appearances are: the violent attempts at escape during the first few seconds following the injection; the subsequent quiescence, the frog scarcely moving unless stimulated; the frequently observed attempts at vomiting; the early and marked effect on both respiration and circulation, the latter being judged of by the abdominal pulsations; the paralytic symptoms appearing towards the end; and, finally, the death. All these have been more fully described elsewhere. (*Loc. cit.*, *Jour. of Physiol.*, vol. I, no. 4.)

Passing to the action of the arseniate, the absence of sudden violent action, with the gradual supervention of respiratory and cardiac failure, and finally of paralytic effects, is what one observes. But, with the larger doses, together with the more rapid accession of symptoms, retching and vomiting were witnessed; whilst desquamation, which, even with doses of 0.5 c.c. (8.4 grains) of arsenious acid, was not observed with metallic arsenic, was not a well-marked symptom, but was strongly marked when the same dose of the two arseniates was used. Amongst other symptoms, frothing was observed, both with metallic arsenic and with arseniate, and early in the action. In the case of the arseniate, it was observed on a few occasions with the arseniate.

It is clear that, qualitatively, but little distinction between the two oxides of arsenic can be made out; in fact, comparing them together, the difference is found to be in the degree of the action, and in the time taken for the action to be completed; and in the gradual accession of the symptoms, in the other.

The very concentrated solutions of arseniate of soda, employed in the end experiments, containing, viz., 5 per cent. of metallic arsenic, caused a certain amount of shock, following directly on the injection; this occurred in three out of the five cases, but recovery soon followed, and in all a stage of comparative well-being preceded the onset of symptoms.

It having been shown that there is a very decided difference in action between the two oxides, the question yet remains: How does the element arsenic act? The fact of the immediate onset of symptoms, with the lower oxide, proves that one has here an arsenic combination having a direct and powerful affinity for the tissues. The fact of the delayed action of the higher oxide bears two interpretations; the arseniate may still affect the tissues directly, and as such, the affinity, however, being much more feeble; or, it may not act as such, but only after it has suffered reduction to the state of the lower oxide—reduction, of course, involving time.

With reference to this last view, there are certain facts of importance, viz.:

1. The fact that the arseniate is a body which, not unready, suffers reduction to the state of arsenite, under suitable conditions.
2. The fact that the process of reduction is constantly obtaining in the tissues.
3. The fact, according to Binz and Schulz, that such reduction from arseniate to arsenite is actually effected in the tissues.
4. The fact of the qualitative similarity in the symptoms of arseniate and arsenite poisoning—a similarity which might exist truly, though either salt acted as such, but which *à fortiori* must obtain if the arseniate act only after reduction.

It is true that Binz and Schulz also state that the reverse process, viz., reconstruction of the higher oxide from the lower, also obtains in the tissues; but having shown, as these experiments undoubtedly do, that the lower oxide is by far the more active preparation, we should regard such reconstructive process as obviating, rather than as constituting, poisonous action; and we should hold that, if such double process do occur, the explanation of the arseniate action on the reduction-theory will have to be found in that the process of reduction considerably outbalances that of reconstruction. This, according to Schulz (*op. cit.*, Band xv), actually is the case; in the papers just quoted, he gives tables showing the relative powers of reduction and oxidation of certain of the tissues; the former process is there seen to outbalance by far the latter.

These points are by no means mere points of contention; they have obvious practical issue. The element arsenic is a most important therapeutic agent, and a very widely used one; it is clear, therefore, that a scientific use of such demands, in the first place, a knowledge of the relative activities of the various preparations employed. These experiments here relate to the frog, it is true, and, moreover, they refer to toxic doses; but there can be no question as to their indicating which is the more active preparation when thus employed. It may be objected that the rate of tissue-change in the amphibian organism is no measure of that obtaining in the tissues of the warm-blooded animal; and also that the argument from toxic doses to medicinal doses is not necessarily valid. It is precisely these objections which give practical importance to the reduction theory; for, if the arseniate do not act as such, but only after reduction to the lower oxide, why use it at all? It may be that in the small doses employed, therapeutically, the arseniate is practically all converted into arsenite, and the equal dosage, now in use, justified; but we are distinctly dealing with an unknown quantity, for of our definite arseniate dose administered we cannot say how much precisely will suffer reduction, how much will be eliminated as such. Next to qualification, the scientific demand is quantification; and how, in the reduction theory, is this possible? On the other hand, are there any advantages to be claimed for the therapeutic use of this drug such as might outweigh these disadvantages? Garrod states the arseniate to be far less irritant than the arsenite, and these experiments are certainly in favour of this; but, in the very large use of the arsenite now obtaining, is this irritant action practically a source of much trouble? Does it justify us in employing unknown quantities when we have known quantities at hand?

To conclude this subject, the result of some experiments of a different nature may be briefly stated.

The isolated ventricle of the frog's heart was fed with an artificial circulating fluid, and by means of Roy's tonometer the contractions were registered on a revolving blackened cylinder. To the circulating blood-mixture, solutions of arsenite and arseniate of soda were added. The following are the results obtained, given in tabular form. The quantities of arsenite or arseniate employed in each experiment represent the quantities requisite to destroy the contractility of the cardiac tissue.

Both solutions were distinctly alkaline, the arsenite indeed strongly so.

Arsenite of Soda 1 per cent. metallic arsenic = 2.5 per cent. about, Na_2AsO_3 .		Arseniate of Soda, 5 per cent. metallic arsenic = 11 per cent., about, Na_2HAsO_4 .	
May 9th T. of Room = 17° C.	29cc.	Aug. 29th T. of Room = 18° C.	24c.c.
" 10th " " = 15° C.	38	" 30th " " = 15° C.	32
" 11th " " = 18° C.	44	" 31st " " = 17° C.	28
" 11th " " = 18° C.	34	Sept. 1st " " = 17° C.	32
" 12th " " = 22° C.	32		
" 13th " " = 18° C.	49		116

Av. = 37c.c.

221

Av. = 29c.c.

This number, 24c.c. was below the mark. The beats on this occasion not being completely abolished.

Again, we see in these experiments a similar relationship between the two oxides to that already found, for, to produce the same effect, viz., abolition of contractility, far larger quantities of the arseniate (compare the percentage strengths) are required than of the arsenite. The arseniate, indeed, is scarcely, if at all, more poisonous than the neutral salts of sodium, the chloride, bromide, iodide; it behaved, moreover, just like these salts in other respects, and after the contractions had been reduced to a minimum, the substitution of fresh blood for the poisoned blood restored the contractility of the muscular tissue.

These results tend rather to confirm the reduction theory, for the reduction which is effected by the small amount of tissue represented by the ventricle must be very minute, and, when effected, if such do occur, it will be most probably swept away and diluted with the whole mass of circulating fluid, so that, practically, the ventricle would be in contact with the unreduced arseniate, and thus these experiments show to be almost inert.

On the other hand, we note that the arsenite is decidedly more poisonous; and, moreover, in two experiments, in which, after reduction of the beats to a minimum, fresh blood was substituted, the contractility showed no recovery.

It will be unnecessary to recapitulate; it is sufficient to say that these last experiments with a single tissue confirm those with the entire organism in their results, and, in particular, they render more probable the reduction theory by showing the absence of direct affinity of the arseniate for certain, at least, of the tissues, ganglionic and muscular.

REPORT OF THE TREATMENT OF A VERY EXTENSIVE OUTBREAK OF RINGWORM OF THE HEAD, IN A SCHOOL:

EIGHTY-FIVE OUT OF NINETY-TWO CHILDREN BEING AFFECTED.

By ALDER SMITH, M.B.Lond., F.R.C.S.,
Resident Medical Officer, Christ's Hospital, London.

The following is a summary of the management of one of the largest outbreaks of ringworm of the head hitherto recorded. It shows the result of treatment by the compound carbolic acid, citrine, and sulphur ointment (described in the BRITISH MEDICAL JOURNAL, February 25th, 1882), and by oleate of mercury; also the great value of croton oil, when applied to small places of disease which have resisted treatment for some months.

On May 2nd, 1882, I visited a school consisting of ninety-two children, between the ages of nine and eleven years; and, on inquiry, learned that there had been some chronic cases of ringworm in the school, and that an extensive outbreak of cutaneous and scalp ringworm had recently developed.

On careful examination, it was found that forty-six out of forty-seven boys, and thirty-seven out of forty-five girls, had ringworm of the scalp. Some of the cases were chronic and extensive, others were moderate and more recent, while some were only one or a few days old. By far the majority had body-ringworm as well; but, as the scalp-disease was the cause of the cutaneous outbreak, and the latter was of very secondary importance, we did not tabulate the number of the spots on the bodies, nor the results of the treatment. I may just mention that the cutaneous patches were all cured during the first two or three weeks, either by Coster's paste, acetic acid, or the compound ointment; and that, after the heads were well under treatment, and the clothes fumigated, no fresh spots appeared. This leads me to remark that an outbreak of body-ringworm, in a school, is generally due to scalp-ringworm—probably overlooked.

The first precaution taken on May 2nd was the isolation of the nine unaffected children; and the following preventive ointment was ordered to be rubbed into all their heads every day: R Hydrargyri oxidii rubri

See paper, Transactions of the Medical and Chirurgical Society, vol. lxx, p. 191

gr. v; hydrargyri ammoniati gr. x; olei amygdal. essent. ℥ j.; adipis benzoati ʒi. m.

The infected children were carefully examined, and all the diseased patches were clearly marked by cutting the hair from, and for half an inch, round them; and then all the small and recent places were blistered with glacial acetic acid, containing four grains to the ounce of corrosive sublimate. The large patches, which had probably existed for weeks or for months, were not blistered. The rest of the hair was cut, and kept moderately short during treatment. The heads were then well washed, and the following ointment was ordered to be rubbed into the entire scalp every morning, and into the diseased patches again every evening, while the head was washed twice a week: R Acidi carbolic (Calvert's No. 2) ʒvj; unguenti hydrarg. nitratis ʒx; unguenti sulphurin. ʒij. m.

As the outbreak was so extensive, it was impossible at first to isolate the infected children; so they occupied their usual dormitories and school-rooms till September, when those who were not cured were removed to, and isolated in, the infirmary.

On May 12th, we found, on one of the free cases, a spot of recent ringworm, which had probably developed since the last examination; this case was quickly cured. No fresh spots were to be observed on the infected cases, nor did there appear to be any spreading of the original patches. As the body-ringworm was nearly stamped out, all the clothes were ordered to be boiled, baked, or fumigated; and all the dormitories and school-rooms to have sulphur burnt in them, one at a time.

On May 26th, i.e., in less than a month after treatment, the school was free from body-ringworm, and we classified the cases according to the numbers in the following table, and again on the several dates mentioned in it. It will be well, first, to explain the meaning of the following terms.

"Cured" is only applied to those cases which were perfectly free from all traces of disease. No stumps were to be detected, and, in most cases, the new downy hair was growing on the affected patches. "Probably cured."—The cases under this heading appeared to be well, but as some little scab remained, or the new hair had not then appeared, they were not certified as cured. "Very slight" means that these cases were nearly well, only a few stumps remaining on one or more very small places. "Slight" is applied to those where there were two or more small places, with some stumps still to be seen. "Moderate" is applied when the patches were more extensive than in the last class—say, of half-a-crown or larger—and there were still many stumps remaining. "Extensive and chronic" is employed where the patches extended over a quarter or more of the scalp, and where the disease had evidently existed for weeks or months; and also where the disease was very chronic, but not very extensive.

Table, showing the results of treatment in an extensive outbreak of ringworm of the head, from May 2nd to November 8th: 85 cases.

TABLE I.—RESULTS OF TREATMENT OF RINGWORM OF THE HEAD.

No.	Date.	Description of the Case.	Treatment the first 11 weeks.	Treatment the next 8 weeks.	Treatment the last 3 weeks.
1	May 2nd	Extensive and chronic	Oleate	Oleate	Oleate
2	May 2nd	Extensive and chronic	Oleate	Oleate	Oleate and croton-oil
3	May 2nd	Extensive and chronic	Oleate	Oleate	Oleate and croton-oil
4	May 2nd	Extensive and chronic	Oleate	Oleate	Ointment and croton oil
5	May 2nd	Extensive and chronic	Ointment	Oleate	Oleate and croton-oil
6	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
7	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
8	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
9	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
10	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
11	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
12	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
13	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
14	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
15	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
16	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
17	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
18	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
19	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
20	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
21	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
22	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
23	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
24	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
25	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
26	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
27	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
28	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
29	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
30	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
31	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
32	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
33	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
34	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
35	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
36	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
37	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
38	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
39	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
40	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
41	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
42	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
43	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
44	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
45	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
46	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
47	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
48	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
49	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
50	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
51	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
52	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
53	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
54	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
55	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
56	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
57	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
58	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
59	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
60	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
61	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
62	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
63	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
64	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
65	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
66	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
67	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
68	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
69	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
70	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
71	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
72	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
73	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
74	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
75	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
76	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
77	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
78	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
79	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
80	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
81	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
82	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
83	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
84	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
85	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil

TABLE II.

No.	Date.	Description of the Case.	Treatment the first 11 weeks.	Treatment the next 8 weeks.	Treatment the last 3 weeks.
1	May 2nd	Extensive and chronic	Oleate	Oleate	Oleate
2	May 2nd	Extensive and chronic	Oleate	Oleate	Oleate and croton-oil
3	May 2nd	Extensive and chronic	Oleate	Oleate	Oleate and croton-oil
4	May 2nd	Extensive and chronic	Oleate	Oleate	Ointment and croton oil
5	May 2nd	Extensive and chronic	Ointment	Oleate	Oleate and croton-oil
6	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
7	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
8	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
9	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
10	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
11	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
12	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
13	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
14	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
15	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
16	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
17	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
18	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
19	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
20	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
21	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
22	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
23	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
24	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
25	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
26	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
27	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
28	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
29	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
30	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
31	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
32	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
33	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
34	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
35	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
36	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
37	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
38	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
39	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
40	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
41	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
42	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
43	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
44	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
45	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
46	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
47	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
48	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
49	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
50	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
51	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
52	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
53	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
54	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
55	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
56	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
57	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
58	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
59	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
60	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
61	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
62	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
63	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
64	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
65	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
66	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
67	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
68	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
69	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
70	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
71	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
72	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
73	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
74	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
75	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
76	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
77	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
78	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
79	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
80	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
81	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
82	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
83	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
84	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
85	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil

TABLE III.—RESULTS OF TREATMENT OF RINGWORM OF THE HEAD.

No.	Date.	Description of the Case.	Treatment the first 11 weeks.	Treatment the next 8 weeks.	Treatment the last 3 weeks.
1	May 2nd	Extensive and chronic	Oleate	Oleate	Oleate
2	May 2nd	Extensive and chronic	Oleate	Oleate	Oleate and croton-oil
3	May 2nd	Extensive and chronic	Oleate	Oleate	Oleate and croton-oil
4	May 2nd	Extensive and chronic	Oleate	Oleate	Ointment and croton oil
5	May 2nd	Extensive and chronic	Ointment	Oleate	Oleate and croton-oil
6	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
7	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
8	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
9	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
10	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
11	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
12	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
13	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
14	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
15	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil
16	May 2nd	Extensive and chronic	Ointment	Ointment	Ointment and croton-oil

croton oil in suitable cases and at the proper time. There is no doubt that very many of these children would still be under care if the oil had not been employed. Yet, as I have before stated, the greatest care must be taken in using it, and some such method adopted as described by me in the JOURNAL for June 12th, 1880.

ON THE FUNCTIONS, CHARACTER, AND POSITIONS OF THE ULTIMATE NERVE-TERMINATIONS IN THE SKIN AND HAIRS.*

By GEORGE HOGGAN, M.B.

THE various forms of the ultimate nerve-endings in the skin and hairs have led histologists to ascribe separate sensory functions to each different form of termination. Most of the opinions thus put on record are almost necessarily incorrect, because they were formed upon insufficient data; and, as almost every year sees some new fact discovered, or some new interpretation given, in this department of research, anything that we can now say has no pretension to finality about it. Our special intention is to place before you a number of new facts, which enable us to place an altogether different functional interpretation upon already well-known structures. We shall then endeavour to trace homology between different nerve-terminations; and, finally, endeavour to trace the causes which have led to the different appearances presented by homologous terminations, and to the different positions occupied by them. In fact, we are making what is probably the first attempt to show the same workings of evolution in altering the forms of the minute histological elements, that Darwin has done for the complete forms of animal life.

For the subject under consideration, we take, not as a matter of precedence, but of convenience, the nerve-endings upon an ordinary hair, as the type to which all the others may be traced; or, at all events, they have their common relationships centred therein. Upon that hair, or rather hair-follicle, we shall find two principal terminal elements: 1, the forked endings, which are probably the terminations of the nerves of touch, and have their metamorphosed homologues in the Pacinian bodies; 2, the ganglionic masses of branched nerve-cells, which probably originate the sensations of temperature, of pain, etc., information of which they telegraph on through the nerve-fibres to the central or cerebro-spinal nerve-centres. These have their homologues in the subepidermic nerve-ganglia situated—*a*, on the lower surface of the epidermic downy growths between the papillæ; *b*, on the feelers on the snout of the lower animals, sometimes called tactile hairs, although all hairs are tactile, and the principal elements upon the feelers can scarcely be called tactile; *c*, on the touch-bodies or corpuscles of Meissner. The secondary nerve-elements on the ordinary hair-follicles are the nerve-fibres, the medullated fibres connecting the primary elements with the central organs, and the non-medullated elements connecting the various cells with each other and with neighbouring ganglia, as well as with the great central nerve-centres. These are also shown by us to ramify between the epidermic lining of the hair-follicle; and they form a circular layer or coil immediately underneath the opening of the sebaceous gland, which may be called Jobert's coil, after its discoverer, who described it twelve years ago. The forked endings were discovered by Arnstein four years ago; but so little is known of them that, when we discovered them independently ten months ago, we remained during six months in ignorance that there had been a prior discovery, although we took every step to inform ourselves upon the subject. The branched cells seem as yet to have been observed only by ourselves upon the ordinary hair-follicles; but, as we have given a detailed description elsewhere† of all these elements, we need not enter into so long a subject in this paper. Upon ordinary hair-follicles we never find beyond a score of such cells, sometimes none at all, and these cells never seem to be in direct communication with a medullated nerve. On the feeler-hairs of the snout several hundred of such cells may be observed to be arranged regularly between the basement-membrane and deep cells of the epidermic lining of the follicle; and they are all seen to be in connection with the medullated nerves passing to them externally to the follicle, and numbering even hundreds; a large number of cells being attached to

each nerve-fibre. In the feelers, therefore, while all the other nerve-elements of ordinary hair are represented, it is the cellular nerve-element which has specially hypertrophied.

While, however, the feeler shows the extreme of hypertrophy from the ordinary hair, the touch-corpuscles show the first step in atrophy; but, as we are only as yet on the threshold of this question, we shall not enter further into it at present than by showing drawings and microscopical specimens of the first stages of separation between the forked tactile elements and the cellular sympathetic (?) elements, as found at different stages in the palms of different animals. In these, as seen in the fringes of the mole, the tactile elements are as yet unchanged in size, and are only beginning to receive the oval coating which distinguishes the Pacinian body. This coating may, however, be seen at various stages of advancement, and covered with several layers of the epithelioid cells which are so well marked in the Pacinian body. In other examples, the termination seems still to be attached to, or lie within, the epidermis. With every little group of such Pacinian bodies may be seen a little clump of cells, forming the ganglion, and either lying apart from the epidermis or lying within it like a nodule of blackened nerve-cells. No one has as yet assigned a function for these forked endings; and although, from other causes, we consider them as tactile nerve-endings, the homology we have discovered between them and the Pacinian bodies lends valuable support to our hypothesis; for the Pacinian bodies have long since been supposed to give the sense of pressure or touch, judging from their presence in the mesenteries of the cat tribe. If anyone, however, will draw the pulp of the finger very lightly over the tips of the hairs on the back of the hand, he will feel the sense of touch distinctly in the hairs, when no sensation whatever is received upon the surface of the pulp of the finger, which is specially provided with the so-called touch-bodies. It is evident that, as a consequence of heredity, the hairs, which, owing to continual friction on the palms and soles, have been prevented from growing, have at last existed only in an abortive condition; the tactile terminations in some cases sinking more deeply into the dermis, becoming larger and more largely covered, as they do so, by the same agency which covers the ends of cut nerves in an amputated stump, constituting the so-called neuromata. On the other hand, the cellular elements remain as the so-called touch-corpuscle; or they may remain still attached to the epidermis, forming one of the subepidermic ganglia, to which we shall now specially direct attention, as upon it we can best demonstrate the changes in position which form the chief point of this paper.

These ganglia were first described by Professor Merkel of Rostock, who, by means of osmic acid preparations, discovered, on the lower surface of certain of the interpapillary epidermic down-growths, peculiar groups of cells, some of which cells appeared to be in direct continuation with some of the medullated nerves of the skin. Misled, however, by his faulty processes of preparation, he gave descriptions of these cells which are very wide of the mark. He called them oval, and under no circumstances branched; and figured them as oval dilata-tions on the very points of the nerves. In fact, as it was almost impossible with the osmic acid process to see the connection between the cells and the nerves, he has simply drawn them as he thought they ought to exist. To these cells he applied the name of terminal tactile cells; and he considered them to be identical with the cells which had already been discovered on the follicles of the whiskers or feelers of most animals by Dietl, Sertoli, and others. He even extended his hypothesis to the touch-bodies on the palms and soles of man, monkeys, and other animals, and to the more simple structure of the same kind in the beak and tongue of birds. In each case, he draws the so-called tactile cells to correspond with those he had found on the epidermic down-growths, and consequently he was led into error in each case. Bonnet, who took up the question after Merkel, agrees throughout with the functional interpretation applied by Merkel to these bodies, only he retrogrades in the question by calling them, not terminal cells, but terminal buds (*End-knospen*). He, however, used the gold process of Löwit, which ought to have shown him the condition we have found. Let us return to Merkel's interpretation. After giving a careful description of these different structures, with copious illustrations, but with which we are not in accord with him, he sums up his important article with the following conclusions.

"I may, therefore, express as a fact, that only one kind of nerve-termination in cells occurs in the skin; that is to say, the termination in tactile cells.....In the skin of birds and mammals, two entirely different kinds of nerve-termination, differing in their original plan of construction, occur side by side; the termination in tactile cells and the termination in free ends (*i.e.*, intra-epithelial fibrils). One feels inclined to make an attempt to utilise the difference physiologically; and I believe, indeed, that I have grounds for considering the termination in

* Read in the Section of Anatomy and Physiology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

† See *Journal of the Linnean Society, Zoology*, Vol. xvi., pp. 546-593, plates xlii-xvi.

cells as the real tactile nerves, and the free ends, on the other hand, as nerves of temperature."

Before entering upon our own interpretation of these structures, we may at once say that we are entirely opposed to Professor Merkel's conclusions, both morphological and physiological; for we find that the cells he describes are neither terminal nor tactile, as he supposes; nor are they, either anatomically or physiologically, distinct from the free ends (intra-epithelial fibres), for they both form part of one and the same nerve system, both being connected and continuous with each other, and consequently they must subserve the same nervous function, whatever that may be.

With regard to the morphology of these so-called terminal tactile cells, Professor Merkel has encountered a formidable critic in Professor Ranvier, who, also, has failed to observe the connection between free termination and end-cells, which forms the complete answer to Merkel's hypothesis. Nor does Professor Ranvier dispute the physiological interpretation given by Professor Merkel. What he does dispute is the character of the nerve terminal organs in connection with the tactile cells; and he proceeds to point out that, in all the four structures or tactile organs described by Merkel, there are two separate elements to be considered: the *cellules du tact* of Merkel and the *disques tactiles* which he has himself specially described as the nervous element in the tactile organ.

Professor Ranvier, in his preliminary communication upon this subject to the Académie des Sciences, gives the following expression of his views. "On the lower surface of the epidermic downgrowths of the snout of the pig, there exist, according to Merkel, amongst the ordinary epithelial cells, certain special cells, in which the tactile nerves end. In reality, these nerves, after having penetrated within the epithelium, divide, subdivide, and form on the surface of the cells of Merkel little concavo-convex discs, which appear semilunar when they are seen in profile in sections made perpendicular to the surface of the integument, but stellate and anastomosing by their prolongations when they are examined from their largest surface. The tactile discs of the pig's snout have apparently the same signification as the tactile discs of the Palmipedes. The termination of the nerves in tactile concavo-convex discs is still more clearly shown in the tactile hairs," etc.

From this, it is clear that Professor Ranvier agrees with Professor Merkel in the terminal and tactile character of the structures called cells by one and discs by the other; and consequently our views are opposed equally to those of both professors. We, however, agree entirely with Merkel in holding them to be cells, while admitting that, on first sight, there is much to be said on behalf of Ranvier's hypothesis.

Laying aside for the present the consideration of two of the organs described by both professors, viz., the touch-bodies in man and in birds, we find that, in the so-called terminal cells of Merkel, one portion of the surface stains much darker by gold than the centre and greater portion of the cell, and that this darkened portion often, but certainly not always, appears as if applied to the body of the cell as a concavo-convex disc, or as a hand might grasp an egg too large for it to enclose. On section, either mechanical or optical, the appearance seems even more accentuated, but we hold that it admits of another explanation than that given by Professor Ranvier. It may be that the nervous influence that undoubtedly passes through, or is generated in, these cells may so modify the protoplasm at one portion of the surface through which a nerve-current passes from other cells in the ganglion, that it stains more deeply and readily with gold than that of the other portions of the cell. That this irregularity does exist is proved beyond doubt in one striking example in our drawings and preparations, in the case of the axis-cylinder of the nerves leading to these cells after it has become divested of its medullary sheath, one portion being often found stained of the same intense black tint as the so-called discs, while another portion remains of the same light tint as the body of the cell. In fact, whether owing to capricious action or irregular deposition of gold, we may find portions of the same axis-cylinder very diversely stained, and thus rendering diverse stainings of portions of the same cell neither a matter of surprise nor requiring to be explained by an hypothesis of concavo-convex nervous discs.

We, therefore, hold Professor Ranvier's hypothesis of tactile discs upon the hair-follicles or epidermic downgrowths to be incorrect, and that they are not terminal; for, even on his own showing, they are connected and continuous with each other by the "anastomosing of their prolongations." The same may be said of the tactile discs of the Palmipedes, which, according to Ranvier, are "terminal cells" and "nervous elements," and which, according to him, are "the real tactile nerves."

In short, for us these cells are merely the ordinary branched nerve-cells so commonly seen on non-medullated nerve fibres, and which

having become aggregated at certain points, assume the character of a ganglionic nerve centre within, or immediately underneath, the epidermis, an opinion that Sertoli has already applied to these cells on the hair-follicles. As, moreover, these cells only exist on the course of a plexus of nerve-fibrils, they cannot be considered terminal, nor can it be argued that the cells subserve a different sensory function than the nerve-fibrils which connect them, and we shall show that the free ends to which Merkel ascribed the function of temperature-nerves, are nothing other than the fibrils which connect together the cells or discs to which he and Ranvier have ascribed the tactile function.

The distinguished men who have debated this question, all agree in recommending the snout of the pig as the object in which these groups of cells may best be studied. In this we think they have been unfortunate; for, although the groups are more common, and easily demonstrated there, yet, whether owing to the fineness of the fibrils, or the size and number of the cells, their whole history cannot be so easily traced as, for example, it can be done in the nose of the horse. Our preparations from this animal put a different interpretation from theirs upon these cells, and the group is only one of some scores of the same kind in every stage of growth. In these we continually find intra-epithelial fibres (the free endings of Merkel) in direct continuation with the nerve-cells, passing up through the epidermis.

Sometimes these fibres are single, but branching at their peripheral extremity, and at other times, as shown in one preparation, they may form a loop or an arch, of which the columns rest upon, or are continuous with, two of the cells of the ganglionic group lying upon the lower surface of the epidermic downgrowth, thereby showing that the so-called terminal nerve-cells belong to the same nerve system as the free ending intraepithelial fibres, and that, therefore, Merkel has made a mistake in ascribing to the latter the special function of temperature nerves, and to the former the special sense of touch.

At the conclusion of his article "On the Terminations of the Nerves in the Epidermis," in the *Quarterly Journal of Microscopical Science* for 1880, Professor Ranvier gives the following hypothesis on the direction and growth of the nerve-fibrils within the epidermis, as borne out by the drawings he gives from the pig, the mole, and man. He says (p. 458), "The nerves which enter the epidermis, whatever may be the form or extent of their ramifications, are subject to continuous evolution. They grow, while at the same time their terminations undergo gradual degeneration. This degeneration leads to the formation of granules of nervous substance, which become entirely free, and are soon transported into the inert layer of the epidermis." This is merely an accentuation of Professor Ranvier's views as expressed on page 75 of the second volume of his *Leçons sur l'Histologie du Système Nerveux*, that the axis-cylinders, forming as they do part of the nerve-cells in the nerve-centres, develop centrifugally from these centres. As far as the space between the nerve-centre and the lower surface of the epidermis is concerned, we are in accord with him; but, on arriving there, our views become divergent. A careful study of our preparations enables us to state that, once the nerves have reached the dermis, instead of passing peripherally through the epidermis, the direction of growth is, on the contrary, lateral—that is to say, parallel with the surface; and that when fibrils are seen passing through the epidermis, as they are continually seen to do in certain very limited localities, they do so not only involuntarily, but in actual defiance of their tendency to lateral development, and of their struggles to form lateral branches. In other words, the progress of the nerve-fibrils through the epidermis, in such limited regions, is not due to their pushing their way through, but to their actually being drawn through by a hitherto unsuspected mechanism, which we now explain.

First, let it be understood that the branched nerve-cells are often found in large numbers, forming groups at various localities and depths in the dermis, and that they appear to grow up, or are prolonged with, the fibres upon which they are placed, towards the epidermis. There they become arrested, either on the lower surface of the epidermic downgrowths, or within the papillæ themselves, which often become stuffed full of such cells. So closely do these cells apply themselves to the lower surface of the epidermis, that they become flattened, often with a concavity towards the free surface. As, however, younger epidermic cells develop, probably by the application of wandering cells to the lower surface of the epidermis, the fibrils, connecting two or more cells in the ganglion, become entangled in the epidermis. Once fairly entangled they cannot again free themselves, for the continuous development of young cells on the lower surface of the epidermis keeps going on, and the fibrils become only more involved within it. The younger cells keep pushing the fibre before them towards the free surface; and as the ganglionic basal cells are comparatively fixed, the fibrils connecting them are forced to elongate themselves, and become bent with their convexity towards the free surface. As the fibrils become pushed

further on, we find them appearing like a narrow arch, resting on two high piers or columns, each of which has its base upon or in a nerve-cell in the ganglionic group. By and by, the arch either gives way through extreme tension, or through being carried to the free surface of the epidermis, leaving, in either case, the two columns standing as two fibrils perpendicular to the surface.

There is still no chance for these fibrils to retract upon their respective base cells; for they are as firmly held between the epidermic cells, growing outward, as a rope would be when grasped and drawn along between a series of toothed wheels moving in one direction; and then the fibrils continue to be drawn out, in spite of themselves, to moulder or crumble away at their free ends in the inert portion of the epidermis. Next, we have the base cells themselves becoming involved, either as individual cells or as a whole group. We possess, in our preparations, every stage of such cells becoming involved in the epidermis.

Here we come to another curious question. If the connecting fibrils are thick and strong, as in the horse, they remain still attached to the cells, while these latter are being carried along through the epidermis. If, however, the fibrils are delicate and weak, and the cells numerous, the cells break off, and are carried separately through the epidermis. These cells are the cells of Langerhans, whose origin seems hitherto to have been a puzzle for all investigators. Strange to say, the last writer on this subject, Robert Bonnet (*Morphologisches Jahrbuch*, 1878, page 386), gives drawings of the cells of Langerhans, and of those of Merkel, in the same group; but denies their identity, because the former are branched. But they are all branched, according as they are looked at, only they become crushed and transformed as they are hustled through the epidermis. Being, moreover, dead on being separated from their centres, they stain intensely black by gold. Sertoli, Mojsisovics Arnheim, and Merkel also deny their nervous character. The latter likewise denies their identity with his cells, or that his cells are branched, or anything else but oval.

Langerhans's cells have also been held by some to be unpigmented pigment cells, lymphatic canaliculi, and a host of other oddities; but it only requires a careful examination of their specimens, keeping in mind the forces we have explained, to convince investigators that the cells of Langerhans are nothing other than broken off nerve-cells, such as we have described. It must, however, be borne in mind that the nerve-fibrils, lying on the lower surface of the epidermis, become involved, whether or not cells be present; and, indeed, this seems to be the most fruitful source of the intra-epithelial fibrils, although, but for the presence of the cells, as shown in our preparation, the mechanism which transports those fibrils might have remained undetected. It is difficult to say how long growth in these fibrils may keep them passing through among the epidermic cells; probably they are continually breaking, even before they reach the surface, and being replaced by newly entangled fibrils. Even, however, after a fibril has become entangled in the epidermis, it still retains its strong tendency towards lateral development: for no sooner has the loop or arch broken, than it begins to push out lateral branches, which, however, get carried with the parent stem towards the free surface, as every histologist must have observed who has studied this question. As an example of this tendency to push out lateral branches, we show a preparation of such a broken fibril from the nose of the kitten. We wish it to be understood that this is no exceptional example: for, from the same animal, we obtained several hundred examples, all more or less similar to it.

The dragging out tendency towards the free inert surface of the epidermis goes on, *pari passu*, with the rapidity of growth or replacement of epidermic cells going on on any special surface. At the surface of the vascular papillary, growth seems to go on with greater rapidity than elsewhere; and this appears to be why the entanglement of nerve-fibrils, and their being dragged towards the free surface, in much greater numbers, becomes so well marked from their summits. In such a case, moreover, the rapidity of growth is so great that the whole plexus is sometimes seen in the act of being dragged out perpendicularly to the surface, no time being allowed to push out lateral branches.

When, however, such intra-epithelial fibres become involved in an epidermic surface unexposed to friction or rubbing off of its surface, cells, and consequently of very slow growth, we might expect to find, in such an exceptional case, the fibrils lying laterally to the surface. This is precisely what happens; for, in the epidermic lining of the hair-follicles, where no one, to our knowledge, has discovered such intra-epithelial fibrils, we have found them ramifying laterally, that is to say, parallel to the epidermic surface. The question of how they became involved at all in such a slow growing epidermis is at once explained by some of our preparations, which show fibres passing out of the summit of the dermic papillæ, next to the hair-follicles; and then,

after making a sharp turn, running down through, or becoming involved in, the epidermic lining of the hair-follicle, the first process of entanglement having taken place at the summit of the dermic papillæ. Why they should become involved on a very small portion of the skin of the body, and not on the great mass of the surface, is a question for which we have hitherto failed to find any solution warranted by all the facts. It is not a question only of the thickness of the epidermis, for the hoofs of horses ought to contain such free intra-epithelial endings, where, however, it is difficult to find them. Probably the desire to touch or feel by one special surface locality, combined with quick epidermic growth, may lead to the growth of many nerves immediately underneath such a surface, and facilitate entanglement within it.

Laying now aside the question of differentiation of function into nerves of touch, temperature, pain, etc., we fail to find that these intra-epithelial fibrils have any function at all. They are nerves in an abnormal position, placed there by mechanical and accidental causes; and we have the great fact before us, unrecognised by physiology, it is true, but demonstrable by any man of ordinary sense upon himself, that the pulp of the fingers, which contain numerous intra-epithelial fibrils, is, in most people, less sensitive to touch, to temperature, to the pain of a slight needle-prick, or irritation of a wet thread drawn across, than is, for example, the skin of the face, where comparatively few intra-epithelial fibrils exist; and it is safer to decide by our own sensations than by interpretations of the sensations of the lower animals; a view, also, which meets the case of the immense development of nerve-cells on the feeler-hairs of animals, and which, we might almost suppose, proved such cells to be tactile.

It is difficult to say how far the forces which we have described may be constantly acting in the nerves of special sense. In the taste-bulbs, for example, we are clear that the special nerves of taste are dragged into and through the taste-bulbs and neighbouring mucous epithelium by the same forces which we have described as forming the intra-epidermic nerve-fibrils. As, at the bases of the circumvallate papillæ containing the touch-bulbs, we find immense masses of nerve-cells, constituting great nerve-centres, we are inclined to suppose the mechanism of the transmission of sensation to be similar in all, namely, that it is the cells themselves in the ganglia which receive or form the impressions, and pass them on through the nerve-fibres to the central nerve-centres, to neighbouring ganglia, and to the blood-vessels, sweat-glands, etc. In fact, the ganglia are telegraphic outposts, and the cells are the operators, or telegraph-machines, at the peripheral and central ends; and, as in a telegraph, an operator and a machine at both extremities, are required to keep up communication. If at any point the telegraph-wire be cut, all communication must cease; and this inclines us to believe that the intra-epidermic nerves, for the most part, are incapable of performing any function while lying broken in the epidermis. That up to a certain point in the epidermis they are seen to be capable of pushing out lateral branches, while in connection with the sub-epidermic fibres and cells, shows that their protoplasmic life is still active; but how far their severance may interfere with function is not at all clear as yet.

Conclusions.—1. The terminal tactile cells of Merkel, the end-buds of Bonnet, and terminal tactile discs of Ranvier, are neither tactile nor terminal.

2. When Merkel claimed for his terminal cells the function of touch, and for the free intra-epidermic fibrils the sense of temperature, he ignored that the two structures belonged to the same nerve-system, and were often continuous with each other.

3. The tactile nerve-terminations are best seen on the follicle of ordinary hairs, as forked endings, of from one to four prongs on each nerve, the back of the prongs being applied to the epidermic lining of the follicle.

4. The so-called terminal cells forming ganglia underneath the epidermis, and similar cells upon the hair-follicles, seem to be the real centres of the sense of temperature and of pain. They are connected with each other by means of the sub-epidermic plexus of non-medullated nerve-fibres and multipolar nerve-cells, and through this plexus, by means of medullated nerves with the great central nerve-organs.

5. There are no physiological terminations for the nerves of temperature and pain (Beale's theory), the free terminations in the epidermis being pathological breaks. The same system exists within the peritoneum and other tissues of the body.

6. The intra-epidermic nerve-fibrils do not push their way through the epidermis, as held by Ranvier, but, becoming entangled therein, are afterwards dragged through, as loops, which, on breaking, leave the fibres as if passing perpendicularly through the epidermis.

7. The direction of growth of these fibrils is lateral or parallel to the surface of the dermis. This is shown by their tendency to branch while in the epidermis, as well as by other conditions already described.

8. The cells of Langerhans are only nerve-cells, either belonging to the ganglia (Merkel's) or to the subepidermic plexus, which have also been dragged into the epidermis, and broken off there.

9. Taking the ordinary hair-nerve apparatus as a standard, we find that its elements may hypertrophy, as shown in the feeler-hairs; or atrophy, as shown in the organ of Eimer in the mole, and in the touch bodies and Pacinian bodies.

10. The organ of Eimer represents the nerve-apparatus of a hair-follicle, from which the hairs have been, in former generations, dragged out by the action of the digging hands of the mole.

11. The forked tactile elements of the aborted hair-follicle may become transformed into Pacinian bodies, which are indeed their homologues and are true tactile nerve-endings.

ON THE VAPORISATION OF CHLOROFORM, ETHER, AND ETHYL-BROMIDE AT DIFFERENT TEMPERATURES.

By WILLIAM SQUIRE, M.D., F.R.C.P.

HAVING recently had occasion to use Dr. Junker's anæsthetic apparatus, my attention was directed to a table of the varying amounts of chloroform and of ether vaporised while passing the same quantity of air through diminishing quantities of the anæsthetic fluid. This table, prepared by Mr. Krohne, gives the results of passing about 430 cubic inches of air through the liquid experimented with, by 100 compressions of the elastic bellows used. It is, shortly, as follows:

	Temperature of Air, 60° Fahr.	Chloroform.	Methylene.	Ether.
6 drachms	110 minims	80 minims	215 minims.	
4 "	90 "	50 "	180 "	
2 "	50 "	30 "	95 "	

In this table, the temperature is given at the commencement of the experiments, but no note is taken of the reduction of temperature, towards the end, produced by the evaporation.

This reduction is considerable; it is greatest in the more readily vaporisable liquid. Each fluid varies as to the amount of vapour given off at different temperatures, and it is to this, rather than to the amount of liquid used, or its height in the containing vessel, that the variations in the table given are mainly due. Bromic ether gives off a very equable amount of vapour at a temperature of 70°. Anhydric ether comes off in moderate quantity at 40°. Chloroform should be lowered to 50° before using.

If, instead of commencing at 65°, with six drachms of chloroform, the temperature be reduced to 50°, not 110 minims, but 80 minims are carried off in vapour by 100 compressions of the bellows, unless a considerable interval be allowed, so that the loss of temperature produced in the first two minutes may be regained. By using the bellows twenty-five times every two minutes, and noting the loss at these intervals, 30 minims were carried off in the first two minutes, 25 minims in the second, fifteen in the third, and only 10 in the fourth, when the temperature was reduced 5°. Commencing at 55°, with only five drachms of chloroform, and using the bellows still more slowly, the loss was 45 minims in the first 25 compressions of the bellows, 30 minims in the second, 20 in the third, and 15 in the fourth. The height of the column of chloroform was one inch to half an ounce; that of ether, was an inch and a half at the commencement of the experiment, and less than one inch at the close; that is, higher when only 15 minims were carried off in the first experiment, than when 45 minims were lost at the beginning of the second with a higher temperature. In a smaller tube, holding two drachms of chloroform at 55° in an inch and half of height, the same sequence of compressions, forcing 100 cubic inches of air through in two minutes, removed 30 minims in the first, and 20 in the second series, when the temperature fell to 47°; 15 in the third and 15 in the fourth, when the temperature fell from 45° to 43°. Hence I conclude that it would be well in administering chloroform by Dr. Junker's apparatus, to lower the temperature at the commencement to 50° Fahr., and to slightly warm the receptacle afterwards by holding it in the hand, or placing it inside the tube. The temperature of the bellows, however, gradually cools; it is, therefore, necessary to warm them by the hand, or by the method. Alcohol, however, does not require such cooling.

The use of the bellows, hitherto been confined to its ready administration by the instrument. Mr. Krohne, by enlarging the receptacle, by this means I have produced complete anæsthesia in two and a half minutes,

which lasted three minutes. Half an ounce of ether had disappeared in 48 inspirations, and the temperature of what remained was reduced 10°, or to 50° Fahr. The temperature of the room and of the ether, to begin with, was 60°. The vapour given off at first was too strong to be agreeable. Even with a good allowance for air entering by the side of the mouthpiece, some cough was excited, and some excess of vapour escaped into the room. In a second administration, beginning with the ether at 54°, sufficient vapour to produce unconsciousness in less than two minutes was liberated without exciting cough. Twelve inspirations were taken in the first minute, 20 in the next 50 seconds. The anæsthesia could have been maintained with very little ether vapour if more had been needed. The temperature of the ether was again lowered to 40° or ten degrees in less than fifty compressions of the bellows. Further observations seem to indicate that the receptacle for ether need not be much enlarged in order to make Junker's apparatus as available for this as for chloroform. Lowering the temperature at first, as by spraying ether on it externally before using, and warming it afterwards by the hand or a warm cloth, would be all that is needed to adopt this safe and convenient method of inhalation to both the anæsthetic ethers.

Table of Evaporation of Ether at Lowered Temperatures.

Amount of Fluid.	Height of Column.	Temperature of Fluid.	Cubic Inchs. of Air.	Fluid Evaporated.	Temprre. After.
4 drachms	3 inches	60°	100	90 minims	55°
3 "	2½ "	55°	100	80 "	50°
2 "	1½ "	50°	100	60 "	45°
1½ "	1½ "	45°	100	40 "	36°

Second Experiment.

5 drachms	3½ inches	55°	100	90 minims	55°
3½ "	2½ "	45°	100	60 "	50°
2½ "	2 "	35°	100	40 "	34°
2 "	1½ "	30°	100	30 "	30°

On evaporating another half drachm, the ether froze in the tube. Two minutes were occupied in the 25 compressions of the bellows, transmitting 100 cubic inches of air. A pause of one minute was made between each series of compressions. In the first observation ether was added at each pause, and in the second the tube was not opened, and no addition made.

Table of Evaporation of Bromic Ether at Lowered Temperatures.

Amount of Fluid.	Height of Column.	Temperature of Fluid.	Cubic Inchs. of Air.	Fluid Evaporated.	Temprre. After.
5 drachms	3½ inches	70°	100	60 minims	48°
4 "	2½ "	70°	100	35 "	45°
3½ "	2 "	70°	100	30 "	36°
2½ "	1½ "	70°	100	30 "	33°

Freezing.

Freezing of some of the ether in the tube was produced, when two drachms and a half only were left, by 100 more rapid actions of the bellows in another experiment with a loss of 90 minims of ether, while the temperature of the fluid remained at 32°. With the slower compressions at the ordinary rate of respiration, 150 minims were vaporised. It will be seen how much more equable is the evaporation of bromic ether than of anhydrous ether by this method.

Clover's ether-inhaler is well suited for the administration of bromic ether. The outer metal case should be warmed up to 70° in cold weather. Instead of water, a layer of felt within this case would retain the heat longer. The proportion of vapour for ether and bromic ether that can be easily inhaled is about the same; viz., 50 minims to 100 cubic inches of air. Fifty minims are equal to more than 100 drops of bromic ether. With ether at ordinary temperature, much more than this amount of vapour is given off; so that, at the commencement of inhalation, the valve of the mouthpiece must be fully open, and much air also admitted at the sides; therefore the temperature of the receptacle may require to be artificially lowered, at first, for ordinary ether.

FEVER IN CARLOW.—A good deal of typhoid fever has occurred during the last few months in Carlow, and also a continued fever with marked diarrhoea. Suspicion was attracted to the water-supply of the town, and an investigation has proved that, at least in some of the streets, it is polluted with sewage. There is little doubt but that the water-supply is subject to periodical pollution by sewage, and the town commissioners, whose attention has been directed to the subject, do not appear to attach sufficient importance to the absolute necessity of a good supply of water for their town.

RECURRENCE OF ALBUMINURIA DURING PREGNANCY.*

By DAVID GOYDER, M.D.,

Honorary Medical Officer to the Bradford Infirmary.

WHENEVER a primiparous or a multiparous woman exhibits puffiness of the face and eyelids, and oedema of the legs and body, as she approaches the period of labour, an examination of the urine will generally disclose albumen, which, in proportion to its continuance and the low specific gravity, indicates more or less danger of puerperal convulsions before, during, or after labour. The recognition of this condition by the medical attendant is, therefore, of great importance to the successful conduction of the confinement. It is not uncommon for the patient, unaware of the gravity of her situation, to neglect to inform her medical attendant, who, called in only at the moment the labour has set in, finds himself face to face with a most serious complication, with which it is difficult, or next to impossible, to grapple.

Many years ago, I was called to attend a labour with the patient in this condition of general oedema. She passed through her labour without accident; twelve hours afterwards, however, she was seized with puerperal convulsions, and, despite treatment, died in eight or ten hours, without a single lucid interval or intermission of the fits. So frightful a result determined me to visit every case of pregnancy a month anterior to the impending labour, and by observation, and, where needful, by examination of the urine, determine whether measures of prevention were necessary or not. In pursuance of this determination, several cases were subjected to treatment, with the satisfactory result that the labours passed over without the occurrence of abnormal symptoms; and the albumen disappeared from the urine within a fortnight after the labour was accomplished.

In the special case to which I desire to call your attention, the patient has had albuminuria coming on from four to six weeks previously to the full term of pregnancy; and this has recurred in three successive pregnancies. The patient is a woman of delicate and spare habit, of highly nervous temperament and acute feelings, and, moreover, of distinctly strumous family history. All her children have died of tubercular affections within a year, except the last but one. The means adopted to remove the oedema, deplete the blood, and check the escape of albumen, consisted, first, in aperients of sulphate of magnesia and powdered jalap; and, second, in a mixture of iron and ergot, combined, also, with sulphate of magnesia. Although the labours have come on sometimes fourteen days before the full period of utero-gestation, this is not necessarily attributable to the effects of the ergot, but to a distinct lapse in the growth of the foetus *in utero*, indicated even before the appearance of the albuminuria by the foetal motions becoming gradually feeble, which feebleness increased as the albuminuria set in and deepened. The premature labour, therefore, seemed rather the result of a conservative reflex act of the uterus to save the life of a waning child, or, to express the matter in a more scientific way, the uterus took on action in consequence of the failure of its own and the child's nutrition.

Now, the question arises, What is the cause of this recurrent albuminuria? Until recently, the connection of albuminuria with eclampsia was but imperfectly known. Eclampsia was largely treated of by the older authors, but its pathology and causes were very obscurely described. Latterly, the finger of observation has steadily pointed to a deranged function of the kidneys as the first in the chain of causes leading to eclampsia as the effect. Dr. Robert Barnes, in his address at a recent annual meeting of the Association, has largely contributed to fill up the gap between the older and more recent writers in midwifery. More recently still, Dr. Galabin, in the BRITISH MEDICAL JOURNAL for October 30th, 1880, summarises the causes giving rise to the albuminuria of pregnancy in its relation to puerperal convulsions. He collates these causes under several heads, some of which I enumerate for the purpose of contrasting them with the view I have formed of the cause operating in the present case. 1. He enumerates as a cause increased venous tension of the kidney, from pressure on the renal veins by the pregnant uterus, this favouring mechanical transudation of albumen from the kidney. 2. He says that arterial tension exists during pregnancy throughout the whole body, the heart developing some degree of hypertrophy, which would tend, by pressure, to a mechanical transudation of albumen, and even produce interstitial nephritis, with consequent depraved function of the kidney. 3. He cites rhythmical contractions of the uterus occurring at definite intervals throughout the pregnancy, as inducing congested kidney and consequent depraved function. 4. He gives nervous sympathy between

the growing uterus and the kidney, which may interfere with the healthy function of the latter. This sympathy is illustrated in non-pregnant women by the copious secretion of urine occurring during certain menstrual troubles and hysteria, the kidney suffering an active state of hyperæmia. 5. He cites as a cause the increased work thrown upon the kidney during the period of utero-gestation; the kidneys, having to depurate the blood of two individuals instead of one, suffer in function in proportion as parturition approaches; and if to this a cause already mentioned be added, viz., the pressure of the gravid uterus upon the uterine veins, then congestion, especially of the tubular structure, will be induced, and consequent nephritis, with albuminuria, result.

Now, the existence of such causes in inducing the majority of cases of albuminuria in the pregnant woman, and at the same time (and this is the main element in eclampsia) the retention of the effete saline constituents of the blood, may be freely granted; but it is not my purpose, and it is foreign to the object of this note, to enter upon the subject of eclampsia. I will merely remark, in passing, that my mind is made up, as, I do not doubt, yours is, that the direct cause of the convulsions is the irritation of the brain by the uræmic blood; the brain being in a prepared state for excitement by the general exaltation of the nervous system during parturition. Thus, while admitting that the majority of the cases of albuminuria during pregnancy are referable to the pressure of the uterus upon the renal veins and kidneys, still I am of opinion that this and the other causes cited are not applicable to the case of the patient of whom I speak. I am rather inclined to regard the cause, at least in this case, as in atonic nervous and vascular condition of my patient—a patient with a hereditary tendency to tuberculosis, and possessing feeble and delicate powers of constitution, resulting in failure of the functions of nutrition. The result, indeed, proves this view. She showed, in fact, a sheer inability to support two lives at once beyond the seventh month of pregnancy. From the first, there was no evidence of great tension of the abdomen, or pressure of the uterus and its contents upon the kidneys and renal veins. The inability successfully to complete pregnancy itself was continued after the birth of the child. She either broke down in the attempt to suckle her infant, or the child pined and sank away under some form of tuberculosis. The child previous to the present one survived, and was comparatively well at sixteen months, solely because it had been reared by a wet nurse. As in the cases fortunately diagnosed and successfully treated, arising from other forms of albuminuria, no actual degeneration of the kidney followed the recurrence of albuminuria in this case. The oedema and albumen disappeared after each labour within a fortnight. The danger which we have to fear in these cases is, that the recurrence of the albuminuria may at last become persistent, and terminate in complete degeneration of the kidney and confirmed Bright's disease.

It appears to me that much light is thrown upon this case by those which are cited under the head of Intermittent Albuminuria in the BRITISH MEDICAL JOURNAL of October 19th and 26th, 1878. In a letter of Dr. T. Morley Rooke of Cheltenham, cases of intermittent albuminuria are mentioned as occurring in girls from fourteen to sixteen years of age, all of whom were suffering from anæmia, with *bruit de diable* in the cervical veins. Dr. Rooke alludes to Dr. Moxon's and Sir William Gull's observations upon the same affection in young men. A peculiarity in all these cases was, that the albumen disappeared when the recumbent posture was maintained for some time, but reappeared when the patient resumed the upright position. Thus it would disappear after a night's rest, and reappear after the upright posture was resumed for a few hours, gradually increasing towards evening. The administration of tonics, especially perchloride of iron and strychnia, either greatly relieved or cured these cases. The rationale of these cases in atony of the nervous and vascular systems is plain, the transudation of albumen being a mere mechanical effect of the weight of the column of blood upon weakened vessels.

Viewing my case somewhat in this light, I determined, when she again became pregnant, to recommend a course of steady exercise without fatigue, change of air and scene, and the administration of phosphate of iron and lime with strychnia, coupled with a nourishing if not generous diet, not excluding such stimulants as malt liquors. Fortunately, the patient's position in life permitted a prolonged stay at the seaside. The result was all that could be desired. She improved in general health and appearance; became stout and rosy; went to the full period of pregnancy without oedema, albuminuria, or sign of weakness; and was delivered of a strong healthy child, which she trusts to be able to suckle.

The satisfactory termination of this case authorises the addition of another cause to those stated by Dr. Galabin, and renders it clear that every case of recurrent albuminuria in pregnancy deserves special study

* Read before the Yorkshire Branch.

not merely to prevent the possibility of convulsions, but to avoid and cure a constitutional state which gives origin and persistency to the escape of albumen.

THREE SUCCESSFUL CASES OF SPONGE-GRAFTING; WITH REMARKS.*

By T. SANCTUARY, M.D., Hayle, Cornwall.

CASE I.—In the January of 1881, a boy, aged 11, tied a piece of cotton three or four times round his penis, two inches from the abdominal wall. Great swelling followed, completely obscuring the cotton. He was treated by a surgeon with cold water compresses, and the swelling was much reduced; but during this time, the cotton became completely embedded in the tissues, and finally cut through the urethra. In June, the urine, which for some time had been passing in diminished and irregular flow, found its way through two small apertures in the upper surface of the penis, and gradually the distal part of the urethra (*i.e.*, the part beyond the cotton) became almost impermeable, so that, when I first saw him, on November 24th, 1881, hardly any urine was coming the natural way. At this date, a piece of cotton was projecting from one side of the old cicatrix which it had formed as it cut its way through: and there was a deep fissure on the upper half of the penis, extending down nearly to the urethra, and at right angles to it. As I could not introduce any instrument of any kind into the bladder, I determined to operate, and on the following day (November 25th) chloroform was administered, and I cut down through the upper cicatrix into the urethra, which appeared gristly, tortuous, and closed; and instead of being a pliable tube, was composed for an inch and a half of a semi-cartilaginous cord. Having dissected through this, I passed a No. 6 catheter from before backwards, till it came out at the incision. Then came the difficulty of getting it into the bladder, for there was still a stricture, or rather a mass of hard cartilage-like substance, where the urethra had been, behind my incision. I therefore cut into the urethra from below, behind this mass, and passed a catheter forwards until it came out at the first incision. Then, having divided this part of the stricture, a No. 6 gum elastic catheter was passed into the bladder, and tied there. Lastly, I pared the edges of the upper fissure in the usual way, united them with silk sutures, and covered the wounds with dressings steeped in an alkaline solution of creasote. On the 26th, the boy's temperature was 100.6° Fahr.; and on the 27th, 99.6° Fahr.; on the 28th, it was 98.6° Fahr.; and there was no subsequent rise. On the 29th, I found that he had moved the dressings, and allowed some urine to trickle over the wounds; and in spite of the greatest care, the incision on the under surface, which was granulating nicely before this, began to slough over a surface rather larger than a sixpence. I then determined to see whether I could obtain healing without loss of superficiality, by means of sponge; so, having applied a solution of zincchloride on the 29th, I arranged flat pieces of fine Turkey sponge on December 2nd, cut in irregular shapes, and nearly a line in thickness, so as to exactly fill up the wound, and fit under the edges of it wherever these projected. The sponge was covered by gutta percha, this by lint, and the whole kept firmly in place by a strip of India-rubber plaster round the penis. In four days, the sponge adhered, and bled when pricked, and by December 28th the wound was whole, and the sponge entirely absorbed. The catheter was taken out on December 9th, and the urine passed the natural way in a good full stream, the boy remarking that he made water now as well as ever he did. The upper wound healed without any sponge. I advised the boy to come to me, and have a catheter passed occasionally, as it was probable, under the circumstances, that stricture would otherwise eventually result; but I have not seen him since January 18th, 1882, when he was perfectly well. There was then a very slight depression where the sponge had been inserted, and the cicatrix was sensible, though not acutely, to the prick of a needle. He would not allow me to pass a catheter, though I was anxious to do so, to ascertain the state of the urethra.

CASE II.—This was not so interesting in its previous history as Case I. A workman had one side of the terminal phalanx of his left index finger cut off by a circular saw. When I first saw him, on January 1st, 1882, the stump of the finger was covered with a piece of sponge in the same way as in Case I; and the finger was sound by the end of three weeks. The only difference in the two cases was that, whereas in the former there was a very slight and doubtful odour of putrefaction the day after application, in this there was a distinctly putrefactive odour for a week after the sponge had been applied, and adhesion took place on the third day instead of the fourth. In both

cases, the sponges were saturated with clear watery discharge on the second day.

CASE III.—On April 14th, 1882, a girl crushed the end of her middle finger in a turnip-machine. There was extensive destruction of skin, and I had to remove part of the terminal phalanx. The wound was dressed in the ordinary manner, but, owing to the loss of so much skin, the wound healed very slowly. On May 5th, therefore, I applied sponge, and dressed it every two or three days until June 1st, when the finger was completely healed, and the sponge absorbed.

REMARKS.—The sponges used were the finest grained Turkey I could obtain. They were boiled in a weak solution of hydrochloric acid for some hours, and then steeped for half a day in a strongly alkaline solution of creasote. Before application, they were rinsed in hot water, and cut in very thin slices; and the wounds were syringed with the same antiseptic solution in which the sponges had been immersed, in which also were dipped the gutta-percha and lint. A single layer of each material was applied in the following order—sponge, gutta-percha, lint—and the whole was covered with a broad strip of India-rubber plaster, applied so as to secure firm pressure. In conclusion, I may remark that I have observed that, unless firm pressure over the sponge be used, the granulations will push the sponge away, instead of growing up through its substance. There are two sets of cases in which I have noticed this adhesion of sponge, where no such adhesion has been intended: 1. Where bleeding cavities have been plugged tightly with sponge, as in excision of the eyeball; 2. Where sponge-tents have been used to dilate the cervix uteri, and have been unavoidably left in longer than usual. In both these sets, firm pressure is probably a *sine qua non* in obtaining adhesion.

ON A MODIFICATION OF SPONGE-GRAFTING.

By JAMES FERGUSON, M.B., C.M., Univ. Glas.,
County and City Infirmary, Perth.

In the *Edinburgh Medical Journal* for November last, Dr. Hamilton, now Professor of Pathology in the University of Aberdeen, brought before the profession a method of treating certain wounds, which he, with some appropriateness, named "sponge-grafting." Prepare a piece of a sponge after certain directions, fit it into a depression in the soft parts, and, ultimately, the foreign body will be replaced, and the gap occupied by newly organised tissue; such was the teaching of Dr. Hamilton, and a number of successful cases were cited in demonstration. The theory of the originator is that the force of the blood-current causes an upheaval of the vessels lying on the surface of the wound, and that if a proper support is furnished, new growth will take place in the vessels and cause them to reach still higher levels. Blood-clot or fibrinous lymph supplies this support in many natural processes; a piece of sponge may be made to serve the same purpose. The sponge, having fulfilled this mechanical function, in virtue of its organic nature then undergoes disintegration, and may either be absorbed or discharged gradually.

I selected a piece of fine Turkey sponge, and treated it as instructed, by steeping in dilute nitro-hydrochloric acid, then washing with liquor ammoniac, and finally setting aside in a one-to-twenty solution of carbolic acid. Some weeks afterwards, I chose an opportunity of testing sponge-grafting, though not in a crucial degree. A man was admitted to this infirmary who, having received a horse-kick on the shin three years before, sufficient only to produce an abrasion of the skin at the time, by incredible neglect had allowed a progressive loss of tissue to go on till an ulcer of the following characters presented. The sore extended almost round the calf, its width varying from two to five inches; its surface was sloughing, discharging profusely, and smelling horribly; the skin around was firmly bound down, and presented an irregular but hard margin to the sore. The man had gone on submitting to matters so long that the knee and ankle-joints were fixed at an angle implying great lameness, while the greatest circumference of the calf was nine inches, as compared with thirteen and a half inches at the corresponding level of the other leg. Measures were successfully employed to produce a clean, and latterly a richly vascular, surface. The level of the sore was now for the most of its extent almost that of the body surface, but at one angle a deeply scooped depression, its dimensions about an inch by an inch and a half, presented. The case was admitted under the care of Dr. J. P. Bramwell, under whose supervision the following treatment was followed out. To the part level with the skin, particles of skin were transplanted, and the result, save at a portion to be hereafter described, have been thoroughly satisfactory. To the hollow referred to, I adapted a piece of prepared sponge, the thickness of which was about a quarter of an inch in thickness. Three days afterwards there was adhesion of the sponge, and any attempt to detach it pro-

duced abundant bleeding. I shall not describe the obvious changes which took place during eight weeks. I made daily observations upon the case. Suffice it to say, they confirm in a rough way the statements given with such careful detail in Dr. Hamilton's paper. One fact I may note, however, as favouring a conclusion opposite to that of Dr. Hamilton on the subject of nerve-supply, he not believing in the production of nerve-tissue at an early stage. I pricked the most superficial portion of the new growth from time to time with the point of a needle, and I asked medical friends to do the same, and pain was most certainly felt by the patient on every occasion. At the same time, Dr. Hamilton's far more extended observations entitle his evidence to regard which I cannot claim for mine. Watching the progress of the case from day to day, a fact which strongly impressed me was that a very protracted period is necessary before organisation can encroach to any extent upon the sponge area. Within three days of application, there is firm union between the living tissues and the sponge. We could hardly expect the vessels to continue their invasion at the same rate afterwards. A physical law may have largely to do with starting the process, which afterwards becomes more purely dependent on vital phenomena. In my case, nearly two months after the application, I was able to remove the superficial part of the sponge with the scissors to the extent of nearly half the original thickness before I encroached on newly vitalised tissue.

In the meantime, another opportunity had been presented me for sponge-grafting, and the issues in this case were peculiar. Dr. Graham, of this city, asked me to see a private case of an ulcer of three months' standing, during which period it had baffled all ordinary methods of treatment, and to decide if the new method might be resorted to. The sore lay over the lower end of the tibia; its size was that of a half-crown; its surface was exsanguine and hard; and its edges were tightly drawn down towards its floor. As a preliminary to further proceedings, caustic was used to the margins, and a strongly stimulating lotion applied twice daily for two days to the surface. The latter proceeding had no appreciable effect. Scratching with the end of a scalpel was now resorted to, until a freely bleeding surface resulted. A bit of sponge was then applied, and kept bound on for three days, when it was found to have united. In three days more, the patient complained of much pain extending up the limb, and the appearances of erysipelas were found spreading from the ulcer upwards. The patient declared himself subject to idiopathic erysipelas. These indications were judged as advising removal of the sponge, and the act produced considerable pain and hæmorrhage. A subsidence of the diffused symptoms took place immediately. As regards the ulcer, the changes were specially noteworthy. What had been the type of indolence and obstinacy among such sores was now the picture of healthy action—the surface abundantly vascular and standing well up towards the level of the skin. The simplest dressings were now sufficient to promote repair; and in three weeks from employment of the sponge recovery was complete. What was the cause of this sudden change? Was it the erysipelas, or was it a foreign body having simply an irritant action, or that effecting an action peculiar to itself? In any case, the sponge was a factor in the process, and deserved further employment.

To return to the first-mentioned case. At one portion of the sore under treatment by skin-transplantation, retrogressive changes set in, and became most persistent. Successive sloughs followed one another until there remained an almost circular gap of fully an inch in diameter, with edges abruptly punched out to the depth of over a quarter of an inch, and its floor, which lay close to the bone, of white fibrous-looking structure. Into this depression, after having used a knife to the floor, as in the other case, I fitted a piece of prepared sponge. Two days effected the same union as before. On the fourth day, I forcibly elevated half of the sponge—pain and bleeding again the accompaniments—and snipped off this semicircle with the scissors. The exposed part left presented highly vascular tissue, reaching well up towards the body-surface as compared with the former depth. In four days more, the remainder of the sponge was detached, and its site was seen to be occupied by a level of new tissue, very slightly higher than the other half. The deficiency left below the level of the skin was soon made up by unaided natural processes, small particles of transplanted skin were applied, and in the end nothing remained to indicate a spot treated differently from parts around. The portion of the ulcer to heal most slowly was that where the sponge was originally applied. I should have removed the whole graft here, as in the other instances, but successive shavings from its surface, in the manner before alluded to, had left only the deep portion, which was now incorporated with the new tissue or disintegrated. Skin-grafts, it was noticeable, were slow to attach to this area, but eventually they became reconciled to it, and the result was a complete cure.

My experience of Dr. Hamilton's proposal has thus been compara-

tively limited, and I leave to wider observation upon it to yield more conclusive evidence as to its general efficiency. I venture to recommend, however, a recourse to the modified or temporary sponge-grafting—if *grafting* is, indeed, a correct expression to apply to the method I have found useful—for at least certain varieties of breach of tissue.

ON THE TREATMENT OF PARTIAL TRICHIASIS BY ELECTROLYSIS.*

By ARTHUR BENSON, M.B.Dub., F.R.C.S.I.,

Lecturer on Ophthalmic and Aural Surgery in the Ledwich School of Medicine, Dublin, Assistant-Surgeon, St. Mark's Ophthalmic Hospital, Dublin.

No portion of the human frame, except perhaps the uterus, has been made the subject of so many and varied experiments at the hands of the ingenious operator as the eyelid; and yet how unsatisfactory all previous experiments have proved, is shown by the host of fresh ones yearly added to the list. The ophthalmologist must be pre-eminently conservative, and in nothing more so than in operation upon the eyelids, hence arises the great difficulty, to alter the shape of the lids, or the direction and position of the cilia, without sacrifice of any tissue.

It is not, however, my intention to speak of the general subject of palpebral surgery, but rather I desire to confine my remarks to the treatment of partial trichiasis. Some method of getting rid of individual cilia, without displacement of those in their immediate neighbourhood has long been a desideratum. It often happens that one, two, three or a dozen hairs are growing in a wrong direction on the lid border, the remaining cilia being in a perfectly normal position. And in such cases most of the text-books advise repeated epilation, a treatment which only gives temporary relief at the expense of future misery; for the irritation caused by the young hairs will most certainly tend to increase the mischief which the epilation for the time relieved.

Instead of epilation, where the offending cilia are few and long, a classical method of treatment, as old as Celsus, and recently revived by Snellen, will, in a fair percentage of cases, prove satisfactory; I allude to *illaqueatio*, or snaring of the hair and turning its direction of growth outwards instead of inwards. This operation, however excellent in the cases in which it is applicable, is very limited in its range, and the snared hairs are very liable, sooner or later, to resume their previous vicious direction. Having practised this operation in a large number of cases, and finding that its action was by no means certain, and having no reliable evidence in favour of the destruction of the hair follicles by such agents as potassa fusa or chloride of zinc, I gladly availed myself of the suggestion of using the continuous electrical current, and decomposing the tissue of the hair-follicle by electrolysis.

As this method had not, as far as I am aware, been tried before by others, I had no rules to guide me. Dr. A. Nieden of Bochum, writing on the subject of "The Application of Electrolysis in Ophthalmic Therapeutics" in the *Archives of Ophthalmology* of March 1881, makes no mention whatever of its employment for the destruction of hair-bulbs, but confines his remarks to its use in the treatment of naevi, etc. The plan I adopted, and one which I have since continued to use, was as follows.

To the negative electrode of a Leclanché's battery, I attached a rather fine gold electrolysis-needle, and inserted the point of this to a depth of about four or five millimètres along the hair to be destroyed, so that its point should reach well above the root. I then applied the positive electrode to the lid near the outer canthus (having first made sure that the battery was working sufficiently well); contact was conveniently made by wrapping some wet cotton wool round the end of the wire. In a few seconds, the tissues immediately around the needle (negative electrode) began to show white, and soon a distinct bubbling of hydrogen gas could be observed. Half a minute or so, according to the strength of the battery, usually sufficed to completely loosen the hair; I then withdrew the needle, and the positive electrode, and, with the fingers or a forceps, removed the hair. It should come away without requiring the slightest drag, and bring with it a gelatinous-looking mass of dead tissue. If the hair be not sufficiently loose, the needle must be reapplied for a few seconds; but, with a little practice, the required time can usually be guessed with accuracy. Each hair has, in this manner, to be destroyed.

The amount of inflammation of the lid resulting is usually not great. In one of the first cases in which I tried electrolysis, an abscess formed, owing, no doubt, to my having inserted the needle too deeply; but that was the one and only untoward result which I have seen in about 120 hairs so treated.

* Read in the Section of Ophthalmology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

Four of Leclanché cells are usually enough, if the battery is in good order; but the current must be strong enough to decompose water with facility.

It seems not to be advisable to destroy very many hairs in the same lid at a sitting, for the resulting swelling is sometimes considerable. The advantages which I claim for this method over epilation, snaring, or the actual or potential cauteries, are these.

1. Any individual hair can be destroyed without injuring those beside it.

2. The hair can be got rid of at once and for ever.

3. Hairs of any length, strength, or position, can be treated.

4. By its early use, it will render unnecessary many of the more formidable operations on the lids, besides saving the patient much misery.

In cases where a very large number of hairs are misplaced, or where entropion exists, it is inapplicable, and some of the numerous plastic operations should be preferred.

The greatest disadvantage, as far as I have seen, is, that it is very painful for the time.

I have now been practising this method for over four months, at St. Mark's Ophthalmic Hospital, during which time I treated 120 cilia by electrolysis, and had some of the patients under constant observation for a month, and at intervals since, and have been able to observe no recurrences; and have been so pleased with the results obtained, that I have ventured to bring the subject before the Ophthalmological Section of this Association, feeling sure that to those who, like us in Ireland, have a large number of cases of trichiasis to treat, it will prove a valuable help; and that by its means many an one who had been for months a regular attendant for epilation to the *clinique* may be permanently cured.*

Four months may seem too short a time to have tested the permanency of the cure; but, while freely admitting this, I must urge that by no other method that I am acquainted with have hairs been for so long kept from showing; and, from the nature of the case, there is every reason to expect that the vitality of the follicles have been quite destroyed, and consequently no return is possible.

If applicable for the cilia, electrolysis should be equally applicable for the destruction of hair-follicles elsewhere, in moles, or hairy-faced females.

The method can, however, only be regarded as on its trial; but, so far, the results have been such as to encourage the most sanguine hopes, and to invite a much more extended trial.

26th,
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ON THE ABSORPTION OF CERTAIN SALTS FROM THE ALIMENTARY CANAL.

By MATTHEW HAY, M.D.,

Demonstrator of Practical Materia Medica, University of Edinburgh.

In a series of papers on the Action of Saline Cathartics, which are at present appearing in the *Journal of Anatomy and Physiology*, I have drawn attention to a remarkable peculiarity in the absorption of sulphate of soda from the alimentary canal. I there state (vol. xvi, p. 568), as the result of a number of experiments—in which a purgative dose of the salt was administered to fasting cats, and the animals killed at various intervals afterwards, and the quantity of salt recoverable from the alimentary canal estimated—that, during the first hour after the administration of the purgative, the salt is rapidly absorbed, until nearly one-half of the whole dose (five grammes) disappears from the canal, whilst during the next hour the greater portion of the absorbed salt returns to the canal. The quantity of the salt was estimated from the quantity of sulphuric acid recoverable, which was precipitated in the usual way by means of barium sulphate from an acid solution of the ash of the dried contents of the canal. I have ventured to explain the peculiar course of the salt by suggesting that the rapid absorption occurs in the small intestine, and the excretion in the large intestine. A more detailed explanation will be found in the papers referred to.

Since these experiments were made, I have recently instituted others for the purpose of ascertaining if other purgative salts behave in a like manner to sulphate of soda, and if the base as well as the acid of each salt be similarly absorbed and excreted; for, as mentioned, it was only the acid of the sulphate of soda which I estimated. The other

salts employed in the present experiments were the sulphate of magnesium and the phosphate of soda.

The results of the additional experiments with the sulphate of soda showed that, although the acid is rapidly absorbed during the first hour of the action of the salt, the base is not. For example, after the administration of five grammes of sulphate of soda to a cat, which was killed one hour afterwards, there were recovered from the contents of the alimentary canal, mixed with an infusion of the canal-wall, 2.544 grammes of sulphate of soda as reckoned from the sulphuric acid present, and 4.877 grammes of the salt as reckoned from the soda present. Other experiments performed in the same manner yielded like results. If the cat were killed two hours afterwards, nearly four grammes of the salt were recovered, as estimated from the acid, and about four grammes and three-quarters, as estimated from the base. After a longer period, the acid and base gradually became less.

The experiments with sulphate of magnesium yielded much the same results as those with the soda-salt. The acid rapidly disappeared from the canal during the first hour after the administration of the salt, and even to a greater extent than in the case of the sulphate of soda. As also with the latter salt, the acid returned to the canal, but not quite so rapidly as the acid of that salt. At the end of the second hour, there was hardly more of the acid in the canal than there was at the end of the first hour; but, by the completion of the third hour, the quantity had considerably increased. Meanwhile, the base or the magnesium was very gradually undergoing absorption, and never at any time during the first few hours after the administration of the purgative, was there evidence afforded of the base having pursued the same peculiar course of absorption and excretion as did the acid.

The following tabulated arrangement of these experiments with the sulphate of magnesium clearly brings out these facts. Five grammes of the salt was the dose in each case, and the cats were nearly of equal weight.

Experi- ment.	Killed after Adminis- tration of Salt.	Acid and Base Recovered from Alimentary Canal, calculated as Mg. SO ₄ ·7 H ₂ O.	
		Acid.	Base.
		Grammes.	Grammes.
A.	1 hour	—	4.966
B.	1 hour	1.852	4.390
C.	2 hours	—	4.240
D.	2 hours	—	4.009
E.	3 hours	3.531	3.421

In my paper on the Action of Saline Cathartics, I pointed out that one-fourth part or less of a purgative dose of sulphate of magnesium will, when injected into the circulation of a dog or a cat, kill it; and I, at that time, remarked that, if this salt were absorbed into the blood in the same manner and to the same extent as the sulphate of soda, it was very strange that it did not exert its toxic action. I did not then know that the acid was absorbed, whilst the base, for the most part, remained in the canal, or was absorbed only very slowly. The present experiments, therefore, offer a very satisfactory explanation of the difficulty I formerly experienced. The salt is split up in the canal, and the basic or toxic part of it enters the blood very gradually, and not more rapidly than it can be excreted by the kidneys.

The remaining experiments were made with the phosphate of soda, to observe if the phosphoric acid of this salt might behave in the same way as the sulphuric acid of the sulphate. The experiments were only two in number, in one of which the cat was killed after one hour, and in the other at the end of two hours. In both the quantity of phosphoric acid recovered from the alimentary canal and its concentration was large, and did not exhibit any evidence of the same primary rapid absorption as of the sulphuric acid. The phosphoric acid was, however, more reduced in quantity than the base, and it is probable that, to a certain extent, the phosphate undergoes decomposition in the canal.

How the splitting-up of the sulphates in the intestines is effected, and in what combination the acid passes into the blood, is beyond the scope of the present communication.

VACCINATION.—Mr. T. H. Hughes, Public Vaccinator of the Ombersley district of the Droitwich Union, has received (for the fourth time) the Government grant for efficient vaccination in his district.

* By several
Meeting of the
British Medical Association in Worcester, August, 1882.

TRACHELORAPHY.

By PERCY BOULTON, M.D.,

Physician to Samaritan Free Hospital.

THE operation for the cure of laceration of the cervix uteri is at present exciting some interest, and the paper of my friend and neighbour, Dr. Tilt, in the JOURNAL of November 25th, suggests that those gynaecologists who have been performing the operation, might with advantage express themselves on the subject.

I would begin by agreeing with Dr. Tilt that, in cases of slight cervical fissure, the operation is unjustifiable. As Dr. Tilt says he has "not once seen a case of extensive laceration since attention has been directed to it," it is probable that he has never performed the operation.

I have treated four cases of this kind during the last twelve months; three were private cases and one in hospital. Of these four cases, three were completely lacerated up to the vaginal *cul-de-sac* on the left side only, so that the outline of the cervix was that of a horse-shoe. In the fourth case, bilateral rupture had occurred, and the uterine lips were everted; there was considerable uterine hyperplasia, due to chronic interstitial inflammation, which had gone on ever since confinement six years previously. This patient had been under other well known men. Every kind of intra-uterine medication had failed to give any relief, and the patient was made sterile.

Here are four typical cases for the operation. In each case the forceps had not been used. Three out of the four were primiparae, the fourth a multipara; and in her case I am inclined to think that a small fissure at the previous confinement had been considerably increased at the last, as extensive laceration with the attendant symptoms is a bar to future pregnancy.

As to the operation, I have found it necessary to pare each side of the rent for a quarter of an inch, removing any cicatricial tissue, especially at the angle or fork of the fissure, and to stitch these flaps so formed together with silver wire. There are three ways of doing this, and I have tried them all. By far the easiest is to draw the cervix down outside the vulva, but this should only be done when the uterine ligaments are sufficiently lax to allow of it without using any fundue force.

I have never chloroformed my patients, and they have not complained of pain. The uterine tissue bleeds freely, and it is very tough. The bleeding ceases when the flaps are brought together with the sutures; and, as there is no difficulty in the dissection, which I do with a tiny hook to hold the tissue, and a small knife, both on long handles, the great "crux" of the operation is the stitching. When the uterus is drawn down outside, this is easy; but, when in the normal position, it is one of very great difficulty. I have done it through a Ferguson speculum, one-half the ordinary length, and in the way usually recommended by Emmet with the duck-bill speculum. I prefer a long needle of a certain curve, mounted on a handle, as being most manageable, and less likely to turn at a critical moment. The penetrating part of the needle should be finer than most mounted needles, and of the curve of two-fifths of the circle of a shilling, the eye being at the end.

The stitch must go deeply through the uterine flap, and the needle threaded afterwards, drawn back, and the wire twisted with a "twister". The number of stitches depends on the case, two or three being usually required at a side.

I am inclined to think all this manipulation is rather easier through the short Ferguson speculum than through the duck-bill. The latter allows of more play of the handles of the instruments used, but it in no way fixes the parts to be stitched, which the other speculum does. This, however, depends again on the dimensions of the Ferguson speculum, since small sizes would very much cripple the operator. There must be an inside diameter of one and three-quarter inches for play of instrument, and the total length only two and a half inches, including the rim. So much for the operation.

The local after-treatment consists in keeping the vagina clean by syringing daily; and the stitches are removed on the ninth or tenth day. I have kept my patients in bed, fed them on a light diet, and kept the bowels regular after the fourth day, allowing the urine to be passed as required. The results, so far, are three complete cures and one failure, the flaps not uniting in this case. This I shall do again shortly; and I saw another case, a few days ago, which I shall be pleased to show to Dr. Tilt either before or at the time of operation.

It is too early to speak of cure, perhaps; and, therefore, I would rather say that the parts are restored, the uterine symptoms relieved, and the patients declare they feel well. It remains to be seen, if they become pregnant, whether the uterine neck will bear the strain of dila-

tation without again giving way. As to acute inflammation of the womb and endometritis in young unmarried women, it is certainly very common; and I have several such under my care at present.

CLINICAL MEMORANDA.

HEART-AFFECTION IN DIPHTHERIA.

NOW that attention is being attracted to this condition, perhaps the following lines may be of some interest. While I was assisting Dr. Lindsay, one of the most careful and accurate of clinical observers, in an extensive country practice in the west of Scotland, he drew my attention to this affection, and wondered why it had never been so prominently brought forward as it deserved to be. What pathological change occurs in the ventricular wall I am not prepared to say, but that some change does occur in certain cases of diphtheria, seems now to be generally credited. Leyden of Berlin found alterations in the muscular substance of such a character, as to justify the opinion that they were inflammatory. These alterations were fatty degeneration of the muscular fibres, with multiplication of the intermuscular nuclei. From such a condition, is it surprising that dilatation of the heart results in some cases? The following cases may be quoted as illustrations. One morning, in February 1881, I was called to attend Mrs. F., a primipara, in her confinement. The labour was an ordinary one, not more tedious than an average case of the kind, but afterwards there was a certain amount of hæmorrhage, sufficient to make it advisable to stay with her for some time. As the pulse was small and irregular, I examined the heart, and detected a murmur over the left ventricle. On inquiry, I found she had never had rheumatic fever, and she attributed the heart-symptoms—such as palpitation, dyspnoea—to an attack of diphtheria a few years before. As this, if true, was a case in point, I asked Dr. Lindsay, who had then attended her, about it. He stated that the heart-affection certainly showed itself during the course of the diphtheria. About the middle of August of last year, diphtheria broke out in a shepherd's family, whom I was then attending. The mother and a little boy, aged 8 years, were affected first, and afterwards another boy, about 11. They all got over the attack, and were able to move about. But about a fortnight after the seeming convalescence, the younger boy complained of dysphagia, particularly of liquids; and all fluids returned by the nose. The voice was nasal, and on asking him to say "ah," the veil of the palate was found to be immovable; the lower extremities were paralysed. The important thing, however, was the detection of a soft apical systolic murmur, which had not existed before in the first days of the illness, as I then had carefully examined the heart and lungs. The contractions of the heart were irregular and tremulous. The pulse was very weak. In spite of treatment with nux vomica, cinchona, and a dietary of wine and milk, about a week after the oncoming of these symptoms, while trying to rise in his mother's arms, he, as the poor woman termed it, went off in a faint and died. As I could not obtain a *post mortem* examination, this is incomplete and unsatisfactory. The murmur might have been due to anæmia, part of the general debility, or even to abnormal innervation of the organ. Reading it, however, in the light of the first case, it is quite plausible that death was the result of acute dilatation.

ROBERT KIRKLAND, M.B., Cheltenham.

THE CAUSATION OF HIGH TEMPERATURES IN TYPHOID FEVER AND THEIR REDUCTION.

As it is a question of first importance how to reduce promptly high temperatures in typhoid fever, I venture to state that further attention to the causation of these morbid temperatures is most likely to reward our investigation of the subject; and, as one step in that direction, I have to record the effect of counter irritation when employed for the relief of local inflammations, either at the epigastrium or various parts of the abdomen, or over the thorax. The reduction of temperature which follows their use is of the most satisfactory kind, as it is of a more permanent character, and impresses me with the opinion that all such local inflammations in typhoid cases are themselves the immediate and the most active causes of high temperatures, and these disturb the brain and produce delirium. Let any one who may differ in opinion from me carefully diagnose the inflammatory condition of the epigastrium—e.g., during the prevalence of delirium—and then treat it with ordinary counter-irritation (emplastrum lyttæ), and judge its effects in twenty-four hours' time; and, if no other organ besides the stomach be inflamed at the same time, I believe he will be agreeably surprised at the amount of relief to the brain as well as the stomach, and will also notice the prompt

reduction of temperature to which I have referred. Of course, I do not suspend the general treatment while this is going on. If, in course of the disease, a further inflammatory action of lungs or abdomen arise, the same treatment will usually produce similar results. In the JOURNAL for October 16th, 1880, will be found my views of the value of the eliminatory treatment in general, which I have practised since the 31st December 1871, or nearly twelve years, with a growing conviction of its value in diminishing the severity and fatality of the disease. The treatment of the epigastrium for typhoid delirium dates from 16th November 1875, or seven years, and has often been employed by me with uniform results; and probably the relative situation of the large ganglia of the sympathetic behind the stomach may explain the mode of action of the counterirritant so directly upon the brain. I shall be glad to learn from any gentleman who may have tested the accuracy of my published statement in October 1880, the results he has met with. I will only add that the diagnosis requires extra care on account of the typhoid condition; but with this, the local inflammatory action can be defined satisfactorily.

GEORGE P. ATKINSON.

HYPERMETROPIC HEADACHE.

THE paper by Dr. Savage, upon the cause of sick-headache, which is published in abstract in the JOURNAL for November 4th, is, I believe, full of exceedingly valuable scientific evidence as to the cause of that malady.

Headache, particularly about the frontal region, is generally accepted by ophthalmic surgeons as having a very direct relation with an over-strained state of an eye, the subject of hypermetropia or hypermetropic astigmatism of one kind or another. Dr. Savage's paper on the connection between optical defects and sick-headache immediately reminds me of certainly one case, in which a person went about boasting that, although he possessed myopic astigmatism, "he did not care to have it corrected". This same individual constantly complained of sick-headache. If one kind of optical defect causes sick-headache, may not another; since myopes are certainly occasionally troubled with ophthalmic headache, particularly when spasm of the ciliary muscle increases their absolute myopia? The use of the term "far-sightedness", used in Dr. Savage's paper to express an abnormal state of the eye, is open to question; since, although perfect distant vision is compatible with various degrees of hypermetropia, yet there is nothing in the term to distinguish between that and the far-sightedness of a natural emmetropic eye; and its use might lead to great confusion. It is not possible to overestimate the value of Dr. Savage's discovery; and it is to be hoped that sick-headache may prove to be as amenable to the correction of an optical defect by glasses as an ordinary hypermetropic headache has hitherto been.

II. BENDELACK HLEWETSON,

Honorary Ophthalmic and Aural Surgeon to the Yorkshire Institution for Infant Deaf-Mutes, Leeds.

THE DIAGNOSIS OF PAGET'S DISEASE OF THE NIPPLE.

I HAVE not yet seen in print any allusion to the fact that this disease may be to some extent counterfeited by syphilis. Some years ago, I met with such a case. A shallow irregular ulceration prevailed over the whole areola and nipple. The patient was a middle-aged married woman, and there was no history of syphilis obtainable, or other indications at the time of its presence. Several months afterwards, however, unmistakable marks of venereal infection appeared. The characteristic red strawberry-like appearance of Paget's disease was entirely absent; and the ulcer healed rapidly under iodoform ointment—a fact quite sufficient of itself to eliminate any suspicion of the former malady.

HERBERT L. SNOW, M.D. Lond., Bayswater.

THE DEATH FROM CHLOROFORM AT THE CARLISLE DISPENSARY.

MR. SHEARER'S case is certainly one of considerable interest, and affords an opportunity for a comparison of his description of the manner in which the chloroform was administered with my own experience, in many cases, of the same nature. I have been very much struck by the fact that the chloroform was not administered in the usual manner, but that the full weight of the liquid was poured into the nostrils, and that the administration was continued until the patient had expired. I have been in the habit of removing the sponge or lint on the first sign of commencing anaesthesia, and have very constantly found the little patient go completely off without any additional interference.

No doubt, the tendency of chloroform is to take itself off from the body by the same channel as it enters—viz., the lungs; but, in Mr. Shearer's case, an obstruction to evaporation presented itself in the mucus found blocking the air-passages, at the bifurcation of the trachea, from the higher portions of which it had probably gradually descended during inhalation. Almost every possible means seem to have been used to avert the sad calamity; but, amongst them, the selection of "direct inflation", before or without inversion, was peculiarly unfortunate; its tendency, of course, being to drive the collection of mucus downward, and eventually to cause almost complete obstruction.

I must say I sympathised deeply with Mr. Shearer, when I read the words "unfortunately, I had no assistance"; but think it a fair opportunity to express my conviction, that (at the present time, when deaths from chloroform seem somewhat frequent, and are certainly tending to prejudice the public mind against its use) the practice of administering anaesthetics single handed, especially for surgical purposes, is to be much deplored.

W. BARRETT ROUE, M.D., M.S.,

Physician to the Bristol Hospital for Sick Children.

PRIMARY ENDOCARDITIS.

I WAS much interested in reading Dr. Harrison's paper on the above subject, and can confirm his conclusions, that acute endocarditis in children is more common than is generally supposed, and that it is a symptom usually of acute rheumatism. Having been taught in the valuable clinics of Dr. Green, at Charing Cross Hospital, that, in children, acute rheumatism, as a rule, never attacked the joints, but generally attacked the heart, and was the cause of acute endocarditis, which frequently ended in chronic valvular disease, I have, during the past five years, observed several cases. During the past winter, my eldest boy, aged four and a-half years, was taken ill with acute febrile symptoms. The temperature was 104.4°; pulse, 160; he was thirsty; his tongue was coated with a cream-coloured fur; he had very sour perspirations; his bowels were constipated; he was very restless and excitable. As he had all the ordinary symptoms of rheumatic fever, I carefully examined the heart, when I found acute endocarditis, there being a soft *bruit*. At once the boy was treated with salicylate of soda, in combination with aconite and opium, with the result that the acute symptoms soon abated, and the patient soon recovered without any valvular lesion. Three months afterwards, the child had another attack, of equal severity, with acute endocarditis. He was treated as before, with equally good results, there being no valvular mischief left. When endocarditis was discovered, his chest was wrapped in flannel rollers, and the heart was not examined until a week after the acute symptoms had left. As a rule, I never examine the state of the heart, as the exposure of the chest I believe to be risky, and certainly no real good can be accomplished. I have met with several cases of chronic valvular disease in children, in whom I have been unable to trace any history of acute rheumatism, which probably had not been discovered.

J. BROWN, L.R.C.P. Lond., Bacup.

THERAPEUTIC MEMORANDA.

SULPHO-CARBOLATE OF SODIUM IN VOMITING.

THE use of the sulpho-carbolate of sodium in flatulent dyspepsia is well known. It is not, perhaps, so generally known as a remedy for the vomiting of pregnancy. I have used it in this affection for several years, and find it rarely fails to give some relief. In some cases the benefit is extremely marked. I give it in doses of $\frac{1}{2}$ or $\frac{1}{4}$ grain in half an ounce of water. Though sometimes directed to be continued in the vomiting of displaced or other abnormal conditions of the uterus, it is less uniformly so than in pregnancy, probably because flatulence is a less constant factor in the former cases. Where deep nerve disturbance exists, we must trust to more powerful remedies, hypodermic morphia or atropine, or surgical procedures. The drug will, perhaps, be useful against sea-sickness, taken every two hours from the time of sailing. In one case—the only one tried—it appeared to have a good effect.

PHILIP MIALI.

BLISTERING IN RHEUMATISM.

WHEN I began practice, thirty-two years ago, the theory on rheumatismus acutus articulorum was very vague, and has remained so until quite lately. Consequently, a great number of differently acting remedies were recommended, e.g., bleeding, nitrate of soda and potash,

alkalies, tartar emetic, mercury, colchicum, narcotics, quinine, diaphoretics, etc., blisters in abundance not to be forgotten. This does not speak much for our former knowledge regarding the character of rheumatic fever. As new researches have detected micro-organisms in the affected joints and in the kidneys, rheumatic fever belongs certainly to the class of zymotic diseases; and this, I believe, explains somewhat the effects of salicylic and carbolic acid.

What good can blisters do against micro-organisms? I have used blisters over and over again with perseverance; and my result was, that the poor patient suffered a great deal more with blisters than without them.

N. GEISSE, M.D., Ems, Germany.

REPORTS

OF

HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

ST. MARY'S HOSPITAL.

CASE OF OPERATION FOR VESICO-VAGINAL FISTULA OF ELEVEN YEARS'
STANDING: TWENTY-TWO PREVIOUS OPERATIONS: RECOVERY.

(Under the care of Mr. A. J. PEPPER.)

History.—J. J., aged 35, was delivered of a still-born child after a severe and protracted labour, in which she was attended by a midwife. For the last eleven years, she had continually suffered from incontinence of urine, by reason of a vesico-vaginal fistula, which dated from her confinement. She stated that she had been subjected to cauterisation, and the formal operation, altogether twenty-two times.

Present State.—June 1879. A fistulous aperture formed a communication between the vagina and the bladder far back on the right of the median line, and from this urine was continually escaping. The exact size of the opening was not ascertained, but a No. 4 catheter passed quite readily. For some distance around, the wall of the vagina was the seat of dense cicatricial tissue, due, no doubt, in part to the operations that had been performed. Her general health was good.

Treatment.—The bowels having been evacuated by a castor-oil purge overnight, and a copious enema the following morning, the patient was anaesthetised, placed on her back, and the fistula exposed to view by a Sims's duck-bill speculum. The edges were then pared to the extent of one-third of an inch, the mucous membrane of the bladder not being involved in the incisions; as there was great rigidity of the tissues around, an incision was made at each extremity of the aperture, so as to allow a better approximation of the freshened edges. Four silver sutures were then passed, care being taken to enter them at some distance from the margin of the wound, in order to secure a firm hold when tightened. A half-grain morphia suppository was introduced into the rectum, and a sigmoid catheter (to the end of which an India-rubber tube was attached to conduct the urine into a vessel containing carbolic water) was placed in the bladder. The patient was ordered to lie continually on her left side; opium to be given at stated intervals; and a liquid diet only to be taken. The catheter was ordered to be frequently cleaned, and to be dipped in carbolic oil before being replaced, so as to lessen the chances of cystitis.

Progress of the Case.—No urine escaped from the fistula after the operation. The catheter was dispensed with on the ninth day, and the sutures removed on the sixteenth, when the wound had entirely healed and a strong puckered cicatrix obtained. She left the hospital a month after the operation, and could then retain her urine for three hours at a time.

REMARKS BY MR. PEPPER.—Acting on the principle forcibly laid down by the late Mr. Hilton, of securing, as far as possible, physiological and surgical rest, the after-treatment was directed to these ends. The bowel was kept perfectly quiet by opium and by restricting the diet (no solid food being given for several days), and thus the contraction of the rectum—one source of failure in the operation which I believe to be greatly underrated—avoided. In like manner, the bladder was relieved of its functions by the inlying catheter. The fistula was on the right side, and for this reason the patient was kept recumbent on the left, so as to avoid, as much as possible, the contact of urine with the wound, although I believe that anxiety is to be felt more from the pressure of the fluid than from any irritation it might cause from its chemical nature. The silver sutures I infinitely prefer to silk, believing them to maintain a more perfect apposition of the edges of the wound, and to give a firmer support. One wire, which had remained imbedded in the tissues from a previous operation, was quite bright

when removed at the last. The patient was seen again on December 8th, 1882, three years and a half after the operation. She had quite recovered control over her bladder, being able to retain its contents for seven consecutive hours. For permission to report this case, I am indebted to the kindness of Mr. Haynes Walton and Mr. Walter Pye, on whose patient it was that I operated, whilst doing temporary duty for them.

BOOTLE BOROUGH HOSPITAL AND DISPENSARY.

RETENTION OF URINE: SPONTANEOUS RUPTURE OF BLADDER:

DEATH: NECROPSY.

(Under the care of Dr. G. C. WALKER.)

[Reported by CHAS. A. McLEAN, M.D., Resident Medical Officer.]

L. B., aged 40, married, fireman on board the Cunard steamship *Pavonia*, was admitted on October 18th, 1882, at 5.45 A.M., suffering from retention of urine. The patient said that he had been a man of temperate habits (which was corroborated by his wife and relatives), that he had never had venereal disease of any kind (no gonorrhœa), and had not sustained any injury whatever, at or about the time; he complained of the desire to pass urine, and of not being able to do so. He had always enjoyed good health, and never had any interference with micturition before. His wife had had five children; three were living and healthy, two died in infancy, and she had had two miscarriages.

On the night preceding admission, he went to bed in his usual good health. Between twelve and one o'clock in the morning, he suddenly awoke wanting to pass urine, and complained of intense pain all over "the privates". A medical man was summoned, who passed an instrument (gum-elastic catheter, about size No. 8); very little or no urine issuing, but only blood in considerable quantity ("about one pint"). He was brought to this hospital by the medical man about 5.45 A.M., and was then complaining of excruciating pain in the abdomen, nates, and penis. The abdomen was found to be distended, and dull on percussion, at and about the neighbourhood of the bladder, and very tender. Externally, there was ecchymosis along the raphe of the perinæum and urethra. He was ordered a warm bath, linseed and mustard poultices to the abdomen, and a quarter of a grain of morphia subcutaneously; this gave him temporary relief. About 11 A.M. (on the morning of admission), he was seen by Dr. Walker, who found him in a critical condition. Local sedative applications (belladonna and glycerine) and subcutaneous injections of morphia were ordered him. During part of the day, he passed about thirty ounces of blood, mostly clotted, and with little admixture of urine. Astringents were given internally. The pulse was 80, regular, and full. The temperature was 98.5°. He took milk and beef-tea and lemonade. He complained of thirst; his appetite was very poor; the tongue was foul, large, and moist, and the bowels costive; an enema of soap-and-water was ordered. Examination *per rectum* revealed no enlargement of the prostate. Mr. Reginald Harrison of Liverpool (Consulting Surgeon to this hospital) was called in consultation on the following day (October 19th). He diagnosed the case as one of rupture of the bladder, and advised that an India-rubber catheter of about No. 8 size should be passed into the bladder, retained there, and the bladder be washed out two or three times daily with weak carbolic lotion (1-100), and the local applications be continued. An erythematous rash began to show itself over the right iliac region, extending halfway down the right thigh.

October 19th, 9 P.M. The pulse was 100, the temperature 98.5°, and he said he felt better, but had not passed any urine.

October 20th, 12.20 A.M. He complained of great pain in the region of the stomach, vomited a good deal, and bore a very anxious expression of countenance. The pulse was 134, quick, regular, and full. The temperature was 100.2°. At 1.15 A.M., he felt very bad; the pulse was 140, very quick and feeble, but regular; he complained of a clammy sweat. He was ordered half a grain of morphia subcutaneously, lime-water and brandy, and ice to suck. Vomiting and retching still continued.—10.30 A.M. He had passed a pretty good night. Sickness was still persistent, but he said he felt a little better. The pulse was weak, thready, quick (144), regular, and compressible. The temperature was 98.5°; the respirations 44. Tenderness over the abdomen was more marked, as well as the ecchymosis about the perinæum and urethra. The erythematous rash on the right flank had extended nearly as far as the axilla. The bladder was washed out with weak carbolic lotion, but only blood issued, mostly clotted. Nothing was retained in the stomach; the patient never rallied, and died at 7.10 P.M.

NECROPSY, October 21st (1.30 P.M.).—Rigor mortis was well marked; decomposition was advanced. There was blood-stained extravasation

in the rectus muscle and the cellular tissue outside the peritoneum. The bladder was quite empty; the extravasation extended below the peritoneum and over the muscles of the back. A cavity, about the size of an orange, was found behind the symphysis pubis, filled with blood-clots. Extravasation of blood was also found in all the pelvic cellular tissue. There was a rupture, two inches in length, in the anterior wall of the bladder, commencing an inch from its neck, and extending to two inches from its summit. The urethra was normal, with the exception of some slight ecchymosis beneath the mucous membrane of the prostatic portion.

REMARKS BY DR. MCLEAN.—The peculiar features of interest in this case are to be found in the history as stated by the patient himself—namely, that he had always been a most temperate man, never had venereal disease, and, what is most important of all, had never sustained any injury whatever to account for his condition, and was in his usual state of good health previously to his being taken ill. There were no external evidences of injury on the abdomen.

CITY OF DUBLIN HOSPITAL.

(Cases recently under the care of Mr. W. J. WHEELER, M.D.) —

[For the notes of these cases we are indebted to Mr. A. H. BENSON.]

Lateral Lithotomy.—John L., aged 8, residing in King's County, was admitted for stone in the bladder. For the previous six months, he had suffered from pain in the hypogastric region, and frequent and difficult micturition; he frequently pulled at his prepucce, was very irritable, and suffered from want of rest. His parents stated that he had lost much flesh, and was rapidly emaciating. The presence of a stone was readily verified by the introduction of a small sound. The patient having been put under the influence of ether, the lateral operation of lithotomy was performed; the bladder was quickly reached, and the stone extracted with the first gush of urine. A *cannule à chemise* was then introduced, the patient removed to bed, and an anodyne draught administered. The urine passed freely through the cannula. On the second day it became plugged withropy mucus; the bladder was then washed out with tepid water through the cannula. On the eleventh day after the operation, he passed his urine through the urethra, a few drops only coming through the wound. He was discharged five weeks after the operation, perfectly recovered.

The shell was composed of carbonate of lime; the nucleus consisted of phosphate of lime, with traces of phosphate of magnesia, lithic acid, and a rather large amount of carbonate of lime.

Large Lipoma of Left Arm: Removal: Ligature of Brachial Arteries: Phlebitis: Recovery.—B. M., aged 14, was admitted on November 26th, 1878, suffering from a large lipomatous tumour of the left arm, extending from the acromion process to the internal condyle, and situated on the front and inner aspect of the limb. From the time she was one year old, it is stated, the tumour commenced to grow, and continued gradually to increase. On December 3rd, the tumour was removed by an elliptical incision; it was found to lie beneath the brachial aponeurosis, with the brachial artery closely applied; the artery was wounded during the operation, and ligatured above and below the wound. The parts were brought together by means of catgut sutures. The patient progressed favourably till the third day, when she had two distinct rigors. The temperature rose to 104.8° in the morning, and 105.6° in the evening. There was great tenderness along the course of the cephalic vein. All dressings were removed, and warm fomentations applied over the entire limb, with oil silk externally; while quinine and salicylic acid were administered internally, and stimulants were liberally given. On the seventh day after the operation, a slight fulness in the axilla was observed; and, on an incision being made, about an ounce of pus escaped. From this date, the patient gradually improved, and she was discharged perfectly recovered in January 1879.

The tumour weighed three pounds four ounces, and was sixteen inches in circumference; a portion of the internal cutaneous nerve was attached to, and flattened on, the tumour.

THE Volta Prize of fifty thousand francs, instituted by a decree of June 11th, 1882, will be awarded in 1887 to the author of a discovery which will render electricity effective and economical in one of the following applications: As a source of heat, of light, of chemical action, mechanical power, and as a means of transmitting despatches, or treating invalids. Physicists of all nations are admitted to the competition, which will remain open until June 30th, 1887. A commission, nominated by the Minister of Public Instruction, will be charged to examine the specified discovery. The report of the commission will be published in the *Journal Officiel* of the Government.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, DECEMBER 12TH, 1882.

JOHN MARSHALL, F.R.S., President, in the Chair.

On Resection of Portions of Intestine.—By FREDERICK TREVES, F.R.C.S.—The author said that portions of gut had been excised for various diseased conditions from all parts of the tube from the pylorus to the rectum. Illustrative cases of the various operations were given: among these one of the most remarkable was Kœberle's case, who excised two metres of the small intestine for multiple stricture with perfect success. In properly selected cases, resection would appear to be indicated in some forms of intussusception when all other means had failed, and when, on opening the abdomen, the invagination was found to be irreducible; in gangrene of gut after strangulated herniæ, in gangrene after some forms of internal strangulation, in non-malignant strictures of the small and large intestine, and in malignant strictures that are yet local. Other things being equal, the mortality after resection would appear to depend more upon faults in the details of the operation than upon any other single cause. There were two procedures; in one an artificial anus was established after resection, in the other the two ends of the divided gut were united by sutures, and the mass returned to the abdomen. The former method had been the more successful. There were many objections, however, to artificial anus, especially of the small intestine, and there appeared to be no reason why the latter method should not prove the less fatal, if the technical defects of the procedure were remedied. The operation of uniting the bowel after resection presented these difficulties. It was not easy to maintain the two ends of the gut in accurate apposition while the sutures were being introduced. The sutures were apt to be irregular. The gut above the obstruction was usually much dilated, while that below was shrunken, and it had been found almost impossible to unite well these unequal parts. One of the most common causes of death, therefore, after the operation, was escape of intestinal contents at the suture line. There was no reason, however, why the escape should not be as surely prevented as in cases of pyloric resection. To meet some of the difficulties of the operation, Mr. Treves had introduced the following appliance. The gut, above the part to be resected, was secured by a special clamp lined with India-rubber, to avoid undue compression of the bowel. The gut below was secured in like manner, and the obstructed or gangrenous part was excised. The corresponding ends of the two clamps were then united by transverse bars, so that they formed with the clamps a rigid square frame. By means of this frame, the two divided ends could be very accurately approximated, and could be firmly retained in position while the sutures were being applied. As it is difficult to apply sutures to collapsed gut, a sausage-shaped India-rubber bag about three inches long was used, that could be distended to four or five times its natural size through a small tube inserted in the centre of its long axis. The bag was sufficiently distended to make it firm, and one end was introduced into the upper segment of the divided gut, while the other was introduced into the lower segment. The tube through which the bag was dilated thus occupied the suture line. After being introduced, the bag was dilated to a good size. By this means, a firm plug was introduced into the gut so as to form a substantial basis over which to apply the sutures. Moreover, by increasing the degree of distension of the bag, all inequalities in calibre between the two segments of the bowel could be overcome. Before the last sutures were applied, the bag was emptied of air and was withdrawn, it being capable, in its shrunken state, of being drawn through a hole of the dimensions of a No. 12 catheter. If the sutures were properly applied—i.e., if the mucous membrane were not included in the stitch—there should be no danger of wounding the bag. At least fifteen or twenty sutures should be used. By means of this appliance, it was possible to excise portions of the colon through an incision in the middle line. In cases of stricture of the colon it was often impossible to diagnose the exact seat of the obstruction, and under such circumstances the abdomen had been several times opened in the middle line, and, the obstruction having been found, a second operation had been performed in one or other loin. Resection of the gut from the loin presented many difficulties, and could scarcely be performed without establishing an artificial anus. The cases at present published of resection of parts of the colon were detailed. If colectomy were always performed through the middle

line it would—in cases of doubtful diagnosis at least—render one operation, only, necessary. The greatest fatality had been found in those cases of resection of the colon where the abdomen was first opened in the middle line, and the gut subsequently removed from the loin through another incision. The author lately resected two inches of gut from the middle of the descending colon for epitheliomatous stricture through an incision in the middle line. The man had had symptoms of obstruction for some months, and was *in extremis* when the operation was performed. The divided ends of the bowel were united by means of the appliance described, and the gut returned into the abdomen. He died in twelve hours. At the *post mortem* examination, the gut at the suture line was found fully distended with fluid fecal matter, yet not the least trace of that matter had escaped from the intestine. The case served to demonstrate that portions of the colon could be resected through the middle line, and that the gut might be so united as to prevent all escape of contents.—Mr. BRYANT congratulated Mr. Treves upon his paper, and upon the interesting nature of the case on which it was founded; he felt, however, inclined to believe that perhaps lumbar colectomy would have been the preferable operation. Since the obstruction had evidently been somewhere in the neighbourhood of the colonic flexure, he thought that Mr. Treves would have come upon the diseased gut very easily, by making an incision in the loin; which had this great advantage, that the peritoneum was not interfered with, so that it was a trifling matter, when compared with the mesial incision. Further, the lumbar incision gave more room than was supposed. Mr. Bryant thought that the quantity of gut which was under the control of the surgeon, was greater than he had believed; five or six inches could with ease thus be reached and examined. The instrument shown by Mr. Treves was most ingenious, and if the surgeon had to do with intestine which was not diseased, would do no serious injury; but in cases of obstruction due either to intussusception, or to internal hernia, or to volvulus, where large portions of the bowel had to be dealt with, and, perhaps, where the upper part of the intestine was widely dilated, gorged with blood, and with effusion into its coats, while, below the constricting or strangulating band, the gut was small and collapsed, if commencing obstruction in the small intestine could be diagnosed, the operation might be hopefully undertaken; but such a diagnosis could not be made; even with obstruction of the large intestine the diagnosis, though easier, was still exceedingly difficult. In either case, before the diagnosis could, under existing circumstances, be made, the intestine above the stricture would have become enormously distended, and so damaged; death, in fact, was usually due to peritonitis starting, not at the seat of obstruction, but above, where the bowel was over-distended, and perhaps fissured. In the small intestine, not healthy, it must be remembered when the operation was done, the cicatrix left by it was, he believed, sure to contract. In cases of intussusception where recovery had occurred from sloughing of bowel, the patients always eventually died of stricture of the gut. Mr. Bryant felt that, with regard to the large intestine, the difficulties in the way of the operation were less, but he was still inclined to think that lumbar colectomy, with the establishment of an artificial anus, was the safer, and on the whole, the better operation. In dealing, too, with large lengths of the intestine, it would be exceedingly difficult to manage the mesentery in the manner proposed by Mr. Treves.—Mr. A. E. BARKER believed that there were no good grounds for believing that there must necessarily be contraction at the site of the operation in the gut; if the wound were kept free from decomposition, there might be no contraction at all. Contraction, after cure of intussusception by sloughing, was not so invariable as Mr. Bryant supposed; one case recorded by Dr. Peacock in the *Transactions of the Pathological Society*, survived for many years without presenting any signs of contraction of the gut.—Mr. HOWARD MARSH thought that death in Mr. Treves's case was due to the operation being undertaken too late. He looked forward to a time when the diagnosis could be made earlier. Surgeons had objected to operations for strangulated hernia, because, for the same reason, death had frequently resulted, but now no surgeon hesitated to operate in such cases. The case upon which he had operated was a woman in whom obstruction occurred suddenly. He opened the abdomen in the middle line, and removed a narrow stricture of the colon; the patient recovered with an artificial anus, but he now thought that it would have been better to have removed the whole of the disease, and then sutured the two ends of the divided gut together. Mr. Marsh did not think that it was safe to rely too entirely upon the dictum quoted by Mr. Bryant, that, in people over forty or fifty years of age, obstruction was always due to disease of the large intestine, and that, therefore, colotomy was the proper operation to perform. He had recently seen three cases which bore on this point. In one, a middle-aged man, apparently in perfect health, was suddenly seized with signs of complete

obstruction; colotomy was done without relief, and the *post mortem* examination showed that the acute peritonitis of which the patient died was due to the rupture of an abscess in the vermiform appendix. In another case, symptoms of obstruction suddenly set in in an elderly man; after due consideration, it was decided not to perform any operation; at the necropsy it was found that two gall-stones had become impacted at the ileo-cæcal valve, and had entirely obstructed the aperture. In a third case, colotomy was performed on the right side, and the obstruction turned out to be due to ulceration of the lowest part of the ileum for about six inches. The difficulty of making a diagnosis of the site of the obstruction was very great, but he hoped that further experience would throw light on this point, and he believed that surgeons would come to make more use of the mesial incision as an exploratory operation. Meanwhile, he was constrained to believe that Mr. Bryant had exaggerated both the difficulty of the operation and the dangers to be feared in the after treatment.—Mr. HARRISON CRIPPS thought that Mr. Treves had demonstrated one very important point, namely, the possibility of uniting the two cut ends of the intestine in such a way as to prevent immediate extravasation. But in the case recorded, the patient had died before the period at which extravasation was likely to occur. He had found that, after excision of the rectum for malignant disease (generally cylindrical epithelioma) recurrence was comparatively unfrequent and remote; and since the disease, in most of these cases of cancer of the large bowel higher up, were of the same nature, it was therefore most desirable that some operation to allow of thorough extirpation of the growth should be devised. Looking at the cases at present published, he thought that the establishment of an artificial anus, after excision of the disease, was the most desirable operation to undertake. After excision of the rectum, the rectum always contracted, unless this were carefully obviated by the use of bougies; and he was therefore inclined to think that contraction would also occur in the colon and small intestine.—Mr. MACNAMARA pointed out that median section of the abdomen might be made without much risk; he had seen a number of the cases where wounds of the intestine had recovered without dangerous constriction. If the operation of excision and suture of the intestine could be performed without allowing fecal extravasation, then it appeared to be a justifiable operation. As to subsequent contraction of the cicatrix, he did not think there was any sufficient grounds for believing that this would occur to any serious extent.—The PRESIDENT said that the subject raised by Mr. Treves was one of great interest, and had been one to which he had himself long given much attention. He hoped that surgeons were upon the verge of treating these diseases in a more and more satisfactory way; Mr. Treves was making an effort, in the dark perhaps, but still an effort, to diminish mortality by bringing ingenuity into play in the construction of instruments and the devising of methods of operating. The instrument, though simple and ingenious, did not entirely obviate the difficulty of suturing the distended upper part to the collapsed lower part of the gut. Perhaps electricity might eventually be of use by producing a contraction of the one part and dilatation of the other part of the gut by acting through the splanchnic nerve. Meanwhile, Mr. Treves had materially improved on the forms of clamp previously used. In attempting to suture the collapsed to the distended gut, it was necessary in arranging the stitches to put them much more closely together in the collapsed gut—to put them, for instance, about one-eighth of an inch apart in the latter, and about one-quarter of an inch apart in the distended gut. With regard to the superiority of the operation for artificial anus, as an operation it was no doubt the safer, but a better operation was sought; we ought to attempt to advance, and there seemed to be sufficient encouragement in cases already on record to lead us to go on. The danger of contraction ought not to be allowed to become a bugbear; he did not think that we were compelled to look for contraction; the contraction which occurred after excision of the rectum was not a parallel, for there healing took place by granulation, and thus was necessarily followed by contraction. In a case of chronic obstruction, he would prefer to go to the lumbar region; in acute obstruction, the matter was quite different. In his own case, he had attempted to draw the diseased bowel through the median incision, but had failed, owing to the diseased bowel being situated in the lower part of the abdomen. At present, he must continue, individually, to prefer to operate from the loin, but was quite ready to be convinced by sufficient evidence that the mesial incision was the better operation.—Mr. TREVES, in reply, referred, first, to the criticisms made by Mr. Bryant. In the case on which his paper was founded, there was no evidence at all to point to the descending colon as the seat of the disease; on the contrary, it had been supposed to be a contraction of the small intestine. When the clamp was on, the gut could be spread out, large to small. The operation was not so dangerous as had been supposed, and the treatment of the mesentery was not a fatal obstacle to

the removal of large portions of intestine; for Kœberle had excised two metres of the intestine with its mesentery; only about twenty-four ligatures were required, and the patient made a good recovery. Then, too, with regard to the danger arising from the inflamed state of the gut, Mr. Lister had the most internal strangulated hernia as a condition insusceptible of relief by suture; but, as a matter of statistics, the most successful cases of excision of the intestine were in cases of strangulated hernia. Stricture of the intestine, after cure of intussusception by sloughing, was rare; he believed it occurred only in about 3 or 4 per cent. No doubt it was exceedingly difficult to suture the collapsed end of the gut to the distended end; but this was partly overcome by his clamp, which allowed of the gut being spread out on it to a certain extent; and the difficulty was still further diminished by the indiarubber bag which he had devised. By using this bag, he had, in the *post mortem* room, found no difficulty in so distending the small intestine that it could be sutured to the large. He had used this bag in the case described in his paper, and had put in twenty-five sutures. With regard to Mr. Cripps's objection, that extravasation of feces would probably occur at a later stage of the case, he would instance the cases of excision of the pylorus; here, if anywhere, extravasation might be expected to occur, but experience showed that this danger might be avoided by care in applying a sufficient number of sutures. Finally, most of the objections urged against the operation he proposed applied only to stricture of the large intestine. No operation at present in use afforded any hope of relief in stricture of the small intestine; the condition was entirely hopeless, unless it could be relieved by some such operation as he now proposed.

Mr. Treves's paper was illustrated by diagrams; by the peculiar form of double clamp he had used, by the elastic bags, by a piece of intestine distended by one of the elastic bags, and by the stricture excised, and the sutured gut.

A number of preparations of epitheliomatous disease of the bowel, from the museums of St. Thomas's and University College Hospitals, were, by permission of the authorities of these hospitals, shown to the Society.

ABDOMINAL SURGERY.—Mr. MEREDITH showed a collection of instruments used in abdominal surgery. Mr. LUND (Manchester) showed a variety of instruments for use in cases of artificial anus.

CLINICAL SOCIETY OF LONDON.

FRIDAY, DECEMBER 8TH.

JOSEPH LISTER, D.C.L., F.R.C.S., F.R.S., President, in the Chair.

Living Specimens.—Dr. COXWELL exhibited a child having symptoms resembling those of myxœdema.—Dr. T. H. GREEN showed a man with pseudo-hypertrophic paralysis.

Three Cases of Intussusception in Infants treated by Abdominal Section.—Mr. RICKMAN J. GODLEE read notes of three cases. The first was that of a child aged nineteen months, who was admitted into University College Hospital with well-marked symptoms of intussusception, from which it had been suffering for four days. The bowel protruded at the anus. The child was very ill and weak, and it was doubtful whether it was justifiable to perform any operation. It was not thought wise to spend much time on attempts at inflation, and abdominal section was performed without much delay. Antiseptic precautions were adopted throughout; the child being as far as possible protected from the chilling influence of the spray by the use of a rubber bag, and wrapping up the greater part of the body in a warm blanket. No great difficulty was experienced in finding the point of involution, nor in reducing the intussuscepted part; the wound was secured as in ovariectomy, and a dressing of iodoform wool was applied and secured by a flannel roller. The temperature rose the day after the operation to 105°, but soon fell to about 100°. It was necessary to give small quantities of brandy after the operation, and some few days minute doses of laudanum were given to allay restlessness and a slight diarrhoea which ensued. A little chloroform was used during the course of the sutures; but the wound healed in about a week, and the child had completely closed, and was in perfect health. CASE II was that of a somewhat older child, who had been seized with sudden pain two days before admission. The symptoms were clear; and a diagnosis of intussusception was made from the report of the umbilicus, easily confirmed by the examination of the abdomen. In the intervals between the attacks of pain, the child was in good health. The intussusception was reduced, and the tumour could be easily felt, and it was thought that it diminished under manipulation; but, as a considerable mass remained, the abdominal section was performed as in

the previous case, and reduction was effected by grasping the end of the ileum, and drawing it toward the wound. Next morning, the child seemed pretty well; but peritonitis set in rapidly, and death occurred the following night. The spray used in this case was remarkably small. At the necropsy, the last two inches of the ileum and the first two of the cæcum were found much congested and thickened, and some slight ulceration had occurred in the ileum; the rest of the intestines were almost empty. There were marked appearances of peritonitis. CASE III. A child, aged fourteen weeks, was admitted into the North-Eastern Hospital for Children, with symptoms of intussusception that had lasted several days. The child was very ill, and the abdomen much distended and tender. The bowels protruded at the anus. Abdominal section was performed. It was very difficult to find the point of involution, which was seated deeply in the splenic region, and correspondingly difficult to effect the reduction. After about four inches had been drawn out, the cæcum and vermiform appendix appeared; and, thinking that the reduction was complete, Mr. Godlee drew the cæcum towards the iliac fossa, and closed the wound in the abdominal wall. The child never rallied, but died eight hours after the operation. At the necropsy, it was found that seven inches of large intestine still remained unreduced. It was clear that the involution had commenced, not as is usually the case, at the ileo-cæcal valve, but at some point in the course of the transverse or perhaps the ascending colon. Some sloughing had already occurred in the cæcum. Mr. Godlee pointed out how easily such a mistake as that which he made in the last case might occur, and the manner in which it might be avoided. He did not feel discouraged by the result of the last two cases; but, whenever the gut protruded at the anus, he would at once proceed to the operation, or at all events would not waste much time in attempting inflation. On the other hand, in cases such as the second recorded, he would give inflation and injection a good trial, since those were the cases most likely to be cured by this proceeding, and they were in a condition better able to bear the exhausting results which it caused; and, moreover, it was clear that the danger of peritonitis was a real one, even if the operation were carried out antiseptically.

A Case of Acute Intussusception.—Mr. GEORGE BROWN gave particulars of this case. The patient, a boy, aged two years and nine months, an active and robust little fellow, was taken suddenly ill about an hour after a hearty breakfast, on the morning of April 14th, 1882, with severe abdominal pains, followed by sickness and constant desire to go to stool. His bowels had acted naturally in the morning, and up to the sudden attack he was apparently in excellent health. Mr. Brown saw the patient within an hour of the onset of the symptoms, and found him on the sofa crying and writhing in agony, and ordered hot fomentations to be applied to the abdomen, and two minute doses of liquor opii sedativus to be taken every hour. The symptoms, however, continued very severe the whole day, and towards night blood, mixed with mucus, was voided from the bowels in considerable quantity. This pointed almost conclusively to the nature of the case, and the diagnosis was confirmed on the following morning, by which time the invaginated intestine could be felt in the rectum. The abdomen was much distended, and there was a large sausage-shaped tumour in the left inguinal and lumbar regions. The case being one of extreme gravity, Mr. Brown suggested the calling in of a consultant. Dr. Cholmeley saw the patient on the 15th, and recommended enemata and insufflation, with the internal administration every hour of a full dose of henbane, to be tried before resorting to an operation. The henbane, after a few doses, had a very soothing effect, but the enemata and insufflation only seemed to aggravate the symptoms, causing more straining and some signs of collapse. On the next day, treatment being found unavailing, the parents consented to an operation, although, from the severity of the symptoms and the semi-collapsed condition of the patient, success seemed almost hopeless. Assisted by Mr. F. H. Hume and Mr. J. B. Cook—chloroform having been administered—Mr. Brown performed abdominal section, making the incision just at the inner margin of the tumour, about two-and-a-half inches to the left of the middle line. After considerable difficulty the point of invagination was found, but all attempts at releasing the incarcerated gut by the usual methods failed. After the patient had been under chloroform about an hour it was decided to discontinue further attempts at reduction. It was then found impossible to return the portion of intestine which had been drawn through the incision to the abdominal cavity, in consequence of extreme distension with gas. As pricking with needles seemed to cause no diminution in bulk, it was deemed advisable to make a second incision in the descending colon to release the compressed and twisted matter (if any). This procedure at once revealed the cause of the failure to release the invaginated bowel. The inflammatory action had been so severe as to cause firm

adhesion of the serous membrane of the colon and that of the invaginated small intestine. The latter was also of a very dark colour. The bowel was then returned to the abdominal cavity, and the wound closed, except a small portion which was left, as in the operation for artificial anus. The child recovered from the immediate effects of the operation better than could have been expected, but later in the evening severe retching and vomiting ensued, which speedily resulted in collapse, and death took place about six hours after the operation. Mr. Brown said the chief features of the case were the rapid and acute character of the symptoms, and the fact that, although only about fifty-two hours had elapsed from the onset of the attack to the performance of the operation, firm adhesion of the intestinal surfaces had taken place. In any similar case he would have great confidence, supposing milder measures failed, in recommending the performance of the operation as soon as possible after the true nature of the case had been recognised. In future he should select the middle line for section, as offering greater advantages for manipulation than that selected in the present case. — Mr. BRYANT congratulated Mr. Godlee for acting on the courage of his opinion, and operating. The cases supported the view that early operation was called for, though valuable time was possibly lost in one case. In all three cases Mr. Godlee had been able to withdraw the intussuscepted bowel from the colon, and he was quite right in doing what he had done. Successes in these cases were not frequent when the operation was delayed to the later stages of the illness. The cases were somewhat analogous to those of hernia; and just as the value of taxis in an early stage of that disease was great, whilst in later stages, when the bowel was inflamed, taxis was less valuable, and was even sometimes not justifiable, so in the early stages of intussusception, mild measures, such as inflation *per anum*, were often of great service, but in a later stage might be injurious; and success became almost hopeless from any other treatment than operation. It was true that, as if by accident, cases even then recovered, as when there was sloughing and discharge of the invaginated bowel; but this was a successful result which no surgeon would care to expect. As to the operation itself, Mr. Godlee was able easily to draw out the invaginated portions of the intestine; his success in this respect was unusual. Generally, there was difficulty in pulling it out, as in Mr. Brown's case; this *contretemps* produced a surgical difficulty which no one could desire to face. Mr. Brown's little patient was, however, almost moribund before the operation, and it probably gave him no worse chance of life. — Mr. MARSH thought the cases of success were so rare, that Mr. Godlee was to be congratulated on the successful result in his first case. It was in an infant, it must be remarked, and it showed that such an operation might be successful even at that age. The difficulty in intussusception appeared to him to be mechanical. At first, mild measures might be of use; later on, nothing but operation was of service. There were at present very few successful cases on record. But that was the history of other operations when they had been first achieved, though afterwards greater experience had rendered them very useful. As Dr. Hilton Fagge had observed, the occurrence of hæmorrhage *per anum* indicated that there was much strangulation of the bowel, but it also indicated that the circulation was not quite arrested in it; and, therefore, it showed that something should be done at once. The period at which strangulation came on was very variable, but the period during which the symptoms of strangulation had been present was the important point. In a child aged seven months, upon whom some years ago he had performed successful abdominal section, the intussusception had existed for a fortnight, but strangulation for twelve hours only. He thought these operations should be done early. Inflation might be tried at once, and if it proved unsuccessful, then the operation should be performed; just as in hernia when taxis failed. The severity of any operation should not deter the surgeon from doing it, if it was the only course likely to rescue the patient from death. Very few of these cases recovered, unless an operation was performed, except by accident, as it were. If there were difficulty in pulling out the invaginated intestine, it should be pushed up from below as recommended by Mr. Jonathan Hutchinson. — Dr. F. TAYLOR said that, in three cases of intussusception seen by him last year, recovery had taken place in two after inflation, and yet the cases had each existed from two to five days. The severity of the symptoms in the successful cases was not marked; there was very little distension of the abdomen, and the children were not very bad. In the unsuccessful case, the symptoms were more rapid and acute, and inflation was attempted, with the result that the tumour was reduced from the size of an egg to that of a hazelnut, and the tumour was driven round from the left side of the abdomen to the right side near the ileo-cæcal valve. The tumour subsequently increased in size, and inflation was again attempted, but unsuccessfully,

and the child died from collapse three hours afterwards. At the *post mortem* examination the bowel was forced out by water, but was found to have a crack in it. The operation, when necessary, ought to be done at an early stage. — Dr. MAHOMED said that in a patient of his who had disease of the abdomen, probably intussusception, a portion of intestine five inches long was passed. He inquired if it would have been proper to cut down upon the bowel, and remove it. If so, that might be done in cases of acute intussusception; the whole length of implicated bowel might be taken away, and the remaining ends united in cases which otherwise seemed to be quite hopeless. Would surgeons countenance such a procedure? — Mr. HOWSE could not help recognising that cases of intussusception were very serious. In four cases since 1876 inflation had been tried by him unsuccessfully, and ventral section then performed. In all four cases the invaginated bowel could not be even then returned, although Mr. Hutchinson's suggestion of pushing back the intestine from below had been tried. In two cases, Mr. Howse had then excised the ileo-cæcal valve, joining the cut ends, but without success. In performing the operation, one often came at last to a part of the bowel which was adherent to that unsheathing it, and a little escape of feculent matter was apt to occur, with almost certain death if it ran into the peritoneum. To prevent this calamity, a thin sheet of rubber material might be used, through a hole in which the whole portion of the bowel being operated upon might be passed during the whole time of its withdrawal from the abdomen. As to the junction of the cut ends of the bowel, he had found it difficult to withdraw the intestine sufficiently to enable him to see it well. In cases where the bowel passed through the anus, an Italian surgeon, not recognising its nature, had seized and cut it off with scissors; he then found he had cut off the ileo-cæcal valve. That patient had recovered. With this bit of experience before him, Mr. Howse would advise that in such cases the bowel should be seized, and kept down by pins passed through it, and then cut off below the pins. — Dr. ANDREW CLARK thought if surgeons would keep a careful record of temperature from the beginning to the end of these cases, particularly throughout the operation, it would tend to the clearing up of some difficulties connected with the question of temperature in disease. — Mr. HAWARD had recently had an unsuccessful case of operation of this kind, and he thought the point as to the duration of the strangulation was much more serious than that of the duration of the intussusception. A child, aged seventeen months, five days before being seen by Mr. Haward, had acute pain, was found writhing on the floor, and vomiting. It had one loose motion after the first few hours, and then no other during the next four days, but blood on the second day had passed *per anum*. The pain and vomiting had lasted for all the five days, when the child was admitted to St. George's Hospital; the tumour could then be felt. Ether was given, inflation, etc., tried, and, when these attempts were found to be unsuccessful, the abdomen was at once opened, and the invaginated bowel easily withdrawn, the ileo-cæcal valve being the part involved. Then the real difficulty of the operation began, for the bowel had protruded, and the difficulty in returning it was very great. The child was held almost head downwards, the bowel had to be pricked, and gas and liquid feces drawn off by means of a trochar and cannula, after which the wound in the bowel was sewn up with carbolic suture. The peritoneum was, however, in spite of all the caution exercised, cracked in many places. The operation necessarily lasted a long time, and the child died a few hours afterwards from commencing peritonitis. — Mr. MARCUS BECK had also done the operation, and had had the greatest difficulty in subsequently returning the bowel to the abdomen. — Mr. PEPPER had seen Mr. Beck's case, and recognised the trouble in returning the intestine. In another case at St. Mary's Hospital there was the greatest difficulty in withdrawing the intussuscepted bowel, and the peritoneum covering the volvulus was split. — Dr. BUZZARD said that a case of intussusception did not stand on the same level as a case of ovarian disease in regard to the necessity for an operation. In simple intussusception there was not obstruction of the bowels; but, when the bowels became adherent together, from that time a process of cure was beginning to go on. There was a natural tendency thenceforward to recover, only that patients often died before recovery could be accomplished. There was this element of possible recovery, which was absent in many other cases in which abdominal section was carried out. — Dr. GLOVER inquired if there was generally no benefit from the use of belladonna in these cases. In a child who had obstruction for ten days, and who became emaciated, and whose symptoms increased in severity, though opium and enemata were tried, it was determined, before proceeding to abdominal section, to try the effect of belladonna. Extract of that drug was then given, with the result that after four doses the child had a good evacuation. — The PRESIDENT thought the Society was to be congratulated on the value of the paper, and the discussion it had drawn forth. Mr. Howse's

suggestion, though startling from its novelty, was worthy of consideration. It seemed to be in imitation of that process of nature which had been remarked upon by Dr. Buzzard. As to the cause of the peritonitis in Mr. Godlee's second case, he considered it most probably due to the state of the bowel. In abdominal surgery, it was said that antiseptic precautions were not required. But he thought that surgeons, perhaps unconsciously, used many antiseptic precautions, such as the boiling of sponges, the use of antiseptic ligatures; and though they did not use the spray, that was, he considered, amongst the least of the antiseptic necessities.—Mr. GODLEE said that, in the case of peritonitis, the condition of the bowel was worse than in the other cases. It was very rare for the bowel to separate by sloughing at a very early age of childhood. Cases of intussusception in very young children usually died; those in more advanced childhood recovered after inflation. As to the course of treatment to be pursued, laid down by Mr. Bryant and Mr. Marsh, the difficulty lay in exact diagnosis. As to the plan of reducing the bowel, he had unrolled the larger bowel from off the surface of the smaller, and no adhesions had taken place between the two. The bowel might be merely intussuscepted for a long time, four to six weeks, without adhesions taking place. The temperature of each case was 99° Fahr. before the operation. No observations had been made upon the point just after the operation, but about nine or ten hours afterwards it had risen to 103° Fahr. in each case. He had also found great difficulty in returning the bowel into the abdomen in his cases.

MEDICAL SOCIETY OF LONDON.

MONDAY, DECEMBER 11TH, 1882.

FRANCIS MASON, F.R.C.S., President, in the Chair.

Mr. DAVY showed his invalid car, and explained its advantages.

Talipes Varus.—Mr. ROSE read notes of a case of talipes varus in a boy, aged 13, who was successfully operated on by removal of a wedge of bone from the tarsal arch. Casts of the right foot taken before and after the operation were shown. The patient had been operated on by tenotomy four times at other hospitals without result. The operation was performed antiseptically. Mr. Rose brought forward the case as another link in the chain of evidence in favour of this operation. Such a procedure should of course be restricted to cases in which instrumentation and tenotomy had failed, and where without this last resource the patient would remain a permanent cripple. The cast of another case operated on by Mr. Rose was shown.—The President and Mr. R. Davy made remarks.

Hairy Mole on Forehead.—Mr. WALTER PYE showed the subject of a large hairy mole on the forehead, treated by transplantation of skin-flap from the arm. The patient was one year and three months old. The pedicle of the skin flap was divided as early as the fourth day.—The President, Mr. E. Owen, Mr. Davy, and Mr. Rose made remarks.

Bronchiectasis treated by Tapping.—Dr. THEODORE WILLIAMS read a case of bronchiectasis treated by tapping. The patient, aged 40, was in the Brompton Hospital with a history of pleurisy followed by cough and expectoration of three years' duration. The chief feature in the case was the harassing cough which precluded sleep and induced vomiting. The sputor of the patient penetrated into the corridors of the hospital. As antiseptic treatment failed, Mr. Marshall punctured between the fourth and sixth ribs to the depth of four inches in the direction of the root of the lung. Air hissed through the opening, and a quantity of fetid matter, shreds of lymph, and sloughs of decaying membrane were expelled with considerable force. A drainage-tube was inserted. The patient died forty-five days after the operation. The *post mortem* examination showed the lungs to be in a state of chronic pneumonia. The right pleura was adherent. In the right lung were found a large number of small bronchiectases, containing fetid fluid as well as larger ones. The largest, of the size of an orange, had been tapped, and held but little fluid. The case illustrated some of the difficulties which beset the treatment of these cases.—Dr. Symes Thompson, Mr. Edmund Owen, Mr. H. Smith, made remarks, and Dr. Theodore Williams replied.

PATHOLOGICAL SOCIETY OF LONDON.

THURSDAY, DECEMBER 5TH, 1882.

SAMUEL WILKS, M.D., F.R.S., President, in the Chair.

Elbow-joint from a Case of Scarlet Fever.—This specimen was brought forward by Dr. NORMAN MOORE. The joint showed thickening of the synovial membrane, with roughness in two places, and one

narrow adhesion. When opened, it was full of pus. The terminal joint of the right index finger and the right elbow were similarly affected. There was some pericarditis and general peritonitis. There were some minute growths on the mitral valve, and in the lower lobe of the left lung there was a small pneumonic patch. In each kidney was an infarction, broken down so as to form a small abscess. The patient was a girl, aged 6, who died in St. Bartholomew's, under the care of Dr. Gee. Another child of the family died of scarlet fever. This one was taken ill on September 28th. On October 10th she had rheumatic symptoms, which rapidly grew worse. On admission, on October 19th, both elbow-joints were found to be much swollen. The temperature was 100° on admission, and twice rose to 104.9. The child grew weaker, and died on October 23rd. The case was of interest in its bearing on the question of the pyæmic nature of scarlatinal rheumatism. This case, in its anatomical features, was clearly pyæmic.—Dr. MAHOMED wished to protest against Dr. Moore's assumption that such a case as this cast any light on the rheumatism which occurs after scarlet fever. After scarlet fever, rheumatism was exceedingly common, the exact counterpart of true articular rheumatism, and susceptible to ordinary treatment; many cases of septicaemia also occurred, but pyæmic cases, such as this one, were rare.—The PRESIDENT inquired of Dr. Moore whether, when he spoke of pyæmia, he meant a primary blood-change, or a poisoning secondary to local changes; pyæmia in these cases had been attributed to absorption from some wounded surface in the throat.—Dr. NORMAN MOORE had not found any abrasion in the throat in this case. He did not mean to say that all the cases of rheumatism after scarlet fever were pyæmic, but that some were.—Mr. BARWELL wished to ask whether, in cases of rheumatism after scarlet fever, there were endocarditis, or acid sweats. He regarded scarlatinal rheumatism as an infective process, due to some altered blood state.

Malformation of Right Auricle.—Dr. NORMAN MOORE also exhibited the heart of a woman, aged 33. All the cavities were somewhat hypertrophied and dilated. The aortic valves were incomplete and thickened. The cords and edge of the mitral valve were thickened, and the flaps adherent to one another. The edge of the tricuspid and some of its cords were slightly thickened. There was considerable narrowing of the mitral orifice, and a slight degree of tricuspid stenosis. The left auricle was very capacious, and its endocardium was much thickened, and puckered in several parts. The septum of the auricle was complete, and the fossa ovalis less distinct than usual. The part of the right auricle near the septum was divided into two by an oblique transverse partition, which stretched one inch into the auricle. It began just below the fossa ovalis, and stretched from the septum of the auricles near the orifice of the inferior vena cava, and ended in the posterior wall of the auricle. This partition was of the same structure as the walls of the auricle. The anterior half was twice as thick as its posterior. The valve of the coronary sinus was of the usual form, and quite free from this projection. He believed that the deformity was produced in connection with the Eustachian valve.

Tubercle of Liver.—The liver of a man, aged 49, who died in St. Bartholomew's Hospital, under the care of Dr. Andrew, of tubercular pulmonary phthisis, with ulceration of the larynx, was also shown by Dr. NORMAN MOORE. The liver was studded throughout its substance with numerous whitish growths, most of them of the size of a large pin's head. Microscopic sections showed that these were tubercles. Giant-cells were found in most of them; in some, the cellular elements were not degenerate, in others caseation had taken place. All showed a considerable amount of connective tissue. Virchow, Cornil and Ranvier, and Rindfleisch describe tubercle as often found in the liver in the general tuberculosis of children, and Virchow states that it more often occurs in the liver than is generally thought; but cases in which the whole liver is infiltrated at so late an age as 49, in phthisis with cavities in the lungs, are certainly rare in London.

Congenital Malformation of the Heart (Biloculate).—This specimen, which Dr. F. G. TURNER exhibited and described, consisted of an auricle with two appendices, that on the left side being small, and a ventricle, with a valve of tricuspid form guarding the auriculo-ventricular orifice. The auricle received the inferior vena cava, and a right and left superior vena cava. The pulmonary veins communicated with the left superior vena cava. This vessel opened in the auricle independently of the coronary sinus. There was a well defined Eustachian valve, and a narrow crescentic membranous fold above the entrance to the left auricular appendix is a rudimentary interauricular septum. The aorta arose from the front of the ventricle. Its arch was directed to the right. The pulmonary circulation was supplied through the open ductus arteriosus. From it a fibrous cord, the closed pulmonary artery, passed to the roof of the ventricle behind the aorta, the position of the arterial trunk having been transposed. On the left side of the ventricle was what appeared to be a rudimentary left ven-

tricle. There appeared to be no trace of a left auriculo-ventricular orifice. The specimen was obtained from the body of a male infant, aged 15 months, who was brought to the North Eastern Hospital for Children suffering from bronchitis. Only a slight degree of cyanosis was observed until shortly before the child's death. It had been born at full term, and was well nourished, and appeared healthy at birth, but did not thrive. The mother had no illness during pregnancy, and had not suffered from rheumatism, beyond slight occasional rheumatic pains. The cyanosis had not been observed by her.

Cancer of Oesophagus.—An example of stricture of the oesophagus, produced by a new growth, was exhibited by Mr. F. EVE. The patient was a man, aged 42, who had suffered from dysphagia for six months. A bougie was passed on November 23rd, and on the following day he could swallow better, but had a troublesome cough. After death a large cavity was found, which communicated with the oesophagus and also with the lung. It seemed to have been produced from the oesophagus, and its contents were probably altered food. In the same patient, an abnormality of the ascending colon was met with. It curved downwards from the cæcum, and then passed upwards, so that it did not occupy its usual situation in the loin.

Deformity of Larynx.—Dr. LEES exhibited the larynx of an infant, aged 12 months, which had, during its whole life, manifested a peculiar noisy respiration. The condition found threw light upon a set of cases, of rare occurrence, but of considerable interest, which presented the following symptoms. An infant, almost invariably of the female sex, suffered, from the moment of its birth, from a noisy inspiration, expiration being much less affected or entirely free, and the cry-sound being quite clear. The noise made during inspiration is often loud and harsh; it was of lower pitch than the crow of laryngismus. It continued, though not so loud, during sleep, and after the administration of chloroform. There was usually some recession above the sternum, and slightly at the base of the thorax; but, generally, sufficient air entered the lungs. In some cases, exacerbations were brought on by exposure of the surface to cold (when the chest was stripped) by flatulence, and other causes; but, as a rule, the condition was fairly constant. Perfect recovery ordinarily occurred after the lapse of a year or more. In this case, the child died of insidious diphtheria. About a month before, a laryngoscopic examination was made, and it was then seen that the epiglottis was folded on itself, like a leaf on its midrib, the ary-epiglottic folds being thus brought close together, and the superior orifice of the larynx converted into a linear median slit of very small diameter. This condition was found, after death, to be actually present, the ary-epiglottic folds being almost in contact. Above them, below the centre of the folded epiglottis, was an opening of the size of a pin-hole, and, between the arytenoids, a second opening, a little larger. The trachea was lined with diphtheritic membrane. The peculiar breathing thus appeared to be due to a congenital abnormality in the epiglottis. This was the fourth case which Dr. Lees had seen. Similar cases had been observed by Dr. Gee and by Dr. Barlow, but they had not yet been published; and Dr. Lees believed that this was the first *post mortem* examination which had been obtained, and also the first time that the cause of the obstruction had been ascertained during life.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

WEDNESDAY, NOVEMBER 22ND.

ANGUS FRASER, M.D., President, in the Chair.

Tubercle-Bacillus.—Professor ALEXANDER OGSTON gave a demonstration of tubercle bacillus, and made a few remarks on the subject. He said Koch had discovered that a peculiar bacillus existed in tubercle, and was of opinion that this organism was the sole cause of tuberculous disease. The bacillus in question was demonstrated by the peculiarity of its reaction with staining materials, it alone remaining pink when acted on by fuchsin, all the other constituents of the sputa being of different colour. Dr. Ogston stated that other bacilli acted differently with the same staining process, and were thus distinguished. He remarked that the specimens under the microscopes had been prepared by Ehrlich's method, and that in one of the specimens the bacilli were specially numerous in a giant cell.—Dr. MCKENZIE DAVIDSON, who had seen the slides prepared by Dr. Heron of London, described the process. He said the sputum was spread in a thin layer on the glass slide, and then fixed by being passed through the flame of a spirit lamp. The slide was then floated on magenta solution with some aniline, then dipped in nitric acid (one to three) then washed with distilled water, then treated with methylene blue, which was washed off in two or three minutes, and the slide being dried, the preparation was mounted in Canada balsam. The bacillus thus alone remained pink, all the other parts of the sputum becoming blue.—Dr.

SIMPSON (Officer of Health) questioned the connection between these bacilli and the diseases with which they were associated. To him we seemed to be looking into a new world yet unknown, and our connecting bacilli and disease as cause and effect seemed to have come too soon. Bacilli were found everywhere, and it was a question unsettled in his mind whether or not they really had any connection with disease. It had been found that Lister's process did not, as was at one time supposed, prevent their appearing, and they occurred even in unopened abscesses. He thought they were merely concomitants.

Ulcers.—Dr. R. J. GARDEN (Aberdeen) read a paper on ulcers. He said ulcers were among the most common and most troublesome of the affections coming under the notice of the surgeon, especially ulcers of the lower extremities. Every hospital surgeon found that he had a certain proportion of them in his wards, and that, from the slow progress they made towards recovery, they were among the bugbears of surgery. Still their study was an interesting one, and had engaged the attention of all surgeons from Hippocrates downwards to the present day. Hippocrates, indeed, had given rules for their treatment, some of which had not yet been improved upon. What was an ulcer? It might be defined as a flat sore, the result of inflammation causing molecular destruction of tissue, with a tendency to peripheral increase. In classifying ulcers, authors had mentioned many different kinds, though types of each of these of a pure kind were rarely seen. Jordan mentioned a dozen or more, and other authorities six or seven. The usual classification seemed to him unsatisfactory as the different characters did not exhibit essential differences, and a real classification must be such as that the subjects of it could always be distinguished. Professor Pirrie's classification from the condition of the edges, etc., seemed also unsatisfactory, as one often changed into another type, and all, if they but lasted long enough, became ultimately callous. Jordan considered that constitutional causes had much to do with the formation of ulcers, and mentioned syphilitic, eczematous, and strumous constitutions. The author was inclined to add "gouty," and to say that the classification of ulcers should proceed on this ground rather than on the appearances presented locally. He thought syphilitic constitutional causes were the most common, and eczematous next in order of frequency. If it was objected to this constitutional classification that this would not account for all the phenomena—say for the frequency of ulcers in the lower limbs—his answer was that the prevalence was owing to secondary causes such as irritation from friction of clothes, exposure to injury, position, etc.; varix was said to be a local cause in that situation sufficient to cause ulcers of the legs, but this was not really a first cause, though it afforded a favourable field where syphilis, eczema, etc., were present. One might any day see any extent of varix without a trace of ulceration, if there were no constitutional weakness such as had been named. These secondary conditions (position, want of muscular support to vessels, liability to injury, etc.) helped the ulcers of the legs, but did not originate them. *Scrofulous ulcers* were rare in adults (unless eczema were a sign of scrofula in them). This was a disease of youth; and, when ulcers were seen, it was usually following inflammation of glandular structures. *Gouty ulcers* were not so common in Scotland as in England. They were small, superficial, painful at night or in the morning, and occurred in persons otherwise well nourished. *Syphilitic ulcers* were frequently not recognised, because they were very late in the history of syphilis, but might be recognised by the appearance of a soft doughy swelling around, like an unhealthy boil before breaking, with perpendicular edges, sanious discharge, scabbing, and a very marked cicatrix; the upper third of the thigh being a common place. *Eczematous ulcers* had eczema around them. The ulcers were superficial, with sloping edges and purulent discharge, and occurred usually on the lower third of the leg. In these cases, varix was often present, and itching was very common. All these ulcers, arising from such varying constitutional causes, might be acute, indolent, bleeding, callous, etc. Pure forms were not often seen. *Treatment.* John Bell said a thousand remedies had been proposed, and mentioned and laughed at the divinity of drugs—some, as he said, devilish; some innocent. The treatment ought to be both general and local, and frequently the local was the more important of the two. Arsenic, iron, and perhaps iodide of potassium, were required in eczematous, and iodide of potassium, with or without bark and general tonics, in syphilitic cases. Rest in bed and cleanliness were great means of cure in all. In some cases, these (rest and cleanliness) would, in recent ulcers, completely change their character in twenty-four hours, and cause them to heal entirely in fourteen days. Poultices were useful only when the edges were inflamed, and did harm if too long continued. Too often, however, from neglect, attacks became repeated again and again; and then infiltration and hard edges caused slow healing. Here the old plan of strapping, now too much abandoned, was useful. Bandages should always be worn

for long after healing. To sum up, he considered that almost all ulcers had primary constitutional causes, with secondary causes also important, but yet secondary only; and it was the existence of these local secondary causes which at the same time tended to give similarity in local appearances to ulcers of different constitutional origin, and rendered attention to local treatment so necessary.—Dr. ALEXANDER OGSTON had derived much pleasure and profit from hearing the paper; but he was dissatisfied with Dr. Garden's definition. A tendency to spread had been stated as characteristic. He did not think this was necessarily the case. An ulcer was a space left by destruction, whether molecular or not. He thought it would be better to give up all attempts at classification, and simply say that an ulcer was a hole left in the body, with a tendency to heal, if not prevented. We could then well dispense with all classification. He differed from Dr. Garden as to ulcers being all constitutional. He did not think eczematous constitutional conditions were necessary. Such cases were simply local, arising from Dr. Garden's secondary causes, and demanding local treatment. Rest in bed would cure every ulcer not syphilitic, scrofulous, or cancerous, unless it were an old neglected case, which nothing would cure.—Dr. OGILVIE WILL said Dr. Ogston had taken up three of the points he had noted for remark, and he quite agreed with him. He did not think every ulcer became ultimately callous, neither did he consider syphilitic ulcers were most common. He saw a great number of syphilitic ulcers, having charge of that department in the hospital; but he certainly saw three varicose for one syphilitic ulcer. He thought varicose veins were very decidedly a cause of ulcers. He considered most of the characters of syphilitic ulcers given quite correct; but the precursor of all these was the cod-flesh-looking core, which was pathognomonic. He had not seen swelling around these ulcers. He thought Bell wrong in ridiculing the remedies for ulcers as he had done. Cleanliness was not essential in the sense of frequent dressings; for it had been found by Lister that, after cleansing with chloride of zinc, boracic acid dressing could be left on for a week at least with advantage.—Dr. HALL thought it should be understood that by rest was especially meant that all causes of irritation were removed.—The CHAIRMAN considered it would be better if Dr. Garden replied without any remark on his part, as he had little experience on the subject of ulcers. He thought, however, that Dr. Garden's definition was more satisfactory than Dr. Ogston's, which, were it adopted, would include all solutions of continuity of the skin.—Dr. GARDEN, in reply, said, in regard to the definition, if Dr. Ogston were correct, then any wound was an ulcer. If ulceration were a disease, then his own definition was correct; the tendency not to heal being from constitutional causes. Dr. Will could not justly consider varicose veins and ulcers as cause and effect, if he (the author) could show one case of bad varix without ulceration. In fact, as he contended, there must be something else besides the varix. All he had meant in quoting Bell was to indicate that he thought Bell right in speaking of overrating the value of particular methods of treatment, which, after being lauded to the skies by their proposers, had had, in many instances, to be given up. He had not, however, so much the subject of treatment in view, in writing this paper. Many points had been touched upon in the paper, which it would have been better to have amplified; and, had he the paper to rewrite, he would have discussed more fully fewer points. He thanked the members who had spoken for their friendly criticism; but he did not think that what they had said had in any way shaken his general conclusions on the subject under review.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

FRIDAY, NOVEMBER 24TH, 1882.

JOHN M. HOBSON, M.D., in the Chair.

Operative Treatment of Ozena.—A paper on the operative treatment of ozena, by Mr. R. CLEMENT LUCAS, was read by Mr. C. F. Symonds. The author stated that, when, as often happened, ozena depended on diseased bone which could not be extracted through the nostrils, there were two ways in which the cavity might be explored, and the anterior aperture so enlarged, that pieces of bone of considerable size might be extracted. One of these (Lawrence's operation) consisted in raising the nose by incisions on each side; and then, if necessary, dividing the nasal process of the superior maxilla and nasal bones with forceps. The other (Kouge's operation) consisted in raising the upper lip and nose together. It was greatly to be preferred, as it left no scar; but there were still cases, such as malum and propti, for which Lawrence's operation might be retained.

Tea-poisoning.—Dr. HALE WHITE read a paper on tea-poisoning, which he illustrated by two extreme cases. He pointed out that two classes of symptoms were produced—namely, the nervous, which mani-

fested themselves as tremblings, and a state in which the patients always described themselves as being "very nervous"; and the dyspeptic. These two groups correspond roughly with those produced in physiological experiments with tea and its constituents; the tremblings being the manifestation of the spinal irritation produced by theine, and the nervousness the manifestation of the cerebral irritation; while the dyspeptic symptoms were probably due largely to the tannin. The best way of avoiding these consequences was considered; and it was shown that nations who drank much tea, as a rule, did not let the water remain long in contact with the leaves, by which means all the pleasant constituents were taken up, but the deleterious had not time to be dissolved in large quantities; and, furthermore, another objection to leaving the water too long in contact with the tea was, that the aromatic oil, on which much of the agreeable taste of tea depended, was dissipated.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

NOVEMBER 9TH, 1882.

Spurious Hermaphroditism.—Mr. BRIAN RIGDEN described this case. The patient was seven months old, and healthy. The mother had previously had three children, all boys; and she could not account for the deformity. The child presented the following appearance. The clitoris or penis was larger than an ordinary clitoris, and not of the same shape; it looked rather as if it were a glans penis, and that the corpus spongiosum was absent; it was bound down, and at the end of the glans-like prominence was a small depression, which was, however, blind, and only admitted the tip of the probe. Beneath the clitoris (if it were a clitoris), rather hidden, was an orifice, into which it was possible to pass a probe, and through this orifice the child passed its urine, very much as a person with hypospadias. On each side of a median raphe were two prominences, looking like ordinary labia; no testicle could be felt in them, nor could any sign of pain be discovered in the groins when they were pressed upon. Between these labia-like bodies was the raphe, which extended from the anus to the orifice through which the urine was voided. It was quite complete in character, and firm, and had been described in a similar case by the late Sir James Simpson as an elongated perineum. No uterus could be felt by the finger passed into the rectum. Thus the signs presented were very equivocal, and did not point more to one sex than to the other; but on further examination it was found possible to pass a bent probe into what might be called the meatus urinarius; and if it were turned down towards the anus, its tip could be felt behind the raphe. This would seem to suggest that there was a hollow space—a vagina, perhaps—behind this elongated perineum. Still, it was possible that the probe went into the urethra, and was in the urethra, drawn down of course, when it was felt behind the raphe.

NORWICH MEDICO-CHIRURGICAL SOCIETY.

TUESDAY, DECEMBER 5TH 1882.

E. G. BARNES, M.D., President, in the Chair.

Phlebolith.—Dr. FADE showed a specimen of a phlebolith, the size of a hazel-nut. A lump had existed on the lower part of the right leg of a woman for 30 or 40 years. Ulceration occurred, and the concretion was discharged. It weighed twenty-nine grains. The portion insoluble in water consisted of phosphate of lime, with traces of phosphate of magnesia and some carbonates, the soluble portion consisting of the chlorides of sodium and ammonium, and some sulphates.

Fœtal Monstrosity.—Mr. D. DAY exhibited a dissection of a double fœtal monstrosity, of which the following is a brief description. The heads and limbs were perfectly formed, the bond of union was the front of the thorax and upper part of the abdomen; the ribs were united on each side to a complete sternum, which was symmetrical; the lungs were normal, and there was one umbilical cord. The heart was single, in a single pericardial cavity; the auricles were distinct, the ventricles completely blended; the vessels at the base were quite distinct, and there were two inferior vena cavae. The diaphragm and liver were common to both. Close under the liver were two stomachs, the intestine beginning by a fusion of the two pylori. For sixteen inches it was single; it then branched into two, and the remainder of the intestines ran a normal course. The umbilical veins divided as soon as they entered the abdomen, half going to each side.

Ovarian Disease, with Hydatids of the Liver.—Dr. BATEMAN showed a specimen of ovarian disease, complicated with hydatids of the liver. Against advice, the woman persisted in going to the water-closet, and was there seized with an attack of syncope, from which she died.

Jaundice.—Dr. MALLINS recorded a case of jaundice, caused by a round worm obstructing the common bile-duct.

Foreign Bodies in the Ear.—Mr. LYDDON reported a case of removal of foreign bodies from the ears after twenty years' impaction. From one ear a pearl button, and from the other an iron dress-hook, were removed by iridectomy forceps. No structural change had taken place in either ear, and the hearing was perfect.

Rheumatic Fever, with Cerebral Symptoms.—Mr. H. TURNER read notes of a case of rheumatic fever which, while apparently progressing satisfactorily, terminated fatally in two hours with cerebral symptoms (the patient was taking fifteen grains of the salicylate of soda every six hours). The cause of death was believed to be meningitis.—Dr. EADE also described three cases with cerebral symptoms he had seen in consultation about the same time (September), no cases of the kind having occurred in his practice for several years.

REVIEWS AND NOTICES.

SUICIDE: AN ESSAY ON COMPARATIVE MORAL STATISTICS. By HENRY MORSELLI, M.D., Professor of Psychological Medicine in Royal University, Turin, etc. International scientific series, vol. xxxvi. London: Kegan Paul, Trench, and Co.

SUICIDE is a subject which has at all times commanded attention, while to the present generation it is especially interesting on account of the great proportional increase in the number of suicides during the present century. Side by side with the advance in intellectual activity and material prosperity of the nations of Europe there has been a corresponding advance in suicide. The attention of many observers has been directed towards the elucidation of this remarkable fact, with the result that statistics of suicide have been compiled in almost every European country. But it was not before the early part of the present century that suicidal statistics were registered; consequently it is impossible to say at what rate suicide is increasing now as compared with last century; but all statistics show, except in England and Norway, a steady increase in the number of suicides relatively to increase of population during the past twenty-five years. We may congratulate ourselves that, in spite of our climate, although suicide has not decreased in England, it has, on the other hand, shown no tendency to increase.

Professor MORSELLI first reviews the cosmical influences which act on suicide. It is interesting to note under this, that suicides increase in number from January till June, when they are, as a rule, highest; then decline gradually, and reach a minimum in the end of the year. He then proceeds to consider the ethnic distribution of suicides, from which it appears that the tendency to voluntary death is greatest among Germans, next among Scandinavians, and then among Anglo-Saxons. The influence of the German element in increasing the tendency to suicide among a population, is well brought out by the fact that, in districts in France where the average of suicides is small, for instance, in Auvergne, Brittany, Gascony, Rousillon, and Eastern Languedoc and Bearn, the German element enters little; but the north, from Normandy to Franche-Comté, and the Eastern Mediterranean zone, furnish a large number of suicides. In Italy the same holds good. The highest proportion of suicides occurs in the north, where the German element is large, while the proportion is smallest in the south, where there is no German blood in the veins of the inhabitants. In our own country, suicide is, relatively to population, of much more frequent occurrence among the Anglo-Saxons than among the Celtic races. In Ireland, the proportion is 14 per 1,000,000, in Scotland 35, in Wales 42, while in England it varies from 47 in Wiltshire to 111 in Sussex, and 153 in Rutland. Cumberland also has a high proportion, namely 96, per 1,000,000 inhabitants.

Of the social influences affecting suicide, religion and general culture appear to be the most important. The proportion is highest among Protestants, lower among Jews, and lowest amongst Catholics. The inclination to suicide, says Professor Morselli, in the inhabitants belonging to any particular form of worship, will diminish in a direct ratio with their numerical inferiority. This is some comfort to those who belong to small religious sects. Culture is an all-important factor in increasing the suicidal tendency. Wherever in Europe the standard of general culture is high, there the proportion of suicides is high. The individual biological influences, such as sex, age, civil state, profession, social conditions, and the individual psychological influences, such as madness, nervous disease, etc., are considered at great length. Then follows a chapter on the methods and places of suicide.

A point which is of special interest to social reformers is mentioned in connection with the effect of alcohol on suicide. In Sweden, after the enactment of stringent regulations regarding the drink traffic, the number of suicides fell from 65 per cent., due to alcohol in 1851-55,

to 18.2 per cent. in 1856-60, and 11.2 per cent. in 1861-64. As one might expect, it is found that the use of alcohol produces more suicides than the use of wine.

Professor Morselli devotes the last chapter to a consideration of the synthesis of suicide. This, it need hardly be remarked, is an exceedingly complex subject, and it may be open to doubt if the statistics at present available furnish sufficient data on which to build a scientifically accurate synthesis of voluntary death. Still, it is useful to consolidate our knowledge of the subject, in order to see how far our information is defective. The author's conclusion is that "suicide is an effect of the struggle for existence and of human selection which works according to the laws of evolution among civilised people." Before definite laws regarding the causation of suicide can be enunciated, it seems to us that a much larger study of individual motives than has hitherto been undertaken or recorded, will be necessary. While details regarding the hour of day, season of year, etc., at which suicides take place are extremely interesting, they do not give us much assistance in arriving at a broad and comprehensive generalisation as to the causes which lead men to commit suicide. The author recognises this in his introductory chapter, but, perhaps in his enthusiasm for general laws, rather underrates the great importance of individuality in relation to suicide. This essay in comparative moral statistics is, however, highly interesting and instructive; those who would know something of suicide, its ways and means, should not fail to read it.

KINETIC JOTTINGS: MISCELLANEOUS EXTRACTS FROM MEDICAL LITERATURE, ANCIENT AND MODERN; illustrating the Effects of Mechanical Agencies in the Treatment of Disease; with Remarks. By the late AUGUSTUS GEORGI. London: Renshaw. 1880.

MR. GEORGI, as many of our readers are aware, was a "professor" of the Swedish system of gymnastics, a system which was instituted by Ling at the commencement of the present century. In reference to this system, it may be remarked that the value of muscular exercises, both active and passive, as therapeutic agents, had been recognised for many centuries before the time of Ling, but it remained for him to systematise and elaborate the principles upon which these exercises may be more beneficially applied. Ling founded the Royal Gymnastic Institution of Sweden in 1813, and obtained a grant of public money for its endowment. In the year 1820, the State legalised the introduction of the system into the public schools, and thus Swedish gymnastics became established upon a sound and permanent basis. Ling was Director of the Institution until his death in 1839, when he was succeeded by Branting, who had been Subdirector; and Georgii took Branting's place, and held it for ten years.

The volume before us is mainly composed of quotations from the writings of a large number of medical and other authors, Mr. Georgii having apparently selected anything and everything relating, even in a remote manner, to the treatment of disease by "movements". As the name of the book implies, these quotations are not systematically arranged; they appear, in fact, to have been "jotted down" in a notebook, and published without re-arrangement. The book is very amusing, and is full of information; but the enthusiasm of the writer has led him to record some "very remarkable cures" by manipulations. The production of absorption of a cataract "by rubbing the eye, and at times beating it with a small wooden hammer (the eyelids being closed)"; the cure of spinal deformities by "succussions"; the cure by means of "interior manipulations"; of "chronic metritis, para-metritis, internal tumours, etc."; the "raising of the uvula" by pulling the hair at the top of the head, and many similar cures, are referred to as facts. But the book appears to have been written in perfect good faith, is full of interesting material, and contains much that is worthy of note. We only quote the above cases to guard those who wish to give the Swedish system a trial against leaving their patients entirely in the hands of "professors" of the "movement cure".

Perhaps one of the most important instances of the benefits of this system is its application to patients suffering from heart-disease. "This kind of affection," says Ling, "ought to be treated with the most careful manipulations, and with the closest observation. No such patient should have violent exercises." Dr. Sætherberg remarked that the great number of modifications and resources of Ling's method, the "graduations of the movements", from such as are applied simultaneously and powerfully to large groups of muscles to such as are localised and of the mildest character, permit of its being applied with benefit to very delicate and sensitive patients without the least inconvenience. There are many other affections which may be beneficially treated by kinetic treatment, and the reader will not require a list for his guidance.

On page 127 are recorded some wonderful cases of recovery from idiocy, paralysis, etc., the cures having been occasioned by blows or severe falls upon the head. We are left in doubt whether or not Mr. Georgii intended to suggest the adoption of such remedies as ordinary methods of treatment.

The advantages of exercise in the treatment of chorea are here referred to, the author quoting Dr. Wilks's observations that gymnastic exercises convert "an irregular movement into a regular one". Upon the other hand, the evils resulting from excessive gymnastic exercises are discussed. Hypertrophy of the heart, and even rupture of the aortic cusp, being given as some of the results of rowing matches and other feats. The excellent writings of Bonnet of Lyons are quoted by Mr. Georgii, in reference to treatment of "sprains produced by muscular contractions", and the treatment of ordinary sprains by pressure and friction is also referred to.

In conclusion, we may say that those interested in the subject will find, in this work, quotations from, and references to, a very large number of writers; and he will thus find it a material assistance to him in learning where to refer for further information.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE
ALLIED SCIENCES.

NEW SAFETY HYPODERMIC INJECTOR.*

By J. WARD COUSINS, M.D. Lond., F.R.C.S.,
Surgeon to Royal Portsmouth Hospital.

DURING the last few years, treatment by hypodermic injection has been very generally adopted in many forms of disease, and the number of remedies introduced into the system by this method has also steadily increased. Up to the present time, the hypodermic syringe has been the only instrument employed by medical men, and the great demand has resulted in the production of many new forms and many ingenious modifications. It is, however, a very general opinion that the syringe does not even now readily and conveniently fulfil all the purposes for which it is required in practice. It is easily deranged, very liable to accidental injury, and always requires very careful manipulation. In any form, it must be considered a somewhat costly instrument, and certainly very troublesome to clean. When not in daily use, it soon gets out of order, and the piston is a constant source of trouble. The washer shrinks, and becomes worn and loose, so that the syringe does not work well; and often the operator discovers, to his great vexation, that the fluid, instead of entering the patient, gradually makes its appearance at the other end of the barrel. I am sure that there are few medical men constantly employing hypodermic remedies who have not been disappointed by the faulty action and sudden failure of this delicate little instrument. The vast majority of practitioners, moreover, employ the same syringe for every emergency; and, in the case of those who are fortunate enough to possess two such instruments, it will be very frequently found that one of them, at least, is broken, and otherwise "out of order".

The same hypodermic syringe is used for every patient, as well as for every remedy; and, in fact, for every purpose for which it is required, both in medical and surgical practice. Sometimes morphia has to be hypodermically injected for the relief of pain, then ergotine has to be administered in the same way during labour; and, after that, some other remedy must be introduced into another patient. At one time, the syringe is charged with perchloride of iron, for the treatment of hæmorrhoids; at another time, it is used for injecting iodine into an abscess, or for other glandular enlargement. By the general use of a single instrument, much extra labour and additional responsibility are necessarily incurred.

The syringe, when continually employed for a large number of patients, demands at the hands of the busy practitioner of the highest and most careful care in washing and cleaning after every use. This difficulty is readily overcome by using a special syringe for every purpose, and for every patient. The instrument is so constructed that it can be washed and cleaned in a moment, and it is no trouble to keep in order for any emergency. It cannot be broken by an accidental fall, which is too often the fate of the hypodermic syringe; and, when it is worn out, it may be very easily replaced. The injector can be used, if necessary, under the bedclothes; and, as a mistake in the dose is impossible, the performance of the operation does not require the guidance of the eye.

dies an expensive form of treatment, and quite beyond the reach of a large class of patients.

The syringe always requires care in its application. The eye must generally assist the hand, and the quantity of fluid injected must be regulated by the movement of the piston over an index. The piston is often furnished with a movable stop, and this is, no doubt, a valuable safeguard; still, it must be remembered that every addition involves extra attention, and that the stop itself has to be properly adjusted before every operation. The hypodermic injection of an active medicine, and the due regulation of the dose, always involves considerable responsibility, and for this reason it is never my practice to place the administration of any remedy by the syringe in the hands of attendants or friends. The little instrument, which is accurately represented in the figure, is intended as a substitute for the hypodermic



syringe, and I venture to hope that many of my professional brethren will find it a simple and economical contrivance, and well adapted for every medical and surgical purpose in which such an instrument is essential. The injector consists of two parts—an elastic measuring ball and an injecting needle; the latter is provided with a boss, which serves for a handle during its introduction. It is conveniently furnished with a joint, so that the same needle may be adjusted on several measuring balls. The prefix "safety" is employed to indicate the important fact that its simple construction affords a valuable safeguard against accident, and that it renders an overdose practically impossible. The measuring balls are made in various sizes, and each ball is capable of holding only a definite amount of fluid—the quantity varying from one to twenty minims. The number placed on the exterior of each ball expresses its capacity, so that, by selecting an injector, the exact dose can be at once administered.

The instrument can be instantly charged by compressing the elastic ball, and inserting the point of the needle or the open end of the joint into the fluid to be injected; and it is generally advisable to repeat this little operation two or three times, to insure the complete expulsion of air. It can be discharged slowly or rapidly under the skin; and this is, of course, regulated by the pressure of the thumb and finger. It can be washed out and cleaned in a moment, and it is no trouble to keep in order for any emergency. It cannot be broken by an accidental fall, which is too often the fate of the hypodermic syringe; and, when it is worn out, it may be very easily replaced. The injector can be used, if necessary, under the bedclothes; and, as a mistake in the dose is impossible, the performance of the operation does not require the guidance of the eye.

It has still another important quality which cannot fail to increase its utility: the cost is so moderate, that a separate instrument can be used for every remedy, as well as for every patient.

In conclusion, the "Safety Hypodermic Injector" will serve many important surgical purposes, and it is a perfect substitute for the syringe in the treatment by injection of naevi and other tumours. It is made for me by Messrs. Meyer and Meltzer, 71, Great Portland Street, and can be obtained from that firm in the form of a single instrument, or in a little case, containing several injectors of various sizes. The surgical needle is furnished with three openings at the point, to facilitate the escape of fluid into the tissues.

It is said that the heaviest brain ever weighed in the United States was taken from James H. Madden, who died in Leadville, Colorado, last July. The weight was sixty-two and a quarter ounces. The man was a professional gambler.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, DECEMBER 16th, 1882.

NEW AND RARE DISEASES.

THE announced subject of Sir James Paget's lecture, which we publish elsewhere, promised much of novelty and interest. Indeed, a discourse on the best known generalities in medicine, or on the commonest practical topics, by a thinker so philosophic, an observer so experienced, and an orator so happily gifted, would always deserve and receive attention; but, in this lecture, Sir James Paget not only indicated what is uncommon in some of the most recondite and rare forms of disease, but suggested a new method of studying disease which, if not entirely novel, is certainly little more than full of promise. The student, the practitioner, and the scientific worker, are much accustomed to seek what are called "good," that is typical, cases, and to put aside, if not absolutely to neglect, instances which deviate from the accepted medical and pathological type. On the other hand, cases of "rare and new diseases" that are observed in practice or reported in the journals and *Transactions* of societies, become the centres of untiring interest and studious investigation. Sir James Paget calls us to note that the less typical forms of disease deserve, on good grounds, particular study. He pointed out that, in observing closely the deviations from type, we may discover that they may represent nothing less than a change to a form of disease which, ultimately, will become the rule instead of the exception, the non-typical disease thus tending to supersede the previously established type. Wonder at a rare or new disease ought not to supersede investigation of the significance of its novelty or rarity.

Rare cases and rare diseases belong to different categories. A disease frequent on one part of the body may constitute a rare case when it attacks another part, as in numerous instances given by the lecturer; who, however, accepted and enforced with nice discrimination the relative value of a methodical system of collection of all records of cases that come under the denomination rare. A disorder which has never been observed before, or which consists of an aggregation of subjective and objective symptoms never previously associated, must be called a "rare disease". Evidently enough, some recently distinguished and newly defined maladies must be very old; but—as, for example, typhoid fever and Bright's disease—they were not recognised by the less exact methods of earlier observers until within the present century. But it was the main object of the lecturer to show that some diseases are almost incontestably new. Some of the tests of novelty lie in records, and still more surely in museum specimens. The shelves of a richly stored museum bear silent witness to the facts of the past. Typhoid ulceration of the intestine was not unknown to Hunter, who valued and preserved its evidence, though he did not recognise its significance. Similarly, gummata in the muscles of syphilitic patients, which are among the recently defined pathological novelties, were seen by him, and in one case preserved in alcohol; and there, at the College Museum, it stands unto this day, to bear its witness. John Hunter did not throw away what he did not

understand, but, as a true naturalist, revered and noted the phenomena, and preserved the evidence, of which the interpretation was yet to come. These memoranda, however, only emphasised the further observations of the lecturer that, though many specimens now understood were mounted and preserved in days when they were incomprehensible or mysterious, there is a complete absence of older specimens of some recently described diseases. In the earlier years of the century, rich pathological collections of bones of all shapes and sizes, and presenting innumerable varieties of injury and disease, were presented to our great museums by the great surgeons and pathologists of the era now passing away. No bone-disease furnishes more conspicuous peculiarities than osteitis deformans, a disease which Sir James Paget has defined and described. Yet we find no examples of this disorder in any of the vast series of bones presented by Hammick, Stanley, and others to the College Museum; whilst, within twelve years, Sir James Paget has seen twelve well-marked cases, and has been able to secure specimens. Charcot's disease may, Sir James Paget thinks, be proved to be new on precisely similar evidence. Turning to clinical records, the lecturer showed that Sir Henry Hallford was astonished to find a case of what he termed male phlegmasia dolens in a gouty patient, and had experience of but three such cases in his large practice among fashionable gouty patients; yet in these days gouty phlebitis, for such the disease clearly must be considered, is frequently seen by all whose practices lie socially in the same direction.

After arguing that some diseases, or varieties and types of disease are actually new, or of recent character, and of increasingly frequent occurrence in our day, Sir James Paget dwelt on their significance, and proffered an explanation of their origin. They result, he believes, through the mingling of different types of diseases through inheritance. Slight differences accumulate, till they completely alter the original form of a disease, as separated by long pedigrees. Here he marked the influence of atavism. In a family strongly predisposed to one disorder, those members who are actually attacked never show precisely similar symptoms, and the variations must tend to increase by intermarriage with families subject to other forms of that disorder, or to totally different diseases. Here the lecturer indicated that we cannot always decide the precise character of such blending of different affections; whether the new disease be hybrid, that is, a clear mixture of two forms, but sterile or incapable of reproducing itself; or mongrel and capable of appearing in its own type, or in one of its parent forms, in a child of the patient; or coincident, so that the sufferer may have the symptoms of one parental disease in one organ, and the phenomena of the other parental malady in other parts of his body; nor, lastly, can we deny that a union of two different diseases may be on the principle seen in chemistry. If the last surmise of the lecturer be correct, and two ancestral infirmities may blend in a child to form a disease conceivably as unlike the two original forms as water is unlike pure oxygen and pure hydrogen, then all sources of proof would be absent whenever the clinical ancestral history was lost, and to elucidate this last most important suggestion, a careful preservation of clinical archives is imperative.

Sir James Paget did not omit to discern the part which therapeutics may play in this department of study and of practice. When a practitioner asserts that a specific drug has failed, it is rather the practitioner's powers of diagnosis that have failed. A closer observation would have shown that the patient, unrelieved by the "specific," was suffering from a form of a disease deviating from the usual type that can be cured or relieved by that specific. The historical shifting of the principal seats of election in any hereditary disease can be no mere matter of chance, and it is no wonder that specifics for gout attacking the toe fail when employed for newer forms of gouty diseases. The change is due to some alteration in the morbid material of the disease itself, and both the lecturer and the late Sir Charles Locock have seen the later recognised forms of gout running in certain families, as surely as podagra has long been known to be transmissible from father to son or grandson. As a hint towards the possibility of a hybridism or a quasi-

chemical union of different types, the lecturer instanced the analogies which certain distinct features in osteitis deformans bear to osteoarthritis on the one hand, and in other respects to carcinoma and sarcoma.

In order to possess material aiding in the discovery of new diseases, our museums must be enriched, and Sir James Paget earnestly appealed to his audience for contributions of specimens to the College Museum; and he gave the same warning with regard to specimens as he did to cases: it is not "good," that is to say, typical, specimens only that are required; they serve to lighten the labour of the student, and to ensure that his education has a sound foundation; but it is the more puzzling specimens that are particularly demanded for study. Why does some preparation "show nothing"? Is there not something really to show? If one specimen do not show the appearances of some disease as well as another, though as well prepared, and not disfigured by the mechanical and chemical effects of some secretion, morbid fluid, or preserving medium, should it not be thrown away? No, Sir James Paget would reply; we must find out why the disease does not "show so well" in this particular case.

Happily, it was in no despairing or reproving tone that Sir James Paget addressed his hearers. When he was preparing the first edition of the College Catalogue, it was rare to see a student making use of the museum; whilst the second edition was in process of compilation, the museum was often crowded with earnest workers. Since the early days of the lecturer's career, surgeons of rare skill and audacity—like the present President of the College—Mr. Spencer Wells—have been able to add specimens all the more valuable in that the persons whence they were removed are yet living, so that we may learn what operations may be borne, and what organs may even be permanently dispensed with, when diseased. But, however rich may be the stores that are continually poured into a museum, it is of no avail if the working staff of that museum are not fully armed for the work. In the case of the Royal College of Surgeons it is far otherwise, and Sir James Paget gracefully alluded to the present pathological curator, Mr. F. S. Eve, as peculiarly fitted for the kind of research necessary to elucidate the questions that formed the subject of the lecture. We may add that the lecturer by no means implied that other museums could not serve a similar useful end. We may, indeed, suggest that the Collective Investigation Committee of the British Medical Association is peculiarly adapted for carrying on some part of the good work indicated by Sir James Paget in his Bradshawe Lecture.

SIR JAMES PAGET ON THE EVOLUTION OF DISEASES.

WHEN the subject that Sir James Paget had chosen for the first Bradshawe Lecture was announced, many were, no doubt, curious as to how he would deal with a vast and important question; but all were confident that it would be treated in a wide and philosophic spirit, and that those who listened to the words of a speaker who is not only always eloquent, but also always suggestive, would carry away with them much material for earnest thought. The very title of the lecture was calculated not only to excite curiosity, but to provoke controversy. Pathologists are not very ready to admit the existence of new diseases; that is to say, of diseases newly evolved, and not merely newly recognised. Rather are they inclined, in their present temper, to exclaim, with the world-weary preacher, "Is there anything whereof it may be said, See, this is new? It hath been already of old time, which was before us." This sceptical humour is, no doubt, proper enough; and the conclusions to which it leads us are, no doubt, true in the vast majority of cases. Syphilis existed, there is very strong reason to believe, for uncounted generations before it was recognised by the physicians of the fifteenth century; none will dispute that, long before the time of Bright and of Addison, the diseases which bear their names were among those to which our ancestors succumbed; and that typhoid fever is no new disease, is very conclusively proved by the specimen of ulceration of the intestine shown by Sir James Paget, and put up by

Hunter himself seventy years at least before a second Jenner immortalised his name by a discovery not inferior in importance to that of the first Jenner. But, though the train of thought here suggested contains a truth, does it contain the whole truth? To this question Sir James Paget returned a negative reply. The theory of evolution has accustomed our minds to note the gradual modification of structure and function in the transmission of individual peculiarities from parent to offspring through numerous generations; and this modification is not invariably of the nature of an advance, of an improvement in the adaptation of structure and function—for the two are inseparable—to the requirements of the organism and its environment; it may, and probably, in a vast number of instances, it does, tend to the disadvantage of the organism, to a retrogression—to a degeneration, in fact. This reflection applies with great force to the human race. "There seems," to quote the words of the lecturer, "to be evidence enough that new diseases are in progress of evolution, and that some of the rare diseases" of which he spoke "are the earliest instances of the new."

Admitting, then, that new diseases may and do arise, it is natural to speculate on the manner of their origin; a speculation likely to be profitable, for it may give us a clue to the nature of many other diseases now old and well known, and may assist us to become intelligent spectators of the many natural pathological experiments which are constantly before our eyes. Sir James Paget looks to the variations and combinations of diseases in hereditary transmission, and regards new diseases as mainly due "to morbid conditions changing and combining in transmission from parent to offspring"; changing by transmission, and changing by combination in transmission. They are mainly due to such transmission, but require, perhaps, some other influence, some change in the environment, or some grafting of acquired disease on transmitted peculiarities, before "diseased nature breaks forth in strange eruptions." The combination of circumstances favourable to the development of a new disease must, if this theory be the true one, in the vast majority of instances be unfrequent; and hence new diseases must be at first exceedingly rare, and only grow by slow degrees more common. This position, if we have interpreted him aright, Sir James Paget illustrates by the history of osteitis deformans, a disease first described by himself; in the twenty years following on the date of his first case, he only saw four more, but, in the last six years, he has seen seven more; so that it would appear that the disease has quadrupled in frequency within his experience; and let it be remembered that the disease is one not likely to escape notice, so well marked are its results both during life and after death, and that, for the whole of the period, the observer has been engaged in the active work of his profession.

In this connection, some experimental observations of Dr. Brown-Séquard ought not to be overlooked. By inflicting a certain injury on the nervous system of a guinea-pig, he has rendered the guinea-pig epileptic; and he has found that the offspring of guinea-pigs thus treated are also epileptic, so that he has now a strain of guinea-pigs, which differs from any other race of guinea-pigs only in this, that its members suffer from epilepsy; the disease has become "constitutional" or "idiopathic," for the tendency or predisposition towards it is inborn and inbred. Are we forbidden to argue from guinea-pigs to men? the greater the complexity of structure and function, the greater surely the liability to derangement.

Let it be remembered that Sir James Paget dealt, in his argument, entirely with the so-called constitutional diseases. The specific, or zymotic, diseases occupy an entirely distinct position. With them, the influence of heredity is reduced to a minimum, while the influence of the environment reaches its maximum. Whether or not these diseases do originate *de novo*, or can even undergo any important modifications, has long been a matter of contention; up to the present time, no satisfactory evidence in an affirmative sense has been brought forward; but the solution of this latter question must be sought in a different direction, and would probably throw but an indirect light on the subject discussed in the Bradshawe lecture.

THE MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

It is rare that any orator can find occasion to combine a practical and immediate purpose with a dissertation having large and philosophic areas. In Sir James Paget's Bradshawe lecture, he gained the two objects with rare felicity. We have, in previous columns, indicated the large scope of his discourse on new and rare diseases. He had, however, the self-devotion to sacrifice that higher oratorical success, which would have been attained by remaining throughout his address in the empyrean of scientific speculation and debate, and to descend from the height of his great argument, to the immediately practical object of bringing before the notice of the more intimate circle of his hearers, and of the outer thousands in the profession whom he will to-day count among his readers, the claims of the Museum of the Royal College of Surgeons, the importance of their active support and suitable generosity in contribution of pathological specimens. No living man knows better the value of a great scientific theme, or can, with equal felicity, set it forth in language of limpid purity and unexaggerated, but often imaginative, eloquence. Sir James Paget sacrificed his peroration, and deliberately prepared for himself an anticlimax. The orator subordinated himself to the pathologist, and passed, with calculated abruptness, from universally interesting speculation to a locally important appeal.

The sacrifice deserves admiration, and calls for substantial recognition. It has been one of the unseen but not the least merits of a very impressive and noteworthy career, that the growing and absorbing work, duties, and temptations of a peculiarly onerous and responsible position, have not weaned Sir James Paget from the modest and little known labours of studying and cataloguing museum specimens. The Bradshawe lecturer of to-day is faithful to the convictions, and has for years been devoted to the continuance and fructification for others of the labours of the "Mr. Paget, Lecturer on General and Morbid Anatomy and Physiology at St. Bartholomew's Hospital," who in 1844, after a careful examination of the Hunterian Collection, drew up a plan of arrangement for a new catalogue, and repeatedly examined every specimen, writing the description of what the preparations still display to the naked eye. When that catalogue was published in 1849, the Pathological Museum contained about 3,500 specimens, including the 1,709 Hunterian preparations and about 1,800 others, added by gift or purchase. Since then, up to the date of the publication of the recent new descriptive catalogue in October, 1882, by Sir James Paget, assisted by Dr. Goodhart and Mr. Alban Doran, 1,750 further preparations have been added. Once more, "descriptions of the specimens added since 1863, written either by Dr. Goodhart or by Mr. Doran, have all been revised and compared with the specimens by Sir James Paget." The Bradshawe lecturer spoke, therefore, no words of merely abstract conviction, but uttered the conclusions of untold hours of patient labour as useful as it was obscure, in entreating from the profession that constant thought for this great Pathological Museum by which alone the utmost measure of its usefulness can be filled, and such frequent contributions of pathological specimens as the daily opportunities of working thousands of medical men must afford. The peculiar eminence of men such as Clift, Owen, and Huxley, and Quekett, in the departments of physiological and zoological and general anatomy, gave to those departments of the museum a fame, and consequently secured for them an extension, which to some extent overshadowed that of the pathological collections, but the collections of Hunter, the contributed specimens of Astley Cooper, Liston, Langstaff, Howship, Stanley, Hammick, Toynbee, Peacock, Spencer Wells, Christopher Heath, and a host of others, and the labours of Professor Flower, who has devoted a rare genius for the work and untiring zeal to the development of the museum, aided by Bader, Toynbee, Pettigrew, Goodhart, Doran, and many others, have brought together, classified and described, in this museum, an "orderly series of illustrations of both special and general pathology" such as befits the great museum of our leading college, and such as promises

to become the very centre of pathological study in this aspect. The new catalogue and the admirable arrangement of the museum invite study, and not in vain; for continually increasing numbers of students and practitioners visit and work in the pathological collections at Lincoln's Inn Fields. The appeal made by Sir James Paget is as timely as it is forcible. From whom could it have come with a better grace, or to whom will the profession listen more willingly, when bespeaking their watchful and frequent generosity in so good a public cause?

MILITARY MEDICAL ORGANISATION.

WE invite the attention of those it concerns to a communication in this issue of the JOURNAL, from a "Soldier-Surgeon", on the want of autonomy, mobility, and independence of other departments, in the Medical Department of the Army when it takes the field. It is an open secret that some, if not all, of the military members of the War Office Commission now sitting, are seeking for a remedy for what they deem faults in military medical organisation, in the direction of entirely subordinating the officers of the department to military rule and government in peace and war. This means the placing a military officer at the head of every hospital at home and abroad, and in command of all bearer companies in the field. This, in plain language, is the French system of *intendance* under another name, which, as we have more than once had occasion to point out, emasculated the medical service of the French Army, and has been the cause of unnumbered woes to the sick and wounded of that army for a hundred years. It has been swept away, and we hope the attempt to introduce it into the British army will be stoutly resisted. If Frenchmen and Germans found this yoke intolerable, is it likely that British medical officers will submit to it? We think not. Medical officers who are of a certain age and are committed to the service may have to bear it as they may; but the sullen discontent the system is sure to beget will soon reach the sources from whence, and whence alone, the supply of men to fill thick-coming retirements is to proceed.

The service, as we hear from many sides, has had some experience of a succession of military commandants in at least one great hospital, where, so far as we have been able to gather from many sources, the presence of such an official has neither been a benefit to the sick nor of service to the State. Whatever military journals and military men of a certain kind may say to the contrary, medical officers aspire to no more command than is implied by their having sufficient authority over those for whose work they are responsible, and whose training can only be carried out by them. It is amusing to note that, while the military mind is so sensitive on the subject of command, military men not only make no allowance for the natural jealousy of medical men who have military commandants sent to administer hospitals, but deem themselves, one and all, able for such duties, without the smallest fitness, natural or acquired, for their performance. The man who has no case in a legal suit, according to a well-known story, has his advocate instructed to abuse the attorney of the opposite party. In like manner, military commandants, pitchforked into hospitals, can always bully the principal medical officer and his staff, if he can do nothing else. In whatever direction the road to reform lies in the administration of army medical affairs, it certainly is not to be found in substituting military for medical authority in such matters. A careful study of the history of past wars in which this country has been engaged has satisfied us that the breaks-down in army medical organisation have occurred, not because medical officers have had too much, but because they have had too little, authority.

THE Council of the Clinical Society of London have nominated Dr. Andrew Clark as the president of the Society for the next year; and the council of the Harveian Society have nominated Dr. Symes Thompson as the president of that Society. Dr. Gervis will be the new president of the Obstetrical Society of London.

PROFESSOR HENLE, the eminent anatomist, has been elected, in the place of the late Professor Wöhler, as permanent secretary of the Royal Academy of Sciences at Göttingen.

DR. SPIERS of Cleator Moor, who, in September last, jumped into the river Eden near the mill weir, and succeeded in rescuing a drowning child, has been presented, at a meeting, with an honorary bronze medal awarded by the Royal Humane Society for his heroic act.

SURGEON-GENERAL HANBURY will shortly arrive in England, and his evidence will be taken before the War Office Committee on Army Medical Organisation. During his absence, the chief medical command will devolve upon Adjutant Surgeon-General Manley, V.C.

It is announced that the lectures at the Royal College of Physicians for 1883 will be delivered on each of the following Wednesdays and Fridays, at 5 o'clock. Gulstonian Lectures: Dr. J. Matthews Duncan, February 16th, 21st, and 23rd, Sterility in Woman. Croonian Lectures: Dr. J. E. Pollock, February 28th, March 2nd and 7th, Modern Theories and Treatment of Phthisis. Lumleian Lectures: Dr. A. B. Garrod, March 9th, 14th, and 16th, Uric Acid in its relation to Renal Calculi and Gravel.

THE Belgrave Hospital for Children, of which Her Royal Highness Princess Beatrice is patroness, has been visited by Her Royal Highness, who was attended by the Hon. Lady Biddulph, Miss Bauer, and Captain F. L. Edwards, C.B. The Princess was received by Captain W. J. Stopford and the Rev. G. H. Wilkinson, the Honorary Secretaries; the Managing Committee; Miss Munro, the Lady Superintendent; and the medical staff. After being shown over the hospital, Her Royal Highness opened and named a new ward, which has been recently constructed, the "Princess Beatrice" ward.

NOTIFICATION OF INFECTIOUS DISEASE.

WE announced, in the BRITISH MEDICAL JOURNAL of June 14th, that the Birmingham Town Council had resolved to petition Parliament in favour of the Compulsory Notification of Infectious Diseases Bill. We now learn, from Dr. Carter of Liverpool, that, on the 28th ult., they rejected from their proposed Consolidation Bill, by twenty-seven votes to twenty, the whole of the clause which related to compulsory notification. The mover of this resolution, we are informed, supported his motion largely from the evidence collected by deputations from the Liverpool Health Committee, which some time back visited eight of the towns in which compulsory notification has been longest in operation, in order to judge of its practical results.

NETLEY HOSPITAL.

THEIR Serene Highnesses Prince Edward of Saxe Weimar and Duke of Teck, accompanied by Lord A. Seymour, A.D.C., and Surgeon-Major R. Anderson, visited Netley Hospital on Friday last. They were received by Sir Charles Pearson, K.C.B., Surgeons-General Longmore, Holloway, Maclean, and Medical Staff Colonel Farmer, etc. The whole of the patients were visited, wounded as also enteric fever cases; the wounded cases seemed all to be making rapid progress, and the hospital emptying. Many of the cases being known to H.S.H. the Duke of Teck, great interest was shown by him; and the patients were all particularly pleased with his visit. The majority are admissions received from Tel-el-Kebir and Cairo. The party lunched with Sir C. and Lady Pearson, and returned to Government House, Portsmouth, by the 5 P.M. train from Southampton. Portsmouth Hospital was visited the following morning, where the patients are remarkably happy, and are also principally from Cairo and Tel-el-Kebir.

FALSIFICATION OF DRUGS.

THE *Pharmaceutical Journal* reports that a bag of a bitter bark, apparently that of a species of *Esenbeckia*, and some of which has on previous occasions been sold as *Cusparia* bark, was again placed on the market. Seventy-five bags of the stems of *Coscinium fenestratum* were offered as *Calumba* root, and some of the mouldy ipecacuanha, mentioned last month, after having been washed and dried, was again put up for auction. Adulterated matico was also offered for sale.

YELLOW FEVER ON THE WEST COAST OF AFRICA.

A DISPATCH from Dakar announces that seventeen fatal cases of yellow fever occurred there between November 17th to 27th. The port had consequently been placed in quarantine.

PRESIDENT GARFIELD'S PHYSICIANS.

WE learn, says the *Medical Press*, that the board which was appointed to consider and report upon the claims arising out of the late President Garfield's illness have recommended that the following fees be paid to the physicians engaged in the case: to Dr. Bliss, 6,500 dollars; to Dr. Agnew, 5,000 dollars; to Dr. Hamilton, 5,000 dollars; to Dr. Reymburn, 4,000 dollars; to Dr. Boynton, 4,000 dollars; and to Dr. Edson, 3,000 dollars. These are much reduced from the original amount.

SIR THOMAS WATSON.

SIR THOMAS WATSON passed peacefully away on Monday night. The end had long been obviously in view, but the loss of the Nestor of British Medicine is none the less acutely felt. The funeral will take place to-day (Friday) at Reigate. The cortege will leave Reigate Lodge, the residence of his son, at 2.30 P.M. Those wishing to attend the funeral from London, will leave by a train from Charing Cross at 12.57 P.M., reaching Reigate at 2 P.M. We defer the publication of an obituary notice till next week.

DEATHS BY VIOLENCE AT TANTA, EGYPT.

A WELL-INFORMED correspondent in Egypt, calls our attention to the fact that the register of deaths of the town of Tanta, shows for the month of July last a total of 190, of which 37 were Europeans. Of these, 36 are entered as homicide or violent deaths. This will give some idea of the massacres which took place at Tanta after the bombardment of Alexandria, if between the 11th of July, the day of the bombardment, and the end of the month, 36 deaths by violence were regularly registered. Many others, no doubt, were never reported nor registered.

JUVENILE LABOUR IN FRANCE.

THE work of children is interdicted in France in the following manufactures: the manufacture of salicylic acid by the carbolic process, on account of the corrosive emanations engendered and the manufacture of celluloid and analogous nitrated products, on account of the noxious vapours engendered, and the risk of explosion and burning. The manufacture of chloride of sulphur is prohibited, on account of the noxious emanations proceeding therefrom. Another decree prohibits the employment of young persons under sixteen years of age, and young girls under eighteen years of age, as producers of motor power in hand-loom weaving. By a decree bearing date November 3rd, the work of girls under eighteen years of age, employed in rag-picking and sorting, is prohibited in workshops which are insufficiently ventilated.

INCOME OF METROPOLITAN HOSPITALS.

IN connection with the issue of the tenth annual report of the Hospital Sunday Fund, which, it is satisfactory to note, has, during the past year, exceeded by over £2,000 the collection of any previous year, it is not unimportant to notice that the funds of many of our great hospitals have been allowed to fail, and their committees have been compelled, in order to keep their wards open, to sell out stock

put by for a rainy day. St. George's Hospital has had to sell out £8,000 of its capital to meet the current expenditure. King's College Hospital (in a more densely populated part of London) is still worse off for new subscribers, and foresees that its invested funds, of which £9,500 have to be sold out, will soon be entirely exhausted. Westminster Hospital, in like manner, had last year to sell out £4,000. These are by no means pleasing facts, which point to the great need that exists for some additional effort towards re-establishing the finances of our unendowed hospitals.

NECROPSIES IN SUSPECTED CASES OF POISONING.

A CONTROVERSY has been carried on in the *Lyon Médical* between M. Cazeneuve on the one hand, and MM. Lacassagne and Chapius on the other, respecting the proper mode of preserving suspected viscera for analysis, which is of great interest to those medical men who are called upon to make necropsies for coroners. Cazeneuve advocates the addition of alcohol to prevent decomposition, and the possible formation of poisonous alkaloids as the result of putrefaction; whilst his opponents deprecate the practice as tending to complicate the analysis. The whole controversy is full of interest. It will be found in the numbers of the *Lyon Médical* for July 23rd, October 29th, and November 26th of the present year. If a poisonous alkaloid be suspected, it is probable that the addition of alcohol, by preserving the viscera, would procure its detection, but where nothing is known as to the probable poison, it would certainly be unsafe to add anything which might vitiate or impede the subsequent proceedings of the chemist.

HOSPITAL BUILDING IN THE MIDLANDS.

THERE is now in course of erection at Birmingham a substantial building called the Birmingham and Midland Eye Hospital. The old structure has been found utterly inadequate to the requirements of the 13,450 patients who annually seek admission. The committee, of which the Rev. B. Jones Bateman is chairman, have succeeded in overcoming the difficulty, and a new hospital, replete with the latest and best appliances, both surgical and sanitary, is in course of preparation. The estimated cost, complete, is £20,000. Many donations have already been given, Mrs. Barrs heading the list with £5,000. Although the trades of Birmingham conduce in a very marked manner to eye-disease and accident (one firm alone sent sixty-nine cases last year), it is perhaps from the surrounding districts that patients mainly come. Birmingham is a centre to which many railways converge, and persons afflicted with eye-disease flock thither from places sixty and more miles distant for the special aid which their own infirmaries are unable to afford them.

MR. FAWCETT.

NEW complications have arisen in this important case since our report last week. The fever was making favourable progress when, on Saturday, December 9th, Mr. Fawcett had three distinct attacks of spasmodic cough, accompanied with hæmorrhage from the mouth. The last of these attacks, at 7 P.M., was especially severe, and produced great distress and oppression of the breathing, but it happily yielded to the treatment which was immediately applied. Subsequently, on December 11th and 12th, there were recurrences of the hæmorrhage to a smaller amount. It is well known that such hæmorrhages are not unfrequent in typhoid fever and diphtheria. The medical attendants are satisfied that the blood flowed from the upper part of the air-passages, and trickled into the lungs, thus producing the distressing difficulty of breathing, which was observed in the attack of Saturday evening last. Since Saturday, clots of blood and fibrinous casts of the smaller bronchial tubes, resulting from the previous hæmorrhage, have been expectorated. On December 13th, symptoms of rheumatism appeared in the arms; but, at present, the principal anxiety is the fear that fresh hæmorrhage may occur and obstruct the air-tubes. There is also some ground for uneasiness lest lung-mischief should be caused by the clots effused in the former

hæmorrhages. We are glad to learn, however, that so far the risks alluded to have not arisen to any serious extent; and there is yet ground for hoping that Mr. Fawcett may recover from his serious illness.

HOSPITAL SUNDAY FUND.

THE Council have issued their tenth annual report, by which it appears that the collection of last year amounted to £34,146, or £2,289 more than that of 1881, which also exceeded any previous collection. Awards were made to eighteen general hospitals, fifty special hospitals, including consumption, children's, and women's hospitals, fourteen convalescent homes, seven cottage hospitals, fifty-two dispensaries, and four "institutions". Four per cent. of the gross receipts, amounting to £1,380, was devoted to surgical appliances. Of the general hospitals, the London Hospital received £2,812; St. George's and King's College, £1,575 each; Middlesex, £1,462; and St. Mary's and University College, £1,012 each. The largest donations to special hospitals were: Brompton Consumption Hospital, £1,068; the City of London, for Diseases of the Chest, £787; Sick Children, Great Ormond Street, £731; and the London Fever Hospital, £675. The Metropolitan Convalescent Institution, Walton-on-Thames, received £731; All Saints', Eastbourne, £562; and Mrs. Gladstone's Home at Woodford, £225. To the Royal Sea-Bathing Infirmary, Margate, one of the "institutions", £450 was awarded.

THE BRADSHAW LECTURE AT THE ROYAL COLLEGE OF SURGEONS.

SIR JAMES PAGET's audience at his lecture on Wednesday afternoon amounted to nearly five hundred persons, which of necessity left barely any standing room for many that came late; the theatre of the College being incapable, even when, as on this occasion, several extra rows of benches are fitted up, of allowing seats for more than four hundred. Among those that were present were Lord Arthur Russell, the Very Reverend Dean Church, the greater part of the Council of the College, and of the Court and Board of Examiners, Sir William Gull, Sir Joseph Fayrer, Sir Risdon Bennett, Dr. Arthur Farre, Dr. Acland, Dr. Paget, Dr. Priestley, many well known members of the staffs of London hospitals, a large number of provincial surgeons and medical practitioners, and lastly, a host of students almost entirely from St. Bartholomew's Hospital. The lecture-table was covered with specimens illustrating various subjects introduced by the lecturer; the great majority were bones affected with osteitis deformans, changes in the articular extremities due to locomotor ataxy, and less distinct diseases, seen in the lower animals, but related to rickets and other disorders too well known in our own species; other preparations illustrated the lecturer's interesting observations upon typhoid ulceration and phlebitis; but the most remarkable of all was a mass of two hundred loose cartilages which had been removed, earlier on the same day, from the knee-joint of a patient, by Mr. Thomas Smith.

BACILLUS OF TUBERCLE IN THE BREATH.

At the Royal Society, November 8th, a "Note on the Discovery of Bacilli in the Condensed Aqueous Vapour of the Breath of Persons affected with Phthisis", was read by Dr. Arthur Ransome, communicated by Dr. W. Roberts, F.R.S. In the year 1869, the author had examined the aqueous vapour of the breath in health and disease. This vapour was condensed in a glass globe surrounded by ice and salt, and, in condensing, it was found to carry down all the organic matter contained in the breath. It appeared probable that the breath of persons in advanced stages of phthisis would contain the bacillus of tubercle, and that this organism could be rendered visible by Dr. Heneage Gibbes's method of staining. The aqueous vapour of the breath of several advanced cases of phthisis was accordingly condensed by the above-mentioned method, and each specimen was separately examined. In order to carry down the organic matter, and to afford a basis to attach the material to the microscopic cover-glasses, fresh

white of egg, or a little mucus, free from bacilli, was added to the fluid. No attempt was made to sterilise the fluids, as the ordinary bacteria of putrefaction are not stained by the process used. In the aqueous vapour obtained from two of the cases, specimens of bacillus were found which took the staining in the same manner as the bacillus found in phthisical sputa and in tubercle. The organism was not found in several other cases, nor yet in the aqueous vapour condensed in the waiting-room of the Manchester Consumption Hospital.

SANITATION IN SWISS HOTELS.

It will be remembered that, in an article on this subject, published in the BRITISH MEDICAL JOURNAL of September 16th, we directed attention to the very unsatisfactory condition of many of the Swiss hotels. We enumerated some of the most patent abuses, and urged upon the proprietors of these establishments the importance of remedying the unhealthy state of things noted, suggesting the formation of a society on the model of our own Sanitary Protection Societies, with a competent staff of inspectors, as a means of carrying these needed reforms into effect. We further recommended the distribution among hotel proprietors of French and German translations of Mr. Pridgin Teale's admirable book on *Healthy Houses*, which, with its instructive illustrations, we urged, "would do much to remove existing abuses." It gives us great pleasure to learn that the article in question has been translated into German by Dr. J. Pernisch, who has brought the subject of which it treats under the notice of the "Association of Curort Proprietors in the Engadine." This society has also, we learn, directed extracts from Mr. Pridgin Teale's *Healthy Houses* to be translated into Romansch and widely circulated among the people. It is also proposed to establish a sanitary protection association for the Engadine, whose functions will be:—first, to rectify such sanitary defects as are found to exist; secondly, to obtain certificates from an independent source as to the sanitary condition of the various hotels and houses where visitors are received. It is very satisfactory to find that this matter has at last been taken up in real earnest, and much practical good is likely to accrue. It is a step which should be taken by the hotel-keepers of Germany and France, and of all those Continental places to which English travellers are wont to resort, and where they as assuredly suffer, if not from actual disease, from a most intense disgust of the prevailing filthiness and the general lack of the most ordinary sanitary arrangements. We would especially recommend this subject to the attention and consideration of the French physicians, who exercise a powerful influence in the various French watering places, and who might, if they chose, soon produce a salutary change in the matter. In this question, the interest of sanitary science and the pecuniary interest of hotel-keepers are closely allied; for assuredly, if they consult their own profits only, they will lose no time in giving this question their most serious attention.

ST. THOMAS'S HOSPITAL.

THE annual *soirée* of the Medical and Physical Society of St. Thomas's Hospital was held on December 7th, in the Governors' room. During the evening, Mr. Norfolk Megone's amateur orchestra discoursed most excellent music, and Mr. West, student at the hospital, demonstrated a new lime-light process for the magic lantern, specially adapted for small rooms, and exhibited with the lantern some excellent photographs of patients, and of the staff of the hospital, taken by himself. Dr. Semon exhibited a number of new appliances, designed for use in the treatment of laryngeal disease, among these, we noticed the rather elaborate but very efficient gag designed by Fraenkel of Berlin, Schmidt's insufflators, a great improvement on the old-fashioned form, and the galvano-caustic instruments of Schech, which are exceedingly neat and efficient. Mr. Thomas gave an account of his successful researches into the life history of the liver fluke (*Fasciola hepatica*), and showed the shells of the *Limnaea truncatula*, the freshwater snail which is the intermediate host of the fluke. Dr. Lingard exhibited microscopical specimens of the peculiar appearances seen in the newly recognised disease, actinomycosis; and Dr. Acland performed a few

physiological experiments. Dr. Frank Payne had brought down a few rare and choice anatomical books, the first edition of Vesalius, and the rare *Epitome*, published in 1543, and containing very large and fine woodcuts, designed apparently for publication in the edition of his great work, but found too large; we also saw the *Anatomy* of Thomas Geminus, bearing the date 1545, and believed to be the first book on the subject published in England. At the last meeting of the Royal Society of Literature (on the 29th ultimo) Mr. Rendle read a paper on the "History of St. Thomas's Hospital from circa A.D. 1200 to 1553," from original manuscripts, and chiefly from a volume formerly in the Stowe Collection, and now belonging to the Earl of Ashburnham. This volume, which was written in the early part of the sixteenth century, consists of a collection of charters and other documents referring to the hospital. The first hospital was a portion of the Priory of St. Mary Overie; it was burnt down in 1207, but rebuilt by the then Bishop of Winchester, Peter de Rupibus, twenty years later; the bishop had appealed for help, and the manuscript of this appeal, "probably the earliest charity sermon on record," is preserved. In 1507 the hospital was again rebuilt, on the site which it occupied until it was pulled down a few years ago; the land on which the old buildings stood cost, in 1507, £31 3s. 4d.; it was resold to the South-Eastern Railway Company for £296,000.

A MUNICIPAL MUSEUM OF HYGIENE AT PARIS.

AT a recent meeting of the Municipal Council of Paris, MM. Bourneville, Cernesson, and Loiseau made the proposition that, as the objects shown by the City of Paris, at the recent Hygienic Exhibition at Geneva, excited in all the visitors to that meeting considerable interest, and aroused their attention, it is desirable that these sanitary objects should be exhibited in the pavilion belonging to the City of Paris, in the Champs Elysées; that they should be completed by the addition of plans of schools, hospitals, baths, hydrotherapeutic appliances, etc., recently agreed on by the municipal council; and that the municipal authorities should seek for a permanent receptacle to contain the different objects, so as to create a municipal museum of hygiene. It is probable that, if the Parisians were not at the present time much taken up with that special form of Socialism, which thinks to solve every economic problem by the heroic and wide-spread application of nitro-glycerine and dynamite, they would take up these propositions with the warmth they deserve. The sanitary questions, to which the propositions of M. Bourneville and his colleagues refer, are of considerable importance to the welfare of the masses; and are a direct outcome of that science of hygiene which has been so well defined by Paul Bert, as "social morality" (*la moralité des sociétés*). The utility of such an organisation for Paris is incontestable, especially if it were followed up by public health legislation, more or less on the English, German, and Swiss lines. It would then be easy to pass the law for the improvement of unhealthy dwellings drafted by M. Martin Nadaud; and that for the sanitary inspection of factories which is under the charge of MM. Nadaud and F. Faure. Great services would also be rendered to Paris by the creation of a central sanitary authority, kept well informed on sanitary matters by subsidiary health committees, such as already exist at Brussels and Turin, and in France itself, at Nancy, Rheims, and Havre. The true value of such a system would be brought home to the great body of Parisians, by the establishment of the museum desired by the gentlemen whom we have already designated, similar in design to our Parkes Museum, and the proposed sanitary museum at Washington, United States of America.

HOSPITAL SATURDAY FUND.

THE report of the Hospital Saturday Fund for 1882 shows the total receipts to be £8,872, exceeding those of 1881 by £500, and of 1880 by £2,000. Of the entire income £6,318 was derived by means of collection sheets supplied to workshops, etc., and £2,160 resulted from the street collection, being £144 in advance of the previous year.

There were 900 stations occupied by ladies on September 2nd last, as against 650 upon the previous Hospital Saturday; £900 of the street collection was in coppers, and included 5,000 farthings. In nearly 3,000 of the London workshops, there are collectors of the fund entitled to distribute, when needed, to their fellow workmen "letters," securing to the recipients the benefits conferred by the hospitals and dispensaries participating in the receipts. Attention is called to the fact that 130 subscribing establishments and friendly societies are represented on the board of delegates, who elect the council and all committees, and control every detail of management and expenditure. The repeated efforts of the council to secure the opening of hospitals and dispensaries during the evening, so that workmen patients might not be compelled to lose valuable time in attending them, had not been altogether in vain. It is regretted, however, that such opening was as yet far from general. Awards, amounting in the aggregate to £7,250, were made to 67 hospitals, 37 dispensaries, six convalescent homes, and two surgical aid societies. No institution applying to participate in the fund had been disqualified. The mode of distribution adopted was based upon the relief afforded, and the efficiency and economy of the various participating institutions. The largest awards to hospitals are as under:—Brompton, £400 9s. 2d.; London, £374 12s. 8d.; Middlesex, £283 12s. 2d.; St. George's, £281 1s. 6d.; City of London, £236 6s. 8d.; St. Mary's, £206 15s. 4d.; Westminster, £186 2s. 2d.; Hospital for Sick Children, Great Ormond Street, £162 7s. 6d.; North London, £157 15s. 10d.; King's College, £156 7s. 6d.; Royal-Chest, £154 11s. 8d.; Charing Cross, £151 8s.; Royal London Ophthalmic, £145 6s. 6d.; Royal Free, £141 10s. 10d.; University College, £134 8s. 4d.; Royal National, £130 17s. 6d.; German, £120 13s.; and the Seaman's, £111 4s. Dispensaries: Infirmary for Consumption, £69 15s. 11d.; Western General, £46 12s. 10d.; West Ham, £42 5s.; Surrey, £40 15s. 10d.; Royal Kent, £36 16s. 8d.; City, £36 0s. 10d.; Finsbury, £32 16s. 6d.; Islington, £31 13s. 6d.; Public, £30 2s. 10d.; Westminster General, £30 1s. 10d.; Royal South London, £27 15s. 4d.; Farringdon General, £27 14s. 4d.; Metropolitan, £26 12s. 4d.; Queen Adelaide, £26 3s. 8d.; North-Western Free, £26 3s. 2d.; and Chelsea and Brompton, £25 9s. 4d. Convalescent Homes: Metropolitan, £223 13s. 4d.; Mrs. Gladstone's, £86 14s. 2d.; St. Andrew's, Windsor, £62 19s. 2d.; London and Dover, £58 19s. 2d.; London and Brighton, £58 4s. 2d.; and St. Andrew's, Folkestone, £22 19s. 2d.; Surgical Aid Society, £69 11s. 8d.; Provident Surgical Appliance Society, £32 15s. It was explained that the movement for establishing a seaside convalescent home for working men in connection with the fund had in no way militated against the prosperity of the fund itself.

THE TREATMENT OF INTUSSUSCEPTION.

THE discussion on this subject which took place at the last meeting of the Clinical Society, and which is reported on page 1210, was excellent. It traversed the whole field of treatment, and brought out clearly and distinctly the points which should claim attention throughout the whole course of the case in regard to surgical interference. There was, further, an unanimity about the discussion which was pleasant to witness. Surgeons from various hospitals, and with most diverse experiences, had all arrived at pretty much the same conclusions. We may take it, therefore, that their advice was sound. Mr. Godlee started the discussion by reading reports of three cases of young children upon whom he had performed abdominal section for intussusception, with a successful result in one of the three cases. Mr. G. Brown described a case in which he had attempted abdominal section, with the result that it was found impossible to withdraw the invaginated portion from within the encircling bowel, so firmly were the two parts glued together by the advancing peritonitis. This *contretemps* produced a difficulty which no surgeon could desire to face. The patient died six hours subsequently, unrelieved by the operation. As regards the treatment of early stages of intussusception, Dr. Glover mentioned the happy result which had ensued in one case in his hands from the administra-

tion of extract of belladonna where opium had seemed to be of no avail. But the general consensus of opinion pointed to the early treatment of all cases by inflation and operation; though, as was pointed out, a great distinction must be drawn between cases of simple intussusception, which may last for weeks when the bowel is not strangulated; and those of strangulated intussusception, in which any delay in operating is to be deprecated, since peritonitis is almost certain soon to ensue. The former cases are those most likely to be benefited by inflation and injection of liquid *per anum*, possibly the two combined, whilst the patient's abdomen is kept relaxed by the use of an anæsthetic. But if the strangulation have lasted for some time, and the symptoms be severe, so that there is reason to fear that adhesions may have formed, or the wall of the bowel have become softened by the inflammatory process, inflation or forcible enemata should scarcely then be attempted, as was pointed out by Mr. Bryant and Mr. Marsh in their practical, common-sense remarks, any more than taxis should be seriously tried in cases of hernia in which the bowel is much inflamed, otherwise the result may be a rending of the intestinal wall, with subsequent certain fatal peritonitis. Should the case be one of severity, and inflation be found valueless, the surgeon should at once have recourse to abdominal section; just as in hernia, when taxis has failed, he directly proceeds to herniotomy. The median line of the abdomen is to be chosen for incision, and the operation should, of course, be done with antiseptic precautions; the invaginated bowel may be either withdrawn by gentle traction from the encircling portion, or its withdrawal assisted by pushing up from below, as recommended by Mr. Hutchinson, or the outside layer may be unrolled from off the inner portion, as was done by Mr. Godlee. Many speakers remarked upon the extreme difficulty they had sometimes experienced in returning the distended bowels into the peritoneal cavity after the operation; a difficulty which Mr. Haward had found it impossible in one case to overcome except by puncture of the intestine with a trocar and cannula, for the withdrawal of gas and liquid, with a subsequent closure of the small opening with a carbolised suture. But in cases in which, as in that detailed by Mr. Brown, the intussuscepted bowel cannot be withdrawn, what is to be done? As Dr. Buzard pointed out, the portion of intestine inclosed goes on to slough and separation, and this is nature's method of cure in the very few cases which struggle on to recovery through the various dangers which beset the patient. Surgeons recommended that nature's method should be imitated, as nearly as may be, by a bold excision of all the implicated portion of bowel, and a stitching together of the two cut ends. Mr. Howse has already done this in two cases, though as yet without success. To avoid risk of the passage of any fecal material into the peritoneal cavity, he further recommends that a thin sheet of gutta-percha material, with a slit in its centre, should be spread before the abdomen, and all the bowel to be operated upon drawn forward through the slit. It may then be treated without fear of fecal contamination of the peritoneum. It remains to be seen whether this bold procedure of excision will in future result in more success than has hitherto attended it. In certain cases, in which the bowel protrudes through the anus, Mr. Howse would also remove it bodily from that situation by amputation, securing the cut end by pins; an Italian surgeon has already done this by inadvertence, not knowing what he was taking away, and the patient recovered.

SCOTLAND.

AMBULANCE lectures have been delivered in Aberdeen by Major Rodger, to the City Artillery Volunteers, while Dr. Hall has done the same for the Engineers; and Dr. Simpson, medical officer of health, for the Police-force. All this betokens energy and progress.

TYPHUS FEVER IN ABERDEEN.

A CONSIDERABLE number of cases of typhus have been taken into hospital from a certain tenement in the east-end of the town. The local

authorities have isolated those exposed to the infection; and it is hoped that the progress of the disease may be thereby stopped. The majority of those affected are females.

DR. FERGUS AND THE GENERAL MEDICAL COUNCIL.

WE congratulate the medical profession in Glasgow on the reappointment of Dr. Fergus to act as Crown representative for Scotland in the General Medical Council. With the prospect during next session of parliamentary legislation on the present system of medical licensing, Dr. Fergus's views and experience will no doubt prove valuable, and carry weight in a matter that will undoubtedly vitally affect the present system of medical education in Scotland.

THE COMBE LECTURES AT PERTH.

THE eighth and closing lecture of the above series was held in the City Hall, Perth, on the 5th instant, when Dr. Andrew Wilson gave an interesting discourse on "Ventilation, and the Skin and its Work". In every respect, the present course of lectures have been eminently successful, and have been much appreciated by the large audiences who have attended them. At the close of the last lecture, a very hearty vote of thanks was awarded to the Combe Trustees and Dr. Wilson.

THE NON-REGISTRATION OF LODGING HOUSES.

THE first convictions known to have been gained in Scotland, under the Public Health (Scotland) Act, for the non-registration of lodging-houses, have just occurred in the burgh of Rutherglen, near Glasgow, in all cases fines being imposed. The necessity for some action on the part of the authorities was shown by the fact that, out of two hundred lodging-houses, only sixty-nine were registered as provided by the Act.

PORTOBELLO DESTITUTE SICK SOCIETY.

AT the annual meeting of the Portobello Destitute Sick Society, held last week, a satisfactory account was given of the operations of the society during the past year, although fewer persons had required aid than in the previous year. It was stated that the funds of the society now amounted to over £1,200; and it was remitted to a committee to consider whether this might be profitably used in building cottages for the aged and destitute sick; and, if this were considered suitable, to carry it into effect.

DIPHTHERIA IN DUNDEE.

THERE has recently been a somewhat alarming outbreak of diphtheria in Dundee, and the mortality has been very high. Of the seven cases reported to the sanitary authorities in October, six had died, and of the six cases reported in November, fourteen had been fatal. The cases had occurred in different parts of the town, and not any special locality, and as the medical officer of health was inclined to attribute them to defective and objectionable house drainage, the authorities have very properly instructed that the drainage of the houses where the diphtheria occurred, and also of any other suspected localities, should be examined into without delay, and that everything necessary should be done to prevent the spread of the disease.

ABERDEEN ROYAL INFIRMARY.

AT a meeting of the subscribers to this institution, held last week, Dr. Henry Jackson and Dr. A. F. Proctor were elected managers for one year. At present there are 218 patients in the infirmary, the largest number known during the last six years. As we mentioned in our last issue, typhus fever had broken out in one or two parts in the east-end of the town, and the number of cases recorded in present thirty, all of which have been removed to the fever wards. The medical officer of health, Dr. Simpson, has been most active in tracing the course of the epidemic, in order, if possible, to isolate all the cases, and also all those who have been exposed to the infection, so that the epidemic may be

stamped out. Already five deaths have occurred since the detection of the outbreak on November 23rd.

UNIVERSITY OF ABERDEEN.

AT a recent meeting of the Medical Faculty of this University a motion by Professor Struthers, for encouraging the opening of special classes in certain subjects in the Medical School, was agreed to. The motion was in these terms:—"That the Faculty—regarding with satisfaction the provision already made for special instruction in diseases of the eye and in diseases of the teeth—record its willingness to consider favourably, and to recommend to the Senatus for recognition, applications from members of the profession who may desire to give special instruction in diseases of the ear, diseases of the larynx, diseases of the skin, or in other subjects in which it is usual to give special instruction in schools of medicine, provided that the instruction proposed to be given is of a practical and useful character." This is as it ought to be, and we trust that some of the younger medical practitioners may avail themselves of this privilege.

HOW TYPHOID FEVER ARISES.

THE state of matters which Dr. Russell, in his recent report, describes as having met with in a farm-stead from which milk is sent into Glasgow, easily explains how typhoid fever arises and is conveyed into our large towns. The following is his description of this model farm. "It is in the Clachan, and is altogether the most scandalous place for a dairy I have ever seen. The premises are in general disrepair. The house is 'a but and a ben', with a through-going passage, which is used as a milk-house. By this passage you enter the back yard, which is one huge manure-heap, with no definite bounds; the soakage forming a filthy bog along the margin, and oozing down towards a barn. There is no water-supply on the premises. There is no privy, and no washing-house. There are no drains." No wonder Dr. Russell complains that there has been great neglect on the part of the local sanitary authority in allowing such state of matters; and he advises that the matter should at once be brought under the notice of the Board of Supervision.

TEMPERANCE SOCIETY.

A TEMPERANCE Society has been started in the University of Aberdeen this session, and most of the professors have become patrons. Dr. Donaldson, in inaugurating the Society, gave an eloquent address, and tendered much good advice to the students in the matter of temperance. He said it seemed to him that, before grappling with the evils of intemperance, we must inquire into the cause of it. He remarked that the northern nations were, as a rule, more intemperate than the southern, this being due, in a great measure, to the severity of the climate. The ancient civilisation did more to modify this than we do. The Romans had long covered walks, public baths, and places for gymnastic exercises, where the overwrought mind could find relaxation. The adoption of some such measures in our own day would, no doubt, have a beneficial influence in checking the prevailing intemperance. Another of the chief causes of intemperance, he said, is heredity. This tendency, when present, could only be eradicated by strenuous self-restraint. A third cause was the ferocious nature of the liquor used. Doctors may recommend it in certain cases; but, taken as it is ordinarily taken, it is a brutal drink. Another cause is the want of congenial society. In connection with this point, he suggested the more frequent intercourse of the students with their professors and with each other. This is one of the felt wants of our northern University, and perhaps this Society might be able to accomplish something in this direction. He concluded by urging the Society to consider what means might be adopted to meet this want, and to make life at the University as pleasant a remembrance as possible. The professor is right; it would be well if there was something of the nature of a *salotto*, *conversazione*, or something of that sort during the winter session, so that art, medical, divinity, and law students might come together, and meet with their professors in pleasant converse, and thus make the university more an unit, and establish a firmer bond between the members of its various faculties.

GLASGOW ASSOCIATION FOR PROVIDING TRAINED NURSES.

THIS association held its seventh annual meeting on the 7th inst. The secretary's report, which was read and adopted, shows that the nursing staff now numbers two superintendents, forty-two nurses, five assistant nurses, and six probationers. In the district, or gratuitous nursing, 1,035 patients have been attended during the year, many of the cases having been very severe, and requiring great care and skill. The demand for nurses to attend on patients who are able to pay for their services has been very great, and the income derived from this source has been considerably in excess of any previous year. From the treasurer's statement, it appears that the total income for the year was £2,599, and the expenditure £2,618, while the stock account shows a balance in hand of £892. It will thus be seen that the association is in a satisfactory position financially, and is making excellent progress in the work for which it was established, namely, providing nurses for both private and district nursing.

GLASGOW MEDICAL MISSIONARY SOCIETY.

THE annual meeting of the supporters of this society was held on the 8th instant, when the fifteenth annual report was submitted and approved. The extent of the medical work of the year was indicated by the fact, that 16,872 cases were treated—a number considerably in excess of those of the year preceding. The out-door work had been somewhat lightened for the medical staff, by establishing a medical missionary studentship in connection with the society, and the plan had been found to work well. It has been decided to erect permanent premises, on the south side of the river, for the branch of the society recently established there. A perusal of the superintendent's report shows the excellent work being done by the society; and it also reveals the amount of preventable misery and suffering that exists among the lower classes, from their improvident habits, and their neglect of health in the diet on which they live, and on which they bring up their offspring, alcohol and tea taking the place of simpler and more nutritious substances.

GLASGOW WESTERN INFIRMARY.

AT the eighth annual meeting of the subscribers and friends of this hospital, the report of the managers for the past financial year was read and approved. This report states that 3,665 in-door patients and 16,695 out-door ones have been treated during the year, the average daily number in the hospital being 311, while the greatest number at one time was 358, and the smallest 266. There were 244 deaths, or 7 per cent. of all the cases treated to a termination; but of these fatal cases, 53 were of such a hopeless character when brought to the hospital, that the patients died within forty-eight hours after admission. Deducting this number, the death-rate is reduced to 5.5 per cent. Comparison with the previous year showed that there had been an increase in the number of patients of 2,239 out- and 712 in-door patients. The ordinary income was £15,864, and the ordinary expenditure £15,887, showing a deficit of £23; so that, for the first time in the financial history of the institution, the revenue and expenditure had been nearly equal. Applying the whole expenses of the year to the in-door department, the cost per bed had been £51 1s. 9d., as against £53 12s. 2d. last year. The average residence of each patient had been 36½ days, and each bed fully occupied had afforded accommodation for eleven patients. Payment was made during the year by the trustees of the late Mr. Freeland of the entire sum of £40,000 left by that gentleman for the completion of the infirmary buildings; and the legacies received in the course of the twelve months aggregated £5,986. The capital account had been increased during the year by £2,285, and the balance now at the credit of that account is £28,484. It is apparent, accordingly, from the report, that there has been an increase in all the departments of income; that in the subscriptions from public works being one of the most encouraging and gratifying; and there is ample evidence of the efficiency and extending usefulness of the infirmary, and of the confidence which the public have in its present board of management.

IRELAND.

AN outbreak of measles has taken place in Newry. About fifty children have been admitted to the infirmary during the last few days, suffering from this disease.

WATERFORD DISTRICT LUNATIC ASYLUM.

LAST year, 73 patients were admitted, of whom 55 were cases of first attack and 18 relapsed cases. The total under treatment amounted to 345; and of these 33 were discharged recovered, 11 improved, and 3 incurable. The deaths amounted to 12. As regarded the social condition of the 286 patients in the asylum, on the 31st of last December, 72 were married, 11 widowers or widows, 196 single, and in 13 cases it was unascertained. Last week, a dissolving view entertainment was given by Dr. Ringrose Atkins, medical superintendent, before the inmates and some friends. The views, according to the *Waterford Standard*, "were produced with much clearness and effect—a most instructive lecture being delivered by Dr. Atkins, whose extraordinary memory and versatility of talent were simply astonishing."

CENSUS OF 1881.

THE Census Commissioners have issued recently a general report upon the census of last year, which reflects great credit for the promptness with which it has been published, and the ability with which it has been performed. There were in Ireland on the night of the last census 5,174,836 persons, and although this number shows a decrease as contrasted with 1871, yet it is satisfactory to note that there has been a general improvement in the classes of dwellings throughout the country. During the ten years 618,650 persons emigrated. The sick and infirm on the night of the census, amounted to 71,328, or one in 73 of the population. Of these, 40,090 were temporarily diseased, and 31,238 permanently diseased. By the latter term is meant the deaf and dumb, blind, lunatic, and idiotic. The number of cases of temporary disease was much less in 1881 than in 1871, showing a considerable improvement in the sanitary condition of the people. General hospitals have not increased in number since 1871, but their accommodation has been much augmented, while special hospitals are yearly increasing. There was not any hospital returned in 1871 as devoted solely to children, but now there are 128 beds provided for that class of the community. The total number of lunatics and idiots returned in 1851 was 9,980; in 1861, 14,091; in 1871, 16,505; and in 1881 it was 18,413. In 1881, 1,748 cases of lunacy were attributed to moral or mental causes; 1,540 to physical; and 871 were returned as hereditary. We may add that the number of medical practitioners has increased by 50 as compared with 1871.

HEALTH OF IRELAND: QUARTERLY REPORT.

During the quarter ended September 30th last, there were registered, in the 800 registrars' districts, 29,379 births, a number equal to an annual birth-rate of 23.1 in every 1,000 of the population; and 18,354 deaths, representing an annual rate of 14.4 per 1,000. The birth-rate was under the average rate for the corresponding quarter of the previous five years to the extent of 1.4 per 1,000; while the deaths were above those registered in the September quarter of last year to the extent of 396. The deaths from the principal zymotic diseases amounted to 1,759, or 9.6 per cent. of the total deaths, equal to a rate of 34.6 in every 100,000. This number was 179 over that recorded for the corresponding quarter of last year, but 1,298, or 42 per cent., under the number for the third quarter of 1880. Small-pox caused only 5 deaths, against 33 in the preceding quarter; measles, 259, against 298; scarlet fever, 231, against 241; whooping-cough, 152; diphtheria, 76; fever, 463, against 636; while diarrhoea and simple cholera together caused 573 deaths, against 424 for the third quarter of last year. There were 549 inquests held during the quarter, being equal to 1 in every 33 of the total deaths registered.

THE EGYPTIAN EXPEDITION.

[FROM OUR OWN CORRESPONDENT.]

Cairo, November 20th, 1882.

THE epidemic of enteric fever, for it may with justice be called an epidemic now, is still on the increase, and the number of deaths from this disease as great as ever. Taking the Base Hospital at Abbassayah alone, the figures are somewhat startling. Since October the 1st, the total number of admissions from all diseases is 1,735, and there have been 33 deaths. On November 18th, 428 remained in hospital. Of those remaining, 68 were enteric fever. There have been 23 deaths from this disease alone—that is, about one-fourth have died; and by far the majority of those attacked came from the mounted branches of the service: cavalry first, artillery and other branches next, in frequency. That the mounted men should be specially selected for disease, points to some peculiar work incidental to their duties, which the men on foot have not. What that is, remains to be seen. Surgeon Vacy Ash, Army Medical Department, has been specially detailed to inquire into this matter; and his reports, which are now in the hands of the General Officer Commanding, may lead to a clearing up of this mystery.

It has been said, by the opponents to the new military system, that the recruits, or rather, young soldiers, are now paying the penalty for the campaign. "They may have fought well at Kassassin and Tel-el-Kebir, etc., as well as other men; but you see now how it is telling upon them." Such like remarks one often hears; so I have been to the trouble of getting an average of the age of the men admitted to hospital. Taking all diseases, the average of men attacked is 24.46 years. I am speaking now more of the cavalry and mounted branches: for they have supplied by far the largest portion; and, consequently, offer a fairer field for criticism. The average age of recruits is nineteen and a half years; but it must be remembered that no recruit under twenty years of age was allowed to take part in the war. Taking, therefore, the age at twenty, it follows that most of the men attacked had an average of over four years' service, and these men can hardly be called recruits. They may not be seasoned soldiers or veterans, in the old acceptance of the term; but, I think, four years' service is as fair a standard for experience as even the old school would approve of. Personally, I feel certain a man of that service would be more likely to go successfully through a campaign, in all its phases, than the knowing "old soldier" of fifteen or twenty years, whose experience in "doing" those in authority over him is extensive enough to permit his evading nearly all sanitary or other regulations, and doing just as he likes. I think, therefore, the point of age may safely be left out of the question.

I have before remarked on the great amount of sickness in the cavalry and artillery over the infantry, and in this probably lies the key to the enteric mystery. Although the duties, or mode of living, etc., in these branches, may have much to do with it, it does not necessarily follow that one specific poison is the sole cause, but rather that several minor causes may be at work—each, within its scope, acting independently, yet to one common end. Take, for instance, the water-supply. Samples have been analysed, and found unwholesome, yet the infantry drink the same water, and their sick-rate is not one-half. Polluted water exists without doubt, and steps have been taken to limit the source of this pollution; but, allowing that the same water-supply goes to both camps, other causes than this must be looked for. The infantry now at Abbassayah certainly did not undergo the same amount of hardships as the cavalry; they were at Ramleh and Alexandria, for the most part; while the whole of the fighting, up to the assault on the heights of Tel-el-Kebir, was done by the mounted branches. If local causes alone were producing this extra amount of sickness, both infantry and cavalry would be equally affected. It may be that the constitutions of the latter were less able to withstand the effects brought to bear on them in Cairo; still, in common fairness, we must not put all down to a campaign which ended some months ago. I feel sure this hobby has been ridden to excess; and, in doing so, the real cause or causes have been overlooked.

Do not suppose that, in speaking of enteric fever, I mean that typical cases are invariably met with. I have seen innumerable varieties; and, if one had time, it would be most interesting to follow each clue to its origin. For instance, I have been noticing an officer going about his daily work for some time past. A few days ago, he put his coat on, feeling, as he said, "creaky" at mid-day. I took his temperature the next morning, and found it to be 102.4°. He had several spots on his abdomen, and was ailing in the right iliac region. It was an unusual case, but what was it? An enteric fever, but of a mild form. A similar case came under my notice a short time ago. An officer had been ailing for some days, but did not feel ill

enough to go on the sick-list, as he thought. The thermometer revealed a fever, with a temperature of 103.5°; and cases of the kind might be multiplied. If this kind of thing occurs among the officers, what more likely than that many of the "simple continued fevers" are really cases of enteric form; and in that case, instead of a hundred, more like three hundred admissions for this disease alone will be nearer the true mark. Then, again, the *post mortem* room tells a tale—instructive, indeed, if only worked out. Looseness of the bowels, with fever and delirium point to the all-absorbing disease; and the patient is removed from the general to the special enteric ward. He steadily goes down the hill, and at length dies. A true case of dysenteric ulceration turns out to be the disease; and yet morning and evening thermometrical observations were taken, and a skilful young surgeon did all he could to arrive at a correct solution of the symptoms. On the other hand, I have heard of a case cured of enteric fever, and readmitted with a relapse. He died, and an examination of the intestines discloses ulceration both of the large and small gut, showing plainly that enteric fever existed complicated with dysentery.

In addition to the complication just referred to, that of ague plays an important part, upsetting the expected ranges of temperature in a remarkable manner; in some instances, giving a higher morning than evening one, and in all cases leaving an impress of malarial taint. Quinine, in large doses, of course works well, and gives almost instant relief from the high fever that usually marks such attacks.

But, as to the cause or causes; they may be summarised as follows: (a) Polluted water; (b) Men, after the campaign, at first sleeping with their horses in stables, that subsequently proved most unwholesome; then in barrack-rooms, which were little less than latrines; followed by rest under canvas, on ground for the most part made up of dried excrement, mixed with the debris of old habitations; (c) Special duties in the mounted arms of the service which the foot-soldiers had not to perform; (d) Several causes acting on constitutions previously weakened, and less able to withstand disease than others which had not been so weakened, e.g., fatigue-work and grooming in the heat of the day, when other troops were not allowed to parade. Horses must be fed, watered, and groomed; and these duties have to be done whether the sun be hot, or its rays filtered through a cloudy sky.

The coincidence that horses and men should just now be both heavily affected with sickness, has led some to imagine that contact with the horse may be productive of disease in man. Of course, we must leave enteric fever out of this question. But, in doing so, we leave out what is causing so much anxiety at present; and not only that; but, if we look at the large preponderance of gastric disease over all others, being nearly ninety per cent. of the whole, and remember that many cases of enteric go unnoticed, we have little left that the horse can communicate to man, even if it were possible to do so. Again, officers have, if anything, suffered more from diarrhoea, dysentery, and enteric than the men, and they have no grooming to do. This sickness among the officers may possibly account for the want of "go" that exists amongst some regiments. It doubtless has its effect on the men, and may, to some extent, account for the depression that exists in the ranks generally.

We must not forget the well known fact that soldiers fall sick much more rapidly in a standing camp, with little to do and none of the excitement of a campaign, than on the move; or the lesson taught us by the natives, who, without exception, sleep on cots, and never lie on the ground, that to them proves so fatal.

Cairo, November 27th, 1882.

It is amusing to watch the biased opinions that are at present prevailing among the money-making people of this country. As long as the sickness and mortality among our troops was confined to Egypt and unknown at home, they did not care one straw, or take the trouble to interest themselves in the least whether "Tommy Atkins" died or not. But directly their interests are attacked, directly it is known abroad that their unsanitary modes of living, their bad liquor in the grog-shops, and their, of necessity, polluted water, is found to be so fatal, they fly at once to the weakest point of our armour, and make statements in the public prints which no amount of contradiction would remove or erase an impression only too readily formed. Naturally, they are anxious about it, for their very livelihood depends upon the reputation of their winter climate; and were this to go, they would indeed be in worse straits than during the late rebellion. But to be anxious about our sick-list, and endeavour to undermine the reputation of a very hard-worked body of officers, is another thing. The leading article I send you, evidently written by a medical man, is hardly what would be allowed in England; or the placards which may be seen in the public hotels here, warning people against the army medical

officers, and advising them to go to some local physician, scarcely what would be considered in England fair play.

It is true, I fear, that a spirit of jealousy exists between the civil and military nursing staffs at present in Egypt; and to this, probably, may be traced the public cry against the medical officers of the army. The civil European hospitals are visited by civil doctors practising in the city; and, although military men are attended in them, I am not aware of a single instance in which an army doctor has been called in consultation; yet they round on them, and complain that they—the civilians—are not called in. It is much too common a practice here to carp at one another's efforts, and many good men are often tempted to stray beyond their judgment in argument when palpable bias is so openly shown. Naturally, if this exists among the medical staff, it is not to be wondered at that it extends to the female portion; and thus, when visits are paid to some of the large military hospitals here, expressions escape which point to the bent of their inclination, and are unmistakably adverse.

The unhealthy condition of the troops, I regret to say, still continues, and day after day adds fresh victims to the epidemic of enteric which is now raging. At the present time, there are over fifteen hundred sick in the different hospitals, many of whom are suffering from this fever. I have visited most of the military hospitals in this country, and carefully inquired into the treatment adopted in these cases. Naturally, some amount of variety exists among such a large body of medical men, but all have one common object in view: the relief of the patient; and I venture to say it is accomplished as scientifically as in the majority of hospitals at home. Unfortunately, however, in some cases the young medical officers are not allowed by their seniors to put into practice the recent ideas with which they left London, and old-fashioned practices are occasionally indulged in by those in authority, which would not be approved of by most modern physicians. But in no case can more be said than that "it can do no harm". Still, young medical officers do not care to have seniority impressed upon them by the bedside, on the neutral ground of medicine, where the opinion of one man is as good as that of another, be he of one or of twenty years' service. I have heard many heart-burnings on this subject, and hope this may be the means of conveying a hint to those most to blame.

The total number of admissions for enteric fever alone at the Abbassayah hospital has been 104; 31 have died, 20 invalided to England, and 64 remain under treatment. A medical officer writes: "We have been too careful in returning only positive cases, so our death-rate appears high, average 27.19. From dysentery six have died, giving an average of 3.70, and from diarrhoea two, averaging 0.57. We have had about 700 cases returned as scarlet fever, civilians would have returned half those as enteric, but we wait until all doubt on the matter has been set at rest, by prolonged thermometrical and other observations which confirm the diagnosis, hence the apparent high death-rate for enteric fever. Unless they house the troops properly or take them off the ground, we shall never improve." The cavalry brigade has suffered so heavily, the sick averaging about 15 per cent., the authorities determined to remove them from Abbassayah to Hilonan, the sanatorium of middle Egypt. Hilonan is situated about fifteen miles to the south of Cairo, with which it is connected by rail. It is two and a half miles distant from the Nile, and 140 feet above its average level, is celebrated for its sulphur springs, 86° Fahr., which contained sulphuretted hydrogen, carbonic acid, and nitrogen in gases and as solids, chloride of calcium, of magnesium and sodium, carbonate and sulphuret of soda, silicium and a small portion of organic matter. They are under the superintendence of Dr. Engel, a German physician, who has kindly favoured me with the analysis and other particulars. On the west of the village rises a range of limestone hills composed of nummulite, petrified animalcula of the tertiary period. These limestone rocks extend at varying depths under the sand and gravel of the desert, here and there coming to the surface. It was from these hills that the rocks and stones were taken to make the great pyramids of Gezah and Sakhara, the hieroglyphics on the walls of the caves still remaining, to testify to the rations issued daily to the labourers.

The climate is most equable, rain seldom falling; in fact, continuous sunshine may be said to prevail. The average temperature for the five winter months the place is used as a health-resort was only 65.16° Fahr. in 1880-1, and 59.93° in 1881-2; the average on which rain falls is 3.2 days a month; relative humidity daily, 53.4 per cent.; and 2.2 days a month are absolutely calm. The force of wind averages 1.55. The healthy prevailing wind during the summer months is from the north, and on 8.2 days per month it blows from this quarter. The reverse may be said of the southerly winds, which blow 11.5 days; and in the hot summer months it is pretty persistent from this quarter—is hot and unbearable, and looked upon with dread by the inhabitants for its well-known unhealthy properties. The water is pumped up from

the Nile, and, with the exception of a little mud, which a filter soon removes, contains little or nothing injurious to health. The soil is chiefly sand mixed with lime, the *débris* of the adjacent lime-rocks; but as the men are all off the ground, on bedsteads, it has little or no influence on the health of the troops. Hilonan should be a very healthy place, and, from all accounts, both animals and men have benefited by the change. It is true that many sick men have been sent in daily, but these were men the seeds of whose disease were laid before they came out, and the place can in no way be made responsible for it. I think, when once the old and deadly effects of Cairo and Abbassayah have worn themselves out, it will be found that Hilonan is as healthy a place as any to be found in England, and more so than many at this time of the year. It is not fair to take the sick list as now produced, but even the morning sick list, from which the sick for the hospital is taken, is far below what it was in Cairo, being a reduction from seventy a day to twenty and twenty-five, and these not of a serious nature. The more I see of the health of the troops the more I am convinced that my former opinion was correct—that the whole of the men who took part in the campaign should have been sent home, and the army of occupation formed of regiments at home first for foreign service, and, further, we have been far too lenient and confiding with the Egyptians. The Germans taught us a lesson that we seem to have forgotten or ignored. When we marched into Cairo our troops should have been housed in the best palaces of the place, or else billeted on the inhabitants, as was done in the Franco-Prussian war. Instead of this we were kept under canvas, or, if placed under a roof, the rooms were full of vermin and worse, were living latrines; and then we wonder that enteric is rife among them, and our sick list fifteen hundred strong.

Some dissatisfaction is openly expressed by many medical officers remaining in Egypt at the way the roster is kept. Many young officers, of only a year or two's service, and none foreign, have been allowed to go home, while older men, who have had many years of foreign, and little or no home service, are kept in the country. Again, others who have had a longer home service than those retained in the army of occupation have been allowed to go home, while their less fortunate brethren have had to bear all the hard work and kicks, and they have not been a few. It is these little things which make a man discontented, and do more to weaken energy and destroy zeal in his work than all the campaigns put together; and yet we had hopes of better things.

THE HEALTH OF THE TROOPS IN EGYPT.

GENERAL SIR ANDREW CLARKE, accompanied by his staff, arrived at Brindisi December 9th on board the Peninsular and Oriental Company's steamer *Hydaspes*, and left for London direct at 3 p.m. Although, when he left Egypt on the 6th inst., there were 2,000 patients belonging to the army of occupation, including forty officers, in the hospital, the General spoke confidently of the improved condition of the troops, as evidenced by the much milder form the diseases were taking, and the very great decrease in the number of fatal cases. The General also expressed the opinion that when the whole force had been moved into the barracks and palaces which he had provided for its use, the health of the troops would be rapidly restored.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council of the College was held on Thursday, Dec. 14th. The minutes of the Quarterly Council held on October 19th were read and confirmed. Reports were received from the Court of Examiners as to candidates found qualified for the Fellowship, and from the Nomination Committee. The Board of Examiners on Anatomy and Physiology were re-elected: Mr. Power, Chairman; Messrs. Pick, Rivington, Bellamy, and Langton, as examiners on anatomy; and Messrs. Morrant Baker, McCarthy, Lowne, and Professor Yeo, as examiners on physiology. A letter was read from the President of the Royal College of Physicians inviting the Council to send delegates to confer with a Subcommittee of that College on the possibility of bringing about a combination between the two Colleges for a conjoint complete medical and surgical examination. It was resolved to accept the invitation of the College of Physicians; and the President, Mr. Spencer Wells, the Vice-Presidents, Professor John Marshall and Mr. Cooper Forster, Sir James Paget, and Messrs. Erichsen, Savory, and Holmes, were appointed as delegates to meet a Subcommittee of that College, constituted of the President, Sir Wm. Jenner, Sir Wm. Gull, Sir Risdon Bennett, Drs. Acland, Pitman, Sieveking, and Ord. A vacancy in the Court of Examiners was announced by the resignation of Mr. Luther Holden, whose period of office expires on January 9th. By Mr. Holden's resignation, a vacancy will also occur in the Dental Board.

COLLECTIVE INVESTIGATION COMMITTEE.

MEMORANDUM ON INHERITED AND ACQUIRED SYPHILIS.

By C. MACNAMARA, F.R.C.S., and THOMAS BARLOW, M.D.
(ON BEHALF OF THE COLLECTIVE INVESTIGATION COMMITTEE).

THE present inquiry (suggested by the valuable investigations of Mr. C. Palmer, of Great Yarmouth), is concerned with the effects of syphilis on the civil population of this country. An answer to the fundamental question of the extent of prevalence of the disease in different parts of the United Kingdom is, for many reasons, a very difficult thing to arrive at, except in general terms. The Committee, in preparing a list of questions, have asked, as the final one, for an opinion as to the relative frequency of the disease in any given district; but they are aware that the answers to this question must necessarily be vague and difficult to summarise statistically. They believe that, if a number of practitioners in different parts of the country will take the pains to fill up a few details of all the cases of syphilis in their respective circles of practice, a definite start will be made, and that in this way, at all events, the relative prevalence of the disease in different parts will not be over-estimated. Mr. Palmer has truly pointed out that a very large amount of acquired syphilis escapes observation and proper medical treatment in the early stage, and that a careful investigation of cases of Hereditary Syphilis gives evidence of a much larger amount of the acquired disease than would otherwise have been suspected. The Committee, therefore, attach great importance to the form No. VA, which refers to inherited syphilis; and upon this, in the first place, a few explanatory observations are offered.

In this, as in all the other forms issued, the replies are as far as possible to be made by allowing those words to remain which denote the symptoms present in any given case, and crossing out the words which denote symptoms not present in that case. But more space is left for the observer to fill in explanatory detail than has been allowed in the other forms already issued.

The syphilitic children who will be available for the purpose of investigation will be either (A) infants first noted when about six weeks of age, and subsequently kept several months—two years, if possible, under observation; or (B) children who have cut the permanent upper median incisors. The form No. VA can be used for either of these.

A. As to the infant of six weeks old, there can be little difficulty in recognising the disease when the signs are definite; but it is certain that many children, marasmic from bad feeding and neglect, are labelled syphilitic, in whom the proof of syphilis is wanting.

With respect to general nutrition, it has been pointed out that congenitally syphilitic infants, so far from being like "little old men," may be very well nourished indeed. The term "earthy colour," which is used in the form, refers, not to the colour of the rash, but to the complexion; it is often most noteworthy after the rash has subsided, and may, indeed, continue for several months. The symptom of hoarseness is quite as important as that of snuffles, as in syphilitic children it often alters the character of the cry for a long period. With regard to eruptions, a minute description of their character is not needed, but a note as to their situation is of some importance; for it will be conceded that squamous skin-lesions about the mouth and chin, and on the trunk, legs, and soles, are often of more value than those on the face, where the results of local and antiseptic treatment may be such as to obscure them.

It has been noted in a goodly number of cases that syphilitic children have undergone vaccination badly. In some, for instance, the conditions after the vaccination have been abnormal. The vaccine sore has been apt to ulcerate, and has been long in healing. It is difficult to say whether, in such cases, the results of vaccination are such as to be of any value; but it is certain that true vaccino-syphilis is a thing which is not often met with. It is such a definite thing, that it is difficult to find any excuse for some of the vague general assertions which have been made on the subject. From Mr. Hutchinson's investigations on the subject, it is clear that no case of alleged vaccino-syphilis can be accepted as such, unless there be a long interval of a month or two between the making of the vaccine sore and the appearance of a chancre, or a third chancre on the site of the cicatrix, which has been left after the healing of the proper vaccination-sore.

It has been noted more than once that vaccination of an infant at the age of six weeks, followed by a true vaccino-syphilis, may be followed by a rash; but on careful investigation it has been found that the child belonged to an unquestionably syphilitic family; and the study of

family groups often establish cases of delayed specific manifestations. It would be obviously unfair to cite such a case as one of vaccino-syphilis; but it is important that it should be noted.

The symptom, "SWELLING OF LONG BONES NEAR THEIR ENDS," needs a special note, because it is necessary to distinguish it from the common rickety swelling of the epiphyses, with which all are familiar.

A typical case may be given as follows. A syphilitic child, about the time of the subsidence of the rash, has been noticed to cry a very little when the wrist or elbow, on one or both sides, has been washed, and not to use the said wrist or elbow as much as the corresponding one. The symptoms may be so slight, that the medical man's attention is not drawn to it by the mother. Sometimes, however, the droop is so marked as to raise the suspicion of nervous disease, and such cases have been mistaken by very good observers for infantile paralysis. But as there is no wasting, and no alteration of reaction to faradism, the term "pseudo-paralysis" has been properly applied to the condition.

The part is not hot, and only very slightly tender on examination. There may be a very little swelling just above the junction of the epiphysis of the radius with its shaft. But the drooping is a more characteristic symptom than the swelling.

In a week's time a similar description will apply to the corresponding end of the bone of the opposite side, whilst the swelling and partial loss of power are lessening in the part first affected. Within a fortnight or three weeks, possibly the ends of all the long bones may be affected more or less; but the affection is found most commonly in the neighbourhood of the wrists, the elbows, the shoulders, and the knees. The amount of swelling may be almost *nil*, although the powerlessness is definite. Rarely suppurative occurs, which may extend into the joint. Occasionally partial dislocation of the epiphysis from the shaft ensues, with subsequent welding of the epiphysis with some displacement to the shaft, slightly altered from its proper relation. The commonest event of all, so far as can be determined clinically, is for complete recovery to take place spontaneously within about a month. The changes giving rise to these symptoms, are chiefly endosteal at the junction of the shaft with the epiphysis. But there is also a varying amount of inflammation of the periosteum or the perichondrium present which gives rise to the slight swelling which may extend up the shaft for several inches. There may be periosteal thickening on the middle of the shafts, but this is rare in the infant period.

ENLARGEMENT OF THE LIVER, although it ought to be noted, because it is often present in congenital syphilis, has but little value as a confirmatory symptom: first, because the liver is proportionally large in infancy, and it is difficult to state the limit of what is actually normal; and, secondly, because other causes besides congenital syphilis lead to its enlargement. With regard to ENLARGEMENT OF THE SPLEEN, the case is different. Dr. Gee's observation, that, in the early stage of infantile syphilis, some enlargement of the spleen occurs in a large number of cases, has been abundantly confirmed. Although, with the subsidence of the other symptoms, this enlargement often disappears, so that on examination, two or three months after, there may be no trace of it; yet in a few cases it persists, and indeed sometimes increases, so as to be considerable when the other signs have quite vanished. The importance of this sign is greatest when noted early, as, for example, when the child is from two to three months old, for at that period the enlargement of the spleen, due to rickets, can hardly come into question.

The term NATIFORM SKULL, as used by M. Parrot, needs some explanation. If a number of syphilitic infants be carefully watched in regard to the shape of the skull up to the age of twelve months, it will be found that, in some of them, lenticular swellings on the bone appear nearly symmetrically around the anterior fontanelle, but at a short distance from it; that is to say, one on each frontal, and one on each parietal bone, which may be described as bossed. These swellings are at first tolerably circumscribed, and often measure, in a child nine or ten months old, an inch in diameter. More or less circular at first, they tend to become more and more massive, and ultimately organise, giving rise to a more or less thickened skull. It is important to note that many of the children presenting such cranial swellings are rickety: it is equally true that these bosses may be found in syphilitic children presenting no signs of rickets. It is very important that the significance of the NATIFORM SKULL should be worked out.

B. In cases where the parents of syphilitic children who first come under observation are the subjects of the disease, it is exceedingly important to have the parents carefully examined and treated.

With regard to the PROMINENCE OF THE FOREHEAD, this enumerated as one of the signs of syphilis, is not a very common one; but every large head is a rickety head, and many rickety children have broad square forehead. But the prominence here referred to is near

the middle line, in fact, at and within the frontal eminences. It was insisted upon by Mr. Hutchinson many years ago, and is probably the result of the diffuse extension and organisation of the bossed condition of the frontal bones above mentioned.

Mr. Hutchinson's observations on the characteristic INTERSTITIAL INFLAMMATION OF THE CORNEA in congenital syphilis are now well known and generally accepted. It is essential to distinguish between scrofulous ulceration and this characteristic syphilitic disease. The latter is usually symmetrical, and attended by a diffuse ground-glass condition, resulting in general haze and opacity, but throughout wholly free from pustules or ulcers. Very rarely, however, it is attended by peculiar crescentic patches of congestion, the so-called "salmon-tinted patch." It is important to bear in mind the late period at which this form of disease may first appear; as late even as the age of thirty-five years. Also it may be here mentioned that, although the heading of the second division of this form is B., child (after second dentition) age—, adult cases of inherited syphilis may, without violence to the scope of the inquiry, be included under it. The deep affections of the eye have not been referred to in the form, but the committee will be exceedingly glad to have notes appended as to the presence of *choroiditis disseminata* in one or both eyes, which is almost as valuable a confirmatory detail as the special corneal affection. Notes of any nervous affections which have been observed may also be appended.

With regard to scars round the mouth, it is worth noting that they are of most value when narrow cicatricial lines extend right across the mucous membrane of the lips, especially if there be a radiating series of them. Occasionally careful observation will establish a network of linear cicatrices on the upper lip and round the nostrils as well as at the corners of the mouth and on the lower lip; and when present, this is quite pathognomonic.

THE CHARACTER OF THE TEETH are so valuable when present, that it is important to have them carefully noted; the more so that, in spite of Mr. Hutchinson's clear description, they have been much misrepresented. It may be pointed out—1. That only the upper median permanent incisors are characteristic, and sometimes only one of them is typical of the disease; 2. That these teeth are generally a little apart, instead of being in apposition, and are more or less dwarfed; 3. That, in a typical specimen, the width of the cutting edge is narrower than the width of the tooth as it emerges from the gum; 4. That a typical syphilitic tooth presents a single notch, not a serrated margin; and that occasionally, if the notch has not been actually scooped out, there is a little lunula-shaped area, as shown in the left-hand drawing, which, it is easy to see, may readily become a notch; 5. Finally, that, although such teeth, when present, are absolutely pathognomonic, the existence of normal permanent upper median incisors by no means excludes the existence of hereditary syphilis.

THE DEAFNESS of inherited syphilis is often only slight and temporary; but in many cases it is permanent and almost absolute. It is almost invariably symmetrical, and is, for the most part, unattended by pain or other subjective symptoms.

With regard to the PERIOSTITIS of long bones in inherited syphilis, it is worth notice that, as compared with the acquired form, it is often much more extensive, is associated with more hyperplasia of bone, and is very much less painful.

Stature and weight are asked for, because it would appear that occasionally a decided stunting in general growth occurs.

It will be found that the history of infantile syphilitic symptoms of the B group is often imperfect and unsatisfactory.

The headings which follow—viz., present and past evidences of syphilis in the father and mother—apply, of course, to either A or B. The remaining inquiries need no further remark.

No. V deals with cases of **Acquired Syphilis**. The most valuable cases are, of course, those coming under observation *ab initio*. Here the first difficulty that arises is as to the nature of the chancre. About some primary sores, the observer can have no question whatever; but as to the interpretation of others, most practitioners will admit that they have occasionally been at fault, as proved by the sequel. It is proposed, therefore, that a form No. V be commenced for every case of chancre coming under treatment, and the words "hard", "soft", and "doubtful" will include those which are equivocal in their characters at the time of first observation, as well as those which are definite. The observation for each case should extend, if possible, over two years at least; and it is recommended that it should be sent in, however few be the number of observations made as to the subsequent progress of each case.

THE AFFECTIONS OF SKIN AND MUCOUS MEMBRANES, which form the first two categories, are understood

to apply exclusively to the early secondary symptoms attacking those tissues. Although, of course, these lesions are generally only superficial, a record of any deep lesion occurring at this period is of great interest. The earliest period at which *iritis* may occur is also important. The *periostitis*, about which information is asked in the next line, is the early form, which is sometimes widely distributed though giving rise to little local swelling and generally transient. It is very desirable that the distribution and character of the ulcerative lesions which may appear late in the secondary stage should be carefully given. Recent investigations tend to show that *gummata* may occur much earlier in the progress of syphilis than had been supposed. We have no data as to the earliest period in which they are to be found in the viscera; but in certain cases a temporary (? general) enlargement of both liver and spleen have been observed in the secondary stage. Functional disturbances of the chest or abdomen, however slight in the secondary stage, are worth recording, with dates, under the head of visceral affections; and here also may be inserted a note of the early affection of the testes.

Affections of the nervous system in the early stages of acquired syphilis are probably not uncommon, but much information is needed, for example, on the date of the earliest occurrence of severe headache, mental disturbance, and deafness, all of which may completely pass away. Pathological study of syphilitic brain-disease, more especially that depending on specific lesions of the arteries, shows that, although a very wide range of time must be allowed, yet arterial disease may start very early indeed, perhaps even within the first two years, but certainly within the first three years after infection, and sometimes in spite of very thorough early treatment. It would, therefore, be of very great value to get records of hemiplegic attacks and unilateral fits in young adults whose syphilitic history has been carefully followed *ab initio*. The earliest date of occurrence, and the duration of localised paralyses, such as ptosis, paralysis of the sixth nerve, etc., also merit record.

The rigid definition of tertiary symptoms in our present attitude with regard to syphilis is almost impossible. But, for this inquiry, they may be roughly considered as those which appear after a definite interval of health has occurred, and which correspond with lesions for the most part non-symmetrical.

As the present inquiry is to extend over two years only, it may be said that the difficulty of enumerating tertiary symptoms will scarcely arise with those cases which are taken *ab initio*; and, with regard to other cases, if the characters and situation of any lesion be given, it matters little whether the terms secondary or tertiary be employed. The remaining inquiries on treatment, etc., require no comment.

Nov. 22nd, 1882.

SYPHILIS—ACQUIRED:—(1) Age of Patient; (2) Primary Sore; (3) Constitutional Symptoms; (4) Duration of Symptoms; (5) Date of Development of Tertiary Symptoms after Infection; (6) Communication to Others, (a) by Direct Contagion, (b) to Offspring; (7) Treatment; (8) Prevalence.

Observer's name.	Periostitis on tibia, clavicle, skull, other bones.
Address.	Visceral Affections.
Date of first obs.	Affections of Nervous System.
Date of last obs.	
When in doubt about purport of any question, refer to accompanying memorandum for explanation.	
Reply, where possible, by erasing words.	
This paper when filled up to be returned to	
..... Secretary of Local Subcommittee.	
Initials of patient or case number.	
M. or F. Age.	
Married. Single. Widowed.	
Temperate. Intemperate. Total abstainer.	
Occupation.	
Primary Sore—Hard, soft, doubtful.	
Date of contraction.	
Date of appearance.	
Position.	
Inguinal Glands—Enlarged, indurated, suppurating.	
SECONDARY SYMPTOMS.—Give dates of each.	
Eruptions on Skin—Character.	
Distribution.	
Affections of Mucous Membranes—Patches or sores on mouth, tongue, tonsils, soft palate, pharynx, larynx, anus, vulva.	
Eyes—Iritis.	
Other affections.	
Ulcerative Lesions of Skin.	
Of palate, of tongue, of larynx, of subcutaneous tissue, of other parts.	
	Tertiary Symptoms.
	Date of appearance after infection.
	Nature, date, and duration of affection in skin, tongue, throat, eyes, nose, bones, testicle, viscera, nervous system. Other parts.
	Treatment.
	Date of commencement.
	Mercurial alone. Length of course.
	Preparations employed.
	If salivation. Date of first appearance.
	Slight, moderate, severe.
	Iodide of potassium alone. Length of course.
	Amount daily.
	Mercury with iodide of potassium. Length of course.
	Preparations and amounts daily.
	Simple non-specific treatment.
	If Married. Date of marriage.
	Wife—Healthy, infected. Date of infection.
	Remarks regarding miscarriages or children born within period of observation.
	Remarks on any special feature of the case.
	What is your opinion as to the prevalence of acquired syphilis in your district?

from the President of the Committee of Council was discussed, and the questions appended to the letter were answered by the members of the Branch.

Papers.—The following were read and discussed :

1. Dr. Field read a paper on a Case of Injury of the Cerebellum, and exhibited the patient. Observations were made by Dr. E. Long Fox, Dr. Stewart, Mr. Collins, and Mr. Crisp.
2. Mr. F. K. Green read a paper on a Case of Gastrostomy.
3. Dr. A. W. Fox read a paper on a Case of Pernicious Anæmia, which was discussed by Dr. Goodridge, Dr. Field, and Dr. Markham Skeritt.—December 14th, 1882.

METROPOLITAN COUNTIES BRANCH: NORTHERN DISTRICT.

THE first meeting of the District was held on Thursday, November 30th, at 308, Camden Road. Dr. BARLOW was announced to read a paper on "Infantile Paralysis, especially in regard to its Home Treatment". In consequence, however, of a sudden and imperative call to a relative in the North of England a few hours before the time of meeting, Dr. Barlow was unable to be present.

Representation of the Profession in the General Medical Council.—Dr. G. W. POTTER said that, as he had received Dr. Barlow's intimation too late either to postpone the meeting or to secure a substitute, he would take the opportunity of bringing before the members a subject which was of great importance, and which would probably require practical consideration at no very distant date; he spoke of the direct representation of the profession in the General Medical Council. He said that, some years ago, he had paid a visit to the office of the Council; and there, in obedience to the mandate of the Imperial Government, had deposited the sum of five pounds sterling. He suspected at the time that the investment would prove to be unprofitable, because he feared that the interest would be *nil*, and he knew for certain that the principal was gone for ever. The affair had proved to be even worse than he feared; for not only was the interest, like the principal, a vanishing quantity, but the memory of the occurrence was a constant source of irritation to a mind constituted as his was to appreciate the facts and principles of political economy. He was a Yorkshireman, and everybody knew that nothing disgusted a Yorkshireman more than an ill-spent five-pound note. No doubt the money had been put to certain uses, and perhaps even to good ones; for had it not periodically brought together certain enlightened and eminent persons, and had not these persons talked? Now it was surely a good thing that persons should talk; and especially eminent persons. Moreover, when they talked it was desirable that they should talk in comfort and elegance, and to their own satisfaction. He was aware that his five-pound note, together with other compulsorily deposited five pound notes, had produced this pleasant result—pleasant to the talkers. But what he objected to, and with a very unpleasant emphasis, was that the five-pound note had done nothing for him. Dr. Potter did not mean to say that the General Council of Medical Education and Reform had done nothing whatever beyond talking. There were persons who were ill-natured enough to go even so far as this, but he was thankful to say that he had far too great a respect for talk and talkers to go such lengths. Nevertheless, there were persons of such a hard practical and unpoetical nature as actually to demand money's worth for their money. Not only did they do this as a general rule; but they were so audacious, so lost to all decency, as even to apply their principle to the General Council of Medical Education and Reform. These persons said to the Council: "We will admit that you have talked and talked long—perhaps you may sometimes have talked well. Nay, we will even admit that you have done one or two things which were worth doing. We do not forget your labours on the *Pharmacopœia*; or the fact that you have visited the examinations. We believe that you have done a good deal for examinations, and a very little for medical education—that is, for teaching as distinguished from examining. But here we have a question to ask you—In whose interests have you done these things? Oh, you say, in the interests of the public, of course. Do you think persons of our eminence are going to work in the interests of a profession, and that profession the medical, of all others? Dear me! what very foolish and uncultured persons you must be. But then, if you did all these things in the interests of the public, did the public pay you? And if you are too sublime to take any consideration for medical interests, are you too sublime to pay your expenses with medical five-pound notes? Did you ever hear of that vulgar proverb, 'The man who pays the piper may surely choose the tunes'? If your labours are spent solely in the interests of the public, we must ask, as Englishmen—nay, as countrymen of Cromwell, we must insist—that the public alone shall be your pay-

master. You probably know history enough to be aware that Charles Stuart lost first his kingdom and then his head for levying taxes in the interests of his people, and spending the money in his own. We are not anxious for your heads by any means, but we wish to remind you of an elementary principle in political government—a principle applicable in large and small matters alike." Dr. Potter said he admitted that public interests demanded an efficient supervision of the medical profession, as they did the supervision of the legal and military professions; though he was not aware of an efficient supervision of these latter. But if the public demanded a Medical Council to watch its interests, surely the least the public could do was to pay its own Council. If the public wanted a body of police to keep the medical profession in order, it was rather hard to make the profession pay the policemen's wages. But Dr. Potter contended, and that with emphasis, that the medical profession had some few interests of its own, and that these interests were perfectly legitimate. Messrs. Huxley and Turner, members of the Royal Commission, had spoken as if medical interests were little less than criminal, and not to be mentioned with patience. The constant teaching of a speciality of limited interest tended to make men narrow and unpractical and pedantic; and none but men of first-rate genius could free themselves from these cramping influences. Messrs. Huxley and Turner were very good schoolmasters, but they were not statesmen. Dr. Potter maintained that, if the present Medical Council declined to take any kind of charge of medical interests in addition to their existing duties, there was nothing to be done but to safeguard those interests by the appointment of a second Medical Council, whose sole business should be the safeguarding of those interests. This true "Medical Council" would, of course, be paid entirely by medical men. But he was of opinion that the present Medical Council could take charge of the interests of the medical profession as well as those of the public, provided that the profession were directly and adequately represented in it. He thought that half the members of the Council should be elected by the general body of the profession. He maintained, finally—1, that if the public appointed all the members of the Council, the public should pay all the expenses; 2, that if the Council were partly appointed by the public and partly by the profession, those appointing should pay their own representatives; 3, that no medical council could be satisfactory to medical men which did not provide for the direct and adequate representation of the whole profession.—Dr. HENTY said that the speaker had dealt with the subject in a very radical fashion, but he was bound to confess that he agreed with what had been said. It seemed to him wrong that the Medical Council, who, as a body, existed solely on the means supplied by the fees of medical men, should affect so supreme a disregard for every practical question which affected the interests of medical men.—Dr. A. O. GROSVENOR said that the question was one to which he had not previously paid much attention. He thought a very clear case had been made out, and he should certainly do his utmost to bring about a reform which the profession ought to have insisted upon long ago.—Other speakers concurred.—At the close of the discussion, the following resolution was proposed by Dr. HENTY, seconded by Dr. A. O. GROSVENOR, and carried unanimously: "That, in the judgment of this meeting, no medical council can be in any sense satisfactory to medical men which does not provide for the direct and adequate representation of the whole profession."

SPECIAL CORRESPONDENCE.

ABERDEEN.

Aberdeen Infirmary and Pathology.

AT a meeting of the managers of this institution, held on Monday last, the question of the office of pathologist was under consideration. The condition of matters is the following. The deed of foundation of the Chair of Pathological Anatomy, as well as the recommendations of the late University Commissioners, state that, in order to the successful teaching of pathology, the professor or teacher of pathology ought to have access to the materials which an infirmary affords. In order to carry out this object, Professor Hamilton wrote to the managers, requesting that he be allowed this privilege, and that he also be permitted to show his students how to conduct *post mortem* examinations. The matter was referred to a committee, a majority of whom reported to the managers that, in addition to having access to the materials which the infirmary affords, the professor of pathology be allowed to make one-half of the hospital *post mortem* examinations. At the meeting of managers, Professor Struthers moved that the consideration of the report be delayed

until next quarterly meeting, at the same time saying that he had reason to hope that the matter would be arranged.

The situation is a complicated one. Dr. Rodger is at present pathologist to the infirmary, and has been so for several years. The question at issue is a most important one, and demands serious consideration. On the one hand, Dr. Rodger is at present pathologist to the infirmary, while, on the other, Dr. Hamilton is professor of pathology in the university, and he is naturally desirous to afford to his students every possible facility for the study of morbid anatomy. This, of course, can only be obtained in an infirmary. There can be no doubt that the perfect arrangement would be that the professors ought to be allowed this privilege; but, in as far as Dr. Rodger is already in possession, there is a difficulty in assigning to Dr. Hamilton part of the work.

Further, there can be no doubt that it would be of advantage, both to the Infirmary and to the University, were there a closer union between these two institutions. It is difficult to see why there should be only one pathologist, when there are three surgeons and an assistant-surgeon and three physicians. Why not two pathologists, to carry out the arrangement recommended by the committee? In the interests of the many—i.e., in the interests of the students—this seems an equitable arrangement. Above all, it is most desirable that the professor should show in practice what he preaches, *ex cathedra*. The matter remains *sub judice*, but we trust that, ere the next quarterly meeting comes round, Dr. Rodger may be in a position to see his way to permit the professor of pathology to act along with him, and thus conserve his own interests and further the interests of the medical school.

CORRESPONDENCE.

MANCHESTER MEDICO-ETHICAL ASSOCIATION.

SIR,—At the last meeting of the above Association, held on the 8th instant, Dr. Irwin introduced for discussion, "The Position of Ship-Surgeons," and the following resolution was unanimously adopted: "That this Association is convinced that the medical and sanitary department of our mercantile marine are in a highly unsatisfactory condition, and that the lives of passengers are frequently endangered thereby. That this Association desires to press upon the Government the necessity of an immediate inquiry into the position, status, and efficiency of surgeons upon passenger ships."—We are, Sir, your obedient servants,

A. WAHLFUCH, M.D. } Secretaries.
JOHN BROADBENT, }

27, King's Street, Manchester, December 11th, 1882.

THE SANITARY STATE OF EGYPT, AND HEALTH OF THE ENGLISH SOLDIERS.

SIR,—In the Egyptian correspondence of the BRITISH MEDICAL JOURNAL of September 30th, your correspondent, writing from Alexandria under date Sept. 12th, writes: "Part of the troops will remain in barracks, and it seems a serious question how they are to be provided with healthy accommodation. The sanitary arrangements of most private houses and all public buildings are vile beyond description." This was written chiefly with reference to Alexandria, but may be taken as referring to every town and village of Egypt. Not only is the sanitary state of all buildings the worst that possibly could be, but all open spaces and closed alleys in and about the towns are simply filled with and saturated with excrement, and consequently infectious matter. None except the higher class native houses possess water-closets. There are no such institutions as public privies or latrines, or public conveniences of any sort. The ordinary natives, therefore, male and female, are obliged to resort to any open space or alley they can find about the towns, or make use of a vessel in the house, the contents of which are pitched into the streets; and note that the streets in the native quarters of the towns are not paved, nor formed in any way, but consist of soil trodden hard, into which is trodden all the excrement deposited in them. The whole length of the shore on the north of Alexandria is a public privy. In the native quarters of the towns, the poor Europeans may be seen, at all hours, resorting to the streets for the demands of nature seem to have a prior claim to modesty. The same thing may be seen every evening in all open spaces of the poorer native part of the town. The result is, that the whole of the town is a cess-pit, and the streets are open sewers, and the excrement is trodden out of sight.

I trust that the position, which is not exaggerated, your readers will

wonder that we are ever free from dire pestilences; and well they may. But Heaven has blessed Egypt with a healthy climate. Our great antiseptic is the sun, a constant high temperature, and dry atmosphere. It is not till the autumn months, when the temperature at night begins to fall sensibly lower than during the day, and dew becomes deposited, that the evil influences make themselves severely felt; and the effect increases with the diminished temperature of the winter and first rains. People residing in the country, and knowing the dangers, soon learn to know how to avoid them; and the health of the inhabitants, so far as we can learn from imperfect statistics, will bear pretty favourable comparison with most countries in Europe. But new comers in the country are very liable to suffer, or go through a seasoning, as it is called, of an attack of fever, dysentery, or diarrhoea, if they happen to be located, on arrival, near any such centres of the towns as I have described. Add to what I have described the amount of decaying matter left by the overflowing of the Nile or the water of irrigation from the canals, and the number of decaying carcases here and there over the country, left to be eaten by dogs and birds of prey, or pitched into the nearest canal.

When an animal, such as a horse or buffalo, is dying of disease, or is fairly used up and good for nothing, the Egyptians do not put it out of misery or pain by killing it and burying it, but drag it outside the town and leave it to lie down and die and be eaten by the dogs; and one's olfactory organs may frequently detect several decaying carcases of such in a long walk round any of the larger towns. Such is the sanitary state of things against which the English army of occupation has had to contend, many of its soldiers weakened and ill from the hard work and privations and exposure of the summer's campaign, and many—I may say most of them—young, and of an age at which they are as liable to contract enteric fever as children of a certain age to contract whooping-cough, measles, or scarlatina. It is little wonder that the amount of sickness amongst them has been great, however much it is to be regretted, and however much every Englishman must grudge the death of an English soldier by disease, after escaping the dangers of a campaign and the battlefield. There are other causes, no doubt, besides bad sanitary arrangements, which help to swell the sick-list—inattention to what they eat when out of barracks on leave, and more especially inattention to what and how much they drink. Only a few nights ago I passed eleven soldiers leaving town at 11.30 P.M., on their way to their barracks at Ramleh, one of whom was drunk. I do not mean this to be taken as a fair average, but I am informed that the amount of drunkenness is greater than in the same regiments before coming to Egypt. An attempt has been made by some members of the community here to attribute the mortality among the troops to the army surgeons, to their ignorance of the climate, and their inability to treat Egyptian diseases. This has found expression in circulars printed and distributed by ignorant persons, who evidently thought they had found in it a royal road to fame and notoriety. The local press, also, has done its share, the only English organ here—the *Egyptian Gazette*—having published a medical "leader" accusing them of ignorance in allowing milk in typhoid fever, and treating diarrhoea and dysenteric symptoms sometimes with acetate of lead and opium! I had hoped to get one of the circulars to send to the JOURNAL, but I was too late in applying; they were all taken up except one which was last seen suspended in the back room of a drinking-shop, with this annotation at foot—"How much have the local medical men paid for this advertisement?" If such articles were inspired by medical men the rebuke was well deserved. I visited to-day, in company with Deputy-Surgeon-General Manley, V.C., the military hospital at Gabari, and the *Carthage* hospital ship. Jaundice, enteric fever, dysentery, and a very severe chronic form of remittent fever seem the principal diseases at present. There was one case of mild confluent small-pox in convalescence, but the disease had been recognised early, and the patient immediately separated from the others and removed to a tent on the roof of the hospital, so that there is little danger of the disease spreading. The surgeons, far from showing ignorance of the diseases, seemed to have clear ideas on both diseases and treatment, and to be careful and minute in their observations, and enthusiastic in their work. When the results of their work are published it will be a useful addition to our knowledge of the "Diseases of Egypt."

The hospital at Gabari, which has been the base hospital at Alexandria since the commencement of the campaign, is ill suited for winter quarters, and I am glad to hear there is a proposition to remove it to one of the Khedive's palaces at Ramleh. The present hospital consists of two enormous rooms, each capable of containing over one thousand patients, and the ground outside, which is soon to be the first rains of winter set in. Another strong reason against it as a winter hospital, which I pointed out to Deputy Surgeon-General Manley to-day, would be the

difficulty of keeping the patients warm. The place was originally a cotton-shed, with huge doors opening directly on the road, and facing the north-west, from which the winter storms always come; and the cold in winter is sometimes of such a piercing character, that, in well-built civil hospitals, we often find a fire in the room very comforting, and an excellent tonic. At the Khedive's palace at Ramleh, the rooms will be more numerous and smaller, and, by contrivances for ventilation and heating, they will be able to regulate the air to the various cases. I see that the correspondent of one of the London daily papers makes a serious complaint that the military surgeons do not consult their civil brethren, who have been long resident in the country. With regard to Alexandria, this is not true.

The local journal which criticises so learnedly and so severely the practice of the military surgeons, describes the president of the Egyptian Board of Health and Hygiene, as "a man whose sagacity in sanitary matters is well known." You will agree with me, I think, that there is great room for the display of such sagacity from the description I have given of the sanitary state of Egypt; and I hope, in the interests of the English soldiers, Her Majesty's Government will not permit this sagacity to remain unapplied. "Who drives fat oxen should himself be fat." Who direct sanitary matters, should themselves understand, and practice, and, appreciate sanitation. The Egyptians do not, but may be taught. Let the English Government teach them in their own interests.—I am, etc.,

A RESIDENT.

Alexandria, December 4th, 1882.

THE REPRESENTATION OF BRANCHES ON THE COMMITTEE OF COUNCIL.

SIR,—It is, perhaps, a little too much to expect of a practically self-elected body like the Committee of Council, that it should take any really effective steps to put an end to the anomalies of its constitution, or, really, seek to reform itself; but if it be desired to gauge the feeling of the branches on the whole matter, another question should, I venture to think, be added to those propounded in the sub-committee's circular letter—viz., supposing the representation of the branches to be made sufficient, and these representatives' expenses to be paid for, do you think it would be satisfactory if, as now, their votes were to be swamped by those of the vice-presidents of the association? This, sir, will be found to go to the root of the matter, and until it is answered one way or the other, it is idle for the sub-committee to hope that they can present any scheme of reform which will escape adverse criticism at Liverpool. I am far from undervaluing the proposal to pay the expenses of representatives if branches do not or cannot pay them. I believe such a plan would secure the far more regular attendance from distant parts of England, and also from Ireland and Scotland, of representatives whose assistance and local knowledge would prove simply invaluable to the association in regard to the multitudinous professional matters which its enormous growth of late years brings its officials into contact with; and, in fact, when this subject was discussed in 1879, I got a resolution carried by the Council of the Metropolitan Counties Branch in favour of such payments; but I cannot shut my eyes to the fact that the demand for reform has grown since then (as such troublesome demands are likely to grow when neglected), and that now any proposal which left untouched the greatest anomaly of all—the presence, that is to say, on the executive of the association of a large body of wholly irresponsible persons—would be bound to be opposed by all who desire to see the affairs of our association conducted in accordance with modern ideas of representative government.—Your obedient servant,

H. NELSON HARDY.

MESENTERIC CYSTS AND TUMOURS.

SIR,—It is but fair that I should add, with regard to "Mr. Doran's interesting case of cyst of the great omentum," mentioned in Mr. Spence-Wells's communication on the above subject, that the patient was under the care of Dr. Bantock, who removed the cyst. The only operation I performed, in this case, consisted in drawing a sketch of the peritoneal relations of the tumour, which is now appended to my report in the twenty-third volume of the *Transactions of the Obstetrical Society of London*.—I am, etc.,

ALBAN DORAN.

MR. STEELE'S CASE OF EXTRA-UTERINE PREGNANCY.

SIR,—Pray allow me a brief reply to Mr. Steele. I cannot find in any authority accessible to me a description of an "intramural" pregnancy. The very rare form of "interstitial" pregnancy is described from Dezeimeris down to myself as a variety of "extra-uterine pregnancy." But Mr. Steele's case had become an abscess of the abdomen, and all fine pathological distinctions were merged in that fact;

and in dozens of perfectly analogous cases, as I said before, I have operated with uniform success. This, of course, does not mean dozens of cases of extra-uterine pregnancy, though it includes some.—I am, etc.,

LAWSON TAIT.

DEMONSTRATION OF ORTHOPÆDIC APPARATUS, AT WORCESTER.

SIR,—I shall be glad if you will allow me to correct an error of omission which I inadvertently made in my report of the above demonstration. I stated that the instruments shown were invented by Mr. Chance, but omitted to add that they are still being used by him at the City Orthopædic Hospital. I trust that in fairness to Mr. Chance you will allow this correction to appear in the JOURNAL.—Yours faithfully,

24, Queen Anne Street, W.

E. NOBLE & SMITH.

MILITARY AND NAVAL MEDICAL SERVICES.

THE ARMY MEDICAL DEPARTMENT.

SIR,—In your article in the JOURNAL of November 21st, on the charges made against the Army Medical Department in Egypt, you hit on the weak points of the department, viz., want of autonomy, mobility, and independence of other departments.

The *Army and Navy Gazette* would seem to have it that our functions are merely those of a prescribing or operating surgeon, with everything found to his hand. In the field, it is soon realised that much more is required for our efficiency as a department, both in administration and executive work. The function of a gunner is to fire guns; but what would be thought if, when a battery was found inefficient on service, it were discovered that, prior to a campaign, the guns were carefully parked at Woolwich, the horses at Aldershot, the ammunition at Chatham, the equipment at Portsmouth; and that no practice in their combination had been permitted. So it is with us. When a bearer company or Field-hospital goes on service, the various elements are collected from as many different sources: from the Medical, Commissariat, Ordnance, and Transport Departments. No wonder if it should prove a disjointed affair. I really believe that such a thing as a field-hospital or bearer company, in its entirety, never existed in England.

In 1878, when a continental campaign was imminent, a number of men were trained at Aldershot; but without transport, equipment, or stores, such as would have been used in the field, and which were all duly noted in regulations as necessary. Every schoolboy knows that only "practice makes perfect," but we are never able to learn by experience, except at great cost, loss, and inefficiency, the result of previous parsimony.

In Afghanistan, after the evacuation of Kandahar, all the field hospitals there were broken up in May 1881, though it was urged by the medical authorities that one should be kept ready for service. But no; it was thought they would never be wanted again. Yet, within three months, another had to be hurriedly got ready; and in eighteen hours all the indents in duplicate or triplicate for the various requirements had to be made out, countersigned, presented, and, to a certain extent, complied with by the Commissariat, Ordnance, Transport, and Medical Departments; and the incongruous mass of stores, tents, carts, camels, mules, etc., arranged and started for the outposts with an infantry brigade. It was a rabble for several marches; and the bulk of the commissariat stores did not arrive for several days, for want of transport, I believe. A field hospital, or bearer company, should be as complete in every respect, and in as perfect training, as a battery of field artillery.—Yours, etc.,

SOLDIER-SURGEON.

November 1882.

PROMOTIONS AMONG ARMY MEDICAL OFFICERS IN EGYPT.

WE learn from Cairo that under the *Gazette* of November 17th, containing the lists of honours and promotions among the army medical officers who had been serving during the campaign, reached that city one omission gave rise to considerable comment. The promotions in the army medical ranks included two of each grade on service in Egypt, and generally the two seniors were selected for advancement. In the rank of surgeon, however, the senior, Dr. Vacy Ash, was passed over by two surgeons junior to him in the list. We are informed that Dr. Ash is a surgeon who has always had a high reputation during his eleven years' service in the department, and that he was particularly noticed for his zeal and activity in the Zulu campaign in South Africa. When sent to Egypt, he was attached to one of the bearer companies, but was removed from this service to be placed in medical charge of the 7th Dragoon Guards, who were then suffering from enteric fever

(One other gentleman passed, whose name cannot be published until

his admission at the next meeting of the Court of Examiners in January, as he did not remain to hear the result.

Seven candidates out of the sixteen examined, having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for twelve months.

With this meeting, all examinations are brought to a close for the present year.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, December 7th, 1882.

Culhane, Francis John Fitzgerald, St. Helen's, Hastings.
Dabbs, Charles John, Newport, Isle of Wight.
Hewitt, Frederick William, Grove Place, Pond Street, S.W.
Maddison, Charles John, William Street, Regent's Park.
Sparkes, Claud Stephen, St. Catherine's, Guildford.
Stephens, Samuel, Cambourne, Cornwall.

The following gentlemen also on the same day passed their Primary Professional Examination.

Anwyl, James Norman, St. Bartholomew's Hospital.

T. KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examinations for the Licences of the College, held on Monday, Tuesday, Wednesday, and Thursday, December 4th, 5th, 6th, and 7th, the following candidates were successful.

For the Licences to practise Medicine and Midwifery.—George Purcell Atkins, Cork Street Hospital, Dublin; Patrick Donellan, Castlereagh; George Henry Johnson Fisher, Rathmines, Dublin; Arthur Joseph Greene, Dublin; Robert Joseph Gubbins, Kilfinane, Co. Limerick; Richard Hatch, Dublin; James Joseph Kerr, Meadow Bank, Sligo; Patrick Maguire, Arney, Co. Fermanagh; Edward Duddy Mullan, Londonderry; Michael James Nolan, Limerick; Rowland Pollock, Navan, Co. Meath.

For the Licence to practise Medicine only.—John Leslie Barrington, Dublin; Edward Vernon, M.R.C.S.Eng., 1853, Kingston, Yeovil, Somersetshire.

For the Licence to practise Midwifery only.—John J. Austin, M.D. Royal Univ. Irel., Ahoghill; Alfred Wynter Hawthorne, M.D. Royal Univ. Irel., Dromore, Co. Down.

The following Licentiates in Medicine of the College, having complied with the by-laws relating to Membership pursuant to the provisions of the Supplemental Charter of December 12th, 1878, have been duly enrolled Members of the College.

John Joseph Mullan, Licentiate 1861, Dundrum, Co. Dublin; George St. George Tyner, 1865, Downpatrick; William Tobin, 1869, Halifax, Nova Scotia; John Byrne Power, 1871, Kingstown, Co. Dublin; Charles Edward Geoghegan, 1876, Surgeon R.N.

MEDICAL VACANCIES.

The following vacancies are announced:—

BELFAST ROYAL HOSPITAL.—Ophthalmic Surgeon and Gynaecologist. Applications by December 16th.

BOYLE UNION.—Medical Officer for the Dispensary. Salary, £100 per annum, and £15 as Medical Officer of Health. Applications by December 20th.

BRINTON, STREATHAM, AND HERNE HILL DISPENSARY.—Resident House-Surgeon. Salary, £150 per annum. Applications to the Secretary at the Dispensary, Water Lane, Brixton, S.W., by December 16th.

BURY DISPENSARY HOSPITAL.—House-Surgeon. Salary, £120 per annum. Applications by December 18th.

CASTLEBAR UNION, Castlebar Dispensary, North Division, No. 2.—Medical Officer. Salary, £110 per annum, with £15 as Medical Officer of Health, registration, and vaccination fees. Election on December 16th.

CUMBERLAND INFIRMARY, Carlisle.—Assistant House-Surgeon. Salary, £60 per annum. Applications by December 26th.

DENBIGHSHIRE GENERAL INFIRMARY, Denbigh.—Honorary Dental Surgeon. Applications by December.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Out-patient Clinical Assistant.

CHIPPING NORTON UNION.—District Medical Officer. Salary, £65 per annum. Applications to the Clerk by December 25th.

GENERAL LYING-IN HOSPITAL, York Road, Lambeth, S.E.—House-Physician. Salary, £50 per annum. Applications by December 16th.

HOLBORN UNION.—Dispenser. Salary, £2 2s. per week. Applications by December 19th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Three Resident Clinical Assistants. Applications by December 30th.

LONDON HOSPITAL.—Medical and Surgical Registrar. Salary, £100 per annum. Applications by December 18th.

NATIONAL DENTAL HOSPITAL.—Dental Surgeon. Applications by December 22nd.

NATIONAL DENTAL HOSPITAL.—Assistant Dental Surgeon. Applications by December 22nd.

NORTH-WEST LONDON HOSPITAL.—Physician. Applications by December 16th.

NOTTINGHAM DISPENSARY.—Resident Surgeon. Salary, £180 per annum. Applications by December 21st.

NOTTINGHAM DISPENSARY.—Resident Assistant-Surgeon. Salary, £160 per annum. Applications by December 21st.

OWENS COLLEGE, Manchester.—Demonstrator and Assistant Lecturer in Zoology. Salary, £150 per annum. Applications by January 6th.

ROYAL FREE HOSPITAL.—Junior Resident Medical Officer. Applications by December 20th.

SOUTHPORT INFIRMARY AND LOCAL DISPENSARY.—House-Surgeon. Salary, £100 per annum. Applications by December 16th.

ST. MARY'S HOSPITAL, Paddington, W.—Physician. Applications by December 30th.

ST. SAVIOUR'S UNION, Southwark.—Medical Officer for the First District. Salary, £130 per annum.

UNIVERSITY COLLEGE, London.—Jodrell Professor of Physiology. Salary, £264 per annum. Applications by January 24th.

UNIVERSITY OF EDINBURGH.—Examiner in Medicine in each of the Departments of Chemistry, Anatomy, Midwifery, and Practice of Physic. Applications by January 15th.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.—House-Surgeon. Salary, £70 per annum. Applications by December 20th.

MEDICAL APPOINTMENTS.

BAKER, Henry F., F.R.C.S.Ed., appointed Surgeon to the Cripples' Nursery, Park Place, Clarence Gate.

BROWN, W. J., M.B., appointed Surgeon to the Iron Works, Chester-le-Street.

CORVEN, M. Cursham, L.S.A.L., reappointed Out-patient Clinical Assistant at the East London Hospital for Children and Dispensary for Women.

FOWLER, Charles Owen, M.R.C.S.Eng., L.S.A., appointed Assistant Resident Medical Officer to the London Fever Hospital, Islington.

KEMPE, Arthur, M.R.C.P., reappointed Medical Officer of Health, for Exmouth; term of three years.

LOWE, George, M.B., appointed Medical Officer and Public Vaccinator to the Third District of the Henstead Union, *vice* B. R. Boast, L.R.C.P., resigned.

MACLEAN, Kenneth, L.R.C.S., L.R.C.P., appointed Honorary Surgeon to the Stockport Infirmary, *vice* J. D. Bird, M.B., deceased.

MILLES, W. J., L.R.C.P., appointed Ophthalmic Surgeon to the Great Northern Hospital, *vice* W. R. Lyell, M.D.

SHAW, J. A., M.R.C.S., appointed House-Surgeon to the Victoria Hospital for Children.

STRETTON, J. Lionel, M.R.C.S.Eng., appointed Honorary Surgeon to the Kidderminster Infirmary, *vice* Samuel Stretton, resigned.

STRETTON, J. Lionel, M.R.C.S.Eng., appointed Deputy Medical Officer to the Kidderminster Union.

STRETTON, Samuel, M.R.C.S.Eng., appointed Honorary Consulting-Surgeon to the Kidderminster Infirmary.

WHITS, Charles J., appointed Certifying Surgeon under the Factory Act for Snodland and neighbourhood, *vice* T. L. Marsden, resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

EMRYS-JONES.—On the 5th instant, at 10, Saint John Street, Manchester, the wife of Dr. Emrys-Jones, of a son.

RAYNER.—On the 12th instant, at the County Asylum, Hanwell, the wife of H. Rayner, M.D., of a daughter.

MARRIAGES.

ANDREW—MARTIN.—At Christ Church, Mussoorie, on the 28th October, by the Rev. H. Spring, George Andrew, M.B., Surgeon-Major, A.M.D., to Milly, widow of the late Curtis Martin, Brigade-Surgeon, A.M.D.

MACGEAGH—DAVIES.—December 6th, at Baltimore, U.S.A., by the Rev. Dr. Leeds, T. E. Foster MacGeagh, M.D., etc., eldest son of Benjamin Scott Foster MacGeagh, Esq., of Coombe House, Coombe, Surrey, and the Middle Temple, London, to Fanny, daughter of the late S. D. Davies, Esq., of Baltimore, U.S.A., and niece of Sir W. Rose Robinson, K.C.S.I.

POYNDR—NISBETT.—On November 13th, at Landour, N. W. India, by the Rev. P. Nicolas, chaplain, George Frederick Poynder, surgeon A.M.D., eldest son of Rev. L. Poynder, retired chaplain in India, to Mary, daughter of Major-General Nisbett, B.S.C., of Shirley, Southampton.

SHARP—MORETON.—On the 7th instant, at Bushbury Parish Church, by the Rev. George Tuthill, vicar of St. Paul's, Wednesbury, assisted by the Rev. J. W. Kenworth, curate in charge, Gwinnett Sharp, surgeon, Walsall, to Elise, younger daughter of the late John Moreton of Moseley Court, Wolverhampton.

DEATHS.

CORBETT.—On the 15th November, of typhoid fever, at his father's residence, 5, Crofton Terrace, Kingstown, from typhoid fever, Joseph Edward Corbett, M.D., L.R.C.S.I., late medical officer at "Opobo", west coast of Africa, fourth son of David Corbett, Esq., 12 Clare Street, Dublin.

DOYLE.—December 8th, 1882, at the Memorial Hospital, Jarrow-on-Tyne, aged 32 years, Anthony Doyle, Esq., L.R.C.S.I., resident surgeon.

GOYDER.—On December 10th, at 1, Higham Place, Newcastle-on-Tyne, Charles Melvor Goyder, L.R.C.P.Lond., M.R.C.S.Eng., aged 26.

SMALL-POX IN SOUTH AFRICA.—Intelligence reaches us from Cape Colony that small-pox continues to diminish, the fresh cases reported during the last week of October averaging only about seven daily. The medical staff has been reduced, and the special meetings of the Town Council and the Relief Committee are now only held weekly. Altogether there was every evidence that the disease is fast dying out, and the Agent-General (Captain Mills), has since received a telegram announcing that the disease has practically disappeared.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to the Manager, at the Journal Office, 161A, Strand, London, and not to the Editor.

DIFFICULTY IN PRODUCING ANESTHESIA.

SIR,—Can any of your readers inform me if they have ever met with any very great difficulty in anæsthetising patients? A few days ago, I had to anæsthetise a boy ten years of age. I gave ether first. After using quite three ounces, the boy seemed just as lively as ever. I then gave chloroform. After using an ounce of this, I had, at the request of the father, to give the matter up, at least for the present. It was altogether one hour from first giving the ether to leaving off the chloroform. He was sick once during the ether, and once while giving the chloroform. His pupils were insensible; and he was unconscious for at least a minute once during the ether, and twice during the chloroform. His face was convulsed at these times, and I therefore took the inhaler off, when he would spring up in bed and begin talking. During the time of giving the chloroform, he was quite hysterical, and remained in this state for an hour or two, when he went off to sleep, and slept till the next morning.

I have had considerable experience in giving chloroform, as, ten years ago, I was house-surgeon to a metropolitan hospital, where it is one of the duties of the house-surgeon to give chloroform. I have also had some experience in this way when attached to a provincial hospital. The only conclusion to which I can come is, either that the anæsthetics were not pure, or that the boy has a peculiar nervous development. His parents are decidedly of nervous temperament. During the inhalation of the ether, he talked occasionally, and was quite sensible, strongly inhaling the ether.

I must say, in conclusion, if I had not been present, I should not have believed such a case could be possible.—I am etc.,

RUSTICS.

WARMING BEDROOMS.

SIR,—In answer to the inquiry of "T. B." in the JOURNAL of November 25th, I feel certain that the best means of warming a bedroom is by Roberts's terra cotta stove. It can be placed anywhere within reach of the chimney or outlet for a pipe, is very cleanly and safe, requires little attention, as it will burn for twelve, or, under favourable circumstances, twenty-four hours, without feeding. It burns very little coal, and can be made to give almost any amount of heat, and keep a room at an even temperature.

I speak from experience, as I had, a few years ago, a relative who had to keep his room continually, and who suffered from bronchitis; and, after trying many contrivances, we were fortunate enough to get one of these stoves, after which we had no trouble in heating the room. I may say that I have had no experience with gas-stoves for this purpose.—I am, sir, yours obediently,

Dudley, November 25th, 1882.

D. BRADLEY, L.R.C.P.Ed.

SIR,—In reply to "T. B.'s" inquiry, I write to inform him that I have in use in my bedroom a form of gas-fire which is very satisfactory. It consists of an iron case open in front, with bars across the lower half, within which asbestos and fireclay fuel is piled, and heated by an air-burner running beneath. I have had the stove supported in front of the grate, and, when burning, it looks like an ordinary fire, gives out a great heat, and is very free from smell, as all fumes are conducted by a short flue up the chimney. This form of stove is made by Wright of Birmingham. The guinea size is sufficient for a moderate sized room.—I remain, yours faithfully,

D. S. DAVIES, M.B.Lond.

41, Queen Square, Bristol, November 25th, 1882.

SIR,—In answer to the inquiries of "J. B." in the JOURNAL for November 25th, I think he will be well suited by Rippingall's patent imperial octagon stove, supplied by the Holborn Lamp Company, 18, Holborn, London. Better than a stove would be Tait's thermic ventilator, which has the advantage that, in addition to warming the room, it also ventilates it; for every 1,000 cubic feet of gas used, we have introduced into the room 3,000 cubic feet of heated fresh air; the price for setting it being about 16s.—I am, etc.,

RICHARD HUMPHREYS, M.B., C.M.

Martock, Somerset, December 5th, 1882.

CASE OF SCARLET FEVER INFECTION.

SIR,—You may, perhaps, think this case of sufficient interest for a space in the JOURNAL. A. M., an adult, with the assistance of a certified nurse, waited on a child for six weeks during an attack of scarlet fever. She was disinfected, and went home for a week, returning to her master's house on September 12th. In the evening, the little girl, who had finished peeling, but had not yet left the infected room, had her bath, and was then put into a clean blanket, taken by A. M. to the sheet, wet with a disinfectant, which hung before the bedroom door, and carried to another room.

The following morning, the trained nurse, who was dressed to leave the house, came to wish A. M. good-bye, wearing a jacket and hat that had hung up in the bedroom the whole of the seven weeks she had been with the case. The infected room had been shut off, and no other case fell.

A. M. and the child came to the seaside on the 14th or 15th; on the 18th feeling quite well. She bathed in the sea on the 19th; she felt shivering on the 20th. I was called in, and found her suffering from a suspicious looking throat and high temperature. On the morning of the 21st, the rash appeared. The house occupied by A. M.'s master stands on its own grounds, and she is not conscious of having come in contact with any focus of infection excepting the nurse on the 13th.

The case is, I think, interesting, as the young woman for six weeks did all the waiting and offices in the sick-room without contracting the disease, and then succumbed.—Faithfully yours,

D. HOADLEY GABB.

Hastings, December 8th, 1882.

CORPORAL PUNISHMENT IN SCHOOLS.

SIR,—I was glad to read your excellent remarks on Corporal Punishment in Schools, which appeared in the JOURNAL of November 25th, and should be glad if you could answer the following questions *à propos* to the use of the cane. Is the practice of caning on the hand, which I believe is very common in schools, objectionable? and is it likely to lead to evil in after life? and, if so, of what nature?—Yours, etc.,

A SCHOOL MANAGER.

SIR,—Is there a home or institution where a girl aged 7, suffering from incipient phthisis, and at present residing at her father's place of business in the City, can be sent during the winter months, with a view of checking the progress of the disease?—I am, yours truly,

ST. CLAN B. SHADWELL.

1, Oxford Villa, Walthamstow, December 11th, 1882.

AN OBSCURE DISEASE.

SIR,—The symptoms in the above disease are due, I should think, to spasm of the organic muscular fibres in the urethra, and the probable cause of this spasm, prostatitis. If "Studens" can read German, he will find this well explained in a pamphlet, *Über die Neuropathica des männlichen Harn-und Geschlechtsapparats*, by Dr. R. K. Ulmann of Vienna. I saw many such cases when in Vienna a few years ago, and Dr. Ulmann explained the symptoms by supposing that the spasm in the urethra caused it to become a rigid tube, hence the last few drops of urine would be retained, just as it will in a glass tube if we put a finger over one end; then, after a little while, the spasm yields, and the walls of the urethra becoming flexible, the urine in it runs away. Spasm of the neck of the bladder is often connected with this symptom, and is shown by the patient being unable to urinate if anybody is standing near. I should suggest bromide of potassium in full doses.—Yours, etc.,

FRED. H. SPOONER, M.D.

Clapton, E., December 2nd, 1882.

SIR,—Under the heading of "An Obscure Disease," "Studens," in your issue of last week, describes certain symptoms which cannot fail to remind one very forcibly of the early signs of enlarged prostate. The inability "to expel the last drops, which, remaining, dribble away after he has adjusted his dress"; the obstruction to the passage of a catheter at "the membranous" (prostatic?) "portion of the urethra," and the "severe straining at stool," each and all point in the direction of prostatic disease. There is one feature in the case, however, which throws a doubt upon its being simply enlargement of the prostate, and that is, the early age at which the symptoms are said to have first appeared.

Still, in the face of this strong argument against the morbid condition being prostatic, I would venture to suspect that such may really be the case; for, although Sir Henry "Thompson has never met with an example" of hypertrophy of the prostate "before the age of fifty-four" (Bryant's *Surgery*), may not the symptoms under discussion still be due to calculi, glandular tumours, or collections of inspissated secretion in the substance of that organ?

"Studens" does not appear to have made an examination of the fistula by the rectum. This is to be regretted, since such an examination would serve to elucidate some important points in connection with the cause of the above-mentioned symptoms, and greatly facilitate in arriving at a correct diagnosis.—I am, sir, yours faithfully,

HERBERT CALLIN, M.D.

High Street, Gorton, December 4th, 1882.

TROUBLESOME FREQUENCY OF MICTURITION.

SIR,—I have found phosphate of soda beneficial in cases of the above description. For a child five years old, I give fifteen grains three times a day in mutton broth, which renders it almost tasteless. I learnt this from a Professor of Therapeutics, who looked upon the drug almost as a specific.—I am, etc.,

PHOSPHATE.

SIR,—I think your correspondent "A Country Surgeon" will find the fluid extract of *rhus aromatica* well worth trial. It can be procured at Ferris and Co., Bristol.—Yours faithfully,

H. A. LAWTON.

Poole, December 11th, 1882.

SIR,—In "Country Surgeon's" letter—case of frequent micturition—I should be induced, in the absence of constriction to the orifice of the prepuce, so frequently a cause of elongation, and in turn frequent micturition, especially in nervous or strumous children (for which circumcision is the remedy)—to sound, in case there might be other conditions as equally serious as stone, though the latter may be present at an early stage without positive symptoms. Failing anything abnormal, taking the carefully written history of the case into consideration, may I suggest having found of immense value in similar cases an ounce thrice daily of a mixture containing: tincture of hyoscyamus, 3ij; bromide of potassium, 5j; bicarbonate of potash, 5j; camphor water, 5viij; a strong belladonna plaster over the bladder, with tepid salt water sponging night and morning; and half a wineglass of tannin wine bis die.—I am, sir, yours faithfully,

Newcastle-upon-Tyne, December 1882.

ANTHONY BELL.

PROFESSIONAL ETIQUETTE, AND HOW DISEASE IS SPREAD.

SIR,—A woman brought her little boy to me on Saturday evening, December 2nd. I prescribed for him, and told the mother he was too ill to be out; if not better, to let me know. They were staying at a farm bailiff's a short distance from the town, whom I had attended previously. On December 4th, I was sent for to see the boy, and found him suffering from scarlatina. I wrote at once to the bailiff's employer, saying what the boy was suffering from, and advised him not to let his children go to the house. The next morning, on visiting my patient, I found Mr. Duke had been the previous evening, and Dr. Cheeseman, his partner, had preceded me that morning, and had gone away to get a room for my patient in the town, where he was moved in the course of the day from a lone house out of the town to a house in the middle of the town in a thoroughfare, without my consent, indeed, without any communication with me by his employer or his medical attendants (Duke and Cheeseman). I ought to mention, as medical officer of health, at some inconvenience, early in the day of the 4th, I went to see my patient, with the intention of taking all proper measures to "stamp out" the disease, which, being in a lone house, was a most suitable place for so doing.—I am, etc.,

ROBERT DE'ATH.

Buckingham, December 11th, 1882.

SIR,—Will some of your readers inform me of the fee usually obtained for death-certificates for assurance companies?—I am, etc.,

MEMBER.

VERRUCA NECROGENICA.

SIR,—During my residence in University College Hospital as physician's assistant, I pricked my knuckle at a *post mortem* examination, which caused some slight constitutional disturbance, swelling of axillary glands, etc., and was followed by such a wart as described by "B. C." (*verruca necrogenica*), which remained and enlarged for five or six years, till it was as large as a shilling. I found emplastrum, ammoniacum hydrarg. on leather, constantly worn and frequently renewed, most useful, but it never quite cured it, as when nearly well I would leave it off.

In 1864, I was thrown from a dogcart, and sustained fracture of the base of the skull, with concussion and compression of brain, for which I was salivated. On recovery from my illness, I found my wart gone, and have seen nothing of it since. I would not recommend our friend to follow my example in its entirety, but he might try a portion of it; the plaster first, and, if that is not sufficient alone, a little salivation.—I am, dear sir, yours, etc.,

J. C.

SIR,—Many years ago, I also suffered from warts on my right hand, after making a *post mortem* examination. I excised them, burnt with fuming nitric acid the affected parts, but of no avail; at last, Mr. Bryant gave me some chloroform, and burnt them out with the galvanic cautery, since which I have seen nothing of them.—Yours truly,

H. D. PALMER.

Nayland, Colchester, December 9th, 1882.

REMARKS ON SOME SPECIAL CHARACTERS OF THE PRESENT EPIDEMIC OF TYPHOID FEVER IN LONDON.

BY OCTAVIUS STURGES, M.D., F.R.C.P.,
Physician to the Westminster Hospital.

THE enteric fever prevalent in London during the last three months, September, October, and November, so far as I have seen or heard of it, has had certain features which, from a practical point of view, it seems desirable to notice while the epidemic is still prevalent. The characters to which I allude are these: the high rate of mortality, the liability to relapse, the prolonged duration of the fever and of the convalescence, the proportion of patients whose recovery was delayed or prevented by intercurrent inflammations, and, most of all, the insidious and misleading nature of the early symptoms.

By the favour of my colleagues, Dr. Fincham and Dr. Allchin, I am enabled to enumerate twenty-one consecutive examples of enteric fever admitted into hospital during the period specified. They are as follows: 1. Henry C., 39; died on the 21st day. 2. James A., 22; died 37th day after relapse. 3 and 4. Ernest C., 5½, Alfred C., 8; brothers, children of No. 1; good recovery. 5. George H., 34; died 56th day after relapse. 6. William S., 24; admitted October 26th; not yet convalescent. 7. Jane B., 19; admitted October 17th; not yet convalescent. 8. Mary C., 8; admitted September 28th; relapsed; still in hospital. 9. Richard H., 17; good recovery. 10. Georgina P., 8; slow convalescence and great wasting. 11. John M., 23; good recovery. 12. John A., 16; good recovery. 13. Charles A., 20; died on the 28th day. 14. Frank P., 20; admitted September 20th; prolonged pyrexia; still in hospital. 15. Sarah P., 19; slow convalescence; over two months in hospital. 16. John D., 27; died; duration of illness doubtful. 17. Thomas C., 30; severe, but not unduly prolonged. 18. Alfred G., 21; made good recovery. 19. Jane B., 32; had two distinct relapses, extending over 81 days. 20. Alfred B., 18; a very severe case; slight relapse; now in hospital 44 days; slowly recovering. 21. Sarah B., 27; prolonged fever, with relapse; now in, 40th day; not convalescent.

It is not proposed here to enter into the details of these cases, but only to make use of them in illustration of certain salient and indisputable points. All the patients were young and healthy, and four were children. In the twenty-one cases, as will be seen, there were as many as five deaths; there are six examples of relapse, two of them fatal; five (not relapsing) had very slow recovery, three of them being still in hospital, barely convalescent, after many weeks' illness. Only six of the twenty-one—or, excluding two children, in view of the special character of typhoid in early life—only four adults out of nineteen persons made a good and proper recovery, in the sense of being apyrexial and on the way to convalescence towards the end of the fourth week.

1. As regards the high rate of mortality, I do not propose to lay stress upon that point, or to argue as though five deaths in twenty-one cases were almost the same as twenty-four in 100. At the same time five fatal cases out of seventeen consecutive examples of enteric fever in adults (the children may be fairly excluded, inasmuch as children hardly ever die of typhoid fever), is a proportion which cannot fail to strike everyone who is familiar with the usual features of the disease. Extensive ulceration existed in the four cases examined after death, with perforation and peritonitis in two of them. In one, pneumonic consolidation was also found. Examination was not permitted in the fifth case.

2. Of the six examples of relapse, one of the two that were fatal advanced so near to recovery as to be up and about the ward. The relapse occurred on the fortieth day, and proved fatal in sixteen days. In another case (Jane B., under Dr. Allchin's care), the patient became unconscious, evacuations were passed into the bed, and she appeared to be actually dying. Recovering, however, from this first attack, she had two distinct repetitions of fever, each with fresh spots and renewed diarrhoea. The first relapse lasted seventeen and the second fourteen days. The two occurred respectively on the thirty-fifth and sixty-seventh days from the original attack. In a fourth case, that of Mary C., a child aged eight, the relapse was not of long duration, but the first attack was severe and protracted. In the two remaining cases (the last of the above list), admitted respectively on the 9th and 13th

of November, the fall of temperature at the end of the third week proved delusive as regards the term of the illness. Both are still in hospital at the time of writing (December 16th), and not yet convalescent. In the case of the girl, the temperature has for some time been sub-normal, but she continues prostrate with the aspect and posture of typhoid, and thickly furred tongue.

3. Apart from relapse (although it is not always easy to separate the two classes, since a fall of temperature, longer or shorter, occurs almost in every case between the twentieth and twenty-fifth days), five cases were *tediously prolonged*. Three of these are still in hospital, and after more than two months of illness not yet convalescent. In respect of prolonged convalescence indeed, and in that respect only, the present epidemic resembles that of two years ago, when, however, cases of death or near danger were very rare.

4. In seven of the cases, some *intercurrent inflammation* either interrupted recovery or had a share in the fatal result. Three had bronchitis (one of whom died), two had pneumonic consolidation (one of whom died), one pleural effusion, and one cystitis.

5. With reference to the remaining point, the *insidious character of the attacks and the misleading nature of the earlier symptoms*, I can, of course, only speak of such examples as fell under my own observation; but I believe a like description applies to other cases as well. A brief account of three instances of the kind will serve to illustrate my meaning. Henry C. was admitted on the third day of fever, with temperature of 100 and pulse of 90. The abdomen was full, but not tense nor tender. The first week, both pulse and temperature gradually fell, and there was no action of the bowels. On the eighth and ninth days, when the pulse was below 80, he had two scanty motions. On the eleventh day he had very slight hæmorrhage—a few specks of blood only. There was but one motion of the bowels between this and the fourteenth day. Then the pulse rose, diarrhoea set in, and five days later the man died with perforation, symptoms of peritonitis having set in two days before.

In the second case, James A., 22, a strong labouring man, admitted on the sixth day of fever, the temperature just exceeded 103° on two days, but for the first ten days the pulse was barely over 90. From the ninth day to the eighteenth the temperature gradually fell, and the diarrhoea, which had been present during the second week, ceased. From the sixteenth to the twenty-first the temperature of each day reached 100, but the pulse was not accelerated, and on two days only was there any diarrhoea. On the twenty-first and twenty-second days the temperature fell gradually to 99, and the aspect and other signs seemed to indicate the ending of the fever. On the twenty-seventh day, however, after eating a piece of biscuit which had been smuggled in by his friends, the temperature rose to 102, and the patient complained of abdominal pains, but did not appear materially worse. The bowels continued confined from the twenty-eighth until the thirty-sixth day, when violent pain set in, accompanied by diarrhoea, the patient became collapsed, and died in a few hours of perforation.

By the side of this case, where the indications of ulceration were faint, the symptoms throughout of little urgency, yet the apparent recovery deceptive, I will place one of a different kind, but where the early signs were equally misleading, and such as would amply have justified an unfavourable prognosis.

Alfred B., aged 18, a labourer, was admitted on the ninth day of his fever. He had profuse diarrhoea, dry tongue, and several spots. The temperature was 104.8°; the pulse varying from 132 to 160. Up to the fourteenth day, the temperature ranged between 104° and 105°, daily; the diarrhoea continued beyond control, and the pulse was still 140 or more. The boy lay groaning and sleepless, and had delirium during the night. Nevertheless, on the twenty-first day (diarrhoea having ceased on the sixteenth, and the temperature descending therewith), the pulse had fallen to 102, and the face betokened those well known signs of coming out of fever, which, although not always lasting, are yet unmistakable. On the twenty-fifth day, the temperature became normal, and so continued for a week; the boy, although wasted almost to emaciation, expressing himself as well, and clamouring for food. Then, for a few days, with the long continuance of constipation and indications of loaded lower bowel, the temperature rose to 101°, and the patient complained of abdominal distress. With the relief of this condition, however (a part of the treatment of no small difficulty and delicacy in the circumstances), the boy resumed his progress to recovery; and now, on the forty-fourth day, although extremely weak and with a nightly rise of temperature, he is in that condition of hunger and contentment which marks the convalescence of enteric fever.

Had I been called upon to express a definite opinion, as to the final result in any of the three cases just quoted, at an early stage, I make no doubt that I should have been wrong in all.

Other cases might be quoted to the same end; perhaps I have not

chosen the best. Yet the general view of these twenty-one examples bears out, I would submit, what was said at the beginning. So far as my own experience goes, which covers twenty years' pretty constant hospital attendance, the typhoid fever of this season has been singularly anomalous and, so to speak, disappointing. It has been almost invariably prolonged and tedious, more than commonly fatal, and very sparing of symptoms to indicate the iliac ulceration, which is the main source of its danger. And it has been treacherous as well as obscure. Seeming recovery has been followed by a fatal repetition, the most approved and apparently benign form of the disease has ended suddenly in death, and sometimes, when the proper symptoms have been kept in check, some local inflammation, occurring in the course of the fever or as its sequel, has either prolonged the illness or contributed to its fatal termination.

During the present month—subsequently, that is, to the period to which the foregoing observations refer—three cases of enteric fever have been admitted; two are in their second week, and cannot therefore be counted. The third, a boy aged 18, was admitted on December 1st, under Dr. de Havilland Hall, on the twelfth day of his fever. The illness ran a mild course, the temperature never reaching 103°, the pulse remaining below 90, and the bowels remaining quiet (one action daily). The temperature, descending gradually, was normal on the twentieth day. On the twenty-third, it began to ascend; and now, on the twenty-seventh day, it is above 103°—higher, that is to say, than it had ever reached during the three weeks of the fever. If this example were added to the others, we should have seven relapses out of twenty-two cases, or seven out of twenty, excluding two young children.

With so unpromising a record of the past, it is gratifying to add that no fresh case of enteric fever has been admitted since December 2nd; and that, with the setting in of winter weather, the epidemic seems to be on the decline.

In concluding, I must express my obligations to my colleagues for this use of their material, as well as to Mr. Hebbert, our medical registrar, for the kind help he has given me in bringing the facts together.

ABSTRACTS OF CLINICAL LECTURES.

Delivered in the Queen's Hospital, Birmingham.

By JAMES SAWYER, M.D.Lond., M.R.C.P.,
Senior Physician to the Hospital.

SOME POINTS IN THE TREATMENT OF ACUTE RHEUMATISM.

SINCE the approximate perfection of surgical anaesthesia, the healing art has won no greater triumph than in the employment of the alkaline salicylates in pyrexial rheumatism. I say in pyrexial rheumatism, because I have not found the salicylates of any use in rheumatism with a normal bodily temperature. I think I know the fallacies which beset any therapeutic inference; and I make allowance for the special sources of error which adhere to therapeutic inferences respecting pyrexial rheumatism, and especially to such rheumatism in hospital patients; but, with a hospital experience reaching back some years, and with several years' experience as a house-physician in a large hospital, long before salicylates were thought of, I feel sure that the alkaline salicylates, and especially the salicylate of soda, have the power, in a larger degree than any other drug or combination of remedial measures whatsoever, of greatly abridging the course, and markedly mitigating the pain, of the simple forms of rheumatic fever. In making this affirmation, I compare the results of salicylates with four distinct and well-known therapeutic plans for dealing with rheumatic fever—namely, by free administration of bicarbonate of potash, by perchloride of iron, by blisters, and by rest in bed and nursing care, without drugs. The routine dosage I adopt in rheumatic fever is, to give fifteen grains of salicylate of soda, dissolved in one ounce of water, every three hours. As the patient's temperature falls, and the articular pains diminish, the frequency of the dose of salicylate may be lessened; but the remedy should be given, at least thrice daily, for at least a week after the temperature has remained normal and pains have gone. If you omit the drug too soon after defervescence and the removal of pain, the patient is very likely to suffer from a relapse. Relapses are frequent when the salicylate is given up too soon.

I have not observed that the salicylates have either prophylactic or remedial value in the cardiac complications of rheumatic fever. If such complications—endocarditis, myocarditis, or pericarditis, singly or variously combined—occur, they usually become manifest in the first week of pyrexia. For the ordinary endocarditis of rheumatic fever, I do not know that any drug is of direct service, excepting, perhaps, a little aconite, if the pulse be of disproportionate frequency. But I am

strongly of opinion, that the future of a patient, who has had acute endocarditis—and by his future, I mean the length of his life and the degree of his suffering from the remoter and almost inevitable effects of endocarditis—is very largely influenced by the way in which he has spent his convalescence from the illness with which such endocarditis at its onset was associated. Prolonged rest, rest in bed for several weeks, or even months, does infinite good after an attack of endocarditis. Such rest nurses the damaged heart; it keeps cardiac action and pulse-rate down, and so promotes the removal of inflammatory products from affected cardiac valves and orifices. The passage of such products into organised connective tissue is a deadly process, irremediably puckering valves and narrowing orifices, and inevitably leading, often very soon, to the fatal mechanical consequences of obstructed blood-flow through the heart. All practitioners, who have had opportunity of comparing hospital practice among the poor with private practice among patients of comfortable circumstances, must have noticed the striking relative tolerance of cardiac lesions by the well-to-do. Such tolerance depends on no single cause; but I believe it has a great part of its explanation in the consideration I have pointed out. The rich are longer in resuming their occupations, after a serious illness, than are the poor. For pericarditis, I have faith in fly-blisters. I advise you to apply, in the case of an adult patient, a blister (six inches square) over the heart, directly pericarditis is declared. I prefer the old-fashioned emplastrum cantharidis; its slow action, extending over a dozen hours or more, is an advantage. In every case of acute rheumatism, take care not to clothe the patient's bed too heavily; but bed him in blankets without sheets, and freely swathe all tender parts with absorbent cotton-wool.

LARGE DOSES OF ARSENIC IN CHOREA.

This little girl, ten years old, about to be discharged, owes her recovery from chorea to the administration of arsenic. We had to give the remedy freely before the disorder gave way. The case was one of subacute general chorea, of moderate severity, occurring in a weakly, nervous girl. We began with five minims of Fowler's solution of arsenious acid, thrice daily, in an ounce of water. In three days, the dose was increased to ten minims; in three days more, to fifteen; in three days more, to twenty; and so on until she was taking thirty-five minims of the solution thrice daily. When this last dose was reached, the choreic movements, which before had been gradually subsiding, entirely ceased; and a little vomiting warned us that we had reached the first and most usual physiological action of our remedy. We then withdrew the drug for two days; after that time we gave it again, in fifteen-minim doses, for a few days more, when we gave it up altogether, and the child remained well. You have seen me treat many cases of chorea in this way with similar success. The dose of liquor arsenicalis in chorea, as laid down in text-books, is too small. Chorea is often an obstinate affection. The more chronic cases frequently pass from doctor to doctor, and go through long courses of medicaments, without benefit. Arsenic, freely and properly given, rarely fails. If a case of chorea come to you, and you learn that arsenic has been given and has failed, give it again, in large doses. You may cautiously increase the dose of liquor arsenicalis, far beyond the limits of the text-books, with the best results in chorea: in this way, you may usually cure cases which smaller doses of the remedy would not affect.

TREATMENT OF ECZEMA.

Do not neglect to learn the treatment of diseases of the skin, and especially of eczema—by far the commonest of such affections; and of which you can always find many examples in our out-patient work. By attention to a few well-established details of practice, eczema can generally be cured, and always greatly ameliorated. I want to impress upon you two points of practical moment. Eczema is often brought out and kept up by local irritation, and it is always an expression of a diathesis. We can often best treat eczema by not regarding it as a disorder of the skin. In failure to recognise, and treat successfully, the general constitutional condition with which the affection of the skin is associated, and which is its foundation, lies a frequent cause of failure to cure eczema. Eczema is mostly a local expression of one of several diatheses—the strumous, the gouty, and the nervous. Some local irritation usually determines and frequently keeps up an eczema, and is its ultimate cause; but the proneness to the local malady, its penultimate cause, the reason why the local irritation results in eczema and not in something else, is to be found in some general constitutional abnormality. In a case of eczema, before you prescribe drugs, always search for, and, finding, remove, causes of local irritation—such as dirt, lice, scratching, rubbing, the wearing of flannel next the skin, or exposure of the affected part to the irritating action of heat, cold, water, urine, discharges, bad soap, or any mechanical or chemical irritants, such as are met with in various occupations.

THE OPERATIVE TREATMENT OF CONGENITAL CATARACT.

By ANDERSON CRITCHETT, M.A. Cantab.,

Ophthalmic Surgeon to, and Lecturer on Ophthalmic Surgery at, St. Mary's Hospital.

ALTHOUGH this subject has from time to time been fully, and in some respects exhaustively, discussed, I think it will be admitted that a considerable diversity of opinion still exists as to the period of life when operative measures become not only justifiable, but expedient, and also as to the form of operation which should be adopted in any given case. The youth of the patient, the partial character of the blindness, and the exceptional risk which attends certain methods of operating that are frequently used for its relief, all combine to invest this subject with an unusual degree of interest and anxiety. My object in reviewing this question is to urge the importance of judging each case upon its individual merits, and to enter a protest against the adoption of an uniform plan in all instances, owing to an almost universal tendency to regard a cataract as a thing to be removed by operation, without giving sufficient consideration to the amount of vision which the patient has till then possessed. I am ready to allow that we meet with a certain proportion of cases where, owing to the extent and degree of the lenticular opacity, and the consequent serious impairment of sight, it is necessary to have recourse to the more radical methods of absorption or suction. Time will not allow me to enter at any length on this important section of the subject, nor would I presume to adjudicate where so many high authorities have already pronounced their opinions. I may, however, in the first place, suggest that, owing to the risk which attaches to either of these operations, even in the most skilful hands, coupled with the fact that failure means nothing less than the blighting of a long and possibly useful life, prudence and humanity should alike forbid a simultaneous operation on both eyes. Respecting the relative merits of absorption and suction, my own personal experience, and my observation of the practice of others, would lead me to select the slower method by absorption; reserving the more brilliant, but, I fear I must add, more risky plan by suction, respectively advocated by Mr. Bowman and Mr. Teale, for those exceptional cases in which the irritative effects of lenticular fragments threaten the safety of the eye; and, even in such cases, a partial removal of the lens-matter by simple paracentesis will often be found equally efficacious, and accompanied by less danger.

An additional argument in favour of adopting the more cautious method by absorption is to be found in the fact, that no necessity exists for obtaining a rapid result, since, one eye only being dealt with, the ordinary pursuits of young life need not be suspended. But, while the above is true concerning a limited number of cases, there exist a decided majority of congenital cataracts in which the partial character of the lenticular opacity suggest an important modification in our operative procedure; and it is to this last point that I desire, in the present paper, to direct attention. The lamellar cataract to which I am now referring is found to differ both in the density of the central opacity, and in the degree to which it encroaches on the more or less clear margin. It is, of course, difficult to lay down any hard and fast rule for adoption; but practically it will be found that, whenever the transparent margin represents one-third of the diameter of the lens, a sufficiently satisfactory result can be obtained to justify the selection of a modified form of iridectomy, or, in some isolated cases, of iridodesis. Before deciding upon either of these plans, it will be well to ascertain to what extent the vision is improved by complete mydriasis, bearing in mind that the creation of a small artificial pupil will, for obvious reasons, secure a more perfect optical result than can be obtained by the use of atropine. The object in view in altering the shape and situation of the natural pupil is to obtain an aperture opposite to the transparent margin of the lens, and corresponding, as nearly as possible, to the size of a central pupil in a moderate state of contraction. The most convenient situation for it is downwards and inwards. The method which my father has recommended, and which I generally adopt, is as follows.

Anæsthetic having been administered, the lids are separated by a stop speculum, and the operator, steadying the globe with a pair of fixation-forceps, introduces a broad needle set at an angle into the anterior chamber, being guided as to the point of entry by the amount of iris which he desires to remove. If there be an exceptional width of clear lenticular margin, the incision may be made within the corneal area to such an extent that a portion of the peripheral circumference of the iris remains intact; but

if, on the other hand, the transparent region be more limited, the pupil must extend further inwards, and this may be accomplished with considerable precision by accurately defining the position of the corneal wound. The broad needle should be introduced at an exact right angle to the cornea, so that it may enter the chamber without travelling unduly between the corneal layers. As the point of the needle is seen within the chamber, the handle of the instrument should be depressed, so as to avoid the possibility of wounding the lens. The needle should be slowly withdrawn, otherwise a rush of aqueous humour may entangle the iris in the wound. The operator then introduces a small blunt hook, known as Tyrrel's hook, also curved at an angle like the needle. The hook is passed in on the flat beyond the pupillary margin, which is caught by inclining the free edge of the hook slightly downwards. Steady traction should then be made towards the wound; but immediately before emergence the hook must be gently rotated, so that its free edge presents a little forwards, to secure an easy exit, and to prevent its entanglement in the corneal aperture. The portion of iris which has been drawn out, and is still held by the hook, should be cleanly excised with small blunt-pointed curved scissors, close to the cornea, by that much to be desired, but not always available, coadjutor, a competent assistant.

If gentle friction be then made with the upper lid over the puncture, the iris floats back into the chamber, and all the elements of a well accomplished iridectomy are secured without its palpable dangers. Nothing further is needed but a light water-dressing and a few days of rest. I may add, that the limitation in the size of the pupil which this method secures, obtains for us a better optical result than can be produced by any iridectomy performed with keratome and forceps.

As I have already stated, the practice of removing the lens in cases of congenital cataract is, I believe, the plan which is still most commonly adopted; though I am pleased to say that our President, Mr. Vose Solomon, spoke as follows in an inaugural address which he delivered at Queen's College, Birmingham, in 1876. "The plan of making an extension of the pupil by the removal of a narrow strip of iris in cases of congenital cataract, in which there is a zone of transparent lens, must be considered as an important advance; and where this condition of lens is binocular, I am in the habit of acting upon the method named in one eye, and destroying the other by solution." The advocates of the major operation will doubtless claim for it that cosmetically they gain a clear black central pupil, that the result is final, and that by the aid of suitable glasses, an optical condition may be anticipated which is superior to that which obtains by any other plan. The drawbacks which experience has forced upon my attention are: firstly, the serious risks involved; secondly, the disadvantage, especially to the young, of constantly wearing heavy and powerful glasses; and thirdly, as I have noted in numerous instances, the eye that has been deprived of its lens possesses a lower vitality, and is more liable to failure of its functions. I think I may fairly allege that the operation by artificial pupil has the following merits. It is one of great simplicity, and when performed with adequate care and skill, of almost invariable safety. The recovery is extremely rapid, and entails a very brief convalescence. The vision, though somewhat below the most perfect results obtained by absorption, is in most instances sufficiently good for all the purposes of life, and is obtained without the aid of glasses, while the power of estimating distances is intact. The chief objection that may be urged against this plan is the possible extension of the central lenticular opacity to the margin. This may be true of certain cases which occupy an intermediate position, and where radiating striæ invade the transparent portion of the lens. Even here, however, I should not hesitate to give the patient the benefit of the doubt, and of the artificial pupil; since, in the event of a necessity arising for the major operation, we know on the high authority of Von Graefe that a preliminary iridectomy introduces a decided element of safety. I have, however, no hesitation in asserting that, where a clean and clearly defined limit exists between the central opacity and the transparent margin, the latter remains bright through life. I have seen several cases answering to the above description where more than twenty years have elapsed since my father performed on them either iridectomy or iridodesis, and where the peripheral portion of the lens has retained its absolute transparency. The converse of this has not yet come before my notice. I will not weary you with statistics of cases in confirmation of these views, though the confidence with which I have ventured to state my position is fully justified by the result of my experience in this direction at St. Mary's Hospital. I will, however, allude to one case which I brought before the Ophthalmological Society this year, and which well illustrates the relative value of the rival operations.

Isaac G., aged eighteen, was admitted to St. Mary's Hospital on April 18th, 1882. The cataract in his right eye had been absorbed

* Read in the Section of Ophthalmology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

eight years before, and with a $+3\frac{1}{2}$ lens he saw 20, and with $2+2\frac{1}{2}$ read No. 4 of Jaeger's test-types. He complained that, owing to the necessity for using a strong glass, he was unable to procure a situation, or to earn his living. In the left eye, where he had a lamellar cataract, I performed a small iridectomy downwards, and inwards, with the result that he without a glass sees 20, and reads Jaeger 4, and has obtained a situation as a domestic servant. I by no means claim any element of novelty or originality for the foregoing observations; but I have felt, and strongly feel that the merits of the particular mode of treatment which I have here advocated, have not hitherto been generally estimated at their true value; and I venture to hope that this plan may in the future obtain a more extended trial, since I am well assured that it deserves to supersede, in a large proportion of cases, its older and more firmly established rivals.

Mr. COWELL agreed in Mr. Critchett's suggestion, and had been in the habit of following the practice in suitable cases. He disapproved of the use of Tyrell's hook, from a fear of wounding the lens, and used iridopexia. — Mr. NETTLESHIP believed that the evidence at present tended to the belief that cases of lamellar cataract remained stationary, but thought more observations were necessary. — The PRESIDENT had been in the habit of adopting the operation referred to by Mr. Critchett for many years with satisfactory results.

ON COLLECTIVE INVESTIGATION: ITS AIMS AND PROBABLE INFLUENCE UPON THE FUTURE OF THE BRITISH MEDICAL ASSOCIATION.*

By C. PALMER, M.R.C.S.,

Retiring President of the Branch.

GENTLEMEN, — At the close of my year of office, I thank you again most heartily for the honour you have conferred on me, and the opportunity you have thereby afforded me of becoming personally acquainted with so many of our leading men, and their views on matters of interest to our Society.

I am pleased to be able to congratulate you upon the progress we have made during the past year, not only in our own Branch, which is as prosperous as we can wish, but the British Medical Association itself, which, though fifty years old, has proved by its energy, rapid growth and development, that it still possesses all the attributes of vigorous youth. It is now scarcely eighteen months ago, that Dr. Gordon of Dublin gave the following summary of the main objects of our Association, viz.:

1. The promotion of social and scientific intercourse amongst members of the profession.
2. The maintenance of a high ethical standard of professional conduct.
3. Encouragement of scientific and practical work, and the advancement of original investigation.
4. Improvement in medical education and examination.

And on all these points we may congratulate ourselves upon having made real and substantial progress; but, within the last few years, the conviction has been gradually gaining ground that, with all our energy and prosperity, there is a deficiency somewhere; that the subjects I have just now enumerated are not the only ones which should occupy our attention; and we all began to feel that, with abundance of the best material, from a want of proper organisation, we were unable to attempt the solution of any of the great problems of disease. This want is now, for the first time, perhaps, being felt by the great body of the Association, as manifested by the enthusiastic reception of Professor Humphry's statement at Cambridge in August 1880, that the work of collective action and cumulative observation has hitherto been too little attempted; a statement, the importance of which we can even now scarcely realise, and which led in 1881 to the formation of the Committee of Collective Investigation; a work for which we owe Professor Humphry, and his friends and advisers, a deep debt of gratitude; for, to my mind, it is a new starting-point, the commencement of the real work of our Society, to which what we have hitherto done has been only preliminary. The thorough elucidation of diseases, their causes and effects, immediate and remote, upon individuals, the community at large, and upon each other, is the work which we are now, for the first time, about to attempt, by means which until now have never before been attempted, and to accomplish which we must be something more than a medical association; we must be so organised as to become a veritable army of observation, with a discipline so perfect, that

every single member shall have his part to perform, and our whole force be capable of being brought to bear upon any one point, with a power that must eventually overcome every obstacle, and in time remove the stigma of uncertainty from our art, and raise it to even a higher position than it has hitherto occupied. To accomplish such results, it will not only be necessary to improve our organisation, but also to extend the field of our observation; indeed, we can already see that many points of vital importance can only be satisfactorily cleared up by an organised system of observation extended to other countries; and I venture to predict that a day will come when the British Medical Association itself will be but a branch of an international one.

There will, I have no doubt, be some amongst us who will say, as men learned in military matters said of our volunteers about twenty years ago, that, though thorough training was necessary before they could become a reliable arm of the service, it was impossible for them to attain to it; but the result has triumphantly proved that they were mistaken; and I am perfectly satisfied that when once the necessity of organisation is demonstrated and generally admitted, the rest will follow as a matter of course, and every one of us will not only be ready, but anxious to put our shoulders to the wheel. And if it be said that it is impossible that the hard worked general practitioner should ever spare the time for all this, we may safely reply, that the power it will give him over his own work will much more than compensate him for the loss of time it will entail.

I know that I owe you an apology for taking up so much of your time, when there is much work to be done, and little time to do it in; but I felt that I could not let this opportunity pass, without stating as briefly as I could my own impressions on the events of the past year, and their probable influence upon the future of our Association.

I cannot leave this subject without alluding to the earnest manner in which Dr. Mahomed, the secretary of this Committee, has devoted himself to the work. He was, I believe, one of the first to propose this plan of combined action, and the zeal and energy he has displayed cannot fail to be of the greatest service to the cause, and deserve our warmest thanks.

It now only remains for me to call upon the President-elect to take the chair; and in doing so, I congratulate you upon having secured the services of a man so deservedly popular; for though I have not the pleasure of an intimate personal acquaintance with Dr. Crowfoot, the name has been familiar to me for the last thirty years, and has been always associated with professional progress and professional honour.

MESENTERIC AND OMENTAL CYSTS

By J. KNOWSLEY THORNTON, M.B., C.M.,

Surgeon to the Samaritan Free Hospital.

THE short paper on the above subject by Mr. Spencer Wells, in the JOURNAL of December 9th, recalls a very interesting case of mesenteric tumour, upon which I operated in 1877, but of which I have never published the details. I think it may be well, while the subject is before the profession, to give the notes of it, and also of two cases of omental cyst which have occurred in my practice.

CASE. — S. M., aged 38, wife of a bank clerk, and mother of eight children, was placed under my care at the Samaritan Hospital in May 1877, by Dr. Peskett of Leyton.

I found a large cystic tumour in the abdomen, and was able to diagnose extensive parietal and intestinal adhesions, and, by vaginal examination, a nodular mass in or closely connected with the left broad ligament. The nature of the tumour being doubtful, I tapped and removed thirteen pints of curious orange-coloured serum. The chemical reactions of this fluid were rather those of a mixed ovarian and ascitic fluid, than of a pure ovarian or peritoneal fluid. The microscope did not aid the diagnosis, for I could find nothing but blood-corpuscles, and a few small granular cells, so indistinct in outline that I failed to draw them with the camera.

Careful examinations of the patient, made from time to time during the following three weeks, led to the following diagnosis, entered in the case-book on June 12th: "A thin-walled flaccid cyst, with some solid masses, which can be distinctly felt *per vaginam* in the left broad ligament. I cannot feel at all sure whether it is an actual cyst, or only an encysted collection of fluid amongst the intestines, omentum and mesentery. If it is the latter, it must be nearly a perfect cyst, as both flanks are clear, and changes of position vary the dullness and tension."

An exploratory operation was decided upon, and performed on the following day. A very thin cyst, with unusually large vessels on its anterior wall, was separated with difficulty from extensive adhesions to

the parietal peritoneum and omentum. A broad vascular pedicle was then discovered, connecting it to the mesentery of a portion of small intestine; this was transfixed and ligatured in two portions. Several smaller adhesions to the intestines, and a broad membranous one to the left broad ligament, were separated, and the left ovary and tube were then found to be adherent to a fringe of solid growths along the lower border of the cyst. I therefore transfixed the left broad ligament, and removed the ovary and tube along with the tumour. This led to its being included among my ovariectomies, where it will be found as Case 33.

The solid portions of the tumour were very vascular, and arranged in fringes along its borders, their edges tapering like the margins of the liver. The solid part weighed 6 lbs. 4 oz., and there were 19 pints of serum like that removed at the tapping. Unfortunately, some portions removed and preserved for microscopic examination were lost, but I have no doubt that it was a cysto-sarcoma, as the solid portions contained numerous small cysts.

The patient did remarkably well for the first week, and the wound healed by first intention throughout. After the removal of a large mass of cotton-wool, which filled up the hollow over the stomach, she became sick, and, on the eighth day, she brought up two pints of purplish-black fluid.

On the ninth day, I could grasp a much-dilated stomach through the parietes, and, shaking it, could hear the gurgle of much fluid mixed with air. I applied the stomach-pump, and removed a pint of grass-green fluid and much gas; then thoroughly washed out the stomach with warm carbolic water, and applied a firm padding of cotton-wool under straps. The fluid removed contained sarcinae in abundance, torulae, and bacteria, and striped muscle-fibre (remains of food), all dyed a deep emerald-green. Sulphite of soda was given in twenty-grain doses every three hours.

Enormous quantities of this green fluid were vomited on the tenth day, and the patient was so exhausted that I gave up hope. Diarrhoea was also troublesome. During the night, she took brandy and egg freely, and next morning the temperature had dropped from 101.6° to 99.0, and the pulse from 152 to 96. During forty-eight hours, she took by the mouth twenty-four ounces of brandy, and twelve ounces of brandy and egg mixture; and had sixteen ounces of port wine in beef-tea enemata. The greater part of the brandy was given between 11 P.M. on the night of the tenth day, and 10 A.M. on the morning of the eleventh day. It was given by the nurse, after I had practically given up all hope of saving the patient, and I have not the smallest doubt that she owed her life to this free and constant stimulation. The change in her condition in the morning astounded me. The bowels remained rather loose for twenty-four hours, and then she rapidly improved, and left the hospital strong and well on the twenty-first day after operation.

It is worthy of remark that, during the discharge of this large quantity of fluid from the stomach, the emaciation was so rapid, that it seemed almost as if one could see the wasting. Certainly the difference was marked between the visits, which I paid for some time every two hours. More than five years have passed, and she remains in good health.

I have twice, in the course of ovariectomy, removed cysts from the omentum, and a brief note of them here may be of interest.

The first was a small multilocular cystic tumour, of the size of a black Kentish cherry, which I found attached by a small pedicle in the lower border of the omentum, in the case of M. S., aged 41, mother of one child. (Case 29 in Ovariectomy Tables.) There were ruptured papillomatous tumours of both ovaries, with extensive papilloma of the pelvic *culs-de-sac* and other peritoneal surfaces. This little omental growth contained several cysts, much of a size, all lined with epithelium, like that commonly found in ovarian cysts; in fact, it was a perfect multilocular ovarian tumour in miniature, and, I have no doubt, owed its origin to cell-infection. It is worthy of remark that, as in some other cases of papilloma which I have recorded, the patient made a good recovery, and remains in good health, five years after the operation, all trace of the peritoneal papilloma having disappeared.

The second was a tumour of the size of a small cocoa-nut, with a very thick whitish fleshy wall, and a small central cavity, which had a puckered lining membrane, and contained three or four ounces of thick yellowish fluid. The tumour was attached to the omentum by a thick vascular pedicle, and lay high up in the abdomen, under the right border of the liver, so that I nearly overlooked it.

The operation was my 236th ovariectomy. The patient, a married woman of 47, with grown-up children, sent to me from Malaga by Dr. Clarence Visick. She was very emaciated, and had an unpleasant cachectic look, and had already had a sarcomatous polypus scraped out of the uterine cavity by Dr. Visick.

I enucleated a large cysto-sarcoma of the left ovary, separating unusually extensive mesenteric and intestinal adhesions, also a large lobulated solid brain-like sarcoma from the head of the caecum; the pedicle of this was so little vascular that it required no ligatures, merely a light touch over with Paquelin's cautery.

I left behind a very large fibroid uterus, and somewhat suspicious-looking right ovary, and was glad to get the patient safely off the table. Thanks to Mr. Meredith's kind care (I was taken ill a few days after the operation), she made a good recovery, and left the hospital on the twenty-fourth day after operation. In September of this year, Dr. Visick, writing about another case he sent over to me, says: "I have just seen Mrs. A. Hers is a most wonderful case. Her health at present seems perfect, and she looks very much younger, and has no kind of suffering." Mr. Doran was kind enough to examine the tumour for me, and found that the solid portions were mixed sarcoma.

One other case may be added here, which might well have been mistaken for a real omental tumour. On April 2nd, 1881, I operated upon Mrs. H., aged 33, and found a dermoid cystic tumour, with a pedicle attaching it to the right side of the omentum, and a band connecting it with the right ovary, which also contained a dermoid cyst. After removing the tumour and the cystic right ovary, I found on the left side a twisted stump where the ovary should have been, and a blocked and twisted Fallopian tube, which I removed. Evidently, the dermoid tumour attached to the omentum in the right side of the abdomen was the left ovary twisted entirely off, and receiving its nourishment from the omentum. This reading of the case was supported by notes taken many years before I operated. I first saw her in 1874, and at that time she had had two children, and both were dead. She had then a small tumour on the left side, but, as it was giving no trouble, I did not interfere with it. In 1874, 1876, and 1878, she bore children without trouble, the tumour remaining quiescent. In 1880, she came to me again, in the third month of another pregnancy, complaining of a severe attack of pain in the left side; this occurred at the time for menstruation each month, except the sixth, till she was confined: it was each time accompanied by some feverishness. She got well through her labour; but finding, when she was about again, that the tumour was larger and more painful, she came to me again, and I advised its removal. When I came to examine her, I found that it was now in the right side of the abdomen, and could not be drawn over to the left. It is obvious how easily this case might have been recorded as one of tumour of the omentum. The cystic tube might easily have been mistaken for an ovary by an inexperienced operator, and the case would have been far more puzzling had I not been able to refer to my old notes.

The first two of these omental tumours, I should say, were both due to cell-infection. In sponging out a peritoneum infected with ovarian papilloma, one is frequently struck with the way in which little growths occur in depressions and places where cells are likely to rest for some time undisturbed.

OBSERVATIONS ON SIX HUNDRED CASES OF DIABETES TREATED AT NEUENHR.*

By RICHARD SCHMITZ, M.D., Neuenahr.

Six hundred patients have been under treatment; of these, 420 were Germans, and 180 foreigners; 5 were under 10 years old, 25 between 10 and 20 years, 56 between 20 and 30, 104 between 30 and 40, 134 between 40 and 50, 196 between 50 and 60, 60 between 60 and 70, and 20 between 70 and 80 years of age: 248 of the patients came of families in which diabetes had already appeared; 51 came of families in which some serious psychosis had manifested itself, and 45 more had relatives who were remarkable for eccentricity or irritability, and 42 came of families which were markedly tuberculous; 93 of the cases were Jews, and of these 48 had diabetic relatives, 18 had relatives with psychoses, and 9 tuberculous relatives. In 8 cases, both husband and wife were at the same time suffering from diabetes. In 183 cases, the immediate exciting cause of the disease appeared to be some acute disturbance of the nervous centres, and only in 18 was there any essential disease of the nervous system; in 153 cases, the diabetes was attributable to an excessive indulgence in sugar and saccharine food. In 45 cases it was attributable to gout, and, in several instances, alternated with a gouty attack. It was in these cases that alkaline waters and salicylate of soda were most useful; in 22 cases, diabetes seemed to be the result of the exhaustion consequent on some severe and long continued disease. The specific gravity of the urine varied from 1025

* Abstract of a paper communicated to the Medical Society of London.

to 1035; the highest was 1042, the lowest was 1013, and in this latter 1 to 5 per cent. of sugar was found. The average daily amount of the urine was 2,500 c.c. to 3,500 c.c.; in only one case was it 9,000 c.c.; in 14 cases it was as low as 500 c.c. to 800 c.c., in spite of taking 1,600 grains of the sprudel water; but wherever the quantity of urine was small the perspiration was great, and where perspiration became copious the sugar decreased, which may explain the beneficial action of pilocarpin and of Turkish baths. Generally the day urine contained most sugar, exercise diminished it, while mental exertion and nervous excitement and pain increased it. The sugar varied from one to three per cent.; in only one case was it as high as eight per cent. When albumen was present, as not unfrequently happened, it seemed to be in inverse relation to the sugar. After the disappearance of the sugar, a material increase of phosphates, and, in some, of oxalates, was noticed; in four cases, hippuric acid was present. In two cases, sugar was simulated by a form of uric acid when the copper test was used; the fallacy was rectified by the polariscope. When the skin was dry, there were considerable polyuria and much emaciation; if there was a fair amount of sensible skin-action, the emaciation was not marked; 35 cases were very fat, and other 46 had lost little of their former corpulency. The muscular weakness is the consequence, mainly, of degeneration of structure, which affects not only the voluntary muscle, producing the unsteady gait and the easy fatigue, but affects the cardiac muscles, producing the small pulse, the feeble heart contraction, the syncope attacks, and the death by asthenia; the intestinal muscles producing the constipation, and the ciliary muscles producing the errors of accommodation. The cardiac weakness accounts probably for some of the cases of death, with accompaniment of coma or convulsions, which have been attributed to acetonaemia. Of the condition called acetonaemia, there were six cases. That it is caused by the absorption of some noxious product of fermentation in the bowels is certain, but whether this is always acetone is doubtful. The case was relieved as soon as a free evacuation of the dark coloured, very foetid contents of the bowels was secured by castor-oil. If this could not be accomplished, the patient died.

Two forms of hunger are to be noticed: one, the normal hunger produced by the need to replenish the great waste of tissue; the other, a form of bulimia, a ravenous desire for any kind almost of food, which I consider a neurosis. In this connection it is to be noticed the frequent insatiable desire for sugar, similar to the alcoholic craving of the drunkard. Thirst is to be looked on as the result of the drain of water, rather than as the result of the passage of sugar. A foetid odour of the breath is proportionate to the amount of sugar passed. Loose-ness and falling out of the teeth is often an early sign of diabetes. Gastric disorders are rare, in spite of the food being difficult of digestion; but intestinal troubles are frequent, notably constipation, and sometimes diarrhoea. Constipation appears to me to depend less on the nature of the prescribed food, than on the weakness of the digestive and enfeebled muscular coat of the intestines. When diarrhoea occurs, there is evidence in the grey foetid motions, which are quickly covered with a thick froth of fermentation of sugar, unnaturally present in the bowels; of which the urine, at this time, is found to contain very much less than just before the attack of diarrhoea. Neuroses of various kinds, such as a form of hunger, already referred to, are not uncommon; they are chiefly neuroses of sensibility; of motor neuroses, cramp was the only one noticed. Crural neuralgia was not uncommon; sciatic and lumbar neuralgia less frequent; some cases of cervico-occipital neuralgia were noticed, and one of mastodynia in a man of seventy-five years. For their relief, codeia and salicylate of soda were most useful. The vulvar pruritus common in female diabetics is probably largely neurotic; it is greatly relieved by lotions of salicylic acid. Apathy is probably produced by the direct influence of the sugar-holding fluids on the brain.

Tuberculosis became developed in the course of diabetes in twenty-six cases only. Impotence was frequently present, but, in twelve cases, sexual desire and capacity was increased. Balanitis was occasionally observed, and was relieved or cured by strict cleanliness and salicylic acid lotions. Dimness of sight was frequent, partly produced by accommodation disturbances, and partly by tumour of the lens, which disappeared with an improvement in the diabetes, except in three cases, where there was cataract, which was successfully extracted in all. Blindness, produced by nutritive disturbances of the skin, as a dry, cracked, and prurient eruption. The prognosis should not be so discouraging as has hitherto been the custom.

A CENTENARIAN. — A female inmate of the Hampstead Workhouse Infirmary, named Martha Grey, is reported to have died at the age of one hundred years. The cause of death is certified by Mr. A. H. Cook, medical officer of the infirmary, as "senile decay."

REMARKS ON THE TREATMENT OF RECENT WOUNDS.*

By RODERICK MACLAREN, M.D.,
Senior Surgeon to the Cumberland Infirmary.

THE treatment of recent wounds is a matter in which we all have experience. Within the limits of our Branch, we see them not only among a healthy, vigorous agricultural population, but also in town populations with constitutions deteriorated by overcrowding, underfeeding, and the various vices which abound in the lowest strata of the people. As to surroundings, we meet with wounds where we have all that money, mode of life, and skilled nursing can do to promote a successful termination. We have them in hospitals, where the nursing, feeding, and appliances are very much what we think the best for the class of cases; and, on the other hand, wounds have to be treated where every favourable condition is absent, where there is no nursing, where the hygienic conditions are of the worst possible kind, and where the feeding is imperfect. It has, therefore, seemed to me that an interchange of views and experience among us would be specially valuable. In the few remarks I am going to make, I cannot tell you anything new, but merely give you my opinions and experience on certain points more or less familiar to you all. Nor can I pretend to make an exhaustive statement of so extensive a subject; I shall content myself with laying down certain broad propositions, which, in my opinion, embrace the great majority of cases.

In the first place, I may express my conviction that no one method of treating wounds is likely to give the best attainable results under all circumstances and with every variety; and, when a man sets forth that one treatment best promotes the healing of every such injury, I think that he is either generalising on imperfect observation, or allowing enthusiasm to warp his judgment. I purpose considering wounds under their ordinary divisions of incised, contused, and punctured.

First, as to incised wounds: for wounds of small or medium size, not involving bones, cavities, or the sheaths of tendons, I have seen the best results from the most absolutely simple treatment. 1. The first thing is careful cleansing of the wound, and removal of any foreign substances, if such be present. For this purpose, I prefer carbolic lotion (1 to 20); boracic lotion (saturated); or even simple dry rag or other convenient material. I am convinced that the water in common use is often a medium which brings deleterious matter into contact with a wound, and, for that reason, to be avoided. 2. Next to this follows suppression of hæmorrhage; and the more thoroughly this is done, the better is the chance of primary union; indeed, the ability to completely control it is one of the limits to this simple treatment. Ligature of vessels with catgut, and torsion, are the simplest means at our command. Sometimes, specially if a wound be over bone, a pad of absorbent cotton-wool, applied for twenty-four hours, will stop oozing. 3. The next stage is the bringing of the sides of the wound into complete contact. For this purpose, I am in the habit of employing one of two methods—suture or pressure. The sutures I prefer are silver wire, hair, or common sewing-needles. I believe it to be an advantage to use very fine sutures; and, for small wounds, hair answers most admirably; it is very strong, unirritating, and easily procured. A very excellent way of closing scalp-wounds is to push a sewing-needle through the two edges, and bring them together with a thread in figure-of-eight. In using sutures of all kinds, it is of great consequence to pass them through the tissues beyond the wound, whenever this can be done. Thus, with hare-lip, after paring, I pass needles right through the whole thickness of the lip and mucous membrane, keeping them (the needles) entirely from contact with the wound. I have sometimes seen suppuration commence at a suture, and spread from it, breaking up a wound which was promising to heal well. This risk can be avoided by keeping the suture away from the cut surface. Occasionally, a wound is so placed that a pad will close it throughout. Absorbent cotton-wool is the nicest material for this purpose. If it come near the edges, it is an advantage to have it impregnated with an antiseptic. When a wound of the class I am speaking of is efficiently closed, and all hæmorrhage has stopped, I look on any dressing not only as superfluous, but generally as injurious. Simple exposure to the air, keeping the wound dry, cool, and, above all, at rest, are all that is needed. We all know that heat and moisture promote putrefaction; and they should, therefore, be avoided. Sticking plaster is, of all known ways of keeping a wound together, the worst, almost invariably producing suppuration of the parts with which it is in contact. The only departure from the above way of treating moderate-sized flesh-wounds is where the surroundings are unhealthy, and especially in hospital, where the presence of suppurating surfaces and various ailments causes special

* Introduction to a discussion at a meeting of the Border Counties Branch

risk of infection; then the complete Listerian dressing is the proper one to adopt.

I will next speak of large flesh-wounds, wounds involving joints and other cavities, and wounds involving bone, such as amputations. These may be all classed together, for one treatment is adapted to all. I am not aware of any treatment which will, in the majority of cases of this class, secure primary union; nor do I think it is likely that any such will ever be discovered. No doubt it occasionally occurs under various methods of dressing; but where there is considerable oozing, which cannot be completely stopped, where muscle is no longer in contact with muscle, tendon with tendon, or subcutaneous fat with fat, but each in apposition to tissue of another kind, it does not seem likely that primary union will ever be the rule. In all cases of this class, I regard asepticism, in its most exact signification, as involving least risk to life, and as most favouring local cure, of any method of treatment with which we are acquainted. No method of maintaining asepticism equals the carbolic gauze dressing, with all the adjuncts of spray, carbolic lotion, etc. I have tried, or seen tried, a great variety of other dressings avowedly antiseptic; but no other as yet seems worthy of holding a permanent place. I have no doubt that a better will be discovered. Its disadvantages are obvious enough. It is troublesome, cumbrous, somewhat irritant, and, above all, it keeps the wound sodden; and this unquestionably is not the most favourable condition for healing. But its certainty—the fact that it *will* do what we intend unfaillingly, where the conditions are at our command, and we make no mistakes—places it above everything else yet brought forward. The drainage-tube is too essential a point of this dressing to be passed over without a word; it provides a ready channel for the escape of discharges, and prevents distension. Drainage should be limited to as few lints as possible, so that the surfaces may be kept thoroughly in contact.

Only one set of incised wounds remains, where the wounds are connected with suppuration already existing, as in opening an abscess, excising a suppurating joint, or removing dead bone. Unless the whole surface which discharged pus can be removed, such wounds may be expected to continue suppurating. In these, also, complete asepticism should be secured whenever possible; but, in a great many, from the impossibility of reaching every corner where putrefaction dwells, it cannot be attained, and I believe we then do best by using some efficient unirritating antiseptic, such as carbolised oil (one to twelve), applied on lint, and frequently renewed. In this class, I find myself yearly using the drainage-tube less and less, preferring, in a great majority of cases, to make a large wound, and leave it fully open. If the case be one where there is a reasonable probability of securing complete freedom from putrefaction, I put a plug of carbolised gauze in the wound, and an ordinary gauze dressing over it. If it seem hopeless to expect an antiseptic condition, I plug the wound with lint, soaked in carbolised oil, and have it frequently changed. Excisions of joints, as of the elbow and hip, I now treat in this way, and have got better results than when sutures were used. There is no possibility of discharge being retained; the wound heals uniformly from the bottom, no pockets of pus or sinuses remain; I believe healing is more rapid. I showed you at last meeting a case of excision of the elbow, for suppurating in the joint and sinuses communicating externally, which was absolutely healed in five weeks and four days after the operation. These remarks apply also to cases in which a cavity, that the tissues will not fill, remains after an operation. It is better to leave such a cavity open, than to shut it up by pulling skin over it.

I now come to contused wounds. When these approximate the characters of incised wounds, as so often happens with the scalp, the edges being sharp and clean, with little damage to the tissues around, they should be treated as incised wounds. The results are often surprisingly good. Large, irregular, branching wounds, caused by a blow from some blunt instrument, or a fall, often heal without any formation of pus. If these are at one end of the scale of contused wounds, at the other are cases where there is no doubt that the vitality of the injured part is for ever destroyed, and that amputation is our only resource. As this brings them into the class of incised wounds, they call for no further remark. But there is an intermediate class, where the amount of injury is doubtful, and where only time can show whether the tissues can live or not—cases, I may say, often of great responsibility and great anxiety. Such injuries, if seen early, should have antiseptic measures put in force at once. To be successful, they should be done very early, as everything in the condition of the wound favours the speedy advent of putrefaction. Very many cases so treated will well repay the trouble. I have seen apparently hopelessly damaged tissue retain its vitality, and I have seen sloughs slowly absorbed without constitutional disturbance or infective sequelæ. When a contused wound of this kind becomes putrid, I generally have it dressed with carbolised oil or charcoal poultices until the sloughs are mapped out, and then re-

move these as speedily as possible. I do not think too much importance can be attached to this, for dead and putrifying tissue forms a terribly active centre of constitutional contamination. Continuous irrigation with carbolic lotion or Condy's fluid, gives often good results with this kind of injury, specially where efficient treatment has not been instituted at once, and where widespread putrid suppuration is going on. It washes away the discharge as it is formed, and by its mechanical, as well as by its antiseptic action, it tends to keep such a wound sweet.

Punctured wounds do not call for much comment. They bear a small proportion to the other classes in civil practice. Their importance depends very much on the tissues or organs they involve, and it would be beyond the scope of these remarks to go into details. Small punctured wounds heal readily with rest alone. For medium-sized ones, an ice-bag is a useful application, the larger ones should be treated antiseptically.

In conclusion, I purpose making a few remarks on the principles and objects we have to keep in view in treating recent wounds. First in importance is the avoidance of constitutional infection; and, second, the speedy healing of the wound, and the restoration of the part to usefulness. These are not synonymous for a treatment which, if successful, results in speedy healing, but may, nevertheless, involve great risk of general infection in the event of its failure, such as the dry treatment of large wounds. I think it is our duty always to keep before us the gravity of the constitutional risk, and to consider first what reduces this to its lowest point, and to regard local recovery as an important but still secondary matter. If we inject a putrid fluid into an animal, we can get exactly the disease which used to afflict our surgical wards, and the evidence is very conclusive that the poison which produces grave general risk, is inseparably connected with putrefaction. Anyone who goes over the experiments of Pasteur, of Lister, of Roberts, or of Tyndall, can, I think, come to only one conclusion, that putrefaction invariably originates in infection from without. But it needs a suitable soil, a certain amount of moisture and heat. Various substances are prone to it in various degrees, living tissues much less than dead ones, healthy much less than unhealthy, thick fluids much less than thin. We may, therefore, endeavour to carry out an antiseptic treatment from two opposite directions. We may either make the soil a very unsuitable one, as in the dry treatment, or we may prevent the access of septic material, as by the Listerian dressing. Experience and science alike tell us that, while we look after the wounds, we must not forget the body in which they are, and that pure air, good food, and careful nursing are not less essential than lotions, and sures, and dressings.

GELSEMINUM SEMPERVIRENS IN TETANUS.

By JOHN B. READ, M.D., Tuscaloosa, Alabama.

[DEAR SIR,—Two years ago, my friend and kinsman, Dr. John B. Read of Tuscaloosa, Alabama, sent me the enclosed report of a case of tetanus cured by gelseminum extract, with the request to publish it in some New York Medical Journal. The report was mislaid, and came to light only a few days ago. I think it of much importance, and hope you will find a corner for it in the BRITISH MEDICAL JOURNAL, and oblige, yours truly,

J. MARION SIMS.

December 2nd, 1882.

The above letter has been forwarded to us by Dr. Marion Sims, with the following report.]

Early in September 1880, I was called to see a strong, healthy mulatto woman, twenty years old, who was suffering from well marked tetanic convulsions, caused by a broken bit of glass, on which she had trodden two days previously, and which was embedded in her heel.

I administered chloroform to enlarge the wound and search for the broken glass. It was impossible to anaesthetise her profoundly, and her foot was forcibly held by strong assistants while I made free incisions, but failed to find the fragment of glass. The wound was then filled with morphia, and a common poultice applied; and a cathartic was given, which acted promptly.

Knowing well the inefficiency of chloroform, chloral, and opiates in tetanus, I determined to try the effect of the gelseminum sempervirens, because of its well known power of relaxing all voluntary muscles. I therefore ordered twenty minims of fluid extract of gelseminum every two hours, alternating with the same quantity of liquor potassæ at the same intervals. There was great difficulty in deglutition; but milk and soups were taken in small quantities frequently.

On the morning of the second day, there was a slight improvement in the rigidity of the jaw, and the general spasms occurred only every three or four hours. But, as the day advanced, the jaw became more

rigid, and there were violent and painful contractions of the muscles on the front and back of the chest. The general spasms also became more frequent, and sometimes occurred during sleep.

The dose of gelseminum extract was then increased to forty minims every two hours. During the third day, there was a marked improvement in both tonic and clonic spasms; the medicine was continued in forty-minim doses. By the close of the fourth day, the rigidity of the jaws was almost entirely relieved, and the general spasms recurred at longer intervals, and with diminished violence. After this period, the improvement was rapid and regular, and the dose of gelseminum was reduced to twenty minims, at which it was continued till full convalescence. No remedy of any potency was used after the first six hours but the gelseminum, and there can hardly be a doubt that the cure was the result of its use. The extract was fresh from the laboratory of Tilden and Co., and was given for a week in amounts closely approximating half an ounce to an ounce every twenty-four hours; it produced no other sensible effect than that of controlling the spasms and arresting the disease. There was no dizziness, no dimness of sight, no double vision, and no prostration of strength, as I have seen in other patients with other diseases from much smaller doses of the same preparation.

So far as I am aware, this is the only instance, in the records of medicine, of the use of gelseminum in the treatment of tetanus, and the result here is certainly encouraging.

As the gelseminum exerts such powerful control over spasms of the voluntary muscles, I would advise its use in hydrophobia, and I would suggest that it be used hypodermically, whether in tetanus or in hydrophobia.

CASE OF CYSTOCELE INDUCTION OF PREMATURE LABOUR: OPERATION: RECOVERY.*

By H. E. SPENCER, L.R.C.P. & S.Ed.

I was called to attend Mrs. T. on June 23rd, 1882, at 8 A.M. The messenger stated that the patient had been taken in labour at the end of the sixth month of pregnancy, and that in all probability the child would be born before my arrival.

The patient had been four times previously confined, three times of twins, being as it happened one of twins herself. On two of these occasions forceps had been used, on account, it was said, of tumours obstructing the passage. I found the patient apparently on the point of being delivered. Violent expulsive pains came on incessantly, the woman bearing down with all her might, and pulling vigorously at a towel attached to the bed-post. Pains similar to these in character, but less in degree had, however, occurred often within the last few weeks. These violent efforts to expel the supposed foetus had been going on for several hours. On examination, I found a globular mass protruding from the vulva, about the size of the foetal head when crowned, as the nurses say. This turned out to be the anterior wall of the vagina, from the congested surface of which blood was oozing. The uterus showed no signs of labour having commenced. Having called in the aid of my friend, Mr. Weekes, I passed a catheter. Only a little urine, however, escaped, and no relief was given. Pressure above the pubes did not produce any sensation referable to the bladder. The foetal heart was plainly heard.

During the next three days things went on exactly the same way, expulsive pains recurring every few minutes, catheterism and the liberal use of opiates giving scarcely any relief. Objects introduced into the vagina with a view to action as pessaries were immediately expelled. As it appeared that the troubles incident to the vaginal prolapse had greatly increased coincidently with the progress of pregnancy, we decided to induce premature labour. Accordingly on the evening of the 26th a catheter was inserted between the membranes and uterine wall, pushed up several inches, and left. In twenty-four hours the os was sufficiently dilated to admit the introduction of the hand; and, after having been examined by Mr. Kirsopp, a living female foetus, apparently of about six months' development, was extracted by the breech. The child lived four hours.

Things went on very satisfactorily, the prolapse and pains subsiding very gradually, when the patient was placed in the hands of the midwife, and the case was handed over to her charge. At this period, however, the patient became very restless, and the prolapse increased, and she was again brought to the hospital. On examination, the os was found to be closed, and the membranes were again protruding from the vulva. The patient was again brought to the hospital, and the case was again handed over to her charge. The patient was again brought to the hospital, and the case was again handed over to her charge.

Read at the Autumn Meeting of the Yorkshire Branch.

attempted. By the help of good nourishment, iron, and astringent injections, these conditions were obtained by August 20th. On the 28th the menses appeared, ceasing on the 31st.

On September 4th, the bowels having been previously cleared out, the patient was etherised and placed in the lithotomy position. The bladder was then distended with water, which brought the prolapsed part well within view and reach. A duckbill speculum retracted the perineum.

Sitting in front of the patient, I dissected an ellipsoidal piece of mucous membrane two inches long, and one inch broad, from the anterior vaginal wall. One small vessel was tied. The raw edges were brought together by seven sutures of Chinese twist. A catheter was left in, but removed the next day, as it was ill managed and caused irritation. Afterwards a catheter was passed twice a day until the fifth day, when the patient micturated in the knee-elbow position. Vomiting was rather troublesome for the first twenty-four hours. The bowels were at first left to themselves, and did not act until a purgative and enema were given on the sixth day. The pulse and temperature were always normal.

On the seventh day, the patient was chloroformed and again placed in the lithotomy position. The bladder was again injected, but this time the distension was upwards and forwards, a very satisfactory sign as regarded the result of the operation, but not facilitating the removal of the sutures. The speculum was introduced with some difficulty, whereas before the operation it slipped in with ease. Not a trace of irritation showed itself about the wound, which was healing well. The sutures were all removed, and the vagina syringed out. Scarcely any chloroform vomiting followed, and the patient micturated during the afternoon. In the evening, I observed that pressure above the pubes caused a desire to micturate.

November 4th. Upwards of two months have elapsed since the operation, and the patient is in perfect health and free from all discomfort whatever. Indeed, she says, she has not been nearly so well as she is now since her first confinement.

NOVEL METHOD OF COMMITTING SUICIDE.

By M. D. MACLEOD, M.B. Edin.,

Medical Superintendent, East Riding of Yorkshire Asylum, Beverley.

THE report, headed as above, in the number of the BRITISH MEDICAL JOURNAL of July 1st, reminds me of two similar attempts at suffocation, one of which succeeded.

The first case occurred, as far as I can remember, in the Calton Gaol, Edinburgh, and was related to me by the late Dr. Handyside, lecturer on anatomy, Edinburgh School of Medicine. During the dissection of a female subject, it was found that there was firmly impacted in the pharynx, completely occluding the glottis, a carefully made wedge of flannel. Dr. Handyside, I recollect, showed me a drawing of the pharynx, showing the position of the wedge, and a cast of the wedge-shaped pledget of flannel which had been found in the woman's pharynx. The cast showed a strip of flannel, which had been smoothly folded into a cone-shaped mass, and the free end secured by a large pin. I believe Dr. Handyside reported this case at the time, most likely in the *Edinburgh Medical Journal*.

The other case occurred in my own practice, while assistant-medical superintendent of the Cumberland and Westmorland Asylum. The patient was a strong young man, labouring under mania, with active-suicidal impulses. At that time he required feeding with the stomach-pump, as he would not take food. On the day in question, he was so violent that he required to be isolated. In the evening he was taken out of his room, so that I might feed him. I remarked that he looked blue and breathed hard, and I was at a loss to account for his state. On opening his mouth with a "Newton's" gag (much against his will), I saw he had pushed something well back into his pharynx. This proved to be a carefully made cone of flannel (a strip of blanket), exactly of the shape of the cast in Dr. Handyside's case. He had doubtless been interrupted as he was pushing the plug down, for there is no doubt, if he had pushed it as much farther, he would have occluded the glottis. No sense of discomfort would have deterred him from carrying his purpose into effect. His death, however, the true cause of his death might have been ascertained, had he been examined, even had an examination of the pharynx been made. It was only by a fortuitous combination of circumstances that his attempt was frustrated.

MEDICAL MANUSCRIPT. The *Lancet* has published the name of Dr. James Thomas to the Commission of the Peace for Swansea.

THE CURATIVE EFFECT OF CHLORAL IN TWO CASES OF ALBUMINURIA.

By THOMAS WILSON, M.R.C.S. Eng., Wallsend.

WHEN Liebreich introduced chloral, he claimed for it a prominent position amongst the drugs known as hypnotics—a position which the experience of medical men has more than confirmed. Its inventor only regarded it as a sleep-producer. Little did he think of the various uses to which it might be applied. Like all new drugs, however, chloral has been used in various combinations for the most varied affections. No one, I think, has as yet drawn the attention of the profession to the almost marvellous effect of chloral in causing albumen to disappear from the urine, and with it the presence of an existing oedema. I am aware that no absolute results can be based upon the success which has followed the treatment of one or two cases of albuminuria; but the facts are so strong, and the results of treatment so striking, that these must be my excuse for bringing them under the notice of the profession.

Mrs. R., a delicate-looking woman, aged 40 years, was delivered of her eighth child in February last. Her children had come rather quickly; on the last occasion, it was the second within the year. During the time she was carrying her last baby there was no oedema of the legs, and nothing occurred of any importance during the period of gestation. Her last labour finished well; but, somehow or other, she never regained her strength. She suffered from night-sweats. The end of March found her suffering from cough and severe attacks of asthma. Medicine proved of little service, for dropsy set in, and the urine became albuminous. On April 13th, Dr. William Murray saw her, in consultation with me. In the early part of May, Dr. Oliver saw her with me, and at this time her condition was as follows. Both legs were very oedematous. Breathing was short and difficult; it amounted to orthopnoea, for patient could not occupy the recumbent position. The lips were markedly cyanosed, and the pulse extremely weak. There was frequent cough, but the lungs exhibited nothing very abnormal; the urine was albuminous, but no cardiac murmur was detected. From the weakened sounds of the heart, cyanosis, and difficulty of breathing, in the absence of any marked pulmonary lesion, I was led to diagnose a dilated heart, passive congestion of kidney, and dropsy. For some time past, the patient had been taking chloral rather freely, and, to diminish it, Dr. Oliver suggested, from its tonic action, as well as its hypnotic, the use of hops. Externally and internally their employment was unsuccessful. I again resorted to the use of chloral, but only at bed-time. Fortunately, a most reliable nurse had been obtained, and, as it had been frequently noticed that the urine passed a few hours after taking chloral was lighter in colour, and contained less albumen, I got her to keep specimens of urine passed at various periods of the day, for comparison. That there might be no mistake, this work was undertaken for some days by the husband, who sat up night after night with his wife. The experiments were carefully conducted, and admirably carried through. From the regularity with which it was noticed that the urine passed after taking chloral was clearer, of lower specific gravity, and contained less albumen than that passed at other times, it was decided to test the effect of chloral by withholding its administration altogether. Until now, the patient had been improving; the albumen had greatly diminished, the oedema was disappearing, and the patient was able to be moved to the couch; but no sooner was the chloral stopped than the symptoms returned. Every medicine was now stopped, with the exception of the chloral, as it was quite apparent to Dr. Oliver and myself that this was the only remedy likely to prove of service. Daily I made a comparative examination of the urine passed at various periods, and I always noticed that the urine which was passed after taking chloral contained a diminishing quantity of albumen. Dr. Oliver at this time made an independent examination of the urine, of which the following is a brief statement: Specimens passed after taking chloral were of average specific gravity 1016, acid, with no albumen; specimens passed at other periods contained albumen, and granular and hyaline tube-casts.

A continuation of the chloral treatment resulted in complete disappearance of albumen from the urine, and with it disappearance of the other symptoms I have mentioned. In the middle of the month of July she had so far recovered that she was able to be removed to the sea-side. At the present time she is better than she has been for many months past, and, with the exception of amenorrhoea, she is quite well. No explanation is offered as to how the chloral was followed by such beneficial results. Suffice it to say that, under its use, a lady so prostrate that she could not stand, with a dilated heart, albuminuria, and marked oedema of feet and legs—indications of a grave constitutional state—has simply been rescued from death. The chloral did not produce any apparent diuresis or diaphoresis.

In another case—a lady 68 years of age, the subject of albuminuria and dropsy—I gave chloral, and had the satisfaction of seeing this line of treatment as successful as in the case which I have reported.

PERIOD OF INCUBATION OF SCARLET FEVER.

By D. P. BARRY, M.D., Surgeon-Major (Half-pay),
Station Hospital, Bury St. Edmund's.

IN the articles which have appeared on this subject during the past six weeks, the general tenor seems to be that the longest period of incubation cannot exceed fourteen days; but, in Reynolds's *System of Medicine*, Dr. Gee considers that it may extend to three weeks; and he states that Rilliet and Barthez are of the same opinion. The case which I am about to narrate strongly corroborates this view; indeed, would be inexplicable, if it cannot be maintained.

Private W. D., a recruit of this depot, was admitted to hospital on November 1st, seemingly with ordinary tonsillitis, no fever, foul tongue, and looking pale and pinched. With inhalation of steam and a gargle of chlorate of potash, the throat was well in a few days; but he looked too weakly for drill, so I detained him. A few days afterwards, some trivial ulcerations about the buttocks appeared; this caused further detention, but they were healed by the 18th, and I intended to discharge the man next day. On November 19th, I found him in bed with a cold in the head and throat, caught, as he said, through a draughty window near his bed. On the 20th, he was still in bed, with pains in all his bones, headache, pyrexia, sore throat, bright red; and, on examining him, I found, unmistakably, the rash of scarlet fever on his neck and chest. He was at once removed to the detached infection ward. On November 21st, he had rash down to his thighs; and on November 22nd, to his feet. The attack proved mild, and on December 4th he was desquamating.

Now as to the source of infection. From November 1st, he had not been outside the hospital enclosure; there had been no case of scarlet fever within this barrack since July; no civilian friends or relatives had visited the man; and the health-officer of the town informs me that there has not recently been any case in Bury St. Edmund's, as far as he is aware. So whence *origo mali*?

On October 28th, Private W. D. went on leave to his home, and returned to barracks early on the 30th. The probabilities are, therefore, that the disease was contracted on Sunday, October 29th, which would leave a clear twenty-one days for incubation. At all events, he was twenty-one days secluded from almost every possible source of contagion.

I have since ascertained that on Sunday, October 29th, Private W. D. went to a chapel, where the greater part of the congregation belonged to a village in which there had been some cases of scarlet fever recently; and it may still be considered probable that infection took place on that date, thus allowing full twenty-one days for incubation.

In 1866, when I was stationed at Aldershot, scarlet fever had become so rife and fatal that the Sanitary Committee of the War Office was ordered to report fully upon the epidemic; and, among the many conclusions arrived at, there was one bearing upon this incubation question; for they found that, "out of all the attacks recorded (333), there were only forty-nine or fifty in which the interval between first and second, or second and third attacks, in the same hut or room, was under a fortnight." And, in their summary, the Committee report that the number of second attacks included within the usual incubative days (third, fourth, and fifth) scarcely exceeded a dozen. All this evidence seems to prove that the incubative period may be any time from forty-eight hours to twenty-one or twenty-two days.

To those who are interested in the subject of scarlet fever, the report of the Army Sanitary Committee in regard to the epidemic of 1866 will be found most accurate and exhaustive. The inquiry was mainly carried out by Dr. John Sutherland, and the report was published as a Blue Book presented to both Houses of Parliament by Royal command.

DONATIONS AND BEQUESTS.—Mr. Joseph Gurney Barclay has given £500 to the North-Eastern Hospital for Children.—The Birmingham and Midland Counties Sanatorium has received £300 under the will of Mr. C. Weston, and £50 under that of Mr. J. A. Williams.—The Goldsmiths' Company have given £100 to the National Truss Society.—Mr. Joshua Payne has given £100 to the Sick Poor Society, Leicester, by desire, and in memory of, his late wife.—The Leicester Infirmary has received £100 under the will of Mr. Alderman T. Norman.—Mr. John Chevallier Cobbold, of Holywell, Ipswich, bequeathed £100 to the East Suffolk Hospital.—Mr. Herbert Clarke has given fifty guineas to the Royal Hospital for Diseases of the Chest.

TREATMENT OF INFANTILE PARALYSIS.

By WM. H. BARLOW, M.D.,

Consulting Physician to the Dispensary, General Hospital, and Dispensary for Sick Children, Manchester and Pendlebury.

THERE is a good deal of truth in the remarks of Dr. R. J. Lee, in his paper on the treatment of "Infantile Paralysis", in the JOURNAL of the 22nd instant, and I am inclined to agree with many of his conclusions; but I wish, in the first place, to protest against the continued use of a term which our advanced knowledge of diseases of the spinal cord has shown to be insufficient, and therefore inaccurate. The disease in question is not confined to infants, nor can we at present say that any age is exempt from its attacks. I have elsewhere suggested a name, which would distinguish the disease by its most prominent and characteristic symptom, and which yet would not imply any restriction of age; that name is "regressive paralysis", and it has been accepted and approved by many of my brethren, both English and foreign, as a convenient and correct designation.

The application of artificial heat has been a recognised and valuable treatment of paralysed limbs for longer than I care to trace backwards, and was perhaps never more strongly urged than by Sir James Paget, in a lecture delivered by him at St. Bartholomew's Hospital in 1864; and very fully and ably by Dr. Ross in his work on *Paralysis in Infancy and Youth*, in 1869.

I have always recognised the great value of the various means, whether by dry heat, as from a fire or from bags of sand, or salt, or flour, heated and applied, and that heat afterwards retained by wraps of wool or silk; of moist heat by warm and stimulating baths of brine, etc.; of frictions with stimulating liniments, of shampooing, of massage, of percussion, and other modes of exciting and maintaining the temperature and capillary circulation of the limb; and I am not at all inclined to object to Dr. Lee's remarks upon the value of such means. But, at the same time, I cannot agree with him that we can safely omit electricity in the treatment of these cases. I have too often seen muscles, apparently irretrievably lost, regain their functions under the careful use of one or the other form of current, judiciously and carefully applied, to ever allow a patient under my care to lose the possibility of recovery, which I believe this means of treatment holds out. In my monograph on Regressive Paralysis is recorded, among many others, a case (No. 17 in the table appended) which has now been under my own eye more than ten years; and, though the attack was very extensive, involving the muscles of the neck and face, as well as an upper and lower limb, and this at the early age of five months, yet he is now able to run and jump, and join in all the pastimes of playfellows of his own age, with only the slightest halt perceptible, due to a shortening of barely one-eighth of an inch, the only muscle atrophied being the extensor longus digitorum of the right leg. This result, I am certain, is due to the careful and persevering use of electricity; in the first instance, the continuous current, and, as the muscles recovered their normal reaction, the induced; and the cause of the failure to save the extensor longus, I believe to have been its deep position between the tibialis anticus and peroneus, preventing the current from reaching the muscular fibres and stimulating them to contraction. By what means but this can a palsied muscle be made to contract regularly and frequently, so as to retain its normal structure and functions? Under the application of heat, the bulk of the limb might perhaps be preserved, but the muscular structure will waste, and be replaced by fat; nothing but constant and regular use will keep the highly organised muscle healthy. Therefore, I would warn all who may have the treatment of these cases not to neglect this great and irreplaceable means, at the period when alone it is of use; that time is the early period of the disease—the earlier, the more valuable—and after the lapse of two years, it is, in my experience, of comparatively little effect.

Next in value to this, nay, perhaps it should stand on the same level, or, were it not that it is impossible to apply the impulse of the will to a palsied muscle, even higher, are the voluntary efforts of the patient to move the limb, thus bringing into use each muscle as it recovers its normal functions; and next to these come passive movements and regular gymnastic exercises, such as can be provided by apparatus, or by the Swedish exercises.

The greatest difficulty lies with the bones, where the circulation and nutrition are for the most part beyond our reach; and here it is, I am inclined to think, that artificial heat is most useful. But beyond all these, and though I have not here, after an attack of this kind, it is necessary to guard carefully against sudden changes of temperature; these patients are peculiarly sensitive to cold, and to changes in the electrical conditions of the atmosphere: and in many, I have known these changes to induce temporary incontinence of urine. They are also peculiarly liable

to boils and chilblains; for these, warm woollen or silken clothing next the skin, with the usual hygienic precautions, are very necessary and very valuable, with the other modes of promoting capillary circulation which I have already mentioned; but I must postpone any further remarks to a future occasion.

CLINICAL MEMORANDA.

PERIOD OF INCUBATION OF SCARLET FEVER.

INVESTIGATORS and recorders of cases bearing on the above subject should, I think, be more careful to eliminate the various fallacies that surround so many cases. If this be not done, then they are almost worthless as part of the data from which to draw accurate conclusions. One sees a good deal of scarlet fever in a children's hospital, but the cases that occur are so difficult to trace to their origin that only a very few can have any value in elucidating the incubation period. The following cases, occurring recently in the East London Hospital for Children, are open to fewer objections than any I have seen there.

A. B. was admitted Friday morning, November 24th, with a burn of the arm. She had attended as out-patient four days.

C. D. had been an in-patient three weeks with eczema capitis. On Friday afternoon, November 24th, A. B. and C. D. were nursed together on the same nurse's lap for half an hour. In the evening A. B. came out in scarlet fever rash, and was sent to the Fever Hospital the same night. C. D. went home Saturday, November 25th, and on Thursday morning, November 30th, the child was brought because of difficulty in swallowing. On examination, I found a scarlatina rash.

E. F. was admitted November 10th with extensive ulceration about vulva. She slept in the next cot to A. B. On Saturday, December 2nd, she complained of sore throat, and vomited. On Sunday the temperature rose to 102°, and a scarlet fever rash appeared.

All these cases were in the same ward, and in cots side by side. No case of scarlet fever had occurred in this ward for a month, nor in the hospital for three weeks. No visitors had been allowed for six weeks. No one had visited C. D. since her admission. E. F. saw her mother for a few minutes on November 30th. There was no scarlet fever in her home. Each case, it will be observed, had some lesion of the integument. In C. D. the rash appeared six days after exposure to infection, and in E. F. nine days elapsed.

J. SCOTT BATTAMS, East London Hospital for Children.

SURGICAL MEMORANDA.

TREATMENT OF NÆVI BY ELECTROLYSIS.

At the meeting of the Midland Branch at Derby in 1879, I brought forward some notes* about the treatment of nævi by electrolysis, and then gave the history of several cases with details of the time occupied, naming also the number of cells employed. I do not to-day propose to travel over the same ground, but rather to try to mark out as clearly as I can the kind of nævi to which this mode of treatment seems to be specially adapted. The cases on which the conclusions are based amount, by the courtesy of my friends and colleagues to even a large number, and I am therefore in a position to speak the more decidedly.

It should first be said that this plan is by no means fitted for all nævi indifferently; it is very far from being of universal application. It would be more true to speak of its range as rather sharply limited; indeed, to the attempt to deal with vascular growths by the electric current without attention to the special conditions of each case must be traced some, at least, of the distrust with which the subject of my paper has not uncommonly been received.

The cases for which electrolysis is eminently suited are superficial dark coloured, sluggish vascular growths, which do not possess special or abundant blood-supply. They waste away after one or two sittings as a matter of moral certainty. Next in order are those nævi which, agreeing with the above in their actual vascularity, yet have much more of surface covering, and which do not therefore so readily, or to mere inspection, declare the conditions of their blood-supply. A majority of these cases will probably be found to be quite amenable to the electric current. On the other hand the cases in which electrolysis will not, at least as a rule, succeed, are those which are intensely vascular, which are rapidly growing or have rapidly grown, and which it is fair to conclude, have more or less direct communication with blood-vessels near at hand. Especially may this condition be suspected if they are near to vascular trunks, if there be local pulsation, or again if there be

* These notes were subsequently printed as a short pamphlet. I shall be glad to send a copy to any one who is interested in the subject.

increase of temperature, a rapid filling after compression, a bright red colour with thinned integuments, all which point to the existence of very free blood-supply. Almost equally unsuitable for this special treatment are the nævi which are more solid and firm, in which, in addition to the tortuous blood-vessels, there is evidently a large amount of connective tissue. To sum up in few words, the degree of vascularity present may be taken as a very tolerable guide, and as an indication of the chances of success in submitting any nævus to electrolytic treatment.

Stamford. WILLIAM NEWMAN, M.D., F.R.C.S., Eng.

AMPUTATION IN AN AGED PERSON.

SOME time ago, I amputated the forearm of a woman, aged 82 years, who was suffering from an enormous cancerous tumour of the hand. The wound healed partly by first intention, and in thirteen days the remainder healed by granulation. She made an excellent recovery, and had not a bad symptom. My only object in recording the case, is the advanced age of the patient. E. B. EVANS, M.R.C.S., L.R.C.P.

St. Thomas, Swansea.

BLOWS ON THE EAR.

THE remarks which were made in the BRITISH MEDICAL JOURNAL of December 9th, under the heading of "A Word and a Blow," on the habit of boxing the ears of school-children, recall to my mind so forcibly the numerous occasions on which I have observed the injuries alluded to, that I hope I may be permitted to add a few words. If an injury follows a box on a healthy ear, it is of three kinds. 1st. The hearing may be immediately damaged without the membrane being ruptured, and without any inflammation being set up within the tympanum. In these cases, the loss of hearing, with the exception of a slight improvement which takes place within the course of a few weeks, is considerable and permanent. This loss must be regarded as due to injury of the nervous structures beyond the tympanic cavity, and therefore, in some degree, resembles similar injuries which occur from explosions or violent noises close to the ear.

2nd. The tympanic membrane may be at once ruptured, and the appearance is generally that of a long vertical slit on one side of the handle of the malleus (I have once seen a slit on both sides of the malleus). As a rule, if nothing has subsequently been poured into the ear, the perforation heals in a few days, but occasionally suppuration takes place within the tympanum, and the perforation may become established, with all the characteristics of one that is the result of disease.

It is noticeable that when the membrane is immediately ruptured by the blow, and subsequently heals, that the loss of hearing is not generally nearly so great as when the membrane is not broken.

3rd. Without the membrane being at once broken, acute inflammation may be excited in the tympanic cavity, and be followed by any of the numerous effects of this, the least of them being the loss of more or less hearing, with perforation of the membrane, which latter condition is a source of danger during the remainder of a lifetime.

The article was not strictly correct in stating that the death of the late Lord Justice Thesiger "was distinctly traceable to a blow on the ear." The exciting cause of the inflammation within the tympanum, which led to pyæmia, was the entrance of sea water into the ear and through the old perforation. His was not the only case where I have known pyæmia or cerebral inflammation set up by mainly the same causes, and I have seen hundreds of instances in which acute inflammation of the tympanum, when the membrane has been perforated, has been produced by bathing in the sea. For many years I have always warned patients (or their parents) of this risk whenever there is a perforation of the tympanic membrane.

Sea water seems to have a peculiarly irritating effect upon the living membrane of the tympanum, and especially when the perforation is of so small a size that the fluid which has once entered cannot freely escape. What applies to sea water in these causes is equally true of many solutions, if they are used for perforations, although they may be tolerated in the case of others.

W. B. DALBY, Aural Surgeon to St. George's Hospital.

IN the paragraph in the JOURNAL of December 9th, entitled "A Word and a Blow," good service has been done in drawing attention to the impropriety of corporal punishment in schools. A case occurred in my practice several years ago, showing clearly the very serious results which may follow a "box on the ear." To make a long story short, I was called to see a boy, aged 12, and found him suffering from serious cerebral symptoms, which after a few days' observations I considered were due to cerebral abscess. The diagnosis was confirmed when the

boy died ten days after. The abscess was situated in the temporal region on the left side. The fibrous portion of the temporal bone was carious, and a probe passed readily into the internal ear, the structures of which had been entirely destroyed by suppurative internal otitis. The history of the case only too certainly pointed out the cause of the disease from which the poor boy died. He was quite healthy until nine months previously, when he returned from school with a "bleeding ear," having received a "box on the ear" from the schoolmaster. He did not suffer much at the time. The bleeding soon ceased, but ever afterwards he had a "running ear." This sad history tells its own tale. The blow evidently caused rupture of the membrana tympani, followed by disease of the internal ear, which ultimately proved fatal in the manner already described. The moral is only too evident. It should be considered penal for a schoolmaster to strike one of his pupils on the head.

JAMES CARMICHAEL, M.D.

22, Northumberland Street, Edinburgh.

OBSTETRIC MEMORANDA.

A CASE OF PULMONARY THROMBOSIS AFTER CONFINEMENT: RECOVERY.

AT 12.30 P.M. on Friday, the 1st inst., I was sent for to attend Mrs. C., aged 40, with her sixth child, seven years having elapsed since the last was born.

On examination, I found the os uteri fully dilated, the membranes entire, and the head presenting. Her pains being slight, I prescribed two drachms of liquor ergot (Hewlett's). In about twenty minutes strong pains came on, and continued until the child was expelled, which took place half an hour after the rupture of the bag of waters, and was followed immediately by the placenta, without loss of blood, extreme restlessness being the only unusual symptom.

Suddenly, and without warning, excessive dyspnoea, accompanied by violent palpitation, set in, and increased until the patient, gasping for breath, became comatose. Upon examination, finding the lungs in a state of acute oedema throughout, and the patient dying of suffocation, I immediately bled her from the right arm to the extent of from fourteen to sixteen ounces, which, with the external application to the chest of a mixture of belladonna and compound camphor liniment, produced decided relief. As soon as the patient rallied sufficiently to be able to swallow, I administered a calomel and jalap powder, and followed this up with a mixture of aromatic spirits of ammonia and digitalis, ten minims of the latter to a drachm of the former every hour. In the hope of relieving the violent palpitation which still continued, I applied a belladonna plaister to the cardiac region, mustard having produced no effect. From this time (an hour and a-half from the commencement of the attack) the patient made very gradual improvement, accompanied by free expectoration of frothy mucus of a bright pink tinge.

Fearing the case might ultimately terminate fatally, I sent for Dr. Fenwick, of Harley Street, Cavendish Square, who arrived about nine o'clock, and after making a careful examination, pronounced the case to be one of pulmonary thrombosis, and advised the continuance of the above treatment, with the addition of sulphuric ether to the mixture. This treatment was continued for thirty-six hours (beef-tea and brandy being given at intervals), at the end of which period the lochia for the first time appeared, and the patient made rapid improvement. To-day, Wednesday, 6th, no trace of the accident remains, and she states that she never felt so well in so short a time after confinement as she does now.

R. H. A. HUNTER, M.R.C.S.

THERAPEUTIC MEMORANDA.

IODINE IN ERYSIPELAS.

A GOOD deal has been written lately about the use of iodine (locally) in the treatment of erysipelas. I have lately tried it in two cases of traumatic erysipelas, and have been highly satisfied. In superficial cases it is more likely, I think, to limit the spreading of the disease than nitrate of silver, etc. For some years past I have been treating erysipelas (idiopathic and traumatic) by painting locally with tinct. ferri mur., and glycerine, and administering the same drug internally, conjoined with spirits of chloroform and moderate doses of tincture of opium and liquid extract of ergot. This is not a nice mixture, but in my hands it has been very successful. In a case of erysipelas of the scalp occurring in a child of sixteen months, and having, at the same time, favus, I got the happiest results. The favus was probably the starting-point of the erysipelas.

R. McDUGALL, M.B., Murrumburrah, New South Wales, Australia.

REPORTS

HOSPITAL AND SURGICAL PRACTICE IN THE
HOSPITALS AND ASYLUMS OF GREAT
BRITAIN AND IRELAND.

ROYAL SURREY COUNTY HOSPITAL.

LACERATED WOUND OF BACK OF HAND FOLLOWED BY TETANUS:
RECOVERY.

(Under the care of Mr. SELL.)

[Reported by Mr. MARSH.]

G. S., aged 40 years, came to the hospital at 2 A.M. on July 19th, 1882. He was a very tall and powerful man, and said that about an hour previously he grasped one of the wheels of a night soil van to push it up a hill, but the van slipped back, and he got his left hand caught between the wheel and the axle. He was in an extremely filthy state. On the back of the left hand there was a lacerated wound extending right across the metacarpal region. For a short time after the accident the wound bled very freely until firm pressure was applied by means of a pad and bandage. The tendons on the back of the hand were laid bare, but not otherwise injured. After the wound had been well washed with carbolic acid lotion (1-20) the edges were brought together with catgut sutures, and a dressing of antiseptic gauze applied. The wound was dressed again at twelve o'clock, and the patient was discharged, having been told to come up every day to have the wound dressed.

Twelve days after the accident happened, symptoms of tetanus began to show themselves. The first thing he complained of was a stiff neck; the next day, he could not open his mouth wide, experienced great difficulty in swallowing, and had pain in the back and profuse sweats. On the night previous to his coming into hospital, the spasms were so severe that a medical man was called in, and the patient's wife thought he must die. For the first week after the accident the wound was dressed every day, and the sutures were removed on the fourth day as primary union had not taken place. After the removal of the sutures, the edges of the wound gaped, and it began to granulate up from the bottom. After the first week, the wound was dressed every second or third day under the carbolic spray, and it never presented any sign of inflammation; at the time of admission, the granulations were covered by a very tenacious layer of lymph.

Condition on Admission on August 3rd.—There was marked risus sardonicus, and he could only just separate his teeth. He sat up with difficulty, owing to the arching of the back; and there was a spasm beginning in the spinal muscles and extending into the lower extremities, about every five minutes. The bowels had been opened after a dose of castor-oil. The patient was bathed in perspiration, and could only swallow liquids with great difficulty. He was ordered to be placed in a hot bath at once, and afterwards to take a grain of extractum physostigmatis in water every two hours. In the evening, he was much freer from spasm, and had taken plenty of fluid nourishment. In the evening, the temperature was 98.8°, the pulse, 88, and the respiration, 17. The mixture was to be omitted during the night, and a draught containing forty grains of chloral-hydrate was ordered to be given every night.

August 4th. The patient had passed a good night. Another hot bath was given this morning, and ordered to be repeated every morning. A third of a grain of acetate of morphia was given subcutaneously twice during the day, when the spasms were severe.

August 5th. The spasms were less severe to-day, and patient had eight hours' sleep after the chloral draught. The urine was of high specific gravity, acid reaction, and loaded with lithates and phosphates. The spasms were always lessened by the extractum physostigmatis; he was prescribed a grain every three hours during the day, and forty grains of chloral-hydrate in water whenever the spasms were severe. The evening temperature was 98.2°; the evening temperature 98°; the pulse, 88; and the respirations 20.

August 7th. The spasms were not so severe, nor were they excited by any slight noise, as formerly. The wound, which was gradually healing, was never at any time painful, nor could any tender spot be found on pressing upon it with a probe.

August 9th. The patient had very little sleep last night, and was disturbed by vivid dreams. He spoke with great difficulty, and lay on his face to relieve the pain in his chest. He took 160 grains of chloral-hydrate during the day. In the evening, he complained of a

severe boring pain in the mid-dorsal region, and opisthotonos was very marked. The pain passed off, and sleep was obtained after the subcutaneous injection of a third of a grain of morphia.

August 10th. The patient again suffered from very severe pain in the back at night, and a morphia injection was given.

August 13th. Opisthotonos and risus sardonicus had ceased, and he could separate the teeth to the extent of an inch and a half. He took 200 grains of chloral-hydrate during the twenty-four hours, and had four or five rather severe spasms during the day.

August 16th. The patient had materially improved, and had only two or three spasms each day.

August 18th. The wound, which has had a poultice constantly applied, had healed up completely. He took 80 grains of chloral-hydrate during the day.

August 19th. The tetanic symptoms were now scarcely observable. He was given 160 grains of chloral-hydrate, and a morphia injection at bedtime, in addition to five grains of extractum physostigmatis.

August 22nd. A grain of the extract of Calabar bean was now to be given four times a day. The spasms were now confined to the abdominal muscles and those on the inner side of the thighs. The chloral draught was given at bedtime.

August 23rd. The urine, on examination, was found to be alkaline and very phosphatic.

August 31st. The abdomen was still rather hard, but there had been no return of the spasms. He was ordered a grain of quinine in an acid mixture, instead of the Calabar bean. He could now chew his food quite well.

September 11th. The patient was discharged, cured.

REMARKS BY MR. SELL.—This, though on the whole a subacute case, certainly warranted an unfavourable prognosis. During the first ten days or so the patient appeared to be well under the influence of Calabar bean, as judged by the contracted state of the pupils and sense of oppression in the cardiac region; after this time the drug gradually lost its power, and towards the end of the case a remarkable toleration both of Calabar bean and chloral-hydrate was established. The Calabar bean seemed to keep the bowels well open. One peculiar feature in the case was a sense of formication produced by the chloral-hydrate when it had ceased to have any soporific action. Until the patient became convalescent, the temperature remained subnormal.

ROYAL PORTSMOUTH HOSPITAL.

TETANUS AFTER LACERATION AND GANGRENE OF EAR: RECOVERY.

(Under the care of Dr. LLOYD OWEN.)

[For the following notes we are indebted to Mr. J. A. WILLIAMS, House-Surgeon.]

JAMES R., aged 26, brewer's drayman, was admitted on September 12th, 1882, for extensive lacerations of the right ear, which, by the revolution of a cart-wheel against which he had fallen, had been completely severed from its osseous attachments, and only hung by a small skin flap. A doctor who saw him after the accident, stitched the ear into its natural position very neatly, and sent him to the hospital. The wound was dressed with carbolic lint, but next day, the ear becoming decidedly gangrenous, charcoal poultices were substituted. The sloughs quickly separated, and everything progressed satisfactorily until September 28th, when great stiffness of the muscles of the jaw and back was complained of; these muscles were found to be very hard, rigid, and tonically contracted. The teeth could not be separated more than a quarter of an inch. There were no spasms. The wound was granulating healthily, and there was no swelling or inflammation of the surrounding tissues to be detected.

Oct. 5th.—The tonic muscular rigidity had extended to the muscles of the extremities, which were extended, hard, and rigid. The m. recti abdominales were also hard and rigidly contracted. Hitherto there have been no spasms observed, but he now complained of tongue-biting during sleep, and his fellow-patients had observed his jaw and arms move spasmodically for a short period. He said that occasionally a "jumping pain" began in the abdomen, which hardened; the pain then passed around the right loin to the back, up which it passed, producing retraction of the head. It lasted but a few minutes, and then ceased. The face bore a well-marked sardonic smile; there was no elevation of temperature; the urine was normal; he could not open the mouth to take food, which had to be sucked in through an India-rubber tube placed between the teeth. He was ordered a mixture containing fifteen grains of bromide of potassium and ten grains of chloral-hydrate three times a day.

Oct. 8th.—The spasms had become more marked, lasting a few minutes, and producing much pain and almost complete opisthotonos. They occurred about every half-hour; in the intervals the muscles were tonically contracted, and in this stage well-marked ankle-clonus was

obtained on forcibly flexing the ankles. The spasms were much relieved by morphia, administered hypodermically. He was afraid to sleep for fear of biting his tongue. To obviate this, corks were introduced between the teeth, after which he passed a good night. The spasms only lasted a few days, but rigidity of the muscles of the jaw, back, and extremities persisted till October 14th, after which the stiffness gradually ceased, and the muscles became relaxed and pliable.

Recovery was now rapid. On October 26th solid food was taken, and on November 6th he was discharged cured. On November 18th he had experienced no relapse; he walked about as usual, and the wound was almost healed. The acuteness of hearing with the right ear was diminished by about one-third when compared with the left ear.

REMARKS BY MR. J. A. WILLIAMS.—The satisfactory termination of the above case in recovery, after the onset of well-marked symptoms of chronic tetanus, is a sufficient excuse for recording it. The favourable progress, however, was, I believe, spontaneous and cannot be attributed to medicine. The large and important nerves which pass behind the ear, through and beneath the parotid gland, render lacerated wounds in this region especially prone to originate tetanus. The prominent feature of the case was prolonged muscular rigidity. There were no severe spasms, and such spasms as were present were slight, unfrequent, and lasted only a few days. The muscles of respiration and deglutition were unaffected. The earliest indication of these spasms was tongue-biting during sleep. The production of ankle-clonus in a foot whose muscles are rigidly contracted becomes of interest, when we remember the important part which passive tension is said to exercise in its development.

SALOP INFIRMARY.

(Cases under the care of Mr. W. EDDOWES.)

Oophorectomy for Menorrhagia: Cure.—S. B., aged 45, was admitted on January 14th, 1882; she married at the age of 40, and had never been pregnant. She first noticed menstruation, profuse and frequent, at the age of 23. From the symptoms she described, she appears to have been, at that time, anæmic and hysterical. She had never felt strong since then, and suffered from chronic constipation and hæmorrhoids. On examination by the vagina, a year before admission, she was found to be suffering from a fibroid tumour of the uterus, apparently intramural, situated more on the right side of the uterus, and distinctly felt above the pubes. Menstruation was very frequent and profuse. She had no trouble with micturition, but the bowels were very obstinate. A mixture, containing liquor ferri perchloridi, ergot, and strychnia, was prescribed, and taken for a year. The fibroid still continued to increase; and, in December 1881, she was admitted an in-patient, when it was found that the sound penetrated to a considerably greater depth than normal. Menorrhagia continued, and she was very anæmic.

Oophorectomy was performed on February 3rd, 1882. One ovary was in front, and easily tied; the other was most difficult to get at, from the uterus being twisted, and more enlarged on one side. The oviducts were included. Strict Listerian precautions were observed. The highest temperature was 101.2° on the third day; on the fifth it became normal, and scarcely rose afterwards. Not the slightest bad symptom supervened, and the only trouble was pain for some weeks in each iliac region.

Mr. Eddowes informs us that he saw her again in June. She looked well and much fatter. She had had no discharge since the operation, and said that she felt quite well, with the exception of slight pain in stooping, or after taking a long walk. The tumour was much smaller in size. He also desires to add, that the case in which he performed oophorectomy some months ago, and which was reported by his colleague, Dr. Cureton, was well, and able to follow her usual work. Before the operation, she had been bedridden, and unable to do any work for months. (*Vide* BRITISH MEDICAL JOURNAL, February 11th, 1882, p. 190.)

Gastrostomy.—C. B., aged 58, female, was admitted, under the care of Dr. Cureton, January 14th, 1882, suffering from stricture of the œsophagus. She was greatly emaciated, but had not suffered from hæmatemesis. She was sick after food, and could retain none. A bougie could not be passed. After a consultation, Mr. Eddowes performed gastrostomy. The visceral was tied to the parietal peritoneum with catgut sutures, under Listerian precautions; and, on the following day, the stomach was opened. She died on the third day, from exhaustion. On examination after death, there was no peritonitis, and the visceral and parietal peritoneum were securely adherent.

REMARKS BY MR. EDDOWES.—I only regret that there was not an opportunity of performing the operation before the patient was so exhausted. The stricture was not considered to be malignant.

Hæmorrhoids: Ligature: Pyæmia: Recovery.—W. E., a male, aged 48, was admitted on January 7th, 1882, for large internal hæmorrhoids.

On January 11th, Mr. Eddowes ligatured the hæmorrhoids with twine, after the method practised and advised by Mr. Allingham. On January 20th, rigors, accompanied by pain in the lumbar region and round the abdomen, came on, together with symptoms of bronchial and pulmonary congestion. Eventually, the patient coughed up a large quantity of blood and pus. A large abscess subsequently formed on the back, and another on the hip, which were opened. For some weeks, he maintained a high and very varying temperature. He afterwards made a perfect recovery.

REPORTS OF SOCIETIES.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

THURSDAY, DECEMBER 14TH, 1882.

WILLIAM BOWMAN, F.R.S., President, in the Chair.

The Death of Mr. George Critchett.—The PRESIDENT said that, before entering on the proper business of the meeting, it was his sorrowful duty to make some allusion, however brief, to an event which had occurred since the last meeting of the Society; it would be anticipated that he referred to the death of Mr. Critchett. It was known at the time of the last meeting that he was seriously ill, but there was then ground for hope that his valuable life might be still spared. But it had been otherwise ordered. In him, the Society had to mourn a warm-hearted, true-hearted, colleague, one whose calm and mature judgment, resting on a long and large experience, was missed by many, when in charge of anxious and complicated cases. Mr. Bowman himself felt that he ought to refrain from any expression of personal grief at the loss of an almost lifelong friend. A particular enumeration of his many claims would be more appropriately attempted on some future occasion; but, at the present moment, it was impossible not to recall that it was he who, at the close of the last session, had presided in the chair. The Council, at their meeting on December 14th, unanimously passed the following resolutions: "1. That the Council of the Ophthalmological Society of the United Kingdom desire to record their sense of the great loss sustained by the Society, as well as by the profession at large, in the death of one of their vice-presidents, George Critchett, whose extended reputation, at home and abroad, rested on the solid foundation of important services rendered to that department of the medical art to which he was chiefly devoted, and whose kindness of heart and excellent judgment were universally recognised and esteemed. 2. That a copy of the foregoing resolution be forwarded to Mr. Critchett, with an expression of the cordial sympathy of the Council, on the part of the Society, under their bereavement."

Hydatid Tumour of Orbit.—MR. P. H. MULES showed a hydatid cyst, of the size of a pigeon's egg. The patient was a boy aged 6 years; the growth was difficult to diagnose, and was treated by free incision and drainage-tubes; the cyst was discharged on the seventh day. Before this, however, a condition of choked disc supervened, which interfered with the perfect recovery of vision; but, six months after the removal of the cyst, he could read Jager 1.—MR. JONATHAN HUTCHINSON inquired whether any echinococci were found, as otherwise the nature of the cyst might still be regarded as a little doubtful.—DR. STEPHEN MACKENZIE observed that the peculiar laminated nature of the membrane proved the nature of the cyst as conclusively as the presence of echinococci could; the hydatid might be a barren cyst.—The PRESIDENT asked why the cyst had not been removed at once; was it very firmly adherent? It was in all cases most desirable to avoid inflammation within the orbit; its consequences could not always be foreseen, and might be serious.—MR. MILLES said that, in a case of hydatid of the orbit lately treated at the Moorfields Ophthalmic Hospital, the whole cyst was removed with great ease, and the wound was well in a few days.—MR. MULES, in reply, said that the cyst was attached very firmly to the apex of the orbit, and he had not thought it prudent to attempt to tear it away.

Panophthalmitis.—MR. MULES related a case which had recently occurred in his practice. The patient had undergone, two years and three months earlier, an operation for glaucoma, which left a cystoid cicatrix. A panophthalmitis, which he attributed to septic absorption through the faulty cicatrix, destroyed the eye within twenty-four hours of the first symptom of purulent infection.—MR. PRIESTLEY SMITH remarked that, at the Ophthalmological Congress at Heidelberg, both Leber and Arlt had attributed such cases of destructive inflammation to septic inoculation through a cystoid cicatrix. He had himself met with a case where, two years after a successful cataract operation, the eye was lost through rapid painless suppuration, which seemed to begin

at one end of the cicatrix where a very small incarceration of the iris remained. The patient was an old lady, who was suffering also from some eczema behind the ear, with a profuse foul discharge; her attendant volunteered the remark, that the old lady was in the habit of fidgetting with this sore, and then rubbing her eyes; so that Mr. Smith, who had at first felt much difficulty in accounting for the panophthalmitis, attributed it with much confidence to inoculation with the finger.—Mr. BRUDENELL CARTER had lately seen a case of panophthalmitis three years after an operation for glaucoma; the eye was rapidly destroyed; and when the patient came for advice, pus was already coming through the cicatrix. In this case, however, the cicatrix was not faulty, and there was no history of inoculation or of suppuration spreading from the scar.

Necrosis, and Spontaneous Separation of a Large Ivory Exostosis of the Orbit.—Mr. H. A. LEDIARD (of Carlisle) showed the portrait of a patient with a large ivory exostosis of the left orbit, and also the exostosis itself. The tumour was stated to have been about the size of a pea at birth, and was situated between the upper eyelid and the eyebrow. It gradually enlarged, and, at the age of nine years, induced destruction and rupture of the globe of the eye. The tumour ceased to enlarge at about twenty-five years of age, and, about two years later, the skin, which had hitherto covered it, suddenly gave way. The patient was admitted into the Carnarvonshire and Anglesey Infirmary, under the care of Mr. Hughes, in 1870. He was then thirty-three years old, a sailor, and in good health. The tumour seemed to arise from the cavity of the left orbit. It was of stony hardness, irregularly pyramidal in shape, nodulated on the surface, and measured 4.5 x 5 inches; the tumour was then movable, and, whilst under observation, gradually became looser; an offensive discharge issued from the base; finally, about a month later, the whole mass became suddenly detached, without any associated pain or hæmorrhage. The tumour was pediculated, and weighed 2.25 ounces. The neck also was much enlarged, the anterior and lateral portions being of stony hardness, the left side being on this account much larger than the right; the girth of the neck was 17.5 inches, and of this a space of ten inches was of stony hardness. In October 1882, the patient survived, was in good health, and master of a vessel. The vision of the right eye remained good. Mr. Lediard referred to the other similar cases which he had been able to find recorded. Mr. Hilton reported in *Guy's Hospital Reports* (1836) a very similar case, where the exostosis, which weighed 14.75 ounces, became spontaneously detached. In a case recorded by Mr. Hutchinson in his *Illustrations of Clinical Surgery*, and under his care jointly with Mr. Borlase Childs in 1853, the exostosis, which was of large size, and appeared to spring from the frontal sinus, also became necrosed. Sir James Paget, in his *Surgical Pathology*, mentions another case of large ivory exostosis in the orbit, which projected not only forwards, but also backwards, into the skull. Mr. Lediard showed a photograph of the skull in this case, which had been sent to him by Professor Humphry of Cambridge. Boyer had referred to spontaneous necrosis of ivory exostosis, and had remarked on the fortunate nature of the process.—Mr. JONATHAN HUTCHINSON thought that there was one fact with regard to these exostoses which was of great clinical importance, namely, that they had narrow pedicles, and might therefore be attacked early. Necrosis did not occur until a late stage; in the case he had recorded, an attempt was made to remove the growth, and Mr. Childs and Mr. Hutchinson had spent an hour, taking turns, to saw a part of it off. Having regard to the fact above referred to, he would now, in a similar case, think it better to wrench the exostosis away, even using considerable force to snap the pedicle. In his case, the exostosis did, about a year later, undergo necrosis, so that it easily shelled off, leaving an enormous cavity; the walls of the orbit had been absorbed, and the dura mater exposed. The patient, however, made a good recovery.—The PRESIDENT said that in one case on which he had operated about twenty years ago, where an exostosis of the size of a walnut had caused great protrusion of the eye, the base was very narrow, and the growth had been pulled off without much difficulty. He had been struck by the slight tension of the investing membrane, which very easily shelled off.—Dr. FITZGERALD (of Dublin) observed that there was, in the Museum of Trinity College, Dublin, a specimen closely resembling that preserved at Cambridge; the examination of this specimen had, on one occasion, deterred him from operating.—The PRESIDENT remarked that it was only in those instances where the tumour was attached to the roof of the orbit that it would be dangerous to apply force.

A Case of Hard Chancre of Inner Canthus.—The Secretary read, for Mr. SIMON SNELL (Sheffield) particulars of a case, occurring in a nurse-girl, aged 21, who had under special charge a syphilitic baby of five months. The chancre was noticed as a pimple, some few weeks before the girl came under observation on August 15th, 1882. It then

involved the caruncle and adjacent conjunctiva, as well as the integument of the commissure and the lids. A point of interest and diagnostic value was the presence of well marked induration of the preauricular and submaxillary glands. Other symptoms were, a papular coppery rash and alopecia, ulcerated throat, and, later on, mucous tubercles of the vulva. The chancre healed, with hardly appreciable deformity.—Mr. BRUDENELL CARTER had seen about the same time two cases of chancre of the eyelids; the patients were a lad and a young girl. He had been quite unable to trace the mode of inoculation.—Dr. FITZGERALD had seen one case in Paris; the patient was a young girl, and the inoculation had been attributed to certain obscene practices.—Mr. M. MCHARDY thought that the popular habit of removing foreign bodies from the eye by licking with the tongue might be a mode of infection; though he met with three or four cases of chancre of the lids, he had not traced them to this cause.—Mr. J. E. ADAMS believed that inoculation was often traceable to indiscriminate kissing of, and by, infected children. He believed that was the mode of infection in the patient which he exhibited to the Society at this meeting (*vide infra*).—Mr. SOLOMON had seen one case in an infant, which was no doubt due to its aunt kissing it.

Cases of Central Amblyopia in Diabetes.—Four papers on this subject were read to the Society. The first was by Mr. LANG; the second paper, by Mr. J. B. LAWFOORD, was an account of a case of stationary tobacco-amblyopia in a man subsequently affected by diabetes. The patient, forty-six years of age, had always been a heavy smoker. His sight had begun to fail about seven years ago, and symptoms supervened about nine months ago; but his sight had not deteriorated, though the diabetes had grown steadily worse. Vision was very defective, and there was a well marked central scotoma for red. The optic discs were a little pale, but the ophthalmoscope revealed no other morbid state.

Mr. STANFORD MORTON communicated a case of double amblyopia, with well marked central scotoma for red and green, in a man aged 34, accustomed to smoke very moderately, and who was suffering from diabetes. The patient was not under care long enough (barely two months) for the result as to sight to be known.

The fourth paper on this subject was contributed by Dr. EDMUNDS. It contained notes of four cases of central amblyopia without ophthalmic changes, in patients suffering from diabetes. 1. A man, aged 40, had suffered from diabetes for several months. He smoked half an ounce of tobacco a day. Failure of sight had been noticed for one month. Vision in each eye $\frac{2}{30}$, letters 14 Jäger (corrected). Under treatment for diabetes, health improved, but not vision. He would not, however, stop smoking. 2. A man, aged 38, had had diabetes three or four years. He smoked half an ounce of strong tobacco daily. Failure of sight had been noticed for five months. Vision in each eye $\frac{2}{30}$, and 14 Jäger. He died in the country three months later. 3. A male, aged 48, had been the subject of diabetes during twenty-one months. He had smoked, during the last thirty years, three-quarters of an ounce of tobacco a day. He had experienced failure of sight for five weeks. Vision was $\frac{1}{30}$, and 8 Jäger. 4. A man aged 58, a moderate smoker, complained that his sight had been failing for eighteen months. Vision in each eye $\frac{2}{30}$, and 16 Jäger. His urine, on examination, was found to contain sugar. Nine cases were referred to by the authors (including published ones) of failure of sight with central scotoma, in the subjects of diabetes, without ophthalmoscopic changes. The author, however, suggested that the coincidence would prove to be fairly common. Most of the patients were smokers, some of them great smokers; and it was not yet certain whether diabetes alone caused the disease, or only acted as a predisposing cause to tobacco-amblyopia. The analogy of double amblyopia to the symmetrical neuralgia in diabetes, described by Worms and Bazzard, was pointed out.—Dr. STEPHEN MACKENZIE had given special attention to diabetes during the past eight years, but had not encountered many cases of amblyopia. It was one of the useful functions of this Society to draw the attention of physicians to such morbid phenomena as those detailed in these papers, which would lead physicians to search carefully for early stages of amblyopia and slight defects.—Mr. PRIESTLEY SMITH thought that much light had been thrown on the pathology of amblyopia by the sections shown at this and previous meetings by Messrs. Edmunds, Nettleship, and Lawford, and by Dr. Samelsohn and Heideberg. They showed that typical central amblyopia depended on inflammation of the central (axial) portion of the orbital part of the optic nerve. Samelsohn had advanced an explanation to account for the inflammation being thus limited; he had pointed out that the nutrient vessels of the optic nerve entered at the periphery and spread out towards the axis, so that the richest capillary plexus, and probably also the most active nutritive processes, would occur at the central part of the nerve, which undoubtedly contained the fibres that, passing to the region of the yellow

spot, were of most functional importance. This hypothesis was borne out by the reflection that, in organs where interstitial inflammation occurred—as, for example, the kidney and liver—it attacked first the surface of the organs, and that the vessels of these organs ramified from the centre towards the circumference. To account for the selection of the orbital part of the nerve, Samelsohn pointed to the vascular relation between the skin of the face and the orbital vessels, and traced the amblyopia to chilling of an overheated face, leading to related vascular changes within the orbit, and so to neuritis. Mr. Smith had recently had under his care a case which bore out this contention; the patient was a young man, aged about 18, who complained of something wrong with his sight after each game of lawn-tennis; ultimately, a typical scotoma for colour developed in one eye, with some pain on movement of the eye. The young man did not smoke, nor drink alcohol, and was not diabetic, but he had a very great tendency to flushing of the face on slight exertion. The case was apparently an instance of retrobulbar neuritis due to frequently recurring chill of an overheated face. Even where a definite cause, such as overindulgence in tobacco or alcohol, was present, this case suggested that cold might probably be an exciting or an auxiliary cause; so that it appeared that, in the treatment of such cases, protection from cold was of considerable importance.

Sequel to a Case of Optic Neuritis (reported by Mr. Stanford Morton in the Society's *Transactions*, vol. i).—Dr. SAMUEL WEST said that the patient came under Mr. Morton's care in January 1881. Vision was then perfect, but both discs were greatly swollen; in the following month, she consulted Dr. West for headache and for sudden temporary attacks of blindness. Vision began to fail, in June 1881; in the right eye; it then amounted to Jäger 2 and $\frac{3}{8}$, and the field of vision was much contracted; headache was worse. At the end of July 1881, vision in the right eye was completely gone, and was defective in the left. She was very actively treated with mercury and with iodide of potassium on several occasions, but without any good result. In September 1881, she was completely blind of both eyes, and even perception of light had ceased. The swelling of the disc remained. Atrophy gradually ensued, so that in August 1882, the discs were quite white and extremely atrophic. In November 1882, there was no perception of light; the pupils did not react to light, but freely to movements of the eyeball; the eyes diverged, but could fix fairly well. The condition was probably secondary to some tumour of the brain, possibly a tubercular tumour, which had become stationary or retrogressive; but the diagnosis was exceedingly difficult. The case was of interest, owing to the persistence of perfect vision for about five months, in the presence of extreme optic neuritis; to the attacks of temporary complete blindness; to the rapidity with which the failure of vision became absolute when once it commenced; and to the entire absence of any symptoms beyond the eye-changes.

Great Tortuosity of Retinal Vessels.—Dr. STEPHEN MACKENZIE showed a drawing of the optic disc of a patient aged 20, who was suffering from severe vesicular emphysema, oedema of the legs, and lividity. The veins in the fundus of each eye were extremely tortuous, dark, and somewhat dilated. This condition of the veins would perhaps have been attributed to the venous obstruction consequent on the emphysema, but for the cases recorded by Messrs. Nettleship and Benson where the condition was noticed in otherwise healthy eyes.—The PRESIDENT remarked that he had occasionally seen patients, generally women, in whom the episcleral portion was marked by small dilated vessels—varicosities, in fact. The functions of the eye appeared to be natural. In some of these cases, glaucoma had supervened some years later, and he had held off from operating owing to a fear of hæmorrhage; but the result of iridectomy showed this fear to have been unfounded. In some of these cases, there was, he believed, an enlarged condition of the retinal vessels.

Living Specimens and Specimens shown by Card:

Optic Nerve from a Case of Amblyopia in Diabetes.—Microscopical sections were shown by Dr. EDMUNDS and Mr. LAWFORD. The patient had been a hard smoker, and sight had been failing for about four months. No ophthalmoscopic changes were detected. He died of diabetes. Sections of the optic nerve showed changes limited to a group of fibres which extended through the length of the nerve; the change consisted in a thickening of the connective tissue with degeneration of the nerve-fibres.

Chronic Membranous Conjunctivitis.—Mr. JULER showed again the patient who had been exhibited to the Society at its last meeting, and referred to in our columns on October 28th, page 843. The right eye had recovered under the use of lapis divinus, but the disease had extended in the left.

Chancre of the Upper Lid.—The patient, who was present, was under the care of Mr. J. E. Adams. There was an indolent shallow ulcer,

with surrounding thickening, on the under surface of the upper lid of the left eye, near the outer canthus, and a very marked adenopathy on the same side. The disease was as yet in too early a stage to allow of an absolute diagnosis, since no secondary symptoms had as yet appeared.

Proptosis.—Mr. A. CRITCHETT and Mr. JULER showed a case of marked proptosis of the left eye. Incisions had twice been made into the orbit without any advantage. The cause of the proptosis, which was beginning to be complicated by ulceration of the cornea, was extremely obscure.

Retinal Abnormality.—Mr. M. GUNN showed a living specimen, who presented a peculiar condition of the fundus; it was probably congenital.

PATHOLOGICAL SOCIETY.

TUESDAY, DECEMBER 19TH, 1882.

SAMUEL WILKS, M.D., F.R.S., President, in the Chair.

A New Material for Casts.—Mr. A. BOWLBY exhibited some specimens made by the method fully described by him in the *BRITISH MEDICAL JOURNAL*, of October 21st, 1882, p. 783.

Disseminated Polypi of Colon.—A specimen of diffused polypoid growth of the colon was shown by Mr. BOWLBY. The case differed from others of the same kind in the absence of constriction of the intestine. The growths extended from the cæcum to the sigmoid flexure: the polypi had long pedicles, and consisted of fibrous tissue, covered by normal mucous membrane. He also showed a specimen of large polypoid growth of the rectum, removed by operation from a young woman; it was attached to the wall of the rectum, and was extruded from the anus during an effort at defæcation; it had given rise to no symptoms. Mr. BOWLBY also exhibited a specimen of polypus of the small intestine. The patient was a child who suddenly experienced severe pain in the abdomen; when admitted into St. Bartholomew's Hospital the vermiform appendix and cæcum protruded as a gangrenous mass from the anus. The child died subsequently of congenital syphilis, and at the *post mortem* examination it was found that there was some limited peritonitis of old standing, and a large polypus of the small intestine; the whole of the colon was absent, having apparently sloughed away; about three inches and a half above the anus was a constriction, which appeared to mark the point where the continuity of the gut was re-established.—Dr. COUPLAND had seen a somewhat similar case; the patient was a woman aged 20; the abdomen was opened for intestinal obstruction, which was found to be due to intussusception; it could not be reduced, owing, as the necropsy showed, to the intussusception having been complicated by the presence of a polypus; this had led to the protrusion of the bowel through the ileo-cæcal valve. In the Middlesex Hospital Museum was a specimen of extensive polypoid disease of the large intestine, which nearly resembled the specimen shown by Mr. Bowlby.—Mr. HARRISON CRIPPS said that the second case was remarkable from the large size of the polypus, and the first case from the very large number of polypi present. He knew the specimen in the Middlesex Hospital well, and there was a clinical history attached to it of some importance, for it appeared that the patient had suffered from cholera some months before death. In Guy's Hospital Museum was a specimen of disseminated polypi of the rectum, in which the polypi were remarkably slender. He believed that, in the earliest stage of these cases, a deposit commenced in the submucous coat and formed a nodule; this was gradually drawn down, and a pedicle formed by the constant straining of the bowel. He compared the condition to molluscum fibrosum. It was difficult to understand how, in the third case, the whole of the colon could become intussuscepted and slough away without the loss of an equal length of small intestine.—The PRESIDENT said that his experience led him to believe that polypi of the rectum were most commonly met with in young males.—Mr. H. MORRIS believed that several specimens of multiple polypi of the rectum had been shown at this society on the same evening, a few years ago, by Mr. Sidney Jones, and that they had all occurred in children. He had recently seen a patient whose rectum contained about half-a-dozen small polypi.—Dr. GOODHART thought that three kinds of polypi might be distinguished. In the first, the growth sprang from the submucous tissue; in the second, the polypus was derived from the mucous membrane, and was, in fact, a papilloma; while the third was this peculiar form of disseminated polypus of the colon. In one such case he had seen, the patient was a boy from whom about twenty or thirty polypi were removed from the bowel by the finger during life, but the boy subsequently died with numerous polypi disseminated through the colon. With regard to the last specimen shown by Mr. Bowlby, he might remark that, in intussusception the greater part of the tumour was usually composed of the colon.—Mr. BOWLBY

observed, in reply, that the chief point of interest in the case of disseminated polypi was, that they were composed of fibrous tissue covered by healthy mucous membrane, and were not due to disease of the mucous membrane itself.

Disseminated Abscesses in the Liver of a Kangaroo and of a Python.—Mr. J. B. SUTTON showed the liver of a kangaroo, which contained about two hundred abscesses; the cavities containing the pus were lined with a hard caseous material. He also exhibited the liver of a python. The animal had died four days after it was received at the Zoological Gardens. There was a large abscess in the body wall; the wall of the abscess was lined with a laminated caseous material. The liver was filled with a number of deposits, varying in size from a pea to a nut; the smaller were fibrinous masses, the larger were pus-containing cavities. In the python, there was a communication between the portal and the omental veins on the one hand, and the lower intercostal veins on the other. The large abscess in this case lay just behind these anastomoses.—In reply to a question from the PRESIDENT, Mr. SUTTON added that abscesses were extremely common in snakes, and it seemed probable that they were due to injuries inflicted by the large boluses of food as they traversed the intestines.—Sir JOSEPH FAYRER, in response to a call from the PRESIDENT, said that he had no experience of hepatic abscesses in the python, but that in man he had often seen this kind of abscess in the liver; he attributed them to limited areas of death of the tissues followed by suppuration.

Nerves from Three Cases of Infantile Paralysis.—Dr. WALTER EDMUNDS exhibited microscopical specimens from three cases of infantile paralysis, in which the leg had been amputated late in the disease. The sections were from the internal popliteal nerve, and showed considerable increase of the endoneurium in the nerve-bundles, together with atrophy of the nerve fibres themselves. The endothelium of the blood-vessels in the nerve was proliferated.—Dr. BUZZARD suggested that, since anterior polio-myelitis was probably really an inflammatory disease, it might first affect the blood-vessels, and so lead to overgrowth of the connective tissue, and thus to secondary atrophy of the nerve-fibres.—Mr. BOWLBY, who had made sections of the nerves from such cases, thought it more probable there was a descending neuritis starting from the large motor cells, which, it was well known, were diseased in these cases.

Changes in Nerves after Amputation.—Dr. HALE WHITE read a paper, written by Dr. Walter Edmunds and himself, in which it was shown that the first change in the coiled bundles of nerve-fibres, at the end of the amputated nerve, was an ingrowth of delicate connective tissue from the perineurium; this ended in the sclerosis of the bundles, and, in its turn, the sclerosed tissue underwent fatty degeneration. The reason why the nerve-fibres underwent fatty degeneration probably was that, in man, the other tissues of the limb not regenerating themselves, there was no need of either sensory or motor nerves. It was pointed out that, in the nerve of the amputated limb, certain fibres underwent degeneration, which were probably those coming from the parts which had been removed, whilst the fibres which had not undergone degeneration were derived from the remaining parts of the limb. In a case of amputation of the thigh, the changes in the cells of the *tracius intermediolateralis* had not extended as high as the lower dorsal cord. Section of the median nerve, just below a spot where it had been cut through previously, showed complete degeneration of the nerve, owing to all its fibres being functionally useless. A specimen was also shown of a round-celled sarcoma at the end of an amputated nerve.—The PRESIDENT inquired whether any curling up of the nerve on itself, such as had been described and referred to, had been noticed in these cases.—Dr. WHITE replied in the negative, and observed that this curling up of the nerve had been described as present only at a date earlier than any case he had been able to observe.—Dr. HOGGAN thought the question dealt with stood in need of much elaborate research; it would be necessary to trace each individual nerve fibre throughout its whole course, and to use the very latest and most perfect methods of investigation.

A Case of Infantile Bone-Disease.—A number of specimens from an interesting case of widely diffused disease of the bones was shown by Dr. HOGGAN. The patient, who died of atelectasis, was under the care of Mr. F. J. in the Hospital. The mother had had a miscarriage; but, shortly before the birth of this child, she contracted gonorrhoea; one other child was rickety. The infant was nursed for three weeks, and then, on a diet of milk and water, it continued to grow, but, on the fourth day, it was ordered beef-tea and cod-liver oil. Within a period of a few days, stiffness was noticed; the spine became curved, and the limbs and arms swollen. On admission, craniotabes and general rickets in the limbs were observed. At the necropsy, the skull was found to be enormously thickened, and there was also a diffused thickening of the shafts of almost all the long bones, and of the

spine; all the bones were so soft that they could be squeezed, like a sponge; and all, with the single exception of the petrous part of a temporal bone, could be easily cut with a knife. The tibia on one side was fractured. This thickening and softening of the bones appeared to be due chiefly to periosteal disease, but also affected the deeper parts. There was beading of the ribs, with other marked evidence of rickets. It was difficult to apply any name to this condition; it was certainly closely related to rickets, but, on the other hand, it seemed to be an extreme instance of the condition which M. Parrot had attributed to syphilis. The amount of subperiosteal growth certainly tended to take it out of the category of rickets. Such a condition persisting might be the cause of the thick skulls sometimes found in adults. The disease seemed also to be related to osteitis deformans, which, again, as Sir James Paget had pointed out, was related, in some points, to generalised bone-tumours; and it should be remembered that certain cases of mediastinal tumour seemed to have their beginning in gummata, which subsequently ran on into sarcoma.—Dr. NORMAN MOORE remarked that the bodies of the vertebra had not the form usually seen in extreme rickets, and that the thickening of the skull did not chiefly affect the neighbourhood of the sutures as usually seen in that disease. He thought the case more nearly allied to osteitis deformans.—In reply to Mr. KESTEVEN, Dr. GOODHART said that there had been no adequate microscopical examination of the bones, and at the suggestion of the PRESIDENT, the case was referred to the Committee on Rickets, for further report.

Addison's Disease without Bronzing.—Dr. GOODHART also showed a beautiful dissection, made by Mr. Pearson, of the suprarenal capsules and abdominal sympathetic from a case of Addison's disease. The patient had been a medical man, who, on account of certain indefinite symptoms of failing health, took a long sea-voyage. During the voyage, he suffered from most obstinate vomiting, and reached England in an extremely exhausted condition. Death was due to syncope after a slight exertion. There was at no time any bronzing, and it was notable that the capsules were very large, so that it was probably an acute case. It had been observed that, in acute cases, bronzing was often absent.

Bone and Brain Disease in Syphilis.—Mr. VICTOR HORSLEY said that the specimens he showed were of interest, chiefly owing to the fact that successful treatment lessened the opportunities of studying syphilitic lesions. In this case, the patient was admitted into University College Hospital under Mr. Hill, from the Lock Hospital, suffering from pyæmia in addition to syphilis. The pyæmia followed the decomposition of the discharge from the necrosing bone. The specimens showed, first, the points of acute necrosis on the frontal and malar bones, together with the spongy bones of the nose; of these, the inferior turbinate bone on each side was found after death to be a mere sequestrum, and kept in the nasal fossa by tenacious muco-pus. The whole mucous membrane of the pharynx was hyperæmic, and showed a few cicatrices of previous ulceration. The seats of active mischief were excessively foul, the smell of the discharge not being controlled by antiseptics. The frontal bone showed very well marked sclerosis, and the cicatrices of former ulceration and destruction of the outer walls. The lungs of both sides showed some cirrhosis of the apices, and bronchopneumonia. The aortic valves on their ventricular surfaces were ulcerated, the ulcers being about one-quarter of an inch in diameter, and covered with fibrine. The liver, fatty, and a little cirrhotic, presented a white depressed scar, which penetrated one-quarter of an inch into the substance of the organ. Both spleen and kidney were cirrhotic, while the former was greatly enlarged, measuring 7 × 4.5 × 2 inches. The other abdominal organs showed no noteworthy lesions. On removing the brain, there was found an excess of cerebro-spinal fluid, while the arachnoid and pia mater at the base were opaque, and matted together by syphilitic exudation. This did not cause any paralysis of the cranial nerves. The cerebellum was symmetrical, the lateral lobe of the left side being deficient on its under surface at the anterior border, the flocculus being scarcely represented. This did not seem to be the result of disease. There were eleven abscesses in the connective tissue of the limbs and trunk.

Micro-organisms in Pyæmia.—Mr. HORSLEY also showed two specimens of micrococci found in the abscess-fluid of the case of syphilis and pyæmia above referred to, and also from a case of excision of the tongue for epithelioma. The form of pyæmia in both cases was alike, that, namely, in which a formation of peripheral and not visceral abscesses occurred, i.e., an infective process not dependent on embolism. As had always been found, the organisms were micrococci, and, while always occurring in the abscess-cavities, were never found in the blood. With the fact of their invariable occurrence in acute abscesses (Ogston) in view, no causative importance could, of course, be attached to their presence. In conclusion, he referred to an interesting case of pyæmia

which recovered. Numerous abscesses had formed, and it was observed that the pus from those which occurred latest in the disease, when recovery had already commenced, contained no micrococci.

Card Specimens.—Mr. SHATTOCK showed three urinary calculi, chiefly composed of carbonate of lime. They were obtained from an ass, a horse, and a dog respectively. The urine of herbivorous animals being normally alkaline, it was not difficult to understand how, in them, calculi of carbonate of lime arose.

Dr. BEDFORD FENWICK exhibited a specimen of carcinoma of the omentum.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

MONDAY, DECEMBER 4TH, 1882.

S. LEE RYMER, L.D.S., President, in the Chair.

Causes of Dental Decay.—The greater part of the evening was occupied with the discussion of the paper read at the previous meeting by Dr. A. Carpenter of Croydon, on the Causes of Dental Decay. It was opened by Mr. OAKLEY COLES, who said that Dr. Carpenter's statement, that so called "dead teeth" were more liable to decay than others, did not agree with the ordinary experience of the dental profession; nor did his assertion that the subjects of inherited gout were very liable to caries; such people generally had large, strong teeth, which were but little liable to caries, but which were liable to be cast off by recession of the gum, or, as the result of chronic congestion of the alveolo dental membrane. Dr. Carpenter apparently had not observed any connection between rheumatism and caries, but it was well known in the dental profession that acute rheumatism was liable to be followed by the worst form of decay—that known as "soft caries."—Mr. HENRY SEWILL said it seemed to be implied in the paper that the causes of dental decay were doubtful or unknown, whereas there was no mystery whatever about them. The predisposing causes were such as led to structural defects in the teeth. Syphilis was undoubtedly a cause of defective teeth, but he was strongly of opinion that gout had no predisposing influence whatever. Caries itself was wholly due to the action on the teeth of the acid products of decomposition formed in the mouth, which permeated the porous enamel, and acted on the dentine. It had also been lately shown that the progress of the disease was assisted by the proliferation of micro-organisms in the canals of the dentine, these organisms having themselves the power of producing an acid secretion. It was not in any sense a constitutional, but purely a local disease.—Mr. REDMAN suggested that Dr. Carpenter had omitted to mention one predisposing cause of caries—viz., the use of carefully cooked and soft food, it being a well known physiological fact, that any organ not fully used would deteriorate.—Mr. HENRY asked whether it really was an established fact that dental caries had become more prevalent. No doubt it came under observation more, but might not this be due to the fact that more attention was now paid to the preservation of the teeth?—Mr. COLEMAN and Dr. WALKER both gave it as their opinion that the increase of caries was an undoubted fact. The latter dissented from Dr. Carpenter's statement that gout was a cause of caries. He thought that improper food in infancy was one common cause of defective teeth, and agreed with Mr. Redman that their comparative disuse in mastication was another.—Mr. HUTCHINSON also thought that the artificial life led by mothers, and the injudicious feeding of infants, were two of the chief causes of the prevalence of bad teeth.—Dr. CARPENTER replied, saying that his statements, particularly with regard to gout, were founded on careful personal observations, and were the result of forty years' experience of medical practice. He admitted that rheumatism had an influence on the teeth, but thought that this part of the subject required further investigation. He quite agreed that the improper feeding of children was a very common cause of bad teeth, but could not admit that the etiology and pathology of dental diseases were as yet quite as satisfactorily made out as Mr. Sewill alleged that they were.

Mr. CHARTERS WHITE afterwards read a paper on the Salivary Glands of Insects.

MIDLAND MEDICAL SOCIETY.

BIRMINGHAM, DECEMBER 6TH, 1882.

E. MALINS, M.D., President, in the Chair.

Removal of Uterine Appendages.—The PRESIDENT showed the ovaries and Fallopian tubes, which he had recently removed from two patients. One was single, aged 38, and had suffered ovarian pain for thirteen years; considerable adhesions were found in the pelvis. The second patient was married, aged 39. The left ovary was soft and friable, and was removed only with difficulty. Both cases did well.

Rectal Polypi.—Mr. WILLIAM THOMAS exhibited three polypi of the rectum, each about three-quarters of an inch in diameter, which had been removed from a child six years of age. Allusion was made to the rarity of multiple polypi of the rectum, this being the only case he had met with or read of.

Resection of Hip-joint.—Mr. THOMAS showed the heads of two femora, removed by resection, which presented similar features. In both the head of the femur rested firmly on the margin of the acetabulum, and at the point of contact the cartilage was completely gone, so that the cancellous tissue of the head of the femur rubbed against that of the margin of the acetabulum. In each case, the head of the femur was grooved by the pressure.

Gouty Deposits in a Rabbit.—Mr. THOMAS also exhibited the ends of the radius and ulna, all the bones of the carpus, and the bases of the metacarpal bones of a domestic rabbit, affected with gouty arthritis. The non-articular surfaces were enlarged and distorted, and the grooves for the tendons destroyed.

Acute Necrosis of Humerus.—Dr. SANDERS showed, for Mr. WEST, a specimen of acute necrosis of the upper end of the humerus, in which symptoms had existed for three weeks before resection was performed. At the operation, a large abscess was found communicating with the joint; the cartilage of the upper epiphysis of the humerus was eroded, and the shaft necrosed for two inches.

Fracture and Dislocation of Cervical Vertebra.—Dr. SANDERS showed a seventh cervical vertebra, in which a fracture and dislocation of the body was seen, and also a fracture through the laminar process. The posterior edge of the lower intervertebral cartilage pressed upon the cord, but without injuring it; there was no hæmorrhage into the cervical canal. The patient lived eight days after receipt of the injury, and during life there was complete paraplegia of all the nerves below the first dorsal.

Hydroa from Bromide of Potassium.—Mr. F. L. PHILLIPS exhibited a man, aged 25, who had been treated for epilepsy for fourteen years, and was now covered with an eruption of thirteen months' duration. There was no history of syphilis; but on the face, the back of the shoulders, the arms and legs, abundant papules and tubercles existed. Some of them were as large as a walnut-shell, and tended to suppurate at the apices, forming rupial-looking patches, but not itching. Most of the tubercles disappeared in a few days, leaving pigmented maculæ, upon which another generation of tubercles sometimes appeared.

Gouty Joint.—This was a metatarso-phalangeal joint of the great toe, of a man who had suffered many acute attacks of gout, and who finally rapidly died of bronchitis. The cartilages and ligaments of the joint were infiltrated with fawn-coloured urate of soda.

Suppurating Ovarian Cyst.—Dr. C. LEWIS showed this specimen, which had been removed from the body of a girl, aged eighteen. Three days before death, having previously been in fair health, she complained of *malaise* and of tenderness over the right ovary. The following day there was a high temperature, and all the signs of traumatic peritonitis. The cyst was of the size of a hen's egg, attached by a pedicle to the uterus, containing between two and three ounces of pus, and adherent to all the pelvic viscera. A small rupture was detected in the cyst-wall. The left ovary was also found to be enlarged, and the Fallopian tube to contain, on that side, a small pyo-salpinx.

Calculi.—Dr. T. NELSON showed the fragments of a large calculus which had been discovered after death in the bladder of a pig. It mainly consisted of triple phosphates. He showed also twenty calculi, which one patient had passed, *per urethram*, at different times. The stones varied in size, one being as large as a horse bean.

Some of the Diseases of the Fallopian Tubes.—Dr. SAVAGE read a paper on this subject. He referred especially to hydro- and pyo-salpinx. He said that these diseases existed, in the author's opinion, much more frequently than was laid down in the text-books; and the fact of their frequency should not seem so surprising, seeing that both uterus and Fallopian tube were developed from the same foetal structure, viz., Müller's duct. As causes which could be ascertained, might be mentioned gonorrhœa, both recent and latent, the abuse of pessaries, especially intra-uterine ones, and pelvic peritonitis or ovaritis. The first effect of inflammation was to cause obliteration of the uterine and fimbriated ends of the tubes, thus allowing a collection of the abnormal secretion. The relatively larger amount of areolar tissue in the wall of the tube, as compared with that in the uterine wall, accounted for pus being common in the former. Surgery was able to step in and remove, when necessary, these tumours, the diagnosis of which must often be presumptive, based on the physical signs and the clinical history. The operation was often a difficult and tedious one, on account of the frequent accompaniment of firm adhesions, and the danger of an escape of the fluid contents, in the case of pyo-salpinx. If let alone the termination might be: 1. Resolution and absorption; this would

be very improbable when pus was present, and it would best affect the results of former adhesions; 2. Bursting into the rectum and vagina, which would have a curative tendency; or into the peritoneum, which would certainly be fatal, unless early operative interference were undertaken. The operation for the removal of diseases such as these, was an extension in abdominal surgery which commenced in ovariectomy, and had gradually been progressing onwards. It was tending to throw a flood of light on "pelvic abscess," and "pelvic peritonitis," some of which cases were in reality collections of pus in the Fallopian tube. —In the discussion which followed, Mr. ROSS JORDAN, Dr. MALINS, Mr. CHAVASSE, and Mr. HARMAN took part.

Tests for Albumen.—Dr. G. P. BEST read a paper on the methods of applying the tests for albumen. After remarking the importance of the early diagnosis of granular kidney, and the fact that this could only be settled by the discovery of small quantities of albumen in the urine, he glanced at the more careful methods of examination from time to time suggested; and while arguing that the very suggestion of these more elaborate methods implied certain necessities, he brought forward his idea of utilising the syringe or suction principle for the purpose of meeting them. First was considered the advantage in point of accuracy of the apposition of urine and nitric acid obtained by the use of the syringe, a point most important in those early cases of granular kidney above alluded to in which the quantity of albumen was small. Secondly, the convenience of the application of this method in house-to-house visiting. In illustration, he exhibited a pocket apparatus arranged for him by Messrs. Salt and Son, which exemplified the general principle as well as the particular application. In this portable case, Dr. Best substituted, for nitric acid, the hydrochloric solution of common salt of Dr. W. Roberts, which acted equally well, and was better suited for packing.

ACADEMY OF MEDICINE IN IRELAND: PATHOLOGICAL SECTION.

FRIDAY, DECEMBER 1ST, 1882.

J. M. PURSER, M.D., President, in the Chair.

President's Address.—The President opened the Session with a brief inaugural address. In the course of his address, Dr. Purser dwelt particularly on the waste of pathological material which took place in many of the hospitals of Dublin, and on the disadvantages that attended the making of *post mortem* examinations by gentlemen who had received no training in pathological anatomy. He suggested that this difficulty might be obviated by the appointment to each hospital, or group of hospitals, of a pathologist who had received some instruction in the details of practical pathological anatomy. In spite of its great development as a centre of medical teaching, up to the present time neither university, nor college, nor private school in Dublin, had supplied any systematic course of instruction in Pathology.

Primary Lupus of the Conjunctiva.—Mr. ARTHUR BENSON exhibited a girl, 15 years of age, of strumous habit. She had first noticed a feeling of soreness at the inner angle of the right eye in May, 1879, and came to St. Mark's Ophthalmic Hospital on May 29th, 1880, where some "lump" was cut off from over the right inferior punctum. In November, 1880, the left eye became affected in a similar way, and had since become the worse of the two. For the last year she had noticed a stiffness of the nose, especially on the left side; her nose often bled a little when she blew it. There had neither been pain in the eye nor photophobia. The region of the inferior lachrymal punctum of the right eye was occupied by a cicatrix; the conjunctiva of the lower lid was somewhat thick and velvety. On the conjunctival surface of the upper lid was a prominent granular mass. There was some eversion of the lower lid of the left eye at the inner extremity. The inferior punctum was excluded, and its position occupied by an elevated mass, the centre of which was ulcerated. The lachrymal sac was obliterated; fluid syringed through the superior punctum and canaliculus regurgitated without dilating the sac. Along the inferior *cul-de-sac* of the conjunctiva there existed a more or less wedge-shaped mass of thickened fleshy conjunctiva, which bled rather readily on being probed. The ocular conjunctiva, and the conjunctiva of the upper lid, were normal, or nearly so. No passage could be found through the inferior punctum into the lachrymal sac or nasal duct. The mucous membrane of the nose, as far as could be seen with a speculum, appeared swollen and covered with a granulation-like surface which bled easily. The cornea was normal, and vision was perfect. The slowness of growth, absence of irritation, peculiar appearance of the growth, its spreading into the duct, etc., seemed to point to lupus.

Hodgkin's Disease.—Mr. WILLIAM THOMSON exhibited a patient,

aged 26, with well marked Hodgkin's disease. There was a large tumour in the left axilla; the glands at the root of the neck were much enlarged; the right lung was infiltrated in its upper half. The veins in the front of the thorax were all enlarged and varicose, this condition being marked above a transverse line drawn through the ensiform cartilage. The patient suffered much from dyspnoea at night. In the morning, his ears were always quite purple, but this condition improved as he moved about. He was well nourished. There was no excess of white corpuscles, and there were no symptoms except the dyspnoea, and occasional pains in the arms. The disease had existed for fourteen months.—Dr. FINNY exhibited the viscera of a patient who died of the same disease. The patient was aged 17, the son of healthy parents. Two years ago, he exhibited enlargement of the lymphatic glands in the neck. The cervical, mediastinal, bronchial, and retroperitoneal glands were enlarged, and adenoid nodules occurred in the spleen. The blood at no time exhibited an increase of white corpuscles. (The further details of the case are reserved until the report of the Committee of Reference on the specimens is brought up.)

Bacillus of Tubercle.—Mr. P. S. ABRAHAM showed microscope mountings of this bacillus, prepared according to Dr. Gibbs's method.

Pachydermatocele.—Dr. A. W. FOOT exhibited photographs of pachydermatocele (Mott), taken from a woman, married, aged 30, never out of Ireland. The disease had existed nine years; its origin was attributed to a severe wetting, followed by irritation of the inguinal glands. She died four days after the removal of a large mass springing from the posterior femoral region.

Ichthyosis.—Dr. FOOT showed a drawing of ichthyosis vera, from a boy, aged 11, affected from early life, but not born so. He was discharged from hospital perfectly cured after five weeks' treatment, consisting of warm baths, cod-liver oil internally, and inunction of a compound of iodoform and glycerine.

Diffuse Melanomata.—Dr. FOOT showed a drawing which represented diffuse melanomata from a washerwoman, aged 57, whose right eye had been excised for melanosis five years previously.

Fractures of Patella.—Dr. E. H. BENNETT exhibited a fracture of the right patella completely united by bone; and a fracture of a left patella united by fibrous tissue.

Double Fracture of the Lower Jaw.—Mr. P. S. ABRAHAM exhibited a jaw showing a comminuted fracture in the region of the right mental foramen, its principal line passing down from between the bicuspid teeth to the anterior margin of the foramen, at the base of which it bifurcated. A triangular piece, with a base 1.5 centimetres (0.6 inch) long, was thus separated from the lower margin of the jaw, chiefly at the expense of the inner surface of the bone. There was no evidence of the fracture having been compound. A second fracture was situated on the left side of the jaw, extending from behind the last molar, of which the alveolar socket was expanded down to the angle. This fracture was compound, communicating with the mouth.—Dr. BRERETON, (Oughterard) stated that the patient was a man, aged 36. From evidence given before a coroner, the fracture was inferred to be the result of a kick while the man lay on the ground. On the fourth day after the receipt of the injury he got out of bed, walked from his house a short distance, and on returning fell dead at his own door. The fracture at the angle was found to be compound, communicating with the mouth; and an abscess, traced from the parotid region down along the carotid artery into the pericardium, had formed in connection with it.

Excision of Elbow-joint.—Mr. CROLY exhibited a specimen from a man, aged 21. The synovial membrane was in the condition of pulpy thickening, and the cartilages were invaded. The bones were affected only immediately beneath the cartilage.

Loose Cartilages.—Mr. WHEELER showed cartilages removed by him from the right knee-joint of a patient in the City of Dublin Hospital.—Mr. COPPINGER exhibited a cartilage excised from the left knee of a man aged 80. It was removed successfully by free incision made under the usual Listerian conditions.

Glioma of the Retina.—Mr. STORY showed three specimens of this disease. One was the right eye of a girl, aged four, enucleated at St. Mark's Ophthalmic Hospital. The whole globe was enlarged and filled with the new growth, which had perforated the cornea and formed an external intensely vascular tumour. The tumour extended into the optic nerve, and had also perforated the sclerotic posteriorly. Numerous hæmorrhages into its substance had occurred. The second was the right eye of a boy, aged six, enucleated at St. Mark's Ophthalmic Hospital. The tumour sprang from the internal granular layer, extended from the papilla almost, if not quite, up to the ciliary processes, and in its widest part measured not quite 0.12 inch. The position of the lens was normal, but the retina and choroid were both detached in places. The anterior chamber was abnormally deep, and the opposing surfaces of the iris and cornea were covered with a thick white layer of

small round cells, indistinguishable microscopically from pus corpuscles. The optic nerve was apparently healthy, and the external tunics were nowhere perforated. The third specimen was the right eye of a boy, aged 4, enucleated at St. Mark's Ophthalmic Hospital. The eye-ball was enlarged and completely filled with a soft yellowish tumour, which had surmounted the shrunken lens and occupied the whole anterior and posterior chambers of the aqueous humour. It did not adhere to the cornea, and rapidly increased in size from the porus opticus up to the foramen opticum.

Nasal Polypi (Muco-gelatinous).—Mr. CROLY showed nasal polypi removed from a light-house keeper from Co. Waterford, aged 55, admitted into the City of Dublin Hospital, May 24th, 1882. The nostrils were distended, and the tumours projected. The sense of smell was lost. The patient was much worse in damp weather. Twenty-three polypi of the muco-gelatinous variety were removed. The patient left the hospital the following day much relieved.

Fatty Tumour.—Mr. CROLY exhibited a fatty tumour weighing 10½ lb, and a cast of the same. The patient was a woman, aged 55. The tumour commenced to grow ten years ago as a small lump on the left shoulder; increased very gradually at first; latterly it grew more rapidly. It had an elastic, almost fluctuating feel, and an undulating margin near the pedicle at the deltoid region.

Peculiar Vesical Calculus.—Mr. ANTHONY H. CORLEY showed a calculus of irregularly ovoid shape with numerous bosses projecting. The symptoms were of four years' duration. It was extracted by lateral lithotomy, June 14th, 1882. The longest diameter was 1½ inches; weight, 420 grs.

Case of Volvulus.—Mr. J. K. BARTON observed that, among the causes of intestinal obstruction, twisting of the gut, or volvulus, was the rarest. It usually took place in the large intestine, and most frequently in the sigmoid flexure. In the following case the cæcum appeared to have been the part which was displaced, and the ascending colon was in consequence twisted and the gut distended. E. M., aged about 58, a charwoman, while cleaning out a church, was suddenly seized with severe pain in the abdomen. She was admitted into the Adelaide Hospital on October 3rd. The abdomen was then found greatly distended, and unequivocal signs of peritonitis existed. No action of the bowels was procured, but the gaseous distension of the abdomen was so great as to require the operation of puncture twice. The patient died on the 8th, five days after admission, and eight after the sudden attack of pain. The necropsy revealed enormous distension of the cæcum and small intestine, with a rupture posteriorly of the cæcum, with general peritonitis. The ascending colon was twisted so as completely to exclude the gut, and the large intestine below this point was small and empty. The cæcum must have accomplished a complete revolution on itself, as the vermiform appendix was behind, but distended to the size of the index finger.—Drs. MYLES, FOOT, FINNY, THORLEY STOKER, CORLEY, WARREN, H. KENNEDY, and ABRAHAM took part in the discussion which followed.

Aneurysm of the Internal Iliac Artery.—Dr. T. EVELYN LITTLE read a paper on this subject, and exhibited a specimen of the disease. Having demonstrated the anatomical details of the tumour which was a true aneurysm, he quoted the statistical tables of Crisp, of Norris, and of Hasse, showing the extreme rarity of aneurysmal disease of the vessel.

Nasal Polypus.—Mr. WHEELER read a paper on nasal polypus, illustrated by the exhibition of six specimens of mucous nasal polypi, one fibrous naso-pharyngeal polypus, and one mucous naso-pharyngeal polypus, removed from three patients. Having detailed the symptoms of interest in each case, and the individual characters of the tumours, he stated the opinions of Cornil and Ranvier, of Sabatier, Boyer, Lassus, Ambroise Paré, Boyard, Gerdy, Nélaton, and Robin, as to the structure and classification of these tumours, and described some of the errors in diagnosis which had occurred regarding them, referring particularly to observations of Syme and of Gerdy. Drs. T. STOKER, CORLEY, and KENDAL FRANKS joined in the discussion, and Mr. WHEELER replied.

VACCINATION AT NORWICH.—Mr. R. W. Fiddy, of St. Peter's Street, Norwich, has been summoned for neglecting to have his child vaccinated. Mr. E. Burgess, on behalf of the defendant, contended that vaccination could not be carried out in Norwich, as the Board of Guardians had not provided a vaccination station. Until such a station was provided, the Act became a dead letter. Mr. Burgess, in the second place, contended that the injuries and fatalities to children arising from vaccination, during the last five years in Norwich, also afforded a sufficient reason for parents not having their children vaccinated. The magistrates intimated that they could not allow the objections of Mr. Burgess. They were, however, anxious to be put right, if they were wrong, and would grant a case for the opinion of a superior court. They felt bound to fine the defendant 2s. 6d. and costs.

REVIEWS AND NOTICES.

LECTURES ON SURGERY. By JAMES SPENCE, F.R.S.E., Professor of Surgery in the University of Edinburgh, etc. Third Edition. Edinburgh: A. and C. Black. 1882.

"THE last line of this volume had been corrected, the last proof returned from the hands of the printer, when death removed its author from our midst; so the end of the work and of the worker have come together. The present edition is, therefore, in every way the perfect and ripe fruit of his experience; as such, it is now offered to the public." Such are the words of preface to the second volume of this edition.

To attempt to criticise in a review Mr. SPENCE'S work would indeed be supererogatory. The great Scottish surgeon has left behind him his monument, and it is for us to profit by his labours.

Originally intended as a text-book for the class in the University, an embodiment of Spence's practical method of teaching, it has grown into a system brought up to the present time, and is laid before us as the result of long and successful experience in surgical practice.

One great point founded on his vast experience is, the dogmatic principle he adopts on such subjects as preparation for emergencies, decision in cases of doubt or differences of opinion, such, for instance, as we notice under the headings of mortification, injuries and diseases of arteries, injuries of head, hernia, etc.

The volume is greatly enhanced in value by the increase in the number of clinical cases introduced, and of illustrations. As a text-book characteristic of the great surgical school of which Mr. Spence was the acknowledged head, it must rest on its merits, and will doubtless long be the work of reference to the surgical student and practitioner into whose hands it falls.

A classical work such as the present, so recently reviewed in detail, surely requires but short notice of its present or more modern garb. Silence in criticism is a greater tribute to Mr. Spence's memory.

SYPHILIS. By V. CORNIL. Translated, with Notes and Additions, by J. H. C. SIMES, M.D., and J. W. WHITE, M.D. pp. 461. London: H. Kimpton. 1882.

M. CORNIL'S lectures, which have been recently translated by Drs. Simes and White of Philadelphia, were published in their original form in 1879; consequently, it is now pretty well known that they are not intended to form a complete treatise on syphilis, but rather an elementary manual based upon pathological anatomy. From this point of view, no one has a better right to speak with authority than M. Cornil; and his clear descriptions, aided by well executed drawings, of the histology of the various lesions which occur in all parts of the body, and at all stages of the disease, have already supplied a want that had long been felt, inasmuch as morbid anatomy has hitherto formed one of the weak points of most works on syphilis. It is, of course, impossible to give anything like a detailed account of M. Cornil's work in this notice. It must suffice to indicate briefly his views on two of the most recent, and still undecided, questions that have engaged the attention of pathologists, viz., the changes in the blood-vessels in acquired, and those in the bones in inherited syphilis. With regard to the former, M. Cornil is of opinion that Heubner's views as to the special and characteristic nature of syphilitic arteries are inadmissible until they are confirmed by further evidence. The changes in the long bones of children are fully described according to the researches of Ranvier, Wegner, Parrot, and others, as well as from the personal observation of the author; and, as a result of these researches, which have separated syphilitic from rachitic affections, M. Cornil thinks that it will now be necessary to recommence the study of rickets, after carefully excluding all children suspected of syphilis.

The translation is divided into chapters instead of into lectures: woodcuts in the text take the place of the lithographic plates of the original; and additions, chiefly as regards clinical matters, to the extent of about one third of the present volume, have been made. Now, although some of these additions are stated to have been suggested by M. Cornil himself, and although the added material is in itself valuable, we cannot help thinking that the translators would have done better to limit themselves to translating, without adding to the substance of such a work as this. But even supposing any additions desirable, a different type ought to have been used to distinguish them. At present they are merely placed within brackets; and, as they sometimes extend over several pages, it is by no means easy, for anyone who consults the book for the purpose of reference, to discover whether he is reading the views of author or of translators, without an amount of troublesome page-turning that might have been easily spared him.

OUTLINES OF THE SCIENCE AND PRACTICE OF MEDICINE.
By WILLIAM AITKEN, M.D., F.R.S., Professor of Medicine in the Army Medical School. Second Edition. London: Griffin and Co. 1882.

DR. AITKEN'S name is so well known as that of the writer of highly esteemed works on medicine, that any product of his pen is sure to obtain readers. And no doubt any medical student who purchases the new edition of his *Outlines of the Science and Practice of Medicine*, will become the possessor of a volume containing an abundance of valuable information in a small space, and will receive a more than ample return for his outlay. We confess, however, that we would recommend him to buy the larger rather than the smaller work; and, indeed, we question if Dr. Aitken has been well advised to make the attempt of epitomising his *Science and Practice of Medicine*.

Dr. Aitken is a laborious and learned author; and his larger work is a storehouse of knowledge culled from all quarters, which can be referred to in all its sections, with the certainty of finding much valuable and curious information. But, on the other hand, he is an involved and often obscure writer; his materials are often imperfectly arranged and not thoroughly digested; there is a want of due proportion between the component parts of his work; and his own views are not always expressed clearly or definitely. Such faults may readily be pardoned in an encyclopædic writer, which is rather consulted in encyclopædic fashion than read continuously; and they have done little to impair the deserved popularity of Dr. Aitken's great treatise. But a brief epitome of any science should be tersely and clearly written, should contain a distinct and clear exposition of the views which the writer entertains or accepts; should be well arranged; and, while treating each section of its subject more or less fully in proportion to its interest or importance, should manifest careful thought as to what it includes and what it omits. It is exactly in these respects that the work under review fails. We shall, however, only call specific attention to a few of what seem to us the faults included under the last head; and we shall do this not for the mere purpose of fault-finding, but because they are such as can easily be rectified in another edition.

1. Dr. Aitken includes in his work the Nomenclature of Diseases published by the College of Physicians in 1869. But what good purpose can it serve to devote fourteen closely printed pages of his outlines to the reproduction of a list of diseases and causes of disease, most of which are not even mentioned elsewhere in his book? Moreover, the nomenclature is already under revision, and will be published shortly in a wholly different form.

2. That disease of the nervous system should occupy a hundred and fifty pages, or about one-fourth of the entire book, is, considering the great and growing importance of the subject, probably defensible; but surely scanty justice can be done to diseases of the urinary system in fifteen pages. This disproportion becomes more striking, when it is observed that diseases of the eye have no fewer than thirty-six pages allotted to them. We have no fault to find with the description of eye-diseases *per se*; but it is certain that medical students will learn ophthalmic surgery from other sources, and that an exhaustive discussion on the subject is out of place in a work on medicine by a physician; yet more space is accorded to it than to the diseases of the respiratory organs; and only eight pages less than are given to the description of diseases of the alimentary viscera from the mouth to the anus.

3. Again, it is curious to observe that Rotheln, or German measles, a disease which is common enough, and a constant puzzle to practitioners, is nowhere even mentioned; while four pages (in an appendix, it is true) are devoted to the description of a foreign fever, which has probably no separate or real existence; that, amongst the parasitic diseases of the skin, two which are very common, and the frequent cause of annoyance, if nothing more (namely, pityriasis versicolor and prurigo decalvans), are wholly omitted; and that, in the comparatively exhaustive account of diseases of the nervous system, no allusion whatever is made to shaking palsy.

The volume is a handy one, very well got up, and very clearly printed; but, unfortunately, verbal and other errors, due to careless editing, are more than usually abundant. The following are a few taken at random: "pulvis ipecacuanha composita," instead of "pulvis ipecacuanhæ compositus"; "radix ante dysenterica," instead of "radix anti-dysenterica"; "ung. hyd. nitratis mitior," instead of "ung. hyd. nitratis minus"; "pempblox," instead of "pompholyx"; and an "aphasic" cough, where probably an "aphonic" cough is intended.

THE PHYSICIAN HIMSELF, AND WHAT HE SHOULD ADD TO HIS SCIENTIFIC ACQUIREMENTS. Pp. 208.

UNDER the quaint and somewhat ambiguous title *The Physician Himself*, Dr. CATHELL, of Baltimore, has published an essay on *Personal Questions in Medical Practice*, being the fruit of thought and experience during a long and busy life. Although the term physician is employed, the teachings of the book have no special bearing on the work of physicians as a class of consultants, distinct from the general body of practitioners in medicine. The physician, according to the author's use of the word, is the ordinary medical practitioner. He has, employing the American phraseology, his office, where he sees and prescribes for patients, performs minor operations, and when desirable, compounds medicines for them.

To the physician thus defined, Dr. Cathell addresses his advice and monitions on almost all matters affecting his relations to his fellow medical men and to society at large. As might be anticipated from different sentiments on many points of manners and of etiquette obtaining in the States, and likewise from the differences there existing in the profession and in its relations to society, compared with what is found in this country, some of the author's recommendations and maxims cannot be accepted as wise and correct, more licence in the way of advertising, of attracting attention, and gaining notoriety is found in America than we in the old country deem fitting. For example, it will not be considered with us good taste to decorate the consulting room with "diplomas, certificates of society membership, anatomical plates, professional relics and keepsakes, whose history is connected with your medical studies, such as the human skeleton, either entire or in parts, pathological or anatomical specimens, and mementos of your dissections (p. 11), and a tariff of fees framed and hung in a semi-prominent position" (p. 16.). The same may be said of the proposal to adopt some special colour, pink or blue, or yellow for bills sent out, "to remind your patients of their indebtedness to you" (p. 197). But apart from suggestions of doubtful taste, there are one or two of questionable propriety and principle. The most glaring instance occurs in the author's lessons for dealing with syphilitic patients; where he recommends the exhibition of a *fac-simile* of the "case in your illustrated works on venereal diseases," or to read "a description of it from a text-book" to a patient who may question your diagnosis. Such a proceeding is said to be adopted and much abused by the tribe of foul quacks who prey upon the victims of syphilis. It is one of which a medical man of high principle and tone should beware.

But we have no wish to insist upon such blemishes in a book marked by good common sense, and almost everywhere by the inculcation of moral principles. The first chapter contains, in a small compass, most of the rules of action which the author expounds and reiterates in the several chapters succeeding, and it would be possible, by the elimination of repeated suggestions, to very materially curtail the dimensions. Be this, however, as it may, it has evidently been highly welcomed in the United States; having, according to the preface, reached a second edition within a few weeks of its first issue. Dr. Cathell is seriously impressed by the over-supply of doctors in his native land. If we in England have to lament the circumstance that there is one medical man to every 1,652 of the population, the position of our professional brethren in America is considerably worse, for, "counting both regulars and irregulars," the proportion there reaches one to every 600. This fact exhibits the evils resulting from the multiplication in that country of colleges and universities acquiring the right from the several independent State legislatures of granting diplomas and licences, without any central control to secure harmony in the conditions of granting them.

But besides the competition of those, rightly or wrongly, calling themselves doctors, the medical practitioners of America have, like ourselves, and apparently in a yet higher degree, to suffer that of the chemists and druggists, who abound in equal ratio with themselves. On one question which has much exercised our brethren in this country, Dr. Cathell is very clear; namely, that no medical man should meet a homeopath, or other irregular practitioner in consultation. And, in connection with the rules that should govern the conduct of practitioners among themselves, we learn that an uniform written code of ethics is recognised throughout the United States; and it is further interesting to know that that code, adopted by the American Medical Association in 1847, is identical with the scheme propounded by Dr. Thomas Percival of London, in a small book published in 1807. The *Code of Ethics* is, however, in many respects superior, in lucidity and completeness, to the well known work of Dr. Jukes Styrax of Shrewsbury.

Any further analysis of the treatise of Dr. Cathell is unnecessary in these pages. We may recommend it to medical readers as being, though not free from blemishes, replete with numerous excellent maxims and suggestions for the guidance of medical men.

NOTES ON BOOKS.

The Royal Guide to the London Charities for 1882-3. By HERBERT FRY. (London: David Bogue).—The twentieth annual edition of this little work, which has steadily grown since 1863 to nearly twice its original bulk, shows at a glance the continuous increase in philanthropic endeavour, and affords a concise statement of the aim and work of every charitable institution of this great metropolis. We gather from its pages that the number of persons who availed themselves during the past year of the use of some of our largest hospitals were: St. Bartholomew's, 166,734 out-patients, 6,690 in-patients; St. Thomas's, 78,404 out-patients, 4,438 in-patients; Guy's, 62,596 out-patients, 4,923 in-patients; Middlesex, 30,243 out-patients, 2,731 in-patients; Charing Cross, 15,205 out-patients, 1,440 in-patients. This is a very carefully compiled list, showing, in alphabetical order, the name, date of foundation, address, objects, annual income, and chief officials of about 1,300 of London charities, dating from 1148, and including lists of almshouses, asylums, lying-in, provident, and other dispensaries, hospitals, homes, crèches, charities for the blind, deaf and dumb, homes for boys, girls' and ladies' nursing institutions, industrial schools and reformatories, model dwellings, book and tract societies, emigration funds, hospitals and infirmaries for special diseases, truss and surgical appliances, societies, etc. This is unquestionably an exceedingly useful guide, and one which the benevolent and wealthy might consult with advantage.

Recherches Cliniques et Anatomopathologiques sur les Affections Cutanées d'Origine Nerveuse. Par HENRI LELOIR. (*Clinical and Pathological Researches on Skin-Diseases which have a Nerve-Origin.* By HENRI LELOIR. (Paris: A. Delahaye et E. Lecrosnier, 1882).—M. Leloir has brought together, in a small volume, reports of a number of interesting cases in which he considers that he has established the connection between lesions of the peripheral nervous system and certain diseases of the skin. He has investigated with great care the condition of the nerve-tubes in some of those affections, and has found in them unmistakable signs of degeneration. He believes that he has shown clinically and anatomically that in certain cases vitiligo, ecchyma, chronic pemphigus, cutaneous gangrene, and perhaps ichthyosis have their origin in a local affection of the nerves. The nature of the degeneration is parenchymatous nephritis. The work is illustrated by four plates in chromo-lithography, in which the appearances of the degenerating nerves are shown, and bears evidence of much careful study. It deals with obscure and difficult questions which in the present state of science are raised rather than settled, and we have no doubt that they will receive further attention from the able and earnest workers in the Parisian school, amongst whom M. Leloir holds a distinguished place.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE
ALLIED SCIENCES.

KEMMERICH'S EXTRACT OF MEAT.

This extract of meat is manufactured by Messrs. E. Kemmerich and Co., at their works in Santa Elena, on the banks of the River Parana. The results of examinations of it by Dr. Hassall, Dr. Fresenius of Wiesbaden, Dr. C. Bischoff of Berlin, Dr. Schwarzenbach of Berne, and M. J. A. Bariel of Paris, with which our own observation agrees, shows that it dissolves easily in water, forming a clean solution of agreeable taste. The extract is reported to be free from fatty matter, and to contain a smaller proportion of water than other similar preparations, the solid constituents of meat present being proportionately increased. A solution of a portion of the extract in hot water forms, with the addition of a little common salt, a solution possessing the taste, smell, and other characters of good beef-tea; and for this purpose, as well as other culinary purposes to which extracts of meat are ordinarily applied, it deserves high recommendation. The agents for its sale in London are Messrs. Rockwood and Co., of 12, Long Lane, West Smithfield.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, DECEMBER 23rd, 1882.

THE MEDICAL ACTS AND THE ROYAL COMMISSION—IV.

IN the BRITISH MEDICAL JOURNAL for December 2nd, 1882, a letter from Professor Gairdner was published impugning a statement made by Dr. Glover when Lord Carlingford and Mr. Mundella received the deputation from the Medical Reform Committee at the Privy Council Office on November 22nd.

Dr. Gairdner was examined as a witness before the Select Committee in 1880, and again before the Royal Commission in 1881. When asked, on the latter occasion, by Mr. Cogan: 4823. "As I understand, you are not in any way prepared to formulate a scheme with regard to meeting the difficulties which have been presented to us on the part of the Scotch universities as regards anything approaching a conjoint system of examination in that part of the United Kingdom?"—Dr. Gairdner replied: "The Scotch universities have never considered it necessary to formulate any scheme." He had previously been asked: 4802. "Do you believe that at present there is any injurious competition—I mean, injurious to the public—arising from the number of licensing bodies?"—"I believe that has been, at all events, very much exaggerated."

From these two answers, it is clear any help from Dr. Gairdner, in promoting medical legislation, cannot be looked for.

The full report of all the statements made on the occasion of the deputation was given in the same number of the JOURNAL in which Dr. Gairdner's letter appeared. No better opportunity, therefore, could have been afforded of comparing them together; statements and letter being placed in juxtaposition, it is unnecessary to dwell further on the subject.

Dr. Gairdner's evidence evinces scant belief in the inequality of existing examinations. Unfortunately for him, the examples cited in the address to the Lord President, materially damage the value of his assertions. Answers from Mr. Cooke were given; to these more might easily be added, as proving the necessity for remedial legislation, thus:

4904. "Have you ever known cases in your own experience in which young men who have failed to pass the English examinations, went to Scotland and passed the corporation examinations there, or *vice versa*?"—"I have known a great many who, having failed in London, have gone to Scotland and passed. There are a great number who do that."

4905. "'Is that a common case?'—"It is."

4911. "How do the examinations of the Apothecaries' Society of London compare with those of the College of Surgeons of London?"—"I believe it would be very difficult indeed to compare the two, they are so very dissimilar. The examination of the Apothecaries' Hall of London is a good examination as regards the compounding of medicines and the mere ordinary uses of medicines; but, in all other respects, I hold it to be totally insufficient to establish a man's ability to practice medicine or surgery."

4912. "It really is an examination in the apothecaries' art more than as regards licensing qualifications?"—"It is. It is a qualification that is held in very fair estimation when obtained in conjunction with another; but alone it is quite insufficient to establish a man's capacity for the practice of medicine. A large number of men unable to pass for the higher qualifications obtain that qualification as a means of getting placed upon the *Register*, and these men frequently have very large practices. The qualifications which make a man succeed in practice are not so much those which depend upon his actual scientific knowledge, as the qualifications which depend upon his power to convince those who see him that he is a man of ability. An example occurs to my mind of a gentleman who has a very large practice. He is simply a L.S.A.; he was anxious to obtain a higher qualification; he managed to get among the ten men who were examined for the degree of M.D. by the University of St. Andrew's, and he came to me for a little help as regards anatomy, physiology, and surgery. Nevertheless, could I have conceived that a medical man could have been so absolutely ignorant of the ordinary facts of daily practice concerning surgery; a fracture, a dislocation, a carbuncle, a boil, and things of that kind, he was really totally ignorant of. He got the M.D. of St. Andrew's. I really do not know how he got it. This is quite a recent case."

4916. "Do you consider that the present number of medical authorities, namely, nineteen, is too many?"—"I think it is greatly in excess of what it should be; it most clearly establishes a competition downwards. It establishes a well marked tendency to diminish the stringency of the examinations."

4938. "Do you find a very great inequality in value among the different examinations which have been passed by those legally qualified persons that come to you?"—"Yes; very great."

4939. "A very wide difference."

4940. "Does it happen to you to often find that persons who are legally qualified are exceedingly ignorant?"—"Exceedingly so."

4941. "To a surprising extent, would you say?"—"Surprisingly so."

4942. "And that applies to the state of things at this present time?"—"Yes."

This is the evidence of a private teacher in London. Now for a few extracts from the evidence of Dr. Wm. Stoker, F.R.C.S.I., a private teacher in Dublin about twelve or fourteen years, who prepares pupils for examinations which admit them to the *Medical Register*, and prepared over 184 in 1880. He makes a point of changing the examining boards for some of his pupils. Thus, he will send a pupil for the first half of his examination to the Apothecaries' Hall of Ireland, and for the second or final half to Edinburgh. Thus:

5126. "The subject considered most important in the examination of the Apothecaries' Hall is *materia medica*. This is, there, a part of the first half. In Edinburgh, on the other hand, it forms part of the final examination. If, then, a candidate know *materia medica* well, it serves him doubly, balancing weakness in the scientific subjects in Dublin, and in the practical subjects in Edinburgh."

5127. "Do you think that there is a very marked inequality amongst the various examinations which admit young men to the *Medical Register*?"—"A very marked inequality indeed."

5131. "You, as a private teacher, make it the study of your life to get your pupils through those examinations?"—"I do; it is my one aim."

5147. "Is there much variation in the time required by the various licensing bodies, in order to obtain degrees?"—"Very great variation. Some licenses are obtainable in a minimum time of two years and five months. The ideal time in most of them is four years. I say 'ideal,' because, in some cases, the modes recognised as the commencement of medical work are so numerous and elastic, under slight strain, as to be practically valueless."

5151. "Do you think that it is open to a candidate to select the place where he passes his primary examination?"—"Certainly, a candidate may select for his primary examination that place where it is

easiest, and then he may go for his final examination to a place at which this was easiest". After stating that he made a special study of the peculiarities of different examiners, he mentioned

5156. "There is one examiner, I think, all of whose questions I know." He was asked in query,

5164. "Do you yourself personally approve of the professors themselves examining their own pupils?"—"I do not approve of the professors examining their own pupils; such an examination is never a fair one. The members of a professor's class have exceptional opportunities of calculating the questions which are most probable, and further have opportunities of learning the answers which this professor requires."

As regards the effects of the visitation of examinations, he says:

5169. "The rejection rate has been very much higher at that examination at which the visitation took place"; and (5170) "afterwards the examination was unaltered".

Referring to the fact that some corporations require that the candidate before presenting himself shall sign an engagement that he has not been rejected at any place else for three months before, he was asked:

5186. "Can you tell the Commission how it is evaded?"—"A candidate, dreading the result of the examination to which he has presented himself, or to which he is about to present himself, would send in an application to the other licensing body to be admitted to examination. He says, 'I am in for one examination, I am afraid I shall be rejected, and I now send in an application to another licensing body which may make this restriction, and I state that I have not been rejected for the past three months by any licensing body'."

5187. "Therefore the pupil tries his hand at the first examination?"—"Yes."

5188. "And having been rejected he goes to the other?"—"Yes".

5189. "Do you know of your own personal knowledge of that having occurred?"—"Yes, clearly."

Dr. Moore, with regard to preliminary education, in reply to Professor Turner, said:—

5528. "I am able to say a good deal on this subject myself, for I have been an examiner in connection with the three bodies—the King and Queen's College of Physicians, the Queen's University in Ireland, and the Apothecaries' Hall in Ireland. Take the case of spelling; the spelling of candidates coming up for their final examinations in the College of Physicians, and in the Queen's University, Ireland, has often been so outrageously bad that, although it was no part of our business, we felt bound to report these students to the authorities of the bodies."

This reply is on a par with the statements made by Dr. Waters before the Select Committee, that an examiner of the Royal College of Surgeons, England, had stigmatised the spelling of some of the candidates as "atrocious."

Even Professor Struthers, specially representing the interests of a Scotch University, admits before the Royal Commissioners, in reply to the Bishop of Peterborough:

5874. "There have been weak points in the Corporations; and I confess I do not think that my friends in the Edinburgh Corporations have latterly acted judiciously." (He uses the word latterly, which embraces the present time, and further stated): "A man may pass the primary examination of the Apothecaries' Society, the anatomy of which, I am quite sure, must be very poor anatomy, and then go up to the Edinburgh Corporations, and that examination by the Apothecaries' Society is accepted by the Edinburgh Corporations. The result of that is that when a man passes the Apothecaries' Society, and goes up with their primary certificate, he virtually skips his anatomy and physiology." These two branches of professional knowledge form the basis of all safe practice of medicine, surgery, and obstetrics. Without a competent acquaintance with them, no practitioner should be allowed to be registered; and yet it now appears proved beyond denial that such a dangerous state of things exists, and this mainly through the lax system of licensing on the part of the Scottish corporations. Scotland, it is acknowledged, has great power, and makes that power felt in the Legislature; but the common sense of the public in the three kingdoms

will no longer tolerate a continuance of this nuisance of the privileges of the Scottish licensing bodies. In a spirit of conciliation various attempts have been made to modify the conjoint scheme, so as to make it acceptable to the northern Universities and Corporations. Dr. Lyon Playfair, the representative in Parliament of the Universities of Edinburgh and St. Andrew's, sitting on the Select Committee, in 1880, asked Dr. Waters—

1906. "Whether he approved of the first examinations of the universities being conducted by the universities themselves, and the final examinations only being conducted by the conjoint board?" To which the reply was: "Yes, I do approve of that."

1907. DR. LYON PLAYFAIR: "The effect of that would be, not to make such a very heavy charge upon the university students going for the higher examinations, because, instead of paying £30, they would only have to pay £5 5s.?"—"Yes, that is so."

This was also the position taken by Dr. Waters when examined before the Royal Commission. Professor Turner, examined as a witness before the Select Committee, was asked by the Chairman:

3151. "You are aware, of course, that the object of the conjoint boards is really to get a minimum, and as high a minimum qualification as the state of education will admit for all the practitioners of the United Kingdom?"—"Yes, that is the stated object."

3152. "Would not you admit that that was a good object?"—"Certainly, it is a good object that there should be no examination which is not efficient."

Professor Turner, having made this important admission, and the inequality and inefficiency of existing examinations having been abundantly proved, it falls on Professor Turner to suggest a remedy. The Chairman then asked him:

3153. "If a change in the law appears to be required, in order to prevent unfit examinations, if you admit that it is required, I want you to tell the Committee how you think it could be got at without making some small sacrifice with regard to submitting to the conjoint board?"

Professor Turner, in reply, after referring to what has been termed the Buccleuch compromise, said:

3155. "I have another suggestion to make, and that is, that the conjoint examination, so far as regards university candidates, should be restricted to the clinical examinations—that is, the examinations in clinical medicine, clinical surgery, and midwifery, which would test whether a man really has a knowledge of practice."

In conclusion, in query 3157, Professor Turner accedes to "a conjoint, practical, and clinical examination of the university candidates. Without undue refinement, it is difficult for the ordinary mind to discern the distinction drawn between the proposal of Dr. Lyon Playfair, and the so-called concession of Professor Turner. The latter, in his proposition, submits to the testing of the university candidates by the conjoint board in respect of their practical attainments, and this is precisely what Dr. Glover and Dr. Waters contended for before the Lord President. The mode of enforcing this test, and rendering it efficient, must rest with the conjoint board. Men have their own characteristic crotchets on most subjects, and therefore, not unnaturally, on the details of medical reform, in which so numerous and so conflicting interests are involved. But, be the issue what it may, the profession, and the British Medical Association, look only to the interest of the public, and they regard the report of the commission as an admirable basis on which to found a Medical Acts Amendment Bill.

The Veterinary College, owing to its recent establishment, has a very simple constitution. It comprises a council, elected by the direct vote of every member of the college. The council appoints an examining Board, before which all candidates have to appear. The Highland Agricultural Society held out for some years against its establishment, but at last recognised the advantages to be gained through it. It is to be hoped the time is not far distant when the Scottish universities and corporations will acknowledge the great benefits which will follow in the wake of the conjoint scheme.

TYPHOID FEVER IN LONDON.

THE illness of Mr. Fawcett, and the recent deaths of several notable persons in London from the same disease, have attracted much public and professional attention, and apprehension has recently been expressed in many quarters in regard to the severity of type, the prevalence, and the possible extension of enteric fever in London. The deaths from this fever, registered in the metropolis during the last few weeks, have risen considerably, as compared with the deaths registered during the weeks preceding; and they have been, also, in excess of the corrected averages for the corresponding weeks of the last ten years. There does not, however, seem to be any ground for a serious alarm. There is, on the contrary, good reason to believe that the present excess will not develop into an epidemic of such a character, for example, as that which has recently raged in Paris.

Typhoid fever, like the other zymotic diseases common to this country, and, indeed, like most classes of diseases, follows a definite law in regard to its seasonal prevalence as estimated by its seasonal mortality. The number of deaths registered as due to this fever rises and falls with the progress of the seasons, and the periods at which its mortality rises and falls are pretty constant from year to year. This law of the disease has been illustrated by the Registrar-General (*Annual Summary of Births, Deaths, and Causes of Deaths in London, etc., 1880*), by means of a curve of seasonal mortality, based on the weekly registrations for the twelve years 1879-80. The form of the curve is that made use of by Mitchell and Buchan in their well-known investigations, and it shows the weekly percentage deviations from an average weekly mortality of 17. The curve attains its minimum in the twenty-seventh week of the year, and thereafter begins to rise rapidly. The ascent proceeds steadily, with the exception of a slight interruption between the thirty-first and the thirty-sixth weeks, until the maximum is reached in the forty-third week, when the curve begins to decline, the subsidence, however, being more slow and less regular than the ascent. "The mortality is above the mean from about the middle of September to the end of January, and then, after a few small fluctuations about the mean, for a week or two, falls definitely below it for the remainder of the annual period."

During the last few months, the mortality of the fever has not differed materially in its seasonal course from the typical curve of the Registrar-General. In the week ending April 9th of this year, the excessive prevalence which occurred towards the end of last year seemed to have disappeared; and from that date to the week ending September 13th (the thirty-ninth week of the year), the mortality remained fairly low. After that date, however, it began to rise according to its usual law. How it proceeded after that date may be seen from the following table, which shows also, for purposes of comparison, the mortality in the corresponding weeks of 1881, and the corrected averages for the corresponding weeks of the ten years 1872-81.

	Deaths registered from Enteric Fever in 1882.	Corrected Averages for corresponding weeks of years 1872-1881.	Deaths registered from Enteric in corresponding weeks of 1881.
38th week (ending Sept. 23rd, 1882)...	13	23.9	40
39th week ...	20	24.3	48
40th " ...	28	26.7	46
41st " ...	26	25.9	33
42nd " ...	32	27.5	53
43rd " ...	32	30.3	49
44th " ...	31	28.3	53
45th " ...	32	27.4	35
46th " ...	30	26.2	33
47th " ...	29	25.6	41
48th " ...	29	26.6	32
49th week (ending Dec. 9th 1882) ...	32	22.9	31

From the above table, it is clear that, although the deaths from enteric fever in 1882 have been decidedly lower than during the corresponding weeks of 1881, they were yet considerably in excess of the corrected averages for the corresponding weeks of the last ten years.

It would thus appear that the metropolis is at present suffering from the effects of a slight epidemic wave of this fever. Although the wave does not yet show decided signs of declining, there is reason to hope that the disease will follow its usual law, and forthwith proceed to decline.

But while there is thus no very excessive amount of typhoid fever in London at present, individual cases of the disease are said to be of a more serious nature than is usually met with. Several physicians are stated to have remarked that the cases which have of late come under their care have been marked by a grave character, a tendency to relapse, and a difficulty of prognosis, owing to their irregular and serious course. Dr. Octavius Sturges publishes in our columns this week some illustrative examples of this. This may, of course, have been merely a coincidence; and, with a view to ascertaining whether the fever generally presents these features, we have made some inquiry regarding the experience of the large fever hospitals. In the London Fever Hospital, we learn that, instead of being severer, the cases are, on the contrary, milder than usual, the mortality per cent. for the present year being little, if at all, above 10. The cases in this hospital, however, do not form a fair test of the general character of the disease. Owing to the more extended use made of the Asylums Board hospitals, the cases at Liverpool Road tend yearly to become more and more selected, so to speak, so that the mortality also tends to become lower. In the Asylums Board hospitals, the cases appear, on the whole, to be of a more serious type than usual; and in one of them, the cases have exhibited an excessive tendency to hæmorrhage. In these hospitals, so far as it is as yet possible to judge, the mortality from enteric fever has been, during the last six months, considerably in excess of the usual mortality. From June 24th to December 9th, there have been admitted into the hospitals of the managers 265 patients suffering from enteric fever, of whom 57 have died, and 170 have been discharged recovered. Hence, estimating the mortality on the basis of half the sum of admissions, deaths, and discharges, these figures give a mortality of no fewer than 26.2 per cent. Compared with the percentage mortality from this fever at Stockwell and Homerton during the ten years 1871-80, which was very slightly under 20 (see *Annual Report of the Homerton Hospitals*, 1880), this percentage is certainly excessive. It must, of course, be remembered that the percentage is calculated from unrevised returns and for an uncompleted series of cases; but making every allowance for these facts, there is still little doubt that the mortality has been considerably greater than the average mortality. It would seem therefore that, while the prevalence of enteric fever in London is not much in excess of the average prevalence at this period of the year, the fever has, on the whole, assumed a somewhat severer type than usual.

FEEES FOR MEDICAL EVIDENCE IN POLICE COURTS.

SEVERAL questions have been asked during the last four or five years concerning the remuneration of medical men for certificates of illness and injuries suffered by their patients and others, for use in police courts, and also for giving testimony before magistrates therein on these and other subjects. Some of such queries have been published and answered, at various times, in this JOURNAL. As, however, on important parts of the subject neither questions nor statements have been published, and inasmuch as it is one upon which the vast majority of the medical profession are much interested, and require fuller and satisfactory information upon the whole question, to dispel their doubts upon it we will endeavour to offer to their notice a few observations, with the view of complying with this requirement as far as we reasonably can, and then briefly comment upon the case connected with this subject, which is reported in our last week's issue.

To better encourage the due prosecution of felonies and misdemeanors, statutory provision has been made to empower justices of the peace in their discretion to allow to medical and other witnesses certain sums

not exceeding those specified in a fixed scale, for attending their courts and testifying what they know respecting the matter of the informations or complaints brought before these tribunals. The sum payable to medical men for this service is not to be more than half a guinea for each time they attend the courts and give evidence. As it was deemed, and is deemed, essential for the latter class of witnesses to give oral testimony in reference to the matters upon which their statements are required by the magistrates, no sum has been expressly provided for payment of the certificate which justices of the peace may require from them for use in police courts; and the remuneration for these documents varies according to the different opinions of magistrates upon them. We think, however, that it should in some cases be equal to, and in all but little less, than half a guinea; as great care, and frequently a considerable amount of time and trouble, are required to prepare them satisfactorily.

The proper legal course to adopt to obtain the testimony of a medical man for a magisterial court, is to summon him to appear there at a certain hour; and the subpoena should be left with him a reasonable time before his attendance is required. In an indictable case, it appears that he cannot, after service of the summons, refuse to attend until his expenses are paid, for it has been decided that a tender of the same is not necessary in indictable cases as in summary convictions. If a medical man improperly neglect, or refuse, to attend the court upon such summons, or if the magistrate be satisfied upon oath that he will not probably attend it unless compelled, then, in either of these cases, a warrant may be issued for the attendance of the required witness, whereby he will be brought to the court. Again, if he refuse to be sworn, or to give evidence when required by the magistrate on his appearance thereon after having been summoned, or brought up on warrant for this purpose, without offering just excuse for such refusal, he is liable to be committed to gaol for any time not exceeding seven days, unless, in the meantime, he shall consent to be sworn or examined as to what he knows respecting the subject-matter of the information or complaint. It is, however, doubtful whether, if a witness who attended the police-court voluntarily, and yet refused to take the oath and be examined, could be committed to prison for omitting to do so.

It has also been decided, that a person who was present in court, when called as a witness, can be compelled to be sworn and give his evidence in a criminal case, although he has not been summoned to do so. Notwithstanding the fact that the magistrates are not bound to order the payment of fees to medical witnesses who give evidence in their courts, they do so in nearly all cases, both in the metropolitan and provincial police-courts, in which it is legally allowable.

According to the account published in our JOURNAL on the 21st instant, in which Mr. Williams, House-Surgeon of the Portsmouth, Portsea, and Gosport Hospital, refused to hand to the police of Portsmouth a certificate of the injuries sustained by a woman in that institution from a murderous assault which she suffered, unless he were paid for this document, we are of opinion, not only that he was legally and morally right under the circumstances in so refusing, but that the action of the magistrates in the matter was not creditable; for, instead of summoning him to attend and give evidence in their court, as they should have done, whereby they would, according to usage, be under the obligation of granting him his fee, a course is adopted, apparently by their knowledge, if not by their direction, which is calculated to deprive him of the remuneration to which he is entitled; and this blameworthy conduct is aggravated by the fact that they were disposed to condemn Mr. Williams for his refusal to supply the certificate without payment, as is evident from the statement of our reporter, that "they agreed not to commit themselves to any extraordinary expression of opinion regarding the matter". Again, although these justices of the peace may not have had the power, according to the eleventh section of the statute 11 and 12 Vict., c. 43, to order the payment of any sum to this house-surgeon for his attendance at the court, when the case upon which he was required to give evidence had been remanded; they appear to have been highly culpable for not express-

ing their regret to him of the unusual and improper means which had been used for procuring his testimony, after he had justly complained to them of the very hasty manner in which he had been told about the case; and that he had been warned to attend the court only twenty minutes previously, which did not enable him to give the necessary instructions to be observed in his absence, and arrive in court at the time he was required therein. The abrupt reply of the chairman to these remarks, that the case had been adjourned for a week, cannot, we believe, in the opinion of most moral-minded men, be regarded otherwise than unwarrantable, if not insolent. We trust that, when Mr. Williams's evidence is again required in this case, that the magistrates will adopt the right means to obtain it; and that, without annoyance, he will be able to secure the remuneration for this service to which he is legally entitled.

The statement of the Inspector of Police, who gave Mr. Williams notice to attend the Court, that there was no fund out of which to pay his fee, is wrong, as provision is made for the payment of witnesses in giving evidence in magistrates' courts by the Criminal Law Prosecution Expenses Act, 29 and 30 Vict., c. 52, sect. 2, which provides that magistrates signing certificates of such expenses shall send the same to clerks of the peace, to be laid before Courts of Quarter Sessions, which may allow the whole or part of the amount according to the scale of payment fixed under section 5 of the Act, 14 and 15 Vict., and make orders for the payment of the same.

A detailed report of this case, a leading article, two leader notes, and a letter by the house-surgeon, and one by his predecessor in office, Mr. Claremont, appear in the *Hampshire Telegraph and Sussex Chronicle*, and the subject has engaged much attention from the public and the medical profession. According to the statement of Mr. Williams, it has been alleged that previous house-surgeons have given certificates gratuitously for the use of the police courts as to the illness and injuries of patients in the hospital, but, from inquiries he has made, he informs us that he has reason to believe that his three predecessors at least have not done so, "nor is it the custom elsewhere." There is a rule well known to house-surgeons to this effect, that caution should be exercised in giving certificates to the police, since they may often lose a fee by not having appeared in person at the police court. He also justly adds that "it was the police who adopted a singular and original course when departing from the common custom of obtaining medical evidence by a summons to court; they adopted the novel expedient of demanding gratuitous medical advice. . . . The ordinary certificates, such as are issued by me free of charge to every hospital patient requiring one, are not considered by the magistrates' clerk sufficient for the requirements of the court. So far as I understand, nothing short of a statement as to the condition of a patient, and an opinion as to the probable progress of the case and length of detainment in hospital will suffice; and am I not justified in exercising professional rights by refusing to grant such a certificate unless the usual fee is assured by some responsible person?" We have no hesitation in saying that he is quite justified in following this course, and that he is right in mentioning that his appointment at the hospital does not in any respect prevent him from obtaining legal allowances as a medical witness, except at coroners' inquests upon the bodies of those who have died at this institution.

We also agree with him and Mr. Claremont that the medical profession have never been found reluctant to forego their claim for fees from poor people; and with the latter gentleman, that he does not perceive any reason why it should be expected to grant the same favour to public departments, as lawyers, architects, and other professional men would not be expected to render services for them gratuitously.

We are glad to notice that it is mentioned in an editorial note in the newspaper referred to, that, if the detailed particulars stated by Mr. Williams were required by the magistrates for use in their court in a certificate from him, it would then be fair that he should receive a fee for furnishing this information.

We sincerely trust that the publicity which has been given to this

case, the comments upon such, and the further important notification which has been communicated by us respecting the rights and liabilities of medical witnesses in police courts, will soon be the means of getting rid of complaints and grievances which have been frequently brought to our notice on this subject, and which have occasioned much just indignation to our profession.

THE Institution of English Hospital Trained Nurses, established four years ago at 29, Avenue Wagram, Paris, has just opened a branch in the Rue St. Etienne, Nice, for the convenience of visitors to the Riviera.

A SERIOUS epidemic has broken out at Chaxhill, Gloucestershire, which is supposed to be diphtheric croup, and is attributed by the medical officer of the Westbury-on-Severn district to atmospheric causes. Forty adults and children, we are informed, are suffering from it, and already there have been nine deaths.

IN the week which ended on Saturday, November 25th, Sunderland occupied the unenviable position of an annual death-rate of nearly 48 per 1,000, or 16 per 1,000 in excess of that at any of the other "twenty-eight great towns"; and a higher death-rate than that shown by St. Petersburg, which has a melancholy pre-eminence in this respect.

THE Secretary of State for the Home Department has appointed a committee, consisting of the Earl of Rosebery, Sir E. Y. W. Henderson, K.C.B., Sir E. DuCane, K.C.B., Mr. J. T. Hibbert, M.P., and Mr. R. S. Mitford (Prison Commissioner), to consider and report on the recent complaints of officers of convict prisons regarding their position and prospects.

THE Secretaries of the Religious Tract Society, the Rev. Dr. L. B. White and the Rev. Dr. Green, have thoughtfully forwarded to the hospitals, workhouses, and infirmaries, not only of London, but of the United Kingdom, large parcels of Christmas cards, illustrated periodicals, and papers specially prepared for the season, for the use of the sick and infirm.

WE understand that the assistant-secretaryship of the Local Government Board, left vacant by the promotion of Mr. J. F. Rotton as legal adviser of that department, has been conferred upon Mr. Cornelius Neale Dalton, M.A., barrister-at-law, who has for some years acted as Inspector of Local Loans and Local Acts under the Board.

A CORRESPONDENT writes that the Home Office has been in communication with the Surrey coroners, with a view to increase the number of coronerships of the county. It is now proposed to appoint two coroners to East Surrey, two to West Surrey, and one to the Mid-Surrey district. Mr. W. Carter has had his choice of divisions, and, it is understood, has accepted the district comprising Camberwell, Peckham, and Dulwich.

THE Leeds Board of Guardians has rescinded a resolution passed a fortnight ago, not to allow any alcoholic liquors to be brought into the workhouse, even for medical purposes. The surgeon having threatened that, in the event of any of the sick paupers dying, he should certify that death was accelerated by want of proper nourishment, it was decided that stimulants be only allowed in urgent cases when ordered by the medical officer.

AN inquest has been held at Sheffield on the body of a pauper named Blackshaw, who had been poisoned by an overdose of laudanum. The deceased was an inmate of the workhouse hospital, and verbal instructions were given by the medical officer to Clara Thompson, the nurse, that she was to administer to the deceased ten drops of laudanum in some

castor-oil. An ounce of laudanum was sent up from the dispensary, and was placed over the deceased's bed. The nurse was away from the hospital for some hours, and in the meantime the deceased drank the laudanum. The jury considered the nurse was greatly to blame.

THE German Reichstag has discussed and referred to a select committee an Imperial ordinance against the use of poisonous colours in making food, packing materials, toys, carpets, clothes, and other articles. A motion was also laid on the table, begging the Chancellor of the German Empire to bring about some kind of international agreement as to the employment of colours in the manufacture of toys.

THE effect of London smoke in obscuring the solar rays comes out very clearly in the sunshine reports for November. It appears, from official returns, that while Cambridge rejoiced in 35 per cent. of the possible duration of sunlight, Strathfield Turgiss in 34 per cent., and Hastings in 41 per cent., smoky London had only 24 per cent., or about 12 per cent. less than the amount which seemed due to its geographical position.

IN Bombay, an interesting experiment has been tried, on Tardeo Flats, in the growing of eucalypti; and, considering the want of practical knowledge as to their treatment, and the saline dampness of the Bombay swamp soil and climate, the experiment has been fairly successful. Mr. T. C. Weir, the health-officer of the municipality, who refers to the subject in his annual report, states that there are six or seven trees in fair condition, though failing, of course, in comparison with Australian trees. With an increased knowledge as to the treatment of seedlings, he hopes, however, in a few years, to be able to show a goodly assortment of these health-preserving shrubs.

THE hospital returns at Cairo for the five days, from the 13th to the 17th inst., inclusive, show that there were 225 fresh entries, and three deaths.

SMALL-POX IN SOUTH STAFFORDSHIRE.

A SERIOUS outbreak of small-pox is reported at Tividale, Rowley, and it has been deemed advisable to open an infectious diseases hospital. It is alleged that, in consequence of persons visiting small-pox patients in adjoining districts, seventeen persons had been attacked with that disease in Rowley parish, one of whom had died. It has been decided to adopt compulsory measures to isolate cases as they occurred.

SOCIETY OF APOTHECARIES.

AT a recent meeting of this Society, it was decided to found two scholarships, to be open to the medical profession: one in Clinical Medicine, Therapeutics, and Hygiene, and the other in Surgery. The amount, tenure, and other particulars of the scholarships, will be published early in the ensuing year. The late J. F. de Grave, Esq., a former Master of the Society, has bequeathed to them a legacy of £5,000 free of duty, in augmentation of the fund for the relief of the distressed members of that body.

NOTIFICATION OF INFECTIOUS DISEASES.

AT a meeting of the Parliamentary Powers Committee of the Sheffield Town Council, a deputation from the medical profession of the town and neighbourhood, consisting of Dr. de Bartolomé, Mr. Favell, Dr. Keeling, Mr. A. Jackson, and Dr. Cleaver, waited upon the committee with regard to certain clauses proposed to be inserted in the Corporation Improvement Bill, upon the subject of the compulsory notification of infectious diseases within the borough. The committee, believing the question of compulsory notification of infectious diseases should be dealt with by Imperial legislation, decided to strike out all the clauses of the proposed Bill dealing with the subject.

THE CONTAGIOUS DISEASES ACTS.

IN order that the admirable report of the Select Committee on the Contagious Diseases Acts may be circulated as widely as possible, the Association for Promoting the Extension of the Acts has had this report published in a cheap form, by Messrs. Harrison. Copies may be obtained from them, or from the honorary secretaries of the Association, Messrs. J. Brendon Curgenven, 11, Craven Hill Gardens, W., and F. St. George Mivart, 6, Devonport Street, Hyde Park, post free, 7d. each. It is especially desirable this should be widely known, inasmuch as the Minority Report is being extensively advertised and circulated, and many people are, no doubt, induced to accept it as the genuine article.

OPEN SPACES.

THE Lambeth Vestry have resolved that a memorial be at once sent by the Vestry of Lambeth to the Queen and the Government, praying the Government to introduce an Act of Parliament enacting that the grounds at Lambeth Palace, now used for pasture and recreation grounds, may be severed from the Archbishop of Canterbury's town residence, and handed over to the Board of Works for recreation grounds for the people at large. It was stated at the vestry meeting that the land in question comprises nine acres apart from the gardens, and that there is no open space between Rotherhithe and Battersea. A memorial to the like effect has been addressed to Mr. Gladstone, signed by Lord Brabazon, Chairman, and Mr. Ernest Hart, Vice-Chairman, on behalf of the Metropolitan Playground and Open Spaces Association.

PROFESSOR VON BISCHOFF.

THE eminent anatomist, Dr. Theodor von Bischoff, well known for his researches on the development of mammalia, died in Munich on December 5th, at the age of 76. Dr. von Bischoff, who was a Hanoverian by birth, commenced his career in 1832, after graduations, as assistant in the obstetric department of the University of Berlin. In 1833, he became a teacher of anatomy in Bonn; in 1849 he was appointed an extraordinary professor of anatomy in Heidelberg; and in 1843, ordinary professor of anatomy and physiology in Giessen. In 1855 he accepted an invitation to the analogous chair in Munich. He was the author of a classical work entitled *Entwicklungsgeschichte der Säugethiere*, and of a book on the *Laws of Nutrition in the Carnivora*; as well as of several works on the anatomy of the skull and muscles in man and animals.

ILLNESS OF THE POSTMASTER-GENERAL.

WE are glad to learn that the progress of Mr. Fawcett's case has, on the whole, been very favourable during the last week. There has been no return of the hæmorrhage, and the lungs admit air much more freely than they did. The rheumatism, alluded to in our last report, extended to several joints, causing most inconvenience in one of the articulations of the jaw, by interfering with the opening of the mouth. There was also some aphthous inflammation of the mouth. These complications have now nearly disappeared. The principal remaining evidences of the severe illness through which Mr. Fawcett has passed, are a rather frequent and irritable pulse, a slight evening rise of temperature, and troublesome sleeplessness. These slight drawbacks are not surprising at the termination of such an illness; and, although it is impossible to say that the striking series of medical incidents in this remarkable case is over, there is at present every reason to believe that convalescence is fairly entered on.

LIFTS AT NETLEY HOSPITAL.

OUR contemporary, the *Builder*, in its issue of the 9th instant, has an article on Netley Hospital, in which it points out the unsuitable construction of the staircases for hospital purposes, and concludes by calling "the very serious attention of the medical and other authorities of Netley Hospital to the strong need that exists for the introduction of mechanical lifts." Our contemporary is right so far as this, that there are no lifts for the conveyance of patients, or for the domestic service

of the several storeys of the building in actual use; but we find, on inquiry, that lifts for both purposes entered into the original construction of the building, and have existed in it ever since it was opened. That the lifts have not been employed for the purposes for which they were intended has been owing to some defects in their arrangement, and an unwillingness to incur the necessary expense for putting them in working order. If the lifts could have been turned to account, a vast amount of labour that now is thrown on the hospital attendants might have been avoided, and the same advantages derived from them as are obtained from their use in most large buildings of modern construction. There is no necessity for calling the attention of the local authorities to these facts, for they are sufficiently familiar with them already; but the means of providing the remedy do not appear to be within their power.

THE QUEEN AND HER SOLDIERS.

HER MAJESTY THE QUEEN has graciously forwarded to the Superintendent of Nurses at the Royal Victoria Hospital, Netley, five large Berlin-wool quilts for the use of the military invalids at the hospital. One of the quilts has been entirely worked by the Queen herself, and a second one by the Princess Beatrice. The former bears in one corner Her Majesty's cipher of a Crown, V.R.I., and the date 1882. The latter bears the initial letter of Beatrice. These were ordered to be appropriated to the use of any of the soldiers under treatment for wounds inflicted during the late war. The other quilts have been worked by ladies of the Court, but the Queen has added a border to each. The quilts are made of the softest wool, are of rich though plain patterns and colours, and are perfect in all respects as warm bed-coverings. They are remarkably evenly and skilfully knitted. This personal gift forms a touching instance of the Queen's kind-hearted solicitude for the welfare and comfort of the sick and wounded soldiers who have recently returned from Egypt. The remark attributed to Her Majesty is—"They have done much for me, and I must do something for them."

OUTBREAK OF FEVER AT NEWTON HEATH, MANCHESTER.

WE are informed that an alarming outbreak of typhoid fever has occurred in Newton Heath, a township within the parliamentary borough of Manchester. At a special meeting of the local board for that district held last week, a letter was read from the Local Government Board, stating that they had information that sixty or more cases had occurred in the district, and asking for reports on the subject. Communications were received from several medical men, one of whom said he had visited forty-three additional cases, and found that at least twenty-eight were undoubtedly typhoid. The first case occurred in October, and between November and December 13th, there had been fourteen deaths from that disease. Fifty-three cases, at least, had occurred in thirty-three separate dwelling-houses, and the majority were situated within a small area. One of the medical men, reporting on the cause of the outbreak, said it was due neither to the water nor to the milk supply, but to the opening of a defective sewer containing poisons and infective material. It was decided to ask the Local Government Board to send an inspector to the district to inquire into the outbreak, and advise the local authority on the subject.

THE SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

A SPECIAL general meeting of the Society was held on Friday, November 24th, at 5 P.M., to confirm certain alterations of the by-laws that had been approved at a special general meeting held November 3rd. The President, Sir George Burrows, Bart., took the chair. The chief alterations made in the by-laws were as follows. The sum required to qualify as an honorary member was reduced by ten guineas. The proposals for membership and the declarations of widows and orphans may now be signed by two registered medical practitioners, instead of by two members of the Society. The admission fee was abolished. The income of the widow eligible for relief was raised

from £50 to £80; and certain powers were given to the directors to make extra grants under special circumstances. The age of the orphans eligible for relief was raised to sixteen years, and, in the case of complete orphans, to eighteen; and the amount of income of orphans was also increased. In the case of a widow of a member marrying, she now ceases, under the new by-laws, to have any claim on the Society.

NAVAL MEDICAL SERVICE.

A CORRESPONDENT writes to us as follows. The good service pension of £100 a year, that has fallen to the patronage of the First Lord of the Admiralty, has been awarded to Inspector-General Dr. Henry Domville, C.B., whose name stands fourth on the list of retired officers of that substantive rank, and six years in juniority to the first of them. These senior officers happen to have been grievously affected by the changes which brought in compulsory retirement of inspectors-general at sixty for sixty-five years of age, contrary to orders in council, depriving them arbitrarily of the highest position in that rank, and involving losses of pay and allowances, against which harsh treatment all respectful remonstrances were offered in vain. Great scandal, damaging to the department, was created by their retirement, as they were refused the compensation afforded to their army brethren similarly situated, whose retired pay for life was raised to a maximum of £765, that of the naval officers being £730. These officers, whose good and meritorious services are undeniable in the eyes of the department, and their characters unimpeachable, have had the mortification of seeing, since then, two juniors rewarded with two of the three Good Service Pensions at the disposal of the First Lord of the Admiralty. We regret to know that the affair is much commented on with great dissatisfaction in medical circles, being regarded as an indication of want of power, on the part of the permanent officials of the Admiralty, to preserve a way to remedy a wrong once inflicted on the medical officers of the navy.

THE ORIGIN OF SKIN-DISEASES.

SOME time since, a paragraph appeared in the *Michigan Medical News* ascribing to Dr. Lunsford P. Yandell (editor of the *Louisville Medical News*) the belief that "all skin-eruptions are attributable to malaria", to which it adds the argument "quinine is a specific for malaria; ergo, quinine is the remedy for all skin-eruptions". Dr. Yandell, whose views have thus been misinterpreted, directs attention to the supplement published with the American Dermatological Association Report in 1877, in which he distinctly states that malaria is the chief source of acute skin-disease. Scrofula is the chief source of chronic skin-disease. The more inveterate cases of skin-disease are often due to the co-existence of these two things. The specific exanthems, of course, are not included here, but Dr. Yandell contends that their progress and termination are often largely influenced by the presence of malaria or struma. He does not allege that malaria and struma are the sole causes of the dermatoses. Indeed, he states that many of the dermatoses may exist independently of malaria or struma, and most frequently some exciting cause is necessary to develop the cutaneous eruption. Among the exciting causes are irritants, injuries, insufficient or improper ingesta, vicissitudes of temperature, alcohol, dentition, menstruation, parturition, lactation, etc. He believes that the proofs of the truth of his views are, in the first place, that the diseases of the skin are cured more certainly and more quickly by the antimalarial remedies on the one hand, and by the antistrumous on the other, than can be done by any other line of therapeutics; and in the second place, that careful and painstaking investigation will, in the majority of dermatoses, make apparent the existence of the malaria or the struma, as the case may be. Dr. Yandell desires to impress upon his readers that his views are not confined to the skin-diseases. What produces disease in the skin will produce it in all other organs of the body. What is true of dermatology is equally true of gynaecology, and ophthalmology, and otology, and it is just as true of the diseases of all the other regions of the body. Dr. Yandell finds that subsequent observation confirms his belief in the correctness of these views.

PUBLIC VACCINATION AND CALF-LYMPH.

A QUESTION of considerable interest to public vaccinators has recently been considered by the Brighton magistrates. A number of persons requested that their children might be vaccinated with animal lymph, and were informed by the public vaccinator that he did not possess any, but that he would obtain some for them by the next vaccinating day. The parents were not, however, satisfied, and demanded to see the animal from which the lymph was taken. This was, of course, impossible, and in the end the children remained unvaccinated, and the parents were prosecuted for not complying with the law. The magistrates inflicted a fine in each case, and declined to recognise as a proper defence the claim of the parents that their children should be vaccinated with animal lymph. Apparently, in this case, the use of stored animal lymph would not have overcome the objections raised against the use of humanised lymph. The demand for animal lymph must necessarily depend upon the teaching which the public receive from the medical practitioners with whom they come into contact, and, until more definite evidence is obtainable as to the amount of protection relatively afforded by humanised and animal lymph, there is a probability that the former will be more frequently used, chiefly on account of its being more readily obtained than the latter, and the longer time it can be preserved. But if the demand for animal lymph should increase, as at any time it might, local authorities will have to consider whether, in view of a compulsory law, facilities should be given for direct vaccination from the calf. The question of expense must then necessarily be taken into consideration, and it may be found a more economic method to give opportunity for children to be taken to the Animal Vaccine Establishment, at Lamb's Conduit Street, than to maintain a separate institution in those districts which are accessible to the metropolis.

TWO NEW PHARMACOPŒIAS.

THE new editions of the German pharmacopœia and the United States pharmacopœia provoke some reflections from the *Pharmaceutical Journal* on their remarkable dissimilarity. They may be, our contemporary points out, regarded as two distinct types. On the one hand is the German compilation, originated by imperial decree, having the force of law, written in Latin, and showing a distinct tendency to decrease the number of articles in the materia medica, and to confine what is said about those that remain within the narrowest limits, not even decimal formulæ or molecular weights being given. On the other hand, the United States pharmacopœia is a volunteer work, not backed by any authority beyond what it acquires through its acceptance by medical men and pharmacists, and a kind of adventitious recognition which it obtains in the legislation in some of the States respecting adulteration, which is written in the vulgar tongue, and which shows a distinct tendency to include within its limits any and every substance that is ordered with moderate frequency by physicians, and to describe them with considerable fulness. Perhaps, continues the *Pharmaceutical Journal*, the most noteworthy of these differences shows itself in the fact that, whilst, from the German Pharmacopœia, 360 articles have been struck out and only 48 added, showing a decrease of 312; in the case of the United States Pharmacopœia, although 229 articles have been dismissed, 256 have been added, resulting in an increase of 27. The net result is that, whilst the former now contains only 600 articles, the latter includes just under 1,000. In view of these statistics, our contemporary points out that it is interesting to note that, in the preface to the first edition of the United States pharmacopœia, published in 1820, the fault *par excellence* then specified as existing in the lists of materia medica that had been adopted in other countries was their redundancy. The two pharmacopœias, however, present one point of resemblance, in the adoption in the United States' volume of the method of expressing formulæ, as a rule, in parts by weight, instead of the actual weights and measures, as in the last edition; and the favour shown towards the metric system, where opportunity offered, manifests an important approximation towards the methods followed

in its German contemporary. A report current that, at the present time, steps are being taken towards the preparation of a new edition of the *British Pharmacopœia*, invests the volumes on which the *Pharmaceutical Journal* comments with additional interest in reference to the question as to how far the English volume may be influenced by the publication of its Transatlantic and European congeners.

THE COMMON LAW ON EXPOSURE TO CONTAGION.

JUDGE DIXON of New Jersey, in a recent charge to the grand jury of Paterson, referred to by the *Boston Medical and Surgical Journal*, called their attention to the case of a man employed at the pest-house in that city as nurse to a small-pox patient, and who, having the germs of the infectious disease about him, went recklessly to his family, communicating the disease to his children, one of whom died. In commenting on this case, he said: "If a man, conscious that he carries about with him the germs of a contagious disease, recklessly exposes the health and lives of others, he is a public nuisance and a criminal, and may be held answerable for the results of his conduct. If death occurs through his recklessness, he may be indicted for manslaughter. It is held that, where a person knowingly communicates a contagious disease to another and death results, the crime is that of manslaughter." Judge Dixon furthermore added: "The man may be indicted also for spreading the disease by conscious exposure of others thereto by his presence in public places, such as on the streets, in halls, etc. He might be indicted as a public nuisance for endangering the public health in this way, even if no consequences had followed. The law provides some penalty for such offences against the public safety." The common law of England is to the same effect. As long ago as the year 1815 it was decided in the case of *Rex v. Vatnandillo* that, if a person with knowledge of the fact exposed in public another infected with a contagious disorder, he was a common nuisance and indictable as such. The remedy by indictment for a nuisance is, however, one which imposes so much trouble and expense on all parties concerned that it is rarely adopted, and persons who offended against the common law in this way often escaped punishment altogether. This common law rule has therefore been supplemented by the Public Health Act of 1875, which by Section 126 provides for the infliction of a summary penalty on any person who wilfully exposes in public either himself or anyone in his charge while suffering from any dangerous infectious disorder, or allows infected clothing, etc., to be where it is likely to convey the infection to other people. The Act also contains provisions for securing the proper treatment and isolation of persons suffering from such diseases, which are, we fear, too little known.

CERTIFICATES OF DEATH.

THE Birmingham Borough Coroner has censured the assistant medical officer, at the Children's Hospital, for giving a certificate of death in the case of a child, which he last saw on Wednesday, and which died on Saturday morning. The child was eight months old, and had been under treatment at the hospital for seven weeks. No medical evidence appears to have been called at the inquest. We are quite unable to concur in the propriety of this censure, as, in most of the cases which have been under observation for some time, there is no difficulty in stating the probable cause of death. More than this, a medical certificate does not pretend to do. It is unreasonable to expect that the medical officials of hospitals can pay visits to the homes of their patients, nor would they be justified in refusing to certify where every probability pointed to a death from natural causes. The coroner called no medical evidence; a witness said the child died of convulsions; and a verdict was found of "Death from natural causes." We might ask wherein this inquiry throws any additional light upon the death, or justifies the expenditure incurred? The result substantially bears out the medical certificate; and, under such circumstances, the censure is meaningless. We are quite aware of the responsibility of the medical profession to the public in the matter of the registration of deaths; but

we have very strong convictions that this duty is carried out with remarkable fidelity, and that medical men are the great promoters of inquiry into cases of suspicious death throughout the country. The relations between coroners, medical practitioners, and registrars are by no means satisfactory; and the way coroners often take upon themselves to censure the two other classes, for merely doing what Acts of Parliament say they shall do, is most reprehensible. It appears to us childish to censure a hospital officer for giving a medical certificate in the case of a person attended by him in his last illness, when the Registration Act says that, under those circumstances, he must give one. If no certificates are to be given in hospital attended cases, and none (in accordance with the recent decision of a metropolitan police magistrate), in cases in which the deceased has only been seen once, there will be an immense increase of uncertified deaths.

PREScribing BY DRUGGISTS.

THE repression of this practice is a subject which urgently calls for the consideration of the General Medical Council. We understand that that body have undertaken the consideration of the question of the employment of unqualified assistants by medical men, on which subject many of the influential members of the Council are likely to take a very severe and unfavourable view. On the other hand, it will certainly not be wise to lose sight of the aspect of the question which is represented by the growing practice of prescribing by druggists. The needs of the working classes and the poorer class of people call for some form of cheap and easy medical advice, less dangerous than that afforded by this means. Another illustration of the continual danger to the population arising from this practice of seeking the aid of prescribing druggists, is afforded by an inquest recently held by Dr. Danford Thomas on the body of Mary Wernhurst. According to the printed report, it appears that the deceased, who was forty-eight years of age, had suffered for the last eight years from asthma and bronchitis, but had sought no medical advice, relying solely upon a prescription given her by the late Dr. O'Connor. Being unable to obtain sleep, she sent her son to the shop of Mr. Wooton, a neighbouring druggist, to obtain a sleeping draught, and in a short time her son returned with the draught, which had been made up by Mr. Wooton's assistant, with the instructions that the whole of the draught was to be taken at once. These instructions were complied with, and the patient in a short time fell asleep, and a few hours later was found to be cold and dead. According to the evidence of Armstrong, the chemist's assistant, the draught taken by the deceased was composed of ten grains of iodide of potassium and six minims of laudanum, which he made up without consulting his employer, and which was not labelled, though it contained poison. The evidence of Dr. Brown, who made a *post mortem* examination, was to the effect that death had resulted from asthma and bronchitis, accelerated by an overdose of laudanum. Mr. A. Wynter Blyth found the presence of iodide of potassium and opium in the stomach. The coroner said it was a most reprehensible practice on the part of many druggists to prescribe medicines for persons of whom they knew nothing, and the result was that many fatal errors occurred. A verdict was given in accordance with the medical evidence, with a strong censure of the illegal conduct of the assistant, Armstrong, in prescribing medicines, and his neglect in not labelling them; as also the conduct of the husband of the deceased, in not having obtained proper medical advice. The coroner, who thought the jury had taken a merciful view of the case in not returning a verdict of manslaughter against Armstrong, said he trusted it would be a warning not to him only, but to druggists generally. These circumstances are so striking, that we have been induced to quote a somewhat full report of the case; and it must be acknowledged that, if, on the one hand, it is considered desirable to restrict the practice of the employment of unqualified assistants by medical men, it will certainly, on the other hand, be right to protect the public and the profession against the dangerous practice of prescribing by chemists; and one branch of the subject should not

be neglected by the General Medical Council while the other is being dealt with.

DEATH DURING THE ADMINISTRATION OF DICHLORIDE OF ETHIDENE.

WM. DITCHFIELD, aged 26, a weakly-looking man, was admitted into the Liverpool Eye and Ear Infirmary on the morning of November 21st, suffering from a wound of the right eye, inflicted by a chipping of steel half-an-hour previously. On examination, the metal could be seen embedded in the lens. Mr. Edgar Browne, one of the honorary surgeons, decided that an attempt should be made to extract the foreign body. The house-surgeon, Mr. Charles Shears, on listening to the patient's chest, could detect no cardiac murmur; but the sounds at the base were not distinct. To this fact, the operating surgeon's attention was drawn, but it was not thought sufficient to contraindicate the administration of an anæsthetic. Dichloride of ethidene was then given on a small flannel inhaler, and the patient came under its influence slowly but quietly. In ten minutes he was fully under, and Mr. Edgar Browne made the corneal section. Almost immediately, the pulse (which had been carefully noted all through) became very feeble and the patient very pale. Mr. Browne's attention was at once drawn to this; the man's head was lowered, his tongue drawn well forwards, and artificial respiration commenced without delay, the air entering freely in and out of the chest. Nitrite of amyl was then applied to the nostrils and the patient inverted; he, however, showed no signs of returning consciousness. With the assistance of another member of the staff, who was in the hospital at the time, artificial respiration was carried on for nearly half-an-hour, but unfortunately with no beneficial result. Between three and four drachms of the anæsthetic were used. By order of the coroner, a *post mortem* examination was made, thirty-six hours after death, by Dr. Alexander Davidson. On removing the heart, it was found to be in a flabby condition, its walls being very thin; all the valves were healthy; under the lining membrane of the aorta, one-inch above the valves and extending for some distance up the vessel, there were numerous small fatty patches; the same condition was found in the thoracic aorta; and in one place there was the appearance as of a healed atheromatous ulcer. The heart-muscle was examined microscopically and found to have undergone extensive granular degeneration, the nuclei, especially, being surrounded by granules. The lower lobe of the right lung was deeply congested. At the inquest, evidence was given to the effect that the man died from cardiac syncope produced by the administration of an anæsthetic acting on a weak heart, which condition could not have been discovered during life, and which certainly was not suspected in so young a man. The jury gave their verdict accordingly, adding that they thought "everything was done that could possibly be done or that was customarily done." Since the early part of 1879, dichloride of ethidene has been largely used by some members of the staff of the Infirmary, and, up to this present unfortunate occurrence without any mishap. There is a record of its having been administered between four hundred and five hundred times. The absence of struggling, as patients come under its influence, its pleasant smell, and the very little sickness following its use, caused ethidene to be regarded as a specially suitable anæsthetic for operations on the eye.

A PRIZE FOR THE PREVENTION OF BLINDNESS.

THE fifth International Congress of Hygiene, which will meet at the Hague in 1884, will award the prize of two thousand francs (£80 sterling), offered by the London Society for the Prevention of Blindness, to the author of the best essay, written in English, French, German, or Italian, "The Causes of Blindness, and the Practical Means for Preventing it". Besides this prize, the International Society for the Improvement of the Condition of the Blind reserves to itself the right to award a second prize of one thousand francs (£40 sterling), or two prizes of five hundred francs (£20 sterling) each and a silver-gilt medal, with a diploma, should it see fit, to such of the essays as should, in the

opinion of the international jury for the principal prize, be deserving of it; the last-mentioned prizes will be distributed at the centenary festival of the first Blind Institution founded by Haüy, which will take place in Paris in 1884. The fourth International Congress of Hygiene, which met at Geneva in September 1882, has adopted for this competition the following programme, as prepared by the London Society for the Prevention of Blindness. 1. The Study of the Causes of Blindness: *a.* Hereditary causes. Diseases of parents, consanguineous intermarriages; *b.* Infantile eye-diseases. Various inflammations of the eyes; *c.* School period and time of apprenticeship, progressive short-sightedness, etc.; *d.* General diseases. Diatheses, various fevers. Chronic poisoning, etc.; *e.* Trade influences. Wounds and accidents, etc. Sympathetic ophthalmia; *f.* Social and climatic influences. Contagious ophthalmias. Unhealthy habitations, defective lighting, etc.; *g.* Neglect of treatment and bad treatment of eye-affections. 2. The Study of Practical Preventive Means: *a.* Legislative means; *b.* Hygienic and professional means; *c.* Educational means; *d.* Medical and philanthropic means. The international jury, elected by the Geneva Congress for the purpose of judging the essays, consists of: Holland—Dr. Snellen, Professor of Ophthalmology, Utrecht; Germany—Dr. Varrentrapp, Frankfurt; Dr. H. Cohn, Professor of Ophthalmology, Breslau; France—Dr. Fieuzal, Physician to the Hospice des Quinze-Vingts, Paris; Dr. Layet, Professor of Hygiene, Bordeaux; Italy—Dr. Reymond, Professor of Ophthalmology, Turin; Dr. Sormani, Professor of Hygiene, Pavia; England—Mr. Streetfeild, Professor of Ophthalmology, University College, London; Dr. Roth, Honorary Secretary and Treasurer (*pro tem.*) of the Society for the Prevention of Blindness, London; Switzerland—Dr. Dufour, of the Ophthalmic Hospital, Lausanne; Dr. Appia, Geneva; Dr. Hallenhoff, Lecturer on Ophthalmology, Geneva, and Secretary to the jury. Dr. Appia and Dr. Varrentrapp having resigned, the jury completed its number by electing Dr. Courserant, oculist, Paris, and Dr. Berlin, Professor of Ophthalmology, Stuttgart. Those essays to which prizes have been awarded will become the property of the Society for the Prevention of Blindness and of the International Society for the Amelioration of the Condition of the Blind, who will bear liberty to publish them in whole or in part in several languages, in order to make them useful in the way they consider best. The (inedited) manuscripts for competition are to be sent to Dr. Hallenhoff, Geneva, not later than March 31st, 1884. Every manuscript has to be distinguished by a motto, which is also to be written on a sealed envelope containing the name, Christian name, titles, and address of the author. The envelopes will not be opened until after the award of the jury.

AN EPIDEMIC OF TYPHOID FEVER TRACED TO LEMONADE.

A VERY singular outbreak of enteric fever at Evesham and its neighbourhood has been the subject of exhaustive inquiry and report by Mr. G. H. Fosbroke, the medical officer of health for the district. The epidemic attacked, in all, as many as sixty-nine persons and invaded fifty-one families, six of the cases proving fatal. The disease was not confined to any particular locality, but was distributed through eleven villages, which may be included in an imaginary circle, having a radius of five miles from Evesham as its centre. The epidemic confirms customary experience as to the predisposition of different ages to attacks of typhoid, as 83.2 per cent. of the cases in the town, and 95.1 per cent. in the surrounding villages, did not exceed twenty-five years of age. The chief interest of the outbreak lies, however, in its causation, which Mr. Fosbroke centres in a low-lying meadow, abutting on the river Avon, and crowded, on a particular date, with people witnessing the local regatta. All the persons attacked prior to the period when the disease became generally diffused had witnessed this regatta, and had all (with one most questionable exception) visited the particular meadow at the same time. No case of fever appeared amongst persons thronging the only other locality largely frequented by visitors to the regatta; and it became therefore apparent—the cases being dotted over a large tract of country, for which no other community of circum-

stances could be found—that there was something in connection with this meadow associated with the outbreak. Further inquiry revealed the fact that of the forty-six persons attacked upon whom the "regatta influence could have acted," thirty-two certainly, eleven most probably, and three improbably, drank, whilst on this meadow, water, mixed either with spirit or in the form of lemonade or ices. The water used for this purpose was obtained from one well located in the immediate neighbourhood of the meadow. On analysis of a sample of water from this well, Mr. Fosbroke found it to be seriously contaminated by animal organic matter; and the well has since been closed by magisterial order. It was situated in one of the most low-lying parts of the town, and about thirty feet from a sewer of recent construction. So far as could be ascertained, this drain did not leak, but examination of the well showed decided evidence of water-pollution; and, looking to the perennial presence of typhoid at Evesham, it is not difficult to account for the access of fever-germs to the water. It is true, that in the meadow in question there were two open gratings acting as ventilators to the sewers which passed near to the well and under the meadow on to the outfall-works; but, though Mr. Fosbroke admits that the effluvia from the ventilators were very offensive, he prefers to disregard their possible share in the outbreak, in view of the undeniably strong evidence as to the drinking of polluted water by the sufferers. One instance he speaks of as specially emphasising his views. A party of three persons repaired to the meadow on the regatta day, and, whilst two of them shared two or more bottles of lemonade, the third took no such refreshment. Both the young people who drank the lemonade developed unmistakable typhoid fever, but the third escaped attack. With so many foci of disease in various places, secondary cases of necessity arose; but these do not affect the main argument, and Mr. Fosbroke seems justified in his conclusion as to the true source of the epidemic.

EXTRAMETROPOLITAN MEDICAL SCHOOLS.

THE *Birmingham Medical Review* writes as follows: We have a fair test for the educational value of a school in its power of attracting students. Parents or guardians are disposed to send lads even long distances, and at considerable expense and inconvenience, in order that they may be efficiently educated; and schools which draw students from remote distances probably afford better and cheaper education than can be obtained in those remote districts. In tracing a school of medicine through a course of years, its annual entrance-register probably affords its best history. The weekly medical papers publish annually a statement of the entries at the various medical schools, and from this we find that there has been a general and steady decline of the number entering at the various London schools during the last four years, amounting on the whole to 14 per cent., while at Guy's the decline is as much as 20 per cent. On the other hand, the entries at Birmingham, Manchester, Liverpool, and Bristol, in the same period, have increased 50 per cent.; while the Scotch schools have, during the same period, reached dimensions unequalled in any other country in the world. For the proper instruction of students, capable teachers and suitable apparatus are equally essential; and it must be admitted that there are London schools in which the apparatus supplied would scarcely have sufficed in the time of Hippocrates. In the well-equipped laboratories of our Scotch universities, or of our provincial colleges, rational instruction in medical science is possible. Moreover, among the teachers in the London schools there are many excellent young physicians and surgeons far too modest to consider themselves competent chemists, botanists, or physiologists, and who cannot hope to compete successfully with properly trained specialists. We therefore anticipate, not without reason, the speedy extinction of some of the minor metropolitan schools, in one of which the entry this year has fallen as low as nineteen. On the other hand, the Scotch universities cannot well increase their numbers much more. Already their classes are too large to be well taught, and their hospital accommodation is woefully insufficient for the crowd of students. Under these circum-

stances, it is easy to understand the reasons for the growing prosperity of the provincial schools of medicine, when we can offer our students splendid laboratory accommodation and first-class instruction. At the present time, Manchester takes the lead in point of numbers among the provincial schools, and Birmingham has the honour of standing second, with an entry larger than either Westminster, St. Mary's, Middlesex, or King's College Hospitals in London. The opening of Mason's College to medical students is so recent, that we may justly regard it as likely to produce still more favourable results as its educational resources become better known.

DEATH UNDER CHLOROFORM.

AN inquest has been held at the Holborn Town Hall by Dr. Danford Thomas on the body of Emily Moon, five years old, daughter of Inspector Moon, of the S Division. The deceased, it appeared, was admitted to the Hospital for Children, Great Ormond Street, on the 25th of October last, suffering from disease of the knee. The father last saw her alive on the 10th inst., and was informed of her death on Saturday last. He understood she had been placed under the influence of chloroform prior to undergoing an operation. Mr. Howard Marsh, one of the senior surgeons of the hospital, on visiting the institution last Saturday, found the deceased suffering from a small abscess near her knee, which threatened to attack the knee-joint, the result of which might have been permanent stiffness of the knee. It was advisable to let out the pus by an operation; and in order to save the child from the terror and pain of the operation, it was deemed necessary to administer chloroform. Dr. H. Smith, the house-surgeon, said he only administered a little of this anæsthetic to diminish sensibility. He had twice before administered chloroform to the child. Having performed the operation, which only occupied a second or two, the child's heart suddenly ceased to beat. Every possible means were adopted in vain to restore respiration. Mr. Pepper, of St. Mary's Hospital, who made a *post mortem* examination of the body, discovered that the cause of death was syncope, due immediately to the depressing effect of chloroform. It was requisite to open the abscess, and to this end it was advisable that chloroform should be given. The practice at hospitals was to administer anæsthetics prior to the performance of trivial operations, without consulting the friends of the patients; but where life was endangered, they were first communicated with. The coroner said the proportion of persons dying under anæsthetics was one in six thousand; and Mr. Marsh said the present was the only fatal case he knew of during his eighteen years' connection with the hospital. The jury found that the deceased died from sudden failure of the heart's action when under the influence of chloroform and suffering from debility following a diseased knee-joint. They added an expression of opinion that the chloroform was properly administered, and no blame was attributable to the hospital authorities; but, at the same time, they recommended that, if possible and practicable, parents and friends of patients about to be placed under chloroform should be previously acquainted with the fact.

SCOTLAND.

A VERY pleasing ceremony took place in Glasgow last week, when Miss Beatrice Clugston, so well known throughout the West of Scotland for her enthusiasm in philanthropic objects, was presented with her portrait, as a mark of the high esteem in which she is held, and as an acknowledgment of her benevolent efforts in the cause of suffering humanity.

TYPHUS FEVER IN EDINBURGH.

AN outbreak of typhus fever has occurred in a street just within the confines of Edinburgh. In two houses in Buchanan Street, off Leith Walk, no fewer than sixteen cases have been reported, and of these two have already terminated fatally. The condition of matters existing

has been fully recognised by the medical officer of health, by whom active measures were taken to deal with the outbreak, as well as by the burgh engineer with regard to the drainage of the houses.

THE FEVER EPIDEMIC IN JOHNSTONE.

ALTHOUGH the disease has not yet been completely stamped out, it is considerably on the decline, and it has been decided to reopen some of the schools. Since this outbreak of scarlet fever in the town, there have been no fewer than 528 cases, and of these 71 have proved fatal.

TYPHUS FEVER IN ABERDEEN.

SEVERAL new cases of typhus have been admitted into the infirmary during the week, and several have been taken to the epidemic hospital. It is hoped that the prompt measures which have been taken by the public authority will have the effect of limiting the spread of the disease.

EDINBURGH DESTITUTE SICK SOCIETY.

AT the annual meeting of the Destitute Sick Society of Edinburgh, held on Monday, it was stated that the visitors of the Society had made 7,500 visits during the year. Relief to the destitute sick had been given to the extent of £1,719 in money, £114 in meal, £88 in coals, and in clothing £16. The number of applicants who had received relief was 1,406—a slight falling-off as compared with the previous year.

THE FEVER EPIDEMIC IN ABERDEEN.

THE managers of the Aberdeen Royal Infirmary have empowered a committee to improvise as a ward the large hall in the hospital used as a board meeting-room, in the event of necessity arising from the fever epidemic at present prevailing in the city. Lord Provost Esslemont stated to the meeting that the number of patients at present in Aberdeen Infirmary was higher than it had been for nineteen years. He stated that the epidemic hospital in Aberdeen was available in the event of the spread of the fever, whither patients labouring under infectious diseases might be taken, and that in the event of the board-meeting room being brought into requisition the infirmary managers need not be afraid to turn up at the next meeting held in it, because good care would be taken that cases of disease of a non-infectious nature would be only treated there.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending December 9th, it appears that the death-rate in the eight principal towns was 28.0 per 1000 of estimated population. This rate is 6.4 above that for the corresponding week of last year, and 3.2 above that for the previous week of the present year. The lowest mortality was recorded in Edinburgh—viz., 21.9 per 1000; and the highest in Perth, viz., 37.8 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 5.5 per 1000, or 1.7 above the rate for the previous week. Of the 39 deaths resulting from whooping-cough, 21 were registered in Glasgow, and 11 in Dundee. From acute diseases of the chest, 185 deaths were registered, or 46 more than in the previous week. The mean temperature was 33.5°, being 2.0° below that of the week immediately preceding, and 5.0° below that of the corresponding week of last year.

UNIVERSITY OF EDINBURGH.

THE Christmas holiday began on Friday, and will terminate on Tuesday, January 2nd. The unfortunate illnesses of Professors Grainger Stewart and Greenfield have deprived their students of the personal teaching of these Professors for a month. It is confidently expected, however, that when the classes resume, Drs. Stewart and Greenfield will be able to resume their respective duties. The annual "social" given by the students' club to their friends and to friends of the Uni-

versity was held on Wednesday, in the Waterloo Rooms. It is needless to say that it was in a crowded room that the talents, musical and otherwise, of the students (of whom the greater number were medical) were exhibited, and that by an approving audience they were highly appreciated. The students' club has inaugurated a new departure this year, in the direction of a Ball to their friends, held on the night subsequent to the "social".

THE LATE PROFESSOR PIRRIE.

THE managers of the Royal Infirmary, Aberdeen, resolved to engrave in their minutes the following regarding the late Professor Pirrie. "The managers of the Aberdeen Royal Infirmary, in Quarterly Court assembled, find, with deep regret, that one name must be omitted from the list of officers of the hospital now to be re-elected. Professor William Pirrie, M.D., LL.D., who for thirty-three years was a valued member of the infirmary surgical staff, died on November 21st, 1882, and by his decease the managers are sensible they have lost one of the ablest and most eminent officers ever connected with the hospital. During the long period of his service to the charity, Dr. Pirrie was distinguished for the tender personal interest he took in the patients under his charge, and the managers are satisfied that thousands of the ailing and injured poor who, from 1847 to 1880, sought the benefits of the infirmary, were restored to health and bodily comfort through his great skill, his watchful care, and untiring devotion to ward duty. In placing upon the minutes this record of the feeling they entertain regarding the late Dr. Pirrie, the infirmary managers desire, at the same time, to convey to his widow and family their warm respect and sincere sympathy."

ROYAL INFIRMARY, EDINBURGH.

THE near approach of the Christmas holidays was this year, as usual, heralded to the clerks, dressers, and many of the students in the Royal Infirmary, by the ever-welcome K. C. (Kitchen Concert). It was held on Tuesday evening, in the large and commodious kitchen of the new Royal Infirmary. In addition to a crowded audience of students, there were present many members of the medical and surgical staff, professors, lecturers, and, what is a pleasant feature, an increased number of managers. The resident physicians and surgeons, on whom devolve the duty of catering for the entertainment of their guests, had a varied programme prepared, the details of which were most successfully carried out by the various gentlemen who rendered their services. It would be invidious to approve one performer more than another; but special mention may be made of the success achieved by the veteran surgeon, Dr. J. D. Gillespie, one of the consulting surgeons to the infirmary, in his two songs, one of which humorously recalled the campaign of the lady medicals in Edinburgh a decade ago. The *Kinder Sinfonie*, as usual, was much appreciated, but the same remark applies to the whole entertainment; and it is no disparagement to former "K. C.s" to say that that of 1882 could not have been more successful. While writing of the Royal Infirmary, it occurs to me that many hundreds of graduates and licentiates of Edinburgh will learn with regret of the death of one who, although in a humble position in the infirmary, was familiar to them, during all their infirmary curriculum, as a civil, obliging, and humane official. John Swayne, principal gatekeeper, died suddenly, from cardiac disease, on Sunday, December 10th. For thirteen years he was at his post, and discharged his duties in a manner that secured for him the esteem of the managers, the staff, the students, and the patients.

PROVINCIAL SCOTTISH HOSPITALS.

THE annual meeting of the subscribers to the Stirling Hospital was held last week, and was presided over by Dr. Galbraith. From the report presented to the meeting, it appears that, during the year, 221 cases were treated as indoor patients, while 1,472 outdoor cases were treated at the dispensary, making a total of 1,693 cases relieved at the institution. A satisfactory report regarding the financial condition of the hospital was submitted. The appeal made for subscriptions for

the new part of the buildings had been well responded to; the work was going on, and was estimated to cost about £1,340. It was intended, however, to erect a mortuary, which would add about £260 to the cost of the new buildings. The ordinary income, including £518 of a balance, amounted to £1,478, and the expenditure to £1,095, leaving a balance of £383 in favour of the hospital. At a meeting of the Kirkcaldy Town Council, held on Monday, it was intimated that Mr. Munro Ferguson, of Rath and Novar, had expressed his willingness to present the extended burgh with a free site for a hospital; also that the Board of Supervision had again inquired as to the erection of a hospital for Kirkcaldy, they having, on a previous occasion, urged on the Town Council the necessity for such. With regard to the hospital at Dalkeith, recently erected by the Duke of Buccleuch (and of which an account appeared in the JOURNAL), it was stated, at a meeting of the Police Commission held on Monday, that the wine and spirit merchants of the burgh had undertaken to furnish the reception-room. At Musselburgh, towards the erection of a fever hospital, Mr. Livingstone has given a donation of £100.

ADDITIONAL EXAMINERS IN EDINBURGH.

CONSIDERING the great commercial success of the University of Edinburgh, and the large emoluments enjoyed by its professors, the remuneration offered to the additional examiners, who perform very important duties in connection with the testing of candidates for degrees in its several faculties, seems to be disproportionately small. Examiners in Chemistry, Anatomy, Midwifery, and Practice of Physic, are now advertised for, and £50 *per annum* is, we understand, offered to the holders of each of these appointments. For this scanty honorarium, an examiner is expected to spend ten days or a fortnight in Edinburgh once or twice a year, paying his own hotel and travelling expenses. It is of great importance to the public, that wherever candidates for medical licences are examined by their own teachers, thoroughly competent and independent assessors should take part in the examinations. We would be far from implying that the gentlemen who have hitherto held office as additional examiners in the University of Edinburgh have not, in every respect, come up to the highest standard of what additional examiners should be—a list of their names commands at once professional and public confidence in the thoroughness of the work in which they have been engaged—but the frequent changes which have taken place in certain examinerships suggests that the present system fails to retain the services of examiners at the time when they may be supposed to add to their scientific attainments experience and skill in their special duties. Were the salaries attached to examinerships larger than they are at present, the gentlemen holding these appointments would be somewhat older than they have hitherto been, and therefore more on a parity with the professors with whom they are associated. As a matter of general principle, it is highly desirable that the additional examiners should not be lecturers or practitioners in Edinburgh, nor aspirants to professorial chairs. As the salaries of the examiners are not stated in the recently issued advertisement, it may almost be hoped that the Edinburgh University authorities are sensible of the insufficiency of their amount, and will not require much pressure to consent to their augmentation.

PHILOSOPHICAL SOCIETY.

ALTHOUGH it has meanwhile been decided not to proceed with the proposed Glasgow Police Bill, in view of the general legislation promised next Session by the Government, yet the discussions that have taken place on the various clauses of the draft Bill have done good, and not one of the least interesting was that which occurred at a special meeting of the Glasgow Philosophical Society, on the 6th inst., upon the prevention and mitigation of disease. It arose out of a paper by Dr. Ebenezer Duncan, on the sanitary clauses of the Police Bill, bearing on this subject; but the two points to which he almost confined his remarks were the proposed compulsory notification of disease, and the regulations with regard to the sale of infected milk. To both of these

is he opposed. The former, he contends, has failed to improve the health of places—like Edinburgh and Dundee—where it is in force; and the latter would do nothing to materially diminish the prevalence of typhoid fever in Glasgow, which was mainly, if not entirely, due to insanitary farmhouses round Glasgow. In fact, he thought that the manure depots distributed over the city are the chief causes of the sporadic cases of typhoid fever that occur in Glasgow. Several members spoke in the discussion that followed the reading of the paper, and among them Professor Gairdner and Dr. Russell. The former gave the weight of his opinion in favour of Dr. Duncan's view as to the notification of infectious diseases being placed on the householder, and not on the medical man; while the latter could not give any countenance to the propositions enunciated in the paper, which he regarded as too theoretical, and showing a want of knowledge of the difficulties that are encountered in carrying on the sanitary work of a large city, and which can only be overcome by suitable legislation. In the course of his speech Dr. Russell made the very important statement that, "if he had possessed the power which the Town Council asked in the milk clauses, Glasgow would have been saved much injury from typhoid epidemics." It was decided, on the motion of Professor McKendrick, to adjourn the further discussion on Dr. Duncan's paper until the 20th instant.

IRELAND.

BELFAST ROYAL HOSPITAL.

A SPECIAL meeting of the general committee and life-governors of this hospital was held on the 18th instant, to elect an ophthalmic surgeon, a gynaecologist, and a house-physician. Dr. J. Nelson was appointed to the ophthalmic department, Dr. John W. Byers Gynaecologist, and Dr. Lindsay resident physician.

MEDICAL OFFICER, CARLINGFORD DISPENSARY.

At a meeting of the Carlingford Dispensary committee, on December 13th, Dr. Lennon, of Crossmaglen, was elected medical officer of the district. This was the third meeting of the committee held for the purpose of filling the vacancy. At the two previous meetings, Dr. Davis, of Collen Dispensary, and Dr. Lennon had an equal number of votes.

ROYAL MEDICAL BENEVOLENT FUND SOCIETY OF IRELAND.

DR. J. MAGEE FINNY has been elected an honorary secretary of this fund in the place of Mr. A. H. Benson, appointed Acting-Secretary in place of Dr. Marks, resigned. Dr. Finny was for several years Honorary Treasurer of the Fund, and is thoroughly acquainted with its working.

VACCINATION.

ACCORDING to the returns of vaccination received for the September quarter, there were 28,865 persons successfully vaccinated in Ireland; in 2,526 cases, the operation was deferred, and 123 children were reported as insusceptible. As children under three months old are not compelled to be vaccinated, the number of vaccinations in any given quarter cannot agree with the number of births registered; but, after sufficient time, the numbers in the birth-register and the vaccination-book should be in accordance with one another.

DUBLIN MEDICAL STUDENTS' SOCIAL CLUB.

A MOVEMENT has been set on foot in Dublin to establish a club for medical students, on the lines of similar institutions elsewhere. A number of hospital physicians and surgeons and medical teachers have given the project their support, and the President of the Royal College of Surgeons in Ireland, Mr. Barton, who has shown a great interest in the proposed club, has been elected its president. Five vice-presidents, one for each school, have also been elected, and the club is to be

managed by an annually elected committee of ten—consisting of two members from each of the five medical schools—with power to add to their number. If the club is well-managed it will prove a great boon to the students, and we heartily wish it every success.

HEALTH OF CORK.

DURING the four weeks ending December 2nd, the total number of registered deaths amounted to 134, while 106 births took place. The annual death-rate per 1,000 inhabitants during this period gives a total ratio of mortality of 22.4, but deducting those (18) who died in the workhouse, it was 19.2, from infectious diseases 0.4, an infant mortality of 3.6, and a birth-rate of 27.5. The returns for fever contrast favourably with those for the corresponding period last year, there being then 70 cases of febrile affections of every description as contrasted with 40 cases now reported. Dr. Wall, Medical Superintendent Officer of Health, has recently been making a personal inspection of each dwelling in which persons affected with any infectious disease had lately resided, when such cases were officially reported to the sanitary department. The object of these inspections was to endeavour to discover the origin of the disease, and to suggest structural alterations in the dwellings where there were reasonable grounds to infer that disease was either produced or fostered by reason of sanitary defects.

EXAMINERS IN THE KING AND QUEEN'S COLLEGE OF PHYSICIANS.

THE President of the King and Queen's College of Physicians, Dr. William Moore, has appointed from among the censors and additional examiners of the College the following Fellows as examiners for the ensuing year for the membership of the College, and for the certificate in sanitary science. *For the Membership:* 1, Principles of Medicine, including Pathology, Medical Anatomy, and Medical Chemistry—Drs. Finny and Purser; 2, Practice of Medicine, including Principles of Public Health—Drs. Cruise (vice-president) and Duffey; 3, Clinical Medicine—Drs. Foot and Nixon. *For the Certificate in Sanitary Science:* 1, Etiology and Prevention of Disease, Dr. Cruise, vice-president; 2, Chemistry, Dr. Walter Smith; 3, Meteorology, Climatology, and Vital Statistics—Dr. Quinlan. The names of the gentlemen appointed to examine in engineering and in sanitary law have already been published. Examinations will be held for both the membership and for the sanitary certificate in January.

ENTRIES IN THE DUBLIN MEDICAL SCHOOLS.

THE following is the return of the number of students in the Dublin Medical Schools for the current session, as furnished by the Anatomical Committee to the Inspector of Anatomy:

School of Physic, Trinity College	...	...	225
Royal College of Surgeons	...	...	132
Ledwich School	...	...	230
Carmichael College	...	...	134
Catholic University	...	...	116

Making a total of ... 837

Comparing these numbers with the return furnished last year (*vide JOURNAL*, December 3rd, 1881, p. 914), it will be observed that there is one more medical student supposed to be dissecting this winter session than last; that the Trinity College and Ledwich schools have each nine, and the Catholic University School sixteen, more students than the number they returned last year; and that the Carmichael and College of Surgeons schools have respectively twenty-five and eight students less. These returns always give rise to much unpleasant comment in school circles and elsewhere; and, as we have said before, some of them are viewed with a certain amount of suspicion. This being the case, we cannot understand why a certified return of the names of each student entered for dissection should not be sent in by the registrar of each school. Unwillingness, on the part of any school to make such a return, certainly gives some ground for reasonable suspicion of a desire to magnify the numbers of its students, or to get more than its fair proportion of subjects for dissection.

NIGHT LECTURES.

A RESOLUTION recently passed by the Council of the Royal College of Surgeons in Ireland, to the effect that in future it will not recognise certificates of attendance at lectures delivered at night, has caused some stir in both lay and professional circles, chiefly in consequence of the publicity given to the matter in the daily papers. One journal has not only thrown open its columns for several days to numerous anonymous as well as signed letters on the subject, but has written itself in an acrimonious and imperfectly informed manner upon what it terms so "high handed and unjustifiable" a proceeding. It is asserted to be the custom in a certain School of Medicine to give the required certificates for attendance at lectures to young men, who, being employed in some business during the day, were unable to attend lectures delivered at the usual hours. For their benefit especially, instruction is given, it is stated, at certain classes ("grinds"?) or lectures at night; and in this way, a large number of so-called "night men"—amounting at present, it is stated, to "at least two hundred" (?)—have been enabled to qualify themselves as members of the profession. But the Council of the College of Surgeons in Ireland, however, as well as numerous other persons, consider that a man who is employed in an office, or in an apothecary's establishment, all day, cannot learn his profession practically and as he ought. Indubitably, many industrious men, placed in such circumstances, have to their credit, succeeded not only in obtaining their diplomas by means of "night lectures", but have subsequently risen to distinction in the profession. It is contended, however, that the system is a bad one, and it is against its continuance that the College aims. Three years ago, the Council of the College expressed the opinion that "giving courses of lectures late in the evening and at night is objectionable, and should not be put into practice." This resolution was communicated to the Dublin Medical Schools; but, before taking any further action, the Council referred the matter to the General Medical Council, who, with their usual sagacity, declined to "express an opinion as to the hours of the day during which medical lectures should be delivered" (*vide* JOURNAL, July 24th, 1880, p. 133). Night lectures, accordingly, have since been continued in this particular School, although the attention of its authorities was again called to the opinion of the College Council in November 1880. Unfortunately, the College, as well as being a licensing body, also possesses a school of medicine, in the prosperity of which a large number of its councillors are financially interested. Its present action is therefore viewed by some parties as being influenced by sordid motives. In this view we do not coincide. But while the College may have the right to refuse any certificates from the school in question, it is to be regretted, we think, that care was not taken to provide that all students should receive adequate notice of the intention of the College to adopt the resolution in question. It would thus not have laid itself so open to the insinuation now publicly expressed, that its object was to increase its own school at the expense of a rival institution. Last week, a largely-attended meeting of the medical students attending night lectures in Dublin was held in the Ledwich School of Medicine, for the purpose of considering the action of the Council of the College of Surgeons in declining to recognise night lectures, and a memorial to the Council, praying it to rescind its resolution on the subject, was adopted. The Council of the College, after a division, resolved to receive a deputation from the night students on the subject, and the memorial referred to was presented to the Council on the 14th instant. Subsequently, the spokesman of the deputation, Mr. Carroll, received a letter from the Secretary of Council containing a copy of the resolution adopted on December 7th, 1882, viz.: "That the Inspection Committee be instructed not to receive certificates from any school in which evening lectures are delivered." "That a copy of the foregoing resolution be communicated in writing to the registrars of the schools in Ireland recognised by the College, and they be requested to furnish the Inspection Committee with a written guarantee to the effect indicated therein;" and also an intimation that the Council had now resolved to postpone putting that resolution into effect until April 1st,

1883, a date which makes some people think that the College has acted in rather a foolish way in the affair, all through.

PROPOSED NEW HOSPITAL FOR LIVERPOOL.

A LARGE and influential meeting of the inhabitants of the city of Liverpool was held in the Town Hall on Friday, December 15th, in accordance with a requisition presented by several medical practitioners in the city to the mayor, to consider the desirability of erecting a new hospital in place of the Royal Infirmary, which has become in many respects inadequate and unsuited for carrying on with proper and desirable efficiency the work imposed upon it; for which purpose a fund of £100,000 is required. The mayor (Mr. W. RADCLIFFE) presided.

In opening the proceedings, the mayor briefly reviewed the history of the infirmary, which is one of the oldest charities in the city, dating as far back as 1749. He said the attachment of the medical profession to this institution had been very marked, and it was a most gratifying circumstance; and, he was informed, had been the means of keeping in Liverpool men of the highest eminence, who would otherwise possibly have been attracted to other places. It was admitted on all hands that the present condition of the buildings was unsatisfactory, and quite unworthy of the city of Liverpool. It had therefore become necessary to seriously take up the question of rebuilding, the accommodation being inadequate and the sanitary state unsatisfactory. The committee, including the medical officers, desired to erect a new hospital rather than extend or patch up the present structure, and in that he thought they were wise. He concluded by expressing the hope that the citizens of Liverpool would respond in a liberal manner to the earnest appeal which would be made.

Colonel BROWN, M.P., proposed the first resolution: "That the old building of the Royal Infirmary has become, in many respects, inadequate and unsuited for carrying on with proper and desirable efficiency the work imposed upon it, and that it ought to be replaced by a new hospital." The infirmary had been usefully occupied on the present and old site for the last 130 years, and it was one of the first provincial hospitals in the whole country. The average number of in-patients in the wards was no less than 2,550, while 5,230 out-patients were treated annually. The hospital could make up a few more than 250 beds, which were always filled; in some cases, on that account, it was found necessary to refuse admission. Connected with the hospital were two most valuable institutions, of which Liverpool might well be proud—the medical school and the nursing institution. He reminded those present that there had been a great advance in medical and surgical skill, and it became necessary that something should be done to make the hospital equal to the requirements of modern times. He also spoke of the medical school, by means of which many were trained up in one of the most honourable of professions.

Mr. WHITLEY, M.P., seconded the resolution.

Dr. A. T. WATERS, in supporting the resolution, said the primary object of all hospitals was to provide such a building as would enable its physicians and surgeons to apply all the resources of science and art to the treatment of patients; and if, in any one of the requirements necessary for the work, any hospital could not be considered adequate, then it stood self-condemned. In the Royal Infirmary there was a want of cubic space in the wards for each individual bed; and next, very imperfect means existed for ventilating the wards. It was most important in the treatment of disease, especially with regard to the after management of surgical cases, that there should be a good supply of air and good management. Moreover, the condition of old hospitals was always apt to bring on erysipelas and pyæmia amongst the patients after an operation, and the sanitary arrangements of the buildings in question were, perhaps, as bad as they could possibly be. On the other hand, the accommodation which existed in the institution for the nurses and domestics, and other persons resident, was most meagre, inefficient, and inadequate. Then, with regard to out-patients, there was not a suitable room in which those persons could be received, or could wait, or any private place where the physicians and surgeons could examine their patients. Also, there was no space for the prosecution by the medical gentlemen of scientific work, to result in the welfare of the patients. More theatres were required for operations and lectures, and more rooms for chemical research and inquiry, instead of being crippled and cramped for want of space, as at present they were. It was true that the infirmary was only sixty years old, but since it had been erected there had been great changes in medical and surgical practice, and there were many more requirements needed at the present than over half a century ago. The views with regard to sanitary matters which might have been considered very satisfactory sixty years

ago, must now be looked upon as most unsatisfactory. The want of a new building had been gradually and steadily growing, but it was only the fact that the sale of the lunatic asylum had furnished the committee with a portion of the funds now required, that they ventured to come before the public. The hospital was not a local one; it received patients from all parts of the whole county, Cheshire, North Wales, the Isle of Man, and the Lake District; and the committee wished to appeal to those people who resided out of the precincts of Liverpool to contribute to the funds for erecting a hospital, in the benefits of which they shared. It should be borne in mind that, in the last few years, upwards of three hundred nurses had been trained, whose services had been not only given to the Infirmary, but to districts far distant from Liverpool. In conclusion, Dr. Waters said that what was required in the proposed new institution was every possible facility to the surgeons for applying all modern resources of their art in the treatment of the patients, with every precaution against erysipelas and pyæmia, so as to enable them to reduce to a minimum the mortality resulting from those hospital scourges.

Mr. BICKERSTETH, senior surgeon to the infirmary, also supported the resolution, endorsing the opinions of the previous speaker. The institution, when it was built, was no doubt a very admirable institution, built with all the light and learning that was then in vogue; but there had been enormous progress since then, not merely in sanitary and social matters, but in medical and surgical science. The physicians and surgeons were at present working under very great disadvantages in the Royal Infirmary, and they had an honest claim for the foundation of another hospital with all modern requirements, which were essential for the proper prosecution of their work.

The resolution was then put to the meeting, when it was carried unanimously.

Mr. R. BROCKLEBANK, junior (Treasurer) read the list of subscriptions which had been received, amounting to £79,000, comprising three subscriptions of £5,000 each, one subscription of £200, one of £1,500, and several donations of £1,000 each. Some friends had also offered £5,000 provided four other persons subscribed a like sum, and three persons had already subscribed this amount.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL.

NOTICE OF QUARTERLY MEETINGS FOR 1883: ELECTION OF MEMBERS.

MEETINGS of the Committee of Council will be held on Wednesday, January 17th, April 11th, July 11th, and October 17th. Gentlemen desirous of becoming members must send in their forms of application for election to the General Secretary not later than 21 days before each meeting, viz., December 26th, March 21st, May 21st, September 26th, in accordance with the regulation for the election of members passed at the meeting of the Committee of Council of October 12th, 1881.

November 9th, 1882. FRANCIS FOWKE, *General Secretary*.

COMMITTEE OF COUNCIL.

NOTICE OF MEETING.

A MEETING of the Committee of Council will be held in the Council Room of Exeter Hall, Strand, London, on Wednesday, the 17th day of January next, at two o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary*.

161A, Strand, December 21st, 1882.

COLLECTIVE INVESTIGATION OF DISEASE.

CARDS and explanatory memoranda for the inquiries concerning Acute Pneumonia, Chorea, and Acute Rheumatism, can be had by application to the Honorary Secretaries of the Local Committees appointed by the Branches, or to the Secretary of the Collective Investigation Committee. Of these diseases, each member of the Association is earnestly requested to record at least *one ordinary case* coming under observation during the year.

Inquiries concerning Diphtheria and Syphilis have been prepared, and can be had on application by those willing to contribute information on these subjects. There are two cards on Diphtheria, one containing clinical, the other etiological inquiries, together with an explanatory memorandum. One of these cards is intended to serve as a guide to the systematic examination of a house or district for sanitary purposes. There are also two sets of inquiries concerning Syphilis, one for acquired, the other for inherited disease. These are accompanied by an explanatory memorandum giving information concerning the most recently observed symptoms of the inherited disease.

It is proposed to publish in the Journal in January a list of the Contributions received up to the end of the present year. It is therefore desirable that members should forward any cards they may have filled up to the Secretary of the Collective Investigation Committee, before December 30th.

F. A. MAHOMED, *Secretary to the Committee.*

12, St. Thomas's Street, S.E.

CORRESPONDENCE.

ON THE POSITION OF SHIP-SURGEONS.

SIR,—In reopening this subject, I wish to disclaim *in toto* all feeling of personal animus, and, since I have now finally retired from the sea-service, all personal interest in the improvement of the ship surgeon's position. Far from desiring to air grievances of my own, the possibility of this suspicion has been my greatest difficulty in approaching the subject, and has, no doubt, long deterred others from undertaking the duty, essentially a public one, which I have assumed. My sea experience, probably as wide as that of any of your correspondents, has been of an exceptionally fortunate character, enabling me to visit most distant parts of the world at small expense, and under circumstances almost invariably pleasant, and securing me some lasting friendships among the captains and shipowners with whom it has brought me into contact. It is unnecessary, and space does not permit that I should recapitulate what I have already said (*BRITISH MEDICAL JOURNAL* and *Lancet*, December 17th, 1881), or notice in detail the remarks of other correspondents. To those whose knowledge is confined to one or two of the best Atlantic lines, or the palmy days of the Peninsular and Oriental, the ground I have occupied may appear extreme. Those of wider experience will know that my statements, each one of which I am able and ready to prove, scarce convey an idea of the truth. It will be well, however, to bear in mind that we have not *one* "mercantile marine medical service," but perhaps *fi/fy*, in almost all of which the customs and conditions of service vary in almost every degree. With two or three of the best companies, there is comparatively little cause for complaint; and these may be known by the fact that they retain suitable surgeons in some instances during many years. Others which, from a public point of view, are little less important, combine so many objections that the most unfortunate specimens of our profession can scarce be induced to engage for a second voyage. This very diversity of the services forms a strong ground of complaint, and it is but natural that a communication pleading for improvement and unity should give most prominence to the worst features of each. Neither Passenger Act nor Board of Trade defines in any way either the duties, responsibilities, status, salary, or accommodation of the ship-surgeon. Each office, and in some instances even each ship, and usually *post facto*, formulates its own law; and hence every parvenu in shipping may "save an honest (?) shilling" by playing shuttlecock with the lives of passengers, and placing indignities upon members of our profession. On the matter of accommodation, I can only reiterate my former statement that the examples I have described "are by no means isolated." It is much more questionable that they are "extreme," as may be shown by yet another instance. In the latest addition to a splendid fleet, carrying annually its thousands upon thousands, and patronised even by royalty, the surgeon's room measures five feet eleven inches by five feet three inches, is without any window or port-hole, and is situated below in a narrow thwart-ship passage, the door being opposite to, and within thirty inches of the door of the passengers' water-closets. Everything else on this vessel is magnificent to a degree. The saloon, to seat about 200, is gorgeous and in perfect taste; the steerages for about 2,000, exceed the requirements of the law; the Captain is allotted two fine rooms, in one of which alone probably twenty persons could sit with comfort; yet for the Surgeon, who has sole charge of the health of these persons, and on whose skill any one of them may depend for his life, this wretched hole, absolutely useless for any other purpose except a clothes-press, or, perhaps, another water-closet, is deemed sufficiently good. Yet, not two years ago, this ship was visited and admired by half Liverpool, pictured and praised by half the papers of England. Is the public interest in the ship-surgeon so small that none but myself asked to see his room? On this same Line the surgeon is paid £9 for each month that he has conducted himself to the satisfaction of those placed over him; but he is obliged to sign the "articles", or contract, between employer and employed, at the rate of one shilling per month, which is, therefore, all that he can legally claim, while the remaining £8 19s. is held over his head as a security for his good behaviour. This principle is applied to no other member of the crew except the surgeon, unmistakably implying that

his employers regard him as the most untrustworthy and probably ill-conducted man on board their ship. How do they reconcile this view with the responsibility they place upon him in the charge of over 2,000 lives? In connection with this part of the subject, it is worthy of note that, while the ocean passenger trade is constantly becoming more enormous, and everything else connected with it is advancing at a proportionate rate, all that pertains to the surgeon is steadily becoming worse. Such rooms as I have described could not have been found, and would not have been tolerated, fifteen or twenty years ago. Then the surgeon's salary was at the rate of £200 or £250 per annum, besides perquisites which no longer exist; now the highest wages (paid by very few lines) are £10 per month. Indeed, as I have already stated, the surgeon on board-ship is commonly remunerated at about the same rate as the steward, cook, and carpenter. On the Line which carries more passengers than any other afloat, he is paid less than the chief steward, and the same as the steerage steward and fifth engineer. Formerly, on all good lines the surgeon had his special servant; now this is everywhere abolished. The surgeon usually "takes his share" of an "officer's boy" or "messroom steward", dispenses unaided, washes his own pestle and mortar, and not unfrequently finds it less trouble and annoyance to carry the medicine to his patients than to search for some stray steward, who may, when found, incline towards impudence at being called upon to do "what is none of his business." And all this, while the duties to be performed are so immensely more important to the public, and proportionately more laborious. During the present year, a new rule has been enforced on all Atlantic steamers: that the surgeon shall examine for vaccination all the steerage passengers; vaccinate those requiring it (*i*), and give certificates of "protection" to the entire number, frequently over 1,500. For this he receives no additional remuneration, although, as recent events prove, he is liable to have his work criticised and his name posted by "obscure western practitioners." When the American authorities performed these vaccinations themselves, they charged the companies fifty cents per head.

The whole question, from a purely public standpoint, may be briefly summarised as follows.

1. Immense and increasing numbers "go down to the sea in ships". Emigration from the United Kingdom has grown from 82,828 in 1877, to 338,244 in 1881.

2. The conditions of the ship-surgeon's position are so very unfavourable, that suitable men can seldom be retained for any considerable time; and those sent out in medical charge of crowded passenger-ships are frequently either too young and inexperienced for the responsibility placed upon them, or men whose want of health or defective character would preclude them from other positions of medical trust. The surgeon's work, especially during the early days of general sickness, and with the present want of all adequate assistance, cannot be satisfactorily performed by one person, and is, therefore, but too often neglected by those who tire of struggling against hopelessly adverse circumstances. Few, if any, ships are furnished with proper ventilating apparatus, or other sanitary appliances; and the master, who is generally wanting in the requisite knowledge, being the only responsible sanitary authority, there is very commonly a neglect of sanitary precautions throughout the voyage.

3. Dependent upon these causes there is among passengers a much larger amount of sickness, and a far higher mortality, than is justified by the necessities of transit.

Before entering upon the subject of sea-mortality, I desire to point out that it is impossible to estimate a reasonable mortality among Atlantic passengers, by mere comparison of the death-rate occurring among them with the contemporaneous death-rate of persons living on land. It is also necessary to consider the conditions peculiar to emigrants which may be supposed to influence this matter. On the one hand, many of these persons have been subjected, for several days prior to embarkation, to a series of unusual influences, which must be admitted to militate against health—excitement at parting from friends and severing old associations, railway travelling, inebriety, and a general disturbance of the regular conditions of life. During the first days on board-ship, some are deprived of accustomed sleep, through fear, close proximity to one another, etc.; and many are subjected to the dangers incident to sea-sickness, which, when uncombated by skilled attention, are unquestionably more serious than is generally believed. Other points might be noticed, such as defective ventilation, improper food, and the rough-and-ready style of cooking and serving food common on board-ship; but these, being distinctly remediable, should hardly be considered in the present inquiry. On the other hand, emigrants are, *a priori*, a healthy and a hopeful people—the picked of the population whence they come. There are among them a much smaller proportion of aged persons, children, and infants, than among the stationary population: of the entire number leaving England for

America during 1881, less than one-fifth were under twelve years of age. And lastly, on the day of embarkation, or the day previously—that is, in all fatal cases, within ten or twelve days of death—they are subjected to three distinct medical examinations, and *passed as healthy*. Balancing these opposing causes, I unhesitatingly express my opinion that the latter are by far the more weighty, and therefore that, if the death-rate among Atlantic passengers approach the ordinary death-rate on land, there must be something wrong, which can and ought to be corrected.

Now to glance at statistics. When worked out, the figures quoted in my letter of December 17th, 1881, from the high authority of Dr. Turner, Director-General of the United States Navy, show that, during the ten years ending December 1880, the mortality among Atlantic passengers was at the rate of 44.6 per 1,000 *per annum*; that, on fifteen particular ships, during 1880, it was at the rate of 70.6 per 1,000 *per annum*, or one death occurred among every 402 passengers; while one ship, carrying 1,331 emigrants during the same year, lost one for every 101 conveyed across. But these statistics, being formed from all European vessels carrying emigrants to New York, may be discredited as applying to British vessels. Not so the return just issued for 1881 by our own Statistical Department (the first ever prepared on this subject in England), and ordered to be printed by the House of Commons. From it may be learned the startling fact, that, of 315,850 persons, who during 1881 embarked on English ships for North America, 185 died in transit.

The proportion of deaths to those embarked by each line was as follows:

On the	Barrow s.s. Line	1 died in every	509 embarked.
" "	Monarch Line	1	751 ..
" "	"American Line	1	867 ..
" "	Anchor Line	1	1,346 ..
" "	Guion Line	1	1,362 ..
" "	Dominion Line	1	1,435 ..
" "	State Line	1	1,461 ..
" "	National Line	1	1,659 ..
" "	Allan Line	1	2,575 ..
" "	White Star Line	1	2,754 ..
" "	Cunard Line	1	2,990 ..
" "	Inman Line	1	3,313 ..
British ships.			

Not included in this rate are the deaths of ten infants born during the voyage, and of fourteen members of the crews, besides seventeen others composed of passengers and crew, who were drowned or committed suicide. It should also be borne in mind that, if such large numbers died during the short transatlantic passage, and *so recently after being passed as healthy*, it is almost certain that many others were landed in a dying condition, or died soon after landing from the effects of the voyage. In comment, I will merely observe that those conversant with the characters of these lines for liberality to their passengers, and such treatment of their surgeons as retains the services of the most experienced men, cannot fail to be struck by how closely the order of the list bears out the substance of my argument. The Allan Line, for reasons it is unnecessary to particularise, one would expect to find occupying a less honourable position.

In interesting contrast to these facts stands this remarkable statement of Mr. Gray, Assistant Secretary of the Marine Department of the Board of Trade, to be found on page 16 of the Blue Book (c. 2,995), referring to a recent Board of Trade inquiry into the treatment of emigrants on Atlantic steamships—probably one of the most glaring official farces ever foisted on a credulous public. "As regards the comparison of an emigrant ship to a 'whited sepulchre' (*Charlotte O'Brien, Pall Mall Gazette*), which I can only imagine means, if it means anything, that disease and death are very prevalent on board such ships, I have made inquiries as to the death-rate, and find that the deaths on board these ships are remarkably few. For this year (the first six months of 1881) the number of deaths on all the steamships of these lines conveying emigrants across the Atlantic, is 18 out of 86,775, or, in other words, one death in about every 4,800 passengers." It is difficult to conceive what was the exact nature of Mr. Gray's inquiries. He need not have left the office of his own department to have ascertained that not 86,775 passengers from Liverpool, London, and Queenstown, but 96,526 from Liverpool alone had embarked in these vessels; and that, instead of 18 deaths being the total, 35 were reported to the Board of Trade by *some* of the surgeons in charge—probably scarce one half of all the deaths which really occurred. Reference to pages 23 and the following of the same Blue Book, whereon are the data of Mr. Gray's calculation, will, in a measure, reveal the method of his errors. In the first place, strange though it may appear in a high official of the Board of Trade, Mr. Gray confuses "adults" with "passengers"—

totally different quantities, since, in the computation of "adults," two children between the ages of one and twelve years count as one "adult," and children under one year of age are not counted at all (Pass. Act, sec. 111). In the second place, Mr. Gray accepts the omission of any reference to deaths in some of the companies' reports as a positive statement that none had occurred—an inference which seems quite unjustifiable, and which I cannot suspect for one moment was ever intended by any one of these companies. Reading the reports from Mr. Gray's point of view, and taking four companies, beginning at the second, we arrive at the stupendous fact that 34,642 "adults," or (following the proportion of the year) about 41,570 passengers, were conveyed across the Atlantic with only two deaths. More stupendous still is the statement if I add that I am in a position to account for those two deaths as having occurred on the last ship of the list, and, therefore, 33,840 "adults," or about 46,508 passengers, were carried from England to America without a single death. Surely it is no light ground for public complaint that such fallacious statistics should be published under the stamp of high official authority, and be "presented to both Houses of Parliament by command of Her Majesty."

In conclusion, let me say that another year's experience has fully confirmed my former opinion that the only means of checking culpable disregard of human life on board of ocean steamers, is to force the matter upon the attention of the Governments of this country and of the United States, "with the view of having the surgeons of all ships carrying any considerable number of passengers, independent and dependable Government officials." Why should the shipowner advance his prices with the view of obtaining more competent men, since he is so little interested in their merits, and is already pestered by shoals of "medical practitioners," *who answer his purpose sufficiently well*, and each of whom is up to the requirements of the Passenger Act—"authorised by law to practise as a physician, surgeon, or apothecary." It is equally clear that a surgeon employed by the shipowner, and subject to dismissal by him at the termination of the voyage, without reason and without notice, can never be an independent guardian of the health interests of the passengers, which not unfrequently come into direct opposition to the money interests of his employer. It has long been a recognised principle, not only by England and the United States, but also, more or less, by every civilised country in the world, that emigration, on any extensive scale, should only be carried on under the direct supervision of Government. Now, the Government Medical Inspector is the last to leave an emigrant ship parting from our shores. The first to receive her on the other side is a medical inspector of the American Government. The one "missing link" in the chain of Government supervision is during *the most important time of all*—while the emigrants are crowded together during the voyage.—I am, sir, your obedient servant,

J. A. IRWIN, M.A. Cantab., M.D. Dub., M.R.C.S. Eng.
Late Honorary Physician to the Manchester Southern Hospital.

* THE LAW AS TO BODIES AWAITING CORONER'S INQUEST.

SIR,—At an inquest lately in the Yeatman Hospital here, the coroner, a surgeon, took exception to the medical witness, under whose care the patient had been for an accident, having made a *post mortem* examination of the body before the inquest was held without any authorisation from him. The medical witness maintained he had a perfect right to make a *post mortem* examination of any patient dying in the hospital, with the consent of the friends of the patient, without waiting for the permission of the coroner; and asked the coroner for the legal authority on which he grounded his objection. He gave none; but wrote to the committee of the hospital, objecting to the medical witness's procedure. Can you tell me whether the coroner has any right to prevent a *post mortem* examination from being made? It is not a question of fees, as the coroner never pays any fees to the medical witness on an inquest at the hospital.—Yours faithfully,

WILLIAM HENRY WILLIAMS.

Sherborne, Dorset, December 13th, 1882.

* * We understand the law to be, that the body of a person awaiting inquest is in the legal possession of the coroner, and no one has a right to interfere with it in any way whatever, except by the coroner's permission. Such interference might be deemed a contempt of authority, and be dealt with accordingly. The consent of the friends obtained by the medical attendant to the making of a *post mortem* examination of a body awaiting inquest cannot in any instance override the authority of the coroner; otherwise, the evidences of crime

might be obliterated, inadvertently or by design, and the ends of justice might likewise be frustrated. The facts, that the coroner alone is empowered by law to order a *post mortem* examination of a body awaiting inquest; that he can issue such order to any duly qualified surgeon he may select; and that no fee is payable without such order, show clearly that the practitioner who proceeds to examination without the previous sanction of the coroner, does so at his peril; and, besides this, he may unexpectedly find himself very awkwardly situated should questions even as to treatment arise—much more so, should carelessness or neglect, in any shape or form, be alleged against him. As a rule, should a *post mortem* examination be required for the purpose of the court, the order is issued to the medical practitioner last in attendance upon the deceased person, or to the one called in at or immediately after death, as he is generally the best witness. With regard to the surgeons of hospitals and public infirmaries, the law relating to *post mortem* examinations applies equally to them as to outside practitioners; with this exception, that the former are not entitled to receive fees. It not unfrequently happens in hospitals that a *post mortem* examination would be most desirable for scientific and pathological reasons, though not required for the strict purposes of the coroner's court. In such instances, an application to the coroner is usually sufficient to obtain the necessary consent. This is the practice generally observed by the coroners of the metropolitan districts. After the inquest is over, a *post mortem* examination, if not ordered by the coroner, can always be made with the consent of the friends.

CHOLERA AND QUARANTINE.

SIR,—I trust you will accord me space for some notes as to your comments on my letter in the JOURNAL of to-day. I am content to rest the opinion I have expressed on the papers referred to, as they seem to me to point out as strongly as any medical statistics can, that cholera is conveyed, as Alison expressed it, by contagion, or human intercourse. Hereafter, I shall use contagion in the strict sense of the word contact, and state, that infection rather than contagion is the term now used for the mode of communication of cholera. I did not say that I "was unable to trace out infection in individual cases," but that "nothing could be done as to tracing out the point of infection." There is much difference; and the full occupation we had at the Jamsetjee Jejeebhoy Hospital prevented the attempt, even were we so inclined. I have no knowledge of any report of large tracts crossed by pilgrims infected (I presume) with cholera, who have not spread the disease. If the passage from Dr. Morehead's *Clinical Diseases in India* had been quoted in its entirety, quite a different impression would, I submit, be left on the mind. Let me complete the quotation, not from the second abridged edition, but from the first of 1856, in which the same words occur.

"In the course of three epidemics of cholera in Bombay (from 1849 to 1854), 158 inmates of the Jamsetjee Jejeebhoy Hospital, while under treatment for other diseases, have been attacked with cholera, and 73 of them have died. At the time of these occurrences, I caused a record to be kept—showing the date of the attack, the bed of the patient, the date of admission into hospital, and the disease for which he was under treatment. I entertained a hope that these facts might throw some light on the etiology of cholera. They have been carefully considered by me; and I have come to the conclusion that, though a considerable part of them are trustworthy, so far as they go, yet they are defective in so many particulars necessary to justify positive conclusions, in an inquiry so difficult and important, that I have determined to withhold their detailed record. I adopt this course, because I am satisfied, that nothing so surely impedes the progress of medical science as the strained applications made by some writers of the observations and statements of others."

Here follow the deductions or remarks, which I forbear to quote, as they would occupy more space, and only quote the passage, *in extenso*, of which you have quoted the first two lines.

"The portable or contagious property of the cholera poison is not supported by these statements; and it is chiefly with reference to this question that *we require facts more complete, precise, and detailed* than these, or than any yet observed and recorded. My present impression on this question is, that if any of the spread of cholera be due to human intercourse, the degree is very limited indeed. My practice with reference to it is, to pay great attention to scrupulous cleanliness and ventilation around cholera sick, and to place them widely

apart from each other; for, setting aside the question of communicability, *nothing is so likely as exhalation from the discharges and bodies of the sick to produce the impurity of atmosphere, the relation of which to the disease is so very probable.*"

The italics are mine. Dr. Morehead was an intimate friend of mine, and it would be difficult to find out any passages more illustrative of the hard reasoning and logical power of his mind. He doubted until logical evidence was forthcoming. I well remember that Dr. Giraud, above twenty-four years ago, expressed to me his opinion that he had seen cholera attack patients and attendants, as he thought, from the infection brought in by those sick of cholera, and healed as Dr. Morehead describes. I submit that the words which I have italicised in the first part of paragraph are borne out by the papers I have quoted; and I further hold that the opinion expressed in the latter part of paragraph, also in italics, seems fully to bear out the conclusions of Drs. W. Budd, Charlton, and others. I saw Dr. Morehead in July last, but a few days before his death, and his words led me to think that he agreed with me as to what I had written on cholera.

In a paper, which I communicated to the Bombay Medical and Physical Society in 1860 on the treatment of cholera, the following passage occurs: "Few will now deny that it does not in many instances spread by infection. The late lamented Dr. Alison, Dr. Budd, Dr. Laycock, and many others furnish incontrovertible evidence that it may be propagated by the effluvia arising from the decomposing dejecta". The discussion on that paper turned on the pathology and mode of treatment. Nor do I recollect seeing any adverse views expressed in the Indian medical papers prior to my leaving that country.

Dr. Goodeve's negative does not invalidate positive affirmative evidence; but, I may ask, was the opinion formed after such inquiries as those of which Dr. Morehead gave the substance? viz.: that upwards of 12.4 per cent. of the cases treated in the Jarnajee Hospital arose among patients admitted for other diseases, besides attendants on the sick. Sir Joseph Fayrer's first remark I may pass unnoticed, as I quite agree with him as to contagion or contact as he precisely describes it. But as to his second, "many believe the same with regard to the excreta and enteric contamination of water"; surely here Sir J. Fayrer does not express his own disbelief in it, he only says that many do not believe in it. Truly such opinions need no refutation from me, until facts have been brought forward which disprove or account for in some other way the simple narratives which I have quoted (*vide* Budd, Charlton, Leao, and others). None of your remarks attempt this, nor do you say where such confutation is to be found.

I think you will find that I have not entered into the question of maritime quarantine. It was only your denial as to the spread of cholera by infection that induced me to call to your attention the papers I mentioned. I can find nothing in my remarks to justify your saying: "Yet he is apparently content that a ship-load of passengers should be crowded for an indefinite period into a lazarette." I am astonished that you should have attributed such an idea to me, and I must ask you for your grounds for the charge.

My own amazement was unbounded when I read your article on quarantine, and in it apparently totally denying the infection of cholera. To my mind, the articles I have quoted decided the controversy which raged about forty-five or fifty years ago, and, at the same time, supplied us with the means of combatting the plague. I should be glad if you would give me references to any articles which disprove what Drs. Snow, W. Budd, and others pointed out. For such a purpose, mere opinions, without the data on which they are grounded, are, in my opinion, of little value. I could have cited much from my personal Indian experience, but without the precision necessary as evidence in so important an inquiry. The cholera inquiry of 1861 shows how the disease radiated from a centre; and again, in Rajpootana, from another centre months afterwards. These radii, being the chief lines of human intercourse, surely point to a connection between the two, and on what other hypothesis can they be accounted for?—Your obedient servant,

Egham Hill, November 25th, 1882.

T. M. LOWNDS, M.D.

HOSPITALLER WORK IN CAIRO.

SIR,—I enclose a copy of an appeal made to the Khedive by Lady Strangford, with a view to the hospital at Cairo, initiated by the St. John Ambulance Association, and administered by her, becoming a permanent institution in Egypt, where skilled nursing might be enjoyed, seen, and studied. During the few weeks required for negotiation, the expense of carrying on the hospital will be very great, and the funds are almost exhausted. You have already shown in your columns—through the pen of Mr. H. Sieveking, who is working in the hospital—how much good has already been done to English and

Arab patients. Will you kindly allow, in these same columns, an appeal to be made for pecuniary help, very urgently required?

If the plan be supported and carried out, a permanent record of practical English philanthropy will be left in Egypt, the value of which will be found to rise year by year.

I have the honour to be, sir, your obedient servant,

F. DUNCAN, Lieutenant-Colonel R.A.,
Deputy Chairman, St. John Ambulance Association, and Director
of Ambulance Department, Order of St. John.
29, The Common, Woolwich, November 28th, 1882.

[Copy.]

Altesse, — En vous offrant mes remerciements profondes pour la visite avec laquelle vous m'avez honoré et pour les belles paroles que vous m'avez dit, j'ose supplier votre Altesse de n'oublier pas la pétition que je faisais à votre bonté. Le travail, la fatigue, l'inquiétude que j'ai prodigué tant volontiers, et l'argent souscrit avec tant de sympathie pour les malheurs, heureusement fugitifs, de ce pays, auront accompli très peu si je ne puisse pas laisser un établissement élevé sur une base sûre, en souvenir éternel de l'heureuse termination d'une guerre tant regrettable. Les soldats Anglais vont partir un jour, la rébellion sera oubliée; veuillez, Altesse, agréer que l'objet de notre travail restera un témoin qui ne passe jamais, de l'amitié fraternelle montrée par l'Angleterre pour le Khedive et pour l'Egypte!

Il s'en faut pour cela que la maison que nous avons arrangé avec tant de soin, soit pour toujours consacrée à son occupation actuelle; et si votre Altesse en pourra devenir le possesseur, j'ose espérer que votre cœur généreux ne refusera pas d'en faire un don personnel à moi; ou de la mettre dans les mains d'une curatelle Anglaise qui la conservera toujours aux besoins des Anglais et des Egyptiens. Il est vrai qu'il y a et qu'il y sera des hôpitaux purement Egyptiens; mais je désire ardemment laisser un petit hôpital *modèle*, où les avantages des soins — la science des gardes-malades purement Anglaise — seront donnés aussi bien que les pansements. Et, en outre, j'aime à croire que ce soit un lien cordiale entre les deux nations, si on voit une petite asile où les Egyptiens peuvent être soignés toujours par leurs amis, les Anglais.

Je vous supplie, Altesse, de permettre que l'ouvrage que nous avons construit avec tant de plaisir, ne sera pas une pensée douce mais fugitive, mais que ce sera véritablement un bienfait aux Egyptiens et un souvenir matériel et solide des plus heureux à nous.

Votre Altesse, j'en suis convaincu, ajoutera à toutes vos bontés, la grâce de prendre le patronage en Egypte de notre entreprise. J'ai l'honneur de dire à votre Altesse que S.A.R. le Duc de Connaught accepte avec la plus grande cordialité le patronage en Angleterre.

V. S.

PLAINS AND HILL CLIMATES IN INDIA.

SIR,—I enclose a short account of the medical history of the 30th Regiment, from the date of its arrival in India, on February 9th, 1880, to August 22nd, 1882, a period of two and a-half years. The peculiar interest in this statement lies in the fact that this regiment was selected by the Government of India to proceed direct to the hills after landing, so that a comparison might be made between it and others who remained in the plains, of the effects of a hill climate, with special reference to enteric fever.

Unfortunately, the experiment was rather spoiled through the accident of the regiment having to be detained for some weeks in camp at Bareilly, so that they did not arrive at Ranikhet till the end of April, the result, that they lost a good many men from typhoid, cholera, dysentery, etc., before their arrival at Ranikhet; and no doubt many of the men contracted a tendency to malarial disease during the residence of the camp at Bareilly. With this defect in the proposed scheme the results are instructive, as will be seen. Venereal disease heads the list, with nearly 600 admissions out of a strength of 900, or, deducting say 100 for married men, 6 men out of 8 suffered from venereal disease during the two and a-half years.

The Contagious Diseases Act is in force at Wainfleet, but the villages all round harbour unlicensed prostitutes; and no amount of care, short of an inspection of the female population for a circle of five miles, would prevent the evil.

The effects of the hill climate is seen in the comparatively small number of admissions for malarial disease. Had this regiment been at any of the ordinary "plains" stations, instead of 202 cases of ague, there would probably have been 1,500 admissions from the same cause. Simple continued fever is credited with 114 admissions. This is a very doubtful term in the nomenclature; and, if these cases were carefully analysed, I think a large proportion would come under the heading of enteric fever in a mild form, or febricula from exposure to the sun or ex-

cessive drinking. Enteric fever, with its 77 admissions and 17 deaths, is the most important disease in the list, and shows how Bryden's two great factors, "youth" and "recent arrival", are constant, even under the best possible climatic conditions.

It will be interesting to see the health-statistics for the next two years of this corps, while quartered at Meenan Meer. According to Bryden (and in all experience), enteric fever will diminish; while hepatic diseases, bowel-complaints, and, later on, heart-affections, will become the chief causes of sickness and mortality.—I am, etc.,

December 5th, 1882. J. B. HAMILTON, M.D., Surgeon-Major.

BRITISH RAINFALL.

SIR,—I am just preparing to issue to all the observers of rainfall known to me, blank forms for the entry of their records for the year shortly about to close. This staff now exceeds 2,000, but still, as they are not unfrequently rather clustered, there are many parts of the country where additional records are needed. I have no doubt that records are already kept in many places unknown to me, and I shall be glad if you will allow me to invite communications from any one who has kept an accurate record, and to supply either those already observing or contemplating doing so with a copy of the rules adopted by British observers, and with all necessary blank forms—all, I may perhaps as well add, free of charge, as our greatest requirements are ample and accurate records.—Your obedient servant,

62, Camden Square, London, N.W. G. J. SYMONS, F.R.S.

THE REPRESENTATION OF BRANCHES IN THE COMMITTEE OF COUNCIL.

SIR,—Will you allow me, through the medium of the JOURNAL, to call the attention of the members of the South Midland Branch to the circular letter issued by the President of Council to all the presidents and secretaries of the branches concerning the representation of the Branches on the Committee of Council? It has not been thought necessary to call a general meeting of this Branch to entertain the subject; but I have personally sent the circular to all the officers of it, requesting their replies and suggestions. It would, however, obviously be impossible to do so in the case of every individual member; and I therefore adopt this method of directing their attention to the circular, which is also published in the JOURNAL of December 2nd. In asking those of them who may be so disposed kindly to furnish me, without delay, with their opinions on the same, and to suggest anything that may occur to them, I would especially draw their particular attention to Query, No. 7. Promising to transmit to the President of Council a collective opinion of our Branch upon the subject of the circular, as far as I am able to obtain the same.—I beg to remain, your obedient servant,

CHARLES J. EVANS,

President, South Midland Branch, British Medical Association.

THE EVOLUTION OF ACUTE SPECIFIC DISEASES.

SIR,—In a paper which I read before the Public Health Section of the British Medical Association, on "The Etiology of the Acute Specific Infectious Diseases," I made a statement to the effect that where the *de novo* origin, and consequent specific evolution, of such disease did occur, observation would probably show that the first cases were abnormal and indefinite, and the succeeding ones would become more and more typical.

This was a natural induction, and was not, within my knowledge, as yet exemplified.

On my return home I was summoned to see a child, 4 years of age, at a lonely farm-house on a hill, quite cut off from all direct communication. When I got there I found the child suffering from a gathering of the lymphatic glands at the angle of the jaw. The tongue was red, and denuded of epithelium, and the fauces of a dusky colour. The fever was very slight, and desquamation commencing. Inquiry elicited the following singular history.

A month ago, James G., age 11, had a bad sore throat. He had no rash, and the indisposition only lasted three days, not preventing him from work. The mother distinctly states there was no rash and no subsequent peeling. No source of infection could be traced in any way. A week later the mother, Mrs. G., had a sore throat. It commenced with rigors, and was very bad. She had no rash at all. The throat was bad three or four days, and there was no subsequent peeling. There was also considerable purulent discharge from nares.

In four days more, William G., 15, sickened. William had severe head-symptoms and a sore throat; no nasal discharge, no rash, and no desquamation; but he complained of pain in the loins towards the end of the attack. The urine was scanty and high coloured.

John G. sickened two days after William, and had a very bad sore throat; he had a rash, and was a bright red all over. The peeling was very marked, and is now only just finished.

Eliza Ann, three years of age, the child I was called to see, began to be ill on the 4th inst. She had a sore throat and a white tongue; the mother could not say if it was spotted with red. She had also a vivid red rash all over the body. No doctor was called in at all to any of the cases until Friday, the 11th, when my Mr. Clarke went to see her, in my absence. He found the throat sore and dusky red, and inflamed glands at the angle of the jaw. I saw the case myself yesterday, August 13th, and elicited the foregoing story.

Now, this farmhouse is quite isolated. The people have had no communication with any one else; they have not been exposed to any infection, so far as inquiry can reach.

Does not this bear out the position I adopted—that scarlet fever can and does, arise *de novo*? We have had one or two epidemics in villages around here, and many sporadic cases, whence I conclude that the atmospheric conditions are favourable to the evolution of the disease. The other point worthy of notice is, that the cases became progressively more and more severe as the poison developed specific qualities; and thus they illustrate, in a singular manner, the prophesy I made on Wednesday last, that where evolution does take place, we shall see a series of abnormal or imperfect cases, becoming more and more typical as the organism, in its course of development, acquires specific properties, as a consequence of its tendency to select in a new host the pabulum which circumstances inured it to in its original location.—I am, etc.,

KENNETH W. MILLICAN, B.A. Cantab.

DRAINAGE-TUBE FOR EMPYEMA.

SIR,—Seeing, in your issue of July 15th, Dr. Philip Hensley's description of an empyema-tube invented by him, and made for him by Messrs. Arnold and Son, I beg you will allow me, in justice to myself, to say that I have used an empyema-tube for the past two years which I had made for me, constructed on exactly the same principles as Dr. Hensley's, although not made of the same material.

My appliance is as follows. A piece of ordinary leaden tubing is soldered on to an oval tin plate, perforated at the spot at which the leaden tubing is attached. Through the plate and leaden tube passes a stout black rubber pipe, which can be lengthened or shortened according to the requirements of the case by stretching and pulling through more or less. That portion of the rubber tube which enters the chest is on one side of the tin disc, whilst the leaden pipe and continuity of the rubber tube contained in it is on the other, and is so placed to protect the India-rubber tube from "kinking" from pressure, etc. The free portion of the rubber tube is twelve or sixteen inches long; and to prevent air from reaching the interior of the thorax between it and the leaden tube encircling it, another portion of rubber tubing of somewhat larger diameter is stretched over both leaden pipe and tubing. In addition, there is a glass gauze pipe interposed in the continuity of the tubing, for the purpose of watching the oscillations of fluids therein contained.

Unlike Dr. Hensley's tube, that portion of my instrument contained in the chest is not perforated laterally, and has simply the end cut straight off. I believe this to be an advantage, for thereby the granulations are prevented from growing into the calibre of the tube, destroying its utility.

The short portion of the rubber tube (one inch and a half to two inches in length) having been inserted into the chest, and the tin disc having been bound to the side, and there retained by the application of a Martin's bandage, the free end of the tube is grasped by the person inserting it, and he, having emptied the chest as far as possible of air, by alternately nipping the tube during the patient's full inspiration and relaxing his hold during expiration, the extremity is immersed in a solution of boracic acid or quinine contained in a jar or bottle near the patient. The onlooker will have the satisfaction of seeing fluids rise during inspiration into the chest and fall again during expiration, in a manner fully described by me in the *Lancet*, March 5th, 1881, in a paper entitled "Respiratory Irrigation: A New Method of After-Treatment in Empyema." It was for the carrying out of the above treatment that I had the tube made, and the results obtained testify to its utility and simplicity, in cases which have occurred both in the Newcastle Infirmary and elsewhere.

I may perhaps be allowed to say that, with this appliance, patients with chronic empyema are rendered free from fever, pain, and hectic, and are enabled to walk about, as some of them do, washing out their cavities at every respiration, by having the extremity of the tube contained in a bottle of medicated lotion in the coat-pocket, or having the free end of the tube for the time being plugged with a cork, the cavity

of the chest having been previously as far as possible rarified.—I have the honour to be, sir, yours very faithfully,

C. M. GOYDER,
Late Senior House-Surgeon Newcastle-on-Tyne Infirmary, etc.
1, Higham Place, Newcastle-on-Tyne.

DEATHS FROM CHLOROFORM.

SIR,—The number of deaths from chloroform that have been reported from time to time in the journals, and the publicity given to them by some of the lay papers, make country practitioners very tardy in having recourse to this agent. Yet surgeons have done little to try to reduce the mortality. No doubt, before an operation is commenced, an electric battery and stimulants will be placed near at hand, but these are not the means by which the mortality is to be reduced. Mr. Schäfer, of University College, has recommended the use of atropine subcutaneously, in order to do away with the supposed stimulating action of the drug on the cardio-inhibitory fibres of the vagus, but the suggestion does not seem to have been acted upon.

Elsewhere, I have tried to show that chloroform does not stimulate the cardio-inhibitory mechanism. If it did so, we should expect to have such symptoms in every case of anaesthesia; but, instead, this effect is the exception. Chloroform is a general protoplasmic depressant, and it does not follow that because, in cases of experimental poisoning, the heart's action fails momentarily, before the respiratory centre becomes paralysed, that it has a stimulating effect on the cardio-inhibitory centre or mechanism. I believe that, in the majority of cases of deaths from chloroform, the cardio-inhibitory impulse originates in the intellectual centres; and the heart, having its functional activity depressed by the drug, as are all other parts of the body, is unable to mount over the additional depression. These views are in keeping with the usual reports of the fatal cases, which generally run somewhat alike. "The patient seemed at first to take the anaesthetic quietly, but suddenly commenced to struggle violently, and the heart ceased beating, and the pulse did not return, though all restorative means were tried."

This "suddenly commenced to struggle violently" means the development of a cardio-inhibitory impulse in the sensorium in the shape of terror, fear, etc. Now atropine paralyses the cardio-inhibitory mechanism, and a dose of it previously to using the anaesthetic would prevent such an impulse from stopping the heart's action. Why is it not used?—I am, sir, yours faithfully,

J. H. WHELAN, M.D., M.Ch.

ŒSOPHAGOSTOMY.

SIR,—The assertion by Mr. Reeves "that œsophageal structure is commenced in the upper part of the tube" receiving a second time your editorial countenance, and being in my opinion calculated to mislead on an important point, it may perhaps be worth while to collect the present experience of pathologists, and ascertain if it bears out the previously accepted doctrine, that opposite or near the bifurcation of the trachea is the usual site of malignant stricture. Out of 630 systematically recorded *post mortem* examinations nine are cases of strictures of the œsophagus; two of epithelioma of the pharynx; two of epithelioma of the œsophagus between the root of the neck and bifurcation of the trachea; three of epithelioma; and one cicatricial stricture below the bifurcation; one of cylindroma, commencing in and spreading upwards from the stomach. That is, two out of the nine might have required œsophagostomy. In addition, I have met with several other cases, which strongly support the conclusion that stricture is commoner below the root of the neck. It is, however, a matter of some importance that the site of cancer of the œsophagus, when above the sternum, can almost always be recognised under any circumstances; nor is there much greater difficulty when below this point, if a stricture be present. It is, therefore, the less advisable to urge œsophagostomy in preference to gastrostomy by such an argument, even if true.

At the same time, it seems to me that Mr. Reeves is deserving of all support in advising that the major operation should never be performed when anything less will suffice; for there is now sufficient experience to show that it is not merely the condition of inanition, in which alone the operation was formerly resorted to, that accounts for the high mortality, but that a fatal result may take place in the most promising cases.

I scarcely think that cutting into the œsophagus should be called either a rare or a novel operation, or that it is only now brought within the range of practical surgery. For the purpose of removing foreign bodies, surely no surgeon has neglected it in suitable cases for a long time past; which, even for the object recommended by Mr. Reeves, we may go back a hundred years, and read in Benjamin Hall's *Surgery* that, "when these (tumours) are situated in the superior

part of the œsophagus, making an opening into it may sometimes be found advisable, with a view to the conveyance of nourishment into the stomach." And, further on, "In addition to what we have already said of the propriety of this operation in particular cases, we may remark that the danger attending it is by no means so great as is commonly imagined"; and this, be it remembered, in the days before anaesthetics lent their aid and encouragement, both to the surgeon and to his patient.—Yours, etc, FRANK T. PAUL, F.R.C.S., Liverpool.

THE NECESSITY FOR COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES IN LODGING-HOUSES.

SIR,—Every year, as autumn comes round, I hear of families who went to the seaside for their "summer trip", to seek health and recreation, but who found instead illness and trouble. Undoubtedly, many of these cases would be prevented by compulsory notification of infectious diseases, and special by-laws for lodging-houses, enforced by the local sanitary authority, under the supervision of the medical officer of health; although I doubt if even this arrangement would work satisfactorily, until each town provides a fund from which compensation might be made to lodging-house keepers, laundresses, and others who are quarantined by the medical officer of health, and so prevented from earning their livings.

The following case, by no means an isolated one, illustrates well the necessity for legislation in this matter. On August 2nd, Mr. and Mrs. B. and family (eleven in all) left South Kensington for a fashionable watering-place, travelling more than two hundred miles from London. They went direct to lodgings which they had previously secured, and for which they paid a very high rent. A fortnight after their arrival, the father and mother had to return to London for a week on business, leaving their family in the lodgings. During this time, the landlady's little girl was taken ill with "a violent chill and slight sunstroke, caused by playing on the beach without a hat". This was the landlady's account; and she assured her lodgers that her child was not suffering from any infectious disease. On the following day, the landlady made inquiries of the nurse in charge of the younger members of Mrs. B.'s family, as to which were the best disinfectants; carbolic acid was suggested, and a solution of this was at once placed in dishes outside the sick-room, but was cleared away by the doctor's order on his next visit. The nurse did not understand why any disinfectant should be wanted for a "chill or a sunstroke", either inside or outside the sick-room, so she managed, in the absence of the landlady, to see the child, and found her in the following condition. The arms and chest (the only parts of the body she examined) were covered with a decided red rash; the throat was sore; the glands in the neck were enlarged and tender; and the child's mind was wandering. This was on or about August 18th. The nurse, thinking this must be a case of scarlatina, waylaid the doctor, who was paying two visits a day, and asked him the question point-blank, and was assured that the child was not suffering from anything infectious. The sick-room was on the basement, and on the same floor was a room which the younger members of Mrs. B.'s family used to take their meals in, as also was the kitchen.

On the fifth day of the illness, the child was allowed to be up and about, although looking far from well. On August 28th, just five days after the child was allowed to leave her room, the youngest member of the family lodging in the house, a delicate little boy, under eight years of age, was taken ill with scarlatina, and had a severe attack. At the suggestion of the landlady, the same doctor was sent for, and he was again asked, and again denied that the landlady's child had suffered from anything more than a derangement of stomach. In due course the rash faded, and the patient began to peel. On hearing of this, the housemaid exclaimed, "Why, that is just what little Cissy K— has been doing; all the skin has been coming off her hands and feet" (alluding to the landlady's child). Now can there be any doubt that the landlady's child had scarlatina, yet no steps were taken to prevent its spread?

Certainly the little boy was isolated at the top of the house during the first part of his illness, for the mother and the nurse knew that this was necessary, but they did not know how long the isolation should be continued; and, as a matter of fact, the child was allowed to go out in a public bath chair whilst he was still copiously peeling, and this with the full approval of the doctor. Moreover, during the whole of the illness, no advice was given by the medical attendant as regards disinfecting the soiled linen prior to its being sent to the laundress. More than a fortnight before desquamation had ceased, the family were obliged, by the landlady, to quit their lodgings, as she had previously let them for the winter to another party. Other lodgings were found,

and, through the neglect of continued isolation, another member of the family contracted the disease. In the meantime I had been communicated with, and, happily, I was able to place my patients in the hands of a practitioner who has proved himself well qualified in sanitary science. If compulsory notification of infectious disease had been in force in this town, in all probability scarlatina would not have broken out in the house, for it has been since discovered that the landlady was visited by a young relative whilst still peeling after an attack of that disease. As the law exists, I believe the sufferers have no power to obtain compensation from those who, apparently, wilfully withheld the truth.—I am, sir, yours faithfully,
WALTER TYRRELL.
95, Cromwell Road, S.W., October 9th, 1882.

THE GERM THEORY OF DISEASE.

SIR,—In the address on the "Germ Theory of Disease," by Dr. Crowfoot, recently published in the *BRITISH MEDICAL JOURNAL*, that gentleman refers to the fact, that Koch, on injecting a large dose of putrefying blood into a mouse, caused death without the development of bacterioid organism.

Further on, he refers to the investigations of the Committee of the Pathological Society "which attacked these diseases, so to speak, from the opposite side to that on which they were approached by Koch. Instead of making experiments on animals, they investigated clinically cases of septicæmia and pyæmia in man. They only met with two doubtful cases, analogous to those described by Koch, in which the dose of the poison is so large, and its effect so rapid, that there is no time for infective disease to be set up."

Now, Sir, it occurs to me that the following case bears on this point. A month or two ago, I was summoned to a child seriously ill in a neighbouring village, in which, I may mention, scarlet fever of, on the whole, a very mild type, was epidemic. I found a child four years of age, completely prostrate, and apparently collapsed. The child had been apparently quite well at 8 A.M. Now, at 11.30 A.M., it was unconscious, vomiting every five or ten minutes. The tongue was very foul; there were motions which I should designate as "rice-water" stools, though there were no cramps, and the child had occasional clonic convulsions. The throat was not sore, for the child swallowed with ease, but it presented a dusky redness. The pulse was very rapid and feeble, the temperature low. I forget the exact record, and have mislaid my notes, but I think under 101° Fahr. At four in the afternoon the child was conscious, and matters looked a trifle more favourable; the sickness was not so severe, and the diarrhoea less. Next day, however, when I saw the child again, it was evidently *in extremis*. The clonic convulsions were exaggerated and constant, the eyes squinted, the breath was icy cold, and the temperature, 106° Fahr. The child died that evening.

The diagnosis appeared to me uncertain. There was no rash, no sore throat. The reading of "rice-water" stools was nullified by fever in place of coldness, and by absence of cramps. I therefore sent a record of the case to Dr. Broadbent, who kindly expressed his opinion that the case looked "like the work of scarlatina poison." "The very sudden access, the extremely frequent pulse, and the early prostration of the nervous symptoms are highly characteristic of 'suppressed scarlet fever,' and even the choleraic diarrhoea, which is the most exceptional feature, is not a very unusual symptom."

My reason for recording this case is because of its bearing on the point. The clinical import of the large dose of fever-poison which killed the patient before any specific symptoms could be manifested, is enhanced by the fact that no further case occurred in that house or the one adjoining, notwithstanding that there were many people in close contact with the patient, and hygienic conditions were very bad.—I am, yours faithfully,
KENNETH W. MILLICAN.
Kineton, Warwick.

ALPINE HEIGHTS AND MARINE CLIMATES IN THE TREATMENT OF CONSUMPTION.

SIR,—In glancing over a paper with this title, in your number of September 30th, I observed this sentence: "At St. Moritz there were only fifteen clear days in the fourteen winter months 1866-67 and 68." It struck me at once that this could not be accurate, and I forwarded this statement to a patient of mine now at St. Moritz, and begged him to inquire into it.

He sends me the official *Meteorological Record*, kept at Bevers, five miles from St. Moritz, from October to April—i.e., the seven winter months, of 1866-67, and from October to April, the seven winter months, of 1867-68, the fourteen months alluded to. This record states that during these months there were twenty-six days of cloudless skies, and 187

days when the sky was "almost clear, and more than half-clear," and sixty-four days "overcast, without sun or rain."

During one of those fourteen months—viz., October, 1866—General McClellan has left a note in the Visitors' Book of the Kuhn Hotel, St. Moritz, to this effect: "In October" (up to date, 22nd) "but five cloudy days, and only one of them at all unpleasant; the remaining seventeen days superb"!—Your obedient servant,

October 10, 1882.

J. BURNEY YEO.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE PORTMAHON PROVIDENT DISPENSARY, SHEFFIELD.

OUR attention has been called to the handbills issued by this so-called provident dispensary. Every good thing has its counterfeit, and the *bonâ fide* provident dispensaries have their counterfeit in such institutions as this. It has nothing "provident" about it but the name; and is, in fact, merely a shop for the sale of cheap advice and medicine. Such institutions are doing much to degrade the profession, and should be met by setting on foot thoroughly equipped provident dispensaries, under the patronage of the leading medical men of the neighbourhood.

GLASGOW MATERNITY HOSPITAL.

THE annual meeting of the supporters of the above institution was held on November 28th. The medical report, which was read and adopted, was of a satisfactory nature. It stated that 256 cases had been treated in the hospital, and 1,254 at the homes of patients, giving a total of 1,510, or an increase of 260 over the numbers of last year. The death-rate had been very low, and there had been no cases of puerperal fever. No fewer than 154 students had attended the practice of the hospital, which was a considerable increase over the numbers of previous years. In the course of the year 23 nurses had received hospital training, and every effort was being made to obtain as superior a class of women as possible for the work. The annual income had been £1,214, and the expenditure £1,310; but by the legacies left and from other sources the deficiency had been met. It is satisfactory to note, too, that all the debt on the institution has been cleared off. In the course of some remarks at the meeting, Professor Leishman expressed his entire satisfaction with the management of the hospital, and with the construction and cleanliness of the new buildings, than which nothing better could be devised.

BOLINGBROKE HOUSE PAY HOSPITAL.

WE have received the second annual report of this institution, and are glad to notice that it records most satisfactory progress. Our readers are already aware of the basis upon which this hospital stands. It is intended to supply the lower-middle class with "a home in sickness," a hospital in which sick persons can receive all the advantages of in-patient treatment, but in which each patient is required to make a weekly payment according to his circumstances. There can be no doubt this is an important experiment; and it is, we believe, an unique experiment, for St. Thomas's Home and Fitzroy House adopt a higher scale of charges, and aim at meeting the wants of a higher class of patients.

During the past year the number of beds at Bolingbroke Hospital has been increased from twelve to twenty-eight. The total number of patients admitted during the year was sixty-five, as against thirty-four last year. The total amount paid by patients was £652 4s., as against £202 13s. last year. On an average, each patient has paid £1 10s. 1d. per week; while the weekly cost of each patient has decreased in consequence of the increased number of patients treated in the hospital. The largest number of patients in the wards at any one time was twenty-three. The table which gives the occupations of various patients, shows that the persons who were admitted belonged to the middle and lower-middle class, that is to say, to the very class whom it is most desirable to keep from falling into the habit of applying to charitable institutions, when sickness comes upon them. On the whole, the year's working must be gratifying to the Committee and to all who are interested in the principle of thrift and self-help. As the report says: "It is obvious that to educate people to believe that they should pay for their medical treatment according to their means, we must be content to move slowly, but that the Pay Hospital scheme for the special class treated at Bolingbroke House is progressing in a very encouraging way there can be no possible doubt to any one who will peruse the comparative table of two years' results."

BELFAST ROYAL HOSPITAL.

THE annual meeting of the subscribers of this hospital was held on November 13th, under the presidency of the Mayor of Belfast. From the report, it appears that all accounts of the past year have been paid, but to accomplish this, it was necessary to expend £2,048 6s. of donations and bequests which had been received during the year, together with £500 from the invested funds, and the balance in the bank at the beginning of the year. It, therefore, appears that were it not for the substantial donations and bequests of friends, there would be annual deficiency of about £2,000. And the Committee report that the greatest economy consistent with efficiency had been exercised in every department. The annual subscriptions, however, have increased from £1,426 11s. 6d. last year to £1,487 6s. 7d. in the present year; the donations from £835 11s. 4d. to £1,348 6s., and the contributions from workpeople and young men from £300 17s. 4d. to £430; but there has been a diminution in the Hospital Sunday Fund of last year from £536 16s. 7d. to £501 16s. 4d. in the present year. The Committee feel some satisfaction in the increase of subscriptions from the working classes, and steps are being taken to still further increase these by a more complete canvass of the town, and they are hopeful of being able to report satisfactory results at the close of another year. Owing to the pressure on the hospital funds, the recommendation from the last annual meeting to expend the balance of the Bryson bequest (£782 2s. 8d.) on the erection and completion of a laundry on the Throne Lands, was again postponed for the present. The physicians' and surgeons' report for the year ending August 31st, showed that 1,749 new cases were admitted to the wards; and these, with 101 cases remaining from the previous year, make a total of 1,853 intern patients treated in the hospital in the twelve months. Of these, 661 were medical, and 1,182 surgical cases; 125 patients died during the year; 263 surgical operations were performed during the year, with a mortality of 5.9 per cent. In medical cases, the mortality was 9.78 per cent., and the general surgical mortality 5.12 per cent. In the extern department, 8,121 persons were treated, 715 being medical, and 5,406 surgical cases. The total attendance in the extern department for the year, was 30,298. Clinical instruction was given in the wards to 229 students during the winter, and 118 during the summer session. The recommendation of the committee and the medical staff to establish two new departments in the hospital—one for diseases of women, the other for diseases of the eye and ear—provoked considerable discussion and difference of opinion. It was urged by some that the state of their funds did not warrant them in making extensions which would necessitate extra expense; and that, if the accommodation was not extended, these new departments would encroach upon the space which was much required for general surgical and medical patients; and, besides, that special hospitals for these diseases already existed in the town well adapted for clinical teaching, and which could be made available to the students. However, the larger majority of the meeting thought that the Royal Hospital, in its teaching and its granting of certificates, should not be made dependent on other institutions; that, with very little extra expense, two efficient departments could be worked, which would afford an ample field for clinical instruction, and empower them to grant certificates of attendance; and that, if the students desired in addition to attend the other special hospitals in town, every encouragement would be given them to do so. It was, therefore, resolved to open two departments, principally extern, in connection with the hospital. Candidates are already canvassing for these appointments—Dr. Nelson for the eye and ear department, and Drs. Byers and Mackenzie for the diseases of women department.

MILITARY AND NAVAL MEDICAL SERVICES.

HONORED Deputy Inspector-General of Hospitals and Fleets Andrew Murray has been awarded the Greenwich Hospital pension of £50 a year, recently received by Andrew Cross, who held the same office up to the time of his death, on the 3rd of the present month.

DEPUTY-SURGEON Jones Lamprey, M.B., lately employed in chief charge of the medical depot in Cyprus, has been appointed Principal Medical Officer to the Forces in Dublin.

COLONEL Sir F. Boller, V.C., K.C.M.G., C.B., has been selected to replace Major-General Sir Evelyn Wood as a member of the Committee at the War Office, of which the Earl of Morley is President, for the re-organization of the present system of hospitals in the Field and Army Hospital Corps, which will assemble from time to time until this important work is completed.

FRANCIS JOHN George William John Sutherland having been

placed on the retired list from November 20th last, has been allowed to assume the rank and title of Deputy Inspector-General of Hospitals and Fleets on the retired list from that date. In accordance with the provisions of her Majesty's Order in Council of April 1st, 1881, Staff-Surgeon Thomas Harvey has been placed on the retired list of his rank from the 8th instant.

BRIGADE-SURGEON Frederick M. Skues is granted retired pay, with the honorary rank of Deputy Surgeon-General; Brigade-Surgeon Sir Robert William Jackson, G.C.B., is granted retire pay, with the honorary rank of Deputy Surgeon-General; Surgeon John Percival Hunt, M.D., from half-pay, to be Surgeon, *vice* D. O'Sullivan, who has resigned his commission.

PUBLIC HEALTH

AND

POOR-LAW MEDICAL SERVICES.

COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES IN GLASGOW.

BY a large majority of votes, and in direct opposition to the almost unanimous opinions of the local medical profession, the town council of Glasgow have decided to include in a new Police Bill, clauses providing for the compulsory notification of cases of infectious diseases by medical men to the sanitary authority. Just two weeks earlier, the town council of Birmingham arrived at a precisely opposite determination, deciding to exclude from their Bill exactly similar clauses to those included by Glasgow. The day before Birmingham's action, the Parliamentary Bills Committee of the Sheffield Town Council struck out similar clauses from their Bill; while, a little earlier still, Liverpool had done the same.

But what is good for Glasgow cannot be bad for Birmingham; or what is bad for Birmingham, Sheffield, and Liverpool, cannot be good for Glasgow. This strange diversity of opinion on the part of different sanitary authorities points to the necessity of a Parliamentary discussion of the question, and of an Act that shall be applicable to the whole kingdom. Were this discussion undertaken, all interests would be fully and fairly considered, extreme opinions would be discounted, and a salutary addition made to our public health legislation, such as would, for some years to come, satisfy the wishes of all moderate men. As it is at present, it seems wholly to depend on some chance circumstance, such as the personal popularity of a medical officer of health, or the particular opinions of the chairman or vice-chairman of a health-committee, whether a town shall have any kind of notification of disease, and in what particular form, and by whom and to whom that notification shall be made.

Not the least serious of the evils that arise from the present piecemeal method of dealing with this question, are the frequently recurring conflicts between medical men and sanitary authorities, and the harsh, bitter, and ungenerous expressions that are indulged in by all alike, and that seem to be gradually bringing about a separation of the profession into two great antagonistic classes—the official class represented by medical officers of health and a small minority of practising medical men, and a non-official class comprising the great bulk of the profession. As most of these evils have been illustrated in the Glasgow conflict, it will be worth while, perhaps, briefly to review its chief incidents.

When it became known that the clauses were to be introduced, a memorial objecting to them was presented by the Faculty of Physicians and Surgeons; and subsequently two deputations met the revising committee and the town council respectively (the latter deputation consisting of Professor Gairdner and Dr. Fergus), and explained the grounds for dissent. A very able paper was read before a special meeting of the Philosophical Society, on the 6th instant, by Dr. Eben. Duncan, in the course of which the medical objections were set forth with great moderation and cogency. These were answered by Dr. Russell, the able medical officer of health, and eventually the meeting was adjourned. In the course of the discussion on this paper, some very wise words were let drop by Professor Gairdner, which, like most of his words, will bear repeating. "It was of the greatest advantage," he remarked, "that a teacher of medicine, in the sense of curative medicine, should also make it part of his duty to inform himself and his students of the principles of preventive medicine; and it would be a bad day for them all if the progress of officialism in sanitary matters tended to make a disruption between the sanitary branch and the medical branch of the profession." He was not quite sure that—not in Glasgow, because Dr. Russell was what he would call the very model of a medical officer—there was not already something of this division of the medical pro-

fession into two sections, the sanitary and official section and the general practising section, with opposing interests and separate views, which, as time went on, were likely to develop into greater opposition to each other.

Any one who watches carefully the progress of events will see how surely the result is being brought about. In confirmation of this opinion, it is but necessary to quote from a letter of Dr. Littlejohn to the editor of the *Glasgow Herald*, written in support of the Glasgow authorities, and, of course, in opposition to its medical men. "Liverpool", says the writer, "had, a few years ago, that unenviable notoriety"—i.e., of repeated outbreaks of infectious disease—"and to-day we have the medical profession there protesting against a loss of fees, were any of their patients, however badly housed, removed to hospital, so as no longer to be a source of danger to the community. Dublin, too, followed suit; and the profession there protests as loudly; and this after the awful revelations of a special commission." The italics are ours. We have carefully observed the attitude of the profession in all towns where the question of notification has been discussed, and we think we are correct in saying that in no single instance has any protest against loss of fees, owing to removal of patients to hospitals, been adduced as a reason against its adoption. It is not to be wondered at that there should be a reluctance on the part of practising medical men to be brought into a relation of subordination to those who are capable of gratuitously attributing to them the basest motives.

Professor Gairdner, fearing, as so many others fear, that, if it were known that doctors were compelled to report, they often would not be called in, and that thus "the very means taken, as it were, to obtain the earliest information would, in a great number of cases, defeat the end that was desired", threw out a random suggestion, to the effect that the sanitary authority, instead of dragging in the doctor to "peach" upon the householder, might offer a reward—not exceeding a shilling, if they liked—to everybody who would give information of any case of infectious disease. This may be a wise or an unwise suggestion. We will not pretend to say. Of the un wisdom, and worse, of the following published criticism of it by Dr. Littlejohn we can, however, have no doubt, nor of the injury which he will have done to the cause of the official section of the medical profession by making it. "No one can look at our rural population without seeing how futile it is to expect from the householder early intimation to a central authority; and, so far as the higher ranks are concerned, the experience of the Postmaster-General is certainly most instructive. There we have four medical practitioners in close attendance on this distracting case, and Mrs. Fawcett, exhausted by watching and distressed by anxiety, is formally presented with a document, duly filled up and signed, which she is under a penalty to transmit to some central office. One can imagine the scene. It would take a Molière to do full justice to its absurdity. And yet this is the plan advocated by the Faculty, and over which Professor Gairdner makes merry, adding, however, with rare dialectic skill, the supreme touch of presenting Mrs. Fawcett with the bonus of a shilling for the trouble she is presumed to take in the matter."

There is one very curious circumstance to which it is worth while to allude. Liverpool, Birmingham, and Glasgow all alike base their contentions largely on, and derive their conclusions from the evidence collected by the Liverpool deputations to eight of the towns in which compulsory notification is the law. That evidence consists of two distinct parts. Firstly, of a series of letters from the town clerks and medical officers of health, all of which are strongly favourable to the principle of compulsory notification; and secondly, of the reports of the examination of medical men and others resident in the town, as to the practical results of its operation. There is often the strongest and most direct conflict between these two branches of evidence, and the effect on the mind of the reader will be very different according as he peruses one or the other, or both. The Lord Provost of Glasgow, in his speech, quoted only from the former portion; the Vice-chairman of the Liverpool Health Committee (who appears to have been changed from advocate to an opponent of compulsion by it), and the member of the Birmingham Town Council, who opposed the clauses, quoted largely from the second. This difference may help to explain the difference of results.

Much reliance is placed on, and not a little misconception is entertained concerning, the report of the Select Committee on Police and Sanitary Legislation of last session. The Lord Provost alluded to it, as did also Mr. Jackson, a member of the Council, the latter gentleman remarking that the "Select Committee had the power, and exercised the power to obtain from all quarters of the country the evidence they deemed necessary to justify them in reporting as they were instructed to do. As any one could see...the Select Committee gave this question full and instructive consideration.....and examined all the

men who were most likely to guide them wisely." It was evidently unknown to Mr. Jackson, as it is unknown to very many, that the Committee merely examined eight medical men, all of whom were known to be favourable to compulsion, and of whom five were medical officers of health, two others members of sanitary committees of their respective town councils, and that they decided that they could not hear the evidence of Dr. Alfred Carpenter, and other medical men who desired to speak on the opposite side. It should be known too, that in striking contrast to the recommendations of the Select Committee were those of the Royal Commission on Infectious Hospitals, which sat at the same time, but which, unlike that Committee, heard evidence from all quarters and of all kinds. Their recommendation, as most of our readers know, was that parochial medical officers should be compelled to notify, but that in all other cases the onus should be placed on the householders, if, as seemed to be the case, there was a general disinclination on the part of the profession to bear it.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

ACCINGTON.—Of the 556 deaths registered in this borough in 1881, 161, or 28.9 per cent., were those of children under twelve months. In alluding to this high rate of infantile mortality, Dr. Milne repeats the old story of improper food, carelessness, and ignorance. He observes that the principal causes of death at this age were atrophy and convulsions. The very prevalent practice here, as in other manufacturing centres, of mothers going to work at mills and leaving their infants in the charge of nurses, as careless and ignorant as themselves, is an important factor in the production of this high rate of mortality. Public attention is now being directed to the subject, and it would almost be well if the law were to interfere with the employment in factories of women who have young families dependent upon them. Zymotic diseases were fatal to 62 persons, giving a death-rate from this class of 1.96 per 1,000. Five deaths occurred from measles, seven from scarlatina (187 cases of which were reported), three from diphtheria, 29 from whooping-cough, six from "fever", and 12 from diarrhoea. Small-pox appeared in the early part of the year, in the person of a girl employed at a rag warehouse; and shortly afterwards two other cases, also girls, employed at the same factory, were attacked. The warehouse at which these girls had been employed had been receiving consignments of rags from Bury, where the disease had for some time been prevalent; and there seems little doubt that the contagion was imported by these rags. Further consignments from Bury were stopped, and the disease did not spread. Dr. Milne urges upon his authority the extreme importance of the provision of a hospital for isolating cases of an infectious nature—a recommendation which the corporation would do well to carry out without delay. Sanitary administration can hardly be regarded as having been efficiently performed in a borough possessing a population of about 31,435 souls, which is still unprovided with an infectious hospital. The sanitary condition of the borough is, upon the whole, fairly satisfactory; but attention is directed to the condition of the well-waters, which are in many cases contaminated with organic impurities; to the defective state of the cesspools, and to the necessity for completing the drainage, and for the purification of the sewage before its discharge into the river. It is to be regretted that Dr. Milne's report is not printed in some more worthy manner.

ANDOVER.—That the completion of the main sewerage system is the most important sanitary requirement of this district is evident from the health officer's last annual report. In referring to the subject, Mr. Farr states that, during the year, forty-three cases of fever (seven of which were fatal) came to his notice, all of which were, directly or indirectly, the result of imperfect drainage. The condition of the well-waters also calls for improvement, many of the wells admitting surface-water, and being situated in close proximity to cesspools. It is satisfactory to observe, however, that the use of the public supply of water is gradually being extended throughout the district. Mr. Farr notes with satisfaction that his authority have resolved upon the extension of the Infectious Hospital, and he again recommends the erection of a public slaughter-house. Evidently Andover is a town that has much sanitary lee-way to make up. The total births registered during the year were 201, and the total deaths 114, representing rates of nearly 33 and 16 per 1,000 of population. More than half of the whole mortality occurred in persons over 60 years of age, and in children under five; a result which Mr. Farr attributes to the unusually severe weather experienced in the early part of the year.

BATH RURAL.—Mr. Harper has apparently made a good beginning in his work as officer of health for this district, in replacement of the district medical officer who formerly supervised it. An exceptionally

low death-rate (13.77 per 1000) is reported during 1881. Zymotic disease appeared in various parishes, but in no instance did it spread or assume the character of an epidemic. Typhoid fever was somewhat prevalent, and in almost all the cases Mr. Harper found its presence to be due to unsanitary surroundings, chiefly to an impure water supply. At the middle of the year small-pox was imported into the district, but the active measures adopted for revaccination and isolation, prevented any extensive spread of the disease. During the year, 13 cases of infectious disease were admitted into the hospital, seven of which were suffering from scarlet fever, and four from small-pox. There were no deaths amongst the hospital patients. The public supply of water was extended, and proceedings taken to secure the due observance of the Public Health (Water) Act. Sewer ventilation, however, seems to be in a defective condition, and the health-officer regrets that the sewers, which have been laid from time to time in the various villages, have not received a necessary amount of attention in their ventilating arrangements. The result is, Mr. Harper observes, that it is impossible to keep out of houses the accumulated gas of half a mile of sewers, all the more dangerous as it may be the bearer of infectious matter. In one village, where there are over 2,200 yards of sewers, only one four-inch ventilating shaft is provided. The subject of sewer ventilation is, indeed, one of the utmost importance, and the sanitary authority would do well to give the matter their serious consideration.

BRENTFORD.—During 1881 a total of 214 deaths were registered in this district, representing a death-rate of 18.0 per 1,000 of population. To the zymotic class 23 deaths were referred, against 27 in the previous year, and 45 in 1879. Diarrhoea accounted for 11 deaths, all of which occurred between June and October, 9 being in children under 5 years of age. The absence of isolation accommodation for cases of infectious disease was severely felt during the prevalence of small-pox at a time when all the hospitals were full, and all but 4 cases occurring in the district had to be isolated at home. From typhoid fever there were 4 deaths registered, from measles 4, from whooping-cough 2, and from small-pox 1. Of this latter disease, 15 cases happened during the year, and Mr. Williams, in detailing the measures taken by him for preventing its spread, refers to the broadcast distribution of copies of the National Health Society's pamphlet on the Facts concerning Vaccination, which was issued with the approval of the Local Government Board, after revision by them. At the time of the report the sewerage scheme was under the consideration of the Central Board, to whom the authorities have applied for a loan to complete the system. Mr. Williams expresses the hope that the sewerage of the district will be completed in a reasonable time, as the numerous cesspools at present in use are a frequent source of nuisance. An important change for the better was made by the substitution of a constant supply of water in place of the intermittent system formerly in use. At the close of the year 1,037 houses were being supplied from the public supply, out of a total of 2,259. The scavenging appears to be efficiently carried out, and other sanitary work of a routine character regularly performed.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

Electors to Professorships.—At a Congregation held on December 18th, the following were appointed Electors, under the new University Statutes, to the undermentioned Professorships. *Anatomy*: Mr. W. H. Flower, Hunterian Professor of Comparative Anatomy; Dr. Allen Thomson; Professor Paget; Professor Huxley; Dr. Michael Foster; Professor A. Newton; Professor Livinge; Mr. J. W. Clark, Trinity. *Downing Professorship of Medicine*: Sir George Burrows, Gonville and Caius; Dr. F. J. Farre, St. John's; Dr. T. Lauder Brunton; London; Dr. Richard Quain, London; Professor Paget; Professor Livinge; Professor Humphry; Mr. P. T. Main, St. John's. *Pathology*: Sir James Paget; Professor Latham; Dr. J. F. Payne, Oxford; Dr. Michael Foster; Professor Humphry; Professor Paget; Dr. W. H. Gaskell, Trinity; Dr. J. Burdon Sanderson, Professor of Physiology, Oxford.

COTTON.—Dr. G. L. Gray, in *Miss. Val. Med.*, writes that he has used this remedy successfully. Taken half a drachm three times a day in a quart of water for a few minutes, let it stand for an hour, strain, sweeten, and, when cool enough, give the patient a few drops, if necessary, pour it into the child. The result is generally prompt, and, sometimes, without emesis. If peristalsis is slow, the dose may be increased. Dr. Gray also states that he has used the remedy with benefit in two cases of asthma.

OBITUARY.

SIR THOMAS WATSON, BART., M.D., F.R.S.

FEW men in any profession have descended to the grave honoured, beloved, and respected in a higher degree than Sir Thomas Watson. Throughout a career of professional activity, prolonged to the utmost limits which the conditions of life allot to man, he attracted to himself admiration, regard, and respect: admiration of his rare combination of mental qualities and gifts, of his wide professional knowledge and attainments, his power of exposition as a lecturer, his keen clinical insight and practical sagacity, his rich and readily available stores of well classified experience, his accuracy of thought and felicitous clearness of expression, his success as a practitioner, his brilliant powers as a teacher and his unrivalled faculty of smooth, apt, and copious diction as a writer; regard and respect for his serene and gentle temper, his modest dignity, his benevolent kindness, his unfailing clearness of judgment in the complicated relations of the life of a physician in large practice; and again as a professional leader to whom reference was constantly made in the troublous questions of professional etiquette and professional policy, as the head of a great college, distinguished for its conservative traditions, for its reputation for learning and for the important interests under its charge, and passing through periods of active development and critical change. Singularly accessible to all who sought his aid or his advice; adverse, from natural tenderness to inflict pain, or even a shade of disappointment, by word or deed; with a mind peculiarly open to argumentative conviction, and of that thoughtful cast which saw quickly the objections to, as well as the reasons for the conclusions which were pressed upon him, Sir Thomas Watson possessed a character and a disposition which did not allow him to pass through professional life wrapped up in his own peculiar work and satisfied with attention to the merely scientific details of his profession, or the rigid performance of his own special daily duties, and the fulfilment of his own personal ideal of work or of happiness. Nothing that happened, in the professional world, of human or scientific importance was alien to him; and there are few men among his contemporaries who have not at one time or another come to him for advice and guidance; and, of all who came, there is perhaps not one that left without a feeling of increased confidence in his elevated judgment, in his great knowledge, and his singular wisdom. Conciliatory to the utmost bounds of kindness, he was never open to the charge of favouring compromise; and thus he retained, in a peculiar degree, the confidence and respect of all classes of the profession. In him, the College of Physicians found a leader never unmindful of its dignity, but sensible of the importance of changes in its constitution which many thought revolutionary. The consulting physician saw in him a typical representative of the dignity of the class: the general practitioner recognised also a sentiment of professional fraternity and a consciousness of the claim of universal brotherhood of medicine, which kept always in the foreground that basis of democratic equality which is the keystone of the heart of professional strength and unity. It is rare indeed to find any man of whom it may be said as of him that there is not one man in the profession who would at any time have declined to have accepted Sir Thomas Watson's judgment on any personal or professional question as final. His sense of justice, his habitual reference of all questions of detail to unassailable principle, his flexibility of mind, and his quick perception of character, gave him a rare but well-justified ascendancy over even the ablest of his contemporaries; and while Sir Thomas Watson's practice as a profession he was, during a long period, recognised, with or without his leader. During the later years of his life, and long after he had retired from practice, he continued to display a keen interest in professional affairs, and was still an eager student of its literature. The opinions which he formed were always provisional—formed on the best evidence then available, but subject to revision. The last edition of his celebrated *Lectures on the Principles and Practice of Medicine*, and to the same principle, and philosophy, and philosophy, and philosophy, revised and altered the conclusions of earlier years, and the same courage with which he avowed such changes of opinion. Among the most notable instances of such changes were the new conclusions as to the accepted as to the change of type in disease, and as to the pathology of tubercle. In the former, he had worked with careful and patient observation, and in the latter he had been led by the results of the researches which then gave rise to the doctrine of the bacillus, to a conclusion in a sense contrary to his former opinion, and to set forth

with the utmost clearness and graceful simplicity the new conclusions to which he had been led. Still more recently, he took occasion to study afresh the relation of vaccination to small-pox, in the light of the discussion which took place at the Conference of the British Medical Association, the subject of animal vaccination, and subsequently to avow in these columns his conversion to the opinions which we had advocated as to the relation of vaccine lymph to cow-pox lymph; to withdraw the opinions expressed in his lectures, and to accept the conclusions which we had advocated. (See BRITISH MEDICAL JOURNAL, vol. i, 1880, pp. 109 and 346.)

In Sir Thomas Watson the Association loses one of its most revered and respected members, and one of its warmest friends and admirers; and we lose a most frequent correspondent, one to whose unfailing kindness, to whose generous aid, to whose eloquent pen and to whose friendly correspondence we have for many years owed personally a debt of gratitude and admiration.

Sir Thomas Watson's private letters were models of epistolary composition, not only in their singular elegance of expression, and their aptness and felicity of thought, but conspicuously in the unfailing courtesy, in the unassuming, unaffected, and natural modesty, and in the generous kindness of the language in which they were invariably couched. The gentle sweetness of expression, the modest dignity of demeanour, the intelligent kindness which beamed from every feature translated the natural character of the man, and it will be long before the recollection of so sincere a friend, so perfect a gentleman, so accomplished a physician, and so true a councillor will fade from the recollection of those on whose minds they have been impressed by personal intercourse.

The late Sir Thomas Watson was born on the 7th of March, 1792, at Montrath (now Dulford) House in the parish of Broadhembury, near Cullompton, Devonshire. The register of his birth is in the adjoining parish of Kentisbere. He received his early education at the Grammar School of Bury St. Edmunds, and in 1811 was admitted a pensioner of St. John's College in the University of Cambridge, where he took the degree of B.A. as tenth wrangler, in January, 1815. Two years later he was elected a foundation Fellow of St. John's College, and in the course of the next year took the degree of M.A. He did not begin the study of medicine until the somewhat late age of 27 years, when he commenced his studies at St. Bartholomew's Hospital under the late Mr. Abernethy, who was his friend as well as teacher. During the session of 1820-21 Mr. Watson prosecuted his studies at some of the medical classes in the University of Edinburgh, and then returned to Cambridge, in which University, in 1823-4, he held the office of junior proctor. In the following year he took the degree of Doctor of Medicine, and married the daughter of Edward Jones, Esq., of Brackley, in Northamptonshire, whom he had the misfortune to lose five years after their marriage, and three days subsequently to the birth of their second child. Soon after his marriage Dr. Watson commenced practice as a physician in the same street (Henrietta Street, Cavendish Square), though not in the same house, in which he lived fifty-seven years. In 1826 he became a Fellow of the Royal College of Physicians, and in the following year, on the resignation of Dr. Southey, was elected Physician to the Middlesex Hospital. In 1828, when University College was opened, and during the following two years, Dr. Watson, as Professor of Clinical Medicine, in 1831, gave lectures on the cases of disease which came under his care in the wards of the Middlesex Hospital. He resigned the Chair of Clinical Medicine in 1831, and was appointed Professor of Forensic Medicine in King's College.

In this year, his first contribution to medical literature appeared in the *Medical Gazette*, vol. ix., 1831, entitled Remarks on the Dissection of Bishop, and the Phenomena attending Death by Strangulation. The notorious Bishop murdered an Italian organ-boy, and then took his body to the dissecting-room of King's College for sale. He was subsequently hanged for the crime, and his body was sent to the same institution for dissection. Hence Dr. Watson's lecture on the subject. From that time Dr. Watson was a frequent contributor to the *Medical Gazette*, and in vol. ix. of that publication will be found clinical lectures on pulmonary hæmorrhage and on epilepsy. Vol. x. contains the Lumeian lectures on hæmorrhage from the stomach, intestines, and urinary organs. In the thirteenth volume will be found a brilliant introductory lecture, delivered on the occasion of the opening of the medical session at King's College. In the fifteenth volume, appears a paper on the efficacy of the vapour-bath in cases of diabetes. The sixteenth volume contains two lectures on rheumatism of the heart, and a paper on the connection of hypertrophy of the heart with cerebral and pulmonary hæmorrhage. Dr. Watson's private practice had continued to grow and prosper; and a proof of the estimation in which he was held is found in the circumstance, that to him was intrusted the care of Sir Walter Scott, on his last voyage from London to Edinburgh. In

1836, on the resignation of Dr. Francis Hawkins, Dr. Watson was appointed Professor of the Principles and Practice of Medicine; and, whilst performing the duties of this position, he first delivered, during the session of 1836-37, those *Lectures on the Principles and Practice of Physic* which take first rank amongst the standard classics of medicine. It may be convenient to our readers to be reminded that these lectures were originally published, week by week, in the *Medical Gazette*. The first lecture appeared on September 25th, 1840 (vol. xxvii), and the last of the series on September 23rd, 1842 (vol. xxx). They have, however, been widely circulated throughout the profession, in a more convenient form, by their collection and publication, in two volumes, by Messrs. J. W. Parker and Son, West Strand. Four editions of the work have since been published, the last bearing the date of 1871.

These lectures have, for nearly half a century, held their ground as the classical authority in the science and practice of medicine in all English speaking countries. Like Graves and like Trousseau, he added the charm of eloquence to the solid merits of extensive learning, great clinical experience, sound judgment and fertility of resource in the expedients of therapeutic practice. The language he used was clear, simple, and familiar; full of apt illustration and happy example, well balanced, marked frequently by striking and unexpected turns of thought, and disdaining neither touches of pathos nor of humour to enforce a conclusion, or to illustrate an opinion. Many a student, taking up the volumes of lectures with ominous anticipations of weary and toilsome reading, has rejoiced to find them as attractive as a romance, and more instructive than a manual.

The following extract, which was chosen some years since by an earlier biographer of Sir Thomas Watson, to whom we are indebted for many details of his life, is an excellent example of the clearness, simplicity, and dignity of his manner of thought and expression. It treats of an important question in medical ethics. "Our influence over a sick person, and the efficacy of many of our remedial measures, are remarkably increased by our evident acquaintance with the nature of his complaint, and by the reliance which he, therefore, places on our skill and judgment. It is often of material consequence, in another point of view, that the fatal character of a disease should be plainly perceived. A sick man made aware of his danger, is furnished with a motive and an opportunity for arranging his worldly affairs, in the settlement of which the future comfort and happiness of his family may be very deeply concerned; for making his will, and for more solemn preparation for the awful change that awaits him. For these reasons, physicians have in all periods endeavoured to read in the phenomena presented to them by diseases the event to which these diseases severally tend. To form an accurate opinion on this head is, however, one thing, and to divulge it another. There is always some hazard of losing, instead of gaining credit by strong statements and confident predictions of the death or the recovery of a patient. If you give an unfavourable prognosis, you incur the risk of losing your patient altogether; his friends argue, very naturally, that you are not infallible; that you may be wrong; that if you know of no means of safety for him, some other practitioner may; and they will grasp at whatever straw comes near them. Do not suppose that this is merely a selfish view of the matter; it is often of much moment to the patient himself that he should not be tempted to put his life under the charge of impostors, who will feed his hopes, and promise largely, and torture him perhaps with their discipline, and have no mercy on his pocket. There are other reasons, too, why we must sometimes conceal the truth from our patients. It often happens that a person is extremely ill, and in great danger, but may yet recover if he is not informed of his peril. To agitate a person in these circumstances by telling him that he is likely to die, is to lessen, perhaps to destroy, his chance of recovery. You kill him if you take away his hope of living. It must be confessed that the duty of the medical man in these cases is very painful and embarrassing; the patient and the patient's friends are urgently inquisitive to know whether there is any danger, or whether he is not yet out of danger. The rule which I have always adopted in circumstances of this perplexing kind, when I see clearly that the case is hopeless of cure, is to fix, as well as I can, upon that person among the family or friends of the patient, to whose prudence the real state of the matter may be most safely confided. If I think that there is a possible chance of recovery, and that a knowledge of his danger by the patient would diminish that chance, of course I urge the necessity of speaking to him with assumed cheerfulness and confidence. If I see that the case is absolutely and inevitably mortal, either soon or at some little distance of time, I leave it to the discretion of the person with whom I communicate to disclose or conceal my opinion as he or she may think best. There are, I believe, practitioners who make it a point, on principles of worldly policy, never to speak despairingly of a patient; but I cannot regard such a rule of

conduct as honest or justifiable, or consistent with one's Christian duty." (*Lectures on the Principles and Practice of Physic*. 2nd. edition, vol. i, p. 109 et seq.)

In 1840, when the hospital in connection with King's College was established, Dr. Watson declined to give up his office of physician to the Middlesex Hospital, which would have been necessary if he had decided to retain his chair at King's College, and therefore retained the former position until 1844, when the increase of his private practice necessitated the relinquishment of his public position. In 1859 Dr. Watson received the unsolicited honour of being appointed Physician Extraordinary to the Queen in 1859, and in 1861 it became his sad duty to attend the Prince Consort in conjunction with Sir James Clark, Sir Henry Holland, and Sir (then Dr.) William Jenner, during his last illness. In 1866, Dr. Watson was created a baronet, the honour having been offered to him by the express desire of Her Majesty. At the College of Physicians, Sir Thomas Watson held numerous offices before he was elected President. In 1827, he was Galstonian Lecturer; in 1830-31, Lumleian Lecturer; in the years 1833, 1834, and 1835, he gave the College Lectures on *Materia Medica*; he was Censor in 1828, 1837, and 1838; and on the Council at various times between 1833 and 1868. From 1858 to 1860, he was the College representative on the Medical Council; in 1862, he was elected President, and held that office for five successive years. The Council would have gladly elected him for a sixth period of office, but he declined the honour on the plea of advancing years.

The details of the last illness of Sir Thomas Watson have been given in recent numbers of the *BRITISH MEDICAL JOURNAL*. His funeral, which took place on Friday, December 15th, was attended by a representative gathering of his professional friends; but it will be no exaggeration to affirm that, notwithstanding his advanced age, which daily brought the event nearer to the minds of men, the death of Sir Thomas Watson has left a sense of individual loss and grief in the minds of the profession at large, even in those who only knew the lamented Nestor of the medical profession through the medium of his immortal writings.

We have selected the subjoined correspondence as a good illustration of the reluctance with which Sir Thomas Watson allowed himself to be drawn into anything like controversy; and, when circumstances necessitated such a course, of the mingled gentleness, firmness, and authority with which he expressed himself. The circumstances are as follows.

Shortly after Mr. Liston's death, a letter appeared on December 18th, 1847, by Dr. C. J. B. Williams, headed "The Physical Signs of Disease in the Case of the late Mr. Liston." Dr. Williams says that, having seen and heard it stated in many quarters that there were no physical signs of disease detected in the chest of his lamented colleague, he thought it right for the credit of physical diagnosis, as well as in justice to himself, to make known the result of his own examination of the case, as recorded in his own note-book. This was to the effect that he had noted a "marked dulness above the left clavicle and scapula (on strong percussion), large tubular breathing, and voice sound in the same space, tubular respiration above upper inner angle of right scapula." This in connection with his previous disease, he considered "most alarming," but he adds, "it saves me from self-reproach that I never said anything to countenance his disposition to make light of his malady, but uniformly asserted my conviction of its serious character." Dr. Williams visited Mr. Liston the second and last time in November, and expressed in his letter his regret that Mr. Liston did not follow his advice "in any particular," but "got relieved by strong exertion in riding a restive horse, which promoted expectoration." He adds, "after this, I did not see my professional friend, as he placed himself under the care of physicians, who both before and after this period found no physical signs of disease, and who, therefore, took a more favourable view of the case than I did; the result is known, and I make no further comment on it."

Dr. Watson replied, calling attention to the injustice done to him and Dr. Forbes by the insertion of the last paragraph, and pointed out that Dr. Williams was "quite wrong in supposing and stating" that they (Dr. Watson and Dr. Forbes) had found no physical signs of disease, and had taken a more favourable view of the case than Dr. Williams; that, on the contrary, both he and Dr. Forbes had been throughout aware of the symptoms stated in Dr. Williams's letter. Dr. Watson pointed out that the whole tenor of Dr. Williams's letter was calculated to lead the unacquainted to infer that they had not done as he would have done, warning the patient, and "countenanced his disposition to make light of his malady." Dr. Watson concluded by saying, "It is not courteous or even fair to publish these statements without previously ascertaining from one or the other whether the facts so stated really were as you understood them? Would it have been charitable or generous so to exhibit our mistakes, even if you were sure

that we had made them? Do you, indeed, believe that if our lamented friend had been entrusted solely to your care, and could have been induced implicitly to obey your directions, the fatal 'result' of this disease would have been prevented? One more question I venture, in perfect amity, to propose for your calm consideration. Is it consistent with your character and your high rank in our profession—with your office (which presents you as an example to so many) in one of our great metropolitan schools of medicine—thus publicly and needlessly under profession of a zeal for science to proclaim your own superior sagacity and (by implication) the comparative ignorance or unskilfulness of others, your contemporaries pursuing, in the same place, to the best of their humbler abilities, the same vocation with yourself, and, in this instance, engaged in the peculiarly anxious duty of ministering to the relief of a professional brother? Would Baillie or Heberden have done this?"

This brought a letter from Dr. Williams retracting the passages complained of, and, finally, Dr. Watson's "letter of satisfaction."

"Letter of Satisfaction from Dr. Watson to Dr. Williams."

"Dear Dr. Williams,—I thank you for your candid, temperate, and satisfactory letter of explanation. If (as I am glad to know from your assurance) I misconstrued the meaning and spirit of your letter in the *Lancet*, my excuse must be that I did so in common with every one of those who have spoken to me about it—and they have been many."

"Indeed, it was the interpretation upon it by some of my friends that first brought the letter under my own notice. It was especially the paragraph, which you so frankly retract, with the addition of the next little sentence—'the result is known, and I make no further comment on it'—that (as it seemed to me) gave force and point to all which had preceded. But for this paragraph, I should not have thought of troubling you with any expostulation on the subject. I assure you that I did not know, until I saw it so stated to you in the *Lancet*, that 'Mr. Liston had first sought your aid,' or that he had formally consulted you at all. On the very morning of the hæmorrhage he sent me a message, simply requesting that I would call on him. I did so on my first going out, and found him recovered from the faintness produced by the loss of blood. But I was not then, nor at any time, informed that he had previously sent for you. I became aware, indeed, at a much later period, that his chest had been once examined by yourself, as well as by another physician, also his colleague in University College. But I believed that these examinations had been casually made upon some occasion of your officially meeting together. Had I known that Mr. Liston had desired your counsel in the first instance, I should have been, not willing merely, but anxious, in a case so painfully responsible, to obtain the comfort and advantage of your valuable assistance."

"Let me assure you, finally, that if, writing to you as I did, upon the spur of the occasion, I transgressed the just limits of self-defence, or so expressed myself as to cause unnecessary pain to your feelings, I am sorry for having done so. I trust, also—and, on my own part, am assured—that what has occurred in this very distressful matter will not be suffered to impair the mutual respect and goodwill which had hitherto subsisted between us.—I remain, yours truly,

THOMAS WATSON."

The following personal recollections of Sir Thomas Watson, from the pen of an intimate personal friend, give interesting illustration of his pleasant social qualities and happily family life.

"Sir Thomas Watson was a great friend of Bishop Blomfield, Lord Hatherley, Rogers, the poet, Mr. Richmond, the R.A., and Herschel (his old college friend), and used to give very pleasant small dinner parties in former days. On the walls of his dining-room was a portrait of himself in oil, after the one now in the Censors' room of the College of Physicians, painted by Mr. Richmond; also a drawing of the portrait of Rogers, by the same artist."

"Of late years, when he had more leisure in the mornings, he was always pleased to receive a visit from any friend, with whom he would talk over the past, bringing over with humorous anecdote referring to his personal experience of men and manners in general. For some time back, he was often found, towards the latter part of the morning, reposing on a couch, with a small jug of fresh milk ready by his side. He was eminently social in his tastes, and remarkably attached to his children and his four grandchildren, whose photographs and artistic handwork he prided himself on pointing to on the walls of his consulting-room, where, amidst books and papers, was the east of the large bust of Humphrey, which came in the French Mission."

"It is stated that his father and mother died in the same parish in which Sir William Gull's family lived, and Sir Thomas has himself stated that his mother was, as a child, at the same dame's school as was Nelson, in Norfolk."

The following are a few of the many anecdotes which we remember to have heard from Sir Thomas Watson's lips.

When attending Lawrence, the great surgeon, when he had hemiplegia with aphasia, it was thought desirable to give to the patient some sedative. Lawrence, knowing this, and wishing to indicate what remedy he desired, was unable to find the word he wanted, and became greatly agitated in consequence. Sir Thomas Watson got pen, paper, and ink, and asked him to write the word. This he could not do, but, taking the pen full of ink, made a large splash on the paper, and offering it to those at his side. Sir Thomas Watson at once perceived the drift of this, and saw that his patient wished for the "black drop," a discovery which greatly delighted and satisfied Lawrence. Once, when dining at a large dinner party where Lawrence and Brodie were, the former remarked that Abernethy was the only genius in surgery he had ever seen.

Sir Thomas, in relating some of his professional experiences, used to mention the extensive amount of venesection which he had witnessed, relating an instance in which a man in Edinburgh was bled to seventy ounces by a clinical clerk, and with benefit, having been told to let blood until a sensible alteration was produced on the pulse.

He remembered the following as having happened. When at the Middlesex Hospital, he once saw a chimney-pot fall to the ground, and out of it jumped a sweep-boy, who immediately ran away, unhurt, for fear of being beaten.

He used to relate that, after a letter of his in the *Times* on the cattle-plague, some one wrote to him from Norwich to ask him to come down and vaccinate his cattle. Watson replied "he did not know how."

Once, when dining in company with Mr. Richmond, and the conversation turning upon sporting, the latter said, "Well, he had never put a gun to his shoulder, and supposed that by not shooting he *missed a good deal*." Watson replied that, "if he did shoot he probably would *miss a good deal more*."

He told the story of some one at a medical dinner party asking another, "Well, what's the news?" "Oh," said his friend next to him, "Dr. Jones has refused a fee, Dr. Smith has taken one, and Dr. Smithson has had one offered to him."

Lord Hatherley used to say that when at Cambridge he paid his fees to Watson, who was then proctor (being a layman), dressed in a blue coat with brass buttons.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—M.B. Examination, 1882. Examination for Honours.—Medicine.

First Class.

King, David Alexander (Scholarship and Gold Medal), St. Bartholomew's Hospital.

Woodbridge, Leonard Charles, D.Sc. (Gold Medal), Guy's Hospital.

*Harris Thomas, Owens College.

Collingwood, David, University College.

Adeney, Edwin Leonard, Guy's Hospital.

Wilkinson, William Camac, B.A. Sydney, University College.

Honeyburne, Richard, Liverpool Royal Infirmary and University College.

Webb, Malcolm, Owen's College.

Second Class.

Buxton, Dudley Wilmot, University College. } equal

Shaw, Lauriston Elgie, Guy's Hospital. }

Fielden, William Eckett, Guy's Hospital. }

Scharlieb, Mary Ann Dacomb, Madras Medical College and Royal Free Hospital } equal.

Third Class.

Pratt, Reginald, University College.

Batterham, John Williams, Westminster Hospital. }

Dingley, Edward Alfred, University College. } equal.

Shove, Edith, London School of Medicine for Women. }

Obstetric Medicine.

First Class.

Scharlieb, Mary Ann Dacomb (Scholarship and Gold Medal), Madras Medical College and Royal Free Hospital.

King, David Alexander (Gold Medal), St. Bartholomew's Hospital.

Honeyburne, Richard, Liverpool Royal Infirmary and University College.

Second Class.

Shove Edith, London School of Medicine for Women.

Dingley, Edward Alfred, University College.

Harris, Thomas, Owens College.

Forensic Medicine.

First Class.

Wilkinson, William Camac (Scholarship and Gold Medal), University College.

Webb, Malcolm (Gold Medal), Owens College.

Maddison, William Thomas, King's College.

Woodbridge, Leonard Charles, Guy's Hospital.

Currie, Oswald James, Guy's Hospital.

Scharlieb, Mary Ann Dacomb, Madras Medical College and Royal Free Hospital.

Second Class.

Dingley, Edward Alfred, University College.

Batterham, John Williams, Westminster Hospital.

Adeney, Edwin Leonard, Guy's Hospital.

King, David Alexander, St. Bartholomew's Hospital.

Vinrace, John Hinks, Queen's College Birmingham and University College.

Third Class.

Honeyburne, Richard, Liverpool Royal Infirmary and University College.

Collingwood, David, University College.

* Obtained the number of marks qualifying for a Gold Medal.

B.S. Examination. Pass List.

First Division.

Collingwood, David, University College.

Pike, Charles James, University College.

Roeckel, Waldemar Joseph, St. Bartholomew's Hospital.

Sutton, Samuel Walter, St. Thomas's Hospital.

Walters, Frederick Rufenacht, St. Thomas's Hospital.

Second Division.

Batterham, John Williams, Westminster Hospital.

Buxton, Dudley Wilmot, University College.

Campbell, Harry, St. Bartholomew's Hospital.

Clarke, Ernest, St. Bartholomew's Hospital.

Dakin, William Radford, Guy's Hospital.

Scharlieb, Mary Ann Dacomb, Madras Medical College, London School of Medicine for Women and Royal Free Hospital.

M.D. Examination. Pass List.

*Buckell, Arthur Edward, University College.

Collins, William Job, B.S., B.Sc., St. Bartholomew's Hospital.

Dalton, Norman, King's College.

Davy, Henry, Guy's Hospital.

Dickinson, Thomas Vincent, St. George's Hospital.

Edwardes, Edward Joshua, St. Mary's Hospital.

Firth, Charles, St. Bartholomew's Hospital.

Gabb, James Percy Alwyne, University College.

Hobson, Lewis Joen, B.S., University College.

MacDonald, Greville Matheson, King's College.

Maguire, Robert, (Gold Medal), Owens College and Manchester Royal Infirmary.

Notley, William John, B.A., Royal Infirmary, Edinburgh.

Paddison, Edmund Howard, Guy's Hospital.

Parkes, Louis Coltman, University College.

Penny, Edward, Guy's Hospital.

Petch, Richard, King's College.

Plumbe, Samuel Thomson, St. Bartholomew's Hospital.

Railton, Thomas Carleton, St. Bartholomew's Hospital and Owens College.

*Rake, Beaven Neve, Guy's Hospital.

Routh, Amand Jules McConnel, B.S., University College.

Russell, George Hannah, Guy's Hospital.

Saunders, George James Symes, King's College.

Savill, Thomas Dixon, St. Thomas's Hospital.

Sayer, Mark Feetham, University College.

Squire John Edward, University College.

Stonham, Thomas George, London Hospital.

Suckling, Cornelius William, Queen's College, Birmingham.

Whittle, Edward George, University College.

Logic and Psychology only.

Barnes, George Frederick, St. Bartholomew's Hospital.

Buckley, Samuel, Manchester Royal School of Medicine.

Hayward, John Davey, University College.

Neale, William Henry, B.S., University College.

Silk, John Frederick William, King's College.

Taylor, Harold Gilbertson, King's College.

* Obtained the number of marks qualifying for the Medal.

M.S. Examination. Pass List.

Ballance, Charles Alfred (Gold Medal), St. Thomas's Hospital.

Collier, Mark Purcell Mayo, St. Thomas's Hospital.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, December 14th, 1882.

Buckley, Thomas William, Betley, near Crewe.

Canton, Herbert, 339, Camden Road, N.W.

Dodd, Henry Work, Hilldrop Crescent, Camberwell.

Ledlie, Andrew, Belfast.

O Kane, Michael, Ganloell Road, Camberwell.

Perry, Allan, The Poplar Hospital.

The following gentleman also on the same day passed the Primary Professional Examination.

Crisp, James Ellis, London Hospital.

ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.—The following gentlemen passed their final examination for the qualification in Medicine during the sittings in October 1882, and were admitted L.R.C.P.Ed.

Henry Harvey de Mello, Calcutta; Samuel George Thompson, Edinburgh; William Follows, Wolverhampton; Ralph George Heathcote, Manchester; John

Urquhart, Ontario, Canada: John Hope Potter, Sheffield; John Arkle Waring, London; Wm. Abraham Dawson Montgomery, London; Arthur George Machell, London; Howard Harris, London; Edward Aug. Harbord, Liverpool; Henry Urgent Bromley, Braintree; John Harrison, Essex; Bowen Stilon Mends, Blackheath; Herbert Remington Mead, Blackheath; Francis Edward Allen, London; George Norman Robins, Waltham Abbey, Essex; John Rodley, Todmorden, Lancashire; Arthur Samuel Stokes, Leicester; Samuel Butterworth, Rochdale; Philip Vincent, Taunton, Somerset; Edward Ramsay Peter Faddy, London; Richard Davies, Bath; David Hugo Daniell, London; Mathew Bernard Shirley, Leeds; George Henry Kinch, London; John T. Camell, Edinburgh; James Henry Croudace, Burnley, Lancashire; Walter Staines Snell, Devon; Jeffrey La. St. Sutherland, Edinburgh; Joseph Arnold Gray, Edinburgh; James Nicol, Glasgow; George Fox, South Shields.

MEDICAL VACANCIES.

The following vacancies are announced:—

- CHELSEA.**—Resident Medical Officer for the Workhouse and Workhouse Infirmary. Salary, £250 per annum. Applications by January 3rd.
- CHORLTON UNION.**—Assistant Resident Medical Officer. Salary, £120 per annum. Applications by January 24th.
- CHIPPING NORTON UNION.**—District Medical Officer. Salary, £65 per annum. Applications to the Clerk by December 25th.
- CITY OF DUBLIN HOSPITAL.**—House-Surgeon. Salary, £100 per annum. Applications by January 6th.
- COUNTY AND COUNTY OF THE BOROUGH OF CARMARTHEN INFIRMARY.**—House-Surgeon. Salary, £100 per annum. Applications by January 1st.
- CUMBERLAND INFIRMARY, Carlisle.**—Assistant House-Surgeon. Salary, £60 per annum. Applications by December 26th.
- DALTON-IN-FURNESS DISTRICT LOCAL BOARD.**—Medical Officer of Health. Salary, £50 per annum. Applications by December 26th.
- DENBIGHSHIRE GENERAL INFIRMARY, Denbigh.**—Honorary Dental Surgeon. Applications by December.
- DENTAL HOSPITAL OF LONDON, Leicester Square.**—Dental Surgeon. Applications by January 8th.
- EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.**—Out-patient Clinical Assistant.
- GENERAL INFIRMARY, Northampton.**—House-Surgeon. Salary, £125 per annum. Applications by January 9th.
- GENERAL INFIRMARY, Northampton.**—Assistant House-Surgeon. Salary, £80 per annum. Applications by January 8th.
- HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.**—Three Resident Clinical Assistants. Applications by December 30th.
- LONDON HOSPITAL MEDICAL COLLEGE, Turner Street, Mile End, E.**—Lecturer on Physics. Salary, £100. Applications by January 1st.
- OWENS COLLEGE, Manchester.**—Demonstrator and Assistant Lecturer in Zoology. Salary, £150 per annum. Applications by January 6th.
- PORTSMOUTH LUNATIC ASYLUM, Milton, near Portsmouth.**—Assistant Medical Officer. Salary, £120 per annum. Applications by January 1st.
- QUEEN'S HOSPITAL, Birmingham.**—Resident Secretary. Salary, £150 per annum. Applications by December 30th.
- ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.**—Curator and Librarian. Applications by December 23rd.
- ST. ASAPH UNION.**—Medical Officer. Salary, £33 per annum. Applications by January 10th.
- ST. BARTHOLOMEW'S HOSPITAL.**—Casualty Physician. Applications by January 9th.
- ST. MARY'S HOSPITAL, Paddington, W.**—Physician. Applications by December 30th.
- ST. MARY'S HOSPITAL, Quay Street, Manchester.**—Resident Medical Officer. Salary, £80 per annum. Applications by December 23rd.
- ST. SAVIOUR'S UNION, Southwark.**—Medical Officer for the First District. Salary, £130 per annum.
- SURREY COUNTY LUNATIC ASYLUM, Brookwood, near Woking Station.**—Senior Assistant Medical Officer. Salary, £200 per annum. Applications by January 3rd.
- UNIVERSITY COLLEGE, London.**—Jodrell Professor of Physiology. Salary, £364 per annum. Applications by January 3rd.
- UNIVERSITY OF EDINBURGH.**—Examiner in Medicine in each of the Departments of Anatomy, Midwifery and Practice of Physic. Applications by January 3rd.
- QUEEN'S HOSPITAL FOR CHILDREN, Queen's Road, Chelsea, S.W.**—Medical and Surgical Registrar. Salary, 60 guineas per annum. Applications by January 9th.

MEDICAL APPOINTMENTS.

AM. J. W., M.B., appointed House-Surgeon to the South Staffordshire and General Hospital.

M.D., appointed Physician for Diseases of Women to the Royal

General Hospital.

M.D., appointed Physician for Diseases of Women to the Royal

General Hospital.

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General Hospital.

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General Hospital.

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General Hospital.

M.D., appointed Physician for Diseases of Women to the Royal

General Hospital.

DELANEY, R. E., L.R.C.P., appointed House-Surgeon to the West Bromwich District Hospital, *vice* F. F. German, resigned.

DE RENZY, A. C. C., L.K.Q.C.P.I., appointed Medical Officer to the Scarborough Union, *vice* M. Collins, M.D., resigned.

EVANS, S. E., L.R.C.P., appointed Resident Medical Superintendent to the Bradford Fever Hospital, *vice* W. K. Rix, M.R.C.S., resigned.

FENWICK, E. Hurry, F.R.C.S., appointed Demonstrator of Physiology to the London Hospital Medical College.

FOWLER, C. O., M.R.C.S., appointed Assistant Resident Medical Officer to the London Fever Hospital.

GENNON, T., L.R.C.S.I., appointed Medical Officer for the Carlingford Dispensary District to the Dundalk Union.

GUNN, R. M., F.R.C.S., appointed Ophthalmic Surgeon to the Hospital for Sick Children, *vice* E. Nettleship, F.R.C.S., resigned.

WILSON, D. M.D., appointed Medical Officer to the Kingston Union, *vice* A. G. Rawson Harris, L.R.C.P., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGES.

PARSONS—COOKE.—On November 11th, at the British Episcopal Church, Monte Video, by the Rev. R. Langbridge, Herbert Flower Parsons, M.R.C.S., L.S.A., of San Jorge, Durazo, Sixth son of Joshua Parsons, M.R.C.S., of Frome, to Katharine Elizabeth Nowell Cooke, youngest daughter of the late John Cooke, Esq., of Midridge Grange, Durham.

SWALE—PARISH.—On the 5th December, at St. Mary's, Guildford, Harold Swale, M.B.Lond., of Ingfield Hall, Settle, Yorks., and Tavistock, Devon, to Alice, daughter of Capt. Parish, R.N.R., of Guildford, Surrey.

DEATH.

PATERSON.—On the 9th instant, suddenly, at Bahia, Brazil, John Ligertwood Paterson, M.A., M.D., M.R.C.S.L., of Boa Vista, The Grange, Edinburgh, aged 62. Friends at home and abroad will please accept this intimation.

HEALTH OF FOREIGN CITIES.—The Registrar-General's return, for the week ending December 9th, shows that the death-rate recently averaged 29.7 per 1000 in the three principal Indian cities; it was equal to 25.0 in Bombay, 33.7 in Madras, and 34.2 in Calcutta. The deaths in Calcutta included 20 fatal cases of cholera, and small-pox caused 6 deaths in Madras and 5 in Bombay; fever showed the largest proportional fatality in Madras. According to the most recent weekly returns, the average annual death-rate per 1000 persons, estimated to be living in twenty-two of the largest European cities, was equal to 26.4, and exceeded by 3.0 the average rate last week in twenty-eight of the largest English towns. The death-rate in St. Petersburg was equal to 45.9, and showed a further increase upon the high rates in recent weeks; the 589 deaths included 39 from diphtheria, 33 from small-pox, and 23 from scarlet fever. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged only 21.9, the highest rate being 22.3 in Stockholm; typhoid fever caused 4 deaths in Christiania, and scarlet fever was somewhat prevalent in each of these three cities. The Paris death-rate was 26.3, and was higher than in recent weeks; the deaths included 62 from typhoid fever, 34 from diphtheria and croup, and 9 from small-pox. The 181 deaths in Brussels, including 2 from scarlet fever and one from small-pox, were equal to a rate of 23.0. The rate in Geneva did not exceed 18.0. In the three principal Dutch cities, the mean death-rate was 27.1, the highest rate being 29.1 in Rotterdam, where 3 fatal cases of small-pox were recorded; measles caused 6 deaths in the Hague. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 24.6, and ranged from 22.0 and 23.3 in Berlin and Dresden, to 28.0 and 31.3 in Munich and Trieste. Small-pox caused 6 deaths in Vienna and 5 in Buda-Pesth; scarlet fever and diphtheria were more or less fatally prevalent in all these German cities. The mean death-rate in three of the largest Italian cities was 22.8, the rate being equal to 20.6 in Turin, 23.1 in Rome, and 26.2 in Venice; diphtheria and "fever" were somewhat fatally prevalent in Rome and Venice. In the four great American cities, the death-rate averaged 22.7, and ranged from 19.0 in Philadelphia to 27.0 in Baltimore. Small-pox caused 32 deaths in Baltimore and 5 in Philadelphia, and 10 deaths were referred to typhoid fever in the latter city; diphtheria showed excessive fatality in both these cities.—The statistics published in the last weekly return show that the death-rate averaged 29.2 per 1000 in the three principal Indian cities; it did not exceed 22.6 in Bombay, but was 33.6 in Calcutta and 37.1 in Madras. Cholera caused 32 deaths in Calcutta, and small-pox 4 and 2 respectively in Bombay and Madras; "fever" showed the largest proportional fatality in Madras. According to the most recent weekly returns, the average annual death-rate per 1000 persons, estimated to be living in twenty-one of the largest European cities, was 26.2, and was 0.7 below the average rate last week in twenty-eight of the largest English towns. The death-rate in St.

Petersburg was equal to 44.3, but showed a slight decline from the still higher rate in the previous week; small-pox caused 37, scarlet fever 27, and diphtheria 31 of the 568 deaths in the city. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged only 19.1, the highest rate being 22.1 in Copenhagen; scarlet fever caused 4 deaths in Stockholm and 3 in Copenhagen. The death-rate was equal to 23.4 in Brussels, and to 21.8 in Geneva, no zymotic fatality being noted in either city. In Paris, the rate was 25.4, and the deaths included 49 fatal cases of typhoid fever, 43 of diphtheria and croup, and 7 of small-pox. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the rate averaged 27.7, the highest rate being 30.7 in the Hague, where 10 of the 73 deaths resulted from measles. Diphtheria caused 8 deaths in Amsterdam, and small-pox 2 in Rotterdam. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 24.9, and ranged from 22.6 and 23.5 in Berlin and Hamburg, to 29.1 and 31.1 in Trieste and Prague. Small-pox caused 5 deaths in Buda-Pesth and 3 in Prague, where 9 deaths from typhoid fever were also recorded; diphtheria showed general fatality in these German cities, but especially in Dresden. The death-rate in Rome did not exceed 20.5, while it was 34.3 in Venice; 3 deaths were referred to typhoid fever in Venice and 2 in Rome. In four great American cities, the death-rate averaged 21.9, and ranged from 19.3 in Brooklyn to 24.7 in Baltimore; the deaths in the latter city included 21 from small-pox and 25 from diphtheria. Diphtheria was also more or less fatally prevalent in the three other American cities, and small-pox caused 4 deaths in Philadelphia.

VACCINATION.—In the Queen's Bench Division, before Justices Hawkins and Watkin Williams, Mr. Kingsford recently moved for a rule for certiorari requiring Mr. Arthur Henry Jenney, one of the justices of the peace for the county of Suffolk, to return into this court a certain order made by him in September last, and all proceedings relating thereto. In the learned counsel's view, in representing the applicant Mitchell, there was no distinct authority on the point raised, and his client desired to have the authority of this court upon it. The matter out of which it arose was a proceeding under the Vaccination Act of 1867, 30 and 31 Vict., chap. 84, sect. 31, which empowers the magistrates to order the vaccination of any child under fourteen years of age who has not already been vaccinated or had small-pox. Mr. Jenney made an order under that section for the vaccination of a child of Mitchell's. It appeared that Mitchell had previously been convicted under the 29th section of the Act, and fined for not having a child vaccinated. That was in 1873; and the question which the court was now asked to decide was whether, the applicant having already been convicted under the 29th section, an order could now be made against him under the 31st, the order still having reference to the same child. Mr. Kingsford contended, on behalf of his client, that the conviction of 1873 made it impossible for the magistrate to proceed against the applicant under the 31st section. No doubt, a long time had elapsed between the conviction of 1873 and the order of 1882; but, in the view of Mitchell, if the conviction was good, there was no imaginable reason why the new proceedings should not have been consecutive, or indeed concurrent. Mr. Justice Hawkins thought there was no ground for the application. He regarded the conviction of 1873 as a totally different proceeding from the present, and had no effect at all as an answer to the order of the magistrate. The justices had made an order for vaccination, and it had not been complied with. His lordship had no doubt on the point, and thought that to grant a rule would only be to raise doubts in a matter which was perfectly clear. Mr. Justice Williams concurred.—Rule refused.

THE NEW MATRON OF GUY'S HOSPITAL.—The interest which was excited when it was announced that the matron of Guy's Hospital, whose name was associated with the late disturbance, was about to retire, left little feeling of excitement as to her probable successor. It soon became known that the governors had wisely determined not again to appoint a matron from the outside, and that the post would be filled by one of two ward-sisters, either of whom would be acceptable to the medical staff. It is highly satisfactory as showing the present desire of the governors to co-operate with the staff, that though a meeting was called on November 29th for the purpose of appointing a matron, the question was not then decided, but was referred to a small committee to which three of the medical officers were invited. The committee selected Miss Jones, who has been for some time one of the ward sisters, and has hitherto performed her duties with modesty and industry.

INJECTIONS OF HOT WATER IN DYSENTERY.—Dr. John G. Earrish gives, in the *College and Clinical Record*, the history of three cases of dysentery, in all of which copious injections of hot water resulted in almost instantaneous amelioration of all the distressing symptoms, followed by a speedy cure.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopaedic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 5 P.M.

WEDNESDAY.....St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopaedic, 10 A.M.

THURSDAY.....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.

FRIDAY.....King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu, F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. W., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th., 3; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear, and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopaedic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopaedic, W., 2; Dental, Tu. S., 9; Th. 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., Tu. F., 2; Eye, Tu. F., 9.15; Ear, M. Th., 2; Skin, Tu. Th., 1.30; Throat, M. Th., 1.45; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S. 9.15; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C.; London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with Duplicate Copies.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to the Manager, at the Journal Office, 161A, Strand, London, and not to the Editor.

VACCINATION AND VACCINATION INSPECTORS.

8.—I am another of the many who feel aggrieved by the great injustice I have endured from the inspectors, with one notable exception of the late Dr. Seaton, who was thoroughly earnest in his work, and behaved most courteously to all his humbler professional brethren.

1. To reverse the order; as to the lymph, it seems almost invidious, having asked for a favour, to find fault; but, since it is the only safe course open to a public vaccinator to obtain his first supply from the only official source, the National Vaccine Establishment, I have always done so, and, as a general rule, have found the lymph almost, and sometimes quite, inert, and on several occasions producing, to say the least, spurious and most impure results. Now starting with such lymph can secure results, expected by the inspectors, of deep foveation, etc., I am at a loss to know; unless it be on the Darwinian theory of the "fittest" germ developing in more congenial soil; or, as I have read, as under skilful agricultural management, oats and rye can be made to produce a crop of good wheat. It is only fair here to remark that the lymph supplied on the last occasion has been far better than I have ever had before, and with it I have not failed in a single instance to produce three good marks on every arm operated on. Failure cannot be owing to my system of vaccination. I scarify at least three places on the arm, across and across, with a row of three needle-points set in a bar of ivory, having at the opposite end a lancet-shaped piece of bluntly edged glass, on which the lymph is taken from arm to arm, or blown from the tube, and then rubbed firmly into the scarifications; the needle-points are invariably carefully cleaned, and plunged into a piece of clean cork, after each operation; and when the vaccine is "matured" from the first faint pimples, only generally produced by lymph from the National Vaccine Establishment, I rarely or never after fail to cause three good marks as large as a lady's wedding-ring. On several occasions, and I make the statement even now with much reluctance, I have been horrified to have children brought on the eighth day, or even earlier, after vaccination with lymph from the National Vaccine Establishment, with spurious pustules, erysipelatous inflammation of the arm, besides, on one special occasion, even more anomalous results.

2. The inspector comes about once in two years, asks for the book, and to be conducted to where the recently vaccinated children reside. Four miles, down to even half a mile only, is too great a distance for him to go, and I cannot afford time and horseflesh to drive him round my district; so that only one of my three districts, held for a considerable length of time, as far as I am aware, has ever been inspected; and only the cases of the weakest constitutions of a country district, living huddled up in close confined cottages in the village close by, have been the small percentage inspected of the whole number vaccinated, in spite of all persuasion or remonstrance, except when I have paid a few parents to bring their children, undergoing the vaccine disease at the time, from a distance to my house, to show the inspector. Can it be wondered at that I do not get full justice done me for the work I have taxed my best energies to fulfil for a considerable period of my life?

As a sequel to my confutation of the charges laid against me by Dr. Parsons, which you kindly published on November 25th, I have now to inform all who may be interested in the subject, that it was duly laid before the Local Government Board, whose only reply was that I must relinquish my appointment, unless I strictly adhered to all their requirements. Whatever others may think, I look upon this as an additional wrong inflicted upon me, by a misuse of the governmental power entrusted to the Board, and an illustration of the evil of too much centralisation. As far as my own experience goes, I see no good from this central control, and consider that the boards of guardians of the various unions are quite competent to superintend the carrying out of the Vaccination Act.

Allow me to forecast a case which, under the rigid system insisted on, is not unlikely to occur. In the spring, I shall have to attend at a station five miles distant. Three children will be brought. All will take good effect. The following week, one only will attend for inspection, but will bring a report that her neighbours' children have beautiful arms. With the fear of dismissal before me, I cannot register them. They are in due time summoned, and will prove to the magistrates that the children had splendid arms. The summons is dismissed; the children are not registered; I lose my hardly earned fees, and the unpopularity of compulsory vaccination is greatly increased.

I would urge my medical brethren, now the subject has been opened, to send a statement of their individual experience, *pro* or *con*, through you, if you will kindly permit, or through

A PUBLIC VACCINATOR OF OVER THIRTY YEARS' STANDING.

SIR,—Seeing a letter or two in your JOURNAL referring to the late vaccination inspection, I am very glad to see that this subject has at last been broached. The young man who inspected my district arrived at my house at about 3 P.M., with the intelligence that he had to catch a train at 3.15, and the station was three-quarters of a mile distant. I had had several cases waiting for some hours, but they had been obliged to leave, and he had to visit the children at their homes. He accomplished the inspection, and caught the train! I asked him the question, most emphatically, if a public vaccinator were allowed to have an unqualified assistant for his occasional deputy, and received the answer, "most decidedly not". The public vaccinator in the next district to my own received a Government grant from this inspector, with the full knowledge that he had frequently allowed his unqualified assistant to both vaccinate and inspect.—I am, sir, yours faithfully,
PUBLIC VACCINATOR NO. 3.

SIR,—As one of the public vaccinators of the district from which originated the comments on the late inspection, I hope you will allow me to state that I was on that and all previous occasions treated with the greatest courtesy and kindness by the inspector?

I have no wish to take either side in the dispute which has arisen in our union, for the simple reason, that I do not consider myself competent to form an opinion where a practitioner of such long experience as Mr. Meymott and one so well informed as Dr. Parsons differ. I feel, however, compelled to make this statement, in justice to the inspector, who, I think, has a very difficult task to perform conscientiously; and also to show that the very personal letter of your latest correspondent was not likely to have come from any of the medical officers of our union, who, no matter how much they may differ in opinion from the inspector, would never stoop to personal comments, or display such lamentable ignorance.

Another point in your correspondent's letter I wish to contradict is, that the

National Vaccine Establishment lymph is worthless, or words to that effect. I have used all kinds, and found it as good as any, never having a failure.—Your obedient servant,
A. COWLEY MALLEY, B.A., M.B., etc.,
Medical Officer for Munslow District of the Ludlow Union.

SIR,—I differ entirely from your correspondents. I vaccinate under two different unions, and I have always found the lymph from Whitehall successful. I have used the animal vaccine also, and that is successful. My work has been inspected by four different gentlemen, and all have been courteous and kind at every inspection. When we do not find those with whom we come into contact to be all that we could wish them, is it impossible for the mote (or beam) to be in our own eye?—I am, sir, your obedient servant,
Wansford, Northamptonshire.
FERGUS M. BROWN.

ITCHING IN ICTERUS.

SIR,—I should be obliged if some of your numerous readers would kindly suggest any remedy for the intolerable itching of icterus in an elderly lady. I have fruitlessly tried hydrocyanic acid, vaseline, zinc-ointment, and glycerine. She herself obtains most relief from warm water ablutions in the early hours of the morning, or from emollient spongings of cream and water. Any hints would oblige yours faithfully,
JUSTITIA.

F.R.C.S. and M.B.M.A., (Liverpool).—Yes, Mr. Reginald Harrison was a candidate for a seat in the Council of the College of Surgeons at the time mentioned, but gracefully retired for the reasons mentioned. It is stated on good authority that he will certainly be brought forward next July; and we join with you in hoping to see Liverpool represented on the Council of the College by the election of Mr. Harrison.

THE TREATMENT OF RHEUMATISM BY BLISTERING.

SIR,—I do not want to discuss the very debatable therapeutics of rheumatism, but simply to call attention to the indisputable fact that Dr. A. Harkin cannot be regarded as the originator of the blistering treatment. William Heberden was born in 1710. He became a Fellow of the Royal College of Physicians, London, in 1746, and published his notable *Commentaries on the History and Cure of Diseases* in 1782, exactly a century ago. In this work, I read, with reference to the treatment of gout, "Whenever there is a doubt whether the distemper be gouty, or what is called inflammatory, and requiring a cooling regimen, there blisters and other remedies suitable to both these cases should be used, till the doubt can be cleared up by a little delay, etc." (p. 45); and again, with regard to rheumatism: "A blister has relieved the more fixed pains of chronic rheumatism; and the volatile and saponaceous liniments have been rubbed upon the parts affected, and, perhaps, with benefit" (p. 402).

The truth is, blistering for rheumatism was a very familiar mode of treatment in Heberden's day, as we see how readily he suggests it; and, in all probability, it was known even long before then to physicians. I have now conclusively shown that this form of treatment was practised at least sixty-eight years before Dr. Harkin obtained his diplomas; and, if the Doctor still persists in establishing his claims, I will prove him as old as

HIPPOCRATES.

SIR,—I should imagine that by this time your readers are completely surfeited with "blisters and rheumatism". In medicine, as in theology or law, nothing is easier than to support or refute a theory, by cullying a few isolated opinions from standard authors. Dr. Harkin, however, seems totally oblivious of the fact that there are influential writers who hold that there is an acid morbid material in the blood of those who suffer from rheumatic fever, and that extensive blistering tends to make the urine neutral or alkaline. In the domain of the therapeutics of rheumatism, there is no room for anything which even borders on empiricism, and "the interests of science" are not advanced by the assumption of a dogmatic superiority. No doubt, it is somewhat galling when a pet theory is demolished, and "a new plan" of treatment is proved to be coeval with Hippocrates! Perhaps this may account for Dr. Harkin's criticism being characterised by acridity rather than convincingness. As Dr. Harkin's paper has been very fully and very unfavourably criticised by a host of correspondents, I will say no more.—I am, yours faithfully,
Lincoln, December 1882.

JOHN COLLIER, M.D.

A FELLOW.—Sir James Paget filled the office of President of the Royal College of Surgeons in 1875.

INTERMITTENT PULSE.

SIR,—Your correspondent "Forty-three" asks for the means of relief "from intermittent pulse" of about "two or three years' duration". Like him, I suffered, from the spring of 1879 to the beginning of the present year (1882), from the intermission named, accompanied by occasional and partial interruptions of the left ventricle, whereby the flow of blood to the brain was so diminished, as to produce an amount of stupor and giddiness, causing me now and then to fall to the ground, or against some solid object.

Medical friends tried their skill on me, but with temporary relief only; but the subjoined compound so effectually relieved me, that, for the past several months, I have been wholly free from intermittent pulse, as well as from the attacks of giddiness, etc. To these latter, I attribute a loss of some practice, and, what is more, such a report as to my ill-health which affected my interests to no small extent. R. Quinin. sulph. gra. xxiv; mist. camph. ad ʒvj; acid. hydrobrom. ʒij; tinct. digitalis ʒiss; liq. aurant. ʒi; tinct. nucis. vom. ʒij. A tablespoonful three times daily.—Your obedient servant,
4, Redland Park Villas, Bristol, December 7th, 1882.

A LARGE CHILD.

SIR,—On November 29th, I delivered a Mrs. A., with the long forceps, and with great difficulty, of a male child, having the following measurements and weight: Circumference of head, 15½ inches; circumference of shoulder, 14½ inches; length, 1 foot 11 inches; weight, 13½ lbs. The mother is making slow progress towards recovery, and the child (with the exception of a wound on the back of the head) is doing well.—I am, etc.,
Nailsea, December 13th, 1882.

W. HOWARD CORY.

A MEMBER does not give his name. If the facts he states be capable of proof, he should communicate them to the authorities of the body of which he speaks.

LIFE-ASSURANCE OFFICES AND PAYMENT OF CERTIFICATES OF DEATH.

SIR,—I last week filled up certificates of the cause of death of a patient of mine for four life-assurance offices. They all decline to pay me a fee, and say that the executors of the deceased ought to do so. Of course, it is for their benefit; and that they should not be imposed upon is the only reason that I can see one is required. I should like to know your opinion in the matter.—Yours faithfully,
The Shrubby, Coddenham.
FREDERICK GULL.

REMARKS ON PHYSIOLOGY OF AUDITORY VERTIGO AND SOME OTHER NEUROSES PRODUCED BY EAR DISEASE.*

By P. McBRIDE, M.D., C.M., F.R.C.P.E.,

Lecturer on Diseases of the Ear in the School of Medicine, Edinburgh.

ON reading for the first time the larger works on otology, the practitioner cannot but wonder at the number and variety of symptoms ascribed to ear disease. Careful consideration, combined with a basis of physiological training, will, however, do much to explain what at first sight seems a mystery.

Let us glance for a moment at the afferent nerve-supply of the essential parts of the organ of hearing. From the meatus and outer layer of the tympanic membrane, sensory impressions are conducted to the brain by means of the inferior maxillary division of the fifth nerve. The auricular branch of the vagus also, as we know, ramifies in the external auditory canal. In the tympanum is situated the well-known plexus, composed of fibrils from the glosso-pharyngeal, sympathetic, and fifth nerves.

The chorda tympani, from its exposed position, is very apt to suffer in suppurative middle-ear disease, as pointed out by Urbantschitsch, giving rise to anomalies of taste. It must be well known to all here how pathological conditions of the tympanum, or even of the meatus, may, by influencing the chain of ossicles or the fenestrae, produce stimulation of the auditory nerve. Now, the latter we must, in the present state of our knowledge, consider as equivalent to two independent nerves: the one connected with the auditory centre, which, when stimulated, gives rise to sensations of sound; the other connected with a centre, irritation of which produces vertigo and other allied symptoms. The former has its peripheral end organs situated, for the most part, in the cochlea, while the latter is distributed to the semicircular canals.

From the peculiar anatomical relations between the various parts of the ear, it is quite possible that we may have several afferent nerves stimulated at one and the same time. For instance, in the case of a foreign body in the meatus, the latter may cause irritation alike of the fifth nerve and of the auricular branch of the vagus. Then, again, it may at the same time, by pressing against the drum-membrane, produce increased tension of the labyrinthine fluids, and cause, in this way, giddiness and tinnitus.

As our time is limited, I will not detain you by detailing other possible conditions which are capable of producing stimulation of the various afferent nerves which terminate in the ear. Many will, I am sure, suggest themselves to those present.

Now, although, as far as I know, no actual physiological experiments have hitherto been made in this direction, it still seems fair to conclude that reflex phenomena are more likely to occur when a stimulus is applied to two or more afferent nerves at the same time than if its action be confined to one. It is a well-known fact that, whereas syringing the ear with warm water is not usually followed by any untoward effect further than a slight and transient feeling of giddiness, the results produced by substituting cold water are much more serious, comprising marked vertigo, nausea, and even syncope. The only physiological explanation which seems satisfactory is that, while in both cases we have stimulation of the auditory nerve in the labyrinth by the pressure of the column of water against the drum-membrane, there is, when cold water is used, an unwonted irritation of those branches of the fifth nerve which supply the meatus. It is, I believe, the simultaneous passage of afferent impressions along the auditory, or rather that portion of it which supplies the ampullæ, and the fifth nerves, which accounts for the unpleasant and serious symptoms sometimes produced by injecting cold fluids into the ear.

So far, we have considered the ear as a favourable starting-point for reflex phenomena, on account of its great and varied nerve-supply. There is, however, yet another reason why disease or injury in this part should tend to produce disturbance of the nervous system.

Rutherford and Hallenstein (*Handbuch der Physiologie*, Hermann, Band ii, 118) both found that, in stimulating sensory nerves, the reflex

phenomena are more marked the nearer the centre the irritation is applied. In other words, the less the distance an afferent impulse has to travel, the greater will be its effects. All the nerves which supply the ear are, as we have seen, cranial, and the peripheral endings in the organ of hearing are in no case separated by any great length of nerve-tissue from their terminations in the brain. In proportion as this is the case, then, their stimulation by ear-disease will be apt to cause marked reflex phenomena.

We know that various functional nervous affections may have their origin in aural lesions. Thus, epilepsy has been traced to the presence of a foreign body in the meatus, and to pathological changes in the middle ear, as, for instance, chronic suppuration. Cases have been recorded by Schwartz, Köppe, and (more recently) by Browne, in which mental disorders were distinctly traced to pathological conditions of the organ of hearing; and, what is more important, cured by local treatment of the part. Less marked phenomena, such as loss of memory and morbid irritability, are described by Von Tröltzsch as of comparatively common occurrence in chronic middle-ear catarrh. Quite recently, I had occasion to treat a patient who, besides being very deaf and suffering from constant tinnitus, had become childish and forgetful. Suitable treatment, directed to the ear, materially relieved all the symptoms.

The group of symptoms which are now almost universally admitted to be due to lesions of the semicircular canals, must be familiar to you all. The morbid condition may be an actual pathological change in the labyrinth, or simply an alteration in the relative tension of endo- and perilymph, such as may be caused by disease of the middle ear, or even by the pressure of a foreign body on the drumhead. In a typical case of ear-giddiness, the most striking phenomena are—(1) vertigo, (2) nausea or actual vomiting, and (3) faintness, going on even to actual syncope.

The questions I now propose to discuss are—

(a) How can we explain the occurrence of these symptoms from irritation of that portion of the auditory nerve which supplies the semicircular canals?

(b) What is the relation between auditory and stomach vertigo?

The elementary facts of nerve-physiology teach us that, in a centre—be it the brain or spinal cord—impressions conducted thither tend to radiate. In the common experiment of tickling the sole of the foot, the impression conveyed by the sensory nerve is radiated first to the motor nerves of the leg, and then, if the stimulus be still applied, to all the motor nerves of the body. It is urged by some that, while radiation from a sensory nerve to a motor often occurs, yet radiation from one afferent nerve to another does not take place. In reply, we may cite the pain referred to the knee, which is a frequent accompaniment of hip-joint disease. Another example, and one with which all here must be familiar, is the reflex ear-ache produced by a diseased tooth. In this country, if a patient complain of severe ear-ache, without deafness, and without inflammatory changes in the meatus or drum-membrane, the cause may generally be sought in some dental inflammation.

With this statement, I think, most of you will agree. The explanation of the pain being referred to the ear is, that the impression originating in the decayed tooth has, in the Gasserian ganglia, been transferred to those centripetal fibres which correspond to the auricular branches of the fifth nerve, and has thus been conveyed to the sensory centre as a message from the ear instead of from the tooth—if I may be allowed a simile. It is sometimes asserted that, in these cases, the pain is due to secondary vaso-motor changes in the ear; in fact, to inflammation. All that I can say is, that I have seen many cases of aural pain due to diseased teeth in which there was no trace of inflammatory reaction revealed by inspection of the meatus and drum-membrane. Indeed, it is the absence of all signs of inflammation that enables us to diagnose the cause of the suffering.

Now, so far we have studied the phenomenon as a transferred impression—the radiation taking place in the Gasserian ganglion; but these cases sometimes go a step further if the tooth be not removed. The nerve-impulse is then radiated to centres corresponding to nerves which supply the arm and mammary region, causing pain in the shoulder and mastodynia.

I believe that the explanation here adopted is simpler, and in the present state of our physiological knowledge more scientific, than theories based upon hypothetical reasoning.

The phenomena of auditory vertigo are to be explained on the same principle.

It will, I think, hardly be denied that stimuli conveyed along the ampullar portion of the auditory nerve are conducted to a brain-area, which, when active, produces the phenomena of vertigo. This we are taught alike by experiments upon animals and by clinical observation.

* Read in the Section of Otology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

If the stimulus be severe, however, it radiates beyond the vertiginous centre, and next involves the vomiting centre, producing nausea, if not actual vomiting. A still more severe stimulus will travel further and involve the cardiac inhibitory centre, causing faintness, chilliness, and even syncope—the vital phenomena of auditory vertigo. The loss of consciousness, which sometimes occurs in so-called Menière's disease, is probably oftener due to syncope than to any other cause.

We have seen that a nerve-impulse reaching the centre of the ampullar nerves tends to spread first to the vomiting and then to the cardiac inhibitory centre. The oculo-motor centre seems to be less frequently involved in man, although the experiments of Cyon show that nystagmus is a common result of section of the semicircular canals in some of the lower animals. Cases are on record where the latter symptom was found to depend upon ear-disease in the human subject. It is difficult to see how any other explanation than the above can be found to account for the phenomena of Menière's symptoms—not the vertigo alone, but its accompaniments, sickness and syncope. Here it will at least be difficult to find a vaso-motor connection between the labyrinth and the various centres involved.

I shall now consider the relation between auditory and stomach vertigo. For the production of giddiness, it is essential that the brain-area which corresponds to the ultimate origin of the ampullar nerves be stimulated. We have already seen that this vertiginous centre is in intimate physiological relation with the vomiting centre. The latter is directly connected with the vagus. The physiological process in the production of stomach-vertigo is, I believe, as follows. By irritation of the afferent fibres of the pneumogastric, an impression is conveyed to the brain, producing either nausea or actual vomiting, and it then radiates to the physiologically adjacent vertiginous centre, causing giddiness.

In auditory vertigo, then, we should expect the first symptom to be giddiness, because the wave of nerve-impulse is conducted directly to the vertiginous centre. In stomach vertigo, on the other hand, we should expect, first, nausea or vomiting, because the wave of nerve-force has to pass through the vomiting centre first. So far as I have seen, this is borne out by clinical experience.

In the case of ear-cough, an analogous explanation of the phenomenon suggests itself. The auricular branch of the vagus conducts an impression to the respiratory centre, producing the combination of expiratory movements known as cough. In his work on *Deafness, Giddiness, and Noises in the Head*, Dr. Woakes says, in speaking of ear-cough, "Thus, it cannot be said that the conducting of morbid impression along the sensitive fibres, from one region to another, will produce the symptoms; because, if reflex action be excited through a sensitive nerve, this is manifested as muscular contraction in the correlated area."

Now, I think that in the preceding part of this paper it has been shown that impressions may be transferred from one sensory nerve to another, or, rather, to its centre, without inducing muscular spasm. Thus it is in the case of the pain in the knee occurring in hip-joint disease, and again in earache, brachial neuralgia, and mastodynia, which may owe their origin to a decayed tooth.

Again, Dr. Woakes, in support of his theory, has laid much stress on the trophic changes in the larynx which occur in ear-cough. I am strongly inclined to agree with Dr. Orme Green, who ascribes them to the commotion of the larynx. In answer to this objection, Dr. Woakes says that this explanation "failed to commend itself for acceptance, chiefly because such laryngeal complications are so frequently—one might say usually—absent in chronic bronchitis, whooping-cough, and other diseases, in which the larynx is even more violently commoted by cough than in the cases referred to in the context."

In reply, and in conclusion, I simply ask whether inflammatory changes in the larynx have indeed been proved to be, relatively, more frequent in cases of ear-cough than in the diseases named?

CORONERS' INQUESTS.—The following were the disbursements of the different coroners presented to the Committee for Accounts and General Purposes of the Middlesex magistrates: Sir John Humphreys, eastern district, 216 inquisitions from October 2nd to November 10th, £388 10s. 6d.; Dr. Danford Thomas, central district, 150 inquisitions, October 3rd to November 10th, £285 3s. 6d.; Dr. Diplock, western district, 75 inquisitions, October 2nd to November 10th, £147 6s. 6d.; Mr. St. Clare Bedford, City and Liberty of Westminster, 30 inquisitions, October 1st to October 31st, £68 17s. 6d.

MIDDLESEX LUNATIC ASYLUM.—On the motion of Mr. A. W. Gadesden, the plans and estimates for the extension of the County Lunatic Asylum at Banstead, by which 120 additional female patients may be received, were submitted to the court and approved. It was also resolved that the sum of £18,000 be granted by the court towards the cost of erecting and furnishing the new buildings, the sum to be raised by mortgage of the county rates in the usual manner.

DISLOCATION OF THE LENS, WITH REMARKS ON THE OLD OPERATION OF COUCHING.*

By EDWYN ANDREW, M.D.,

Surgeon to the Shropshire Eye, Ear, and Throat Hospital, Shrewsbury.

MOST writers on injuries to the eye, producing dislocation of the lens into the vitreous body, are inclined to take a grave view of the condition; but, from a number of observations made, my opinion is much more favourable; in fact, I have been surprised, under such circumstances, to notice the great power of recovery the eye possesses, and the excellent vision obtained by the aid of glasses, with little or no treatment besides rest. In the majority of such favourable cases, it must be allowed that the lens has been dislocated with its capsule entire, and the external coats of the eyeball left intact. When, from greater violence, other lesions are added, such as rupture of the lens capsule, or rupture of the external coats, with admission of air containing the dreaded germs of the present day, the prognosis becomes more and more unfavourable in proportion to the addition of these evils; recovery becomes much more slow, as the iris is generally implicated; the vision obtained is less perfect; much more active treatment is required; and, when these evils are conjoined with admission of air, often general inflammation is set up, requiring immediate extirpation of the whole eyeball.

It seems, then, to me, that simple dislocation into the vitreous body of the lens encased in its capsule causes little or no irritation, and most commonly has a favourable termination. Without referring to the spontaneous dislocation of the lens, and usually the very slight disturbance therefrom, the two following cases are recorded, out of several others, in support of the above views.

CASE I.—G. J., aged 70, a labourer, whilst breaking stones, received a severe blow on the right eye from one of the fragments; the pain produced was only temporary, but vision was so impaired that he was unable to continue his work, the left eye being previously affected with incipient cataract; after five weeks' rest, therefore, he presented himself at the Eye Hospital.

On examination, the right pupil was found round and contractile; the iris was flat and vibratile; tension normal or *minus*; the cornea was clear; there was little or no conjunctival injection; the disc was clearly seen; there were no moving bodies, and the lens was distinctly visible, resting on the lower surface of the eyeball. With +2½ and 4, he could read for near sight No. 4 of Jäger, and for far sight ⅔ of Snellen.

As there was no sign of any irritation, merely a placebo was given. Six months later the right eye was perfectly quiescent; the media were clear, and vision same as before. In the left the cataract had advanced. He was told to report himself, should he feel the slightest uneasiness in his eyes, but he has not done so for the last eighteen months.

CASE II.—J. P., aged 73, came in March last for injury to his right eye, also from stone-breaking, six months previously. There was detachment of the inner half of the iris, forming a double pupil, not contractile. The iris was slightly inclined backwards, and very vibratile; tension was normal, or slightly increased; the cornea was clear; there was no injection. The lens was partially dislocated outwards and backwards; the inner margin was very visible, from having a fringe of pigment adhering to it. It was slightly hazy, but the disc could be seen through it indistinctly. With +10 letters of 16 could be made out with the greatest difficulty, but for distance 8. He said he had lost the sight of his left eye for twelve years from a slight injury. On examining this left eye, there was a small central contractile pupil with a vibratile iris. Tension was normal, the media clear, and disc distinct; there were no moving bodies; and the lens was found dislocated to the lower fundus, movable, and apparently anchored in this position by the lower part of the suspensory ligament. The edge was readily seen by a black circular margin; the capsule seemed shrivelled with a white centre (nucleus?). With cataract glasses, to his astonishment, he could make out No. 1 Jäger and ⅔ Snellen. Seeing the happy result of accident in his left eye, I determined to imitate the proceeding in his right eye. He was placed under ether; a small opening was made near the corneal margin with a narrow bent flat needle, and an instrument made of a piece of stiff wire, having a rounded point, and a line to half a line of its extremity bent at a right angle, was introduced, and the suspensory ligament torn through except at its lower part. The instrument was now placed sideways in front of the lens near its upper margin, and pressed back so as to push the lens downwards and backwards in its capsule to the lower fundus of the eye. On recovery from the ether, the patient

* Read in the Section of Ophthalmology, at the Annual Meeting of the British Medical Association, Worcester, August 1882.

at once noticed improvement in vision. During the evening, and also the next day, there were some general injection, slightly increased tension, and also slight vitreous haze; but the tension soon disappeared by the application of eserine twice a day, and the haze gradually diminished, so that at the end of the week he could read, with cataract glasses, 14 Jäger and 28 Snellen. At the end of a fortnight, the disc was almost distinct. Words of 4 Jäger were read with difficulty and 28. From the condition of the iris, perfection of sight in this eye would be simply impossible.

Do not these and other similar cases show the performance of the old operation of couching in the roughest manner, but producing results, as we see in one instance mentioned above, and after a period of twelve years, so good that it is rarely equalled by the best mode of extraction? Do they not point out that the almost universal condemnation of this old operation of our forefathers requires to be modified; for, disastrous as the results of couching have been, and having succeeded to the hospital practice of a surgeon who chiefly depressed, I speak with some authority, and believe that, in suitable cases, these bad results have been rather due to laceration of the capsule than to the forced dislocation of the lens.

Putting aside a large number of cases for which couching is quite unsuitable, and confessing that I have only had the courage to carry out my opinion in a few cases, still, with all reserve, I feel that, in a limited number of patients with senile cataract, such as those of great age with severe cough, or a marasmic constitution; or where suppuration or hæmorrhage has followed extraction in one eye; or where previous examination of the patient before the lens has become opaque, has shown very fluid vitreous humour, and some others, recourse may be had to this operation, now outside the pale.

Should other surgeons agree with me that art ought to accomplish equally well what accident effects so rudely, and nature spontaneously, I think they will find my plan of operating the most desirable, as it will decide in such cases whether depression is advisable; for should the vitreous humour be fluid, on detaching the suspensory ligament, except at its lower part, the lens will fall away from the pupil, when this movement may be continued by the aid of the instrument downwards and backwards to the fundus, where it will remain partially fixed by the remains of the ligament; but, should the lens retain its position, the operation of extracting it in its capsule will probably be the better one.

Von Graefe has stated that a lens, perfectly freed from its detachment, is less likely to set up glaucomatous symptoms than one partially detached; but, in the plan proposed, the lens is practically free, although still adherent at one part.

ON THE USE OF ESERINE AS A PRELIMINARY TO EXTRACTION IN CASES OF CATARACT.*

By CHARLES BELL TAYLOR, M.D., F.R.C.S.,
Surgeon to the Nottingham and Midland Eye Infirmary.

IN selecting an operation for cataract, the surgeon will always have two ends in view; first, to adopt such a method as will secure the smallest percentage of positive failures, and second, one that will give the most brilliant results, both as regards appearance and vision.

Unfortunately, these two ends are not always compatible. What may be done in the way of cataract operation, I shall illustrate by two patients who are subjects of double extraction with central and movable pupils, who are kind enough to attend here to-day; as also by another patient who has had both eyes operated on in the manner I am about to describe.

No one—if you will pardon a slight digression—who has had experience in ophthalmic surgery, can have failed to appreciate the advantage of a background of iris when extracting small chips of steel or other foreign bodies from the surface of the cornea. Unless the eye can be turned in such a direction as to obtain this advantage, there is apt to be a want of precision in our proceedings; and, when the foreign body is situated exactly opposite the black expanse of the pupil, it may be either overlooked altogether, or attempts at extraction may be attended by unnecessary denudation of the cornea. A drop of eserine obviates this inconvenience, and the foreign body, thrown into strong relief, is readily removed without doing violence to any of the tissues not actually involved.

Now, if a background of iris is a convenience when operating for the removal of foreign bodies from the surface of the cornea, it is equally advantageous when operating for extraction of cataract; while a deep anterior chamber, and a pupil so contracted as to reduce the

chances of subsequent prolapse to a minimum, are so manifestly in favour of the operator, that I cannot doubt that the instillation of eserine will speedily become generally adopted as the first step in the operation of extraction for cataract, as also in some cases where it is necessary to form an artificial pupil, or to remove foreign bodies from the cornea. I generally apply the solution half-an-hour or twenty minutes prior to commencing the operation; which, premising that I always secure complete control of the eyeball by forceps that pierce the sclerotic, may be accomplished, according to the varying exigencies of each individual case, by one or other of the following methods.

First, I use an extremely narrow-bladed knife; enter it with the edge directed upwards in the corneo-sclerotic junction on a line with the pupil; bring the knife out exactly opposite, and then cut upwards with a gentle sawing motion until close to the corneo-sclerotic junction of the upper third of the cornea, when the edge of the blade is turned forwards and the section completed. I then excise a few fibres of the upper segment of the sphincter of the iris, lacerate the capsule, and extract in the usual way. It is only in very exceptional cases that I find it necessary to administer anæsthetic; and, in a majority of patients, I am in the habit of manipulating the knife so as to get a portion of iris across the edges, completing the iridectomy and section at the same time.

The only delicate portion of the operation now remaining is the laceration of the capsule, which, when possible, I dispense with, and extract the lens and capsule entire by careful manipulation on the surface of the cornea. The operation may be simplified by a preliminary iridectomy, which I accomplish by a small incision midway between the upper edge of the pupil and the corneo-sclerotic junction, lacerating the capsule at the same time. If this be done half-an-hour before the extraction, the aqueous humour is resecreted, and the only risky part of the operation is completed when the eyeball is thoroughly under control. Or, instead of completing the incision, I leave a bridge in the upper third of the cornea, make an incision in front of this bridge, perform a slight iridectomy and lacerate the capsule, dividing the bridge as the last stage in the operation; or a bridge may be left at the angle of the wound, which is subsequently divided with scissors. If it be desirable to extract without iridectomy, I make an incision with the pupil under eserine, and extract when the contraction caused by eserine has been overcome by atropine, which takes place in about half-an-hour.

The Use of Eserine as a Preliminary to Extraction.—Iridectomy purposely effected with the knife, or half-an-hour before the removal of the lens, or under the protection of a bridge which is subsequently divided, is, so far as I know, a novel feature in the operation of extraction for cataract. In my hands, eserine has proved specially useful; and I have here a patient in whom the iridectomy was effected in the left eye with the knife in the right eye half-an-hour before extraction. The two other cases of double extraction in which the iris is untouched demonstrate the brilliant results which are obtained by preserving a central and movable pupil; and, had it been practicable, I could have introduced several patients illustrating what I conceive to be the advantage of one or other of these modes of procedure in suitably selected cases.

ON BENT TIBIÆ IN CHILDREN: CAUSE AND TREATMENT.*

By CHARLES STEELE, M.D., F.R.C.S.

IN this short paper, I do not intend to dwell upon either the characteristic forward bending of rickets or the severe cases of bent tibiæ associated with deformity of the knees or ankles, but to speak of those milder cases where the inner surface of the shaft of the tibia, instead of being straight from the upper to the lower extremity, presents a curve outwards and backwards; and, in doing so, gives a twist to the ankle, which carries the foot with it, and compels the toes to turn inwards. This unseemly appearance is very objectionable in children belonging to the upper classes; and by it, in some instances, I have detected the cause, and confirmed my diagnosis on examination.

These children, with their feet and legs naked, cannot possibly turn their feet outwards when walking, unless they straddle their knees; but as, under proper treatment, the curved tibiæ approach the normal straight line, the feet naturally turn straight, and can be turned outwards. If not detected and treated early, bandy legs probably result; and the condition can be remedied, whether late or early, by the use of irons, persistently applied for some time. But irons are objected

* Read in the Section of Ophthalmology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

* Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Worcester, August 1882.

to if the case be mild, because they are conspicuous; or if the child be very young, because they are likely to tax its strength, and this I have known them to do. Straight wooden splints are used by some; and I have tried them, but without satisfaction, because they take their bearings upon the knee and ankle, which, if these joints be normal, is objectionable; while, as regards both irons and wooden splints, the most valuable time—namely, the many hours during which the child is asleep, and therefore no weight is upon the bones, and no muscular effort can bias treatment—is lost, as irons and splints cannot be worn in bed; and splints, if worn, are either kicked off or pushed by the child into an useless position.

This state of bent tibiae is generally observed in fine children soon after they begin to walk, and is believed to be caused by the child's legs having to carry a weight heavier than they are able to support. I believe this to be an intensifying, but not the primary cause. I hold, in fact, that, like talipes varus and talipes equino-varus, of which this may be considered the mildest modification, it is congenital, and due to the position which the child's legs and feet occupy *in utero*; the most favourable exciting cause being that of a large child lying in a uterus containing but little liquor amnii, so that the lower extremities are obliged to conform to the rounded containing cavity.

All obstetricians must have observed how newly born infants' limbs, when extended, rebound into the bent position they occupied in the uterus; and that often involves the appearance I have mentioned, and even talipes varus and equino-varus. It is well known also that a good nurse, by daily manipulations, can cure even pronounced talipes. What we need, therefore, for treatment, and early treatment, is an elastic power acting directly upon the bone affected, leaving free the knee and ankle joints, which can be worn when the child is awake and active, and particularly during the long hours of rest. These small light steel spring splints, which I have devised, and which a clever mechanist, Mr. Bryant of Lower Park Row, Bristol, made in accordance with my instructions, are designed to act in the same manner as manipulation. If we place the fingers of one hand on the upper extremity of the tibia, and of the other hand on the lower extremity, and both thumbs on the outer surface of the limb, the bone can, with gentle firm pressure, be soon made to assume almost the straight line, as at an early age it is cartilaginous. These splints consist of a spring shaft well curved outwards, having the lower extremity cupped to cover the malleolus of the fibula, and to the upper extremity fixed a transverse band of malleable iron to partially embrace the limb below the knee. In applying them, the centre of the shaft and the lower portion are first bandaged in position; then the upper part is pressed to the limb, the soft band moulded to the surface, and the bandaging completed. I have lately had straps affixed to the extremities of several, and these keep the splints in place without bandages. It is requisite that the splints be not strong, or they cause pain; but, if they be mild and well fitted, I find that mothers and nurses readily apply them, and see their operation; and children do not get them out of place, and wear them willingly both when asleep and when awake; and, so far as I have had time to observe, the results are most encouraging. I have adapted the same principle in these splints for bent radius and ulna in boys, the result of walking-stick fractures which had occurred some months before I saw them; also for keeping a toe straight after division of its flexor tendon for contraction.

NOTES ON A CASE OF DEAFNESS FOLLOWING CONCUSSION OF THE BRAIN.*

By RICHARD ELLIS, F.R.C.S.Ed.,

Senior Surgeon to the Newcastle-on-Tyne Throat and Ear Hospital.

THE patient, aged 28, the second officer of a steamer, on going on board his vessel in the harbour of Leith, at night, and where the light was bad, fell off the gangway, between the vessel and the wharf, into the water, a distance of about twelve feet. In falling, he struck his head against the sponsoom of the vessel, and he was in the water for some minutes. When taken out, he was insensible, and remained so for twelve hours. Upon recovery of consciousness, he remembered nothing of the fall; he was told he had vomited much, and bled freely from the mouth, nose, and left ear. Mentioning, as his general symptoms were coming up, he was allowed to proceed quietly as far as he could to South Shields. On arrival at this port, he found he was totally deaf in the left ear, for which he applied to Mr. Rajanah, the house-surgeon at the Ingham Infirmary, who sent him up to the Newcastle Throat and Ear Hospital, where he came under my care a week after

Association in Worcester, August 1882.

the accident, presenting the following symptoms. There was a lacerated wound on the upper portion of the mastoid process; the pinna was also lacerated; these wounds were in a healing condition. He could not hear the watch on contact; he said that, on closure of his good ear, he could not hear the noise of the railway-train on his journey up. The tuning-fork was heard very faintly and indistinctly. On using the otoscope, no impulse was heard from the Eustachian tube. The tympanum was dull in colour, particularly in its lower segment; the cone or pyramid of light was not seen. The diagnosis was intratympanic hæmorrhage, blocking the Eustachian tube; and laceration of the lower segment of the tympanum, which was possibly hastened down by a coagulum of blood, thus preventing vibration.

Treatment.—The meatus was filled with a warm solution of boric acid of soda, in distilled water, with glycerine. This was renewed, and the steeping continued, for about twenty minutes. The syringe was now very gently used, which brought away a small thin coagulum, about half the size of the little finger nail, and he expressed a sense of relief; but still the hearing, although much improved, was defective. The Eustachian catheter was now passed, through which a weak alkaline solution was passed by means of a syringe; finally, he was Politized, with the result of there and then completely restoring his hearing. I recommended him to take, for a week or so, a mixture containing five grain doses of the iodide of potassium.

PARALLEL HISTORIES OF TWO CASES OF BLEEDING MYOMA.*

By LAWSON TAIT, F.R.C.S.

IT is now just ten years since I introduced the operation of the removal of the uterine appendages for the arrest of hæmorrhage; and though at first my results were so unsatisfactory as to lead almost to a desertion of the practice, within the last six years the results, both primary and secondary, have been so brilliant, that I have every reason to regard this proceeding as the most satisfactory addition to gynecology which has been made during the present generation.

The idea seems to have occurred simultaneously to Professor Hegar and to myself; and the performance of the operations in order of date gives only a few days' priority to Professor Hegar. But, for the relief of pain, I had performed the operation seven months before Professor Hegar. At first I was contented to remove the ovaries, but I soon found that the results were not speedily and completely satisfactory unless the tubes were removed. Increased experience in this class of cases has satisfied me that it is with the tubes that we have chiefly to do, and that the function of menstruation has little or no dependence on the ovaries. If the tubes are removed and the ovaries left, menstruation may be entirely suspended. Thus it will be seen that the principles upon which is based the operation introduced and practised by myself differ very much from those of Hegar and Battey.

I have already published several series of cases of removal of the uterine appendages for the arrest of intractable uterine hæmorrhage, in which I have shown that both the primary and the secondary results are more satisfactory than those of lithotomy in the male, so far as these are known.

I have now to give the histories of two most curiously parallel cases of bleeding uterine myoma, the contrast afforded by these being a singularly powerful argument in favour of the operation I advocate.

The first case is that of a young woman, aged 28. I admitted her to the Hospital for Women on May 15th, 1879, on account of profuse menorrhagia. She was in a condition of the most extreme anæmia, due to the presence of a small myoma in the fundus. Every therapeutic measure had failed to make the least impression on the hæmorrhage, and I therefore attempted to remove the myoma by dividing the cervix and opening the capsule. This was done on August 12th, and a mass as large as a hen's egg was removed. She hung between life and death for weeks, and was eight months in recovering strength sufficiently to get about. In a report published in the *Lancet*, I remarked that I was of opinion that, in such a case, the removal of the appendages was a much safer proceeding than enucleation of the tumour, and that it had given much better results. There can be no question that enucleation is a most terribly fatal operation; and even when it does not kill, it is not necessarily successful, as will be seen in the second part of the history of this case.

I saw her from time to time after she left the hospital, and she became strong enough to resume occupation in July 1880. She became engaged to be married about this time, and everything promised well

* Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

for her future life, for her menstruation was normal, and her uterus quite as it should have been. But in December 1880 she came to me on account of increasing menstruation; and I found that the fundus was enlarged, and in all probability the seat of another myomatous growth. In April 1881, matters were much worse, and I then proposed to her the more complete operation for the cure of her disease—removal of the uterine appendages. She was quite prepared for anything, but the consent of her intended husband had to be secured for the proceeding; and here a difficulty was encountered. In spite of my assurance that with a myoma she had little or no chance of being a mother, and that with the increasing hæmorrhage she had little chance of surviving her marriage more than a few months, my advice was rejected, and she was taken to London for the opinion of a distinguished surgeon there. I am informed that his advice was that nothing should be done, as the tumour was small, and would probably never trouble her, and that she might be married. She married in June, and died of hæmorrhage in August.

In the same period exactly which limits the history of this case, I had another under my care, sent to me by Dr. Law Webb of Ironbridge. She was thirty-two years of age, and had suffered from profuse menstruation for about twelve months, when I first saw her in February 1879. I found the cause of the hæmorrhage to be, as in the first case, a small myoma. I enucleated it also, and she made a very tedious recovery. Up to January 1881, she remained perfectly well; but she came back to me in August last with all the old symptoms, and I found another myoma. On August 25th, 1881, I removed the appendages, and she made a speedy recovery. On January 30th, 1882, she came to see me, looking very well, expressing herself as being much stronger; and she told me that there had been no return of menstruation. The last interview I had with her, in June last, was to discuss the question of her marriage. The tumour had become greatly reduced in size; and as she was entering into the married state with full knowledge, in the case of both parties, that she could never be a mother, I could see no objections to the step, and it is about to be taken.*

The lessons from these two cases are: first, that hæmorrhage due to a myoma may be fatal; second, that enucleation of a tumour is often not a successful operation in its secondary results; and this fact, together with its enormously high primary mortality, is quite enough to condemn it.

The series of cases I have already published prove conclusively: 1. That the primary mortality of removal of the uterine appendages for bleeding myoma is very small, and is limited to those cases already so reduced by loss of blood as to be practically unable to withstand any surgical proceeding; 2. That the secondary results of the operation are extremely satisfactory, and are permanent, the arrest of the hæmorrhage being followed by the shrinking of the tumour, and in many cases by its complete disappearance.

The objections to the operation, so far as I have seen them, are only two. (a) It deprives a woman of her sexual powers. This is proved on all hands to be incorrect; but even if it were true, nothing could be more immoral than to refuse to relieve a suffering woman on such a plea. (b) It is argued that it completely destroys the possibility of maternity; but the answer to this is, that the chances of a woman suffering from uterine myoma becoming a mother are infinitely small, and if she should become pregnant, she runs a most serious risk of her life.

Dr. SUTTON (Pittsburg, U.S.A.), in response to a call from the Chairman, said that, coming as he did from the country where ovariectomy had its birth, and where Battey had more recently re-introduced the operation for removal of the ovaries, he knew well the difficulties which surrounded the introduction and advocacy of a new operation. He had, during his stay in this country, had the opportunity of seeing Mr. Tait's operations; and although he did not, of course, know what the ultimate result might be, he was able to say that patients recovered from the operation perfectly. He should go back and tell his countrymen, that he considered Mr. Tait's operation was worthy of their acceptance, and he recommended them to give it a full and fair trial.

* She has now been married some months, and is in perfect health. The tumour is about one-third of the size it was at the time of the operation (December 20th, 1882).

KING'S COLLEGE, LONDON.—The Right Hon. Sir John Mowbray, Bart., M.P., D.C.L., has consented to preside at the annual dinner of associates and students, to be held in the College Dining Hall, on January 17th, 1883. Gentlemen wishing to be present are requested to communicate with the Honorary Secretary of the Committee, Mr. H. Courtenay Luck, at the College.

ON MEDICAL LIFE-HISTORIES.*

By F. A. MAHOMED, M.D.,

Physician to the London Fever Hospital; Assistant-Physician to Guy's Hospital.

GREAT as our advances have been during the last half century, I suppose that all of us will agree that our knowledge of medicine at the present time is painfully deficient. I say advisedly of medicine, for our advances in surgery have been far more satisfactory. Here we are dealing with more tangible things; surgical diseases are on the surface or within reach; we can see them, handle them, remove them. The physician only obtains outward and visible signs, from which by an elaborate mental process, founded on past experience, he deduces his diagnosis of an inward invisible disease.

Now I would ask you to glance for a moment at the present position of medical science. Our diseases may be roughly divided into three great groups:

1. Acute diseases, with organic changes (including the specific fevers).
2. Chronic diseases, with organic changes.
3. Functional diseases, without organic changes, but often preceding or forewarning of them.

Our knowledge of disease has been obtained almost entirely from hospital experience; from that we have learnt much.

1. With regard to acute diseases, we can recognise their nature, we know their usual course, we can estimate to some extent their severity, we know their special dangers, and we have more or less well ascertained rules to apply which enable us to guide a patient through them with the least possible risk.

Concerning the specific fevers, we know how most of them are propagated, though we still know next to nothing of their ultimate cause. There are three diseases which are more or less specific—by that I mean propagated by germs—of which much less is known, *i.e.*, diphtheria, acute pneumonia, and ulcerative endocarditis; the first two of these are being at present investigated by the Collective Investigation Committee. These specific diseases we now class together as preventable, because we recognise their means of propagation, and can therefore, to a large extent, stop their spread among the population. When we have discovered their cause, we shall still more rightly call them preventable.

Another class of acute diseases—such as pleurisy, peritonitis, meningitis, pericarditis, and enteritis—usually occur as an extension of disease from other parts, as the results of injury or of some known blood-poison, such as pyæmia, rheumatic fever, uræmia, or some specific fever; they are rarely primary diseases, more commonly they are complications. They are, occasionally the manifestations of some obscure and unknown blood-poison (such as sewer-gas), and from this point of view require much further study; but this aspect of the disease can only be studied in the patient's home, and not in the hospitals to which they are removed; it is therefore a very proper object for collective work.

With regard to other acute diseases—such as bronchitis, nephritis, gastro-intestinal catarrh—we have yet much to learn about their causes, and why they should attack some individuals more frequently than others. Many of them are manifestations of what are called "general" or "constitutional" disorders, such as rheumatism and gout. Of the real pathology of these diseases we know next to nothing; most of them appear to be due to disordered function, though they frequently produce chronic organic changes; we have a good deal of loose unformulated knowledge concerning them, but our facts require to be carefully collected, collated, and laid before us in definite shape. How various, and often contradictory, are the opinions held about the pathology and treatment of such a common thing as gout. No more valuable work could be undertaken than that of defining our knowledge on these subjects. Our committee has already commenced on one of them, and we may hope in time to take up others.

2. We next come to the great class of chronic organic diseases. The advance of our knowledge concerning them has been enormous; but to what has it brought us? We now have the means of diagnosing most cases of advanced organic disease. That is to say, if our patient has a greatly cirrhotic liver, an advanced disease of his kidney, an extensive disease of his lung, a generally irrecoverable disease of his brain or spinal cord, it is our privilege to inform him of the fact. We may perhaps advise him how to live, that he may prolong his life to the utmost; but, if he asks us to cure his disease, we have to tell him that that is now impossible. But these chronic organic diseases do not come in a day; the health of such a patient must have been for long impaired; the disease must have been preceded by characteristic minor

* Read at a meeting the Birmingham and Midland Counties Branch.

ailments, or functional disorders; and, if we could have recognised their meaning, we should have been able to forestall what would happen, and by changing the habits of life or the environment of the patient, and possibly by the help of other remedies, we might have been able to arrest its course, or entirely have prevented it. Our efforts in this direction would be greatly aided by an accurate knowledge of the individual's family history, and of his past illnesses. To obtain a systematic record of these details for all our patients must be one of our future objects. Such records as these will afford us knowledge that will enable us to practise preventive medicine, in relation to this, the largest and most fatal group of all diseases which come under our observation—the chronic organic diseases. At present, we are almost powerless in their presence, though so frequently asked to fight with them for the lives of those who entrust themselves to our care.

The hospitals have done their share to help us; it now remains for the practitioners of medicine, who see the beginnings of disease, to do theirs; and to unite together to watch and record the life-histories of diseases; for it is the practitioners who first see the little leaks, which will expand till they sink the ship.

3. Concerning our third class, that of functional diseases, we know scarcely anything. They are rarely seen in hospitals, except among the out patients, where they cannot be studied; here they pass before us, their past unknown, their future untraceable. All that we know concerning these diseases, is some more or less satisfactory experience as to their empirical treatment. It is true that many careful observers, after long experience, may have detected certain relationships of these minor ailments to more grave diseases; they may have known them as marking a family predisposition or an acquired vicious habit; but such observations as these require a lifetime to make them, when they are limited to the experience of an individual; and, although the mental note may have been made, the permanent record in black and white has been omitted—so that, if the observer records anything, he records only the impressions of a life-time; but he lacks the accurately detailed facts necessary for the proof and acceptance of a new doctrine.

These observations we now ask of you to unite in making; and the best efforts of this Association will be given to making the method easy and the labour light. I may say that our committee has in preparation a scheme, which it will shortly bring before you, for encouraging patients to keep carefully prepared records of their lives and of the chief incidents therein, both medical and otherwise. These records would prove of very great value, alike to the patient, to the doctor, and to medical science. From them could be deduced, not only forecasts of disease, but warnings and guides for the conduct and preservation of life. In this scheme, we have the assistance of Mr. Francis Galton, whose valuable papers (in the *Fortnightly Review* of this year) on "Photographic Chronicles" and "Anthropometric Laboratories", shadowed forth the desirability, and indeed the necessity, of some such scheme. Closely allied with this will assuredly follow certain changes in medical practice, which are at present slowly, but, I believe, surely, advancing. I mean such a change as that advocated by Dr. W. F. Phillips of Andover—a system by which we shall be paid to prevent disease; not, as at present, called in to cure the incurable. We want to teach our patients how to live, to give them healthy surroundings, and to protect them from unhealthy habits and occupations; then to watch and treat their minor ailments; and so ward off, as long as possible, grave organic disease.

CASE OF TRAUMATIC ANEURYSM OF THE FACIAL ARTERY.

SUCCESSFULLY TREATED BY PRESSURE UPON THE FACIAL ARTERY WITH HARE-LIP PINS.*

BY T. SYMPSON, F.R.C.S.,

Surgeon to the Lincoln County Hospital.

S. P., aged 31, a foundryman, was admitted into the Lincoln County Hospital on June 25th, 1882, on account of a pulsating swelling, the size of a walnut, in the right cheek, about an inch from the angle of the mouth, at a point corresponding to the course of the facial artery. The pulsation was easily stopped by pressure upon the artery on the proximal side of the swelling. No bruit was audible.

Three weeks before admission, while the patient was holding a punch which another man was hammering, a minute portion of steel flew off and entered his cheek, occasioning a small punctured wound, which bled freely. The hæmorrhage was readily controlled by pressure of a pad dipped in cold water.

On June 26th, at 11 A.M., one hare-lip pin was inserted beneath the proximal, and another beneath the distal portion of the artery, and a figure of 8 ligature was placed over each. Slight pulsation was perceptible in the sac immediately after the operation, but within four hours this had altogether ceased, and did not return.

June 28th, 11 A.M. The pins were removed. The swelling was firm and considerably lessened in size.

This patient called on me on September 11th, when I could discover only a very small amount of thickening in the former site of the sac, and was unable to detect any pulsation. It needed close inspection to make out either the cicatrix of the wound or the marks left at the points of entrance and exit of the hare-lip pins.

REMARKS.—This was obviously a good example of Erichsen's first variety of circumscribed traumatic aneurysm, concerning the treatment of which he says: "If the artery be small, and so situated that it can be opened without much subsequent inconvenience to the patient, as in the temple, or on the forearm, it should be laid open, the coagula turned out, and the vessel ligatured above and below the wound in it." Such a method of dealing with a traumatic aneurysm, resulting of necessity in the production of a large scar, would clearly be undesirable in an exposed part of the body, such as the face. I was, therefore, induced to consider whether a cure might not be effected by the employment of some milder means. Taking into consideration the free anastomoses of the arteries in this situation, and the chance, therefore, of the failure of pressure applied to the artery leading to the sac, to the sac itself, or to both the artery and the sac, I thought it best to attempt to arrest the circulation by means of hare-lip pins passed beneath the artery at its entrance into and exit from the sac. The fact of the tumour being well-defined and firm, and the skin over it of natural colour, showing that the tissues in the neighbourhood of the damaged artery had become condensed, led me to entertain a hope that this method of treatment would be attended with a satisfactory result, which hope, happily, proved well grounded.

OBSTETRIC MEMORANDA.

PLACENTA PRÆVIA: FÆTUS AND PLACENTA MUMMIFIED.

THE following are short notes of a rare and interesting case of pregnancy, terminating with labour.

Mrs. C., aged 43, the mother of eight living children, her first confinement being a case of twin labour, and with the history of one miscarriage at the fourth month, consulted me for hæmorrhage from her womb, which I diagnosed as the result of placental presentation, she then being six months advanced in her pregnancy, which had appeared to her quite natural till this date; but, as the hæmorrhage had ceased when I saw her, and had not been excessive, I ordered entire rest and a gallic acid mixture, and gave instructions that I should be sent for should it again occur; but I heard no more of my case till after nine months of her pregnancy had passed. I was then sent for, as she had not been delivered, and had greatly decreased in size; consequently, she became very anxious about her condition. I then learnt that she had several times, since I saw her, had a slight hæmorrhagic discharge, chiefly during the seventh and eighth months of her pregnancy, and at this latter period lost a quantity of water, and then imagined labour had commenced; but no pains followed. From this date she rapidly decreased in size, her breasts also becoming much smaller; slight hæmorrhage again occurring weekly; and on two more occasions water had passed from the vagina. On examination, I found the abdomen and breasts flaccid, the uterus appearing scarcely larger than it should do at the fourth month; and, on vaginal examination, which caused only a slight hæmorrhagic discharge, the os was only sufficiently open to admit with difficulty one finger, which came upon a fleshy mass, which felt very much like a fleshy tumour; consequently, I determined to thoroughly dilate and explore the uterine cavity on the following day; but, being sent for early the next morning, on my arrival, found the placenta, membranes, and fœtus (a male) expelled *en masse*, perfectly mummified; and, on opening the membranes, which contained scarcely any liquor amnii, I noticed the fœtus' head much flattened.

Her delivery was due, undoubtedly, to my examination on the previous day, and was very easily accomplished, with scarcely any hæmorrhage or pain, and from this time she made an excellent recovery. She attributed the death of her offspring to a fright which she had experienced early in her pregnancy.

HAROLD THOMPSON, M.R.C.S., L.S.A.

Oxford, December 4th, 1882.

* Read at a quarterly meeting of the Midland Branch.

NARROW ESCAPE FROM DROWNING IN A BREECH CASE.

THE following case is an example of an infant being nearly drowned in the liquor amnii, and illustrates the necessity for remembering this danger in resuscitating a breech case apparently dead. The cord was four times round the child's neck, and was uncoiled with great difficulty, when the child began to struggle and I had to bring down the arms and hurry the birth of the head. On being born, the child was limp and made no attempt to breathe, the lips were dark and the surface of the body pale; pulsation had ceased in the cord, but the heart could be felt beating. Having ascertained, with the finger, that the mouth and pharynx were clear of foreign bodies, and after slapping the child's nates vigorously but ineffectually, I made use of Sylvester's method of artificial respiration, applied a towel dipped in cold water to the front of the chest, and blew in the child's face, with the result of producing four or five convulsive gasps, having an interval of about a minute between each. I noticed that these inspiratory efforts were accompanied by coarse rales, and it occurred to me that the child, in its efforts to breathe before the birth of the head, might have sucked liquor amnii into its respiratory passages. I thereupon laid the child with its epigastrium and lower part of the chest resting on the palm of my hand, while the head hung down on one side, the feet on the other; and at once fluid ran from the mouth and nose, and the child then made several quick respiratory efforts, which were free from the rattling accompaniments. Howard's method of artificial respiration was then made use of; and, after a few minutes, the child was crying lustily, and the surface of the body had become pink. The breech presentation was probably the result of the head being noosed to the upper uterine segment from the shortening of the cord.

NEIL MACLEOD, Shanghai.

CLINICAL MEMORANDA.

ON CARDIAC DILATATION.

FOR years Dr. Balfour, of Edinburgh, has taught that cardiac dilatation occurs in anæmia and febrile affections, and yet it does not seem to have obtained that positive place in general knowledge which it is most desirable it should. In addition to the dilatation which occurs in typhoid fever, diphtheria, and the diphtheritic throat accompanying or following many cases of scarlet fever, these diseases seem to exercise a peculiarly noxious influence upon the heart. While using all available means to counteract this specific action, we are aided greatly in the general treatment of these and similar cases, by accepting the doctrine of dilatation, and appreciating its scope. In a debilitated heart, only a small part of the contents of the left ventricle is expelled into the aorta, part regurgitates into the auricle (and this regurgitation seems to be as certainly a "safety-valve" action as the similar, and more generally recognised condition, at the tricuspid orifice); the remainder is left in the ventricle. When a patient is recumbent, it is easy to understand how a seriously weakened ventricle can carry on the circulation, under conditions where a minimum of power suffices to pass on a little blood into the aorta, while the same weak effort relieves ventricular distension by regurgitation into a chamber occupying a posterior, and, therefore, somewhat lower plane. Raise the patient, and the mechanical conditions are materially altered: the weight upon the aortic valves is increased, and more power is required to open them; at the same time the column of blood in the auricle falls into the partially filled ventricle, and the chamber is overdistended; it is too weak to open the aortic cusps, or to lift the blood into the auricle, and death occurs by paralysis from overdistension. The appearance of murmur in these cases, instead of being necessarily of evil omen, is often the most gratifying of phenomena, showing that the organ is regaining power, and death from asystole is no longer to be dreaded.

W. RUSSELL, M.B.,

Physician to the Carlisle Dispensary.

RESIGNATION OF A LANCASHIRE CORONER.—At the Liverpool Chancery Court, before Vice-Chancellor Bristowe, application was made by Mr. Rotch for Mr. C. E. Driffeld, Coroner for the South-Western Division of Lancashire, for permission to resign his appointment. Mr. Rotch said Mr. Driffeld had held the post for 31 years, and now wished to retire on the ground of ill-health. The Vice-Chancellor said it was difficult to ascertain what course should be taken, and he had been at some trouble to ascertain it. Mr. Rotch said equal uncertainty had prevailed in Liverpool. After discussion, an order was made by the Court for the issue of a writ of *exonando*, to be followed by a writ for the appointment of a new coroner.

REPORTS OF SOCIETIES.

LEEDS AND WEST-RIDING MEDICO-CHIRURGICAL SOCIETY.

ORDINARY MEETING, DECEMBER 1ST, 1882.

J. E. EDDISON, M.D., President, in the Chair.

New Operation for Spina Bifida.—Mr. A. W. MAYO ROBSON showed a child, six weeks old, upon whom, when six days old, he had performed a new operation for spina bifida. The redundant parts removed by the operation were also shown. After the removal of these parts and after stitching up the arachnoid over the spinal canal, periosteum from a rabbit was inserted between the meninges and the skin so as to cover the gap in the bones. The wound had perfectly healed; the skin over the lumbar region was quite level; there seemed to be no tenderness on pressure; the child looked strong and healthy. The sac, examined by Mr. F. H. Mayo, was found to be of the size and shape of half a swan's egg; the wall consisting of true skin and subcutaneous tissue lined by serous membrane. At one point the sac was very thin and transparent, appearing to consist only of the serous membrane covered by a thin layer of epidermis, when fresh minute blood-vessels could be seen to ramify over it. Mr. Robson drew attention to the following points: 1, the operation was performed with full antiseptic precautions, eucalyptus air being used instead of carbolic spray; 2, the meninges were closed by uniting the serous surfaces, as in peritoneal surgery; 3, the transplantation of living periosteum and its continued vitality; it had not yet, however, formed new bone; but already the covering of the canal had a greater than mere skin-firmness; 4, the entire absence of bad symptoms in the child, operated upon at so early an age, was noticed.

Excision of Hip-Joint.—Mr. MCGILL showed three patients, aged 18, 17, and 12 years, upon whom he had performed this operation five, four, and three years ago respectively. In all the cases the result was very good. One of the patients had walked eleven miles consecutively. In all, suppuration had occurred and sinuses existed before the operation; therefore no antiseptic precautions had been adopted, but the wounds were treated by free drainage, induced by dependent incisions and the absence of sutures. Mr. McGill, replying to various speakers, said that the cases were not selected, but it happened that in none of them had the pelvic cavity been opened, the greatest danger connected with the operation being thus absent.—Mr. TEALE remarked that many cases of excision of the hip-joint left the hospital apparently cured, but afterwards, from want of care at home, suffered a relapse.—Mr. JESSOP concurred, and dwelt upon the great importance of having the cases carefully watched for a long time after the operation.

The Electro-Magnet for the Removal of Fragments of Steel or Iron from the Interior of the Eye.—Mr. SIMEON SNELL (Sheffield) related his experience of this instrument since he published in the JOURNAL (p. 843, vol. 1, 1881) the description of his instrument, with records of cases in which he had successfully employed it. His opinion of its value had been strengthened, and he regarded it as one of the most useful of recent advances in the treatment of ocular injuries. He had now used the electro-magnet in fourteen cases with success. In six of these the particles were situated in the lens, and in all of these recovery with good vision occurred. In seven cases fragments were extracted from the vitreous body; in two of these good sight was regained; in the remaining cases, which came late under the author's observation, vision remained imperfect, but in only one case was enucleation of the eyeball subsequently necessary. In two cases, the instrument failed to remove the fragments. In one of these, in which much doubt existed as to whether any foreign body were really present, the needle was introduced chiefly to operate on a diseased lens, with the hope that it would discover any particle of steel which might be in the neighbourhood. The battery, however, got out of order, and the needle was therefore almost powerless. Subsequently, a fragment was found in the ciliary region. In the second case, not a recent injury, the fragment was observed to follow the magnet for a short distance and then to recede. After removal of the globe, the piece of steel was found to be firmly embedded in the optic disc.

Meningocele.—Mr. JESSOP related the case of an infant from whom he removed a meningocele, about the size of the patient's head. The child was six and a-half months old at the time of operation, and the tumour, which was covered with a thick, hairy scalp, lined by a shining thick membrane, closely resembling the dura mater, and filled with a liquid not to be distinguished in appearance from the cerebro-spinal fluid, had doubled in size since the birth. Dr. Coleman, in whose practice the case occurred, and who ably assisted Mr. Jessop throughout in the management, had emptied the cyst by

was mixed with milk, if no hydrochloric acid were added, and the acidity were below one gramme of hydrochloric acid per litre, fermentation took place much more rapidly, and attained a higher degree of acidity, than in milk alone. The deficiency of hydrochloric acid in atonic dyspepsia probably led, by permitting fermentation to take place, to the quantities of acid found in that condition.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY

DECEMBER 7TH, 1882.

B. WALKER, M.R.C.P.E., President, in the Chair.

Blood Cyst.—Dr. KEELING showed a tumour about the size of an orange, removed from the neighbourhood of the vulva, where it had been growing for seven years. The tumour consisted of a thick cyst-wall, the cavity being traversed by numerous delicate fibrous bands, and containing a quantity of thickened red serum.

Extirpation of Kidney.—Dr. KEELING showed a large tumour of the right kidney which he had removed, at the Jessop Hospital, by a front abdominal incision from an unmarried woman, aged 23, on August 10th, 1882. The tumour was thought to be ovarian in the first instance, its real nature not being ascertained until the peritoneal cavity had been opened. The stump of the tumour, consisting of the pelvis of the kidney and the renal vessels, was secured by catgut ligatures, and a long drainage tube was placed in the track of the wound. The hæmorrhage in the latter part of the operation was severe, and the patient almost pulseless when carried to bed. Convalescence was retarded by profuse suppuration and diarrhoea. The wound was finally healed on the thirty-eighth day; the patient had now (four months after the operation) completely recovered. The tumour was cystic in its character, with strong fibrous walls, continuous, apparently, with the capsule of the kidney. It was developed on the concave aspect of the gland, and the kidney itself, otherwise but little altered in appearance, was flattened out on the back of the tumour. It had been growing for more than three years, but had not given rise to any kidney symptoms. Remarks were made on this case by Mr. GARRARD and Mr. JACKSON.

Amputation after old Excision of Wrist.—Mr. FAVELL exhibited a hand which he had that day removed. The interesting feature in the case was, that four years ago, in London, the wrist had been excised, and sinuses had existed ever since, and latterly great pain had been suffered. The specimen was referred to the Pathological Committee to report upon.

Ununited Fracture of Femur.—Mr. FAVELL showed also fragments from a case of amputation of thigh, performed under the following circumstances. The patient, a man aged forty-eight, had fallen on January 9th, 1882, and fractured the femur in its upper third. His health had for some time been indifferent. The fracture was treated in the usual way, but at the end of about six weeks there was no attempt at union—for the next few weeks a gum-and-chalk bandage was applied. On the removal of this, the thigh was noticed to be very much swollen, and a large deposit of what was feared to be some neoplasm around the bone. Subsequently abscesses formed, and sequestra were removed. Mr. Favell amputated the limb on November 23rd. The patient made a good recovery. Examination of the femur after removal showed a roughened necrosed condition of the upper fourth of the lower fragments, below which the upper fragment had united at an angle to the front aspect of the bone—there was consequently so much shortening and deformity as to render the limb useless, and necessitate its removal.

Hip-Joint Disease.—Mr. ARTHUR JACKSON read a short paper on the treatment of hip-joint disease, and dwelt particularly upon the unsatisfactory results of treatment in the present day. He called attention to the management of such cases during the last century, treatment which included the incision of joints, strapping, local bleeding, mercury, and which was followed by suppuration, absorption of the head and neck of the femur, and shortening. Mr. Jackson believed that this treatment had better results than the present. The results of the eighteenth century treatment, as gathered from books, when compared with the results in our hospitals, intensified this belief. Dividing cases of hip-joint disease into (1) those in which there was no absorption; (2) those in which there was considerable absorption, he turned his attention to the latter. Calling attention to the growth of the femur, to the nature of the joint, the muscles which surrounded it, and to the frequency of the disease in young subjects during the period of growth, he urged the importance of relieving tension and pressure inside the joint; and the evil effects of straightening the limb, and applying the long splint in any form. He quoted Bromfield, a surgeon to St. George's Hospital in 1773, as allowing the position of the limb to be the one most easy to the patient; Joseph Warner of Guy's, in

1760, as incising the joint, and letting out the fluid, whatever it might be, and then applying pressure; Benjamin Bell, of the Royal Infirmary, Edinburgh, recommending the same; and he urged the more free incision into the joint at the earliest possible moment of the case coming under treatment; and the turning out of the head of the femur from the acetabulum for some days. By this means, he thought inflammation and softening might be arrested, the joint thoroughly drained, and that, after the lapse of a few days, the femur might be replaced, with a fair prospect of an useful limb; and so the ordinary result of amputation at the hip-joint, or death, be avoided.—A discussion followed, in which Mr. FYE-SMITH, Mr. GARRARD, Mr. FAVELL, Dr. KEELING, and Dr. GWYNNE took part.

YORK MEDICAL SOCIETY.

ORDINARY MEETING, SATURDAY, DECEMBER 9TH, 1882.

W. H. JALLAND, M.R.C.S.E., President, in the Chair.

Excision of the Knee.—Mr. JALLAND made some remarks on two cases of excision of the knee treated by him at the York County Hospital. Both patients were shown. The results were satisfactory. In one case the patient was up within a month of the operation.

Pernicious Anæmia.—Mr. JEFFERSON read notes of a case of pernicious anæmia. The patient was 52 years of age, he stated that for six months before admission to the York County Hospital he had suffered from severe epigastric pain, which kept him awake at night, and that for two months he had vomited after meals. When admitted, he was feeble, emaciated, his expression was indicative of suffering, and he complained of severe pain at the outer border of the left rectus on a level with the umbilicus. There was no tumour or enlargement of any of the organs. His urine was normal. The case was thought to be one of malignant disease. A pill containing morphia, creasote, and nuxvomica was ordered, and after ten days the vomiting ceased. Citrate of iron and quinine was then given with cod-liver oil. In fourteen days he gained sixteen pounds, and within a short time an additional stone. He returned to work and has had no relapse.

Cancer of Bone.—Mr. CLIFFORD GILL showed some sections of cancer of bone. The patient from whom the diseased bone was taken was an elderly woman, who, for many years, had been insane. A tumour was noticed in the neighbourhood of the sacro-iliac synchondrosis; this, when removed, had attained the size of a Maltese orange. Shortly after the appearance of this tumour a small scirrhous tumour of the breast was detected. On examination under the microscope, the bony tumour was found to present the characteristic cancerous arrangement.

Acute Rheumatism.—Mr. SPENCER read some notes on this subject. As illustrating the connection between acute rheumatism and erythema multiforme, he took three cases—those of two young women between 16 and 20, and that of a man aged 40. The women were fair-complexioned and anæmic, and the man dark and anæmic. In each case there was a period of invasion, and in two, sore throat during this period. In all three the attack followed on a chill; the erythematous rash commenced by distinct papules on the hands and feet, and the urine was turbid and deposited gravel copiously. In one, there was no affection of the joints; in the other two many joints were affected. After some allusion to the remarks of Trousseau, Bristowe, Powell, and Thin on this subject, Mr. Spencer referred to a case brought before the Society last session by Mr. Jefferson, where the order of symptoms was—firstly, pericarditis; secondly, erythema papulatum; and, thirdly, acute rheumatism. He then read the following notes: A young, delicate girl, sixteen years of age, who had suffered from chlorosis for some time, was exposed to wet and cold. Four days afterwards she began to suffer from synovitis of the ankle-joint. The general symptoms were slight, and there was no febrile disturbance. The following morning, when rising from the sofa, she fell backwards in a fainting condition, and soon afterwards died. On *post mortem* examination, the walls of the heart were found to be thin, the valves normal, and the foramen ovale patulous. A laminated, fibrinous mass, which was partially adherent, occupied the apex of the left ventricle, and a quantity of translucent fibrin, possibly of *post mortem* origin, extended from the superior vena cava into the right auricle, through the patent foramen ovale into the left auricle, and through the mitral orifice into the left ventricle, which it nearly filled. Mr. Spencer discussed briefly the question of the essential nature of acute rheumatism, referred to the zymotic and chemical theories of its etiology, and finally pointed out its relationship to gout, in which disease a poison, or poisons, manufactured by perversion of a normal process, was known to be the predisposing cause.

REVIEWS AND NOTICES.

REPORT ON THE MANUSCRIPTS OF THE ROYAL COLLEGE OF PHYSICIANS IN LONDON; Contained in the Eighth Annual Report of the Commissioners of Historical Manuscripts (Blue Book). London: 1881.

THE eighth Report of the Historical Manuscripts Commissioners contains an analysis of the muniments belonging to the London College of Physicians. How full these muniments are of important matter for illustrating the history of the College, from the time of its foundation by Henry the Eighth, in 1518, must be apparent to all who have consulted Dr. Munk's *Roll of the College*, in which the author has made copious extracts from them.

The College muniments consist chiefly of thirty or forty volumes of *Annals* or records of proceedings, and several miscellaneous documents. Some of these date considerably before the existence of the College itself, and appear to refer to lands which at different times came into its possession. Among these documents are preserved the charters (including the Charter of Incorporation) which successive Sovereigns have granted to the College. In one of these, dated in 1565, Queen Elizabeth allows them to have yearly, for dissection, "one, two, three, or four human bodies of men condemned and executed for theft, homicide, or other felony." We shall not, however, have space to speak more of these charters and the other miscellaneous records, and will, therefore, pass on to the extracts from the *Annals*, which form the bulk of the Report under notice.

It is unfortunate that no contemporary record of the College proceedings was kept until about half a century after its foundation, as much work of importance was carried out during the earlier years of its existence; however, as the first volume of *Annals* (which covers the period from the foundation of the College to the year 1572) was compiled by the eminent and careful Caius himself, we may console ourselves with the fact that, if much has been left unrecorded, nothing of doubtful authenticity has found place in the volume. Till the latter part of the seventeenth century, the entries in the *Annals* were almost invariably made in Latin; after that time we find the College proceedings recorded in English. The change was made, we are told, "by advice of the Council," as, in consequence of "the variety of styles in Latin, and the uncertain acceptance of many Latin phrases, the registers would not be so useful as if kept in English," and in "the plainest words that could be" (p. 231).

It needs but a cursory glance at the report on the *Annals* to show what an useful body the College proved itself almost from the day of its foundation; and how much, at that time, its existence was needed. The practice of medicine was then too generally regarded, even by the educated classes in this country, in the light of a supernatural acquirement—an idea which unscrupulous practitioners found, for the sake of their pockets, desirable to encourage. The first duty then which the College had to perform was the extermination of "quackery," by the exposure, prosecution, and punishment of empirics and unlicensed practitioners; this work they set about diligently to accomplish. In 1585 they complained that the universities granted degrees of medicine to unqualified persons, and the following year they raised the standard of their own body by requiring that no one should be admitted to any degree of medicine who was not either a Master or Doctor of Arts. The early volumes of the *Annals* contain numerous entries of the punishment of "quacks" and the burning of their medicines. In 1588, "Paul Fairfax" is fined for administering his "Celestial Water." In 1593, and for some years afterwards, we find mention of proceedings that were taken against one Simon Forman, "of the county of Wilts," who boasted that he used "no other help to know diseases than the Ephemerides, and by celestial signs and aspects, and constellations of the planets, he can at once understand any disease" (p. 228). To expose this impostor, the College examined him in astronomy, and found him therein "laughably ignorant." He was interdicted from practice, and fined. He, however, appears to have resumed his former practice, as, in 1606, a series of "complaints" was lodged against him. His form of treatment is on this occasion minutely described in the *Annals*, as follows: "He first asks the name and address of his patient; he next erects a figure: like a prophet, he judges of the disease and the event; and, lastly, he prescribes a medicine." There are also several other entries respecting this Simon Forman. One of them records a complaint against his exorbitant charges, and states that, "for one medicine he asked ten drachmas, for another five shillings, and for two purges four shillings." We may note, *en passant*, that about this time another "great impostor" is recorded to have charged £6 for one pill. In 1637, proceedings were commenced in the Star Chamber against

one Leverett for "taking upon himself to cure the king's evil." The Court directed the College to examine Leverett, and report upon his case. Some of the statements which he made at his examination are curious; he said he was "the seventh of eight sons," but did not "challenge" by being the eighth son. In effecting his cures, he used these words: "God give a blessing! I touch! God heals!" After "touching" about thirty or forty persons, he declared himself "weakened by the virtue gone out of him more than, when he was a gardener, by digging up eight roods of ground." He also said that he was unable "to touch when his hands were cold." The College say that he "speaks scornfully of those whom the King bath touched," and consider him a sheer impostor, adding that "his pretended cures, and the manner of them, be full of superstition and sorcery" (p. 229).

The determination of the College to eradicate "quackery," is very clearly demonstrated in 1682, when Charles II went so far as to make personal efforts to stay the proceedings against a certain Gerard Van Mullen, who was being prosecuted for empiricism. The College in their reply request the King "to leave the matter to them, they being bound by their oath to prosecute empirics" (p. 230). This, by the way, was not the only occasion on which the College refused to be biased by royal or powerful interference; for, throughout the extracts from the earlier volumes of the *Annals*, we notice entries which show a steady resistance of any appeal made on behalf of those who desired to practise medicine, and could not prove themselves fit for the profession.

The College were also firm in resisting the demands which were often made upon them by the city to find military arms. In 1711, they were also called upon to furnish two men for the militia. This they refused to do, and the Attorney-General gave his opinion that they were justified in their refusal. The College, as a body, do not appear after this to have been troubled with similar demands, but, in 1716, we find Sir Hans Sloane acquainting the Board that he had received a notice "that a warrant was signed by the Lieutenantcy to distrain on his goods for not appearing in the county troop" (p. 232).

The utility of the College was ever recognised by the Government, and, on the sudden outbreak of an epidemic, their aid was called into requisition. Some curious entries in the *Annals* illustrate a few of the more serious outbreaks of the plague. In 1583, the Lord Mayor inquired of the College how many doctors were required to treat "plague cases" in the city; the answer was, "not less than four". In March 1630, Dr. Atkins reported that at Court there was great complaint of the increase of the plague; and a Council Letter, dated on the 15th of that month, directed the College to draw up rules for preventing the spread of the disease. The President proposed that members "who attended pest cases" should receive salaries at the rate of £400 a-year whilst the complaint lasted, and £200 a-year for life; a pension of £100 a-year being awarded to the widow of the physician, should his death occur in treating the plague (p. 229). Dr. Clements and Dr. Crooke accepted these terms, and the College presented to the Lords of the Council a copy of "annoyances," which they considered tended to increase the spread of the disease. This list included the neglect of cleansing the common sewers and town ditches; the existence of "standing ponds in divers Inns"; the burying of infected people in the city churches; the "carrying up of funnels to the tops of the houses from privies and vaults of the dead"; and the selling of musty corn, unsound meat, and tainted fish.

In 1665, we notice in the report numerous extracts from the *Annals* concerning the "Great Plague". Many of these extracts show the general alarm with which its relentless progress was regarded.

The advice and assistance of the College was also frequently asked by Government on questions which concerned the health of the army and navy. Often we notice the College called upon to furnish "doctors and medicine" for troops despatched on foreign service: in 1692, the total cost of providing "medicine" for between four and five thousand men, sent to the West Indies, was estimated at £576 5s. 11d. In 1739, the Lords of the Admiralty inquired if "the best English spirits, distilled from malt, are equally wholesome with the brandy of France, and may be safely used as part of the victualling of ships;" the reply of the College was in the affirmative (p. 232). On another occasion, the College advise the frequent use of vinegar in cooking food for the navy, and they recommend the use of "elixir of vitriol" in all cases of scorbutic affection. In 1745, they recommend the trial of "Mr. Lowndes's salt," which they think "very likely to answer in curing flesh for long voyages;" and in 1752, they express their approval of Appleby's scheme "for getting fresh water out of salt."

It is interesting to observe the attitude which, in former times, the College adopted towards female doctors. During the latter part of the sixteenth century, and afterwards, we find, in the reports, extracts from the *Annals* which record the applications of influential persons on behalf of women who desired to practise medicine; as a rule, these appli-

cations were firmly refused by the College, who generally answered them by setting forth the inefficiency of women as medical practitioners, though on one occasion we find a woman permitted to practise "in such parts of surgery as are of less danger to the party affected." When, in 1616, "the Midwives of London" petitioned the King to be incorporated, the College strongly advised their petition being refused.

Throughout the report, we find extracts from the *Annals*, which, although they do not illustrate any special subject, yet deserve a word of notice in this review, as being quaint and interesting. Amongst other entries of this kind, we notice a letter, dated in February 1588, addressed to the College by the Ecclesiastical Commissioners, stating that, as some of those practising physic and chirurgery in London refused "to frequent divine service, and conform to Her Majesty's Godly laws for the religion established," the College were, without delay, to "inform themselves of the names, surnames, qualities, and abodes of all such as pretend to be physicians or surgeons," and send a list of them to the Archbishop of Canterbury (p. 227).

In 1591, we notice Roger Powell cited for "fixing bragging bills" on the walls of houses. In 1628, the College were directed, by an Order in Council, to assemble and report "whether English tobacco, as usually taken, is hurtful to men's bodies." They say that "it is hurtful, falling short of other tobacco brought from more southern parts." In 1648, an appeal to the College as to the expediency of establishing "public baths", drew forth the somewhat strange reply that "public baths were abused in the Greek and Roman States, and when Christianity came in, were destroyed." They suggest that, should they be reintroduced, precautions should be taken against the recurrence of former evils. In 1602 and 1604, we find recorded the action of the College in two cases of supposed witchcraft; on the former occasion, some of their number were directed to "go and see" a person thought to be bewitched, and make their report upon the case; and, on the latter occasion, we find the President of the College certifying to the Bishop of London, at whose request a girl professing to be a "demoniac" had been examined, that some of the College had seen her, and found in her "nothing but fictions and simulations," everything about her "being fraudulent and feigned" (p. 228).

Space forbids us to speak more fully of this report on the College manuscripts, but we have said enough, in enumerating some of the subjects illustrated by them, to show what valuable as well as miscellaneous matter they contain.

In conclusion, we cannot express too warmly our appreciation of the benefit which the College authorities have conferred on the profession in sanctioning the appearance of the analysis of their muniments.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By LOUIS A. DUHRING, M.D. Third Edition. Revised and Enlarged. Philadelphia: J. B. Lippincott and Co.; London: 16, Southampton Street, Covent Garden. 1882.

THIS third edition of Dr. DUHRING's book on Diseases of the Skin has been issued in less than two years after the publication of the second edition—a fact that testifies unmistakably to the excellence of the work. The author has certainly succeeded in producing a treatise that fills a gap in medical literature. Although there is no department of medicine that is more copiously represented in our current literature than that of dermatology, there are yet few recent works on the subject that can claim to be exhaustive. Dr. Duhring's book is, however, very complete. Every recognised disease of the skin is fully treated in it; the modern medical literature of both Europe and America has been exhaustively scrutinised during its compilation; and, up to a very recent date, there is nothing that has appeared, in reference to the pathology or treatment of cutaneous affections, that is not referred to in the volume. In his preface to this edition, the author states that the chapter on the anatomy and physiology of the skin has been re-written and elaborated; that the work, as a whole, has been considerably enlarged; and that numerous additions, in the way of cases illustrating rare forms of disease, new and important observations, personal experience, and therapeutics, will be found upon almost every page. We have fully verified this statement, by comparing the second and third editions. The difference between them consists in the addition to the more recent one of a notice of everything bearing on dermatology, that has any value, which has appeared since the previous edition was issued.

The thoroughness with which the author has examined current literature, and the sound critical judgment which he has shown in selecting from it only what is valuable, makes his book of special interest and value to practitioners who devote themselves more or less exclusively to dermatology; whilst to the practitioner who enjoys a more general

and wider experience, it will prove completely satisfactory as a work of reference. There is no book on diseases of the skin that we can more confidently recommend, as being likely to be useful in the ordinary emergencies of practice.

As examples at once of the care with which Dr. Duhring has revised this edition, and of the rapid progress that is being made in this department of medicine, we may instance the article on Bromidrosis, which may be said to have been rewritten. In the second edition, the tumours of the skin known as examples of myoma cutis are well described, and illustrative case given. These tumours are generally painless. In the meanwhile, a case had been published by Solles, in which severe pain, spontaneous and provoked by irritation, existed, and we find it duly noted in the new edition. But Dr. Duhring does not content himself with the addition of new cases. The results of his own larger experience, and the increase of knowledge in his department are utilised to bring cases previously quoted as exceptional or rare within the category of recognised conditions. In the previous edition, under the head of General Idiopathic Atrophy of the Skin, a case reported by Wilson is given in detail as illustrative of "a very rare condition." In the present edition, the author rightly remarks that, the case possesses certain features in common with both morphea and scleroderma, and might be regarded as a severe and peculiar form of either of these diseases. The article on Miliaria is made more complete by a footnote, pointing out that the disease is not to be confounded with the "miliary fever," known also as the "sweating sickness," "sudor anglicus," or "English sickness," which first made its appearance in England in the autumn of 1486, and of which a short historical account is given.

These may suffice as examples which might be indefinitely multiplied, which testify to the earnestness of the author in his endeavour to produce a complete treatise on diseases of the skin. That the present edition will do much to maintain and increase his reputation as a trustworthy authority in this branch of professional study does not admit of doubt.

MANUAL OF DISEASES OF THE SKIN, WITH AN ANALYSIS OF EIGHT THOUSAND CONSECUTIVE CASES AND A FORMULARY. By L. DUNCAN BULKLEY, A.M., M.D. London: Churchill. 1882.

THE volume is an attempt to present the subject of diseases of the skin concisely, and yet with sufficient details to be of practical value to the student and practitioner, and has been, the author observes, "largely prepared for those following his clinics at the New York Hospital, and has indeed grown out of a skin pharmacopœia arranged for their use."

Dr. BULKLEY is well known as an active and enthusiastic dermatologist, and everything coming from his pen possesses some interest for practitioners who are specially engaged in treating diseases of the skin. Students and practitioners have now so large a choice offered to them of books on skin diseases that they will find some difficulty in making a selection. The volume now before us is one of those that occupy a midway position in size and price between the very short "epitomes" of skin diseases, and the larger volumes which are considered to be more or less standard works. As a work of reference, it cannot and does not intend to take the place of the latter, whilst it will be found more useful than the very brief epitomes. The utility of books of this class is, however, doubtful, as they can be of little service to any one who possesses a book on practical medicine which contains a good description of the symptoms and treatment of skin diseases.

NOTES ON BOOKS.

The "Handy" System of Medical Book-Keeping. By ALFRED SHEEN, M.D. Cardiff: William Lewis.—The present departure from the old-fashioned system of medical book-keeping is an attempt to simplify the painful amount of labour inherent in the old style. It introduces a simplicity of arrangement which, it is said, will enable a medical practitioner—1. To reduce the labour of "posting" to a minimum; 2. To keep book debts well in hand; 3. To see, by an easy calculation, how much is booked year by year.

The Day-Book, which is the centre of all the clerical work, and may be used with any form of ledger, contains—1. The name and address, and other necessary particulars of each patient, which have only to be entered once during a month; 2. Every necessary entry respecting each patient, which, except the prescription, is entered daily on one line running straight across the page.

It also contains an epitome of all the work, and should be constantly

at hand. The total amount to be entered in the ledger at the end of the month is stated in the cash column provided for that purpose.

The Ledger is indexed so that the accounts can be entered under each client's name alphabetically. No particulars are entered in the ledger; if these are wanted they can be readily found by referring back to the day-book. At the end of the six months, or whenever the account is rendered, the total amount is entered in the cash column provided for that purpose. The next two columns show when the account is rendered and when paid, and the last cash column is for amounts brought forward where the previous account is not paid or only partly paid. There is also a column for the charge per visit or consultation.

Prescription Slips are recommended instead of a Prescription Book, as being much more handy. These (8 of which may be cut out of a sheet of foolscap), with the patient's name and address, age, etc., at the top, may contain the prescriptions on one side and notes of the case on the other, and should be numbered. These slips are kept together in a case or by an ordinary elastic band, on the consulting-room table, arranged alphabetically. As they are done with, they are taken out and placed in a drawer, arranged alphabetically; they are then at hand when wanted again for another attendance. These slips have the advantage of facilitating the arrangement of groups of similar cases for reference or study. The learning of this method, of course, naturally involves a certain amount of trouble, but once learned it is claimed for it that it reduces chaos to order, and serves to economise time and labour.

The "Handy" Medical Visiting List, issued by the same publisher, has the advantage of great portability, it being easily carried in the waistcoat pocket, and when full may easily be replaced by another. They are published at the very cheap rate of 3s. per dozen.

Lectures on the Elements or First Principles of Surgery. By JOHN CHIENE, M.D., Professor of Surgery in the University of Edinburgh. (Reprinted from the *American Practitioner*, 1879, 1880, and 1882).—These are abstracts of several lectures delivered at the commencement of Mr. Chiene's course of Systematic Surgery during 1878, and asked for by Dr. Vandell for publication in the *American Practitioner*. Though they deal in an elementary way with the subjects of inflammation and its treatment, healing of wounds, and antiseptic surgery, there is such an amount of freshness and original thought in them as to make them interesting reading for all who have studied these questions. The theories of counter-irritation, more especially, are very ingenious, and to a great extent in accordance with the recent researches in physiology and pathology. A distinction is made between determination of blood and congestion. "When a muscle is inflamed, it is congested; when it is in action, there is determination of blood; when at rest, it is anemic. Apply a poultice to the skin over an inflamed kidney, and it acts on the skin-centre; it is altered, as evidenced by the condition of the skin vessels; it is congested. Where does the blood come from? From the neighbouring parts—from the vaso-motor kidney centre. Vascular tension is relieved; the centre regains its power" (it is supposed to be congested when the kidney is inflamed, and to have thus lost its power of regulating the supply of blood to that organ); "the kidney vessels are restored to their normal condition."

In considering the treatment of wounds, the antiseptic question is dealt with, not merely with reference to Listerism, but also to the other methods of free drainage, the open treatment, etc., and this is followed by two chapters by the author on the mode of carrying out the Listerian method. Mr. Chiene is an advocate of Listerism in its strictest sense. "I have heard," says he, "much of modified antiseptics. An English Radical nobleman once asked his opponents, who were pleading for antiseptics, what they thought of moderate chastity; and in this case I think the answer is, 'There is no point at which we can begin.' Beginning with simple cleanliness and fresh air, and ending with all the contrivances which a trained scientific ingenuity can suggest for the prevention of putrefaction."

To touch on all the subjects which are put in a fresh light would be to reprint the volume; but, while we cannot agree with all Mr. Chiene's views, we would recommend the work for careful perusal, more especially by

Dr. J. I. ... has given £250, additional, to the ... Mr. Joshua Payne, of Kibworth, has given £100 to the Leicester Infirmary. The Countess of Sheffield has given £100 to the Sussex County Hospital, Brighton. Miss ... the Crescent, Carlisle, has given £100 to the Cumberland ...

The ... has given £100 to the ... and ... of 5,400 toys were ... last week to sick and pauper children in London hospitals and workhouses.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, DECEMBER 30th, 1882.

RETROSPECT: 1882.

In attempting a summary of the principal events affecting medical science and the medical profession, which have occurred during the year now closing, it is perhaps natural that we should give some precedence to those that particularly interest the British Medical Association, and especially those to which reference has been made in the pages of the *BRITISH MEDICAL JOURNAL*. The first subject that claims notice is

THE BRITISH MEDICAL ASSOCIATION.

We have, during the present year, already devoted a large amount of space to the historical summary of the Association and all its Branches and Committees up to a very recent date. The most important event of the year has been the celebration of the jubilee meeting of this body, which was held at Worcester, where it was founded in 1832 by Sir Charles Hastings. During the meeting, an interesting ceremony took place at a public luncheon given by the members of the Worcestershire and Staffordshire Branch: a bust of Sir Charles Hastings being formally presented by the President, Dr. Strange, on behalf of the Association, to the Mayor and Corporation of Worcester. The scientific proceedings of the Association were of a varied and instructive character. The President's Address, and the addresses in Medicine and Surgery, by Dr. Wade and Mr. Stokes, were of a high class. The sections were well supplied with papers of considerable merit, and were well attended; and several important discussions on subjects of practical and scientific interest took place. The addresses, and most of the papers and discussions, have been reprinted in the pages of the *JOURNAL*.

The growth of the Association through the year has been steady and satisfactory.

The last annual meeting displayed, especially in the discussion on the notification of infectious diseases, the excellent facilities which the constitution of the Association affords for the representation of all varieties of opinion, and for the revision, at any one time, of the conclusions or resolutions of an earlier date. It is believed, however, that the constitution may be still further improved; and an investigation is now going on as to the best methods of constituting the Committee of Council in such a manner as to make it—if it be not already—in all respects and entirely representative of the sentiment of the Association at large.

We may refer with great satisfaction to the prosperous condition of the funds of the Association, which enables it to spend a sum which will certainly not amount to less than £500 on the Collective Investigation Committee. And this sum, if the work of the Committee prove as popular and as sound as there is every reason to believe it will do, will no doubt be considerably increased.

At the end of the fiftieth year it is extremely satisfactory to be able to say that at no time in the history of the Association has it been more thoroughly united in feeling, or pervaded by a more evident and active sentiment of fraternal good-will and social and scientific fellowship and labour.

The work of Collective Investigation of Disease, proposed by Professor Humphry at the annual meeting of the Association at Cambridge in 1880, has been proceeding with vigour under the guidance of the Committee appointed for the purpose, of which Professor Humphry is chairman, and which has found an efficient Secretary in Dr. Nicholson, who takes a deep interest in the work, and is sparing of no trouble in his endeavours to render the work successful. In

this, he is receiving the cordial and active co-operation of the Branches of the Association. Of the work of other committees of the Association, notice will be taken in subsequent paragraphs. Of the Branches, it need only be said that they are in a prosperous condition and still growing in number and in members. At their meetings, which have been duly recorded in our pages, various valuable scientific and practical communications have been made, as our pages have borne evidence.

SCIENTIFIC PAPERS IN THE BRITISH MEDICAL JOURNAL.

The number of original and signed articles and papers on professional subjects published in the JOURNAL during the year has been greater than in any previous year, and we trust that their value is not less. Subjoined is a list of the principal communications, classified as far as possible.

Of *Lectures and Addresses* the JOURNAL has contained the following: Dr. William Ewart's Gulstonian Lectures at the Royal College of Physicians, on Pulmonary Cavities; Sir Joseph Fayrer's Croonian Lectures on the Climate and Fevers of India; Dr. Burdon Sanderson's Lumleian Lectures on Inflammation; the two Bradshawe Lectures, one, on the Influence of the Sympathetic in Disease, delivered at the Royal College of Physicians by Dr. Long Fox, and the other, on some New and Rare Diseases, delivered at the Royal College of Surgeons by Sir James Paget; a lecture delivered at St. John's College, Cambridge, by Mr. D. Macalister, on the Form and Mechanism of the Heart; abstracts of Professor Parker's lectures at the Royal College of Surgeons, on the Morphology of the Mammalian Skull, and of Professor Flower's lectures on the Anatomy, Physiology, and Zoology of the Edentata; also clinical lectures by Mr. Jonathan Hutchinson, Dr. Wilks, Dr. S. Coupland, Dr. G. Johnson, Dr. J. R. Wolfe, Dr. A. H. Bennett, Dr. Burney Yeo, Mr. R. Davy, Mr. Furneaux Jordan, Mr. Christopher Heath, Dr. McCall Anderson, Dr. T. R. Fraser, and Dr. Sawyer. The following special orations and addresses have also appeared: Dr. G. Johnson's Harveian Oration (abstract), in which he refutes the claim put forth by Dr. Ceradini in favour of Cesalpino as the discoverer of the circulation of the blood; an address on Surgical Aids to Medicine, delivered before the Midland Medical Society by Dr. Clifford Allbutt; an address on Health, delivered by Sir Rutherford Alcock, as president of the Health Department at the annual meeting of the Social Science Association; Dr. Pettigrew's introductory address at the University of St. Andrew's, on Man's Place in Creation, and his Education and Development from a Science Point of view; the introductory address, on the Study of Pathology, delivered by Mr. D. J. Hamilton, first Erasmus Wilson Professor of Pathological Anatomy in the University of Aberdeen; the addresses delivered at the annual meeting of the Association: namely, Dr. Strange's Presidential Address; Dr. Wade's Address in Medicine, in which he discussed the sources of error in medicine; Mr. William Stokes's Address in Surgery, dealing chiefly with some debated topics of general interest; Dr. Clifford Allbutt's address as President of the Section of Medicine, on Modern Thought and its Influence on the Progress of Medicine; the address of Mr. Prichard, President of the Section of Surgery, giving an interesting retrospective view of surgical practice; Dr. Alfred Carpenter's address to the Section of Public Medicine, giving an account of the early work of the Association in regard to Preventive Medicine; Dr. Humphry's address to the Section of Anatomy and Physiology, pointing out the relations between the two sciences; Dr. Hughlings Jackson's address in the Section of Pathology; Mr. Solomon's address to the Section of Ophthalmology, on Advances in Modern Ophthalmic Surgery; the address to the Section of Otology, by Mr. Laidlaw Purves, on Physical Diagnosis and Therapeutics in Aural Surgery; also the following addresses by presidents of Branches: Dr. Kidd's address to the Dublin Branch, on Medical Education; Mr. C. Palmer's address to the East Anglian Branch, on Syphilis and its Effects on the Civil Population of Maritime Towns (this has led to the institution of an inquiry on the disease in question, by the Collective Investigation Committee); Mr. W. M. Crowfoot's address to the same Branch, on the Germ-Theory of Disease; Dr. E. C. Thompson's address to the North of Ireland Branch, on the Past, Present, and Future of Medicine; and Mr. Jessop's address to the Yorkshire Branch, on some of the recent changes in surgical practice.

There have also been published reports presented to the Scientific Grants Committee of the Association, by Dr. P. M. Braidwood and Mr. F. Vacher, on the Life-History of Contagium; by Dr. A. Waller and Mr. A. de Watteville, on the Influence of the Galvanic Current on the Motor Nerves of Man; by Dr. P. M. Chapman, on the Duration of the Ventricular Systole in Man; and by Dr. Thin, on the Pathology of Parasitic Diseases of the Skin.

Action of Medicines: Therapeutics.—First under this head comes the use of salicylic acid and its salts in rheumatism, which has been discussed by Dr. C. Orton, Dr. P. W. Latham, Dr. T. Churton, Dr. J. Russell, Dr. D. H. Cullimore, and Dr. E. Mackey. Dr. Shingleton Smith has advocated the use of codeia in diabetes. The treatment of erysipelas by the external application of iodine has been discussed by Mr. C. N. Spinks, Dr. C. F. Hutchinson, Dr. T. A. G. Balfour, Dr. H. Tomkins, and others. Dr. A. Harkin has advocated the treatment of rheumatism and gout by blisters; and the subject has been commented on by Dr. Herbert Davies, Dr. Burchell, Mr. A. B. R. Myers, Mr. A. Roberts, Dr. N. Geisse, and various correspondents. Staff-Surgeon T. Browne has recommended hyoscyamine in certain cases of insanity; while Dr. W. J. Simpson expresses a less favourable opinion of its utility. The abuse of certain medicinal drugs by the public has been commented on by Mr. B. Marsack and Dr. Henry Barnes. Dr. M. Hay has given a brief account of the result of experiments on the absorption of certain salts from the alimentary canal; and Drs. Ringer and Sainsbury have investigated the action of arsenic in the forms of arsenite and arseniate.

Endemic and Epidemic Diseases.—Our editorial columns have contained records of the prevalence of epidemic disease in various localities; and several original communications on the various diseases have appeared. The forms of fever prevalent in India have been described by Sir Joseph Fayrer, in his Croonian Lectures, and Dr. W. C. Maclean and Sir J. Fayrer have described the question of the occurrence of enteric fever in that country. Dr. C. J. B. Williams has provided information, based on personal observation, regarding typhoid fever at Cannes. Dr. W. Skeen, of the Army Medical Department, has discussed the prevalence of enteric fever in subtropical countries. Dr. Byers of Belfast has attracted attention to the premonitory symptoms of intestinal perforation in enteric fever; and recently Dr. Octavius Sturges has commented on certain special characters of the present epidemic of typhoid fever in London. Surgeon-Major Boileau has described yellow fever, with regard to the removal of troops. Dr. E. Wilson has described an epidemic of measles in Cheltenham, presenting peculiar features. The question of the period of incubation of scarlet fever has formed the subject of a series of communications by Mr. R. Sweeting, Dr. W. Squire, Mr. Bryden, Mr. J. S. Main, Dr. Cullingworth, and other writers. Dr. R. Bruce Low has treated of the etiology of endemic goitre, with special reference to drinking water, and Mr. C. Roberts has also commented on the same subject. Dr. Spencer Cobbold has presented a brief practical article on the parasites endemic in Egypt, and their communication by water-drinking; and Dr. J. Mackie has described a form of dysentery in Egypt, which he has found to be traceable to the presence of *Bilharzia hematobia*. Anthracic inoculation for the prevention of splenic fever has been the subject of an interesting communication by M. Pasteur, of Paris. The etiology of the acute specific diseases has been the subject of an ingenious paper by Mr. Kenneth Millican, who recommends the study of anomalous forms, and expresses his belief in the spontaneous origin of such diseases.

Diseases of the Brain and Nervous System.—This has been dealt with in a considerable number of papers. Dr. Hadden has contributed a case of anomalous infantile hemiplegia; Dr. H. Donkin a case of recovery from pseudo-hypertrophic paralysis; Dr. Hughes Bennett has described a case of chronic cerebral meningitis and cerebral abscess, with other implications; spinal paralysis has formed the subject of communications by Dr. W. R. Gowers and Dr. J. M. Finny; Dr. W. H. Barlow has advocated the use of the term regressive paralysis, to designate the affection otherwise known as infantile paralysis; Dr. Dowse has discussed the diagnosis of general paralysis and tabes dorsalis; Dr. E. H. Jacob has described a case of saltatory and general clonic spasm treated by conium; Mr. de Watteville has commented on reflexes and pseudo-reflexes; Dr. Warner has directed attention to the study of the face as an index of the brain; and Dr. Mortimer Granville has advocated the use of percussion in nervous diseases. Dr. Shingleton Smith has made a contribution to the literature of locomotor ataxy; and Mr. E. Robinson has called attention to the cramp which affects telegraphists. Mr. Nettleship has commented on the value of eye-symptoms in the localisation of cerebral diseases; and a case of spastic paraplegia in an acrobat has been described by Dr. H. Donkin.

Operations on the Nerves.—The now popular operation of nerve-stretching has been the subject of several communications. Its dangers have been pointed out by Dr. Althaus; and its physics have been commented on by Mr. Symington. The practical application of the operation in traumatic tetanus has been discussed by Mr. H. E. Clark, Mr. Henry Morris, and Mr. W. I. Wheeler; in locomotor ataxy, by Mr. H. E. Spencer; and in infantile paralysis, by Dr. R. M. Simon. Mr.

W. Cadge has published a paper defending the practice of section of nerves in severe and obstinate cases of neuralgia.

Diseases of the Lungs.—The topic which has occupied much attention in this department is phthisis. The treatment of this disease by the inhalation of antiseptic vapours has been described by Dr. W. V. Snow, Dr. R. Hamilton, Dr. W. R. Thomas, Dr. E. Mackey, Dr. Burney Yeo, Dr. R. J. Lee, and others; the use of hypophosphites in phthisis has been advocated by Dr. Thorowgood; and the subject of climate in relation to phthisis has been described by Dr. A. H. Hassall and Dr. C. R. Drysdale. The question of the contagiousness of phthisis has been the subject of articles in the JOURNAL by Dr. Burney Yeo, Dr. C. T. Williams, Dr. R. Robertson, and others: the doctrine of its self-limited duration has been advocated by Dr. Austin Flint; and its laryngeal complications have been commented on by Dr. J. Williams. Antiseptic incision with drainage in empyema has been the subject of a paper by Mr. F. R. Cross; and auscultation of the trachea and mouth has been recommended as a means of diagnosis by Dr. David Drummond.

Diseases of the Heart and Blood-Vessels.—In this department of medicine, the chief communications have been the following. Dr. S. Wilks has published a clinical lecture on ulcerative endocarditis, or arterial pyæmia. Dr. G. A. Gibson has described the cephalic murmurs of anemia; and Dr. G. W. Balfour has called attention to dilatation of the heart as the cause of cardiac hæmic murmurs. Primary endocarditis has been the subject of a practical paper by Dr. A. J. Harrison; and Mr. E. W. Forster has commented on the therapeutics of cardiac disease.

Aneurysm was the subject of several interesting papers in the JOURNAL of October 14th. Dr. Alfred Sheen described two cases in which the external iliac artery was successfully tied for femoral aneurysm. Mr. Thomas Bryant gave the details of a case of aneurysm of both popliteal arteries, one of which was cured by pressure, while the other was treated successfully by the application, under antiseptic precautions, of Dr. Fleet Speirs's artery-compress or, Eschsch's bandage having failed. Mr. William Thomson described a case of ligation of the arteria innominata for subclavian aneurysm, the patient dying on the forty-second day after the operation. Appended to this history are some practical remarks, and an interesting summary of all the known cases of ligation of the innominate artery. Mr. A. Dolman described a case (fatal) of ligation of the left subclavian artery for traumatic aneurysm of the axillary, and Mr. T. H. Bartleet a case of aneurysm of the femoral artery treated successfully by ligation, first of the femoral, and on the nineteenth day, of the external iliac artery. The same number of the JOURNAL contains a paper by Mr. Bennett May, on the choice of material for the ligation of vessels.

Intestinal Obstruction: Hernia.—Papers on intestinal obstructions have been published by Dr. McGown (case cured by puncture of the colon), Dr. H. J. Benham, Mr. C. Firth, and Dr. Cockle (case caused by a diverticulum of the ileum). Mr. H. A. Reeves has advocated inguinal colotomy in stricture of the rectum; Sir Joseph Fayrer has commented on stricture of the colon; Mr. F. A. Southam has described a case of excision of the pylorus for cancer; and cases of gastrotomy have been described by Mr. Walter Whitehead and Mr. R. H. B. Nicholson. The radical cure of hernia has been the subject of papers by Mr. W. D. Spanton and Mr. Mitchell Banks; Mr. H. Bracey has described a case of strangulated umbilical hernia after parturition; Mr. U. Daly a case of successful operation for hernia at sea; and Mr. C. R. Thompson a case in which part of the appendix vermiformis was removed in operating for hernia. The administration of food by the rectum has formed the subject of papers by Dr. W. J. Tyson and Mr. H. E. Spencer.

Diseases of the Kidney.—Dr. George Johnson has described the various forms of tube-casts and their significance. Dr. H. F. A. Goodridge and Dr. Thomas Cole have commented on strumous disease of the kidney, in its relation to the operation for removal of that organ; and cases of nephrectomy have been described by Dr. G. Elder and Mr. Lawson Tait.

Diseases and Injuries of the Bladder and Urethra.—Under this head, several articles of practical value have appeared in the JOURNAL. Mr. Reginald Harrison of Liverpool has advocated the early treatment of prostatic obstruction by tapping the bladder through the hypertrophied prostate; and Sir Henry Thompson has described his method of affording permanent relief in cases of obstinate chronic cystitis and prostatic retention of urine, by making an opening in the membranous portion of the urethra, and fastening in a vulcanised catheter with its point in the bladder. Mr. Walter Whitehead has described a new method of irrigating the urethra, and an instrument for the purpose. Papers have also been published by Mr. F. S. Edwards, on foreign bodies in the bladder; by Dr. Ward Cousins, on lithotomy in children, and the

advantage of a long-beaked staff; by Mr. R. Harrison on litholapaxy; by Mr. W. R. Williams on sarcoma of the bladder; and by Mr. T. W. H. Garstang on urethral caruncle in the female.

Diseases and Injuries of the Skull and Spine.—In this division there have appeared in the JOURNAL the report of a case of successful trephining for gunshot injury of the skull, by Surgeon General Longmore, and papers bearing on the diagnosis and treatment of disease and curvature of the spine by Mr. Golding-Bird, Mr. E. Owen, Mr. B. Roth, Mr. N. Grattan, Dr. T. J. Walker, and Mr. F. R. Fisher.

Diseases of the Skin.—The principal communication in this department has been the following. The treatment of eczema by regulated diet ("Bantingism") has been discussed by Mr. Balmanno Squire, Mr. Cresswell Rich, Mr. F. C. Berry; and Mr. Malcolm Morris has recommended the use of papaine in chronic eczema. The same author has also described a new method of removing the diseased hairs in chronic ringworm of the scalp; and Dr. Cavafy has described the treatment of this disease by the local use of boric acid. Mr. Alder Smith has given an account of an extensive outbreak of ringworm of the head in a school, illustrating the utility of an ointment of carbolic acid, and of citrine and sulphur ointments, and of oleate of mercury and of croton-oil. Dr. Thin has furnished to the Scientific Grants Committee of the Association a series of contributions to the pathology of parasitic diseases of the skin, the subjects specially described being *Trichophyton tonsurans*, *Microsporon furfur*, and *Bacterium decalvans*. He has also published in the JOURNAL two papers on the treatment of alopecia areata, illustrating the utility of sulphur ointment in that affection.

Diseases and Injuries of Bones and Joints.—There have been numerous articles, mostly of a practical character, on the nature and treatment of various injuries and diseases of the bones and joints, besides those of the skull and spine referred to in another paragraph. Regarding fractures and dislocations, the following articles have appeared. Dr. J. H. Anderson has commented on the reduction of dislocation by manipulation; and a peculiar injury of the arm in children, probably of the nature of dislocation, has been the subject of articles by Mr. S. H. Lindeman, Mr. A. Benson, Mr. W. Sneddon, Dr. W. J. Mackie, and Mr. Bennett May. The voluntary dislocations of the American acrobat Warren, who visited this country some months ago, were examined and described by Mr. Edmund Owen, as well as by our correspondent in Glasgow. For the treatment of fractures, Mr. J. A. Grant has advocated a "spruce-shaving" splint; Mr. Furneaux Jordan has called attention to the utility of a laminated plaster splint; Mr. Walter Pye has recommended corrugated paper as a material for some common forms of splint; and Dr. Ward Cousins has described a form of iron wire splint with sliding bars. Mr. Henry Greenway has commented on the value of suspension, and has described an apparatus devised by him for the purpose. Fracture of the patella and its treatment has formed the subject of remarks by Mr. Jonathan Hutchinson, Mr. Christopher Heath, and Mr. Holderness; and a case of compound refracture of the patella has been described by Mr. William Thomson.

The "coat-sleeve" method of amputation has been described, and its advantages pointed out, by Mr. Richard Davy; Mr. Nelson Dobson has advocated amputation in certain conditions of senile gangrene; and Dr. L. W. Marshall has described a case of amputation at the hip-joint by Furneaux Jordan's method. Mr. W. Thomson has commented on the after-treatment in cases of excision of joints; Mr. W. Stokes, on resection of the knee-joint in early life; and Mr. G. Cowell has described his experience of resection of the hip-joint. Mr. Greig Smith has advocated the early operative treatment of strumous diseases of joints; and Mr. Henry Morris has advocated trephining in cases of abscess of bone. The use of wire-ligatures for uniting divided bones has been advocated by Mr. Sympton. Mr. Howard Marsh has supplied an interesting paper on bone-setting; and Mr. William Adams has described the conditions under which forcible flexion should be applied in cases of stiff joint. Contraction of the palmar fascia (Dupuytren's contraction) has been the subject of communications, especially with reference to its occurrence in females, from Dr. A. S. Myrtle, Mr. W. Adams, Mr. F. A. Southam, and Dr. J. S. Bury.

Diseases of the Eye.—In this department of surgery, Mr. H. Juler has commented on the application of retinoscopy to the diagnosis and treatment of errors of refraction; Mr. Anderson Critchett has advocated the use of atropine in correcting errors of refraction, and has also commented on the operative treatment of congenital cataract. Dr. Edwyn Andrew contributes a paper on dislocation of the lens, with remarks on the old operation of couching; and Dr. Bell Taylor one on the use of eserine as a preliminary to extraction in cases of cataract. Mr. Makuna has published a paper on diseases of the eye occurring in connection with small-pox.

Diseases of the Ear.—Mr. G. P. Field and Mr. Lennox Browne

have commented on the connection between diseases of the ear and general medicine; Dr. Urban Pritchard has recommended the use of dilute mineral acids in the treatment of certain diseases of the bony portions of the ear; Dr. P. McBride publishes remarks on the physiology of auditory vertigo and some other neuroses produced by ear-disease; and

Obstetric Medicine and Diseases of Women.—Under this head, Dr. Hickinbotham has described a case of labour complicated with a large urethral cyst and prolapsus uteri. Mr. A. D. Macdonald has advocated the straight bodied position in labour. Dr. Fancourt Barnes has described a case of puerperal convulsions, in which nitrite of amyl was used successfully. The sanitary condition of Bagshot Park was the subject of a communication by Dr. W. S. Playfair, in reference to the illness of the Duchess of Connaught, and the subject of sewer-gas in connection with puerperal septicæmia has also been commented on by Dr. J. C. Ferrier. Dr. Arthur Edis has communicated a paper on sterility, and one on the rational treatment of metrorrhagia. Ovariectomy has been the subject of several papers; Mr. J. E. Adams has commented on its use in general hospitals; the statistics of the operations in Switzerland has been referred to by Mr. Alban Doran; Mr. J. Greig Smith has described eleven cases of antiseptic ovariectomy; and Mr. Lawson Tait has given the statistics of one hundred cases of ovariectomy performed without Listerian details. The same surgeon has also commented on the diagnosis and treatment of chronic disease of the ovary. Dr. G. G. Bantock has furnished a paper on hysterectomy; Dr. John Williams has commented on subinvolution of the uterus; Dr. Routh on the etiology and treatment of a certain form of endometritis; and Mr. J. Dewar on dysmenorrhœa as a cause of hysterio-epilepsy. Mr. W. Walter has described a successful case of transfusion of blood after severe *post partum* hæmorrhage. Dr. Neil Macleod of Shanghai has described the results of experiments made with lochial fluid, in reference to antiseptic midwifery; and Dr. Braidwood and Mr. Vacher have commented on the same subject. Dr. W. H. Day has described a case of ovarian cyst suppurating after parturition. The subject of tracheloraphy has been discussed by Dr. Tilt and Dr. Percy Boulton. Mr. Barnish has described an epidemic of puerperal fever in Wigan, traceable apparently to the communication of infection by a midwife.

Pathology.—Traumatic malignancy has been the subject of articles by Mr. Richard Barwell, Mr. Harrison Cripps, and Mr. Chauncey Puzey; and articles on the bacillus of tubercle and its detection have been communicated by Dr. G. A. Heron and Dr. Heneage Gibbes, Dr. Cossar Ewart has commented on the influence of bacilli in the production of disease.

Public Health.—In this department, Dr. A. P. Stewart has called attention to the establishment of convalescent hospitals for persons recovering from scarlet fever. The notification and registration of disease have been the subjects of papers by Dr. A. Ransome and Dr. W. Carter. The hygienic relations of food supply have been commented on by Mr. F. Vacher and Dr. Drysdale; quarantine by Dr. Imlach; the public medicine aspect of the alcohol question by Dr. N. S. Kerr; the relations of private practitioners to the Public Health Act by Dr. Slade-King; and the closure of schools during the prevalence of zymotic diseases by Mr. H. Page.

Miscellaneous Papers.—Dr. Marion Sims, in the early numbers of the JOURNAL for the year, contributed a valuable paper on the treatment of gunshot wounds of the abdomen in relation to modern peritoneal surgery. Mr. C. B. Lockwood has directed attention to the effect of the rheumatic diathesis on the initial lesion of syphilis. Mr. Cresswell Baber has described adenoid vegetations of the base-pharynx, and Dr. G. Richelot a new method for the cure of salivary fistula of Stenson's duct. Dr. D. J. Leech has discussed the treatment of various form of dropsy. Dr. S. S. Roden has directed attention to the therapeutic value of the brine-springs of Droitwich. With regard to the means of transport of sick and wounded persons, Dr. B. Howard has described a pauper's hospital and ambulance service for London, and Mr. Richard Davy has directed attention to the points necessary to be attended to in the construction of carriages for the conveyance of invalids. Dr. Sarell, of Constantinople, has described the case of the late Commander Selby, R.N., who was murdered in February. Mr. John Marshall has given a description of the new hospital at Antwerp, to which Dr. Dawson Williams has added a note on the advantages of the circular ward system in the construction of hospitals. Mr. Spencer Wells has given his experience of holiday-making and health resorts in Norway; and Dr. Joseph Williams has furnished some interesting notes of travels in Egypt and the Soudan. Mr. D. Biddle has elaborately investigated the statistics of life and death in England, as given in the last annual report of the Registrar-General.

EDITORIAL ARTICLES.

DURING the year a large number of subjects of interest to the medical profession have received comment in the JOURNAL. Among these may be mentioned the following, the greater number of which have been furnished by contributors who have special knowledge of the respective subjects.

Private Boarding Schools and the Necessity for their Inspection; the Office of Coroner; the Medical Aspects of the Opium Question; Experiments on Animals, and the Antivivisectionists; Attendance on the Families of Medical Men; Insanity and Responsibility; the Position of the Royal Medical and Chirurgical Society; the Proposed Establishment of County Boards; the Notification of Infectious Diseases; the Isolation of Persons Suffering from Diphtheria; the Medical Endowments at the University of Oxford; Medical Administration in India; Pay Hospitals; Mortality in Indian Prisons; the Sanitary Condition of Prisons in Ireland; the Trial of G. H. Lamson, especially with special reference to physiological tests for poisons; Fees to Medical Expert Witnesses; the New Association for the Advancement of Medical Research; the Sale of Poisons; *Post Mortem* Examinations in their Legal Aspects; the Regulations in force in France for the Prevention of Lead Poisoning; the Responsibilities of Prison Surgeons, with reference to a charge against the medical officer of the Chester Prison; the Work of the Metropolitan Asylums Board; the Examinations at the Royal College of Surgeons; Militia Surgeons; Public Appointments through Nomination, with reference to the Army Medical Department; the Proceedings of the Royal College of Surgeons in Ireland; Defects in Medical Education; Adulteration of Food; the British Medical Association; THE BRITISH MEDICAL JOURNAL; Police and Sanitary Regulations; Guiteaumania; Medical Reform; Medical Officers of Convict Prisons; Medical Officers in British Guiana; the General Medical Council; Medical Duties of the Metropolitan Board of Works; Examinations for First Year's Students; the Registrar-General on Mortality from Small-pox; the Medical and Hospital Arrangements for the Egyptian Expedition; the Use of Alcohol in Workhouses; the Jubilee Meeting of the British Medical Association, and the addresses delivered there; Public Convalescence; Medical and Social Aspects of Temperance; Phases of Pharmacy; General Gordon and the Medical Department of the Cape Colonial Force; the Study of Pathology; Sea-Scurvy and Merchant Ships; Sanitation in Swiss Hotels; Cholera and Quarantine; the Vaccination Inquiry at Norwich; Poisoning by Lead; Mr. Matthew Arnold's Address at Liverpool University College; the Student in Relation to Contemporary Medicine; the Examinations of Licensing Bodies; the Report of the Royal Commission on Small-pox and Fever Hospitals; the Medical Department of the Army; Typhoid Fever in Paris; Museums in London Hospitals; Mortality from Different Diseases among Assured Lives; Spurious and Worthless Drugs; Superannuation of Asylum Medical Officers; Medical Numismatics; Sir James Paget's Bradshaw Lecture; the Museum of the Royal College of Surgeons; Typhoid Fever in London; Fees for Medical Evidence in Police Courts, etc.

Under the head of Legal Obligations of the Medical Profession, have appeared articles on—1. Corporal Examinations without Assent; 2. Contracts in Restraint of Medical and Surgical Practice; 3. Actions for Malapraxis.

There have also been published several articles relating to topics of scientific and practical importance in medicine and surgery. In these, the following subjects, among others, have been treated:—Myxœdema; Syphilis of the Lung; Cancer; Sarcoma and Local Injury; Galvanism and Hypnotism; Infective Forms of Nephritis; Primary Chronic Disease of the Organs of Voluntary Motion; the Origin and Formation of Red Blood-corpuscles in the Marrow of Bone; the Physiology and Pathology of the Spleen; Actinomycosis in Man; Syphilitic Disease of the Heart; the Management of the Inhalation of Chloroform; Recent Researches in Bacteria; Diabetic Coma; Simple and Antiseptic Ovariectomy; Hunger and Appetite; Sleep and Sleeplessness; Infant Psychology; the Dangers of Iodoform; Electrical Stimulation of the Heart; the Bacillus of Leprosy; Recent Developments in Antiseptic Surgery; Forced Feeding and Over-feeding; Parasitic Hæmoptysis and Distoma Ringeri; Sensorial Localisation; the Formation of Fibrin; the Mal del Pinto; the Pulmonary Circulation; the Use of Naphthalin Dressings; Nervous Derangement of Diabetes.

The department of "The Week" has contained records of and comments on numerous topics of social and scientific interest to the profession.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE efforts of the Council of the Royal College of Surgeons of England have been mainly directed, during the last twelve months, to the regulation of examinations, and to the exercise of as complete a control as possible over the space of time elapsing between a candidate's anatomical and surgical examinations. In the discussion of this and of kindred questions, joint committees and subcommittees, the board, the court, and the council have laboured hard. In answer to the recommendations of the General Medical Council that a preliminary scientific examination was advisable for medical students, the College Council replied that such an examination was desirable, if passed before the commencement of the purely medical curriculum, but that it was not in the province of the College to take any steps either separately or conjointly, in the establishment of the proposed preliminary scientific test. A regulation giving the Court of Examiners, in cases where extreme ignorance is exhibited by candidates for the Pass Examination, the power of lengthening the period of reference to their studies, from six to nine or twelve months, was adopted after very strong discussion. The limitation of the compulsory attendance of students to a single course of anatomical lectures was carried, but, for certain reasons, postponed. The most warmly contested alterations yet remain to be noted. By a new regulation, candidates commencing their professional education on or after October 1st, 1882, will not be admitted, except under certain special conditions, to the Pass Examination until the expiration of two years from the date of their passing the Primary Examination. This will prevent the anomaly witnessed when an often-rejected candidate succeeds in passing the anatomical examination, and then presents himself for the final test, only a few days later, defeating the object of the examiners, who expect two years to be devoted to the study of surgery and medicine. A still more pronounced innovation is the institution of an elementary examination of students at their respective medical schools on the termination of their first year of study, which has now become law. This arrangement seems to have followed more or less directly on a suggestion made by the subcommittee of the Committee of Council of the British Medical Association in 1880, and approved by a large majority of members of the profession whom the subcommittee consulted by means of a special circular. The College of Surgeons took up the same subject, apparently on quite an independent basis, for we hear of no allusion to the action of the Association in the reports of the proceedings of the College authorities. Once more, the new law of the College appeared to meet with the approval of those whom, precisely after the manner of the Association, were consulted by circular. But no sooner was the rule made law, than great discontent was expressed by many demonstrators and junior teachers in medical schools who, both in direct memorials to the College authorities and through the medium of the JOURNAL, objected to educational institutions like their schools being compelled to play the part and share the responsibilities of licensing bodies. They also complained that the new regulation would burden them alone with this unexpected kind of duty, the lecturers who had approved of the local examination of first year's students really having but a slight part of the actual labour of instruction, so that, acting in their usual manner, they would practically leave all the new examining duties to their overworked junior colleagues, the demonstrators. We understand that endeavours are still being made to effect a revocation of the new arrangement; but the senior medical authorities of the schools and the Council itself appear determined to enforce it; and when we remember now strongly it has been recommended by the experienced, it is fair that it should have a good trial. The ever-recurring question of conjoint schemes appears to be about to advance a stage, if we may judge from the report of the December meeting of the College, when, we are informed, a letter was read from the President of the Royal College of Physicians, inviting the Council of the Royal College of Surgeons to send delegates to confer with a subcommittee of the former College on the possibility of bringing about a combination between the two Colleges for a conjoint complete medical and surgical examination. The invitation has been accepted, and the President, vice-presidents, and four other members of the Council have been appointed as delegates to meet a subcommittee of the College of Physicians. The result of the co-operation of the two Colleges will be awaited with deep interest by all concerned in medical education. The proceedings of the College of Surgeons with regard to subjects not of an educational character, in 1882, are chiefly confined to the arena of forensic medical matters. A remarkable poisoning case, which caused great excitement in England during last spring, turned the attention of the Government to various questions pertaining to criminal investigation. One result of this was the despatch of a letter from the Secretary of State for the Home Department to both the London Colleges, requesting the nomination of two public analysts to undertake *post mortem* examinations in criminal cases.

The Physicians selected Dr. Stevenson; whilst the choice of the College of Surgeons fell upon Dr. Meymott Tidy, Lecturer on Chemistry and Forensic Medicine at the London Hospital. The same Secretary of State also inquired of the College, by letter, whether the Council had any suggestion to make for the amendment of the law relating to the sale of poisons. In reply, after conference with the Council of the Pharmaceutical Society, the College stated their opinion that it was neither necessary nor practicable that any further restrictions should be placed on the sale of medicines containing poisons dispensed from ordinary prescriptions by qualified practitioners; that greater restrictions should control the wholesale trade in such virulent poisons as strychnine, aconitine, and all poisonous alkaloids; that further restrictions should be provided by law, so as to more efficiently control the sale of poisonous patent medicines; and that the power which the Act confers on the Pharmaceutical Society to make, with the consent of the Privy Council, any additions to, or alterations in, Schedule A, is a wholesome provision, and a sufficient guarantee that from time to time further changes in that schedule will be effected as new poisons are introduced into common use. It must be remembered that, at the beginning of the year, the Pharmaceutical Society had made use of the power above alluded to by adding to the schedule sulphuric, hydrochloric, nitric, and carbonic acids, solution of chloride of antimony, hellebore, nux vomica and its preparations, and, lastly, vermin-killers containing phosphorus. The action of the College in approving of the action of the Pharmaceutical Society is highly satisfactory, when we consider the deadly or mischievous nature of these materials. Among the more interesting events in the domestic affairs of the College of Surgeons is the completion and publication of the first volume of the new edition of the Pathological Catalogue, and the delivery, for the first time, of the Erasmus Wilson Pathological Lectures by Mr. F. S. Eve, and of the Bradshaw Lecture by Sir James Paget, the echo of which discourse has hardly yet died in our ears.

MEDICAL SOCIETIES.

At the meetings of the *Royal Medical and Chirurgical Society*, several subjects, both of practical and pathological (doubtless also ultimately practical) interest, have been discussed. On January 10th, Dr. Creighton described the appearances found in three cases of tumours arising in the skin-gland of the dog, to show the connection between disorders of the secreting structure and cancerous invasion of the connective tissue. On January 24th, Dr. Robert Barnes supplied an interesting paper on hernia of the ovary, its symptoms, diagnosis, and treatment. He considered the affection to afford legitimate grounds for the performance of Battey's operation. On February 14th, a paper by Mr. Thos. Girdlestone, of Melbourne, was read, in which the author advocated the use of tendons from the tail of the kangaroo for the purpose of ligature of large blood-vessels. At the same meeting, Mr. Henry Morris brought forward a paper, bearing on the mechanism of dislocations of the hip. On February 28th, Dr. Champneys presented a third communication, founded on experimental results, on artificial respiration in newly born children, dealing especially with mediastinal emphysema and pneumothorax in tracheotomy; and, at the same meeting, Dr. Angel Money gave an account of the result of observations made at the General Lying-in Hospital, showing the frequency of cardiac murmurs in puerperal women. At the meeting of March 14th, Dr. Theodore Williams drew attention to the frequency of albuminuria in phthisis, and the gravity which it imparted to the prognosis. On March 28th, Mr. Bryant described a case, in which he had excised a strictured portion of the descending colon through an incision made for left lumbar colotomy; and Dr. S. Fenwick called attention to the presence of bile in the saliva, and the variation in the amount of sulphocyanide of potassium in the saliva of patients affected with various diseases. On April 11th, an interesting case of removal of a tumour of the bladder, by perineal section of the urethra, was described by Sir Henry Thompson, who advocated that, in certain cases of renal hæmaturia, of which the cause could not readily be detected, an incision as for median lithotomy should be made, for the purpose of exploration, and removal of the tumour, if any were found. On April 25th, two papers were read: one on wounds of the theca vertebralis, with discharge of cerebro-spinal fluid, by Mr. Holmes; and the other, by Mr. R. W. Parker, containing a suggestion for the treatment of some cases of empyema by thoracentesis and injection of filtered and carbolic air. On May 6th, Mr. Tivy of Clifton described a case of double inguinal hernia, treated by Wood's operation for radical cure, and discussed the merits of Wood's and Spanton's methods; and Mr. M. D. Makina described the results of the method which he had followed for the ectrotic treatment of small-pox varioles by cauterisation with carbolic acid, as recommended

by Dr. Eade, of Norwich, in 1878. On May 23rd the attention of the Society was directed to the surgery of the larynx. Dr. F. Semon described two cases in which growths in the larynx were removed from within by the galvano-caustic method; and Mr. T. Holmes discussed the subject of thyrotomy for the removal of foreign bodies impacted in the interior of the thyroid cartilage, and described the indications for its performance. At the same meeting Mr. Watson Cheyne, Mr. Horsley, and Mr. Dowdeswell, showed a large number of specimens of micro-organisms from various diseases. On June 13, the last meeting of the session, Drs. Ringer and Sainsbury described the results of their researches on the action of salts of potash, soda, and ammonia on the frog's heart; Sir James Paget described seven cases of osteitis deformans showed by him since his former paper on the subject was read before the Society; and Mr. Davies-Colley communicated a tabular statement of seventeen cases of malignant pustule showed at Guy's Hospital, and advocated early treatment by excision or free cauterisation of the eschar. The present session of the Society, which commenced on October 24th, was opened with the reading of two papers; one by Mr. Barwell on dislocation of the foot with version and torsion of the astragalus, and the other by Dr. Warner, on a case of Graves's disease complicated with ophthalmoplegia externa. On November 14th, a paper by the late Dr. Vasy Lyle, of Durban, on endemic hæmaturia in South-East Africa, and its connection with *Bilharzia hæmatobia*, was communicated by Dr. John Harley; and Mr. A. P. Thomas, of Oxford, gave a most interesting account of researches which he had made in the life history of the liver fluke in sheep, by means of which he had discovered the source of the disease. In connection with the papers, enormous specimens of entozoa in various stages of development were shown under microscopes by Dr. Spencer Cobbold, Dr. Radcliffe Crocker, Dr. Charlton Bastian, Dr. Stephen Mackenzie, and Mr. A. P. Thomas. On November 28th, Dr. F. Warner treated of positions of the hand as indications of conditions of the brain; and Dr. Ralfe described seventeen cases of epilepsy treated by sodium nitrite according to the plan recommended by Dr. Law, of Hastings. At the last meeting for the year, on December 12th, the subject of resection of portions of intestine was brought forward in a paper by Mr. F. Treves, and discussed by several members.

At the beginning of the present session, in October last, a system was introduced of exhibiting at each meeting (instead of only occasionally, as hitherto) various articles of interest, such as instruments, drawings, microscopical specimens, etc. Several articles, besides those referred to above, have thus been exhibited. The papers read have generally been followed by instructive discussions; and the prospects of the Society, under the energetic and judicious guidance of its president, Mr. John Marshall, are very promising.

The *Medical Society* has been busily bestirring itself for some months past with the erection of the new meeting room, library, and other offices. The new meeting room will probably be as handsome as any of its kind in London. It is not generally known that the *Medical Society* possesses a large collection of works of old medical writers. Many of these books are of the greatest rarity and interest, and bibliophiles will be able to inspect them at their ease, when they will have been set out and arranged in the new library. The interest taken in the meetings during the year has been steadily increasing. Dr. Heneage Gibbes showed recently to the Society a large number of specimens of bacteria, including bacillus anthracis, bacillus tuberculosis, and bacillus anthracis after cultivation. This was one of the best attended and instructive evenings of the year, and was enlivened by an instructive discussion between Dr. Gibbes and Dr. Heron.

The proceedings of the *Clinical Society* during the past year have been chiefly characterised by several discussions on the recently developed operations upon the abdominal viscera, which are beginning to find favour with surgeons. Thus nephro-lithotomy, nephrectomy, splenectomy, extirpation of the uterus, and intussusception treated by abdominal section, have all given rise to several animated debates. Nor have physicians been behindhand in submitting papers on subjects of great interest. Their contributions have been the following. At the first meeting in January a discussion, adjourned from the last meeting of 1881, took place on the subject of myxœdema, chiefly characterised by a valuable summing up of the subject by Dr. Ord. In March, Dr. Mahomed showed a case of the same disease, which seemed to be improving under treatment by nitro-glycerine. In February, Dr. Finlay exhibited a patient having aneurysm of the ascending aorta, when a long discussion respecting treatment by galvano-puncture ensued. Dr. George Johnson brought forward a case of acute perforative pneumothorax terminating in complete recovery; and Mr. Godlee mentioned a case in which an ear of rye-grass, swallowed by a child, emerged on the forty-third day subsequently from an opening near the spine between the sixth and seventh ribs. In April, Dr. de

Havilland Hall mentioned a case of primary perichondritis of the larynx, in which the cause of the disease could not be ascertained, there being not the least suspicion of syphilis. In May, Dr. Althaus gave interesting notes of a case of cerebro-spinal syphilis, accompanied by a large number of symptoms of widely extended nervous origin; and Dr. Ord cited particulars of a case in which various disorders of movement had followed right hemiplegia. On the opening night of the present session, October 13th, Dr. Theodore Williams described the case of a patient suffering from phthisis who had been greatly benefited by residence at a high altitude, viz., Davos; upon which the cause of such improvement in consumptive patients was well discussed by several speakers. Dr. Crocker showed the ova and embryos of the *Bilharzia hæmatobia*, which had been passed from a patient suffering from that parasite. Dr. Goodhart, in November, discussed the treatment of diphtheria by local applications of borax or boracic acid to the throat, and expressed a high opinion of the remedy. Dr. Duckworth, at the December meeting, related two cases of subcutaneous rheumatismal nodes. A very valuable report upon hyperpyrexia in acute rheumatism, by a committee of the Society, was presented in May last, and a copious abstract of it was published in the *BRITISH MEDICAL JOURNAL* for June 3rd. At the same meeting, Dr. Greenhow presented a paper comprising notes of forty-three cases of rheumatic fever treated by him in the Middlesex Hospital with iodide of potassium and sulphate of quinine; and Dr. Churton (of Leeds) communicated particulars of a case of double hæmorrhagic pleurisy with formation of cholesterine, in which the patient died.

The cases of surgical interest have been more numerous. In January, Mr. Beek narrated a successful case of nephro-lithotomy, in which he was followed by many other surgeons who had removed calculi from the kidney, with various results. In February, Mr. Knowsley Thornton gave notes of a case in which suppression of urine was threatened several times after ovariectomy, and was on each occasion relieved by the packing of the arms in cold wet towels. In March, Mr. G. Lawson exhibited a chimney-sweep, from whom he had removed an epitheliomatous cancer from the axilla. Mr. Marsh related particulars of a case of aneurysm of the left axillary artery, in which he had ligatured the subclavian, and afterwards, upon rupture of the sac, successfully amputated at the shoulder-joint. The question as to the best kind of ligature for arteries in their continuity was discussed then and on other occasions during the year, notably in April, when Dr. Hector C. Cameron of Glasgow read notes of all the cases of antiseptic ligature of arteries in their continuity in which he had performed such an operation, whether for aneurysm or for accidental wound. In March, Mr. Haward read notes of an unsuccessful case of splenectomy, which gave rise to an animated debate; and at this and the next meeting, the subject of nephrectomy for scrofulous kidney was discussed. The readers of the cases introducing the discussion were Dr. Goodhart and Mr. Golding-Bird, Dr. Barlow and Mr. Godlee, and Mr. Marsh. During the present session, too, Mr. James E. Adams read notes of a case in which he had performed nephrectomy for carcinoma. In April, Mr. Pearce Gould read notes of a case of spina bifida cured by injection of iodine, in which he was followed in November by Mr. Clutton. Mr. Gould also mentioned a case of congenital intestinal obstruction in which he had performed abdominal section; and in May, exhibited a man upon whom he had performed a new operation for amputation of the penis. Mr. T. Smith read notes of a case of aneurysmal varix affecting the hand and fingers; and Mr. T. Holmes narrated the removal of an epitheliomatous ulcer of the leg by scraping, and of loose cartilages from a joint. In October, Mr. Golding-Bird detailed the removal of an epitheliomatous tonsil by Cheever's method, and Mr. Lucas the excision of the base of the tongue, right tonsil, and part of the left palate for a similar disease, from a patient who had had aneurysm of both popliteal arteries. Mr. Walsham read notes of a gunshot injury of the lower jaw, and Mr. Pepper and Dr. Mahomed those relating to a case of ligature of the common carotid artery for severe hæmorrhage from the throat after an attack of scarlet fever. In November, Mr. Golding-Bird mentioned a case of removal of the uterus for fibroid disease, with a fatal termination on the fourth day. Mr. Heath mentioned a case of separation of the epiphysis of the clavicle by muscular action. At the December meeting, Mr. Godlee read a paper on cases of intussusception in infants treated by abdominal section, and Mr. G. Brown mentioned another case. A well sustained discussion thereupon ensued. Several papers relating to diseases of the skin and of the eye have also been read, viz.: by Mr. B. Squire, on erythema iris; by Dr. Crocker, on the prurigo of Hebra; by Dr. B. O'Connor, on ichthyosis involving the entire surface of the body; by Dr. S. Mackenzie, on a case of lupus-poriosis; and by Dr. Cavafy, on symmetrical congestive mottling of the skin. Mr. Kesteven, in January, read notes of a case of xanthopsia;

and Mr. Spencer Watson, in February, those of a case of eyeball-tension treated by sclerotomy.

The *Pathological Society* is one of the most popular of societies; its meetings are well attended, the material for exhibition and discussion appears to be inexhaustible, its members are numerous, and possess the vigour of youth; it is emphatically the young men's society. To shine at its meetings requires no laborious compilation of statistics, no accumulation of instances, no searching investigation of deep problems—though, indeed, the president has observed that there is a tendency in the society to evince increasing interest in abstract speculations and wider-reaching hypotheses. Since this tendency has been recognised and approved by the president of the society—a man, whose name is as a household word to all English students of pathology—we may be permitted to observe that the impression left on our mind by looking back on the work of the society during the past year is one of some little confusion and disappointment, for lack, as it seems to us, of a little more of this spirit of generalisation and discussion. It is difficult to pick out any subject which the Society has dealt with in any spirit of thoroughness; of the excellency of the material, and of the ability and scientific spirit of the observers, there can be no question; but the material seems to suffer for want of grouping and for want of discussion. We believe that a very large number of members of the Society would agree with this criticism. One innovation which it is gratifying to recognise, has been the increased prominence given to what has been called comparative pathology, and we hope that in future years more and more assistance may be looked for in this direction. A better acquaintance with this subject would probably prevent us from falling into many errors in reasoning from experimental to human pathology. Among subjects and cases of more than usual interest which have occupied the time of the society, we may instance the completion of Dr. Stephen Mackenzie's important case of filarial hæmato-chyluria, a paper by Dr. Zancavol (of Alexandria) on Bilharzia hæmatobia, several short discussions on ulcerative endocarditis, a remarkable case of symmetrical gangrene recently shown by Dr. Southey, and several instructive instances of extremely rapid development of sarcoma in various situations, shown by Dr. Samuel West.

At the *Obstetrical Society* a paper by Dr. Clement Godson on the Treatment of Dysmenorrhœa and Sterility, and another contribution on the Natural History of Dysmenorrhœa, by Dr. John Williams, gave rise to animated discussions. Another communication of great interest was Dr. Playfair's monograph on Emmet's operation; the debate which followed its delivery showed that the opinions of authorities remain greatly divided. The President, Dr. Matthews Duncan, contributed his share in two papers, one based on a case of imperforate hymen, the second consisting of the President's opinions on puerperal diabetes. Dr. Galabin read an interesting paper on retention of menstrual fluid in one half of a double uterus; Dr. Popoff contributed some valuable notes on the corpus luteum, based on cases the menstrual histories of which were known to the author; interesting specimens illustrating different forms of hermaphroditism were exhibited by Drs. Fancourt Barnes, Champneys, and Chalmers; and the gynecologists of several well-known general and special hospitals contributed interesting valuable records of cases of oophorectomy and the removal of uterine fibroid tumours, including a case of removal of an extra-uterine cyst by Mr. Thornton.

The *Ophthalmological Society* has this year entered upon its third session, and already has much good work accomplished upon which to look back. It has done much to fulfil one of the chief objects with which it was founded—namely, to bring to a common centre, for the mutual advantage of both, the knowledge acquired by ophthalmic surgeons and by physicians in the course of their daily practice. We may instance the papers and discussions on optic neuritis after injuries of the head, on the relations between tubercle of the choroid and tubercle of the meninges, and on the visual acuity of seamen, a point of vast practical importance, which has received serious attention from the Board of Trade. In June, on two succeeding evenings, a discussion on sclerotomy, an operation proposed as a substitute for iridectomy in glaucoma, was maintained with much spirit by a large number of speakers, and naturally contributed to a right comprehension of the subject by the profession at large.

HOSPITALS.

In our report on the progress of surgery during the past year, we will shortly refer to the present condition of antiseptic surgery, and to the different chemical substances employed with more or less success in British hospitals as a substitute for carbolic acid.

Our columns have contained, during the past year, full reports of no fewer than sixteen cases of death attributable to chloroform inhalation,

all occurring in the United Kingdom, and references to four others, of which full details were not obtainable. Two of the patients were children, under ten years of age; two were young male adults, under 30 years of age, and the ages of the remainder varied from 33 to 58. In two of the cases only, where the functions of the larynx had been severely interfered with—in one case by disease, and in the other by injury—could chloroform be exonerated from the blame of being the direct cause of death. All the patients were males with two exceptions, and one of these was a very severe case of abdominal disease. The subject gave rise to an interesting discussion in our pages during the earlier part of the year, during which many of our correspondents expressed a very strong opinion in favour of the superior safety of ether; we were told that, whereas, the death-rate for chloroform was 1 in 2,873 inhalations, the rate for ether was only 1 in 23,204. We are not quite prepared, however, to accept the conclusion that chloroform is "eight times more dangerous than ether," for, during the year, we have recorded two cases of death from ether.

In our hospital column, a most interesting case of recovery after swallowing three ounces of chloroform, was recorded by Mr. Oliver, from the Queen's Hospital at Birmingham. This column of reports of medical and surgical practice in the hospitals and asylums of Great Britain and Ireland, which is a distinct feature in each number of our JOURNAL, has contained numerous cases of interest during the past year, in addition to those we have already referred to. We would point especially to the cases of median lithotomy for prostatic calculi, under the care of Mr. Christopher Heath and Mr. Lister respectively; to the cases of oophorectomy for menorrhagia, performed by Mr. Eddowes of Shrewsbury; of extirpation of the uterus, by Mr. Sydney Jones; of gastrostomy, by Mr. Whitehead of Manchester, and Mr. Swain of Plymouth, the case reported by the former surgeon being one of the first successful operations of the kind in England; and among cases of more purely medical interest, we may mention the four cases of aconite poisoning reported by Mr. Grenfell Baker; a case of recovery from meningitis, under the care of Dr. Dickinson, and four cases of recovery from tetanus.

One of the most important movements of the day, and one which has conspicuously gained strength during the past year, has been in the direction of providing additional accommodation for convalescents. Mr. Gladstone, at a meeting held at his own house, lent his powerful eloquence to the support of Miss Waddell's scheme for providing convalescent homes for scarlet fever patients. The Charity Organisation Society has published a catalogue, showing the capabilities of the various convalescent institutions already in existence, and has elaborated a scheme for boarding-out children in the country with the families of labourers and others. St. Bartholomew's Hospital has been fortunate enough to be presented with money to establish a home for eighty-five patients at Swanley, and the buildings are to be ready early in the coming year. The German Hospital has also determined to take a similar step, and efforts by other hospitals in this direction are in progress. The authorities of the Hospital for Consumption at Brompton, unfortunately, as some people thought years ago, when the decision was come to, and as they themselves, perhaps, may be more inclined to think, now that the contagiousness of phthisis has become such an every day topic of conversation, have not followed out the plan of devoting extra endowments to the establishment of a country home for their patients, but have erected a large new block opposite the old buildings. This was formally opened by Lord Derby in June last, and is now in working order. London has spread so rapidly in recent years towards the north, that first of all "University College, or North London Hospital," and now the Great Northern Hospital are being left behind, and we are to have a New North London Hospital; but while this activity is evinced in the creation of new hospitals, or in the enlargement of old, some of those already existing are in great straits for money. St. George's Hospital has had to sell out £8,000 of stock, Westminster £4,000, King's College £9,000, University College £6,000; and the last named hospital has, in addition, to face the pressing necessity for a new nurses' home, the present structure (never well suited for the purpose) being under condemnation as in a condition not safe for habitation.

ANATOMY AND PHYSIOLOGY.

THE year's record is, as usual, composed of a long list of titles—so long, indeed, that we cannot pretend, within the space of one or two pages, to give even a sketch of all that has been done and undone during the last twelve months. Old themes studied by new men, theories supported by their parents and advocates, and ~~modern facts~~ consolidated by painstaking labour, have been the occasion of much printing; and, doubtless, there are many grains of gold hidden in the literary deposit. But we have not the leisure to sift the whole mass,

and we shall simply put into words the impression left on our memory by those published papers, which have attracted our attention by their titles, or by the names of their authors, or by the remarks we have heard expressed concerning them.

We are naturally interested, in the first place, by work done in this country, and we are glad to note the fact that no such work has involved the infliction of pain upon the lower animals. But while congratulating ourselves upon the fact that some physiological research can be carried on without the infliction of pain, we hasten to add that all physiological research cannot be so carried out; and, knowing that it will remain the desire of English physiologists to pursue, as far as may be, such lines of research as do not involve painful experiment, we still continue to claim for them the liberty to have recourse to such experiment in the few cases in which it may be absolutely necessary.

Several papers of interest have been published on the composition of the blood. A third corpuscular element has been alleged to have been discovered in that fluid within the last few years, by three independent observers, each observer asserting that his corpuscle differs from that of his brother physiologists. It is therefore to be believed that a third corpuscle of some kind has really been discovered. The elements referred to are the invisible corpuscle of Norris, the hæmatoblast of Hayem, and the pale plate of Bizzozero. It appears, however, especially from the control experiments of Mrs. Ernest Hart, that Norris's corpuscles are only the red discs from which the hæmoglobin has been shed by solution or pressure. That author considers the corpuscle in question as the key to a theory of coagulation similar in most respects to that of Schmidt; and Bizzozero ascribes a similar part to his corpuscle. Hayem describes the part played by his hæmatoblast (first described by him in 1875) in the arrest of hæmorrhage. But the most comprehensive publication of the year on this subject is that of Schmidt, in which he sums up the results obtained in his laboratory during the last few years concerning the problem of coagulation of fibrin. He states that the fibrin-ferment derived from the disintegration of leucocytes, which is produced in large quantities in shed blood, also exists in small quantities in the circulating fluid, as an intermediate product which is destroyed in the organism. After discussing its variations, under such conditions as may be termed normal, he develops his views upon the more interesting question of its pathological variations and concludes that "there are changes of the blood in which the physiological decomposition of leucocytes reaches an intensity beyond the normal; the products of this decomposition, including the fibrin-ferment, accumulate in the blood; the percentage of fibrin diminishes, the temperature rises, the blood becomes exhausted of white corpuscles; these changes supervene when putrid liquids or hæmoglobin in solution or distilled water are brought into direct contact with the blood." Malassez has studied the hæmatopoietic function of the spleen and bone-marrow, for the purpose of determining the origin and transformation of Neumann's embryonic cells; he concludes that they originate from hyaline leucocytes, and that they give rise to non-nucleated red cells by a process of gemmation.

Professor Schäfer has turned his attention to a theory based on analogy only, yet supported by the names of good authorities, that, because the white blood-corpuscle resembles the amœba in its property of seizing minute particles with which it comes into contact, and retaining them for an indefinite time within its protoplasm, that kind of corpuscle must also possess, like the amœba, the power of digesting organic substances which may thus be included within it. Schäfer's experiments led him to conclude that this hypothesis rests on an entirely insufficient basis of fact; he observed organic particles remaining for hours, or even for days, imbedded in the protoplasm of white corpuscles, but in no case did any such particle entirely disappear by solution within the corpuscle. Since the fluid part of the blood contains, in solution, all the elements necessary for the nutrition of a white corpuscle, its alleged powers of digestion would be superfluous.

Turning from the blood to the organ that propels it, we may notice Martin and Sedgwick's observations in the *Journal of Anatomy and Physiology* on the mean pressure, and the characters of the pulse-wave of the coronary arteries. Judging from a superficial examination of the parts, it has long been supposed that during a contraction of the heart, the aortic valves, pressed against the sinuses of Valsalva by the power of the current of blood rushing into the arterial system, must necessarily close the orifices of the coronary arteries; so that those vessels, unlike any other artery, must needs be filled during diastole. Experiment disproves this doctrine, for the pressure-waves in the carotid and coronary vessels, as indicated by cardiographic tracings, were found by Martin and Sedgwick to be synchronous, both in normal and in disturbed states of the circulation. Dr. Donald Macalister, continuing the researches of Ludwig and Hesse, has embodied in a lecture recently published in our columns, an interesting series of observations

on the form and mechanism of the heart. Among the many points of interest in Dr. Macalister's discourse, is the evidence he brings forward to show that the length of the ventricle does not alter as the heart contracts, and that the systolic form is derived from the diastolic by diminution of the heart's transverse section, in every transverse plane of that organ, whether towards base or apex, without any change in its vertical measurement. This diminution in transverse diameter involves contraction of the muscular walls around the auriculo-ventricular orifices, diminishing the calibre of those orifices, and thereby aiding the valves in preventing regurgitation. In a healthy heart, the muscular walls co-operate with the valves for this purpose; when, however, the ventricular walls are weakened and dilated, regurgitation occurs during systole, not because the auriculo-ventricular orifice with its ring of tough fibrous tissue is dilated, but because that orifice cannot be sufficiently contracted, owing to the weakness of the muscular walls. The arterial orifices are not affected by this transverse contraction of the heart. The papillary muscles do not extend higher than the middle third of the ventricular cavity. When, at the height of systole, these structures are all in contact, there yet remains a free space under the valves. The great anterior segment of the mitral valve is not merely a partition between the orifice of the aorta and the orifice of the auricle; it is continued upwards beyond the fibrous valve-ring to form the posterior membranous portion of the root of the aorta. The space in the ventricle above the papillæ is thus shut off towards the auricle, and left open towards the aorta by this pendent continuation of the aortic wall, the flap of the mitral valve. The blood-stream strikes against the ventricular side of the partition and of the auricular opening, at the same time swelling out the root of the aorta, making it continuous with the suprapapillary space, and leaving the outgoing path unobstructed. The mechanism of the right side of the heart is similar, but Macalister shows, from pathological evidence, that the left ventricle naturally does some of the work of the right, and can do almost all in certain diseased conditions. As the new doctrine teaches that the auriculo-ventricular orifices are contracted during the ventricular contraction, so, by converse laws, we are shown that the same orifices are dilated, and their valves on the stretch, instead of being loosely pendent, during diastole.

Dr. Gaskell's researches show, among many other points of interest, that excitation of the vagus produces marked effects upon the force of contractions, both of auricle and ventricle, independent of any alteration of rhythm. These effects vary with the intensity of stimulation, and, presumably, with the nutritive condition of the heart, and show themselves as a diminution or arrest of contractions, followed by increase, or as an immediate increase in the strength of contractions. Gaskell concludes that the varying effects of vagus action upon the cardiac muscle, depends upon the nutritive state of the latter. It appears, however, that he also discovers in these opposite effects the existence of two kind of nerve-fibres in the cardiac vagus, the one affecting the force of contraction, the other the rate of its rhythm, and that the heart contains two kinds of peripheral centres, the one motor, the other trophic, both subject to the influence of the vagus. Heidenhain, who has since published results which correspond in many points with those of Gaskell, concludes that the vagus contains cardiac fibres, which effect diminution in the strength and in the frequency of contraction, increase of diastolic relaxation, and other fibres which bring about the opposite effects, viz., increase in the strength and frequency of contraction, diminution of diastolic relaxation. Papers on the same subject have also been published by Rossbach, Schiff, Luchsinger, and Löwitt. Roy has successfully employed, for measuring the action of the mammalian heart, a vigorously exact method, by which he demonstrates that nervous action, excited by direct or reflex stimulation, immediately affects the strength of contraction of both auricle and ventricle. By the same method, he shows that there is no wave of contraction in the mammalian ventricle, which, unlike that of the frog or tortoise, contracts *en masse* at the same instant. Various deductions as to the physiology of the mammalian heart, drawn from experiments upon the hearts of cold blooded animals, are thereby invalidated. Newell Martin has succeeded in isolating the mammalian heart, and maintaining its contractions by an artificial circulation of defibrinated blood. He finds that variations of arterial pressure do not affect the frequency of its contractions, but that the temperature of the blood greatly influences the beat, so much so indeed that its frequency constitutes almost a thermometric scale. Working under his auspices, Sewell and Donaldson, in confirmation of the previous results of Ludwig and Luchsinger, found that increased intracardiac pressure weakens or abolishes the cardio-inhibitory action of the vagus. They demonstrated this only for the frog, and did not succeed in demonstrating it upon the mammalian heart. The effect of intracardiac pressure has also been studied

by Dastre on the hearts of the frog and tortoise. He satisfied himself that internal pressure is an excitant of the cardiac muscle. Quite recently, also, it has been studied incidentally by Engelmann, whose experiments are related in a paper which we have not yet been able to analyse. Measurements of the normal variation of the length of systole with different pulse-frequencies have been published by Chapman and by Waller, from which it appears that systole of the human heart increases or diminishes by about one-fiftieth of a second for each increment or decrement of ten beats in the pulse-frequency per minute. Ziemssen has been favoured, with an exceptional opportunity of observing the action of electricity upon the mammalian heart, in the case of a woman from whom a large portion of the chest-wall had been removed by operation. He found that the galvanic current is far more efficacious than the induced, during the application of which no change of rhythm was observable, even with very strong currents. Each make or reversal of the constant current produced a contraction, the galvanic formula being similar to that of motor nerve or muscle; by interruptions 120 to 180 times per minute a corresponding pulse-frequency could be substituted for the normal; during the flow of an uninterrupted current the frequency was increased as much as threefold. He also observed that compression of the organ gave rise to a bigeminal rhythm. The frog's heart continues to be a favourite object of study by physiological pharmacologists. Sydney Ringer has this year used it for the investigation of the effects of soda, ammonia, potash, and of the various constituents of the blood. One of the most interesting points which he brings out, is the efficacy of potassium salts in restoring to its normal duration a systole prolonged by various causes. On the physiology of the peripheral vessels and of their vasomotor control, perhaps the most noteworthy publication of the year is that of Dastre and Morat, in which they give a full account of their experiments on the dilator function of the sympathetic. They have proved beyond doubt that, in addition to its well-known vaso-constrictor action, the cervical sympathetic contains elements which convey dilator influence to certain vascular districts of the head. Lewaschew has given us the account of a laborious investigation of the part played by each of the several nerves of the lower extremity in the cutaneous vaso-motor control, from which it appears that all the nerves of the limb contain vaso-motor elements; the vessels of a given district are innervated through those nerves which contain the sensory and other fibres of these parts. Openchowski comes to the conclusion that the pulmonary vessels are destitute of vasomotor nerves, whereas François Franck takes these nerves for granted. The last named author has this year studied the venous circulation, and relates an interesting experiment in which tricuspid incompetence is produced during excitation of the vagus, presumably by a relaxing or "antitonic" action on the cardiac muscle. The venous circulation has also been studied by Riegel, who clearly brings out the distinction between the normal jugular pulse of auricular systolic rhythm and the abnormal jugular pulse of ventricular systolic rhythm which is a sign of tricuspid reflux.

Among the labours of anatomists and physiologists in the province of the digestive system, we may say that Lesshaft's strange theory, on the vertical position of the stomach, has been entirely set aside by the observations of his opponents, since the date of the International Congress in London, when his paper was read, and was violently assailed by His and Kolliker. Studies on gastric digestion form a prominent feature in the past year. Dr. De Pietra Santa has been led by experiment to consider gastric juice as composed of an organic fatty acid, an albuminoid body (pepsin), which has the power of dissolving the fibrine of blood, and another form of albumen, which has not that property, but is combined as a sodium-salt with pepsin. Professor Leube, of Erlangen, has found that cane-sugar is converted into grape-sugar by the gastric juice—the latter sugar being, in health, rapidly absorbed into the vessels after this process. He filled a hollow sound with a solution of cane-sugar and gastric juice, and retained it for half an hour in a stomach, containing a solution of cane-sugar swallowed by the subject. When the sound was withdrawn, its contents (protected from absorption) were found to be charged with grape-sugar; whilst no sugar of either kind could be detected in the contents of the stomach, pumped out at the same time. Still more remarkable are Dr. Matthew Hay's researches on the origin and distribution of the cane-sugar ferment in animals. Dr. Hay has found that the cane-sugar ferment is, like other digestive ferments of the animal body, a product of glands within the body. It is entirely confined to the mucous entericus and the mucous membrane of the small intestine; and, as a disproof of the very reasonable objection, that the cane-sugar might have been introduced in food, Dr. Hay has found it as abundantly in the *fœtus* of man and the cat as in adults.

Dr. Hay has also made some remarkable researches on the absorption of certain salts from the alimentary canal. When sulphate of

soda was administered in purgative doses to fasting cats, it at first appeared that, within an hour, half the salt was absorbed from the alimentary canal; whilst, during the next hour, the absorbed salt returned to the canal. Additional experiments showed that it was the acid, and not the base, that was so largely absorbed during the first hour; in the case of sulphate of magnesia, the absorption of the acid, and its return to the canal, was very marked. Experiments with phosphate of soda did not yield the same results. The remarkable disintegration of the acid and base, in the case of sulphate of magnesia, explains how large a dose of the salt may be safely swallowed in solution, whilst but a fraction of that solution proves poisonous when injected into the veins. The basic or toxic part of the salt, separated from its acid, enters the blood very gradually, and not more rapidly than it can be excreted by the kidneys. This disintegration of mineral salts is clearly a subject of physiological importance before all therapeutical considerations. Dr. J. J. Charles of Cork has continued the researches of Pfäfer, Bogoljubow, and others, on the gases of the bile. His experiments confirm previous theories which indicated that free oxygen is absent, and carbonic acid present, in that secretion. Bile direct from the liver is generally richer in carbonic acid than bile taken from the gall-bladder. One interesting fact that may cover important but unrecognized truths in relation to the chemistry of digestion, is the large amount of carbonic acid found in the fresh bile of herbivorous animals, compared with the proportion of the same gas in the same secretion taken fresh from the liver of the carnivora. Owing to the difficulties attending any experiments for testing the alkalinity of the blood, and the variability of the degree of alkaline reaction in fresh blood, any proof of the natural corollary deduced from the above discovery—namely, that the blood is more alkaline in the herbivora than in the carnivora—becomes a matter of considerable difficulty. Dr. McGregor-Robertson has confirmed certain observations made by Falk and Meltzer on the mechanism and innervation of deglutition. In summarising the results of his labours, he states that deglutition is effected by the quick contraction of striated muscles, a draught of water reaching the stomach even before the peristalsis appears. The glosso-pharyngeal nerve exercises an inhibitory influence on deglutition. Movements of deglutition appear to increase the activity of the heart by restraining the action of the vagus; they also inhibit the action of the vaso-motor centre. The conclusion most easily verified by experiment, but not thoroughly explicable, at least in our limited space, is that the movements of deglutition diminish the need of respiration. If, it is pointed out, a man hold his breath as long as possible, till the desire to breathe becomes almost irresistible, and then, without having drawn breath, proceed to drink a glass of water, he will find that all desire to breathe passes completely away during deglutition, though, as soon as the swallowing is stopped, a prolonged and deep inspiration follows. Other phenomena are observed, but we must refer the reader to the sixteenth volume of the *Journal of Anatomy and Physiology* for fuller details.

Nothnagel has published observations on the intestinal movements that are of practical interest. We are informed from these that though, as Engelmann stated, antiperistalsis may take place, yet it never does so normally, but only under pathological conditions, as when the intestines contain irritant matter. Morphia in small doses arrests the intestinal movements, such as are excited by chloride of sodium; whereas large doses fail to produce that effect. Langley's researches point to the general conclusion that the ferments secreted by the glands of any one section of the alimentary canal are destroyed by the secretion of the succeeding section, viz.: the amylolytic ferment by the gastric juice, the proteolytic and rennet ferments by the pancreatic and intestinal fluids. He has also prosecuted his investigation of the microscopic changes that take place in the peptic cells during digestion, and finds that the fresh glands contain little or no pepsin, but a large quantity of pepsinogen, which is secreted within the cells in the form of granules; during digestion, this granular substance is so used up as to give rise to an outer non-granular and an inner-granular zone in the chief cells.

Dr. Roy has added some very valuable contributions to our knowledge of the spleen. The circulation in that organ has a rhythmical rise and fall, each lasting about a minute, the diastole being longer than the systole. The force which impels the blood through the organ is not that of the blood-pressure in the arteries, the pulsation being carried a distance of at least an inch, before the contraction of the muscles contained in the capsule and trabeculae of the organ. This muscular element in the spleen has long been recognized, and, for almost as long a period, has been suspected of serving some important physiological purpose. Senator, after observation and comparison of all the older and newer theories on the subject, confirms the established doctrine that the Malpighian tufts in the kidney perform the simple filtration process in the secretion of urine; the

glandular epithelium separating the solid constituents of that fluid from the blood. He does not believe that the epithelium covering the Malpighian tuft can perform the secreting work of the lining of the tubules.

The function of the bladder has been carefully investigated by Mosso and Pellacani on animals and on man by means of records of vesical tension. They show that on man any psychical act or sensory excitation is accompanied by a vesical contraction. The organ reacts like the blood-vessels to the various conditions which excite vasomotor and respiratory effects. Prévost has made experiments on the effects of subcutaneous injections of corrosive sublimate, from which it appears that, after a course of such injections, osseous tissues become atrophic, and the kidneys blacked by calcareous matter.

Electro-physiology has not stood still. Burdon-Sanderson has fortified his position to the effect that the electro-motive changes which accompany the movements of the leaf of *Dionæa* are truly physiological, the analogue of the changes which accompany muscular movement. Setschenow has investigated the medulla oblongata as to its states of activity, by means of its electro-motive properties, using for the purpose its "surface-section" current. He finds that this current undergoes negative variations, which are the electrical symptoms of corresponding spontaneous nervous discharges. He finds that sensory stimuli, such as excitation of the sciatic nerve, have an inhibitory effect upon these discharges analogous with the action of the vagus upon the heart's beat.

Waller and de Watteville have studied the alterations of excitability in the motor and sensory nerves of man, in a series of experiments which have been such as to remove from our minds any fear of evil results from intense or prolonged electrical applications to healthy nerve or muscle. Their results are in the main consonant with the classical doctrine of Pflüger, derived from the study of "nerve-muscle preparations;" viz., excitability is augmented during cathodic, diminished during anodic influence; after cathodic influence, excitability is at first diminished, subsequently increased; after anodic influence it is immediately increased, that is to say, after a period of about one twenty-fifth of a second, during which the anelectrotonic depression persists, and which accounts for the long latency of the break contraction.

Hermann dismisses an error, current upon Du Bois-Reymond's authority, to the effect that the skin of fishes is devoid of electrical currents. He has improved the rheotonic contact by using brushes of fine wires, a device which is, in miniature, that used for dynamo-electric machines.

Many thousand "nerve-muscle preparations" have been made and used during the year by the ever-zealous investigators of the mechanism of neuro-muscular action. Of the papers on this subject, that of Grützner is perhaps the most noteworthy, since it puts us in possession of a principle (yet to be endorsed by others) by which many anomalies can be explained. The principle developed by him is, that the excitability of nerve or muscle is always greater to currents in the same direction as the "current of rest" than to currents in the opposite direction; in other words the current of rest produces an electrotonic increase and decrease of excitability at its points of entrance and exit respectively when these points are connected by a metallic circuit. This principle affords an acceptable alternative in explanation of the facts observed two years ago by Biedermann and by Engelmann relating to the excitability of injured muscle, and if, as is highly probable, it should turn out to be correct, we shall be spared the necessity of following many of the complex considerations in which Stricker and von Fleischl engage us by the painstaking researches which they have recently published. The last named physiologist has invented a circular rheonome, by means of which a succession of currents can be derived of equal rapidity, duration, and intensity alternately in opposite directions. Sewall finds that a minimal excitation is increased in the neighbourhood of the cathode of a simultaneously made subminimal induction current, diminished in the neighbourhood of the anode of the same. Yeo and Cash find that the muscular latency is increased in a definite ratio by weight, that it is unaffected by curare, that it is increased by fatigue or cold, and that it is diminished with strong stimuli or warmth. Bernstein, from comparison of the latency of muscle directly excited with that of muscle excited by its nerve, obtains a difference of 0.003", which he considers as the physiological proof of the existence of an organ of intermediation (the end-plate) between nerve and muscle. The usual amount of philosophical speculation, but not much precise work, has been done during the year on the central nervous system, with the exception of Bevan Lewis's thorough elaboration of the best methods of investigating the structure of the brain. His labours constitute a definite basis of reference for all future investigators, and fully uphold the reputation of the West Riding Asylum. To Birge's work

in the Leipzig laboratory we owe some useful data. He has carried through a series of laborious enumerations of the cells and nerve fibres contained in the cerebro-spinal axis and nerve-roots of the frog; from which it appears that the number of sensory fibres is greater than that of motor fibres, and that the number of motor fibres is equal to that of the large cells (motor) of the anterior horns, i.e., that each cell has one fibre in connection with it. Setschenow's experiments on the medulla oblongata have been already referred to. On the physiology of the special senses, the most considerable publication of the year is that of V. Kries on the analysis of sight. We have not space, however, to do more than mention this paper.

We have now mentioned in a cursory manner most of the new anatomical and physiological work during the past year that has left any impression upon us. We have given that impression *currente calamo*, in preference to passing the whole literature of the year through a fine sieve, and we cannot pretend to have noticed everything noteworthy. Indeed, had we done so we should also have encumbered our pages with much that may prove to be relatively insignificant. Nor should we have known where to limit our task, which is rendered still more difficult by the impossibility of assigning the limits of physiology itself. Physiological science is composed of the measured and compared knowledge of vital functions under all conditions; to watch its progress is to watch the amount of all manifestations of vital dynamics, accidentally as well as intentionally provoked, that are from time to time introduced into the field of science.

In conclusion, it may be noted, that the recently invented contrivances for the photographing of animals and objects in motion may some day prove of great practical value when applied to biological experiments; and we must not omit all reference to the contortionist, who, in the course of this past year, excited the attention of British surgeons interested in disputed points regarding the deformities produced in different forms of dislocation.

PATHOLOGY.

FIRST in importance among the pathological work of the year we must place the splendid series of researches by Koch (*Berliner klin. Woch.* April 10, 1882) on the tubercle bacillus. Whatever may be the ultimate conclusion as to the pathogenic value of this organism, there can be only one opinion of the exhaustive and admirably planned experiments upon which Koch has based his conclusions. A microscopic organism in tubercle had been previously described by Klebs (*monas tuberculosus*), and Eklund (*micrococcus phthisis dryotemenos*), and almost simultaneously with Koch's paper, Baumgarten published a fresh description (*Cent. für die Wiss.* April 11th, 1882). Since that time Koch's method of demonstrating the bacilli has been improved upon by Ehrlich and Heneage Gibbes, the method of the latter being especially trustworthy in its results. Birch-Hirschfeld (*Centralblatt für die Med. Wiss.*, 1882, No. 33) has found bacilli in freshly excised condylomata from syphilitic patients; Rebatel (*Lyon Méd.*, January 8th, 1882) completely failed to transmit either of the specific venereal poisons to the lower animals. Eklund has discovered (*Nord. Med. Arkiv.*) the *plax scindens* in the urine of scarlatinal patients. Richard has described (*Comptus Rendus*) the *bacillus malariae*, which has its habitat in the red blood-corpuscle. Rossbach (*Cent. für die Med. Wiss.*, 1882, No. 5) found that injection of a chemical ferment, free from bacteria, such as papayotin, is followed by a rapid development of bacteria in the blood. Dr. Ernst Almqvist (*Nord. Med. Arkiv.*) has succeeded in cultivating the pathogenic organism of typhoid fever, and produced swelling of Peyer's patches in a dog by inoculation. Weigert (*Virchow's Archiv*, May, 1882) has described tubercle on the inner wall of veins, and points out the importance of this in the generalisation of tuberculosis. Faraday (*British Assoc.* 1882) suggests that in badly ventilated rooms the want of oxygen favours the development of the tubercle bacillus out of innocent forms of bacteria.

Guelliot (*Union Méd.*, January 10th, 1882) and Weber (*Boston Med. and Surg. Journal*, January 19th, 1882) have related cases of locomotor ataxia occurring in workers with sewing machines. Lasègue (*Journ. de Méd. et de Chir.*, March 1882) draws attention to the attacks of syncope, apoplexy followed by transient hemiplegia, and patches of anaesthesia occurring in diabetic patients. Déjerine (*Le Prog. Méd.*, 1882, No. 6) has found parenchymatous neuritis in gangrene of nervous origin. Luys (*L'Encephale*, May 1882) reports four cases of diabetes in which he has found alterations in the floor of the fourth ventricle, near the diabetic puncture. Gibney (*American Journal of Neurology*, 1882, No. 2) has published two cases of intermittent spinal paralysis of malarial origin. Long Fox, in the Bradshawe Lecture on the Influence of the Sympathetic on Disease, gives an admirable account of this department of pathology. Wood and Formad

on Diphtheria, National Board of Health Report, 1882, Supplement No. 17) believe that they have proved that the micrococci of simple catarrh may, under favourable circumstances, develop into organisms capable of giving rise to malignant sore throat. Strauss (*Le Progrès Méd.*, No. 5, 1882) has found that antiseptic ligature of the ureter is followed by hydronephrosis, and not by nephritis. Ter-Grigorianz publishes a case of hemialbumosuria (*Zeitschr. für Phys. Chemie*, Bd. 6, Heft 6) during acute dermatitis from mercurial inunction. Max Litten (*Zeit. für Klin. Med.*, Bd. 4, p. 191) relates two cases of mycotic renal disease. Brose (*Philadelphia Medical Times*, March 11th, 1882) has given an excellent account of the histological changes in Bright's disease. Goodhart (*Path. Soc. of London*, February 7th, 1882) and others have observed all the phenomena of Addison's disease, with simple wasting of the suprarenal capsules. Hlawka and Thomayer (*Wiener Med. Woch.*, No. 39) found a small celled infiltration round the entrance of the vessels of Malpighian bodies in all cases of uræmia. Kehrer (*Archiv. für Gynäkologie*, 1882) found, by experiment, that it is impossible to cause hydronephrosis by any mechanical change in the position of the kidney. Osler (*Journ. of Anat.*, Bd. 2, p. 208) has recorded a remarkable case of obliteration of the portal vein of an adult. Hjelt (*Nord. Med. Arkiv*, Bd. xiii, Heft 4) describes a form of circumscribed sclerosis of the heart. Saundby and Barling (*Journal of Anatomy and Physiology*, vol. xvi) have shown that fat emboli are found in capillaries of the lung in all cases of injury of the bones or soft parts, but that the lipæmia met with in diabetes does not cause true embolism. Potain (*Le Prog. Méd.*, 1882, No. 40) believes he has observed cases of cardiac hypertrophy of neuralgic origin. Bendall (*Pathological Society of London*, February 7th, 1882) has described the lesions in acute farcy in man, and draws attention to the fat-embolism present. Senator (*Berliner Klin. Woch.*, September, 1882) has recorded two cases of leukæmia in children aged 18 months. Bovell-Sturge (*Nice Méd.*, February, 1882) has described a case of complete excavation of the lung. Warner (*Ophthalmological Society*, October 12th, 1882) has recorded a case of general military tuberculosis, with tubercle in the choroid, without meningitis.

RESEARCHES ON MICROSCOPIC ORGANISMS.

In the department of mycology, the great event of the year has been the discovery of the bacillus of tubercle by Baumgarten and Koch, and the demonstration by the latter of the close connection between the organism and the diseased processes in which it is present. What the precise relation of this organism may be to phthisis, scrofula, gelatinous degeneration of synovial membranes, and lupus, is a matter for future investigation; but that it stands in a causal relation to the diseases generally grouped under the heading of tubercular diseases seems clear from the results of Koch's cultivation experiments. The discovery of this organism and its cultivation will, no doubt, soon be followed by researches as to its destruction; and we may confidently look forward to a great improvement in our treatment of phthisis before many years have elapsed. Even now, a great diagnostic aid has been given us in the demonstration of these bacilli in the sputum of patients suffering from tubercular disease of the lungs, even in a very early stage. This was at first somewhat difficult to do with the mode of staining originally employed by Dr. Koch; but the method introduced by Ehrlich has rendered it easy and certain. While we write, the news arrives that the cause of glanders has been discovered in the form of a micro-organism by workers in Dr. Koch's laboratory; and, from what we know of Dr. Koch's work, we may feel satisfied as to the care and accuracy of observations made under his direction. But, while there is at present no more fertile or useful field of research than that of the relation of microphytes to disease, the fear is that, by the publication of imperfect researches by those desirous of making a name, a great amount of erroneous and contradictory investigations may be associated which will delay the progress of knowledge for years. A striking example of the absurd conclusions which may be drawn from one or two ill-conceived experiments will be found in *L'Union Médicale* for September 7th, 1882, in an investigation by Messrs. Martineau and Hamon on the bacterium of syphilis. Further researches have been carried on with regard to the immunity from disease conferred by the methods of inoculation introduced by Pasteur and others; and we published, some time ago, the conclusions of Dr. L. J. L. The hopes which were raised by these investigations seem to have been much damped by experience; for it is found that, with the exception of sheep, and, perhaps, of cattle, other animals are not at all, or only with great difficulty, rendered immune; while a larger proportion seem to die from the vaccinations than succumb to the disease naturally. The tendency seems to be now to cease inoculating for this disease till some safer

and more certain means has been devised; but we may point out that this is hardly the conclusion which the facts warrant. Let us say, for example, that over all England only five per cent. of the sheep die from splenic fever, while ten per cent. would die from inoculation, we naturally conclude that it would be wrong to inoculate all the sheep in England to protect them from the chance of getting splenic fever. But this disease tends to occur in particular localities and on particular farms; and there the percentage of deaths is enormously greater—say, thirty, forty, or even more per cent. In such a locality, there would be a great gain from protective inoculation, even at the sacrifice of ten, or, as some put it, of thirteen per cent. in procuring immunity. In the *Journal of Anatomy and Physiology*, Dr. Ogston has written a paper on micrococcus-poisoning, in continuation of the report on micrococci in abscesses, which we published in 1881. He there ascribes all acute abscesses and acute suppurations to the action of these organisms; and he brings forward many arguments in support of his view that pyæmia and septicæmia are only aggravated forms of the same infection.

PROGRESS OF SURGERY DURING 1882.

IN discussing the chief advances in surgery during the year, we have to point out, in the first place, the results of certain bold operations that have been performed, mostly under antiseptic conditions, on the walls and contents of the large cavities of the body. Although surgeons have not yet applied, to any great extent, in the treatment of head-injuries, such knowledge as has lately been gained through the researches of Hitzig, Ferrier, and Broca, much enterprise has been shown in the extension of operative treatment to other important regions, more especially those of the abdomen and pelvis. There can be no doubt that the importance of what is now known as the department of "abdominal surgery" has increased very much in extent and importance during the year. A prominent place amongst the many contributions to this subject is occupied by the suggestive article, published in this JOURNAL, by Dr. Marion Sims, on the treatment of gunshot-wounds of the abdomen in relation to modern peritoneal surgery. In this communication, it was argued, with much force, that death after penetrating wounds of the peritoneal sac, and after ovariotomy and other operations on abdominal organs, is usually the result of septicæmia, and not of peritonitis; and that the septicæmia in such cases is due to the absorption of bloody serum and other effusions found in the peritoneal cavity soon after wounds or operations. Dr. Sims insists on the necessity of removing such effusions; and states that, where there is no natural drainage, as in cases of gunshot-wound of the pelvic cavity, it is necessary to enlarge the abdominal wound, to clear out the peritoneal cavity, and to close wounded intestine and bleeding vessels. An example of the good results of so bold a proceeding as abdominal section in an affection of non-traumatic origin was given during the year by Schmidt of Moscow, who, in a case of purulent peritonitis, incised the abdominal wall from umbilicus to symphysis, removed the effusion, and drained the peritoneal cavity. The patient, a man aged twenty-one, was, it is stated, quite well two months after the date of operation.

Resection of the pyloric end of the stomach has, it seems, been extensively practised, as we have collected no fewer than thirteen instances of this operation recorded during the year. One of these cases has been reported by Mr. Southam of Manchester, and the operation has quite recently been performed by Mr. Sydney Jones. In eleven of the cases, the gastric disease thus treated was of a malignant character. The result was fatal in nine of these cases, the history of such result, in most instances, having been speedy death through shock. Of the two cases in which the operation was performed for non-cancerous disease, one recorded by Rydygier, of gastric ulceration, resulted in complete success; whilst the other, one of dilatation of the stomach, under the care of Hahn, terminated fatally on the eighth day. If it be considered that, in the many fatal instances of resection of cancer of the pylorus, there is the common record of intense shock and speedy death after a prolonged and tedious operation on a cachectic subject, necessitating the application of many ligatures to bleeding vessels, it may fairly be doubted whether this operation will be long recognised as a justifiable one for the treatment of malignant disease.

With regard to resection of portions of diseased intestine, the progress is much brighter, as a decided advance has of late been made in this branch of operative surgery, mainly through the efforts of surgeons in this country. Mr. John Marshall, in commenting on a case of colectomy early in the year, expressed his opinion that this operation, though not to be rashly undertaken, bids fair to take a place in surgery. Mr. Bryant, on the ground that, in chronic intestinal obstruction, the seat of the structure in three out of every four cases is

seated in the descending colon, argued, in a communication to the Royal Medical and Chirurgical Society, that lumbar colectomy demanded the consideration of the profession. In a paper on resections of portions of intestine, read before the same Society by Mr. Treves of the London Hospital, early in this month, after an allusion had been made to the remarkable case of Kœberlé, in which more than two yards of ileum had been excised with success, resection of diseased intestine, both small and large, was advocated under certain conditions clearly laid down by the author. Whilst Mr. Marshall advocates an incision through the abdominal wall, as close as possible to the seat of intestinal disease, and Mr. Bryant is in favour only of lumbar colectomy, and both these surgeons aim at forming an artificial anus, Mr. Treves holds to an incision in the middle line of the abdomen, and would attempt, in dealing either with small intestine or with colon, to bring the divided portions together, and to fix these by sutures. This surgeon, in order to obviate those faults in the details of the operation which have hitherto rendered enterorraphy so fatal, has devised several ingenious appliances and aids, which he has already used in one case of malignant tumour of colon, in which the operation of resection was very probably performed at too late a stage.

In a recent discussion by members of the Clinical Society of papers communicated by Mr. Godlee and Mr. G. Brown, the value of early surgical interference in cases of intussusception was fully confirmed. By most surgeons who have had much experience of these cases, it is now held that inflation and injection are indicated when the symptoms are not very severe, and that early abdominal section in the middle line affords the best chances of recovery in instances of severe and acute strangulated intussusception. It was pointed out, in the course of this discussion, that, as a rule, children are fairly tolerant of such treatment, and bear abdominal section well. In order that surgeons may overcome the unfortunate complication of firm incarceration, so frequently met with in cases of intussusception submitted to operation, and well exemplified in the instance reported by Mr. G. Brown, it has been suggested by Mr. Howse that the affected portion of the intestinal tract might be excised, and the two ends of the divided intestine be brought together, and retained by sutures.

In the course of the year, some attention has been paid to the subject of splenotomy. In March, Mr. Warrington Haward communicated to the Clinical Society a case in which he had removed an hypertrophied spleen. The patient, a female, aged 49, had suffered much from the dragging weight of the tumour, and had not presented any of the general symptoms usually accompanying leucocythæmia. The enlarged spleen was found to be quite free from adhesions, and the operation was performed with antiseptic precautions. The patient suddenly became collapsed during the operation, and died after an interval of seven hours. Mr. Haward's comments on this case, together with an able article by Dr. Herbert Collier, and more recent contributions on the subject by Zesas and Crédé, seem to have exhausted the subject of the indications and prospects under different conditions of removal of the human spleen.

Among the many contributions that have of late been made in the department of peritoneal surgery, we would point out a case, we believe, unique, in which Bozeman removed a large cyst connected with the pancreas; a report by Mikulicz on Billroth's cases of gastric resection, read before the Congress of German Surgeons; and a paper by Dr. Victor Wehr, on experimental researches on abdominal wounding. Operations on the kidney have met, during this year, with encouraging if not invariably brilliant results, and nephrectomy has stood not only in no discredit, but has been repeatedly performed, and is now advocated even in cases of unilateral strumous disease of the kidney, both in communications to the Clinical Societies and in special contributions to this JOURNAL, and was in one instance, in the practice of Mr. J. E. Adams, performed for the removal of a carcinomatous kidney, the patient surviving for forty-four days. Similar operations by other surgeons were either successful or, if they advanced less nearly towards perfect success, they, at least, did not fail to prove that nephrectomy may save life under desperate conditions. The treatment of rupture of the bladder has been fully discussed since the beginning of the year by Fischer, Rivington, Stein, and other surgeons. Although, as we believe, no further instance of the performance of laparotomy for this lesion has been recorded since 1876, when Mr. A. Willett and Mr. Christopher Heath practised this mode of treatment, the operation seems to be regarded with much favour. Dr. A. W. Stein of Brooklyn, in one of the most recent contributions on the subject of vesical injuries, advocates this treatment in cases of intraperitoneal laceration of the bladder, as it alone permits thorough cleansing of the peritoneal cavity, and accurate closure of the vesical wound. The chief points of interest in connection with disease of the urinary organs, have been the steady advance in favour of Bigelow's operation, both in this country and

abroad, and the question as to whether or not special instruments are needed for the removal of a vesical calculus at a single sitting. In the last published volume of the *Medico-Chirurgical Transactions*, a case is recorded of successful removal of fibrous tumour from the bladder by Mr. Berkeley Hill, and also a case of removal by Mr. Reginald Harrison, during lithotomy, of a tumour of the prostate. Sir Henry Thompson has likewise contributed, through the medium of the Royal Medical and Chirurgical Society, the results of his experience in operative treatment for tumours of the bladder. Incisions through the thoracic wall into diseased lung have recently been advocated by Dr. Bull of Christiania, and Drs. Fenger and Hollister of Chicago. The cases in which such treatment is supposed to be indicated, are those of circumscribed gangrenous foci in lung tissue, of pulmonary abscess, and of phthisical and bronchiectatic cavities. Ever threatening septic poisoning through decomposition of the contents of such cavities may, it is thought, be best obviated by establishing a free opening for the secreted fluid, and by constant drainage and disinfection. Extensive resection of portions of the osseous wall of the thorax—the so-called thoraco-plastic operation of Estlander—has lately been recommended by Dr. Fenger and by Dr. Bruglocher of Schabach, as a valuable final step in the treatment of long standing empyema, and in cases in which closure of the pleural cavity has failed to be established, notwithstanding the existence of a free outlet for the discharge of its purulent contents. That a considerable portion of the chest-wall may be removed under strict antiseptic conditions with a chance of success, even when all the contents of the thoracic cavity are in a normal and healthy condition, has been shown in the course of the year by a remarkable case, in which Kœnig of Göttingen removed the whole of a stomach affected with sarcoma. Although, during the operation in this case, the pericardium and both pleural cavities were opened, the patient recovered without any bad symptom save temporary dyspnoea. At the Worcester meeting, Mr. Noble Smith gave a most interesting demonstration on the application and use of the various orthopædic apparatus now in vogue. These demonstrations were largely attended, and excited considerable interest.

Among the most important of the contributions on the surgery of the nervous system is an able analysis by Dr. Chandler of New York, of 416 cases of nerve-stretching, which shows that this operation, though occasionally valuable in the treatment of neuralgia and some spasmodic affections, is of very questionable benefit in cases of central nervous disease. In the course of the year, Dr. W. Alexander of Liverpool has advocated deligation of the vertebral arteries for the treatment of epilepsy, and has reported cases in which this operation had apparently beneficial results. Similar treatment has been applied by this surgeon in cases of locomotor ataxy, paralysis, and choreic spasms.

At the annual meeting of the British Medical Association, Mr. W. Thomson read a very elaborate paper on "Ligation of the Innominate Artery," and gave full details of a case, in which on June 9th, he tied this vessel with Barwell's tape ligature for aneurysm of the second and third portions of the right subclavian. On the thirtieth day, after some slight suppuration in the wound, there was temporary hæmorrhage to the extent of three ounces. On July 16th, the thirty-eighth day, there was very severe hæmorrhage, and the patient then became much exhausted, and on the forty-second day, succumbed. This result was due to ulceration at the bifurcation of the innominate, at some distance from that part of the vessel to which the ligature had been applied. The coats of the innominate at the seat of constriction had not been divided, and the ligature, it was stated, had apparently done its work by gripping the vessel until a well organised clot had been formed. At the same meeting, a case was recorded by Mr. Bryant, in which a popliteal aneurysm had been successfully treated, after failure of Esmarch's bandage, by means of an artery constrictor devised by Dr. Fleet Speirs. The use of kangaroo tendon as a material for ligature and tendon, which had been previously tried in this country by Mr. Thomas Smith, Mr. Stirling, and Mr. Dent, was again advocated in March in a paper sent to the Royal Medical and Chirurgical Society by Mr. Girdlestone of Melbourne, who was, we believe, the first surgeon to use this material. The tendon ligature, Mr. Girdlestone states, has all the valuable qualities of the catgut ligature without any of its defects and, as a suture, resists the softening effects of purulent discharges for a much longer period than the suture of gut.

In the first number of the JOURNAL for this year, Mr. Hutchinson enforced the doctrine of a precancerous or simple inflammatory stage of cancer, and insisted strongly on the necessity of operating early and in this stage. Early removal of the tongue for cancer has been advocated by Mr. Hutchinson and Mr. Bryant. In a discussion at a meeting of the Clinical Society in cases on which cancerous disease of the tonsil and

mouth had been freely excised by Mr. Clement Lucas and Mr. Golding Bird, an almost general opinion was expressed in favour of the removal of all accessible affected glands as well as the primary seat of cancerous disease.

Although trials have been made of a host of other supposed antiseptic agents, of which we might mention eucalyptol, naphthaline, salicylic acid, cajuput, iodine, and corrosive sublimate, carbolic acid seems still to hold its ground. At the meeting of the British Medical Association in Worcester, Mr. Barwell detailed the results of his experience of boroglyceride in surgical practice, and alluded to cases which, in his opinion, proved this agent to be a perfectly reliable antiseptic and a promoter of the rapid healing of wounds. During the year much attention has been directed to the action of iodoform when used as a dressing; and from the reports of Schede, Kuster, Kocher, and Falksen, and from records of cases published in our Hospital columns by Mr. Stanley Boyd, there can be no doubt that this agent, whatever may be its antiseptic efficacy, is, in certain cases of idiosyncrasy, or when applied in large quantities, a dangerous and often fatal poison, causing increase of pulse, high fever, mental depression, extreme and alarming restlessness, delirium, and occasionally inflammatory disturbance of the brain and its membranes. Quite recently Fischer of Strasburg, and Anschütz of Königsberg, have reported favourably of naphthalin as an antiseptic agent, and a good substitute for iodoform. In a recent paper by Neuber on the use of certain antiseptic agents in Esmarch's surgical practice, turf-mould is recommended as a very efficient and cheap dressing. This mould is applied over wounds in bags of gauze. It is said to be soft and elastic, to be capable of taking up more fluid than jute or gauze, and to possess a great power of absorbing the products of decomposition of organic substances.

The published bulletins of the Société de Chirurgie de Paris for 1882, contain reports of interesting discussions on lumbar colotomy, on sub-peritoneal amputations and resections, and on tracheotomy.

OBSTETRICS AND GYNÆCOLOGY.

IN the department of obstetrics and gynecology, perhaps the chief advances have been in the application of some recent modes of treatment originated in America and Italy. The operations of oophorectomy, hysterotracheloraphy, and the treatment of hysteria by the Weir Mitchell system, have been more especially this year the subjects of discussion and comment among English obstetricians. An interesting paper on the treatment of hysteria by Dr. Weir Mitchell's method was read by Dr. Playfair at the meeting of the British Medical Association at Worcester. Dr. Playfair related several cases which he had treated with success, and the discussion which ensued upon the reading of his paper endorsed the views therein set forth. The removal of both ovaries to arrest the rapid growth of vascular fibroids of the uterus has now received the sanction of such eminent authorities as Dr. Robert Barnes and Professor A. R. Simpson, both of whom have successfully performed Battey's operation. Removal of the uterus for fibroid and malignant disease has become much more frequent during the past twelve months than previously; and, as far as fibroid tumours are concerned, the results have been most encouraging. Experience leans more to treatment of uterine pedicles by the clamp, than to any intraperitoneal method. Hysterotracheloraphy has slowly but surely made its way among obstetricians, and at a recent discussion at the Obstetrical Society most of those who spoke expressed themselves in favour of the operation. The amputation of the uterus and ovaries after Cesarean section, as recommended by Professor Porro, of Pavia, has, since it was first done in 1876, been preferred to the old Cesarean section, and has quite recently been successfully practised in London upon a rickety dwarf by Dr. Clement Godson. Mr. Morris rescued a pregnant woman from the great perils of labour, complicated by cancer of the cervix uteri, by performing Cesarean section; the patient had been under the care of Dr. Edis, who set a good precedent by publicly asking for an expression of opinion on the case, before the Obstetrical Society, during the earlier stage of the patient's pregnancy. The great strides which have been made in the hygienic condition of lying-in hospitals is worthy of note. It was stated by Dr. Fancourt Barnes at the discussion on Antiseptic Midwifery at the International Medical Congress, that among his patients in the British Lying-in Hospital high temperatures were now the exception, whereas formerly they were almost the rule. On many sides, corroborative evidence on this point is forthcoming.

The surgical treatment of diseases of women continues to involve the most warmly disputed questions regarding the merits and the faults of the antiseptic system. It is curious that the division between Listerians and non-Listerians is not more marked than it was a year

ago. Several experts, whose contributions cannot fail to be very familiar to our readers, have not only discarded the spray, but object to the use of carbolic acid in any form, believing that chemical substance to be absolutely noxious. Mr. Spencer Wells does not express the profoundest belief in the spray, in the new edition of his standard work, published this year; whilst, on the other hand, the strict Listerians claim the most brilliant results in their practice.

Dr. Edis, at the Worcester meeting of the British Medical Association, read a valuable and scientific essay on the treatment of menorrhagia. He pointed out the fact, frequently overlooked or misunderstood, that in young plethoric girls, whose sexual development is well marked, menstruation is not unfrequently profuse. In place of giving iron, which generally produces constipation, and thus aggravates the tendency to menorrhagia, the better plan is to regulate carefully the diet, avoiding alcohol and any undue amount of animal food; to give bromides, which lessen the ovarian irritation, together with some saline aperient, when requisite. In anæmic patients, he advised the combination of iron with salines, in moderate doses, more as a chalybeate than as a mixture. At the same meeting, a successful case of transfusion of blood, in a severe case of *post partum* hæmorrhage, was recorded by Dr. William Walter. In this instance, blood transfused was defibrinated. The apparatus used was Dr. Macdonnell's. Only four ounces of blood were injected into the patient's arm. This quantity, however, was sufficient almost immediately to restore the pulse and respiration of the patient, who was, at the time of the injection of the blood, apparently lifeless. The subject of transfusion of blood, although one of the highest importance, and although it has been the subject of investigation by a committee of the Obstetrical Society, has, by no means, yet received that amount of investigation which it demands. The case recorded by Dr. Walter is peculiarly gratifying and opportune. It is to be hoped that his example will be more generally followed by obstetricians than has hitherto been the case. It is only too certain that, if transfusion were more frequently resorted to, many lives would be saved which are now lost. The question as to the preference for mediate transfusion to immediate, or arm-to-arm transfusion, is one which can only be settled by a complete series of clinical records of both modes, so that the advantages and disadvantages of both might be seen side by side. Simplicity in the apparatus is of the first importance, and this essential is fulfilled in both Dr. Aveling's and Dr. Macdonnell's instruments. The complicated transfuser shown a few years ago, at the Obstetrical Society, by Dr. Roussel, can, we fear, never get into general use. In gynecological literature, the appearance of a new edition of Dr. Graily Hewitt's valuable treatise on the Diseases of Women has filled a gap in the more strictly mechanical department of uterine therapeutics. Dr. Graily Hewitt's eminence as a teacher, and long and extensive experience as a clinical physician, enforce respect and attention for his views, from the profession. The work has been almost entirely rewritten, and we can recommend it to the notice of all who are interested in the diagnosis and treatment of displacements, versions, and flexions of the womb. Dr. Aveling, in his history of the Chamberlens, has produced a work of great historical interest, and at the same time he has elucidated one of the vexed questions in obstetrics—the authorship of the midwifery forceps. This subject will, now, no longer be a point of dispute in text-books on midwifery.

MEDICAL REFORM.

IN respect of Medical Reform, the Profession, in conjunction with the British Medical Association, has attained a point of vantage from which it will not be possible to dislodge it. The Association has only to remain true to the principles it promulgated fifty years ago to secure their triumph. The Act of 1858, conferred on the diplomas of corporations, which previously licensed practitioners for limited districts, it might be only for a few sparsely populated countries, the privilege of practice throughout the whole of the United Kingdom. The reciprocity thus established was intended to be marked by uniformity in professional education and attainments, but the Association was defeated in its efforts to secure this advantage.

It was hoped that the General Medical Council would be able really to improve medical education, but after 25 years of existence, composed as it is mainly of representatives from the Universities and Corporations it was designed to control, it has proved altogether unequal to the task.

The Report on the Royal Commission is a new starting point in the history of medical reform. It may not be satisfactory or acceptable to all the universities and corporations, whose interests are affected by it, but as regards the strength of the Commission, and the mental power and impartiality of the great majority of the Royal Commissioners there can be but one opinion. No judicial decision of the House of

Lords or of the Privy Council could possibly carry greater weight. The universities and corporations on the one hand, and the British Medical Association and the profession on the other, have equally appeared before it as the final Court of Appeal. It now only remains to register the decree, and by the enactment of a new Medical Act, based on the Report of the Commission, to settle the vexed question of Medical Reform.

The Report of the Medical Reform Committee was unanimously adopted at the public meeting of the Association at Worcester, and in accordance with the resolution then passed, the Committee have memorialised the Lord President of the Privy Council to promote legislation on the basis of the Report.

The deputation who waited on Lord Carlingford and Mr. Mundella were very favourably received, and the Association may well be congratulated on the result of their labours.

INFECTIOUS DISEASES.

THE subject of the registration of infectious diseases, in which the Association has ever taken the warmest interest, achieved an important development during the year. The very extensive deviations that large towns were making under local Acts from the general statute law, attracted the attention of Parliament early in the session, and as a consequence, a special committee, with Mr. Slater-Brooth as chairman, was appointed by the House of Commons to consider the local Bills bearing on sanitary matters. The committee did not go so deeply into the subject as could be desired; but they were quite in accord with the views often expressed in these columns as to the need for some more effectual supervision of local legislation on health matters. As regards the notification of infectious disease more particularly, the Committee reported in favour of making such notification compulsory both on the householder and on the medical man in attendance. The profession has, however, in the most positive manner expressed its opinion against the compulsory notification by the medical man of infectious cases under his care. A special day was appointed for the discussion of this question at the Worcester meeting of the Association, and the feeling on the matter of those present was unmistakable. The whole question is one which must soon engage the practical attention of Parliament, as it is abundantly clear that, whatever difference of views may exist as to the manner of reporting, enlightened public opinion is universally in favour of compulsory notification as the only means of effectually checking the diseases that are now so rife amongst us.

A number of cases of erysipelas occurring in the practice of the Public Vaccinator of Norwich, attracted a considerable, indeed, an undue share of public attention. Acting upon what he no doubt believed to be the general feeling, Mr. Dodson ordered a public inquiry into the circumstances attending the cases; but this inquiry was ingeniously turned by the complainants into an airing ground for anti-vaccination fallacies, and the real object of the investigation became lost sight of. That eight cases of erysipelas, four of which terminated fatally, should occur within a limited period amongst the attendants at the public vaccination station is undoubtedly sufficiently lamentable. But it must be borne in mind that vaccination, like everything else, requires care in its performance; and, when grave defects of practice, such as appear to have been customary with the public vaccinator, exist, the occurrence of such a calamity as that at Norwich must be regarded as not impossible. The report of the Commissioners, Mr. Healey and Dr. Airy, has been generally condemned as weak and unsatisfactory; and it appears to have been left for Dr. Buchanan, the medical officer of the Local Government Board, to rescue his department from the indignity of a breakdown. The opportunity for a complete and searching inquiry into the circumstances of the outbreak has now unfortunately been lost; but the evidence seems strongly to favour the suspicion entertained by Dr. Buchanan, that the public vaccinator's employment for vaccinating purposes of ivory points which had been used over and over again may have occasioned the outbreak. Vaccinators are usually alive to the risks attaching to a second employment of a point once used for vaccination; but for the benefit of any who still continue so objectionable a practice, it may be laid down as a rule without exception that an ivory point once charged with vaccine lymph and put to its intended purpose is a mere waste thing fit only to be destroyed. If we except the serious typhoid epidemic at Bangor and its neighbourhood, due to the pollution of a water reservoir with the specific poison of enteric fever, there was no home epidemic which conspicuously attracted public attention during the year. Small-pox has been comparatively quiescent in the metropolis; but an extensive epidemic

is reported from the Cape, where measures of extraordinary precaution have been taken against it. The undue prevalence of typhoid ever at Paris has been the subject of many a paper and many a speculation in that city; but the reasons for its epidemic appearance do not seem to have been yet fathomed. There seemed, at one time, a possibility of the perennial question of quarantine in the Red Sea obtaining some immediate international importance; but the British campaign in Egypt has, for the present at least, again relegated the subject to the background.

The hospitals of the Metropolitan Asylums Board, and their alleged power for mischief, have monopolised a large share of the public mind. After the protracted litigation as to the Hampstead Hospital on the one hand, and the Fulham Hospital on the other, it had become apparent that the whole question must needs be investigated afresh by the light of new experiences and new knowledge. Dr. Thorne Thorne, inquiring into the use of infectious hospitals throughout the kingdom, found not a single instance in which the spread of infectious disease beyond the walls of a hospital had been demonstrated. But Mr. Power, investigating for the Local Government Board the circumstances of an exceptional outbreak of small-pox round the Fulham Hospital, could not in the end divest himself of the conclusion that "the machinery of the hospital administration, with inclusion of defects in that machinery, does not account for the peculiarity of small-pox incidence within the three parishes of Chelsea, Fulham, and Kensington, since the establishment of the hospital; and that there must have been some condition or conditions operating to produce the observed distribution of small-pox around the hospital that have pertained to the hospital as such, and that have been in excess of the conditions for small-pox extension as usually recognised." This opinion, fortified as it was by the mature judgment of the medical officer of the Local Government Board, Dr. Buchanan, was rightly felt by the Government to involve so many important considerations that a Royal Commission was appointed to inquire into the whole subject. The report of the Commission, which was published in the autumn, substantially accepts Mr. Power's report, and makes a variety of administrative suggestions that it will be the duty of those responsible for the sanitary welfare of this overgrown metropolis to weigh most carefully.

No measures of any medico-sanitary importance were carried through Parliament in its last session. The Public Health (Fruit-Pickers' Lodgings) Act (45 and 46 Vict., cap. 23) may, however, be mentioned as an attempt to give sanitary authorities, as regards fruit-pickers, the same power that they now possess as regards hop-pickers, for insuring their decent lodging and accommodation.

MEDICO-POLITICAL.

AMONG medico-political matters, perhaps the most important events of the year have been the discussions which took place on the subject of the notification of infectious disease at the annual meetings of our Association and of the Social Science Congress. Up to the beginning of this year there seemed no reason to doubt that the full sympathy of the medical profession went with those sanitarians who wished to see the compulsory powers which had been obtained by a few northern towns, extended to sanitary authorities throughout the country; but early in February meetings in connection with the two largest branches of the Association were held in Liverpool and London, at which objections were urged on various grounds to medical men being compelled to notify; and at the annual meeting at Worcester these objections were repeated and urged with such effect that, in the result, a resolution was passed approving of notification being made compulsory on the householder, but disapproving of any penal clause directed against the medical attendant. At the Social Science Congress, a resolution approving Mr. Hastings's Bill was agreed to.

In the House of Commons the representations which have been made by the Parliamentary Bills Committee, from time to time, on the subject of Corporation Private Bills containing important provisions, such as compulsory notification, being allowed to slip through without any real discussion, have at last taken effect; and a group of such Bills was this year referred to a Select Committee for consideration and report, while it was agreed that, for the future, particular attention should be called to any such provisions in Corporation Bills. There can be very little doubt that the whole subject of isolation and notification will come up for discussion in the House at an early date.

Several convictions have been recorded during the year against medical practitioners for giving death-certificates containing statements more or less false; usually these have been in cases where the deceased person had been attended by unqualified assistants at so-called dispen-

saries or branch practices. In an important case, however, heard at the Lambeth Police Court in July, where it was proved that the surgeon had seen the deceased child once and made up some medicine for it, the magistrate held that one solitary attendance did not amount to that degree of investigation and attendance on the patient, which would justify the attendant in giving the usual form of death-certificate under the Act, and convicted him of the offence charged. This decision was not appealed against; but, should a similar case occur again, it seems desirable that the soundness of this first judicial definition of what constitutes an "attendance" for the purposes of the Registration Act, should be tested in a higher court.

Unqualified practice at the East end of London was the subject of a question in the House of Commons during the early part of the Session, when the Home Secretary stated that the proper course for the hon. member who asked the question to take would be to call the attention of the Medical Council to the matter, it having power to act by the 21 and 22 Vict., and ask them to put the Act in force. It should be remembered, however, that the Royal Commission on the Medical Acts reported that the penal clause of the 21 and 22 Vict. has proved ineffective, and that the Medical Council has uniformly declined to take steps to put the Act in force when such cases have been brought under their notice.

On the kindred subject of prescribing druggists, much light has been thrown by inquests held by the Middlesex and other coroners during the year; and the numerous letters we have published show how widely prevalent is this frequently fatal practice.

Prescribing druggists had their case argued with considerable plausibility by Professor Atfield in his presidential address before the Pharmaceutical Conference at Southampton in August. Though he held that patent medicines were not the unmixt evil they were sometimes represented to be, he thought the reduction of "what was sometimes termed" the patent medicine evil would be effected by the gradual extension of pharmaceutical knowledge among future pharmacists, which would enable them to recommend from their own shelves simple remedies for minor maladies. For an answer to this sophistry, we have only to turn to the records in our columns of inquests held on infants and others who were treated by druggists during the year. It would be found that, even in cases where poisons drugs were not prescribed, valuable time was lost; and diseases which, under proper treatment, might have been cured, proved fatal, through the ignorance and presumption of druggists.

The practice of setting up so-called dispensaries, and employing unqualified assistants in them to treat disease, was brought before the Medical Council at its sitting in July, by a formal request that they would remove from the *Register* the name of a practitioner proved to be the proprietor of more than one of these places. The charges against the accused person were stated thus by the solicitor to the council: 1, that he had a number of dispensaries, at which he employed unqualified assistants; 2, that he allowed unqualified persons to sign in his name false certificates of death; 3, that in cases under the care of his unqualified assistants, he presented himself at the last moment, so as to be able to sign a certificate. The solicitor to the council was of opinion that there was no evidence to support the second and third charges; and it must, therefore, be taken for granted that it was on the evidence offered in support of the first charge that the council, after two hours' deliberation, found the accused "guilty of infamous conduct in a professional respect," but decided not to remove his name from the *Register*, in consequence of his having promised to desist from the practice complained of.

The charges of malapraxis which have been made against midwives during the year, show the necessity for a regular system of examination and registration of all who are engaged in that important branch of medical practice. At the present time, while anyone who wishes to style himself dentist must pass an examination, and be duly registered, women so ignorant and unscrupulous as to drag away an uterus and ovary with fatal result, may, as a recent case shows, do so in England with the most perfect impunity, and continue to call themselves midwives.

MEDICAL EDUCATION AND REGISTRATION.

THE General Council of Medical Education and Registration held a session of eleven days' duration in June and July. Not only was the session of unusual length, but the number of new members was greater than usual. Mr. John Marshall succeeded Sir James Paget as representative of the Royal College of Surgeons of England; Dr. King Chambers appeared as representing the University of Oxford in place of the late Dr. Rolleston; Dr. P. Heron Watson succeeded Mr. Spence as representative of the Royal College of Edinburgh; Mr. Thomas Collins took

the place of Dr. Leet as representative of the 'Apothecaries' Hall in Ireland; and Dr. R. D. Lyons was chosen Crown representative for Ireland, in place of the late Dr. McClintock.

An interesting report on the visitations of examinations made on behalf of the Council by Mr. T. P. Teale and Mr. William Stokes, was presented, and the conclusions at which they arrived forming material for a considerable amount of discussion, an account of which was given in the pages of this JOURNAL during July. Among the questions which were most discussed were the possibility of requiring of all candidates the performance of dissections and of surgical operations on the dead subject at the examinations; and the time allowed for *visd voce* examinations. With regard to the first question, it was pointed out that, if the proposed frequent dissections and operations were strictly enforced it could not be possible to obtain a supply of the necessary material; and the Council decided that dissections and operations should be required when circumstances permit; and a committee was required to inquire into the alleged deficiency of subjects, and to suggest a remedy. With regard to the second question, a recommendation was adopted to the effect that additional time might be allowed to examiners in cases where the time ordinarily allowed was not sufficient to remove doubts as to the knowledge possessed by the candidate.

The Medical Council took action in several matters having reference to the conduct of certain registered practitioners. The name of a person who had been convicted of arson was removed from the *Register*. An application was made by the Secretary of the Medical Alliance Association for the removal of the name of a practitioner named Murdoch, charged with employing unqualified assistants and allowing them to sign death certificates in his name. Much deliberation took place on this case, and Mr. Murdoch was heard in defence. Ultimately the Council declared him guilty of disgraceful conduct, but decided not to remove his name from the *Register*, as he had expressed contrition, and declared his intention of desisting from the practices with which he had been charged. This case led to the appointment of a committee of the Council to consider the question of unqualified assistants.

A rather startling revelation was made to the Council by the representative of the Royal College of Surgeons of Ireland, that a scheme on the part of a student for procuring personation of himself at a preliminary examination had been detected; and it was stated that the practice was of not uncommon occurrence. The subject was referred to the Executive Committee.

The attention of the Council was directed to a statement made by the South Australian branch of the British Medical Association, to the effect that a Mr. Hartley Dixon had obtained the license of the Apothecaries' Hall in Ireland without having gone through the proper course of study. The representative of the Hall, Mr. Collins, gave an explanation, showing that the Hall had acted under special powers which they legally possessed, and which were put in force only in very rare cases; and the Council accepted the explanation as satisfactory.

A Bill for the Examination and Registration of Midwives, drawn up under the direction of the Parliamentary Bills Committee of the British Medical Association, was forwarded to the Council from the Privy Council with a clause for an expression of the Council's opinion; and a deputation from the Parliamentary Bills Committee had an interview with the Council and explained the objects and provisions of the Bill. A committee of the Council was appointed to consider the Bill, and presented a report, which, after debate, was ordered to be sent to the Lord President of Council.

The chief changes which have taken place in the regulations of the Examining and Licensing Bodies in England are the following. The Royal College of Physicians of London has ceased to issue a special curriculum of study and examination to be followed by candidates for the membership; and provides merely a pass examination in medicine and psychology; previously to which the candidate must either hold an approved degree or other qualification in Medicine or Surgery, or be forty years of age, or have passed the examinations for the licence of the College. The Royal College of Surgeons of England has issued regulations affecting students who commence their professional education on or after October 1st, to the effect that two years must intervene between the primary and the pass examination; except in certain conditions. Changes have also been made in the regulations dealing with candidates whose knowledge has been found insufficient. The University of London has altered the title of the Examinations for the Bachelor Degree. That which was hitherto the "First M.B. Examination" is now the "Intermediate Examination in Medicine," and the "Second M.B. Examination" has become simply the "M.B. Examination."

THE ARMY MEDICAL SERVICE.

To the branch of the profession engaged in medical practice in the army, the year 1882 has been by no means an uneventful one. In the early part of this period, at the beginning of the month of April, a change occurred in the direction of the Army Medical Department. Sir William Muir, K.C.B., who acted as its chief for a year beyond the allotted term of seven years, having received the appointment in April 1874, was succeeded by Surgeon-General Thomas Crawford, the present Director-General. It was during the tenure of office of Sir William Muir's predecessor, Sir Galbraith Logan, that the disruption of the old arrangement of the department into staff and regimental officers, and the unification of the medical body into a single corps, had occurred; and when Sir William Muir took over the Directorship, he found the new system established, but requiring much still to be done to give it due consistence, and to bring it into harmony with the working of other parts of the military machine. At the time the new system of army medical organisation was introduced, the present Director-General, Dr. Crawford, held the post of head of the medical branch at the central office in Whitehall Yard; and the views entertained by him at the present time on the subject may be fairly assumed from a recollection of this circumstance. It was not without surmounting great difficulties, and overcoming very powerful opposition in high quarters, that the reformed system of administration, as its supporters regarded it, was introduced; and Sir Galbraith Logan, as its parent, had personally to encounter much obloquy, which was continued to his successor when it was found he was determined to follow in the same path. The influence of the opponents of the new system, who reckoned among their numbers not only the majority of the combatant officers of regiments, but also many medical officers who preferred the previously existing mixed regimental and staff organisation of the department, together with a general feeling of dissatisfaction among the medical officers at the derogatory, and in many respects unfair, manner in which they were treated relatively to officers of other parts of the military service, had led for several years to a dearth of candidates for commissions in the army medical ranks. The evils which this state of things brought about were frequently commented on in Parliament; and at last, under pressure of the need for a better supply of aspirants for medical commissions, and the representations made by various public bodies, among which the British Medical Association took a prominent part, the Government felt itself constrained to issue a Royal Warrant removing most of the grievances complained of. This concession, which emanated from the War Department towards the latter part of the time when Sir William Muir was Director-General, restored contentment in the medical service, and there has been no want of candidates for commissions in it since; but among the provisions of the new warrant was one which had for its object to defeat any repetition of a similar demonstration on the part of the profession, such as had been made before the warrant was granted. This was accomplished by partly closing the door of entrance by open competition, and substituting for it a power of nominating in the future a proportion of medical officers to commissions instead. On the occasion of the first competitive examination of candidates in the past year (1882), an attempt was made to show that the fact of no surgeons having commissions conferred on them without competition was a breach of the nomination clause of the warrant; and we found it necessary to expose in the JOURNAL the fallacy of these assertions, and to indicate the trouble to the authorities, as well as discontent in the medical schools of the kingdom, which would have inevitably followed such a course, had it been adopted. It would be out of place, in a summary of this kind, to refer further to the changes in organisation of the Army Medical Department; but it has been necessary so far to advert to them, inasmuch as during the latter part of the year which has just passed away an agitation has arisen, backed by very powerful supporters, for a return to the old system of departmental administration, in consequence of the breakdown, as it is alleged, of the existing system during the late campaign in Egypt. On this subject, some remarks will be made presently.

About the month of May 1882, accusations of inattention and misconduct on the part of men of the Army Hospital Corps in South Africa, during an outbreak of enteric fever which occurred among some of the troops who had been left in occupation after the close of the Boer campaign, were freely commented upon in various newspapers. The subject was referred to in Committee of Supply on the Army Estimates, and an influential opinion was expressed that the short service system did not work well in the Army Hospital Corps. A Departmental Committee, with Sir Evelyn Wood, K.C.B., as the chairman, was appointed by the Secretary of State for War to inquire into the occurrences complained of; and though no report on the subject was published, it was understood that the general charges against the men of the corps fell to the ground under the investigation. All

that could be proved was that there had been faults in some particular individuals; but it was at the same time shown that these had been noticed and adequately punished at the time they had occurred. Subsequently the inquiry by this committee was led to assume a wider range, and the Secretary for War, Mr. Childers, stated in the House of Commons that the whole question of the organisation of the corps had now been submitted to for consideration. The Committee were still engaged on this question, when their proceedings were interrupted by the services of the chairman and some of the members being otherwise required in connection with the arrangements for the approaching campaign in Egypt.

The Egyptian campaign, remarkable in its military aspect for the rapidity with which its objects were accomplished, led to severe criticisms on the working of the medical department of the army. A general cry was raised that the medical service had "broken down". All sorts of charges were made against it. Hospitals were said to have been quite destitute of medical comforts, operations to have been performed without the use of chloroform, patients left without ordinary attention, and invalids on the voyage home to have been half-starved from not being able to get the kinds of food which were necessary for them. None of these accusations, so freely uttered, could be substantiated when they were sifted. We ourselves undertook a searching inquiry into the subject, questioning in considerable detail invalid soldiers and officers, as well as hospital orderlies and nurses, who had been in Egypt; and the result of the investigation was published in the JOURNAL of the 21st of October last. As there shown, sufficient proof was afforded that there was no justification for the allegation that the hospital service had broken down; and as to the assertions of there having been a dearth of chloroform, medicines, medical necessities and comforts, they were simply untrue. The Commander-in-Chief, Sir Garnet Wolseley, in his report of September 24th, at the termination of the war, testified that "the medical department under Surgeon-General Hanbury, C.B., had done everything that could possibly be done for the care and comfort of the sick and wounded"; and this official tribute was confirmed by the strong sympathy evinced by the civil members of the profession in the memorable banquet which was given by them to the medical officers of the Egyptian Expedition in London. This banquet was attended by all the heads of the profession in the metropolis, and a large number of eminent provincial practitioners.

The medical officers of the British service worked under immense difficulties in the expedition. The Army Medical Department had provided for the wants of the campaign on an extensive and elaborate scale, and especially had despatched a hospital ship—the *Carthage*—equipped with every requisite for a large number of sick and wounded patients. But the movements of this vessel were not under the control of the medical department; and, at a time of urgent need, she was left behind at Alexandria, for reasons with which the medical service had no concern. The Commander-in-Chief had considered it necessary to keep the change of his base from Alexandria to Ismailia a profound secret; and, as soon as he had secured a footing at Ismailia, had found himself obliged to advance and engage the enemy, so that a considerable number of wounded required immediate care and attention. These sudden demands were responded to, and the difficulties connected with them overcome, in a manner that should call forth admiration, considering the circumstances in which the medical officers concerned were placed. It is all the more remarkable that the special wants thus created were supplied as well as they were, when it is remembered that the medical department has no opportunities afforded to it of gaining in time of peace the experience which alone can make things work smoothly as well as successfully in time of war. In every other part of the army it is admitted, as a matter of course, that the actual establishments which will have to be employed on active service in the field should be rehearsed from time to time during peace. But even when field operations are practised on the largest scale in which they are ever practised in England, it is never considered by the military authorities to be necessary for bearer companies, field hospitals, or other field medical establishments, to take part in the practice. The more the discussion has been carried on in the public press regarding the alleged failures of the Army Medical Department during the late war, the more it has been rendered apparent that the defects in the medical service, whatever they may have been, have not been due to faults of the medical officers themselves, but to the fact that they have no separate and integral organisation of their own, as other parts of the military service have. Such defects in the service in Egypt as have occurred have been due to the want of autonomy in the department, and of control over the transport and other materials which are essential for its even working in war time; and the evil results that are inevitable under such conditions, when the pressure of war has to

be met, have been foretold in the writings of our best military surgeons over and over again. As soon as the outcry against the medical department broke out, some military surgeons were led to advocate a return to the old regimental system of organisation, while military officers have been tracing the defects of the medical service to the want of more military control over the hospital establishments; but it is obvious that no change of organisation, much less a return to systems which are incompatible with modern arrangements, can improve matters so long as the only possible method of medical officers gaining experience in field duties, practice in time of peace, is withheld from the department. An official inquiry is again proceeding on the subject, and it may be hoped that it will lead to the Government and the public becoming impressed with the conviction that it is a false economy not to afford the means which alone can enable the medical department to work as smoothly and efficiently, when it is subjected to the strain of war, as other departments of the army are enabled to do. The Committee, which, as we have already mentioned, was originally constituted under the presidency of Sir Evelyn Wood, to inquire into alleged neglects on the part of the Army Hospital Corps in South Africa, has been again further expanded, and placed under the direction of the Earl of Morley, Parliamentary Under-Secretary of State. The scope of its inquiries has been enlarged, so as to comprehend the whole question of hospital management and nursing in the field, as well as the sea-transport of sick and wounded. It was stated in the House of Commons that the Committee is also to ascertain what deficiencies, if any, existed in the field or other hospitals, or in the hospital ships and invalid transports, during the Egyptian campaign, with a view to future remedy. Evidence is in the course of being taken on these subjects; and, shortly before the last session of Parliament closed, it was announced that great efforts would be made to have the report completed by next session. The inquiry of this Committee is not merely a medical concern; it is rather one that concerns the interests of the whole army, as well as the character of the country at large; and we trust that a right solution of the important questions under its consideration will shortly be attained.

The hospital service of the large Indian contingent which took part in the Egyptian Expedition not only escaped without the animadversion which the sister service of the British forces evoked, but met with expressions of praise on all sides. This happy circumstance was doubtless due to the fact that the experience of continual field-service in India had taught what was necessary for efficiency; and because a greater liberality in the constitution of the Indian field-hospital establishments, as well in the *personnel* as in stores and transport, had rendered them self-reliant and comparatively independent. Each of the Indian field-hospitals, regarded as an unit, was complete within itself, possessing the means of supplying all its wants; and it is not a matter for wonder, therefore, that they accomplished their work with less friction and delay than those of the British, which were dependent on a variety of other departments for their working and efficiency.

One other point connected with the history of military medical events during the past year must be alluded to, and we must then close this part of the summary. For many years past, the question of effecting an amalgamation between the home and Indian branches of the military medical service has been under discussion. To accomplish this fusion has been the aim of the Government ever since the rule of India was transferred from the Home to the East India Company to the Crown; and the subject has been the subject of many a bill and resolution in the House of Commons, but owing to the interests of pecuniary economy. The question of the way of bringing about the union for a long time appeared to be impossible, owing especially to the nature of the duties performed in the act of transfer, to compete for promotion in the Indian Medical Service, while they were disqualified for promotion in the British army. Some steps towards a coalition have, however, been made of late; and, in 1879, when the war in Afghanistan broke out, the Indian Army Medical Department were both together and separately considered—viz., the Principal Medical Officer of the Indian Army in India. The way towards an amalgamation of the two services has been further cleared of late by a partial separation of the Indian Medical Department into military and civil branches, and the transfer of the former to the British Army, and the latter to the Indian Medical Service. The Indian Government has been anxious to have the medical department of the Indian Army brought into line with the British and Indian services. The War Office and the Home Office were desirous to do so, and many of the principles involved in the scheme; and, although the correspondence was carried on confidentially, it was generally understood that the dis-

cussions on the subject were being carried on between the central authorities in England and the Government of India up to the time when the preparations had to be made for the Egyptian campaign. The subject of the amalgamation of the two services was then allowed to drop for a time, but is now, we understand, on the eve of being resumed; and in the interest of India itself, as well as in the interest of the officers of a department to whom India owes so much of its present development and prosperity, it is to be sincerely hoped that no long time will be allowed to elapse before the questions in dispute are settled, and the medical services of that vast country, both civil and military, placed on a settled and satisfactory basis.

THE NAVAL MEDICAL SERVICE.

THERE has been some reaction in favour of this service, from which it may be inferred that the Order in Council of 1880 has had beneficial results, as there have been more candidates, and fewer resignations after experience of the service. Still the active force remains at about 25 per cent. under established strength; but as many as have been advertised for have been entered, so that the new policy would appear to be to keep down the staff to working necessities.

Deaths have happened, on or from active service, to two deputy inspectors-general, one fleet-surgeon, and one staff-surgeon; of whom it may be said that all are losses to the service. Deputy-Inspector-General Hill died in charge of Malta Hospital, of chronic dysentery contracted on service in Japan; Deputy-Inspector-General Cotton of hepatic and enteric disease, displaying itself when in charge at Plymouth Hospital; Fleet-Surgeon Dr. Anderson, in charge of the Marine Infirmary at Walmer; and Staff-Surgeon Connell in Japan waters.

The credit of the Medical Department has been well sustained in the bombardment of Alexandria and on shore in Egypt, at the ports where the sick and wounded have been received, and in the fighting at Kassassin and Tel-el-Kebir, respectively; for which Dr. Shaw, of the flag-ship, was awarded the decoration of C.B. without promotion, and two junior officers have been raised each a step in rank. The manner in which the service in general, and especially in the affairs preparatory to the Egyptian expedition, has been executed so satisfactorily to the Government, that its chief—Dr. Watt Reid—has received Knighthood of the Order of the Bath from Her Gracious Majesty.

Amid such general approval and propitious outlook, it is to be regretted that dissatisfaction is loudly expressed at the allotment of pensions that have fallen vacant.

MILITIA SURGEONS.

IN January 1881, a clause was issued in the Militia Regulations for that year, stating that all militia medical officers on the departmental list should be compelled to retire when they reached the age of sixty-five. This clause was at complete variance with the Warrant of 1876, and the several Acts under which militia surgeons held their appointments, and was, as they considered, *ultra vires* and at variance with all rules of equity and law—depriving them, from no fault of theirs, of incomes ranging from £100 to £350 a-year, and in many instances leaving them destitute of any means of livelihood. Some of the militia surgeons, therefore, headed by the President of the Militia Surgeons' Society, issued a circular to all the members and militia surgeons, both past and present, urging them to co-operate and subscribe funds to bring the matter before the Secretary of State for War, and the House of Commons. We are sorry to find that but a very small proportion of the militia surgeons responded: many from want of means, and others believing it was hopeless to expect any redress, as they had been repeatedly denied such from previous Secretaries for War. However, a sufficient sum was subscribed to enable them to submit a case to two members of the Council; and, although the case was adverse to granting a petition of rights, they both considered the militia surgeons had good and reasonable grounds for pensions of six shillings a week, as provided by the Militia Act of 1870, and from George II. to George IV., 1870, at which time all these Acts were repealed, and the militia were brought under the authority of the Crown; but this was in no way retrospective, or took away previous rights.

The Secretary for War, although appealed to by the Chairman of the Parliamentary Bills Committee, supported by several members of Parliament, having declined to receive any deputation, or to allow the case of the militia surgeons to be stated personally to him, a petition was prepared, numerously signed, and presented to the House of Commons about April of this year: and was supported by numerous petitions from several of the licensing bodies in the United Kingdom, and from branches of the British Medical Association. The Secretary for War, in consequence of a strong representation made to him by several members of Parliament, and by the Chairman of the Parliamentary Bills Committee,

agreed to receive further communications from both the chairman and from militia surgeons. Several very exhaustive and able letters were addressed to him; and the Chairman of the Parliamentary Bills Committee also submitted a case for the opinion of a very eminent lawyer, whose arguments and legal opinions, with cases in support, were brought before the Secretary for War; but, up to this time, with no successful result. Several leading articles have appeared, not only in the *BRITISH MEDICAL JOURNAL*, but also in many of the leading daily and weekly papers. The militia surgeons still purpose pursuing the matter, and are advised that an appeal by legal action, in one of the superior courts of judicature, must prove successful, both on the legal and equity points set forth in their petition, and the several articles which have appeared. Before, however, having recourse to these proceedings, they are awaiting the result of another appeal, which the Chairman of the Parliamentary Bills Committee has addressed to the Secretary of State for War, and which, it is hoped, may be more favourably received than the preceding one.

THE POOR-LAW MEDICAL SERVICE.

AMONG the more important events and subjects relating to the Poor-Law Medical Service which have been related and commented on during the year, are the following.

In January, attention was drawn to a serious statement as to the alleged punishment of sick paupers in the Birmingham workhouse; and it was pointed out that what was intended probably for medical treatment of malingerers and other ailments had been misrepresented as cruelty. Subsequently, our view was sustained by the evidence taken at an inquiry held there. In the following month we commented on the decision arrived at, and congratulated Dr. Simpson, the medical officer, whose conduct was impugned, on his complete exoneration from the charge made against him.

In January, reference was made to the decision arrived at in an important Poor-Law inquiry, which had been held in Sussex. Regret was expressed that we could not differ from the conclusion arrived at by the Department, and we urged on Poor-Law Medical Officers the absolute necessity that existed for extreme caution in their treatment of the sick poor, if they wished to avoid the painful consequences which sprung out of the neglect in this case.

In March we commented on the case of Dr. Pullin, medical officer of the Honiton Union, and drew attention to the irregularity in the proceedings of the guardians in allowing assistant-overseers to grant orders for medical relief, an action which was condemned by the Department in their subsequent official decision. At the same time they laid down the important principle, that, as overseers were only permitted by law to give orders in urgent cases, every such order given by overseers must be held to imply urgency.

In June, attention was directed to the case of Mr. Sykes of the Doncaster Union, who, on the action of the clerk, had been refused payment for certain urgent operations. We pointed out the objections to requiring a hard and fast line to be laid down, in the way of insisting on a second opinion in such cases. We also showed the hardship entailed on workhouse medical officers, in requiring them to attend club patients admitted for treatment who were in receipt of the weekly club allowance; and pointed out that as the guardians recouped themselves the cost of maintenance, it was only just that the medical officer should be also remunerated.

In July, we called attention to the case of Dr. Martin O'Connor, of the North Witchford Union, Cambridgeshire, who had been requested to attend, without an order, a mother and boy. On his arrival at their house, he found the mother ill, and that the boy, aged 9, had fractured his leg. Having attended to both cases, he requested the husband to get the orders. The relieving officer refused to grant either until the board had sanctioned his so doing. At their next meeting, the guardians gave an order for attendance on the mother, but refused one for the son. The question raised thereby has been discussed extensively in the press and in Parliament; but the legality, or otherwise, of the proceedings of the board of guardians has not, up to the present date, been brought before a court of justice.

In the following month, we called attention to the case of Mr. Grubb, district medical officer of the Chesterton Union, Cambridgeshire. Mr. Grubb had been requested by a woman, whom he met accidentally on her way to her own home, to attend her, she having broken her leg. He did so, when she handed to him a permanent relief order that had been given her on January 1st. During the treatment of the case, she again handed him a fresh order, which had been given her on July 1st, that supplied on January 1st having run out. Subsequently, Mr. Grubb sent in his claim for £3, being his extra

fee. This the guardians refused to pay. Mr. Grubb thereupon brought an action against the board in the Cambridge County Court, and after full argument the judge decided that the orders given on these two dates could not be disputed, that the holder was entitled to medical relief of all kinds, and that the guardians were not justified in disputing the claim. In accordance therewith, he gave judgment for the claim, with full costs—thus establishing an important precedent, should any such case arise in the future.

In September, we drew attention to the scheme for district medical relief in the Manchester Union, and pointed out the insufficiency of the arrangements that were proposed by the committee of guardians, to whom the subject had been referred.

In the same month, we published a letter showing that a district medical officer having been called to a case of fracture occurring in a boy, aged twelve, without any order, and having subsequently applied for the same, it was refused, but that the board granted 2s. 6d. a week, and a loaf of bread to the family, the same not having been asked for.

In October, we drew attention to the action of Mr. Fenn, Workhouse Medical Officer of the Dover Union, who complained that he was called on to sign orders for beer and other stimulants for persons not sick, but who were engaged in labour. We pointed out that Mr. Fenn was not compelled to sign such orders if he did not consider that such beer, etc., was necessary. This custom exists and is much abused in a great number of workhouses throughout the country, and it is important that medical officers should know that they are entitled to use their own free will and judgment, and are not under any compulsion to give orders under an imposed and fictitious medical sanction for alcohol as a bribe or payment for work done.

In November, we commented on the parsimonious procedure of the Monmouth Board of Guardians in granting a superannuation allowance of only £26 a year to Mr. Hutton, after thirty-six years of continuous service. We also drew attention to an inquest in the Boston Union, *apropos* of the refusal of a relieving officer to give some whiskey ordered by a district medical officer, in the course of which inquiry the coroner laid down the important principle, that if the medical officer had stated that he believed that the death of the deceased had been hastened by the refusal of the relieving officer to comply with the medical officer's order, he would have had to answer for it in another court.

Early in the year reference was made to the action of the Swaffham Board of Guardians, Suffolk, in their treatment of Dr. Milne, and we pointed out the difficulties, under the conditions which existed in that union, of efficiently treating the sick poor. The coroner of Central Middlesex having refused to grant the customary fees to the officers of workhouse asylum hospitals for giving evidence on inquests, a correspondence on the subject took place, when it was pointed out that according to the law on the subject, such hospitals were but continuation workhouse infirmaries.

Reference has also been made to the injurious statements often made by individual members of boards of guardians as to the conduct of their medical officers, and it has been shown that such officers had their remedy, either against the individual who made the statements, or the journal which published them. This view has been confirmed by a decision in a court of law.

A cognate subject was reported in the *JOURNALS* for October 28th and December 2nd, under the head of "Medical Amenities in the town of Penzance," and attention was drawn to the fact that by a recent decision in a court of law individual utterances at a meeting of a board of guardians are not privileged, and that the guardian uttering unfounded statements is amenable to an action for libel.

In May, a deputation of Metropolitan Poor-Law Medical Officers had an interview with Mr. Hibbert, representing the Local Government Board, with regard to the question of superannuations. An account of the proceedings was given in the *JOURNAL* of May 13th.

OBITUARY.

THE year has witnessed the deaths of many members of the medical profession, and men eminent in science. Among them have been: Mr. John Flint South, many years surgeon to St. Thomas's Hospital, and twice president of the Royal College of Surgeons; Dr. C. D. Purdon, a highly esteemed practitioner in Belfast; Sir Robert Christison, the eminent authority on poisons, more than fifty years professor in the University of Edinburgh, and president of the British Medical Association in 1875; Dr. A. W. Baird, physician to the Dover Hospital; Mr. R. S. Nunn, surgeon to the Essex and Colchester Hospital; Dr. George Bodington, of Sutton Colefield; Dr. George Duplex, a well-known and respected general practitioner in London; Dr. G. S. Jenks, of Bath, president of the British Medical Association at the meeting at Brighton in 1881; Mr. A. Gardiner Brown, surgeon-aurist

to the London Hospital; Sir C. Wyville Thomson, the eminent naturalist, and lately professor of natural history in the University of Edinburgh; Sir Edward B. Sinclair, professor of midwifery in the School of Physic in Dublin; Dr. W. H. Holmes, physician to the Cork Dispensary; Dr. Charles Darwin, the eminent naturalist; Dr. Fife Jamieson, demonstrator of anatomy in the University of Aberdeen; Dr. John Hughes, senior physician to the Mater Misericordiae Hospital in Dublin; Sir John Rose Cormack, physician to the Hertford British Hospital in Paris, and formerly editor of the JOURNAL of the British Medical Association; Dr. John Brown, of Edinburgh, author of *Hæma Subscissa*; Dr. T. B. Peacock, many years physician to St. Thomas's Hospital; Mr. James Spence, professor of surgery in the University of Edinburgh; Dr. Andrew Buchanan, late professor of physiology in the University of Glasgow; Surgeon-major G. Shaw, killed during the battle at Kassassin in Egypt; Dr. Alexander Silver, senior physician to the Charing Cross Hospital; Dr. G. Dickie, Emeritus professor of botany in the University of Aberdeen; Mr. F. M. Balfour, professor of animal morphology in the University of Cambridge; Dr. A. Leith Adams, professor of natural history in Queen's College, Cork; Dr. Richard Giles, formerly in extensive practice as a physician in Oxford; Sir James Alderson, formerly senior physician to St. Mary's Hospital, and president of the Royal College of Physicians of London; Dr. Charles Morehead, retired surgeon-major Bombay army, first professor of the principles and practice of medicine in Grant's Medical College, Bombay; Dr. Waller Lewis, chief medical officer of the General Post Office; Mr. Joseph T. Clover, a most accomplished administrator of anaesthetics; Dr. R. W. Lyell, assistant-surgeon to the Middlesex Hospital, and to the Royal London Ophthalmic Hospital; Mr. W. St. George Davies, staff-surgeon R.N., present at the bombardment of Copenhagen in 1807, and at other engagements of that period; Mr. George Critchett, consulting surgeon to the Royal Ophthalmic Hospital; Dr. William Pirrie, lately professor of surgery in the University of Aberdeen; Dr. Edwards Crisp, a well known medical practitioner, and an industrious worker in medical science; Mr. George Gulliver, a well known anatomist and physiologist; Dr. Richard Cross of Scarborough; Dr. Tanner, lately professor of surgery in Queen's College, Cork; and lastly, in a good old age, beloved of his friends, and respected by all, Sir Thomas Watson, formerly president of the Royal College of Physicians in London, and author of the well known *Lectures in the Principles and Practice of Physic*.

In foreign countries, there have died: Dr. Schwann, professor of physiology in Liege, celebrated as the first exponent of the cell doctrine in animals; Dr. J. C. Draper, professor of chemistry in the University of the city of New York; Hermann von Schlagintweit, the eminent naturalist and traveller; Dr. Oscar Simon, director of the Dermatological Class in Breslau; Professor Wintrich of Erlangen, well known for his works on physical diagnosis; Professor Hüter of Greifswald, an eminent surgeon and clinical teacher; Dr. Erskine Mason of New York; Dr. Hodgen of St. Louis; Dr. Amedée Latour of Paris; Professor N. Friedrich of Heidelberg; Dr. Guntner, family physician to the Emperor Ferdinand of Austria, and Emeritus director of the General Hospital in Vienna; Dr. Davaine of Paris, a celebrated authority on entozoa in man; Dr. Troschel, professor of zoology in Bonn; Dr. Obernier, extraordinary professor in the University of Bonn, an authority on diseases of the stomach and intestines (he has left his income, 150,000 marks, to the city, for the foundation of a museum); Professor Theodor von Bischoff of Munich, an eminent author on embryology; Dr. Hjalteclm of Reykjavik, late chief sanitary officer in Iceland; Dr. Levinstein of Berlin, known for his writings on the effects produced by the choice of hypodermic injection of morphia; Dr. Concato, professor of clinical medicine in the University of Turin.

NEW BOOKS AND NEW EDITIONS.

SEVERAL valuable additions to medical literature have been made during the year, in the form either of new works, or of new and improved editions of standard works already well known.

In *Anatomy and Physiology*, there have appeared a sixth edition of Mr. Luther Holden's "Human Osteology"; the ninth edition of "Quain and Sharpey's Anatomy," edited by Dr. Allen Thomson, Mr. Schafer, and Mr. G. D. Thane; the first volume of a new work on "Human Morphology," by Mr. H. A. Reeves; a treatise by Dr. Richard Norris on the "Physiology and Pathology of the Blood"; and a work by Dr. Cleland on the "Relation of Brain to Mind."

In the department of *Materia Medica and Therapeutics*, the chief works that have appeared during the year have been the part of Dr. Phillips's "Materia Medica and Therapeutics," treating of Inorganic Substances; a new edition of Dr. Sidney Ringer's "Handbook of Therapeutics"; a "Student's Guide to Materia Medica and Thera-

peutics," by Dr. Thorowgood; electricity in its medical uses is represented by a work on "Electro-Therapeutics," by Dr. W. Erb; and one by Dr. M. Meyer on "Electricity, and its Use in Practical Medicine"; Dr. Mortimer Granville has published a lecture on "Nerve-Vibration and Excitation as Agents in the Treatment of Functional Disorders and Organic Disease."

In *Medicine*, there have appeared a third edition of Dr. Bristowe's "Science and Practice of Medicine," a new edition of Dr. Aitken's "Outlines of the Science and Practice of Medicine," and a "Student's Handbook of the Theory and Practice of Medicine," by Dr. H. A. Husband. Dr. Graham Brown has brought out a new work on "Medical Diagnosis." Among works on Epidemic and Endemic Diseases, there have been published Sir Joseph Fayrer's Croonian lectures on the "Climate and Fevers of India"; Dr. Guilemard's Treatise on the "Endemic Hæmaturia of Hot Climates caused by Bilharzia Hæmatobia"; and Dr. Vandyke Carter's valuable work on "Spirillum Fever," to which the Stewart prize of the British Medical Association was awarded. Dr. G. W. Balfour has brought out a second edition of his work on "Diseases of the Heart and Aorta"; and Dr. Milner Fothergill has written a work on "Chronic Bronchitis." There have been several new and important works on Diseases of the Nervous System; the chief of them being Dr. Buzzard's "Clinical Lectures on Diseases of the Nervous System"; Dr. Byrom Bramwell's work on "Diseases of the Spinal Cord"; Dr. Hughes Bennett's "Treatise on Electro-Diagnosis in Diseases of the Nervous System"; a new edition of Mr. Erichsen's work on "Concussion of the Spine"; and a new work, by Mr. Herbert Page, on "Injuries of the Spine and Spinal Cord without apparent Mechanical Lesion." Dr. Althaus has brought out a work on "Failure of Brain Power." Dr. Charcot's Clinical lectures on the "Diseases of Old Age" have been translated by Dr. L. H. Hunt; and an instructive work on "Health-Resorts and their Uses" has been written by Dr. Burney Yeo.

In the special department of *Cutaneous Diseases*, there have been published a new edition of Dr. R. Liveing's "Handbook of Diseases of the Skin"; a "Manual of Diseases of the Skin," by Dr. L. D. Bulkeley; a second edition of a work by Mr. Alder Smith, on "Ringworm, its Diagnosis and Treatment"; and a work on the "Hair in Health and Disease," by Dr. Pincus.

In *Surgery*, there has been published a third edition of the late Professor Spence's "Lectures on Surgery"; a third edition of Mr. Holmes's "Treatise on Surgery"; a sixth edition of Dr. Gross's "System of Surgery"; a Manual of the "Principles and Practice of Operative Surgery," by Dr. Stephen Smith; the first part of a work on "Regional Surgery," by Mr. F. A. Southam; and a fifth edition of Mr. Berkeley Hill's "Essentials of Bandaging." Professor Esmarch's "Ambulance Lectures on First aid to the Injured," have been translated by H. R. H. Princess Christian. The first and second volumes of an "International Encyclopædia of Surgery," edited by Dr. J. Ashhurst, have also appeared. Among works in special departments, may be mentioned Sir Henry Thompson's "Clinical Lectures on Diseases of the Urinary Organs" (sixth edition); Mr. William Adams's "Lectures on the Pathology and Treatment of Lateral and other Forms of Curvature of the Spine"; Mr. Noble Smith's work on the "Surgery of Deformities"; and Mr. Henry Smith's work on the "Surgery of the Rectum"; a work by Mr. John Gay on "Hæmorrhoidal Disorders"; and one by Mr. T. W. Nunn on "Cancer of the Breast".

Among the chief contributions to the literature of *Diseases of the Eye* have been a fourth edition of Mr. C. Macnamara's work on "Diseases of the Eye"; a new work by Dr. J. R. Wolfe on "Diseases and Injuries of the Eye"; and a second edition of Mr. Nettleship's "Student's Guide to Diseases of the Eye". In this department must also be mentioned a second edition of Dr. Gowers's "Manual and Atlas of Medical Ophthalmoscopy."

In *Aural Surgery*, there have been published a third edition of Mr. G. P. Field's book on "Diseases of the Ear"; and a second edition of Dr. Macnaughton Jones's "Treatise on Aural Surgery". Dr. Patterson Cassells has translated into English Professor Politzer's "Text-book of Diseases of the Ear and Adjacent Organs."

In *Obstetric Medicine, and Diseases of Women and Children*, the following works have been published during the year: a fourth edition of Dr. Playfair's "Treatise on the Science and Practice of Midwifery"; a second edition of Dr. Edis's work on the "Diseases of Women"; a fourth edition of Dr. Graily Hewitt's work on the same subject; a work by Mr. Spencer Wells, on "Ovarian and Uterine Tumours, their Pathology and Treatment"; a translation, by Dr. A. McLaren, of Professor Courty's work on "Diseases of the Uterus, Ovaries, and Fallopian Tubes"; and a treatise on "Diseases of Children," by Dr. Forsyth Meigs and Dr. W. Pepper. Dr. I. H. Aveling is the author

of an interesting little work on "The Chamberlens and the Midwifery Forceps." A valuable "Manual of Gynecology", by Dr. D. B. Hart and Mr. A. H. Barbour, has also been published.

Among works on *Pathology*, may be mentioned the "Descriptive Catalogue of the Pathological Specimens in the Royal College of Surgeons of England," edited by Sir J. Paget, with the assistance of Dr. Goodhart and Mr. A. Doran; also the catalogues of the museums of St. Bartholomew's and St. George's Hospitals, which have been arranged in accordance with the latest improvements. A valuable book on "Sarcoma and Carcinoma," by Mr. H. T. Butlin, has been published. The first volume of a translation of Cornil and Ranvier's "Manual of Pathological Histology", by Mrs. Ernest Hart, has also appeared.

Among other books which have appeared during the year must be mentioned Dr. Richard Neale's valuable "Medical Digest," Dr. Sieveking's "Medical Adviser on Life Assurance," the third volume of the "Index Catalogue of the Surgeon-General's Department, U.S.A.," a work by Mr. F. A. Lowndes, on "Lock Hospitals and Lock Wards in General Hospitals," and the yearly volumes of "Transactions" of the Royal Medical and Chirurgical, Clinical, Pathological, and Obstetrical Societies, of the Edinburgh Obstetrical Society, of the Medico and Chirurgical Society of Edinburgh, etc. The first volume of an elaborate work on "Legal Medicine", by Dr. C. Meymott Tidy, has been published during the year.

MISCELLANEOUS EVENTS.

AMONG the medical events of the year, besides those to which allusion has already been made, the following may be mentioned.

At the Brompton Hospital for Consumption and Diseases of the Chest, arrangements were made in the beginning of the year for more systematic utilisation of the abundant supply of clinical and pathological material for the purposes of teaching, and for the weekly delivery of lectures and demonstrations.

At the meeting of Convocation of the University of London in January, it was resolved that female graduates should be admitted to Convocation; and that it was advisable to institute local examinations similar to those conducted by the older Universities. A vacancy having occurred in the Senate, Dr. George Buchanan and Dr. Robert Barnes, Mr. S. Newth, and Mr. G. C. Foster were proposed, and the names of Dr. Buchanan, Mr. Newth, and Dr. Barnes were submitted to Her Majesty for the selection of a member; Dr. Buchanan being ultimately selected.

The influence of fog and smoke on the public health was the subject of a considerable share of comment in the numbers of the JOURNAL for the year; and attention has been directed to the means to be provided for the abatement of the smoke nuisance. An exhibition of apparatus for this purpose was held in the course of the year.

On March 28th, a meeting of members of the medical profession and other gentlemen interested in the advancement of medicine and surgery, was held in the Royal College of Physicians, Sir William Jenner, President of the College being in the chair. It was resolved to form an Association for the Advancement of Research, for the purpose of encouraging original research, and of noticing and seeking to removing any hindrance which might appear to be operating adversely to the progress of medical knowledge; especially with regard to the Act of Parliament regarding experiments on animals. The speakers at the meeting were Sir William Jenner, Mr. Spencer Wells, Vice-President of the Royal College of Surgeons; the Master of the Rolls; Mr. Spottiswoode, President of the Royal Society; Sir James Paget, Dr. Quain, Sir William Gull, Sir Risdon Bennett, Mr. Erichsen, Sir John Lubbock, Professor Tyndall, Dr. Andrew Clark, and Sir J. Hooker. The mode of formation of the Council of the Association raised some discussion in the pages of this JOURNAL, it being argued that it was not based to a satisfactory extent on the principle of representation. It was decided at the meeting that there should be no special subscriptions, but that contributions of money might be made towards carrying out the objects of the Association; and in a few weeks a sum exceeding £1,000 was announced.

Several congresses have been held during the year on the continent. In April, the first Congress of German Physicians was held at Wiesbaden, under the Presidency of Dr. Frerichs; and the Congress of German Surgeons in Berlin at the end of May and the beginning of June again, under the Presidency of Baron von Langenbeck, who, it may be mentioned in passing, has resigned the Chair of Surgery which he for many years occupied in the University of Berlin. The International Congress of Hygiene was held in Geneva, under the Presidency of Dr. Lombard, early in September. The fifty-first meeting of the Association of German Naturalists and Physicians took place at Eisenach in

September, and a Russian Congress of a similar character was held at Odessa in August. There have also been the usual annual meetings of the American and Canadian Medical Associations.

The record which we have given is necessarily brief, and incomplete in some respects; but it will, we believe, sufficiently indicate to our readers the activity which prevails in the profession with regard to scientific and practical, as well as to social and political affairs; and they will join us in the hearty wish that from it much benefit may result to medical science, and to the general and personal welfare of the medical profession.

MEDICAL EVENTS OF THE YEAR IN SCOTLAND.

AMONG the more important events of the year may be noted the removal of the teaching of physiology and pathology in Edinburgh to the new University buildings. Of the accommodation provided for the systematic and practical classes in these subjects, and for private investigation a full account appeared in the JOURNAL. Suffice it now to say that Professors Rutherford and Greenfield have premises leaving little to be desired, and which are worthy of the development of the practical teaching of these subjects, the foundation and development of which owe so much to Hughes Bennett and Sanders. The appointment of Ray Lankester to the Chair of Natural History, the breakdown of that arrangement, and the subsequent translation to it of Cossar Ewart from the Aberdeen University; the appointment to the Chair of Surgery of Mr. John Chiene, are the principal features to be noted in the Edinburgh University staff. At this University, the matriculated students at December 26th, 1882, were 3,340; at December 26th, 1881, 3,237; of these, in 1881, 1,638 were medical; in 1882, 1,730 medical. An important concession was during the year made to junior students, by which they are permitted to appear for their first professional examination at times that are less likely to injure their further studies. That the student mind, in many cases, is prepared to go farther than this, was shown by the discussion that recently took place in the Royal Medical Society, when certain of the subjects embraced in the first professional examination were spoken of in a manner that proved that many students and graduates felt anything but grateful for the results derived from the study of these subjects. At the beginning of the winter session, the Rector of the University, Lord Rosebery, delivered his rectorial address, and earlier in the year the Parliamentary representative, Mr. Lyon Playfair, addressed his constituents in Edinburgh, an unusual, but not undesirable proceeding for an University M.P. In Aberdeen, important events have also taken place, the most noticeable of them being the foundation of a Chair of Pathology through the munificence of Sir Erasmus Wilson, and the appointment to it, as Professor, of Mr. D. J. Hamilton, an appointment received with favour by all, and especially by those who knew from personal experience of the fervour and success of Mr. Hamilton as a pathologist and teacher in Edinburgh. The resignation by Professor Pirrie of the Chair of Surgery led to the appointment of Dr. Ogston; and the translation of Professor Cossar Ewart to Edinburgh, led to Professor Alleyne Nicholson's appointment to Aberdeen. In St. Andrew's, the only change was the appointment of Dr. Macintosh, Superintendent of the Asylum at Murthly, and an enthusiastic naturalist, to the Chair of Natural History vacated by Alleyne Nicholson. The further progress of the new College at Dundee and its probable affiliation to or association with St. Andrews, are matters of interest to all the graduates of that University. As to Glasgow University, no important change has to be chronicled, but a movement has been on foot there for some time for the founding of a Chair of Pathology, the want of which is much felt, and the absence of which from an important school of medicine is scarcely creditable to this period of the nineteenth century. In Edinburgh Infirmary may be noted the loss to that institution of the services of Dr. Balfour as physician, and Mr. Walker as ophthalmic surgeon, through expiry of their terms of office, and of Professor Spence through his death, while to it have been appointed Dr. James as Assistant-Physician, Dr. Macgillivray as Assistant-Surgeon, and Mr. Graham Berry as Assistant Ophthalmic Surgeon.

Of the younger men in the teaching ranks of the profession, who have been advanced during the year, in addition to Professor D. J. Hamilton, are Dr. D. J. Cunningham and Dr. T. P. Anderson Stuart; the former now being Professor of Anatomy in the Royal College of Surgeons, Dublin, and the latter Professor of Physiology in Sydney University. The erection of provincial hospitals in many places in Scotland (some of them places of no considerable size) is a feature worthy of notice. Thus in Glasgow recently a Sick Children's Hospital was opened; at Dalkeith, Ayr, St. Andrew's, and at other places during the year hospitals have been erected; and some already existing, as at Stirling, have been enlarged; while at Dundee it has been resolved to embrace a children's ward in the Infirmary arrangements.

In Edinburgh, ample measures have been taken for the equipment of a large hospital for infectious diseases; and altogether the tendency in Scotland is evidently to put at the command of the profession and of the suffering members of the less well-provided portion of the community the best means of administering and receiving medical treatment.

Regarding professional societies in Scotland, in them many interesting papers have been read and discussions engaged in; in Edinburgh the subject of the Murmurs in Anæmia having received special attention. Various provincial associations have held profitable meetings, and to them has been added a medical association for the county of Fife. Among publications that have been reviewed in the JOURNAL, and of which the success is now assured, is the *Manual of Gynecology* by Hart and Barbour; and the recent publication by Graham Brown, of his *Manual of Physical Diagnosis*. In Edinburgh and elsewhere, members of the profession have aided in the education of the public in sanitary matters by delivering courses of health lectures, while the Combe lectures delivered by Professors McKendrick and Stirling and Dr. Andrew Wilson in various parts of Scotland have forwarded the same cause. The Morison lecture at the Royal College of Physicians of Edinburgh, was delivered by Professor D. J. Hamilton.

Notwithstanding that the Scotch university system has for long been viewed with comparative satisfaction, there have not been wanting indications, in the year now passing away, that some changes are needed in the way of university reform. Considerable diversity of opinion has been shown by the universities themselves as to how these improvements are to be accomplished. Some desire an executive commission, appointed with full powers to deal with any needed changes, while others would fall back on carrying out the recommendations of the previous Royal Commission, especially as regards the scientific grants, and allow each university to work out, in its own constitution, any reforms that it may, from time to time, find needful. There is, however, more unanimity among the universities on the proposed alterations in medical education and licensing, as suggested by the recent commission on the subject. They regard them with disfavour, as being detrimental to their prosperity, and likely to lower the standard of medical education throughout the country, a standard which they hold they have done so much to raise. Taken collectively, the Scotch medical classes have this year shown no signs of falling off, and the erection of the new buildings of the Edinburgh Medical School, has been fully justified by the numbers of students enrolled.

An additional disagreeable experience has been added to the trials of the medical practitioner when, in obedience to the calls of his profession and of humanity, he leaves his home during the night. In the month of July, Dr. Whitelaw of Kirkintilloch was called out during the night by a respectably dressed woman, who desired him to visit a sick person living at some distance in the country; he was on his way when attacked and maltreated by two men, who then robbed him, assisted by the woman in holding him down. It is needless to say that the whole was an organised plot; and the knowledge of the severe injuries sustained by Dr. Whitelaw is not at all likely to expedite the medical practitioner on his way to relieve the sufferings of unknown patients. An assistant to a practitioner in the South of Scotland was tried for, and pleaded guilty to, having administered an overdose of morphia, by which the patient's life was lost; a fine of £20 was imposed.

Death has been busy during the year. The deaths of Professors Sir Wyville Thomson, Spence, Pirrie, Buchanan, and Dickie; of Drs. Hamilton of Falkirk, Wm. Robertson of Edinburgh, Sir Robert Christison, Bart., Dr. Fyfe Jamieson, Dr. John Brown, Dr. Charles Morehead, etc., have been chronicled, and they have received obituary notices in the JOURNAL. Their deaths have given rise to many new appointments; several of those have already been recorded. Dr. P. Heron Watson has been appointed Surgeon in Ordinary to the Queen in Scotland, and Dr. Grainger Stewart Physician in Ordinary to the Queen in Scotland, in succession to the late Professor Spence in the one case, and Sir Robert Christison in the other.

In Aberdeen and Edinburgh, by the benevolence of some dead and some living friends of medical education, several bursaries and prizes have been added; and, in this matter, Edinburgh especially compares very favourably with the state of matters existing some years ago.

As regards Scotland, we find that the present year has been almost barren of any important legislative enactments. In the matter of her fisheries, Scotland has been placed on an equal footing with the sister countries of England and Ireland, by a Fishery Board (Scotland) Act, whereby there is established a Board, with a parliament, having all the powers of the old Board of White Fishery, and also possessing superintendence over salmon fisheries. It is hoped that, if this new Act be properly worked, much good will result from it in connection with a

subject that is of considerable interest and importance to the country at large. To the Public Health (Scotland) Act, there has only been one amendment, and that provides authority for altering boundaries of special drainage districts, and for the formation of special water-supply districts. While, however, there has been no new sanitary legislation, there has been ample evidence everywhere of the judicious activity of the authorities in carrying out the existing powers, and striking statistics were recently published in the case of Greenock, showing clearly the advantages conferred on the community by the present Act. Still greater benefits would follow, were the extent and scope of the Act to be increased, and made more in consonance with the Public Health Acts of England and Ireland. So much is this felt to be the case, that we have very recently had an instance of one of the large towns, namely Glasgow, coming forward, and, by means of a new Police Bill, asking for itself extended sanitary powers. This step has been productive of good, inasmuch as it has drawn from Government the promise of new general legislation for Scotland in these matters, and it has furnished an opportunity for discussion as to the compulsory notification of infectious disease, and on whom the onus of that duty is to lie.

During the year, in Scotland, as elsewhere, electricity has continued to occupy the greatest share of attention in the scientific world, the two chief points aimed at being the production of a convenient and practicable form of electric light, and how to apply the electric current to motive purposes. Of the several distinct types of electric lamp in the field, the Scotch Aketer lamp has proved itself both powerful and steady; and one of the most successful instances of the transmission of power by electricity is to be seen at Polmadie, in the works of the Railway and Electric Appliances Company, where large saws for cutting wood are driven by electricity, and are completely under the workman's control. For long, efforts have been directed to find out some method of utilising the waste gases of the iron furnaces before burning them, and this year has seen the problem solved: for at the Gartsherrie works, where coal is used as fuel, the tar and ammonia are now extracted from the gases, and made available for use in commerce. Thanks to the indomitable perseverance of Mr. Clement L. Wragge, Scotland has the credit of having contributed important aid during the year towards raising the study of meteorology to a more exact science. For several months in the summer, Mr. Wragge took daily observations on the top of Ben Nevis, the highest point of land in the United Kingdom, and these records were duly forwarded to the meteorological office. So valuable have they been found, that it has been decided to maintain an observatory on the summit of the mountain. In connection with this subject, it would be an omission not to allude to the very practical suggestion, thrown out by Professor Piazzi Smyth, of the value of the spectroscope in weather prognostications, not by itself alone, but taken in conjunction with the other means at our command. Speaking generally of the weather experienced in Scotland during the present year, the winter may be said to have been a decidedly mild one, although marked by some storms of great severity. The summer was a wet one, and more so in the eastern than the western districts—so that, while in the former the crops suffered, in the latter they were secured in good condition. Two shocks of earthquake were experienced in Scotland in September, when the village of Comrie was twice shaken at an interval of four hours. The published figures show that the various industries of the country continue in a prosperous state; and from the corrected tables of the recent census, made public during the year, we learn that, despite emigration, there has been a total increase of 375,555 persons in the ten years so that, during the last decennium, the population of Scotland has increased at a rate exceeding any previous period within the last fifty years.

MEDICAL EVENTS OF THE YEAR IN IRELAND.

THE returns as to the state of the public health in Ireland during 1882 have been favourable. In the last, and best, census, in the second quarter of the year, measles was prevalent in Dublin, and small-pox in Belfast; but there has been no epidemic reference to the mortality—especially that caused by acute diseases—compared with the death-rate in 1880. The temperature throughout the year has been generally lower than usual. In the beginning of December the cold in Dublin was intense. On the 14th of the month the thermometer fell to 33.3, the lowest temperature recorded in the city for many years.

One of the most important events, perhaps, in the medical history of Ireland during the year, was the election, on the 15th of January, of the Queen's University, after an existence of only one year; and the establishment, in its stead, of the Royal University of Ireland. During its somewhat chequered career, the Queen's University furnished its graduates with medical degrees of a respectable stamp,

and required but a minimum course in arts. The Royal University grants its degrees at an exceedingly low scale of fees; its curriculum is a very moderate one, and the only test of an arts education it enforces is an easy matriculation examination. It offers, however, great inducements to students, in the shape of prizes, etc., to enter the profession through its portal, and in these ways competes formidably with the older licensing bodies in Ireland. At present, the result of this competition can only be surmised; but, notwithstanding its tendency, the Royal College of Surgeons in Ireland deserves much credit for carrying into force its new scheme of education and examination. Although we have criticised some features in this scheme, its general effect, as tending to bring about a much-needed reform in medical education, cannot be doubted. The College should feel grateful to Dr. Kidd, and those who acted with him, for their great energy—in spite of the obstacles thrown persistently before them—in raising the standard of its licentiates, and in insisting upon the practical and *bona fide* character of their professional education. The College also adopted, during the year, new rules with regard to the examinations for its Fellowship, which are framed in an equitable manner, and are arranged so as to meet the various classes of candidates for this high grade.

In connection with the action of the College of Surgeons as regards medical education, it resolved, after some opposition, to expend a large sum of money—about £4,000—in improving its medical school. Dr. Cunningham of Edinburgh was also appointed Professor of Anatomy and Histology in it. With the approval of the Home Secretary, an examiner in ophthalmic surgery was added to the Court of Examiners for the Letters Testimonial of the College. Mr. H. R. Swanzy, having resigned his chair of ophthalmic surgery in the College, was elected to this examinership, Dr. A. H. Jacob succeeding him in the professorship.

In the King and Queen's College of Physicians several changes occurred during the year. The King's Professorship of Midwifery, vacated by the death, in March, of Sir Edward Sinclair, was filled by the appointment thereto of Dr. J. R. Kirkpatrick; and Dr. Finny has succeeded as King's Professor of the Practice of Medicine, Dr. Wm. Moore, who is now President of the College. A certificate in Sanitary Science has been lately established by the College, and a large number of licentiates have taken out the new membership, which, however, as yet is not a registrable qualification. The College has strongly expressed its disapproval of advertising medical books, and of the system of giving laudatory testimonials by any of its Fellows, members, or licentiates, and has declared such a proceeding to be censurable by the College.

A most important medico-political matter brought forward during the year was the Bill for the Notification of Infectious Diseases in Ireland, drafted by a joint committee of the Dublin Branch of the Association, and of the Irish Medical Association. This bill was approved by both the Irish Colleges, as well as by the Irish Medical Association and the Dublin Branch. It was introduced into the House by Mr. Meldon, Q.C., but shared the same fate as the other Bills having a similar object. The principal feature in the Bill was that, while it made it compulsory on the householder or responsible person in charge to report the existence of infectious disease, it left it optional with the medical attendant to report or not, as he might think fit. The objection to direct notification by the medical attendant was thus avoided. Although this compromise was not accepted by the promoters of the other Bills, its introduction gave rise to much discussion, and made a large number of medical men familiar with the nature of the proposed enactments which closely affected them.

The important Union Officers' Superannuation (Ireland) Bill, which has been so effectively promoted by the Irish Medical Association, was referred to a Select Committee of the House in July. Owing, however, to the period of the session at which it was taken up, the Committee could not complete the evidence which bore on the Bill. It was therefore reported without amendment, but with the concession of the Government to the principle of certain amendments which will prove fairly satisfactory. It is hoped that the Bill, as thus amended, will be reintroduced early next session.

The amalgamation of the Medical Societies of Dublin with the Academy of Medicine in Ireland, is an event of importance in the medical history of the year. The Pathological Society and the Obstetrical Society of Dublin were the first and oldest societies of their name in the United Kingdom. It was with feelings, therefore, of regret in the minds of some members of these societies, that it was decided to unite them, after an honourable, independent existence, in a common lot. There were associations also connected with their respective Colleges, which weighed with the Medical and Surgical Societies. The

amalgamation, however, has been effected, and the Academy has commenced work vigorously in all its sections.

In matters purely medical or surgical during the year, the most interesting, perhaps, has been Mr. Thomson's case of ligature of the innominate artery. The operation was apparently a complete success, when hæmorrhage occurred, and death resulted on the forty-second day.

WE regret to learn that the comparatively premature death of Mr. Arthur Ewen of Exmouth, and formerly of Long Sutton, has left his widow and children (several of whom are in delicate health) in very straitened circumstances. An appeal for funds is being made in the provincial press by the Vicar of Exmouth, the Rev. W. H. D. Purcell, M.A., who speaks of the excellent work that the late Mr. Ewen did in many ways in the town in which he lived, and especially among the poor. Mr. Ewen was well known to many old Guy's Hospital men, who may be glad to have this opportunity of contributing to the fund for the assistance of the bereaved family of their old fellow-student.

SOCIETY OF APOTHECARIES.

At a recent meeting of this Society, it was decided to found two scholarships to be open to the medical profession, one in clinical medicine, therapeutics, and hygiene, and the other in surgery. The amount, tenure, and other particulars of the scholarships will be published early in the ensuing year. The late Mr. J. F. de Grave, a former master of the Society, has bequeathed to it a legacy of £5,000, free of duty, in augmentation of the fund for the relief of distressed members.

HOSPITAL SUNDAY IN BIRMINGHAM.

FROM the accounts of the Hospital Sunday collection in Birmingham for the present year, it appears that the total contributions amount to £5,152. This sum has just been divided amongst the "amalgamated medical charities" of the borough; that is, amongst the hospitals and dispensaries other than the two large hospitals, in shares proportioned to the respective expenditures of the various institutions. It is interesting to note that, for the first time in twenty-four years, the collection for the amalgamated charities has exceeded the corresponding collections for the larger hospitals. The collections last year in aid of the Queen's Hospital amounted to £4,700; those in the previous year, for the General Hospital, to £4,886.

NOVEL ABOMINATIONS.

THE following delectable substances are contained in the American Homœopathic *Pharmacopœia* (published by Bœnike and Tafel, New York, 1882), and their names sufficiently indicate their composition: *syphilinum*, *buboinum*, *gonorrhœin*, *leucorrhœin*, *glanderin*, *anthracin*, *psorin*, etc. They are called isopathic remedies or nosodes, which are defined to be "remedies obtained from morbid products of the animal system." It seems probable that the gorge of even the most credulous patients would rise, if they could fathom the mystery of such "prescriptions".

BANG VERSUS ALCOHOL.

DR. ROBERT GRIEVE, of the Colonial Lunatic Hospital at Berbice, affirms that, of the Creole patients admitted into that institution, a majority have become insane through indulgence in alcohol, whereas, of the Coolie patients, a very large proportion owe their mental trouble to the abuse of cannabis Indica, or bang, and only a very few to alcoholic excesses. Now, among the Creole patients the rate of recovery is much lower, and the death-rate much higher, than among the Coolie patients. This fact, together with his clinical observations on individual cases, leads Dr. Grieve to conclude that the forms of insanity resulting from the abuse of Indian hemp are much more amenable to treatment than are those varieties of mental derangement which follow on alcoholic intemperance. Indian hemp is not, he alleges, even when

taken in large quantities and for long periods, so apt as alcohol is to set up gross structural changes in the brain.

BEFORE HIS TIME.

A MEDICAL man, practising in Dantzic, recently undertook the resection of the lung of a young female patient, with the consent of her parents. The *St. Petersburger Medicinische Wochenschrift* understands that, through the denunciation of two colleagues, the case, which ended fatally, will be made the subject of judicial inquiry; all parties, however, appear to admit that the attempt of the surgeon was made in perfect good faith, and in the full belief that it gave the patient a chance of recovery from otherwise incurable lung disease. Was the surgeon's conduct simply foolhardy and entirely reprehensible, or was he, on the other hand, before his time? It is by no means impossible, judging from analogies that abound in scientific literature and biography, that works may appear, one century hence, treating of resection of the entire lung as a recognised operation, and recording how, in the nineteenth century, the first pneumotomist got into trouble. Some, though not the majority of innovators, live to see their views and their practices established. In any case, full inquiry and fuller details of the Dantzic operation are imperatively demanded.

DRUNKENNESS IN ITALY.

PROFESSOR VERGA recently read a paper on this subject at the Royal Lombardy Institute of Science and Letters. The statistics of the six years, 1872-77, would lead one to suppose that drunkenness was diminishing. The diminution, however, appeared to the author to be illusory; and the various means of determining whether the vice was growing or not, he regarded, for one reason or another, as fallacious and insufficient. Judging, however, from the quantity of wine and spirits manufactured in Milan and imported there, he believed he was warranted in saying that, in the city and its neighbourhood, people drank much more than was good either for their health or for their morals. He pointed out that the abuse of spirits is much more injurious than the abuse of wine, and related the case of a brandy manufacturer who, through the inhalation of the alcoholic fumes in which he was obliged to spend much of his time, fell ill, and died of alcoholism in a lunatic asylum. A distinction, too, should be drawn between old spirits and new spirits, between that obtained by distillation from wine and that obtained from grain; and he regretted that these distinctions were not impressed on the lower orders either by their knowledge or by their purses. Dr. Verga did not think a temperance society would be of much use in attempting to repress the vice.

"WOOLSORTERS' DISEASE."

IN his last report on the health of Bradford, Mr. Butterfield records the occurrence of several further cases of woolsorters' disease, the origin of which was, it will be remembered, the subject of exhaustive inquiry by the Medical Department of the Local Government Board. The three deaths attributed to this disease in 1881 were in persons not engaged in wool-sorting. Two of the men were employed at an establishment where the means prescribed for rendering the wool innocuous are adopted. One was a carder of Cape mohair, and the other a back-washer of Van mohair. They were both elderly men, aged sixty-two and seventy-two respectively. One died within forty-one hours, and the other within forty-seven hours, after leaving work. The symptoms were those usually associated with blood-poisoning from this cause, and numerous bacilli were found in the blood after death. The third case was one of external anthrax in the person of a machine wool-comber, aged fifty-eight, who tended the back-washing machine, at which the back-washer mentioned above had worked. Two days after his fellow workman had been taken with his fatal illness, a small portion of skin on this man's forearm was nipped and torn by one of the cog-

wheels. He washed the blood and dirt off with a little wool, which he wet with the warm soap suds through which the Van mohair was passing in his machine. Three days afterwards his forearm was swollen; the next day the wound was surrounded by vesicles, the fluid in which contained specimens of bacillus anthracis. He rapidly became worse, and sank on the eighth day after receiving the injury.

THE TRANSACTIONS OF THE PATHOLOGICAL SOCIETY.

THE thirty-third volume of the printed records of the Pathological Society of London, is enriched by the addition of an appendix of even higher value than the index, occasionally issued for reference to past volumes. This appendix is entitled "Supplementary Reports in Continuation of the Histories of Cases Recorded in the Transactions of the Pathological Society of London, volumes i to xxxi, compiled by a Committee of the Society." The members of this committee are Dr. Barlow and Mr. R. W. Parker, Dr. Baxter and Mr. Marcus Beck, Dr. Goodhart and Mr. Walsham, Dr. Kesteven and Mr. Godlee, Dr. F. C. Turner and Mr. Barker. The examination of past volumes of the *Transactions*, with the object of ascertaining the number of incomplete histories, and endeavouring to complete them by reference to the authors of the contributions, was suggested by Mr. Jonathan Hutchinson, in 1881, and the Council then appointed the above Committee. The members were arranged in the manner which we have just indicated, in order that every volume of the *Transactions* should pass under the examination of a medical and a surgical pathologist. The contributors of cases with incomplete histories were consulted by letter, and the replies entered in a uniform manner. In some cases of interest, where it was deemed advisable to give negative evidence, in short to register the unsatisfactory reply "no information to give," this has been done, probably to save needless trouble to future readers of the *Transactions*. Not one single volume out of the twenty-one available to the Committee at the time when their work was completed, remains unrepresented in the supplement, which has, quite rightly, been bound up with the new volume of the *Transactions*. An extra volume is always, in itself, an evil to be avoided, especially when it takes the form of an index or supplement much thinner than the regular series of text volumes; it is very liable to be mislaid, and, if arranged in its right order on the shelves of a library, it cannot fail to spoil the tidy appearance of a long row of symmetrical volumes of works of this kind. It is true that the present arrangement involves the purchase of an entire volume of *Transactions*, but this will hardly be grudged by those who wish to acquire a work of reference so rich with the spoils of time as this supplement.

THE NEW PRESIDENT OF THE LOCAL GOVERNMENT BOARD.

NO doubt political exigencies go far to account for the appointment of Sir Charles Dilke as President of the Local Government Board in place of Mr. Dodson. Sir Charles Dilke has, however, taken conspicuous interest in county government, and as his talents are admittedly of the highest order, much hope may be built upon his assumption of Mr. Dodson's position. Hardly any, if any, department of the State needs a clearer head, a more elastic mental disposition, or greater administrative capabilities than the Local Government Board. Sir Charles Dilke has already given evidence of his powers in these respects whilst at the Foreign Office; and the outcome of this new shifting of the ministerial cards will be watched with no common interest.

PARIS IN FEVER.

THE alarming mortality and enormous loss from sickness and depression of business and pleasure-seeking, due to the great, though now diminishing, epidemic of enteric fever in Paris, have evidently taught the necessity for a better system of sanitary administration in that city. Indeed, it can hardly be said, at the present time, that the arrangements for dealing with epidemic diseases are deserving to be considered a system, for such few duties as are performed in relation to this class of maladies are so divided amongst police authorities on the

one hand, and departmental authorities on the other, that no proper control is exercised, and disease continues to spread unrestrained, until climatic or other natural conditions lead to its extinction. But the faults of administration which the present epidemic is bringing to light are not failing to attract the attention of some of the more thoughtful members of our profession in Paris. An interesting discussion has very recently taken place at the Academy of Medicine on this subject, and the introductory remarks of M. Proust show very clearly that the division of authority to which we have referred renders it impossible for preventive medicine to have any real existence in Paris without considerable changes in the administration. M. Proust, after pointing out that the want of accord between the Prefect of the Seine and the Prefect of Police had proved a hindrance, urged the necessity for some competent authority to intervene between them and the Société de Médecine des Hôpitaux, a purely scientific society, whose studies of disease might be usefully turned to account if an official existed who would be capable of utilising the information which they make available. There is, however, in Paris a *conseil de salubrité*, but this body is only consulted when an epidemic already exists. In all matters relating to quarantine, the Government is advised by M. Fauvel, but only recently has it been thought desirable that this function should be performed by a medical man. M. Fauvel's predecessor was a layman, who held strong views that medical training was unnecessary for investigation of the causation of epidemic disease; and, inasmuch as nothing more was thought necessary than that a few facts should be learnt concerning the first case of disease, he was of opinion that such duty could be better undertaken by the policeman than the doctor. The means at the disposal of the prefects are evidently of the most limited kind; the prevention of an epidemic is no concern of theirs; it is only when disease has attained epidemic proportions that it is deserving of their attention, and that *médecins des épidémiques* are employed. M. Proust contrasted this condition with that of Brussels, where, although the laws are similar to those of Paris, the municipality have, since 1874, developed a system which is productive of the best results, the death-rate from zymotic diseases, and especially enteric fever, having since that year been diminished by one-half. In this town, notification of a case of infectious disease is made directly to the administration, and is immediately followed by a visit from a divisionary inspector to the infected house. If the retention of the sick person in the house be a source of danger to the other inmates, he is at once removed in an ambulance provided for that purpose. In cases of small-pox, all the family are vaccinated, and sometimes the whole house, if it be a tenemented one. A surveyor is at the disposal of the director of the sanitary department to certify to the sanitary condition of the house, to examine the state of its communication with the sewer, and to disinfect. In cases where work is necessary to put the house in proper condition, it is done at once. The administration applies later on to the owner to refund the money spent, evidently resembling the system that obtains in the city of Glasgow, rather than that in districts under the Public Health Act, where the house-owner is compelled to do the work himself after notice has been served upon him. In Brussels, again, every evening at five o'clock the director of the sanitary department sends to the burgomaster the map of the town, on which are indicated, with coloured pins, the cases of infectious disease which have come to his knowledge during the day, and he affixes his signature to those measures which, from urgency, require his attention at once. M. Proust was of opinion that a department to prevent the spread of infectious diseases might be very simply constructed, and the measures to be taken would consist of four—viz., compulsory notification of infectious diseases, vaccination in cases of small-pox, isolation, either in private houses or in hospitals, and disinfection of the sick person and his surroundings. Thus, experience is teaching our neighbours to have resort to the same methods which many of us on this side of the Channel are anxious to perfect for the prevention of epidemics. And, first and foremost amongst these comes some acceptable and general method for the notification of infectious

diseases. In Brussels, as we have before noted, the system of notification is to a considerable extent adopted, not through any compulsory law, but simply on account of the recognition of the good results which follow from such a procedure.

SCOTLAND.

GLASGOW WESTERN INFIRMARY SAMARITAN SOCIETY.

At the eighth annual meeting of the Samaritan Society of the Glasgow Western Infirmary, held last week, it was reported that, during the year, 820 cases had been considered; and that to those deserving and requiring aid, it had been given in the form of money, surgical appliances, and warm clothing. The income for the year was £488 16s. 7d.

SCARLET FEVER AT GREENOCK DUE TO INFECTED MILK.

DR. WALLACE has reported to the Health Committee of Greenock the circumstances of a recent development of scarlet fever in that town, which he regards as due to the drinking of infected milk. The first case of the group occurred in the person of a milk-dealer, who sickened of what he took to be an ordinary cold on October 6th. One of his children became affected about eight days after. No medical man was called in, not, apparently, because of any dread of the operations of the sanitary officers, but solely because of the supposed nature of the disease; for, as soon as the discovery was made of the occurrence of scarlet fever amongst the man's customers, he readily agreed to everything that was proposed for stamping out the outbreak. Of twenty-six cases of scarlet fever occurring at Greenock during October, eight were reported by Dr. Wallace as "clearly connected with this contaminated milk"; and of twenty-one cases during November, four more were "unquestionably" due to the same cause.

TYPHUS FEVER AT ABERDEEN.

It is worthy of inquiry why typhus fever should lurk perennially in the large towns in Scotland, whilst in more southern cities of the kingdom it has been banished except as an occasional visitant. Dr. Simpson, the medical officer of health for Aberdeen, has just presented to his sanitary authority an instructive account of a recent outbreak of typhus in a particular quarter of that town. The disease first appeared in a house which has the unenviable distinction of starting something like four epidemics. There was fever in it two, four, and twenty years ago, the two last causing a large number of deaths; and it has now, after a fourth outbreak, been too tardily ordered to be closed. On November 23rd, three cases of typhus were reported in this house, and a visit to it led to the discovery that there were other persons ill of typhus in the same building, the total number being fifteen. These were removed the same day to the Infirmary; and all the rest of the people in the house, nineteen in number, were taken to the reception-house. The infection seems to have come from a young girl in the house, who had a mild attack of typhus, complicated with inflammation of the lungs, so that the low febrile condition which she at first had was not suspected to be due to typhus. How this girl got typhus is not exactly certain, but many circumstances point to the probability of its having been imported. Through the most culpable and careless intermingling of the sick and healthy, six of the seven families in the house became smitten with the disease, the one family that escaped being the one that did not visit the sick people. Of outside visitors, eight caught the disease, and formed in themselves fresh centres for its further spread. At the time of Dr. Simpson's report, there were thirty-six cases under treatment; but he does not write as if he had seen the end of the outbreak. Perhaps it is hardly necessary to add that overcrowding, extreme filthiness, and want of ventilation, were the concomitants of all the cases.

IRELAND.

DR. WILLIAM KEARNS TANNER died on the 21st instant, at Lapp's Island, Cork, aged 71. Deceased was a graduate in medicine of the University of Glasgow, and a Fellow of the Royal College of Surgeons in Ireland.

DR. O'RORKE, medical officer of the Ballinrobe Dispensary District, has resigned; and Dr. Kelly, medical officer of the workhouse, has been appointed to act as *locum tenens* pending the election of a successor.

SCARLET FEVER IN BELFAST.

THIS disease is very prevalent in Belfast at present, and, for the week ending the 23rd instant, there were 89 cases in the workhouse hospital, 11 having been admitted during that period, and one case having terminated fatally.

CORONERSHIP OF COUNTY SLIGO.

A CONTESTED election took place recently for the office of coroner, the candidates being Dr. Moloney of Colloney, and Dr. Roe of Carney. The Subsheriff presided in the county courthouse last week, when the result of the voting was declared as follows: For Dr. Moloney 416 votes, for Dr. Roe 354, the former being successful by a majority of 62.

CORK FEVER HOSPITAL.

A SPECIAL meeting of the General Committee was held on the 21st inst., to receive the resignation of Professor H. Macnaughton Jones, as senior physician to the hospital. For the past eleven years, Professor Jones has been attached to the institution, but found it impossible, in consequence of new professional engagements, to discharge the duties satisfactorily for the future. The following resolution was unanimously adopted: "That the resignation of Dr. Jones be accepted, and his letter of resignation entered on the minutes, and the committee are unanimous in their expression of regret at losing the valuable services of Dr. Jones, who has been so long and honourably connected with the institution; and they hope that his future career will be as distinguished and successful as his past."

THE QUEEN AT HASLAR HOSPITAL.

AFTER the recent Royal visit to the military sick and wounded from Egypt at Netley a similar compliment to the sick and wounded blue-jackets and Marines at Haslar was considered as certain. We take a highly interesting report from the *Times*, slightly abridged. On Saturday (last week) Her Majesty, accompanied by the Duke and Duchess of Edinburgh and the Princess Beatrice, crossed over from Osborne, and made a tour of the wards.

It is now more than twenty-six years since the Queen visited Haslar Hospital, and brief as the visit was on Saturday, Her Majesty could not fail to notice the many changes and improvements which had taken place in the meantime. The former visit took place during the war with Russia, when Her Majesty's attention was occupied with the care of the wounded who were arriving from the Crimea. In a letter to Lord Panmure she wrote:—

"Nothing can exceed the attention paid to these poor men in the barracks at Chatham, or rather Fort Pitt and Brompton, and they are in that respect very comfortable, but the buildings are bad, the wards more like prisons than hospitals, with the windows so high that no one can look out of them, and most of the wards are small, with hardly space to walk between the beds. There is no dining-room or hall, so that the poor men must have their dinners in the same room in which they sleep, and in which some may be dying, and at any rate suffering, while others are at their meals."

Her Majesty concluded the letter with a hope that before long she would be able to visit the hospitals at Portsmouth also, and to see in what condition they were. Until the erection of Netley Hospital, Haslar Hospital was unquestionably the noblest national institution of the kind in the kingdom, and although it is now 125 years old, it is impossible not to be struck with the advanced views of its designer.

It possesses none of the disadvantages which the Queen detected at Chatham. It is built upon a tongue of land at the mouth of Portsmouth Harbour, so that the patients have a clear view up the Solent and out to sea. The soil is porous and the grounds are extensive. The building itself consists of twelve stately and substantial blocks, six on each side of the central entrance, with two zymotic blocks, which are separated from the rest, and possess a distinct drainage system. The wards, which are divided into lower, middle, and upper, are roomy, light, and airy, and are naturally ventilated, there being a window between each bed. The total accommodation of the hospital is equal to 1,318 patients. The water is furnished by two artesian wells, which are sunk to a depth of 300 feet, and a water tower is now in course of erection, with a capacity of 250 tons, by which means it will be available in case of fire breaking out in any part of the establishment. Since the appointment of the present Inspector-General, a Japanese system of cooking has been introduced, which enables the patients to be supplied with warm and nutritious food throughout the wards; and it is even proposed to utilise the machinery on the premises for lighting the building with electric light, the superiority of which from a sanitary point of view need not be pointed out.

The royal party left Osborne at eleven o'clock, the Duke of Edinburgh wearing the uniform of a Vice-Admiral in the British Navy. After driving to East Cowes they embarked from Trinity Pier on board the *Alberta*, Commander Balliston, and proceeded to the railway pier in Stokes Bay. The Queen prefers the Royal Clarence Victualling-yard as a landing place, but in order to reach the hospital from this point, it would have been necessary to either make a *détour* round the head of Haslar Creek, or to drive through some of the most squalid and tortuous thoroughfares of Gosport. The pier and station were guarded and kept thoroughly clear by a detachment of metropolitan police. On landing, the Queen was escorted by the Duke of Edinburgh to a carriage which had been sent from the royal mews at Buckingham Palace for the purpose, and in which the Duke and Duchess of Edinburgh and the Princess Beatrice also took seats. Two other carriages contained General Sir Henry Ponsonby and the suite in attendance. Driving along the front of Anglesea Terrace, past the Cemetery, and the Haslar Boat-yard, the Royal cortege reached the hospital just as the gun from the flagship announced the hour of twelve. The approaches to the building were guarded by strong bodies of Metropolitan police, under the command of Inspectors Goffrey and Coppin, but, in consequence of the exclusively private character of the visit and the uncertainty of the date, there was no crowd. As the Queen drew near, the Royal standard was hoisted in front of the hospital, while a guard of honour, composed of one hundred men belonging to the Royal Marine Light Infantry under the command of Captain McKechnie, with Sub-Lieutenant Kush as bearer of the Queen's colours, presented arms as the carriage entered the gate, the splendid band of the corps playing the opening bars of the National Anthem. The Queen was received on alighting by Admiral Sir Geoffrey Hornby, Commander-in-Chief, Colonels Mawbey and Bennett, commandants of the Royal Marine Artillery and Light Infantry Divisions, and the medical staff of the hospital, consisting of Inspector-General Morgan, C.B., Deputy-Inspectors-General Harran and Davies, and Fleet-Surgeons Ridings and Reid, all of whom were in dress uniform. Passing through the Arcade, along a broad riband of crimson cloth, the Royal party were conducted first to the right or surgical side of the hospital, and into No. 2 Ward, where the cot patients were, and thence to No. 4 ward, in which the whole of the convalescent had been gathered. The wards were decorated with the seasonable holly-berries and mistletoe. The number of cases which had been sent to Haslar Hospital from the recent campaign had amounted to a total of 520, of which fifty-two were wounded cases. There had been only one death from wounds and ten from disease, the percentage being the very low one of 2.1. The remainder of the sick and wounded blue-jackets and marines had all left the hospital with the exception of six, of whom five were suffering from wounds and twenty-eight from disease. The names of the patients, including Commander Purvis, of the *Penelope*, who lost a foot at Kassassin, and Lieutenant Polwhele, of the *Tamar*, had the honour of being presented to the Queen, the other twenty-one being under treatment in the zymotic ward, which Her Majesty did not inspect. As each name was called Dr. Morgan explained to the Queen the special circumstances of the case. It was intended that each man who was able should walk forward to receive the medal; but Her Majesty soon set formality at defiance by walking up to each man, saying a kind word to all, and, after pinning the medal on their breasts, dismissing them with an affectionate tap. The cot cases showed her womanly kindness in a peculiar degree, especially the case of Private Weston, who was twice wounded at Kassassin; Private Edis, who received dreadful wounds from shell at Tel-el-Kebir; and Roynce, a

seaman who was struck by a piece of iron at Ramleh. And when poor Maguire, a young sailor who had a leg shot off on board the *Invincible*, endeavoured to raise himself in his cot to receive the decoration which he had bravely won, the Queen quietly pressed his head back upon the pillow so that he should not suffer.

On leaving No. 4 Ward, Her Majesty was conducted to the left, or medical side, of the hospital into No. 7 Ward, in which the sick from the war were accommodated. To reach the ward in question without descending the stairs, it was necessary to pass through the central ward. This ward, which is empty at the present time, is a magnificent room, containing 19,000 cubic feet, and was much admired by the Royal visitors. In pinning on the medals in this ward the Queen was assisted by the Duke of Edinburgh. This concluded the visitation, whereupon the *cortège* was formed in the same order, the Queen driving back to Stokes Bay and embarking in the *Alberta*. Before leaving, Her Majesty expressed her satisfaction with everything she saw, and the arrangements which had been made for the comfort of the sick and wounded.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL.

NOTICE OF QUARTERLY MEETINGS FOR 1883: ELECTION OF MEMBERS.

MEETINGS of the Committee of Council will be held on Wednesday, January 17th, April 11th, July 11th, and October 17th. Gentlemen desirous of becoming members must send in their forms of application for election to the General Secretary not later than 21 days before each meeting, viz., December 26th, March 21st, May 21st, September 26th, in accordance with the regulation for the election of members passed at the meeting of the Committee of Council of October 12th, 1881.

November 9th, 1882. FRANCIS FOWKE, *General Secretary*.

COMMITTEE OF COUNCIL.

NOTICE OF MEETING.

A MEETING of the Committee of Council will be held in the Council Room of Exeter Hall, Strand, London, on Wednesday, the 17th day of January next, at two o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary*.

161A, Strand, December 21st, 1882.

COLLECTIVE INVESTIGATION OF DISEASE.

CARDS and explanatory memoranda for the inquiries concerning Acute Pneumonia, Chorea, and Acute Rheumatism, can be had by application to the Honorary Secretaries of the Local Committees appointed by the Branches, or to the Secretary of the Collective Investigation Committee. Of these diseases, each member of the Association is earnestly requested to record at least *one ordinary case* coming under observation during the year.

Inquiries concerning Diphtheria and Syphilis have been prepared, and can be had on application by those willing to contribute information on these subjects. There are two cards on Diphtheria, one containing clinical, the other etiological inquiries, together with an explanatory memorandum. One of these cards is intended to serve as a guide to the systematic examination of a house or district for sanitary purposes. There are also two sets of inquiries concerning Syphilis, one for acquired, the other for inherited disease. These are accompanied by an explanatory memorandum giving information concerning the most recently observed symptoms of the inherited disease.

It is proposed to publish in the *Journal* in January a list of the Contributions received up to the end of the present year. It is therefore desirable that members should at once forward any cards they may have filled up to the Secretary of the Collective Investigation Committee.

F. A. MAHOMED, Secretary to the Committee.

12, St. Thomas's Street, S.E.

BRANCH MEETINGS TO BE HELD.

SOUTH-WESTERN BRANCH.—The next quarterly meeting will be held, at 2.30 P.M., on Thursday, January 11th, 1883, in the Board-room of the Devon and Exeter Hospital, Exeter. Members intending to make communications or show specimens are requested to give notice to S. REES PHILIPPS, M.D., Honorary Secretary, Wonford House, Exeter.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

PALINURUS.—At page 362 of a legal publication, known as the *Weekly Reporter* for March 10th, 1877, will be found the decision of the Court of Appeal, in the case of Purcell v. Sowler, which is the judgment to which we referred in the remarks made by us in our issue of December 9th, and on which our correspondent "Palinurus" founds his question. As, however, the majority of our members are necessarily in ignorance of the important point settled thereby, we propose to go into the case somewhat in detail. It would appear that the medical officer of the workhouse of the Altrincham Union, Knutsford, felt that he was libelled by the chairman of the house committee, at a meeting of the board of guardians. The libellous matter was reported by the printers and publishers of a daily newspaper called the *Manchester Courier and Lancashire General Advertiser*. We learn that the medical officer incriminated by the statements elected to bring his action against the proprietors of the journal, who grounded their defence on the plea that their report was *bona fide*, and that the matter reported was privileged. The court below decided against the newspaper proprietors, and gave a verdict of forty shillings damages and costs. Against this decision the appeal was made. Four of the judges of the Court of Appeal gave in their judgments, to wit, Lord Justice Cockburn, Lord Justice Mellish, Justice Bagallay, and Justice Bramwell. They all concurred in supporting the decision of the Court of Common Pleas, and the appeal was dismissed with costs. It will be seen thereby that it is a very dangerous game for individual members of a board of guardians to play, when they proceed at their meetings to asperse the character of their medical and other officers; and it is equally dangerous for the printers and publishers of local papers to print the highly seasoned matters which so frequently crop up at board meetings. We commend our reply especially to the members of the Poor-law Medical Officers' Association, many of whom, we are fully aware, too frequently have to chafe under the cruelly slanderous language so constantly made use of by guardians at their meetings. The names of the solicitors, etc., will be found in the report of the appeal and judgment.

MILITARY AND NAVAL MEDICAL SERVICES.

THE ARMY MEDICAL SERVICE.

SIR,—Uneasiness has been caused by the remarks in your issue of the 16th instant, foreshadowing the results to the Army Medical Department of the Committee on Hospital Organisation now sitting; and it is felt by many that not a little blame is due to a section of the department in having led to this reaction. A general feeling is expressed by the seniors of the medical service, that amongst what I may term the "Aldershot school", the military as opposed to the medical element has run into extravagant extremes. The disciples of this school have apparently preferred to subordinate the professional part of their duties to what they consider the more important, viz., the military control over the Army Hospital Corps; and have taken a greater pleasure in battalion drill, sword exercise, and orderly-room minutiae, than in treating the sick and filling up clinical records. This being so, we can hardly be surprised that the military authorities have taken alarm at this "combatant" fever; and, dreading its consequences, have determined to put it down with a strong hand. Is it too late to prove that the large majority of the Army Medical Department are doctors rather than disciplinarians, and that all they desire in the military direction is a sufficient control over their subordinates in the Army Hospital Corps to enable them to manage their hospitals properly; and that they would prefer that drill manoeuvres be left to drill instructors?

The subject is too large a one for me to detail it within the limits of this letter: but I believe I may justly say, that if the votes of the members of the department were taken, the military authorities would find that they had taken fright at a shadow, and that we are in favour of a system that would develop our talents as surgeons, whilst we leave to "combatants" the dearly prized privileges of military control.—I am, etc.,

A.M.D.

THE Greenwich Hospital Pension of £50 a-year, vacant by the death of Retired Deputy Inspector-General of Hospitals and Fleets Alexander Cross, on the 3rd instant, has been awarded to Retired Deputy Inspector-General of Hospitals and Fleets Andrew Murray, from that date.

To be Honorary Surgeon to Her Majesty: James Jenkins, Esq., C.B., M.D., Retired Inspector-General of Hospitals and Fleets, *vice* Dr. Johnston, deceased.—Deputy Inspector-General of Hospitals and Fleets Samuel Slean Dalzell Wells has been promoted to the rank of Inspector-General of Hospitals and Fleets in Her Majesty's Fleet, with seniority of November 10th, 1882.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, December 21st, 1882.

Cuffe, Robert Ernest Gilhurst, Woodhall Spa, Lincolnshire.

Davidson, Hugh Morgan, Aldeburgh, Suffolk.

Dent, Harry Lord Richard, Wood Street, Woolwich.

Griffin, Richard Palk, Padstow, Cornwall.

Lyons, Thomas, 364, Brompton Road, W.

Wingrave, Vitruvius Harold W., 55, Torrington Square, W.C.

The following gentlemen also on the same day passed their Primary Professional Examination.

Clarke, James F. Howard, Charing Cross Hospital.
Holloway, Robert, St. Thomas's Hospital.
Rees, William Thomas, London Hospital.
Shorthouse, William Stanley N., Guy's Hospital.
Wetwan, William A., London Hospital.

UNIVERSITY OF CAMBRIDGE.—The following have passed the first part of the third examination for the degree of Bachelor of Medicine.

Class I.—Sheild, Downing. Class II.—Bernays, non-collegiate; Bostock, B.A., Pembroke; Crallan, B.A., Emmanuel; A. Davies, B.A., Trinity; Deighton, B.A., St. Peter's; Floyer, B.A., King's; H. Groom, B.A., Magdalene; Holt-house, M.A., Trinity; Knowling, B.A., King's; Morris, B.A., Gonville and Caius; G. Parker, M.A., St. John's; Peskett, Downing; Pigeon, B.A., Christ's; Pitt, M.A., Clare; Roberts, B.A., Christ's; Sanders, B.A., Gonville and Caius; F. F. Schacht, Trinity; Vos, B.A., Christ's; F. C. Wallis, B.A., Gonville and Caius.

On December 18th, the degree of Bachelor of Medicine was conferred on—

Adolphus Vaughan Bernays, non-collegiate.

UNIVERSITY OF DUBLIN.—MICHAELMAS TERM, 1882.—At the Examination for the Degree of Bachelor of Medicine (M.B.), held on Monday and Tuesday, December 4th and 5th, the successful candidates were arranged in the following order of merit.

Francis R. Cassidi, Eugene Cormack, Arthur W. Fenton, Thomas W. Haughton, Richard G. Hanley, Joseph P. Finnegan, John Fitzgerald, Charles W. Fagan, Denis W. Freeman.

At the Examination for the Degree of Bachelor in Surgery (B.Ch.), held on Monday and Tuesday, December 11th and 12th, the following were successful, arranged in order of merit.

Arthur W. Fenton, François A. Mouillot, Francis R. Cassidi, William H. Bennett, Henry W. Peard, Joseph Bulfin, William A. Carte, John W. Gowland, Joseph P. Finnegan, George Lloyd-Apjohn, Augustus M. Whitestone.

At the Examination for the Diploma in State Medicine, held on Thursday, December 14th and following days, the following candidate was successful.

Edward Gordon Hull.

MEDICAL VACANCIES.

The following vacancies are announced:—

CHELSEA.—Resident Medical Officer for the Workhouse and Workhouse Infirmary. Salary, £250 per annum. Applications by January 3rd.

CHORLTON UNION.—Assistant Resident Medical Officer. Salary, £120 per annum. Applications by January 24th.

CITY OF DUBLIN HOSPITAL.—House-Surgeon. Salary, £100 per annum. Applications by January 6th.

COUNTY AND BOROUGH OF CARMARTHEN INFIRMARY.—House-Surgeon. Salary, £100 per annum. Applications by January 1st.

DENBIGHSHIRE GENERAL INFIRMARY, Denbigh.—Honorary Dental Surgeon. Applications by December.

DENTAL HOSPITAL OF LONDON, Leicester Square.—Dental Surgeon. Applications by January 8th.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Out-patient Clinical Assistant.

ECCLESALL BIERLOW UNION, Rural Sanitary Authority.—Medical Officer of Health. Salary, £30 per annum. Applications by January 16th.

ECCLESALL BIERLOW UNION.—Medical Officer and Public Vaccinator. Salary, £40 per annum. Applications by January 16th.

GENERAL INFIRMARY, Northampton.—House-Surgeon. Salary, £125 per annum. Applications by January 8th.

GENERAL INFIRMARY, Northampton.—Assistant House-Surgeon. Salary, £80 per annum. Applications by January 8th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST. Three Resident Clinical Assistants. Applications by December 30th.

LONDON HOSPITAL MEDICAL COLLEGE, Turner Street, Mile End, E.—Lecturer on Physics. Salary, £100. Applications by January 1st.

OWENS COLLEGE, Manchester.—Demonstrator and Assistant Lecturer in Zoology. Salary, £150 per annum. Applications by January 6th.

PORTSMOUTH LUNATIC ASYLUM, Milton, near Portsmouth.—Assistant Medical Officer. Salary, £120 per annum. Applications by January 1st.

QUEEN'S HOSPITAL, Birmingham.—Resident Secretary. Salary, £150 per annum. Applications by December 30th.

ST. ASAPH UNION.—Medical Officer. Salary, £83 per annum. Applications by January 10th.

ST. BARTHOLOMEW'S HOSPITAL.—Casualty Physician. Applications by January 9th.

ST. GEORGE'S UNION, Middlesex.—Out-door Medical Officer. Salary, £150 per annum. Applications by January 1st.

ST. MARY'S HOSPITAL, Paddington, W.—Physician. Applications by December 1st.

SURREY COUNTY LUNATIC ASYLUM, Brookwood, near Woking Station.—Assistant Medical Officer. Salary, £200 per annum. Applications by January 1st.

TOWNS HOSPITAL AND ASYLUM, Glasgow.—Junior Assistant Medical Officer. Salary, £30 per annum. Applications to Dr. Robertson by January 3rd.

UNIVERSITY COLLEGE, London.—Jodrell Professor of Physiology. Salary, £264 per annum. Applications by January 24th.

UNIVERSITY OF EDINBURGH.—Examiner in Medicine in each of the Departments of Chemistry, Anatomy, Midwifery, and Practice of Physic. Applications by January 15th.

VICTORIA HOSPITAL FOR CHILDREN, Queen's Road, Chelsea, S.W.—Medical and Surgical Registrar. Salary, 60 guineas per annum. Applications by January 9th.

MEDICAL APPOINTMENTS.

BATE, F. W., L.D.S., appointed House-Surgeon to the National Dental Hospital.

CLARKE, W. B., M.B., appointed Surgeon to the Out-Patient Department to the St. Peter's Hospital for Stone.

DALY, C., M.D., appointed House-Surgeon and Secretary to the Stourbridge Dispensary, *vice* A. C. C. De Renzy, L.K.Q.C.P.I., resigned.

HARRIS, H., L.R.C.S.I., appointed Medical Officer to the Cookstown Union Stewartstown Dispensary, *vice* R. Henry, L.R.C.P., deceased.

HOGARTH, Andrew A., M.A., M.B., C.M., appointed Medical Officer to the Cheltenham Provident Dispensary.

HOPE, E. W., M.D., appointed House-Physician and Pathologist to the General Hospital, Wolverhampton.

HOPKINS, H. C., M.R.C.S.E., appointed Public Vaccinator to the City and Borough of Bath.

KEELY, M. D., L.R.C.P., appointed Resident Medical Officer to the Three Towns Friendly Societies' Medical Institution, Devonport.

KELLETT, R. G., L.K.Q.C.P.I., appointed Medical Officer to the Halstead Local Board of Health.

KEYWORTH, John White, M.D. Lond., M.R.C.S., L.S.A., elected Physician to the Wellington Hospital, New Zealand, *vice* D. Collins, appointed surgeon to same.

KIRKLAND, Robert, M.B., C.M., appointed Medical Officer to the Cheltenham Provident Dispensary.

MAGUIRE, Robert, M.D. Lond., appointed Pathological Registrar to the Manchester Royal Infirmary, *vice* A. H. Young, M.B. Edin., F.R.C.S., resigned.

MARSH, P., M.R.C.S., appointed Resident Clinical Assistant to the East London Hospital for Children, *vice* D. J. Slater, M.R.C.S., resigned.

MILLS, J., M.R.C.S., appointed Administrator of Anaesthetics to the Dental Hospital of London, *vice* J. T. Clover, deceased.

MORRIS, D. W., L.K.Q.C.P.I., appointed Medical Officer to the Smethwick and Handsworth Medical Association.

PHILLIPS, H. W., M.B., appointed House-Physician to the Bradford Infirmary and Dispensary, *vice* W. J. Spence, L.R.C.P.

RAE, G. A., L.R.C.P., appointed Resident Medical Officer to the Three Towns Friendly Societies' Medical Institution, Devonport.

RYAN, J. N., M.D., appointed Medical Officer for the Parish of Weymouth to the Weymouth Union.

SCATCHARD, W., M.R.C.S., appointed Resident House Surgeon and Dispenser to the Ripon Dispensary, *vice* G. Patterson, resigned.

TIZARD, H., M.D., appointed Medical Officer for the Parish of Melcombe Regis to the Weymouth Union.

TREVOR, E. T., M.R.C.S., appointed Resident Clinical Assistant and Registrar to the North-Eastern Hospital for Children.

WALLER, T. H., M.R.C.S., appointed Resident Medical Officer to the City of London Hospital for Diseases of the Chest, *vice* L. Humphry, M.B., resigned.

WEST, S. M. B., appointed Physician to the City of London Hospital for Diseases of the Chest, *vice* A. B. Shepherd, M.D., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

MAILE.—On the 22nd inst., at Westbury, Wilts, the wife of C. E. Drayson Maile, of a daughter.

REEVE.—On the 13th, at 24, White Horse Lane, Stepney, the wife of Henry Reeve, Esq., of a son.

DEATH.

HENSON.—On the 21st inst., at Park Villas, Harpurhey, Manchester, Sydney Henson, M.R.C.S., L.S.A., aged 55 years.

ALLEGED MURDER.—A coroner's jury at Halifax last week, after a second inquiry of seven hours' duration, returned a verdict of wilful murder against Mr. Samuel Joseph Noake, a medical man, practising at Ilkley, near Leeds, who, it is alleged, has caused the death of Margaret Scott, a single young woman. For the past two years the deceased had been manageress in a tea-shop in Wakefield. She met with a slight injury a short time ago, and was attended by a Wakefield practical man until Monday, the 4th inst., when she left for a week, stating that she was going to Ilkley for the benefit of change. It is stated that she went to Leeds, and was taken to the house of a Mrs. Hudson, in Vernon Street, by Mr. Noake, who visited her there for a week. On Monday, the 11th inst., the doctor took her in a cab to the Great Northern Railway station, Leeds, apparently in a state of collapse. She had to be assisted from the vehicle into a first-class carriage. Mr. Noake gave her some brandy, which he poured into her mouth. She arrived at Wakefield helpless, but conscious, and died the next morning. The medical evidence went to show that her death had been compassed by unlawful means.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopaedic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.....St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopaedic, 10 A.M.

THURSDAY.....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.

FRIDAY.....King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu, F., 1.30; Skin, M, Th.; Dental, M, W, F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M, W, F., 1.30; Eye, M, W., 1.30; Tu, F., 12.30; Ear, Tu, F., 12.30; Skin, Tu., 12.30; Dental, Tu, Th, F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu, Th, S., 2; o.p., M, W, F., 12.30; Eye, M, Th., 1; Ophthalmic Department, W, 1; Ear, Th., 2; Skin, Th., 3; Throat, Tu, F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M, Th., 1.30; o.p., W, S., 1.30; Eye, W, S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu, F., 1.30; o.p., W, S., 1.30; Eye, W, S., 8.30; Ear, and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu, Th, S., 2; o.p., W, S., 9; Eye, Tu, W, Th, S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopaedic, F., 12.30; Dental, Tu, F., 9.

ST. GEORGE'S.—Medical and Surgical, M, Tu, F, S., 1; Obstetric, Tu, S., 1; o.p., Th., 2; Eye, W, S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopaedic, W., 2; Dental, Tu, S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu, F., 9.30; o.p., Tu, F., 2; Eye, Tu, F., 9.15; Ear, M, Th., 2; Skin, Tu, Th., 1.30; Throat, M, Th., 1.45; Dental, W, S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M, Th., 2; o.p., W, F., 12.30; Eye, M, Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu, 12.30; Children, S., 12.30; Dental, Tu, F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M, Tu, Th, F., 1.30; Eye, M, Tu, Th, F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu, F., 3; Eye, M, Th., 2.30; Ear, Tu, F., 9; Skin, Th., 1; Dental, W, S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

TUESDAY.—Pathological Society of London, 8.30 P.M. Annual General Meeting for Election of Officers. Specimens: Dr. Sharkey: Arteritis at an Early Stage of Syphilis. Dr. Angel Money: Hepatic Cirrhosis in a Child. Dr. Norman Moore: 1. New Growths from Alimentary Canal; 2. Chronic Inflammation of Glottis; 3. Endocarditis with Disseminated Tubercle. Mr. W. H. Kesteven: Spina Bifida in a Child. Mr. R. J. Lunn: Renal Abscess, with Calculus (card specimen). Dr. F. C. Turner: 1. Fibrinous Coagulum loose in Left Auricle of the Heart; 2. Fibrinous Coagulum attached to Pleura; 3. Lardaceous Disease of Liver. Mr. Shattock: Polypi of Bladder in a Child. Mr. J. B. Sutton: Animal Rickets. Dr. R. G. Morison: Crystalline Deposit in Hepatic Ducts of an Ox (card specimen).

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication. WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

PUERPERAL FEVER IN WIGAN.

SIR,—I was pleased to see Mr. Barnish's excellent report of the above epidemic in the JOURNAL of December 2nd. But, in considering the subject, it is wise to confine our attention to the purely contagious aspect of this form of septic fever, and to put aside the many other factors which allow and lead up to, its propagation. Is there no such thing as susceptibility of constitution? Will not some constitutions repel or eliminate the poison, if they have received it? Some fungi produce spores so minute, that one million may rest comfortably on the head of a pin; but few of these come to maturity. Typhoid-spores are found by thousands in the water-supply of a house; why does only one person imbibing that water become stricken and die? Or do not scarlet fever contagia fall upon the just and the unjust? but who can say which is the constitution that will receive, retain, and cultivate the poison? Then, again how little do we know what protection is afforded by one fever against another, or whether liability may not be increased in a person who has previously suffered from another blood-poison.

Is there nothing in the atmosphere which leads to the prevalence of a certain kind of fever? M. Pasteur has shown us, as quoted by Mr. J. Faraday, that, by the modifying influence of oxygen only, the specific virulent micro organism found in typhoid fever in rabbits ultimately evolved a race of organisms capable of serving as the vaccine of the original virus. Some vegetable spores require oxygen in order to live; others cannot exist in such an atmosphere. The ova of the animal causing the butyric fermentation can only be supported in an atmosphere of hydrogen.

Again, does the poison of puerperal fever depend upon a specific virus, or may it not be caused by erysipelas, scarlet fever, or typhoid fever? Are not the germs influenced by the media in which they are carried, or the pabulum from which they are nurtured?

Respecting the cases of puerperal fever that have occurred in this town, admitting at once that I do not believe that puerperal fever can arise *de novo*, how do we account for the facts that the woman Mary Anne R. probably attended at the same time other "lying-in women", who have not died from puerperal fever? One of the cases mentioned by Mr. Barnish was attended by her mother, acting as nurse. The mother, twelve months previously, with another daughter who was at the time pregnant, was present at the death-bed, in a distant town, of a third daughter from puerperal fever. The sister who was pregnant had a normal labour, whilst her sister died twelve months later; and, as far as I know, there was no contagion except that carried by the mother. Instances are familiar to all where women and medical men attend puerperal cases, and must carry about the infection; yet other cases they attend, without special precautions, have been in every way satisfactory. On the other hand, we know that, in spite of all disinfection, some persons will persistently carry the poison.

My reason for writing this letter is that, though imbued with the essential truths of the principles upon which germs and their results are based, yet may we not fall into the error of becoming "germ wise, and in other things foolish"; forgetting that, although the oak cannot arise but from the acorn, yet no more can the acorn develop without heat, moisture, a suitable condition of the atmosphere, proper ingredients of the soil, and these in their right proportion. Without the germ, we cannot have fructification; but just as important, and much more numerous, are the conditions under which the germ can develop. Let us lay as much stress as we can on all preventable causes of disease; but surely there is no opinion so rash, no position so secure, amongst the tangled evidence upon the subject of puerperal fever, as not to necessitate great care how it associates cause and effect, and more particularly if that opinion implicate the relation between man and man.—I am, etc.,

R. PROSSER WHITE, M.B.

TREATMENT OF GASTRIC CATARRH AT CONTINENTAL SPAS.

SIR,—I should feel obliged for any information as to the treatment pursued at the continental spas for subacute and chronic gastric catarrh, especially as to dietetic treatment; and if such treatment is contraindicated in the case of a syphilitic patient.

My patient, a gentleman about thirty years of age, an officer in the army, has suffered for the past month from subacute gastric catarrh, induced by irregular diet, and the excessive use of alcohol, etc.; he does fairly well under irregular treatment, as long as he is careful in his diet, but the least indiscretion throws him back; and as it is impossible to induce him to be careful when pretty well, it appears to me that a course of treatment at Carlsbad, Homburg, etc., or some such place, would be advisable. My patient had a mild syphilitic rash a short time since, and has undergone slight mercurial treatment; he has always been very healthy up to this, but his father suffered from some gastric affection, which, from the account I have heard of it, appears to have been of a malignant nature.

I should be glad to know the most suitable place to which to recommend my patient to go for treatment; and if there are any establishments in England or Scotland where he would be treated according to strict dietetic rules, and could at the same time pursue an antisiphilitic treatment.—Yours, etc.,

AN IRISH MEMBER.

INCORRECT SPELLING.

SIR,—As one of that unfortunate class who cannot spell correctly, I beg to protest against the assumption of Dr. Waters, in his evidence before the Select Committee on Medical Education, that the inability to spell correctly must arise from faulty education. I have been well educated. I am a Master of Arts of the University of Dublin, and took honours three times in metaphysics, so that my reading has, at any rate, been sufficiently extensive; still I frequently find the greatest difficulty in spelling correctly simple words. I have hesitated as to whether I should put a *t* in much or an *h* in sugar, and, when once I hesitate, I am lost, and must refer to the dictionary.

In my case, the failing is hereditary, as my father had the same difficulty; and I have spoken to other well educated persons who suffered in the same way. Want of mathematical capacity is not put down to faulty education, any more than bad sight or indifferent hearing; and the same may be said of musical capacity. People who have not these powers or special senses fully developed are not condemned for it; on the contrary, we attribute it to some cerebral hiatus over which they have no control; and I contend that want of orthographical capacity may, in a large number of cases, be placed in the same category, especially where a man shows in other respects that his mental powers have been well trained; and it would be, in my opinion, an unfortunate thing for our profession, as well as others, if examiners were to reject men for faulty orthography, as Dr. Waters would seem to advocate, whose scientific attainments come up to the proper standard of "pass". Had they done so in my case, I should never have been able to subscribe myself, your obedient servant,

M.A., M.D., M.R.C.S.E.

P.S.—The passage to which I refer is on page 1,115 of the JOURNAL, first six lines from top.

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